DMX REFERENCE

Alcor

Starway



Manufacturer	Starway
GDTF file	Starway_Alcor_167456.gdtf
GDTF revision	V001 · 2026-11-03
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1 About this manual

This document describes the Alcor by Starway. It was compiled from the GDTF file Starway_Alcor_167456.gdtf from the GDTF-Share library.

File revision: “V001”.

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 Starway; 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 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
4CH	4	128	1, 5, 9, 13, ...
5CH	5	102	1, 6, 11, 16, ...
9CH	9	56	1, 10, 19, 28, ...
11CH	11	46	1, 12, 23, 34, ...

No light? Check these channels

- 5CH: CH 1 Dimmer above 0
- 9CH: CH 1 Dimmer above 0; CH 2 Strobe at 0–3 “No Strobe”
- 11CH: CH 1 Dimmer above 0; CH 3 Strobe at 0–3 “No Strobe”



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

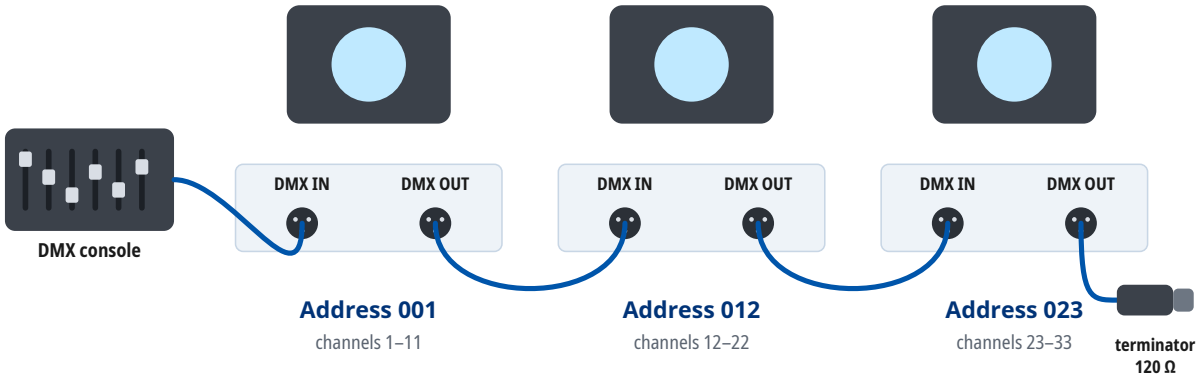
⚠ **WARNING**

- 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: 2 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 11CH: every unit occupies 11 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 “11CH”: 11.
- 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 “11CH”, you can use, for example, the start addresses 1, 12, 23, 34.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

7 Functions at a glance

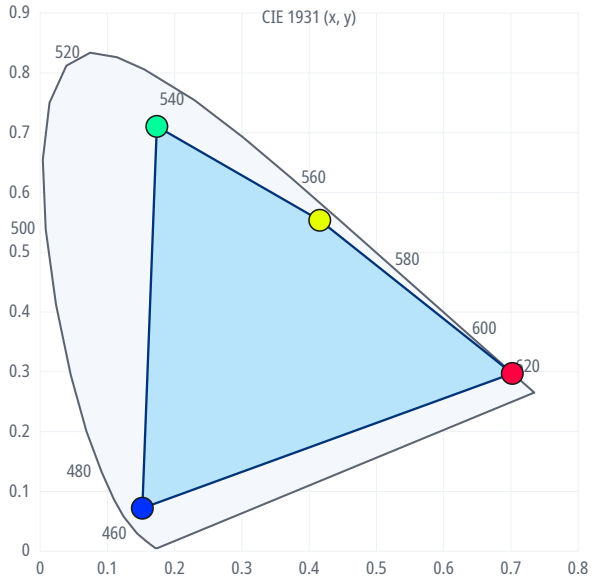
Functions in each DMX mode

	4CH 4 channels	5CH 5 channels	9CH 9 channels	11CH 11 channels
Dimmer		1	1	1
Dimmer resolution		8 bit	8 bit	16 bit
Shutter / strobe			2	3
Color mixing	1–4	2–5	6–9	7–10
Effects / macros			3–5	4–6

Color wheel

1. Idle — DMX 0–9
2. White 10000K — DMX 10–15
3. White 9000K — DMX 16–21
4. White 8500K — DMX 22–27
5. White 8000K — DMX 28–33
6. White 7500K — DMX 34–39
7. White 7000K — DMX 40–45
8. White 6500K — DMX 46–51
9. White 6000K — DMX 52–57
10. White 5600K — DMX 58–63
11. White 5000K — DMX 64–69
12. White 4500K — DMX 70–75
13. White 4000K — DMX 76–81
14. White 3600K — DMX 82–87
15. White 3200K — DMX 88–93
16. White 3000K — DMX 94–99
17. White 2700K — DMX 100–105
18. LEE 101 Yellow — DMX 106–110
19. LEE 102 Light Amber — DMX 111–115
20. LEE 105 Orange — DMX 116–120
21. LEE 106 Primary Red — DMX 121–125
22. LEE 107 Light Rose — DMX 126–130
23. LEE 110 Middle Rose — DMX 131–135
24. LEE 111 Dark Pink — DMX 136–140
25. LEE 115 Peacock Blue — DMX 141–145
26. LEE 116 Medium Blue-Green — DMX 146–150
27. LEE 118 Light Blue — DMX 151–155
28. LEE 119 Dark Blue — DMX 156–160
29. LEE 121 Lee Green — DMX 161–165
30. LEE 124 Dark Green — DMX 166–170
31. LEE 126 Mauve — DMX 171–175
32. LEE 127 Smokey Pink — DMX 176–180
33. LEE 128 Bright Pink — DMX 181–185
34. LEE 132 Medium Blue — DMX 186–190
35. LEE 135 Deep Golden Amber — DMX 191–195
36. LEE 139 Primary Green — DMX 196–200
37. LEE 147 Apricot — DMX 201–205
38. LEE 151 Gold Tint — DMX 206–210
39. LEE 152 Pale Gold — DMX 211–215
40. LEE 158 Deep Orange — DMX 216–220
41. LEE 164 Flame Red — DMX 221–225
42. LEE 174 Dark Steel Blue — DMX 226–230
43. LEE 179 Chrome Orange — DMX 231–235
44. LEE 180 Dark Lavender — DMX 236–240
45. LEE 201 Full CT Blue — DMX 241–245
46. LEE 203 Quarter CT Blue — DMX 246–250
47. LEE 204 Full CT Orange — DMX 251–255

LED colors and the colors they mix

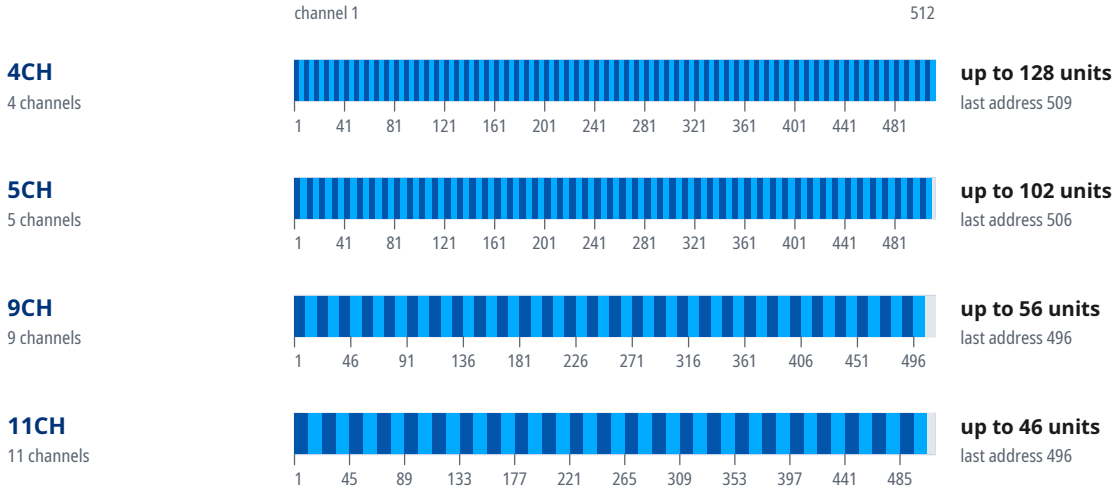


LED	x	y	nm
Red	0.702	0.297	622
Green	0.173	0.711	529
Blue	0.152	0.072	452
Lime	0.416	0.553	567

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

8 DMX channels

Units in one DMX universe



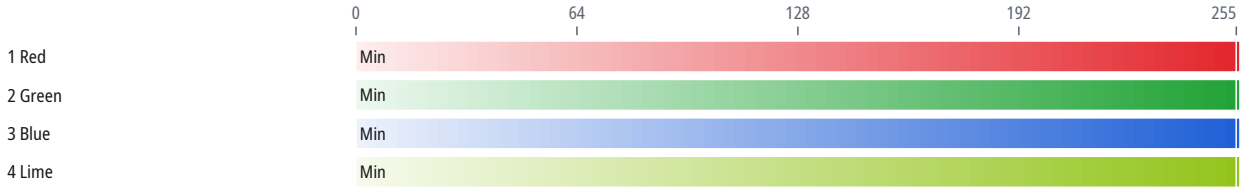
Start addresses of 20 units in the mode “11CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	56	11	111	16	166
2	12	7	67	12	122	17	177
3	23	8	78	13	133	18	188
4	34	9	89	14	144	19	199
5	45	10	100	15	155	20	210

Mode 4CH

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 2 Green 255, CH 3 Blue 255.

Channel functions at a glance

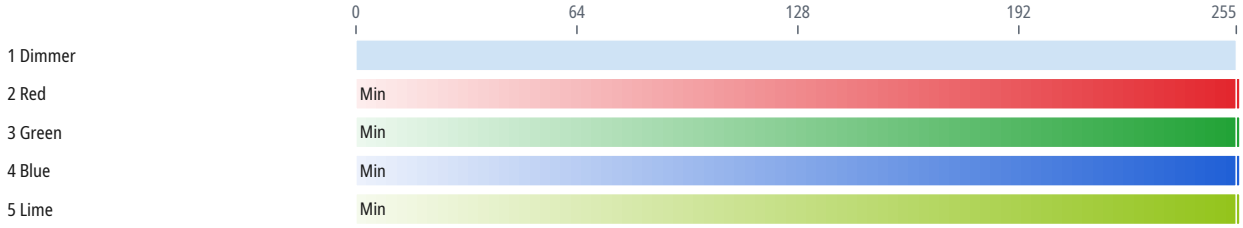


CH	Function	DMX	Description
1	Red	0–254	Min
		255	Max
2	Green	0–254	Min
		255	Max
3	Blue	0–254	Min
		255	Max
4	Lime	0–254	Min
		255	Max

Mode 5CH

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, CH 2 Red 255, CH 3 Green 255, CH 4 Blue 255.

Channel functions at a glance

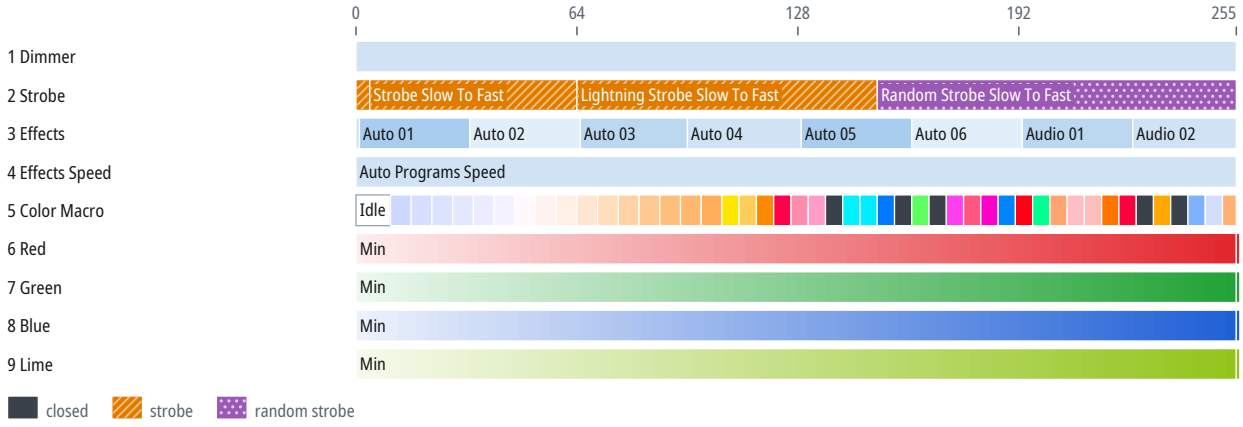


CH	Function	DMX	Description
1	Dimmer	0–255	
2	Red		Same as CH 1 in the mode “4CH” (p. 9)
3	Green		Same as CH 2 in the mode “4CH” (p. 9)
4	Blue		Same as CH 3 in the mode “4CH” (p. 9)
5	Lime		Same as CH 4 in the mode “4CH” (p. 9)

Mode 9CH

If the device receives DMX in this mode but gives no light, check these channels: CH 1 Dimmer above 0; CH 2 Strobe at 0–3 “No Strobe”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 5 Color Macro 0, CH 6 Red 255, CH 7 Green 255, CH 8 Blue 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–255	
2	Strobe	0–3	No Strobe
		4–63	Strobe Slow To Fast
		64–150	Lightning Strobe Slow To Fast
		151–255	Random Strobe Slow To Fast
3	Effects		Auto Programs
		0	Idle
		1–32	Auto 01

CH	Function	DMX	Description
3	Effects (continued)	33–64	Auto 02
		65–95	Auto 03
		96–128	Auto 04
		129–160	Auto 05
		161–192	Auto 06
		193–224	Audio 01
		225–255	Audio 02
4	Effects Speed		Auto Programs Speed
		0–255	Auto Programs Speed (0–20 Hz)
5	Color Macro	0–9	Idle
		10–15	White 10000K
		16–21	White 9000K
		22–27	White 8500K
		28–33	White 8000K
		34–39	White 7500K
		40–45	White 7000K
		46–51	White 6500K
		52–57	White 6000K
		58–63	White 5600K
		64–69	White 5000K
		70–75	White 4500K
		76–81	White 4000K
		82–87	White 3600K
		88–93	White 3200K
		94–99	White 3000K
		100–105	White 2700K
		106–110	LEE 101 Yellow
		111–115	LEE 102 Light Amber
		116–120	LEE 105 Orange
		121–125	LEE 106 Primary Red
		126–130	LEE 107 Light Rose
		131–135	LEE 110 Middle Rose
		136–140	LEE 111 Dark Pink
		141–145	LEE 115 Peacock Blue
		146–150	LEE 116 Medium Blue-Green
		151–155	LEE 118 Light Blue
		156–160	LEE 119 Dark Blue
		161–165	LEE 121 Lee Green
		166–170	LEE 124 Dark Green
		171–175	LEE 126 Mauve
		176–180	LEE 127 Smokey Pink
		181–185	LEE 128 Bright Pink

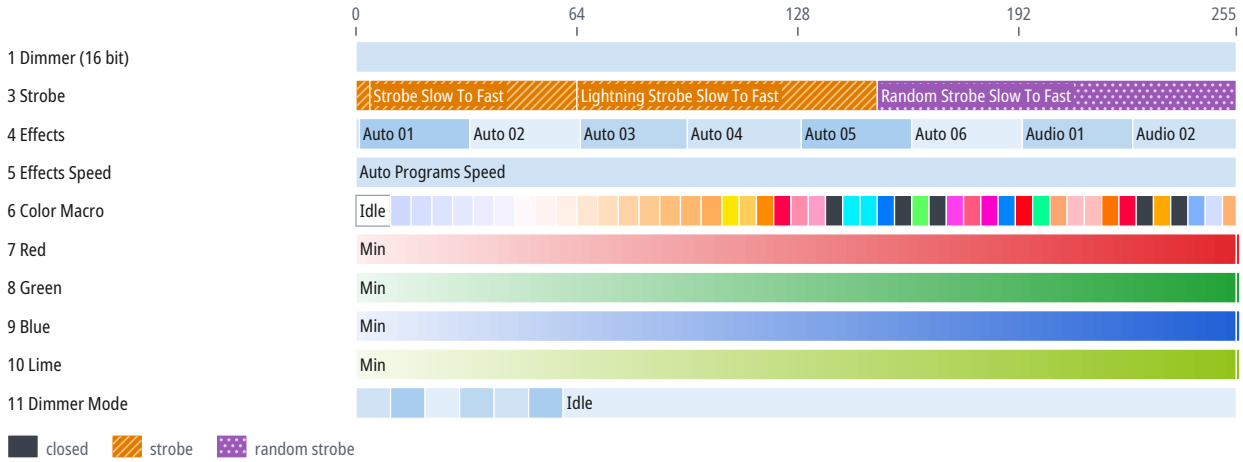
CH	Function	DMX	Description
5	Color Macro (continued)	186–190	LEE 132 Medium Blue
		191–195	LEE 135 Deep Golden Amber
		196–200	LEE 139 Primary Green
		201–205	LEE 147 Apricot
		206–210	LEE 151 Gold Tint
		211–215	LEE 152 Pale Gold
		216–220	LEE 158 Deep Orange
		221–225	LEE 164 Flame Red
		226–230	LEE 174 Dark Steel Blue
		231–235	LEE 179 Chrome Orange
		236–240	LEE 180 Dark Lavender
		241–245	LEE 201 Full CT Blue
		246–250	LEE 203 Quarter CT Blue
		251–255	LEE 204 Full CT Orange
6	Red		Same as CH 1 in the mode “4CH” (p. 9)
7	Green		Same as CH 2 in the mode “4CH” (p. 9)
8	Blue		Same as CH 3 in the mode “4CH” (p. 9)
9	Lime		Same as CH 4 in the mode “4CH” (p. 9)

Mode 11CH

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 1 Dimmer above 0; CH 3 Strobe at 0–3 “No Strobe”. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 6 Color Macro 0, CH 7 Red 255, CH 8 Green 255, CH 9 Blue 255.

Channel functions at a glance



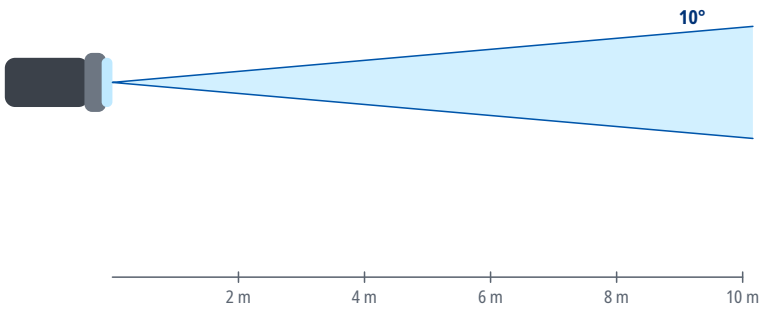
CH	Function	DMX	Description
1	Dimmer	0–255	
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Strobe		Same as CH 2 in the mode “9CH” (p. 10)
4	Effects		Same as CH 3 in the mode “9CH” (p. 10)

CH	Function	DMX	Description
5	Effects Speed		Same as CH 4 in the mode “9CH” (p. 11)
6	Color Macro		Same as CH 5 in the mode “9CH” (p. 11)
7	Red		Same as CH 1 in the mode “4CH” (p. 9)
8	Green		Same as CH 2 in the mode “4CH” (p. 9)
9	Blue		Same as CH 3 in the mode “4CH” (p. 9)
10	Lime		Same as CH 4 in the mode “4CH” (p. 9)
11	Dimmer Mode		Dimmer Speed
		0–9	From Projector Menu
		10–19	DIM0 0s
		20–29	DIM1 250ms
		30–39	DIM2 500ms
		40–49	DIM3 750ms
		50–59	DIM4 1s
		60–255	Idle

9 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	60 W
Luminous flux	1,385 lm
Color temperature	6,000 K
Color rendering index (CRI)	100
Optics	
Beam angle	10°
Dimensions and construction	
Weight	2 kg
Operating environment	
Operating temperature	0 to 40 °C

Spot diameter



Distance	Ø 10°
2 m	0.35 m
4 m	0.7 m
6 m	1 m
8 m	1.4 m
10 m	1.7 m
15 m	2.6 m

Spot diameter square to the beam axis, calculated from the beam angle.

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.