DMX REFERENCE

Mini-B 7X40

Mini-B

ONIX



Manufacturer	ONIX
GDTF file	ONIX_Mini-B_7X40_108105.gdtf
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1 About this manual

This document describes the Mini-B by ONIX. It was compiled from the GDTF file ONIX_Mini-B_7X40_108105.gdtf from the GDTF-Share library.

File revision: “INIT PUBLIC GOOD NAME”.

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 ONIX; 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	6.5 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Basic RGBW	18	28	1, 19, 37, 55, …

No light? Check these channels

- Basic RGBW: CH 6 Dimmer above 0; CH 7 Shutter at 104–107, 208–212 or 252–255 “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.

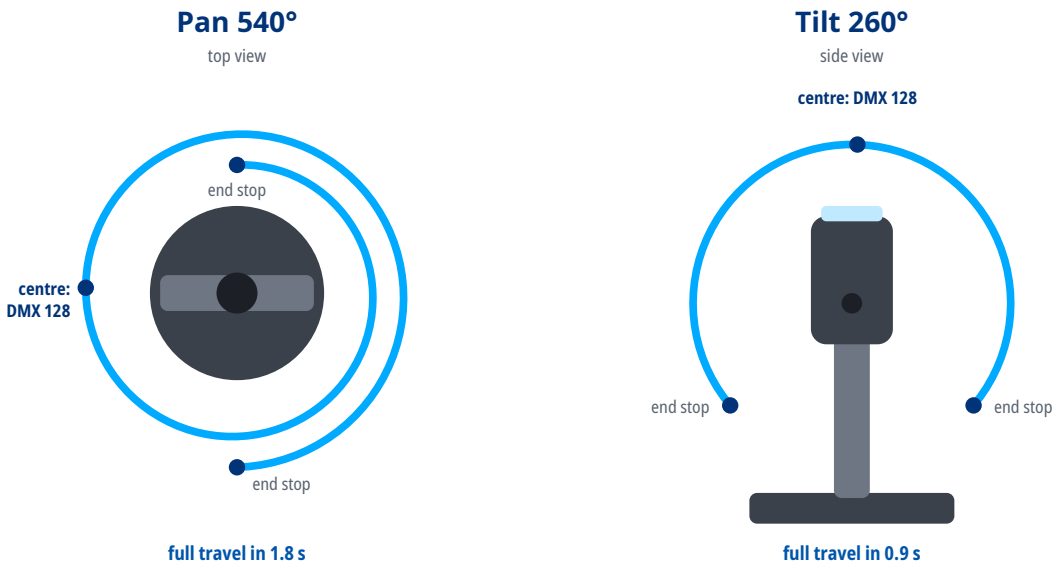
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts, move them by hand, or obstruct their movement; this can cause injury (pinching) and damage the drive.
> - Do not carry the device by its moving parts. If the device has a transport lock, engage it before transport and release it before switching on.

4 Product description

Description in the GDTF file

“Mini-B features a wide zoom, ranging from 4° to 55° that makes this little luminaire extremely versatile. At the narrow angle, the beam produced is very solid and concentrated, superb for aerial effects. At full aperture, the Mini-B becomes an excellent wash light and it can replace much heavier and bulkier equipment. The Mini-B's central LED may be controlled separately from the external ring of LEDs, making it ideal for graphic lighting effects too. More than fifty pre-installed effects/color macros, 2500K-8000K color temperature control, a 24 bit dimmer with five curves, an electronic strobe @ 25 f/sec, and Ethernet access complete this highly professional tool.”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

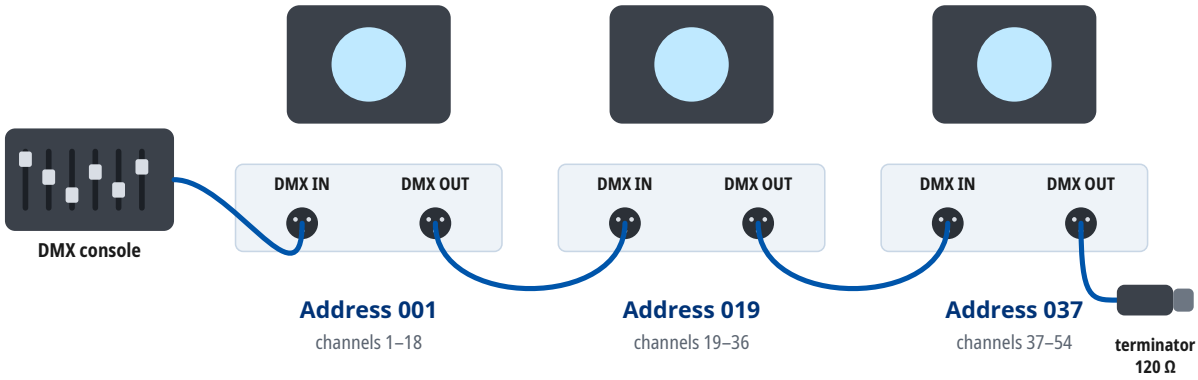
⚠ **WARNING**

- 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: 6.5 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.

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 Basic RGBW: 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.

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 “Basic RGBW”: 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 “Basic RGBW”, 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.

8 Functions at a glance

Functions in each DMX mode

	Basic RGBW 18 channels
Pan / Tilt	1, 3
Dimmer	6
Shutter / strobe	7
Color mixing	8–11
Color temperature	14
Color wheel	15
Zoom	12, 13
Effects / macros	16

Color wheel

1. Macro Color Off — DMX 0–9
2. Red — DMX 10
3. Green — DMX 11
4. Blue — DMX 12
5. Cyan — DMX 13
6. Yellow — DMX 14
7. Magenta — DMX 15
8. White 7000K — DMX 16
9. White 3700K — DMX 17
10. White 5000K — DMX 18
11. Black — DMX 19
12. Medium Yellow — DMX 20–22
13. Straw Tint — DMX 23–26
14. Surprise Peach — DMX 27–28
15. Fire — DMX 29
16. Medium Amber — DMX 30
17. Gold Amber — DMX 31
18. Dark Amber — DMX 32–34
19. Sunrise Red — DMX 35–44
20. Light Pink — DMX 45
21. Medium Pink — DMX 46–48
22. Pink Carnation — DMX 49–61
23. Light Lavander — DMX 62–67
24. Lavender — DMX 68–77
25. Sky Blue — DMX 78–88
26. Just Blue — DMX 89–99
27. Dark Yellow Green — DMX 100–109
28. Spring Yellow — DMX 110–111
29. Light Amber — DMX 112
30. Straw — DMX 113
31. Deep Amber — DMX 114
32. Orange — DMX 115–116
33. Light Rose — DMX 117
34. English Rose — DMX 118
35. Light Salmon — DMX 119
36. Middle Rose — DMX 120
37. Dark Pink — DMX 121–122
38. Magenta 1 — DMX 123–124
39. Peacock Blue — DMX 125
40. Med Blue Green — DMX 126
41. Steel Blue — DMX 127
42. Light Blue — DMX 128
43. Dark Blue — DMX 129–130
44. Leaf Green — DMX 131–133
45. Dark Green — DMX 134–135
46. Mauve — DMX 136–137
47. Bright Pink — DMX 138–141
48. Medium Blue — DMX 142–144

49 Deep-GoldenAmber
DMX 145

50 Pale Lavander
DMX 146

51 Special Lavander
DMX 147–148

52 Primary Green
DMX 149–150

53 Bright Blue
DMX 151–156

54 Apricot
DMX 157–161

55 Pale-Gold
DMX 162–167

56 Deep Orange
DMX 168–171

57 Bastard Amber
DMX 172–173

58 Flame Red
DMX 174

59 DayLight Blue
DMX 175–178

60 Lilac Tint
DMX 179

61 Deep Lavander
DMX 180–183

62 Dark Steel Blue
DMX 184–190

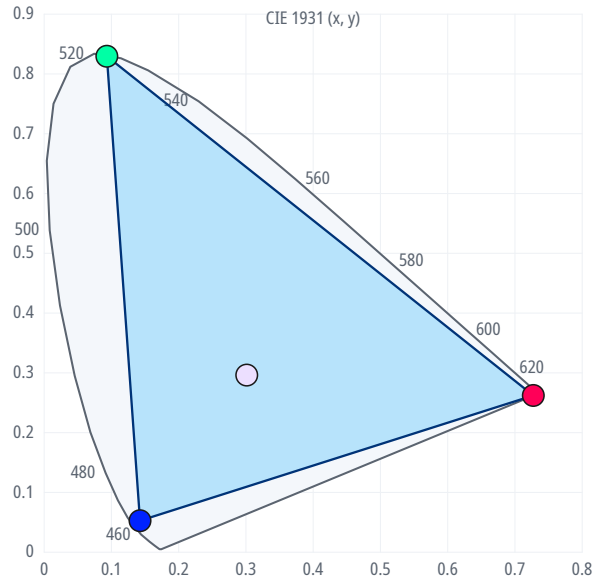
63 Congo Blue
DMX 191–206

64 Alice Blue
DMX 207

65 Dirty White
DMX 208

66 White
DMX 209–255

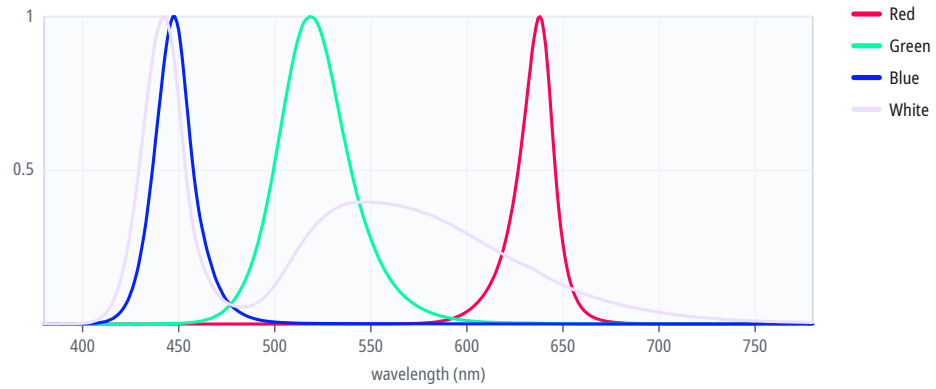
LED colors and the colors they mix



LED	x	y
Red	0.727	0.262
Green	0.093	0.830
Blue	0.142	0.053
White	0.301	0.296

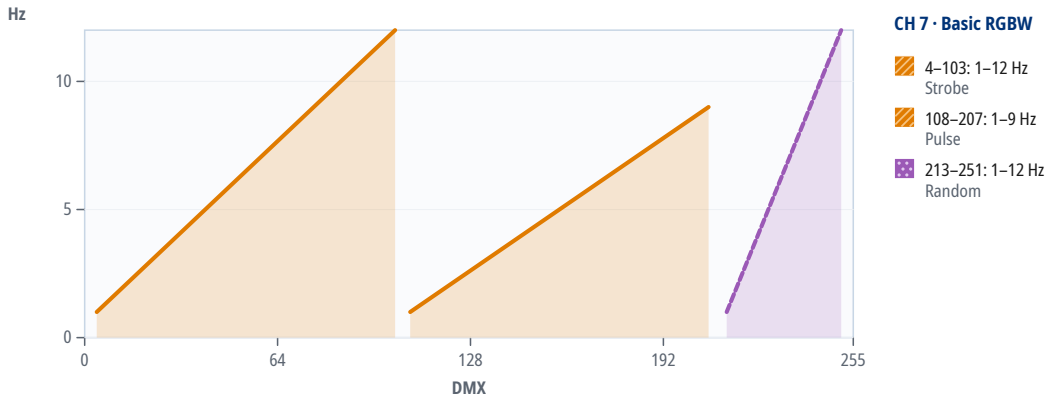
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Spectra of the light sources

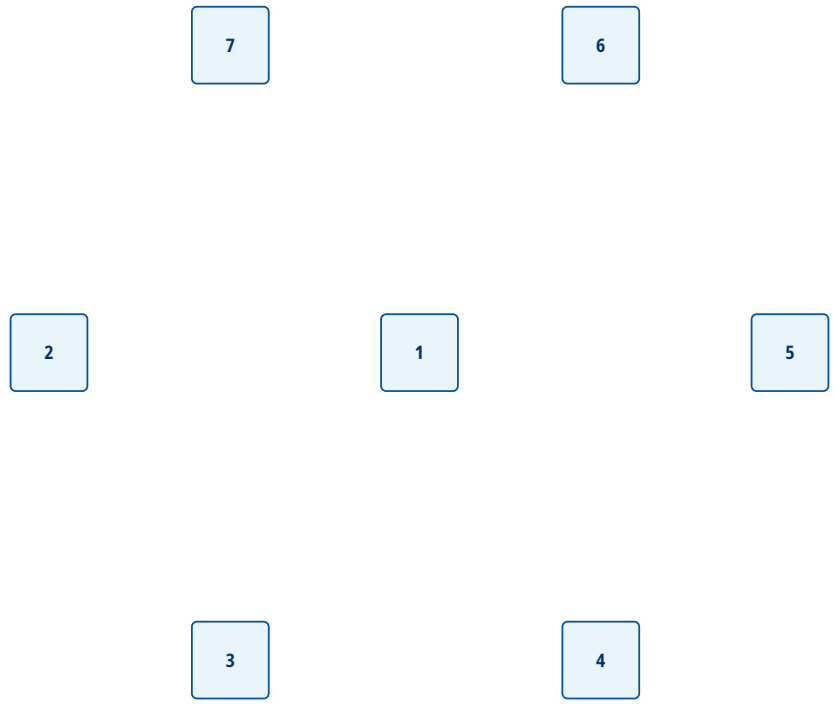


Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

Strobe rate



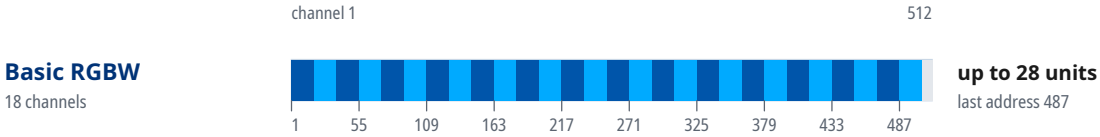
Cells (pixels)



7 cells where the GDTF file places them (seen from above), numbered in the file's order; the mode “Basic RGBW ” drives them together.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Basic RGBW”

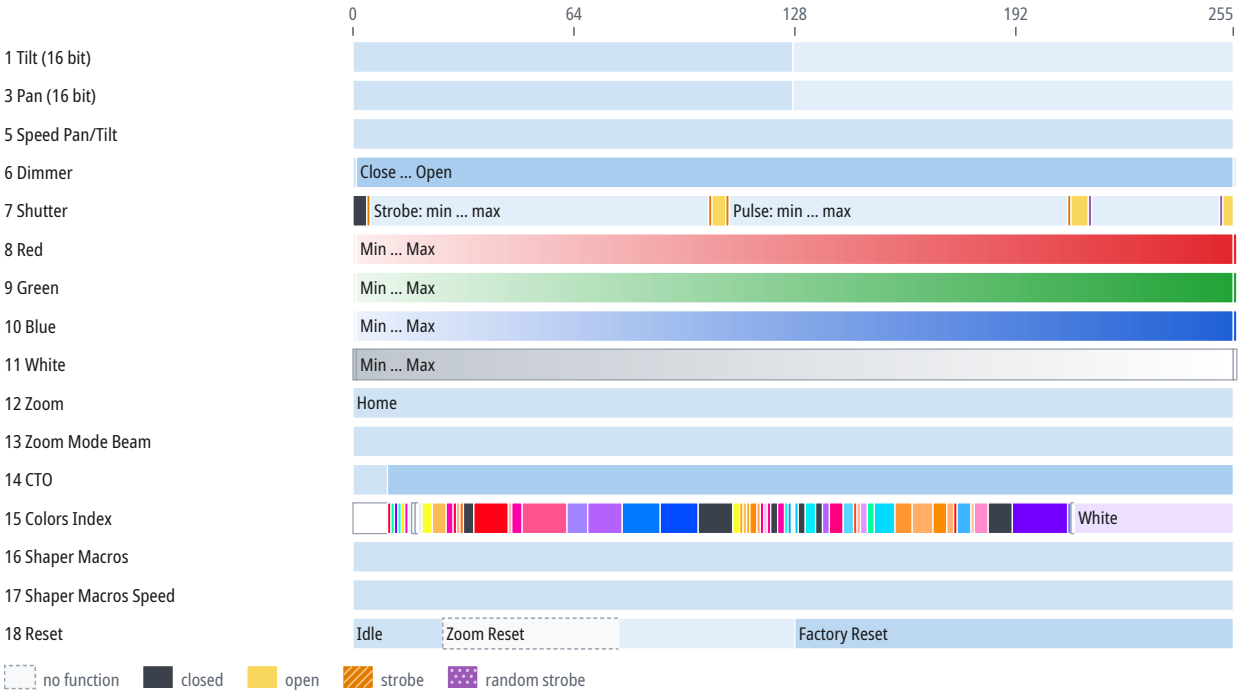
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	91	11	181	16	271
2	19	7	109	12	199	17	289
3	37	8	127	13	217	18	307
4	55	9	145	14	235	19	325
5	73	10	163	15	253	20	343

Mode Basic RGBW

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 6 Dimmer above 0; CH 7 Shutter at 104–107, 208–212 or 252–255 “open”. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255, CH 7 Shutter 255, CH 8 Red 255, CH 9 Green 255, CH 10 Blue 255, CH 11 White 255, CH 15 Colors Index 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt	0–127	Tilt 1
		128	Home
		128–255	Tilt 1
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Pan	0–127	Pan
		128	Home
		128–255	Pan
4	Pan Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Dimmer	0	Close
		1–254	Close ... Open
		255	Open
7	Shutter	0–3	Close
		4	Strobe: min
		5–102	Strobe: min ... max
		103	Strobe: max
		104–107	Open
		108	Pulse: min
		109–206	Pulse: min ... max
		207	Pulse: max
		208–212	Open
		213	Random: min
		214–250	Random: min ... max
		251	Random: max
		252–255	Open
8	Red	0	Min
		1–254	Min ... Max
		255	Max
9	Green	0	Min
		1–254	Min ... Max
		255	Max
10	Blue	0	Min
		1–254	Min ... Max
		255	Max
11	White	0	Min
		1–254	Min ... Max
		255	Max
12	Zoom	0–255	Home (4–55°)
13	Zoom Mode Beam	0–255	
14	CTO	0–9	Unused Range

CH	Function	DMX	Description
14	CTO (continued)	10–255	CTO (8000–2500 K)
15	Colors Index		Virtual colour wheel
		0–9	Macro Color Off
		10	Red
		11	Green
		12	Blue
		13	Cyan
		14	Yellow
		15	Magenta
		16	White 7000 k
		17	White 3700 k
		18	White 5000 k
		19	Black
		20–22	Medium Yellow
		23–26	Straw Tint
		27–28	Surprise Peach
		29	Fire
		30	Medium Amber
		31	Gold Amber
		32–34	Dark Amber
		35–44	Sunrise Red
		45	Light Pink
		46–48	Medium Pink
		49–61	Pink Carnation
		62–67	Light Lavander
		68–77	Lavender
		78–88	Sky Blue
		89–99	Just Blue
		100–109	Dark Yellow Green
		110–111	Spring Yellow
		112	Light Amber
		113	Straw
		114	Deep Amber
		115–116	Orange
		117	Light Rose
		118	English Rose
		119	Light Salmon
		120	Middle Rose
		121–122	Dark Pink
		123–124	Magenta 1
		125	Peacock Blue

CH	Function	DMX	Description
15	Colors Index (continued)	126	Med Blue Green
		127	Steel Blue
		128	Light Blue
		129–130	Dark Blue
		131–133	Leaf Green
		134–135	Dark Green
		136–137	Mauve
		138–141	Bright Pink
		142–144	Medium Blue
		145	Deep-GoldenAmber
		146	Pale Lavander
		147–148	Special Lavander
		149–150	Primary Green
		151–156	Bright Blue
		157–161	Apricot
		162–167	Pale-Gold
		168–171	Deep Orange
		172–173	Bastard Amber
		174	Flame Red
		175–178	DayLight Blue
		179	Lilac Tint
		180–183	Deep Lavander
		184–190	Dark Steel Blue
		191–206	Congo Blue
		207	Alice Blue
		208	Dirty White
		209–255	White
16	Shaper Macros	0–255	
17	Shaper Macros Speed	0–255	
18	Reset	0–25	Idle
		26–76	Zoom Reset
		77–127	Position Reset
		128–255	Factory Reset

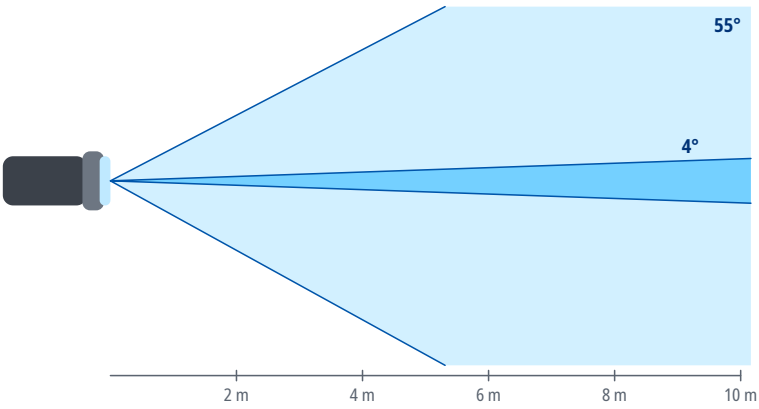
10 Technical specifications

Parameter	Value
Light	
Light source	LED
Optics	
Zoom	4–55°
Movement	
Pan	540°
Tilt	260°
Control	
DMX connection	5-pin XLR IN/OUT
RJ45 connectors	RJ45
Electrical	
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	6.5 kg
Operating environment	
Operating temperature	-20 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2500–8000 K
Strobe frequency	1–12 Hz

Spot diameter



Distance	Ø 4°	Ø 55°
2 m	0.14 m	2.1 m
4 m	0.28 m	4.2 m
6 m	0.42 m	6.2 m
8 m	0.56 m	8.3 m
10 m	0.7 m	10.4 m
15 m	1 m	15.6 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.
Movement is reversed	Check whether Pan/Tilt inversion is enabled in the device menu or in the controller.
Moving parts do not reach the correct position after power-on or transport	Switch the device off and on again to reset the position, and make sure the transport lock, if any, is released. If this does not help, contact a service center.
Movement is jerky	Check the value of the Pan/Tilt speed channel, if the device has one, and the stability of the DMX signal.

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.