DMX REFERENCE

RA2000Profile

Prolights



Manufacturer	Prolights
GDTF file	Prolights_RA2000Profile_88424.gdtf
GDTF revision	Rev 15 - Added Snap Feature · 2025-03-05
Generated	2026-11-24

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1 About this manual

This document describes the RA2000Profile by Prolights. It was compiled from the GDTF file Prolights_RA2000Profile_88424.gdtf from the GDTF-Share library.

File revision: “Rev 15 - Added Snap Feature”.

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 Prolights; 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	32 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
38ch	38	13	1, 39, 77, 115, ...
39ch	39	13	1, 40, 79, 118, ...
40ch	40	12	1, 41, 81, 121, ...
41ch	41	12	1, 42, 83, 124, ...
44ch	44	11	1, 45, 89, 133, ...

No light? Check these channels

- 38ch: CH 6 Shutter at 0–10, 93, 174, 255 “Open” or 83–92 or 164–173 or 245–254; CH 7 Dimmer above 0
- 39ch: CH 6 Shutter at 0–10, 93, 174, 255 “Open” or 83–92 or 164–173 or 245–254; CH 7 Dimmer above 0
- 40ch: CH 6 Shutter at 0–10, 93, 174, 255 “Open” or 83–92 or 164–173 or 245–254; CH 7 Dimmer above 0
- 41ch: CH 6 Shutter at 0–10, 93, 174, 255 “Open” or 83–92 or 164–173 or 245–254; CH 7 Dimmer above 0
- 44ch: CH 6 Shutter at 0–10, 93, 174, 255 “Open” or 83–92 or 164–173 or 245–254; CH 7 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.

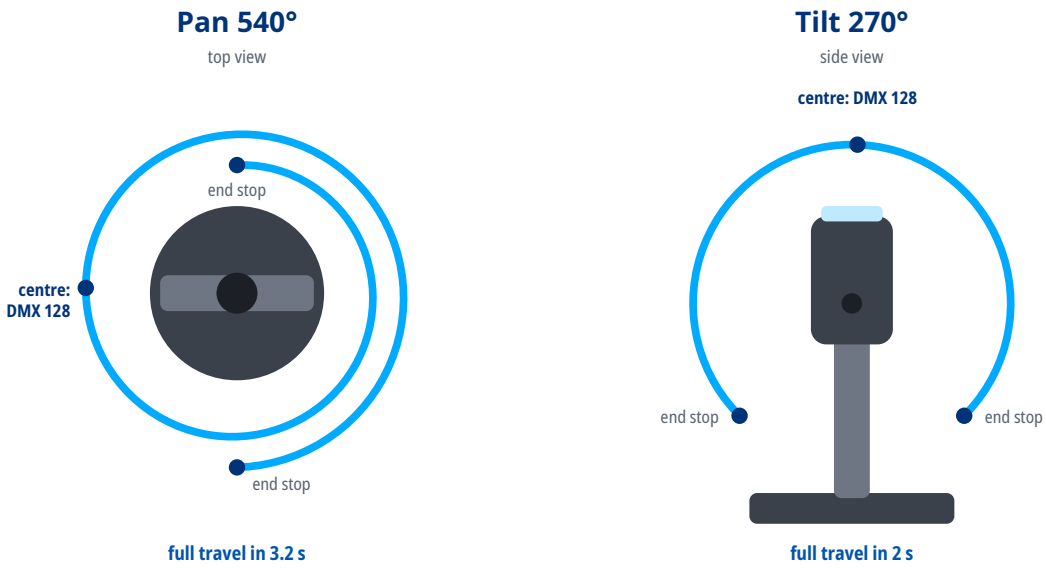
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do 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

Description in the GDTF file

“The Ra 2000Profile has been designed in response to feedback from global users and by lighting designers. A universal moving profile/spot that lighting designers and users can use for theatrical, touring and TV productions.”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

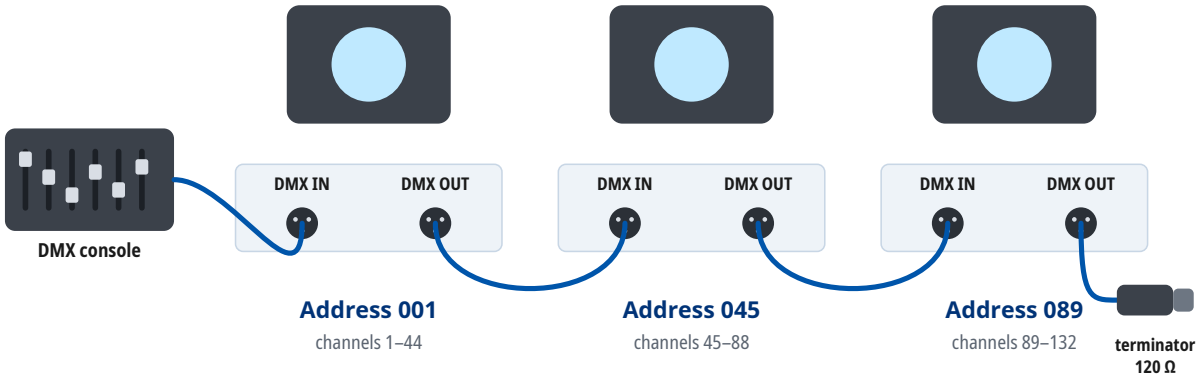
⚠ WARNING

- 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: 32 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 44ch: every unit occupies 44 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 “44ch”: 44.
- 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 “44ch”, you can use, for example, the start addresses 1, 45, 89, 133.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.
- The device supports RDM (Remote Device Management), two-way communication with the controller over the DMX line.

8 Functions at a glance

Functions in each DMX mode

	38ch 38 channels	39ch 39 channels	40ch 40 channels	41ch 41 channels	44ch 44 channels
Pan / Tilt	1, 3	1, 3	1, 3	1, 3	1, 3
Dimmer	7	7	7	7	7
Shutter / strobe	6	6	6	6	6
Color mixing	10–12	10–12	10–12	10–12	12–14
Color temperature	13	13	13	13	15
Color wheel	14	14	14	14	16
Gobo wheel	15	15	15	15	17
Gobo rotation	16	16	16	16	18
Prism	17	17	18	18	20
Frost	18, 19	18, 19	20, 21	20, 21	22, 23
Zoom	22	23	24	25	27
Focus	20	20, 21	22	22, 23	24, 25
Iris	26	27	28	29	31
Animation wheel	24, 25	25, 26	26, 27	27, 28	29, 30
Effects / macros	36	37	38	39	41

Color wheel

1. Color: Open — DMX 0–4
2. Deep Red — DMX 10–13
3. Deep Blue — DMX 19–22
4. Primary Green — DMX 28–31
5. Half Minus Green — DMX 37–40
6. Light Orange — DMX 46–49
7. Congo Blue — DMX 55–58

Gobo wheel

1
Rotating Gobo: Open
DMX 0–5

2 
Rotating Gobo: Gobo 1
DMX 6–10

3 
Rotating Gobo: Gobo 2
DMX 11–15

4 
Rotating Gobo: Gobo 3
DMX 16–20

5 
Rotating Gobo: Gobo 4
DMX 21–25

6 
Rotating Gobo: Gobo 5
DMX 26–30

7 
Rotating Gobo: Gobo 6
DMX 31–35

8 
Gobo7
DMX 36–41

Prism

1
Open
DMX 0–4

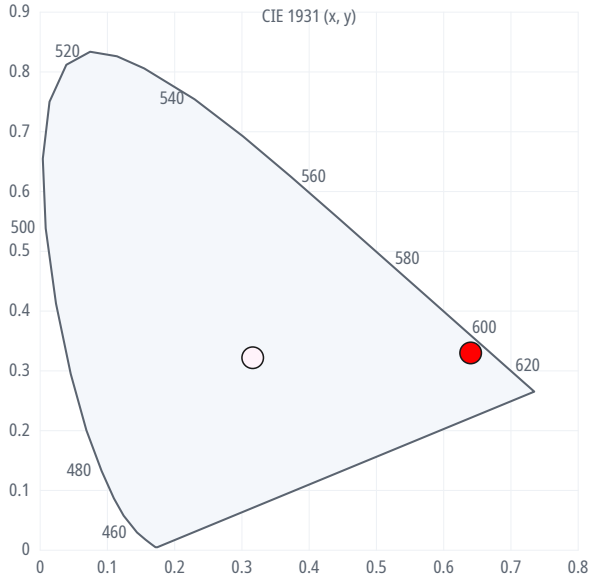
2 
4 facets
0 degrees ... 360 degrees
DMX 6

Animation wheel

1
Open
DMX 0

2 
Animation
DMX 1–255

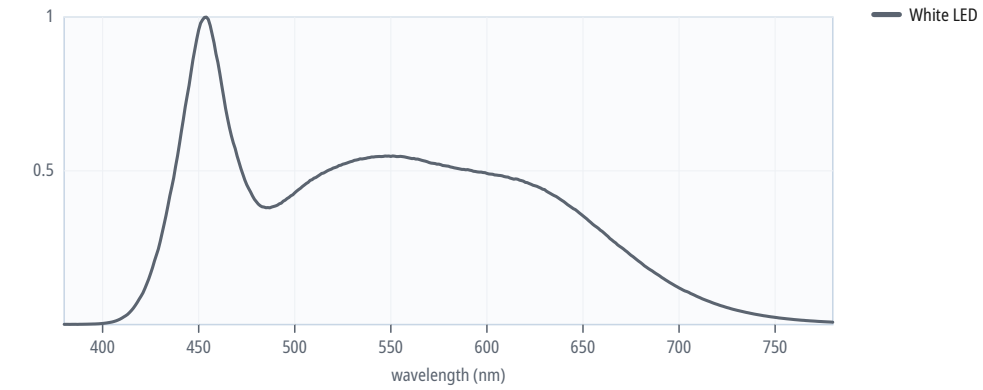
LED colors



LED	x	y
White LED	0.316	0.322
Red LED	0.640	0.330

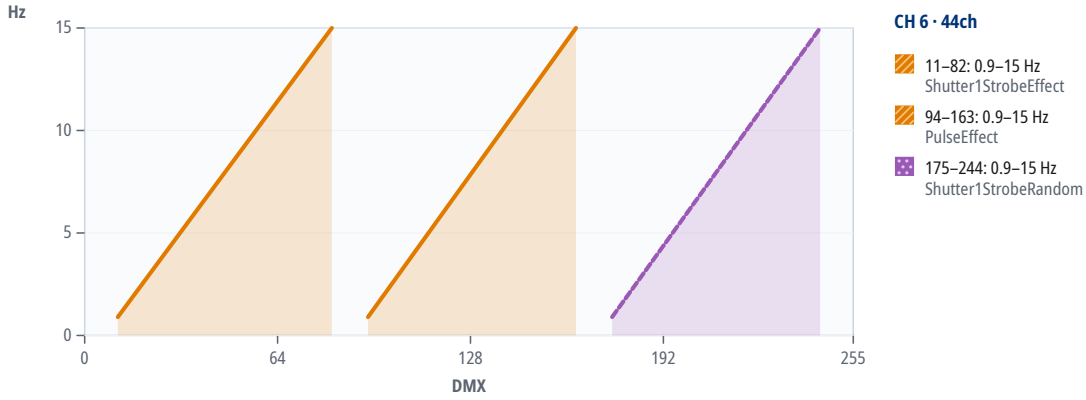
The dots are the LED colors the GDTF file states.

Spectra of the light sources



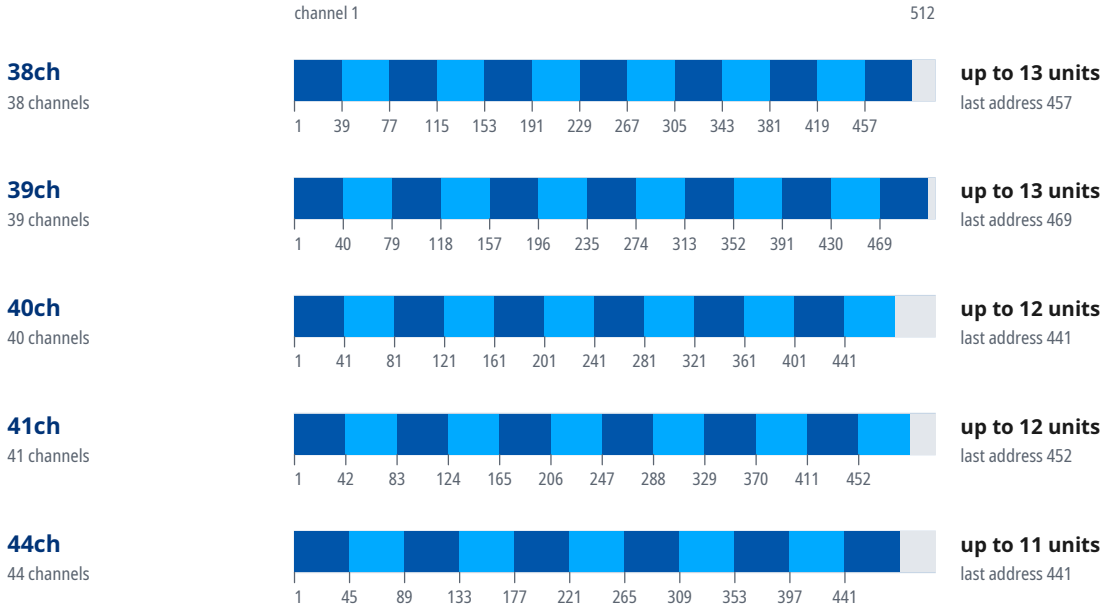
Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “44ch”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	221	11	441	16	U2 · 177
2	45	7	265	12	U2 · 1	17	U2 · 221
3	89	8	309	13	U2 · 45	18	U2 · 265
4	133	9	353	14	U2 · 89	19	U2 · 309
5	177	10	397	15	U2 · 133	20	U2 · 353

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 38ch

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 Shutter at 0–10, 93, 174, 255 “Open” or 83–92 or 164–173 or 245–254; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 0, CH 7 Dimmer 255, CH 13 CTO 0, CH 14 Colors 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan 1
		128	Center
		128–255	Pan 1
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt 1
		128	Center
		128–255	Tilt 1
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–83	Position Effect: Fast
		84–167	Mid
		168–250	Position Effect: Slow
		251–255	BlackOutMode
6	Shutter	0–10	Open
		11	Shutter 1 Strobe Effect: Slow
		12–45	Slow ... Mid
		46	Mid
		47–81	Mid ... Fast
		82	Shutter 1 Strobe Effect: Fast
		83–92	Open 1
		93	Open
		94–163	PulseEffect (0.9–15 Hz)
		164–173	Open 2
		174	Open
		175	StrobeRandom
		176–244	Shutter 1 Strobe Random
		245–254	Open 3
		255	Open
7	Dimmer	0–255	Closed ... Open
		255	Open
8	Dimmer Fine	0–255	Fine adjustment of CH 7
9	Dimmer Mode	0–51	As From Menu
		52–101	Dimmer Mode: Off
		102–152	Dimmer Mode: Fast
		153–203	Middle
		204–255	Dimmer Mode: Slow
10	Cyan	0	Min
		1–254	Min ... Max
		255	Max
11	Magenta	0	Min
		1–254	Min ... Max

CH	Function	DMX	Description
11	Magenta (continued)	255	Max
12	Yellow	0	Min
		1–254	Min ... Max
		255	Max
13	CTO	0	Min
		1–254	Min ... Max
		255	Max
14	Colors	0–4	Color: Open
		5–9	Open+Deep Red
		10–13	Deep Red
		14–18	Deep Red + Deep Blue
		19–22	Deep Blue
		23–27	Deep Blue + Primary Green
		28–31	Primary Green
		32–36	Primary Green + Half Minus Green
		37–40	Half Minus Green
		41–45	Half Minus Green + Light Orange
		46–49	Light Orange
		50–54	Light Orange + Congo Blue
		55–58	Congo Blue
		59–63	Congo Blue + Open
		64	CW Spin: Stop
		65–94	Stop ... CWSpin Fast
		95	CWSpin Fast
		96	CCWSpin Fast
		97–126	CCWSpin Fast ... Stop
		127	CCW Spin: Stop
		128	0 degrees
		129–254	0 degrees ... 360 degrees
		255	360 degrees
15	Gobo	0–5	Rotating Gobo: Open
		6–10	Rotating Gobo: Gobo 1
		11–15	Rotating Gobo: Gobo 2
		16–20	Rotating Gobo: Gobo 3
		21–25	Rotating Gobo: Gobo 4
		26–30	Rotating Gobo: Gobo 5
		31–35	Rotating Gobo: Gobo 6
		36–40	Rotating Gobo: Gobo 7
		41–55	Rotating Gobo Shake: Gobo 1 (0.9–10 Hz)
		56–70	Rotating Gobo Shake: Gobo 2 (0.9–10 Hz)
		71–85	Rotating Gobo Shake: Gobo 3 (0.9–10 Hz)

CH	Function	DMX	Description
15	Gobo (continued)	86–100	Rotating Gobo Shake: Gobo 4 (0.9–10 Hz)
		101–115	Rotating Gobo Shake: Gobo 5 (0.9–10 Hz)
		116–130	Rotating Gobo Shake: Gobo 6 (0.9–10 Hz)
		131–145	Rotating Gobo Shake: Gobo 7 (0.9–10 Hz)
		146	Stop
		147	CW Slow2Fast 1/8 (1–10 °/s)
		148–154	CW Slow2Fast 2/8 (10–20 °/s)
		155–161	CW Slow2Fast 3/8 (20–30 °/s)
		162–169	CW Slow2Fast 4/8 (30–40 °/s)
		170–178	CW Slow2Fast 5/8 (40–50 °/s)
		179–185	CW Slow2Fast 6/8 (50–60 °/s)
		186–192	CW Slow2Fast 7/8 (60–70 °/s)
		193–200	CW Slow2Fast 8/8
		201	NoRotation
		202–208	CCW Slow2Fast 1/8 (1–10 °/s)
		209–215	CCW Slow2Fast 2/8 (10–20 °/s)
		216–222	CCW Slow2Fast 3/8 (20–30 °/s)
		223–229	CCW Slow2Fast 4/8 (30–40 °/s)
		230–236	CCW Slow2Fast 5/8 (40–50 °/s)
		237–243	CCW Slow2Fast 6/8 (50–60 °/s)
		244–245	CCW Slow2Fast 6/8 ... CCW Slow2Fast 7/8
		246–252	CCW Slow2Fast 7/8 (60–70 °/s)
		253–255	CCW Slow2Fast 8/8
16	Gobo Rotation	0–191	0-360 (360°)
		192–221	CWSpin: Slow2Fast (1–360 °/s)
		222–225	Stop
		226–255	CCWSpin: Fast2Slow (360–1 °/s)
17	Prism	0–5	Open
		6	0 degrees
		7–190	0 degrees ... 360 degrees
		191	360 degrees
		192	CWSpin Slow
		193–222	CWSpin Slow ... CWSpin Fast
		223	CWSpin Fast
		224	CCWSpin Fast
		225–254	CCWSpin Fast ... CCWSpin Slow
		255	CCWSpin Slow
18	Frost	0	Min
		1–254	Min ... Max
		255	Max
19	Frost 2	0	MIn

CH	Function	DMX	Description
19	Frost 2 (continued)	1–254	MIn ... Max
		255	Max
20	Focus	0–255	Min ... Max
		255	Max
21	Focus Fine	0–255	Fine adjustment of CH 20
22	Zoom	0–255	Min ... Max
		255	Max
23	Zoom Fine	0–255	Fine adjustment of CH 22
24	Animation System		Linear Insertion
		0	Open
		1–255	Animation
25	Animation System Rotation Speed		When CH 24 is 0:
		0–255	Open
			When CH 24 is 1–255:
		4	CWSpin: Stop
		5–127	CWSpin
		128–131	Stop
		132	CCWSpin: Stop
		133–255	CCWSpin
26	Iris	0	Large
		1–62	Large ... Small
		63	Small
		64	Iris Effect: Slow
		65–126	Iris Effect: Slow ... Fast
		127	Iris Effect: Fast
		128	Iris Pulse: Slow
		129–190	Iris Pulse: Slow ... Fast
		191	Iris Pulse: Fast
		192	Iris Pulse: Slow
		193–254	Iris Pulse: Slow ... Fast
		255	Iris Pulse: Fast
27	Blade 1 A	0	Out
		1–254	Out ... In
		255	In
28	Blade 1 Rotation	0–127	From -25 degrees to 0
		128	0 degrees
		129–255	From 0 degrees to +25
29	Blade 2 A	0	Out
		1–254	Out ... In
		255	In
30	Blade 2 Rotation	0–127	From -25 degrees to 0

CH	Function	DMX	Description
30	Blade 2 Rotation (continued)	128	0 degrees
		129–255	From 0 degrees to +25
31	Blade 3 A	0	Out
		1–254	Out ... In
		255	In
32	Blade 3 Rotation	0–127	From -25 degrees to 0
		128	0 degrees
		129–255	From 0 degrees to +25
33	Blade 4 A	0	Out
		1–254	Out ... In
		255	In
34	Blade 4 Rotation	0–127	From -25 degrees to 0
		128	0 degrees
		129–255	From 0 degrees to +25
35	Shaper Rotation	0	Left to Center
		1–127	Left to Center ... Center
		128	Center
		129–254	Center ... Center To Right
		255	Center To Right
36	Shaper Macros	0–3	No Function
		4–11	1
		12–18	2
		19–25	3
		26–32	4
		33–39	5
		40–47	6
		48–54	7
		55–61	8
		62–68	9
		69–75	10
		76–82	11
		83–90	12
		91–97	13
		98–104	14
		105–111	15
		112–118	16
		119–125	17
		126–133	18
		134–140	19
		141–147	20
		148–155	21
		156–161	22

CH	Function	DMX	Description
36	Shaper Macros (continued)	162–168	23
		169–176	24
		177–183	25
		184–190	26
		191–197	27
		198–204	28
		205–211	29
		212–219	30
		220–226	31
		227–233	32
		234–240	33
		241–247	34
		248–255	35
37	Shaper Macros Speed	0	Slow
		1–254	Slow ... Fast
		255	Fast
38	Control	0–7	No function
		8–15	FixtureGlobalReset
		16–23	PositionReset
		24–31	Animation Reset
		32–39	Gobo Wheel Reset
		40–47	Frame Reset
		48–55	Other Reset
		56–63	Color Mix Reset
		64–71	Motor Fast Mode
		72–79	Red Led Control: Off
		80–87	Red Led Control: On
		88–95	Auto
		96–103	Amber Shift Control: Off
		104–111	Amber Shift Control: On
		112–255	TBD

Mode 39ch

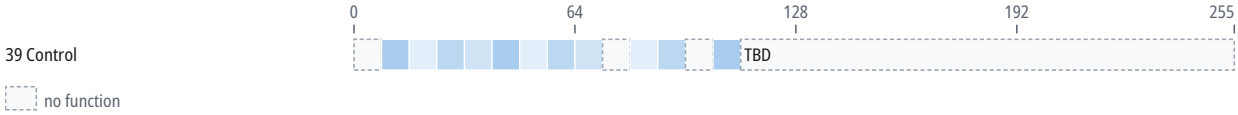
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 6 Shutter at 0–10, 93, 174, 255 “Open” or 83–92 or 164–173 or 245–254; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 0, CH 7 Dimmer 255, CH 13 CTO 0, CH 14 Colors 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “38ch” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “38ch” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “38ch” (p. 13)
6	Shutter		Same as CH 6 in the mode “38ch” (p. 13)
7	Dimmer		Same as CH 7 in the mode “38ch” (p. 13)
8	Dimmer Fine	0–255	Fine adjustment of CH 7
9	Dimmer Mode		Same as CH 9 in the mode “38ch” (p. 13)
10	Cyan		Same as CH 10 in the mode “38ch” (p. 13)
11	Magenta		Same as CH 11 in the mode “38ch” (p. 13)
12	Yellow		Same as CH 12 in the mode “38ch” (p. 14)
13	CTO		Same as CH 13 in the mode “38ch” (p. 14)
14	Colors		Same as CH 14 in the mode “38ch” (p. 14)
15	Gobo		Same as CH 15 in the mode “38ch” (p. 14)
16	Gobo Rotation		Same as CH 16 in the mode “38ch” (p. 15)
17	Prism		Same as CH 17 in the mode “38ch” (p. 15)
18	Frost		Same as CH 18 in the mode “38ch” (p. 15)
19	Frost 2		Same as CH 19 in the mode “38ch” (p. 15)
20	Focus Mode	0	Auto Focus OFF
		1–7	Auto Focus ON: 4 meters
		8–15	Auto Focus ON: 6 meters
		16–23	Auto Focus ON: 8 meters
		24–31	Auto Focus ON: 10 meters
		32–39	Auto Focus ON: 12 meters
		40–47	Auto Focus ON: 14 meters
		48–55	Auto Focus ON: 16 meters
		56–63	Auto Focus ON: 18 meters
		64–71	Focus On Gobos: 4 meters
		72–79	Focus On Gobos: 6 meters
		80–87	Focus On Gobos: 8 meters
		88–95	Focus On Gobos: 10 meters
		96–103	Focus On Gobos: 12 meters
		104–111	Focus On Gobos: 14 meters
		112–119	Focus On Gobos: 16 meters
		120–127	Focus On Gobos: 18 meters

CH	Function	DMX	Description
20	Focus Mode (continued)	128–255	Focus On Gobos
21	Focus		Same as CH 20 in the mode “38ch” (p. 16)
22	Focus Fine	0–255	Fine adjustment of CH 21
23	Zoom		Same as CH 22 in the mode “38ch” (p. 16)
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Animation System		Same as CH 24 in the mode “38ch” (p. 16)
26	Animation System Rotation Speed		When CH 25 is 0:
		0–255	Open
			When CH 25 is 1–255:
		4	CWSpin: Stop
		5–127	CWSpin
		128–131	Stop
		132	CCWSpin: Stop
		133–255	CCWSpin
27	Iris		Same as CH 26 in the mode “38ch” (p. 16)
28	Blade 1 A		Same as CH 27 in the mode “38ch” (p. 16)
29	Blade 1 Rotation		Same as CH 28 in the mode “38ch” (p. 16)
30	Blade 2 A		Same as CH 29 in the mode “38ch” (p. 16)
31	Blade 2 Rotation		Same as CH 30 in the mode “38ch” (p. 16)
32	Blade 3 A		Same as CH 31 in the mode “38ch” (p. 17)
33	Blade 3 Rotation		Same as CH 32 in the mode “38ch” (p. 17)
34	Blade 4 A		Same as CH 33 in the mode “38ch” (p. 17)
35	Blade 4 Rotation		Same as CH 34 in the mode “38ch” (p. 17)
36	Shaper Rotation		Same as CH 35 in the mode “38ch” (p. 17)
37	Shaper Macros		Same as CH 36 in the mode “38ch” (p. 17)
38	Shaper Macros Speed		Same as CH 37 in the mode “38ch” (p. 18)
39	Control		Same as CH 38 in the mode “38ch” (p. 18)

Mode 40ch

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 Shutter at 0–10, 93, 174, 255 “Open” or 83–92 or 164–173 or 245–254; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 0, CH 7 Dimmer 255, CH 13 CTO 0, CH 14 Colors 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “38ch” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “38ch” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “38ch” (p. 13)
6	Shutter		Same as CH 6 in the mode “38ch” (p. 13)
7	Dimmer		Same as CH 7 in the mode “38ch” (p. 13)
8	Dimmer Fine	0–255	Fine adjustment of CH 7
9	Dimmer Mode		Same as CH 9 in the mode “38ch” (p. 13)
10	Cyan		Same as CH 10 in the mode “38ch” (p. 13)
11	Magenta		Same as CH 11 in the mode “38ch” (p. 13)
12	Yellow		Same as CH 12 in the mode “38ch” (p. 14)
13	CTO		Same as CH 13 in the mode “38ch” (p. 14)
14	Colors		Same as CH 14 in the mode “38ch” (p. 14)
15	Gobo		Same as CH 15 in the mode “38ch” (p. 14)
16	Gobo Rotation	0–191	0-360 (360°)
		191–222	CWSpin: Slow2Fast (1–360 °/s)
		222–226	Stop
		226–255	CCWSpin: Fast2Slow (360–1 °/s)
17	Gobo Rotation Fine	0–255	Fine adjustment of CH 16
18	Prism	0–5	Open
		6–190	0 degrees ... 360 degrees
		191	360 degrees
		192–222	CWSpin Slow ... CWSpin Fast
		223	CWSpin Fast
		224–255	CCWSpin Fast ... CCWSpin Slow
		255	CCWSpin Slow
19	Prism Fine	0–255	Fine adjustment of CH 18
20	Frost		Same as CH 18 in the mode “38ch” (p. 15)
21	Frost 2		Same as CH 19 in the mode “38ch” (p. 15)
22	Focus		Same as CH 20 in the mode “38ch” (p. 16)
23	Focus Fine	0–255	Fine adjustment of CH 22
24	Zoom		Same as CH 22 in the mode “38ch” (p. 16)
25	Zoom Fine	0–255	Fine adjustment of CH 24
26	Animation System		Same as CH 24 in the mode “38ch” (p. 16)
27	Animation System Rotation Speed		When CH 26 is 0:
		0–255	Open
			When CH 26 is 1–255:
		4	CWSpin: Stop
		5–127	CWSpin

CH	Function	DMX	Description
27	Animation System Rotation Speed (continued)	128–131	Stop
		132	CCWSpin: Stop
		133–255	CCWSpin
28	Iris		Same as CH 26 in the mode “38ch” (p. 16)
29	Blade 1 A		Same as CH 27 in the mode “38ch” (p. 16)
30	Blade 1 Rotation		Same as CH 28 in the mode “38ch” (p. 16)
31	Blade 2 A		Same as CH 29 in the mode “38ch” (p. 16)
32	Blade 2 Rotation		Same as CH 30 in the mode “38ch” (p. 16)
33	Blade 3 A		Same as CH 31 in the mode “38ch” (p. 17)
34	Blade 3 Rotation		Same as CH 32 in the mode “38ch” (p. 17)
35	Blade 4 A		Same as CH 33 in the mode “38ch” (p. 17)
36	Blade 4 Rotation		Same as CH 34 in the mode “38ch” (p. 17)
37	Shaper Rotation		Same as CH 35 in the mode “38ch” (p. 17)
38	Shaper Macros		Same as CH 36 in the mode “38ch” (p. 17)
39	Shaper Macros Speed		Same as CH 37 in the mode “38ch” (p. 18)
40	Control		Same as CH 38 in the mode “38ch” (p. 18)

Mode 41ch

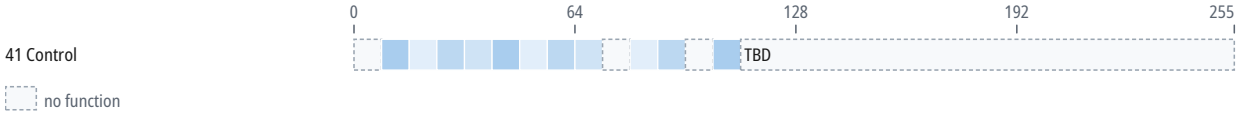
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 6 Shutter at 0–10, 93, 174, 255 “Open” or 83–92 or 164–173 or 245–254; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 0, CH 7 Dimmer 255, CH 13 CTO 0, CH 14 Colors 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “38ch” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “38ch” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “38ch” (p. 13)
6	Shutter		Same as CH 6 in the mode “38ch” (p. 13)
7	Dimmer		Same as CH 7 in the mode “38ch” (p. 13)
8	Dimmer Fine	0–255	Fine adjustment of CH 7
9	Dimmer Mode		Same as CH 9 in the mode “38ch” (p. 13)
10	Cyan		Same as CH 10 in the mode “38ch” (p. 13)
11	Magenta		Same as CH 11 in the mode “38ch” (p. 13)
12	Yellow		Same as CH 12 in the mode “38ch” (p. 14)
13	CTO		Same as CH 13 in the mode “38ch” (p. 14)
14	Colors		Same as CH 14 in the mode “38ch” (p. 14)
15	Gobo		Same as CH 15 in the mode “38ch” (p. 14)
16	Gobo Rotation		Same as CH 16 in the mode “40ch” (p. 23)
17	Gobo Rotation Fine	0–255	Fine adjustment of CH 16
18	Prism		Same as CH 18 in the mode “40ch” (p. 23)
19	Prism Fine	0–255	Fine adjustment of CH 18
20	Frost		Same as CH 18 in the mode “38ch” (p. 15)
21	Frost 2		Same as CH 19 in the mode “38ch” (p. 15)
22	Focus Mode		Same as CH 20 in the mode “39ch” (p. 20)
23	Focus		Same as CH 20 in the mode “38ch” (p. 16)
24	Focus Fine	0–255	Fine adjustment of CH 23
25	Zoom		Same as CH 22 in the mode “38ch” (p. 16)
26	Zoom Fine	0–255	Fine adjustment of CH 25
27	Animation System		Same as CH 24 in the mode “38ch” (p. 16)
28	Animation System Rotation Speed		When CH 27 is 0:
		0–255	Open
			When CH 27 is 1–255:
		4	CWSpin: Stop
		5–127	CWSpin
		128–131	Stop
		132	CCWSpin: Stop
		133–255	CCWSpin
29	Iris		Same as CH 26 in the mode “38ch” (p. 16)

CH	Function	DMX	Description
30	Blade 1 A		Same as CH 27 in the mode “38ch” (p. 16)
31	Blade 1 Rotation		Same as CH 28 in the mode “38ch” (p. 16)
32	Blade 2 A		Same as CH 29 in the mode “38ch” (p. 16)
33	Blade 2 Rotation		Same as CH 30 in the mode “38ch” (p. 16)
34	Blade 3 A		Same as CH 31 in the mode “38ch” (p. 17)
35	Blade 3 Rotation		Same as CH 32 in the mode “38ch” (p. 17)
36	Blade 4 A		Same as CH 33 in the mode “38ch” (p. 17)
37	Blade 4 Rotation		Same as CH 34 in the mode “38ch” (p. 17)
38	Shaper Rotation		Same as CH 35 in the mode “38ch” (p. 17)
39	Shaper Macros		Same as CH 36 in the mode “38ch” (p. 17)
40	Shaper Macros Speed		Same as CH 37 in the mode “38ch” (p. 18)
41	Control		Same as CH 38 in the mode “38ch” (p. 18)

Mode 44ch

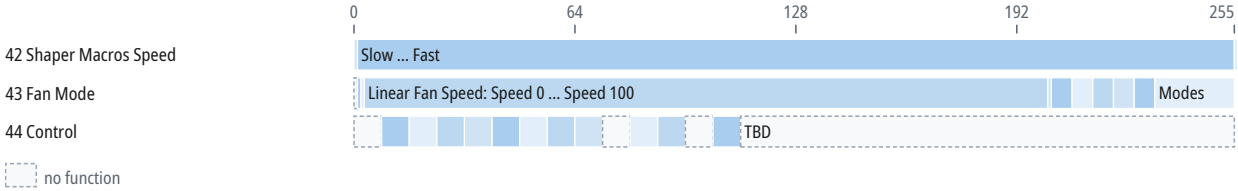
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 6 Shutter at 0–10, 93, 174, 255 “Open” or 83–92 or 164–173 or 245–254; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 0, CH 7 Dimmer 255, CH 15 CTO 0, CH 16 Colors 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “38ch” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “38ch” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “38ch” (p. 13)
6	Shutter		Same as CH 6 in the mode “38ch” (p. 13)
7	Dimmer		Same as CH 7 in the mode “38ch” (p. 13)
8	Dimmer Fine	0–255	Fine adjustment of CH 7
9	CRI Mode	0–255	Closed ... Open
		255	Open
10	CRI Mode Fine	0–255	Fine adjustment of CH 9
11	Dimmer Mode		Same as CH 9 in the mode “38ch” (p. 13)
12	Cyan		Same as CH 10 in the mode “38ch” (p. 13)
13	Magenta		Same as CH 11 in the mode “38ch” (p. 13)
14	Yellow		Same as CH 12 in the mode “38ch” (p. 14)
15	CTO		Same as CH 13 in the mode “38ch” (p. 14)
16	Colors		Same as CH 14 in the mode “38ch” (p. 14)
17	Gobo		Same as CH 15 in the mode “38ch” (p. 14)
18	Gobo Rotation		Same as CH 16 in the mode “40ch” (p. 23)
19	Gobo Rotation Fine	0–255	Fine adjustment of CH 18
20	Prism		Same as CH 18 in the mode “40ch” (p. 23)
21	Prism Fine	0–255	Fine adjustment of CH 20
22	Frost		Same as CH 18 in the mode “38ch” (p. 15)
23	Frost 2		Same as CH 19 in the mode “38ch” (p. 15)
24	Focus Mode		Same as CH 20 in the mode “39ch” (p. 20)
25	Focus		Same as CH 20 in the mode “38ch” (p. 16)
26	Focus Fine	0–255	Fine adjustment of CH 25
27	Zoom		Same as CH 22 in the mode “38ch” (p. 16)
28	Zoom Fine	0–255	Fine adjustment of CH 27
29	Animation System		Same as CH 24 in the mode “38ch” (p. 16)
30	Animation System Rotation Speed		When CH 29 is 0:
		0–255	Open
			When CH 29 is 1–255:
		4	CWSpin: Stop
		5–127	CWSpin

CH	Function	DMX	Description
30	Animation System Rotation Speed (continued)	128–131	Stop
		132	CCWSpin: Stop
		133–255	CCWSpin
31	Iris		Same as CH 26 in the mode “38ch” (p. 16)
32	Blade 1 A		Same as CH 27 in the mode “38ch” (p. 16)
33	Blade 1 Rotation		Same as CH 28 in the mode “38ch” (p. 16)
34	Blade 2 A		Same as CH 29 in the mode “38ch” (p. 16)
35	Blade 2 Rotation		Same as CH 30 in the mode “38ch” (p. 16)
36	Blade 3 A		Same as CH 31 in the mode “38ch” (p. 17)
37	Blade 3 Rotation		Same as CH 32 in the mode “38ch” (p. 17)
38	Blade 4 A		Same as CH 33 in the mode “38ch” (p. 17)
39	Blade 4 Rotation		Same as CH 34 in the mode “38ch” (p. 17)
40	Shaper Rotation		Same as CH 35 in the mode “38ch” (p. 17)
41	Shaper Macros		Same as CH 36 in the mode “38ch” (p. 17)
42	Shaper Macros Speed		Same as CH 37 in the mode “38ch” (p. 18)
43	Fan Mode	0–1	No function
		2	Linear Fan Speed: Speed 0
		3–200	Linear Fan Speed: Speed 0 ... Speed 100
		201	Linear Fan Speed: Speed 100
		202–207	Auto
		208–213	Silent
		214–219	Studio
		220–225	Performance
		226–231	Follow Output
		232–255	Modes
44	Control		Same as CH 38 in the mode “38ch” (p. 18)

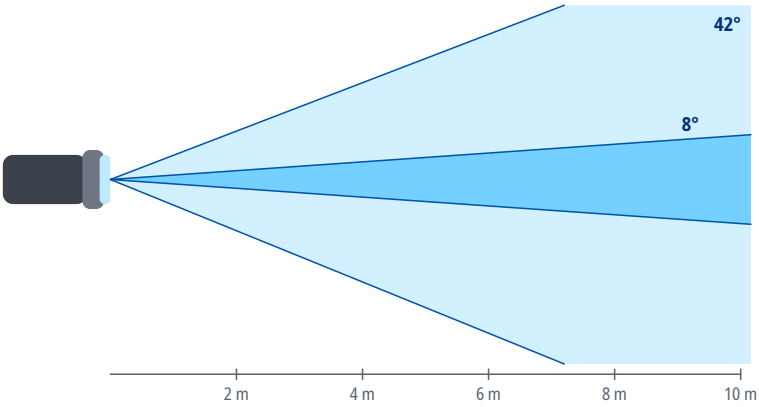
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	540 W
Luminous flux	13,900 lm
Color temperature	6,500 K
Color rendering index (CRI)	93
Optics	
Zoom	8–42°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	5-pin XLR IN/OUT
RJ45 connectors	RJ45 IN/OUT
RDM	yes (manufacturer ID 0x15D0, device model ID 0xD047)
Electrical	
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	32 kg
Operating environment	
Operating temperature	-10 to 50 °C

Speeds and ranges

Parameter	Value
Color temperature range	3000–6500 K
Strobe frequency	0.9–15 Hz
Color wheel rotation	up to 360 °/s (60 rpm)
Gobo wheel rotation	up to 70 °/s (12 rpm)
Gobo rotation	up to 360 °/s (60 rpm)
Prism rotation	up to 360 °/s (60 rpm)

Spot diameter



Distance	Ø 8°	Ø 42°
2 m	0.28 m	1.5 m
4 m	0.56 m	3.1 m
6 m	0.84 m	4.6 m
8 m	1.1 m	6.1 m
10 m	1.4 m	7.7 m
15 m	2.1 m	11.5 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.