DMX REFERENCE

Aurora Profile V6

CKC Lighting



Manufacturer	CKC Lighting
GDTF file	CKC_Lighting_Aurora_Profile_V6_33922.gdtf
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1 About this manual

This document describes the Aurora Profile V6 by CKC Lighting. It was compiled from the GDTF file CKC_Lighting_Aurora_Profile_V6_33922.gdtf from the GDTF-Share library.

File revision: “Aurora Profile V6”.

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 CKC Lighting; 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	27.8 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Standard	38	13	1, 39, 77, 115, ...

No light? Check these channels

- Standard: CH 34 Shutter at 32–63 or 96–127 or 160–191 or 224–255; CH 35 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.

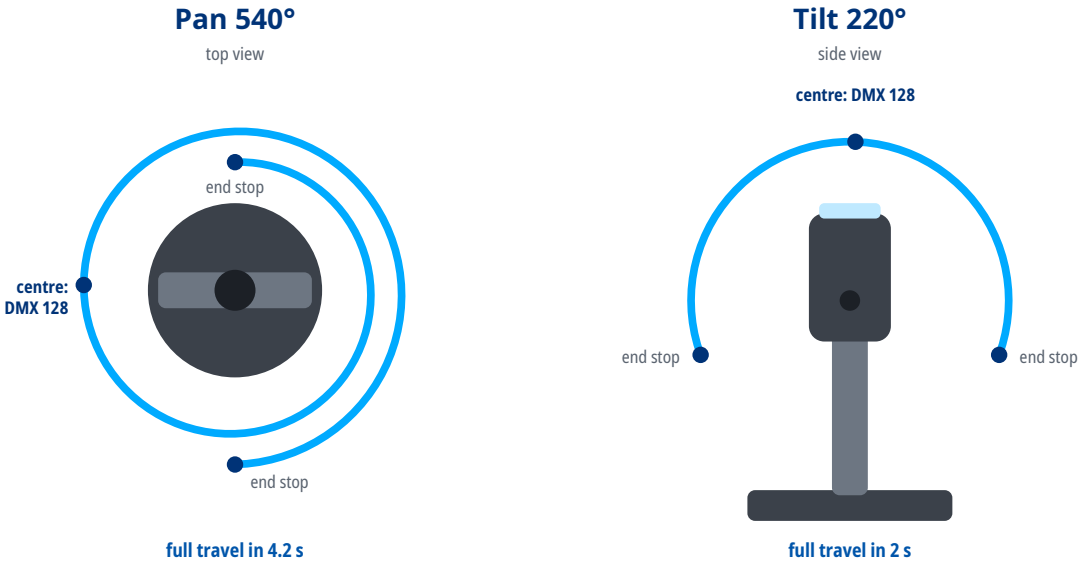
⚠ CAUTION

- 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.

> ⚠ **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

Range of movement



Full-travel times as stated in the GDTF file.

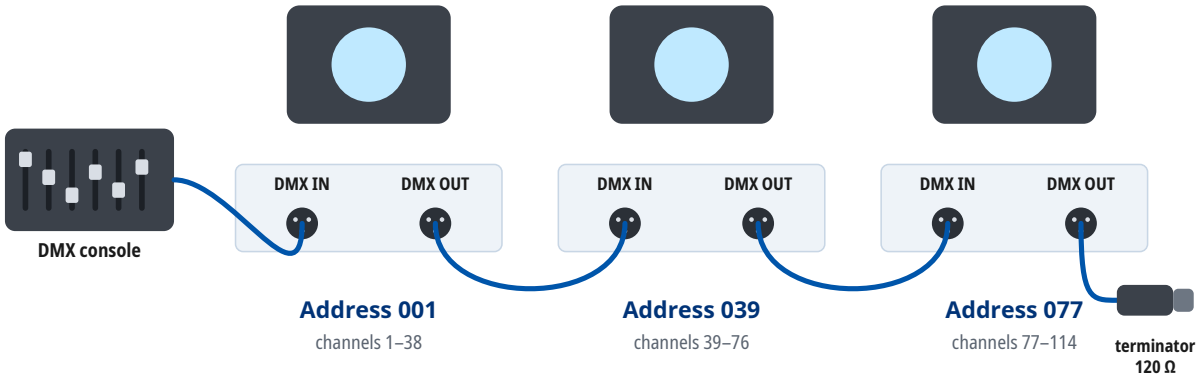
5 Installation

> ⚠ **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: 27.8 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 Standard: every unit occupies 38 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

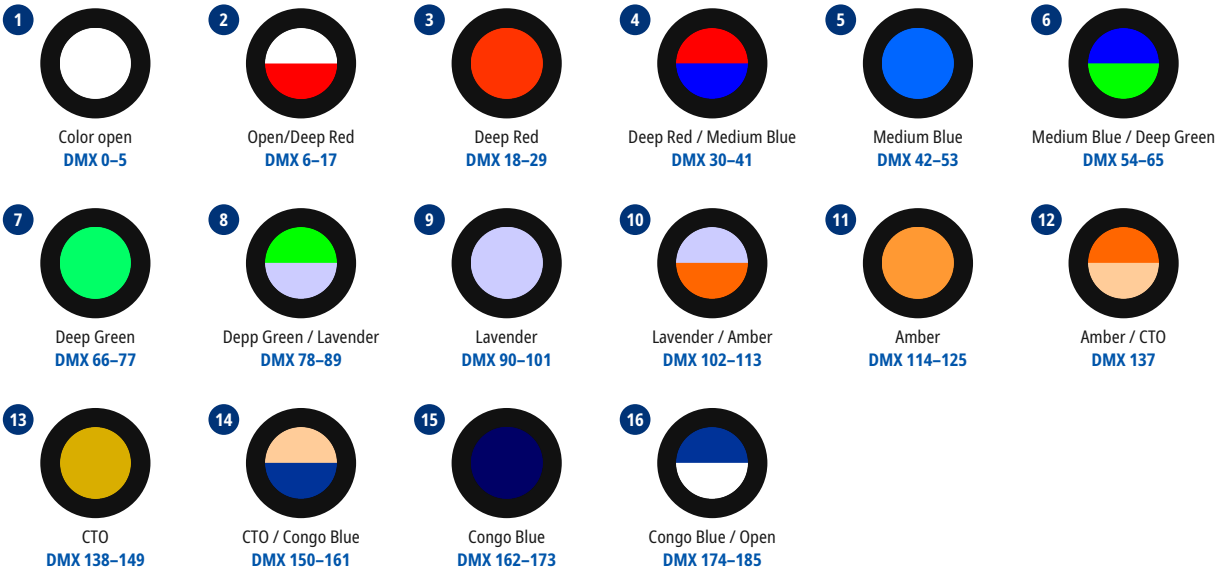
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Standard”: 38.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “Standard”, you can use, for example, the start addresses 1, 39, 77, 115.
- 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

	Standard 38 channels
Pan / Tilt	1, 3
Dimmer	35
Shutter / strobe	34
Color mixing	6–8
Color temperature	9
Color wheel	12
Gobo wheel	10, 13
Gobo rotation	11
Prism	14–17
Frost	18
Zoom	20
Focus	22
Iris	19

Gobo wheel 1



Gobo wheel 2

1 
Select: Open
DMX 0–9

2 
Gobo 1
DMX 10–19

3 
Gobo 2
DMX 20–29

4 
Gobo 3
DMX 30–39

5 
Gobo 4
DMX 40–49

6 
Gobo 5
DMX 50–59

7 
Gobo 6
DMX 60–69

8 
Gobo 7
DMX 70–80

Gobo wheel 3

1 
Fix Gobos: Open
DMX 0–5

2 
Gobo 1
DMX 6–14

3 
Gobo 2
DMX 15–23

4 
Gobo 3
DMX 24–32

5 
Gobo 4
DMX 33–41

6 
Gobo 5
DMX 42–50

7 
Gobo 6
DMX 51–59

8 
Gobo 7
DMX 60–68

9 
Gobo 8
DMX 69–78

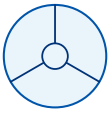
Prism 1

1
Open
DMX 0–31

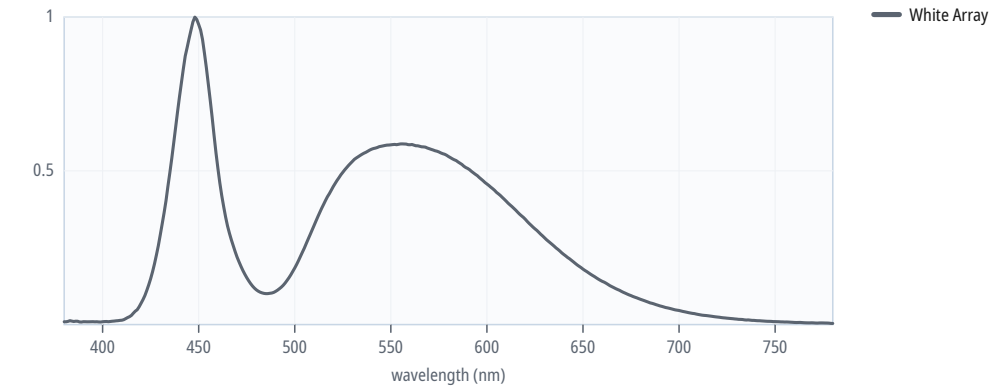
2 
6 facets
Prism 2 (6 Facet)
DMX 32–255

Prism 2

1
Open
DMX 0–31

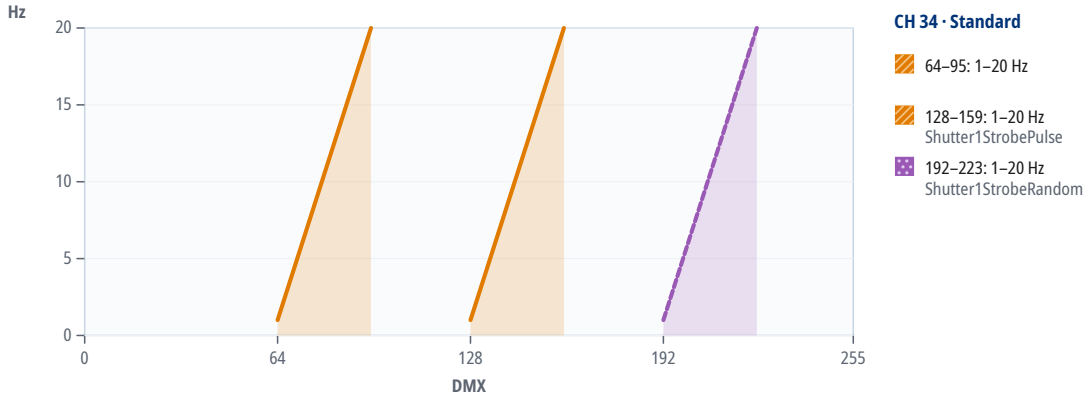
2 
3 facets
3 facet prism
DMX 32–255

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.

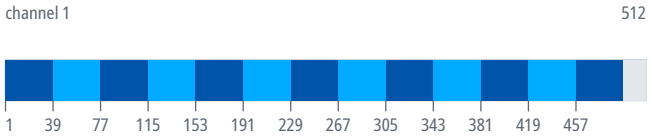
Strobe rate



9 DMX channels

Units in one DMX universe

Standard
38 channels



up to 13 units
last address 457

Start addresses of 20 units in the mode “Standard”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	191	11	381	16	U2 · 77
2	39	7	229	12	419	17	U2 · 115
3	77	8	267	13	457	18	U2 · 153
4	115	9	305	14	U2 · 1	19	U2 · 191
5	153	10	343	15	U2 · 39	20	U2 · 229

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 Standard

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 34 Shutter at 32–63 or 96–127 or 160–191 or 224–255; CH 35 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Cyan 0, CH 7 Magenta 0, CH 8 Yellow 0, CH 9 CTO 0, CH 12 Colors 0, CH 34 Shutter 50, CH 35 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan
		128	Home
		128–255	Pan

CH	Function	DMX	Description
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt
		128	Home
		128–255	Tilt
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Pan/Tilt Speed
		0–5	No function
		6	Fast
		7–254	Fast ... Slow
		255	Slow
6	Cyan	0–255	Cyan
7	Magenta	0–255	Magenta
8	Yellow	0–255	Yellow
9	CTO	0	KW (6500K)
		1–254	KW (6500K) ... WW (2600K)
		255	WW (2600K)
10	Gobo	0–9	Select: Open
		10–19	Gobo 1
		20–29	Gobo 2
		30–39	Gobo 3
		40–49	Gobo 4
		50–59	Gobo 5
		60–69	Gobo 6
		70–79	Gobo 7
		80–94	Shake Gobo 1
		95–109	Shake Gobo 2
		110–124	Shake Gobo 3
		125–139	Shake Gobo 4
		140–154	Shake Gobo 5
		155–169	Shake Gobo 6
		170–189	Shake Gobo 7
		190–221	Wheel rotation: fast to slow
		222–223	Wheel rotation: stop
		224–255	Wheel rotation: slow to fast
11	Gobo Rotation	0–127	Right (540°)
		128	Gobo Pos Rotate
		129–189	Gobo Pos Rotate: fast to slow
		190–193	Gobo Pos Rotate: stop
		194–255	Gobo Pos Rotate: slow to fast
12	Colors	0–5	Color open
		6–17	Open/Deep Red
		18–29	Deep Red

CH	Function	DMX	Description
12	Colors (continued)	30–41	Deep Red / Medium Blue
		42–53	Medium Blue
		54–65	Medium Blue / Deep Green
		66–77	Deep Green
		78–89	Depp Green / Lavender
		90–101	Lavender
		102–113	Lavender / Amber
		114–125	Amber
		126–136	Amber ... Amber / CTO
		137	Amber / CTO
		138–149	CTO
		150–161	CTO / Congo Blue
		162–173	Congo Blue
		174–185	Congo Blue / Open
		186–192	Color open
		193	Spin: forward slow (10–560 °/s)
		194–254	Spin: forward slow ... backwards slow
		255	Spin: backwards slow (560–10 °/s)
13	Gobo 2	0–5	Fix Gobos: Open
		6–14	Gobo 1
		15–23	Gobo 2
		24–32	Gobo 3
		33–41	Gobo 4
		42–50	Gobo 5
		51–59	Gobo 6
		60–68	Gobo 7
		69–77	Gobo 8
		78–91	Shake Gobo 1
		92–105	Shake Gobo 2
		106–119	Shake Gobo 3
		120–133	Shake Gobo 4
		134–147	Shake Gobo 5
		148–161	Shake Gobo 6
		162–175	Shake Gobo 7
		176–189	Shake Gobo 8
		190–221	Gobo Wheel rotation fwd: fast to slow
		222–223	Gobo Wheel rotation fwd: Stop
		224–255	Gobo Wheel rotation fwd: Slow to fast
14	Prism		Prisma select
		0–31	Open
		32–255	Prism 2 (6 Facet)
15	Prism Rotation	0–127	Prism position 0 to 540 (540°)

CH	Function	DMX	Description
15	Prism Rotation (continued)	128–189	Prism Rotation: forward fast to slow
		190–193	Prism Rotation: stop
		194–255	Prism Rotation: Backwards slow to fast
16	Prism 2	0–31	Open
		32–255	3 facet prism
17	Prism 2 Rotation	0–127	Prism position 0 to 540 (540°)
		128–189	Prism 2 Pos: forward fast to slow
		190–193	Prism 2 Pos: stop
		194–255	Prism 2 Pos: Backwards slow to fast
18	Frost	0	Open
		1–254	Open ... Frost
		255	Frost
19	Iris	0	Iris: Open
		1–191	Iris: Open ... Close
		192	Iris: Close
		193–225	Iris
		226	Puls with Dim: slow
		227–234	Puls with Dim: slow ... fast
		235	Puls with Dim: fast
		236	Puls without Dim: slow
		237–244	Puls without Dim: slow ... fast
		245	Puls without Dim: fast
		246	Puls Random without Dim: slow
		247–254	Puls Random without Dim: slow ... fast
		255	Puls Random without Dim: fast
20	Zoom	0–127	Wide ... Mid
		127–255	Mid ... narrow
		255	Narrow
21	Zoom Fine	0–255	Fine adjustment of CH 20
22	Focus	0–255	Focus
23	Focus Fine	0–255	Fine adjustment of CH 22
24	Shaper Rotation		Blade Modul rotation
		0–127	0 <- ... Mid
		127–255	Mid ... 100 ->
		255	100 ->
25	Shaper Rotation Fine	0–255	Fine adjustment of CH 24
26	Blade 1 A	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
27	Blade 1 B	0	Open

CH	Function	DMX	Description
27	Blade 1 B (continued)	1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
28	Blade 2 A	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
29	Blade 2 B	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
30	Blade 3 A	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
31	Blade 3 B	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
32	Blade 4 A	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
33	Blade 4 B	0	Open
		1–63	Open ... Mid
		64	Mid
		65–254	Mid ... Close
		255	Close
34	Shutter	0–31	Shutter Closed (1)
		32–63	Shutter Open (1)
		64–66	Strobe slow
		67–77	Strobe slow ... Strobe mid
		78–80	Strobe mid
		81–92	Strobe mid ... Strobe fast
		93–95	Strobe fast
		96–127	Shutter Open (2)

CH	Function	DMX	Description
34	Shutter (continued)	128–130	Pulse slow
		131–140	Pulse slow ... Pulse mid
		141–143	Pulse mid
		144–156	Pulse mid ... Pulse fast
		157–159	Pulse fast
		160–191	Shutter Open (3)
		192–194	Str Rnd slow
		195–204	Str Rnd slow ... Str Rnd mid
		205–207	Str Rnd mid
		208–220	Str Rnd mid ... Str Rnd fast
		221–223	Str Rnd fast
		224–255	Shutter Open (4)
35	Dimmer	0–255	
36	Dimmer Fine	0–255	Fine adjustment of CH 35
37	Dimmer Curve	0–20	Standard
		21–40	Stage
		41–60	TV
		61–80	Architectural
		81–100	Theater
		101–255	Default to Unit Setting
38	Control	0–39	Control off
		40–44	Fan Control - Auto (Default)
		45–49	Fan Control -High
		50–54	Fan Control - Low
		55–79	No function
		80–84	All motor reset
		85–87	P/T motor reset
		88–90	CMY motor reset
		91–93	Gobo motor reset
		94–96	Blade motor reset
		97–99	Other motor reset
		100–255	No function

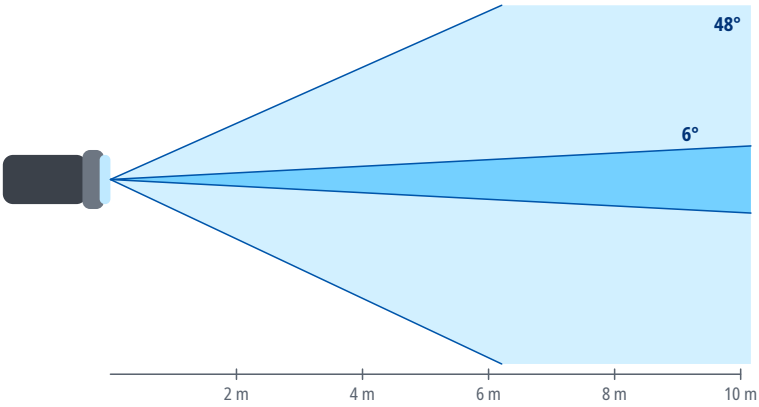
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	550 W
Luminous flux	33,000 lm
Color temperature	6,500 K
Color rendering index (CRI)	72
Optics	
Zoom	6–48°
Movement	
Pan	540°
Tilt	220°
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
RJ45 connectors	RJ45 IN/OUT
Electrical	
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	27.8 kg
Operating environment	
Operating temperature	-20 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2600–6500 K
Strobe frequency	1–20 Hz
Color wheel 1 rotation	up to 560 °/s (93 rpm)
Gobo wheel 2 rotation	up to 800 °/s (133 rpm)
Gobo wheel 3 rotation	up to 800 °/s (133 rpm)
Gobo 2 rotation	up to 800 °/s (133 rpm)
Prism 1 rotation	up to 500 °/s (83 rpm)
Prism 2 rotation	up to 500 °/s (83 rpm)

Spot diameter



Distance	Ø 6°	Ø 48°
2 m	0.21 m	1.8 m
4 m	0.42 m	3.6 m
6 m	0.63 m	5.3 m
8 m	0.84 m	7.1 m
10 m	1 m	8.9 m
15 m	1.6 m	13.4 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.