DMX REFERENCE

Razer 650i Profile

Leding

Manufacturer	Leding
GDTF file	Leding_Razer_650i_Profile_141425.gdtf
GDTF revision	v003 · 2026-05-05
Generated	2026-11-24

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1 About this manual

This document describes the Razer 650i Profile by Leding. It was compiled from the GDTF file Leding_Razer_650i_Profile_141425.gdtf from the GDTF-Share library.

File revision: “v003”.

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 Leding; 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	35 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Basic	35	14	1, 36, 71, 106, ...
Standard	41	12	1, 42, 83, 124, ...
Extended	44	11	1, 45, 89, 133, ...

No light? Check these channels

- Basic: CH 33 Dimmer above 0; CH 34 Shutter at 0–9, 100–109 or 180–189 “Open”
- Standard: CH 38 Dimmer above 1; CH 40 Shutter at 0–9, 100–109 or 180–189 “Open”
- Extended: CH 41 Dimmer above 1; CH 43 Shutter at 0–9, 100–109 or 180–189 “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.

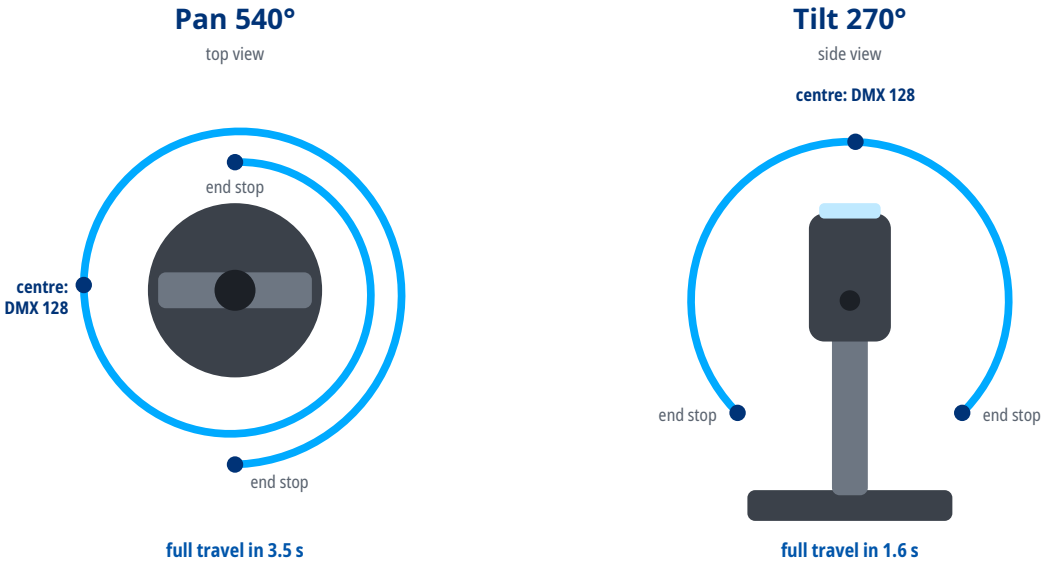
⚠ CAUTION

- 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

Range of movement



Full-travel times as stated in the GDTF file.

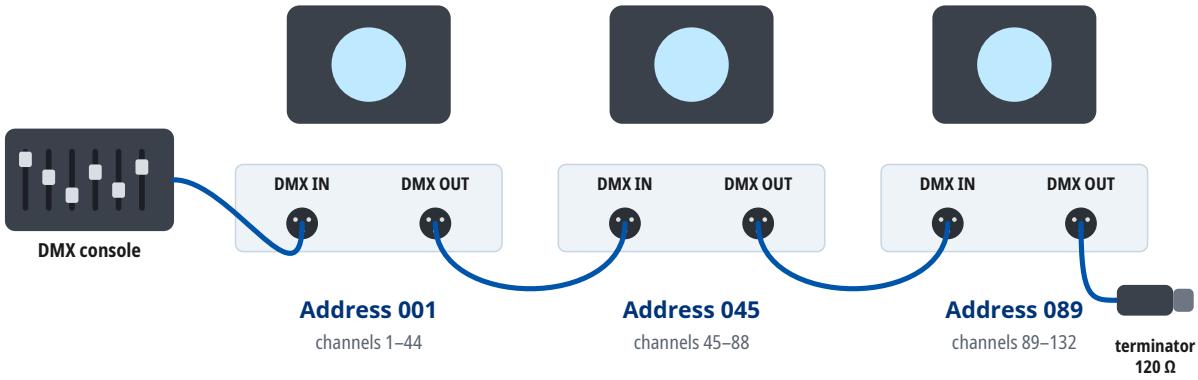
5 Installation

> ⚠ **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: 35 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 Extended: 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 “Extended”: 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 “Extended”, 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

	Basic 35 channels	Standard 41 channels	Extended 44 channels
Pan / Tilt	1, 2	1, 3	1, 3
Pan / Tilt resolution	8 bit	16 bit	16 bit
Dimmer	33	38	41
Dimmer resolution	8 bit	16 bit	16 bit
Shutter / strobe	34	40	43
Color mixing	4–6	6–8	6–8
Color temperature	7	9	9
Color wheel	10	12	12
Gobo wheel	11, 13	13, 16	14, 17
Gobo rotation	12	14	15
Prism	16	19	20
Frost	17, 18	20, 21	21, 22
Zoom	20	23	25
Focus	21, 22	25, 27	27, 29
Iris	19	22	23
Animation wheel	14, 15	17, 18	18, 19
Effects / macros	8	10	10

Color wheel

1. White — DMX 0–7
2. Red — DMX 8–15
3. Blue — DMX 16–23
4. Cyan — DMX 24–31
5. Orange — DMX 32–39
6. Yellow — DMX 40–47
7. UV — DMX 48–56

Gobo wheel 1

1

Gobo 2: Open
DMX 0–10

2

Gobo 1
DMX 11–15

3

Gobo 2
DMX 16–20

4

Gobo 3
DMX 21–25

5

Gobo 4
DMX 26–30

6

Gobo 5
DMX 31–35

7

Gobo 6
DMX 36–40

8

Gobo 7
DMX 41–45

9

Gobo 8
DMX 46–50

10

Gobo 9
DMX 51–55

11

Gobo 10
DMX 56–61

Gobo wheel 2

1

ROT Gobo 1: Open
DMX 0–10

2

Gobo 1
DMX 11–18

3

Gobo 2
DMX 19–26

4

Gobo 3
DMX 27–34

5

Gobo 4
DMX 35–42

6

Gobo 5
DMX 43–50

7

Gobo 6
DMX 51–58

8

Gobo 7
DMX 59–67

Prism

1

Prism 1: Open
DMX 0–10

2

4 facets
0-360
DMX 11–145

Animation wheel

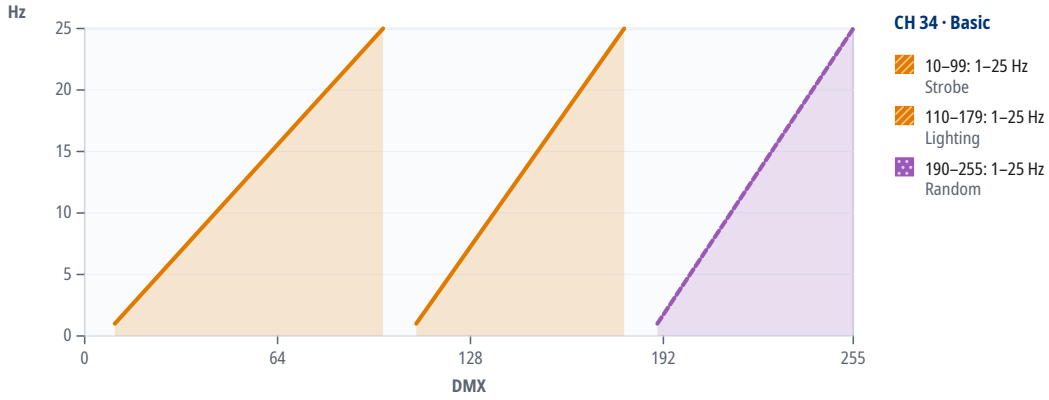
1

Open
DMX 0–127

2

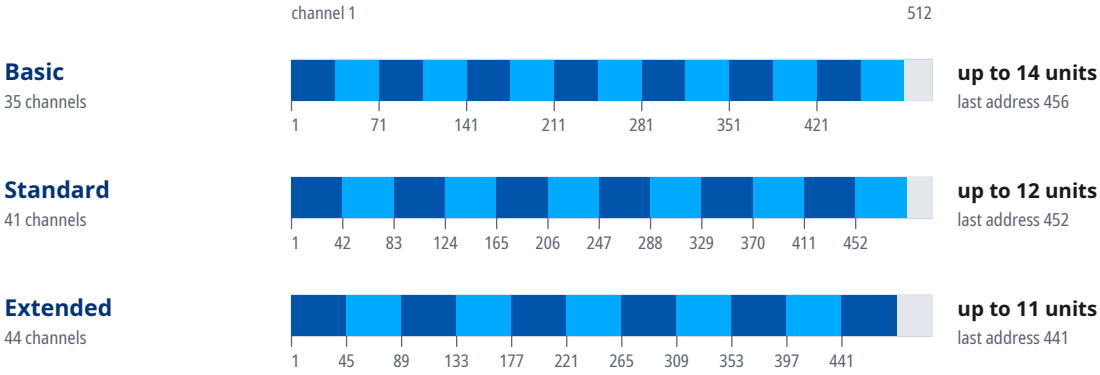
Animation
DMX 128–255

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Extended”

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

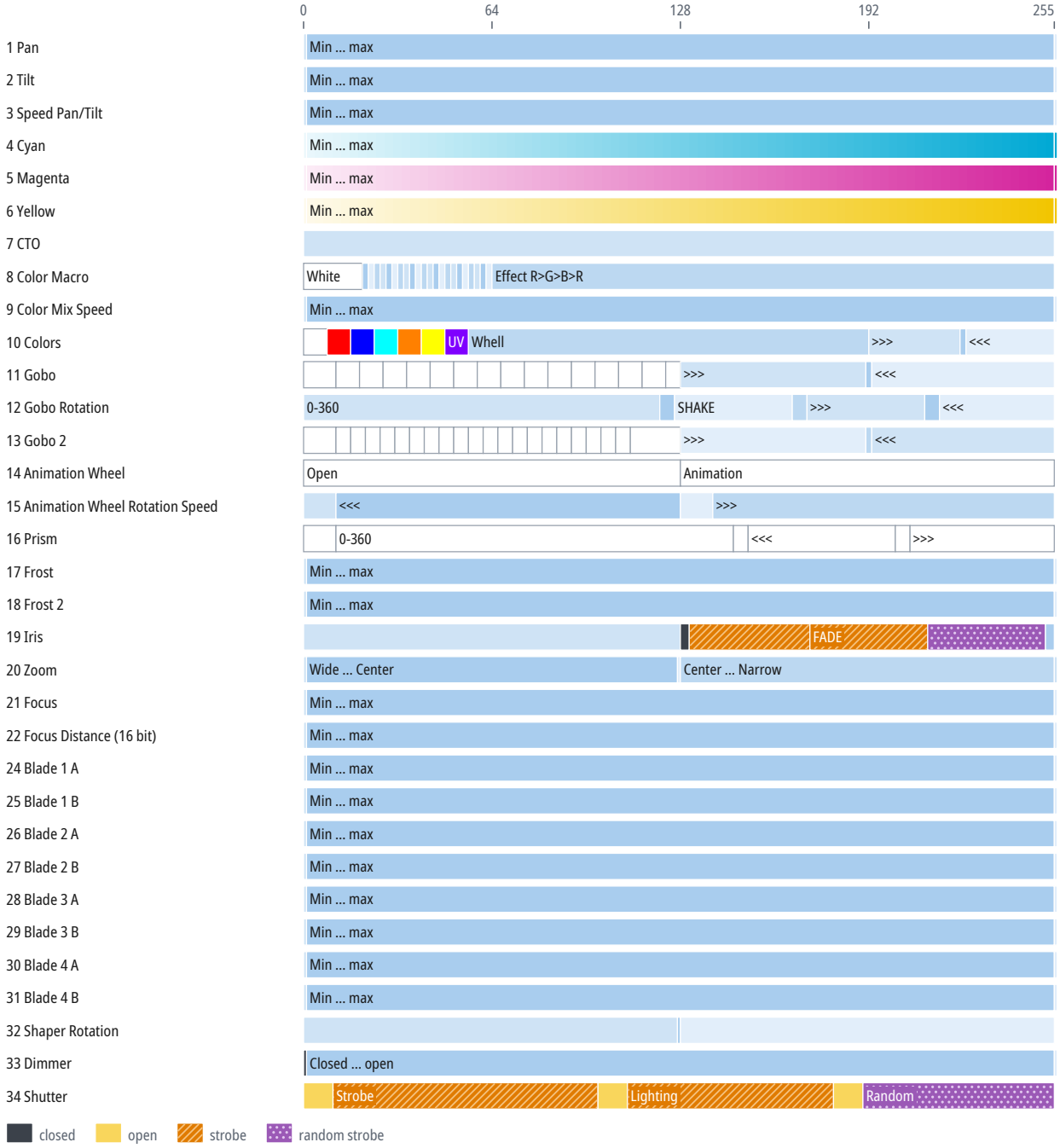
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode Basic

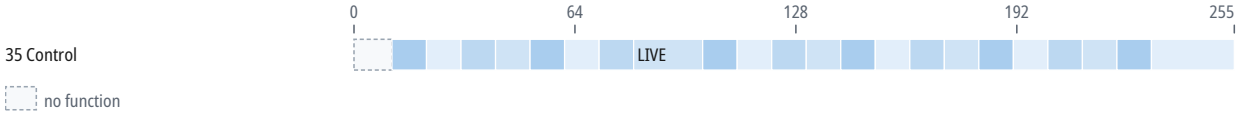
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 33 Dimmer above 0; CH 34 Shutter at 0–9, 100–109 or 180–189 “Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Cyan 0, CH 5 Magenta 0, CH 6 Yellow 0, CH 33 Dimmer 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0	Min
		1–254	Min … max
		255	Max
2	Tilt	0	Min
		1–254	Min … max
		255	Max
3	Speed Pan/Tilt	0	Min
		1–254	Min … max
		255	Max
4	Cyan	0	Min
		1–254	Min … max
		255	Max
5	Magenta	0	Min
		1–254	Min … max
		255	Max
6	Yellow	0	Min
		1–254	Min … max
		255	Max
7	CTO	0–255	6800–2700 K
8	Color Macro	0–19	White
		20–21	3000K
		22–23	3200K
		24–25	3500K
		26–27	4000K
		28–29	4500K
		30–31	5000K
		32–33	5400K
		34–35	5600K
		36–37	6000K
		38–39	6500K
		40–41	6800K
		42–43	L106
		44–45	L194
		46–47	L019
		48–49	R08
		50–51	L213

CH	Function	DMX	Description
8	Color Macro (continued)	52–53	R80
		54–55	L202
		56–57	L328
		58–59	R3314
		60–61	L101
		62–63	L768
		64–255	Effect R>G>B>R
9	Color Mix Speed		CMYK SPEED
		0	Min
		1–254	Min ... max
		255	Max
10	Colors	0–7	White
		8–15	Red
		16–23	Blue
		24–31	Cyan
		32–39	Orange
		40–47	Yellow
		48–55	UV
		56–191	Whell
		192–222	>>> (30–0 °/s)
		223–224	RAINBOW: STOP
		225–255	<<< (0–30 °/s)
11	Gobo	0–10	ROT Gobo 1: Open
		11–18	Gobo 1
		19–26	Gobo 2
		27–34	Gobo 3
		35–42	Gobo 4
		43–50	Gobo 5
		51–58	Gobo 6
		59–66	Gobo 7
		67–74	Gobo 1 sk
		75–82	Gobo 2 sk
		83–90	Gobo 3 sk
		91–98	Gobo 4 sk
		99–106	Gobo 5 sk
		107–114	Gobo 6 sk
		115–122	Gobo 7 sk
		123–127	Shake: Open #2
		128–190	>>> (300–0 °/s)
		191–192	Gobo 1 Select Effects: STOP
		193–255	<<< (0–300 °/s)
12	Gobo Rotation	0–120	0-360

CH	Function	DMX	Description
12	Gobo Rotation (continued)	121–125	Gobo 1 Pos: STOP1
		126–165	SHAKE (1–30 Hz)
		166–170	Shake: STOP2
		171–210	>>> (300–0 °/s)
		211–215	Rot: STOP3
		216–255	<<< (0–300 °/s)
13	Gobo 2	0–10	Gobo 2: Open
		11–15	Gobo 1
		16–20	Gobo 2
		21–25	Gobo 3
		26–30	Gobo 4
		31–35	Gobo 5
		36–40	Gobo 6
		41–45	Gobo 7
		46–50	Gobo 8
		51–55	Gobo 9
		56–60	Gobo 10
		61–65	Gobo 1 sk
		66–70	Gobo 2 sk
		71–75	Gobo 3 sk
		76–80	Gobo 4 sk
		81–85	Gobo 5 sk
		86–90	Gobo 6 sk
		91–95	Gobo 7 sk
		96–100	Gobo 8 sk
		101–105	Gobo 9 sk
		106–110	Gobo 10 sk
		111–127	Gobo 2 Wheel Shake: Open #2
		128–190	>>> (300–0 °/s)
		191–192	Gobo 2 Wheel Spin: STOP
		193–255	<<< (0–300 °/s)
14	Animation Wheel	0–127	Open
		128–255	Animation
15	Animation Wheel Rotation Speed	0–10	Stop
		11–127	<<< (0–300 °/s)
		128–138	Stop
		139–255	>>> (300–0 °/s)
16	Prism	0–10	Prism 1: Open
		11–145	0-360
		146–150	Prism 1: stop
		151–200	<<< (108000–0 °/s)
		201–205	Prism 1 Pos Rotate: stop

CH	Function	DMX	Description
16	Prism (continued)	206–255	>>> (0–108000 °/s)
17	Frost	0	Min
		1–254	Min … max
		255	Max
18	Frost 2	0	Min
		1–254	Min … max
		255	Max
19	Iris	0–127	Iris
		128–130	Iris: closed
		131–171	Iris Pulse Close: FAST (1–3 Hz)
		172–211	FADE (1–3 Hz)
		212–251	Iris Strobe Random: FAST (1–3 Hz)
		252–255	Close
20	Zoom	0	Wide
		1–126	Wide … Center
		127	Center
		128–254	Center … Narrow
		255	Narrow
21	Focus	0	Min
		1–254	Min … max
		255	Max
22	Focus Distance	0–1	Min
		1–255	Min … max
		255	Max
23	Focus Distance Fine	0–255	Fine adjustment of CH 22
24	Blade 1 A	0	Min
		1–254	Min … max
		255	Max
25	Blade 1 B	0	Min
		1–254	Min … max
		255	Max
26	Blade 2 A	0	Min
		1–254	Min … max
		255	Max
27	Blade 2 B	0	Min
		1–254	Min … max
		255	Max
28	Blade 3 A	0	Min
		1–254	Min … max
		255	Max
29	Blade 3 B	0	Min
		1–254	Min … max

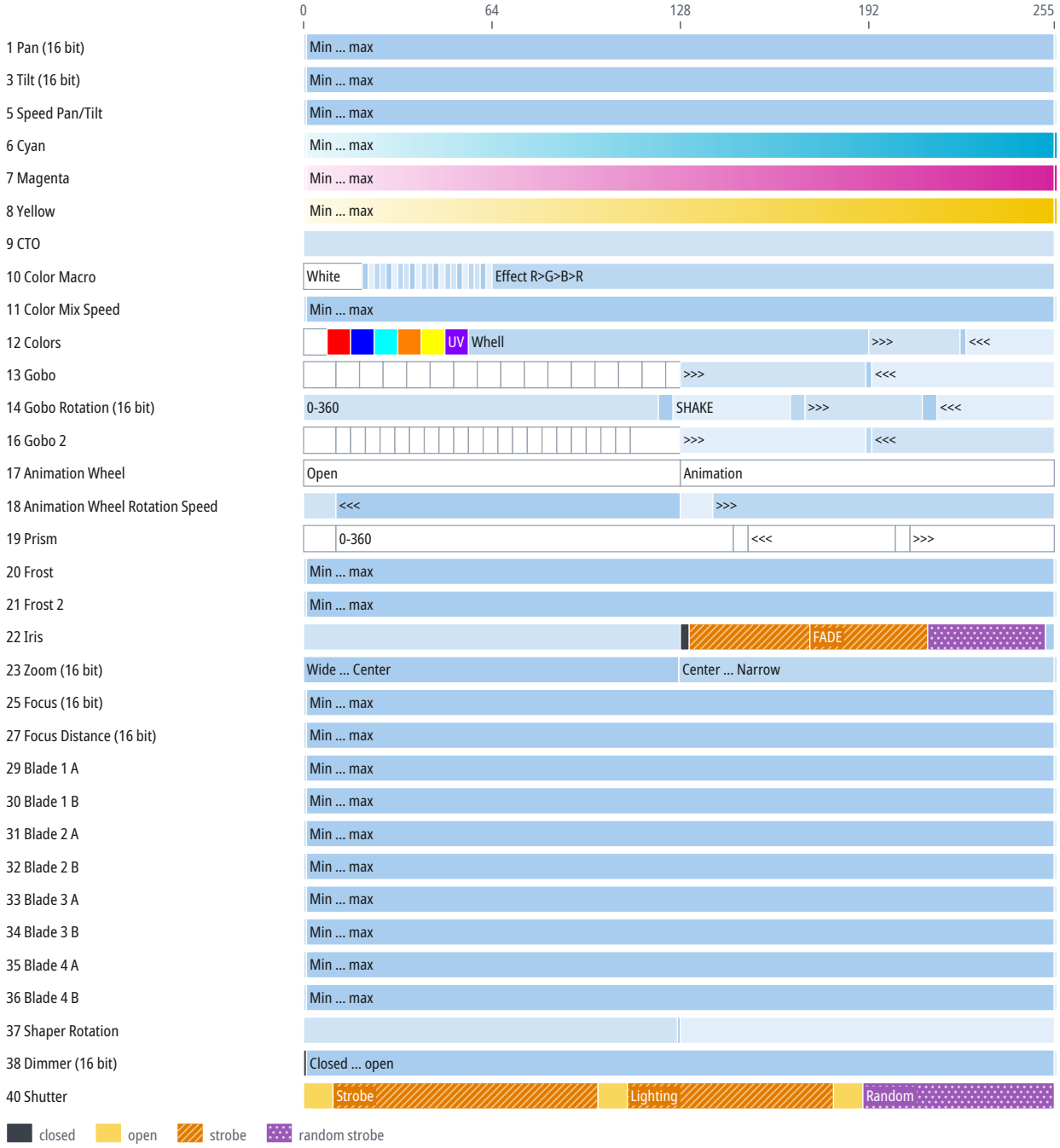
CH	Function	DMX	Description
29	Blade 3 B (continued)	255	Max
30	Blade 4 A	0	Min
		1–254	Min ... max
		255	Max
31	Blade 4 B	0	Min
		1–254	Min ... max
		255	Max
32	Shaper Rotation	0–126	Shaper Rot 1
		127	Center
		128–255	Shaper Rot 1
33	Dimmer	0	Closed
		1–254	Closed ... open
		255	Open
34	Shutter	0–9	NO FUNCTION1: Open
		10–99	Strobe (1–25 Hz)
		100–109	NO FUNCTION2: Open
		110–179	Lighting (1–25 Hz)
		180–189	NO FUNCTION3: Open
		190–255	Random (1–25 Hz)
35	Control	0–10	No Function
		11–20	PT BLACK ACTIVATED
		21–30	PT BLACK DEACTIVATED
		31–40	PAN INVERT
		41–50	TILT INVERT
		51–60	PT INVERT OFF
		61–70	STUDIO
		71–80	POWER
		81–100	LIVE
		101–110	DIM4
		111–120	DIM3
		121–130	DIM2
		131–140	DIM1
		141–150	DIM0
		151–160	1200HZ
		161–170	2400HZ
		171–180	4000HZ
		181–190	6000HZ
		191–200	25000HZ
		201–210	ALL RESET
		211–220	XY RESET
		221–230	COLOR RESET
		231–255	OTHER RESET

Mode Standard

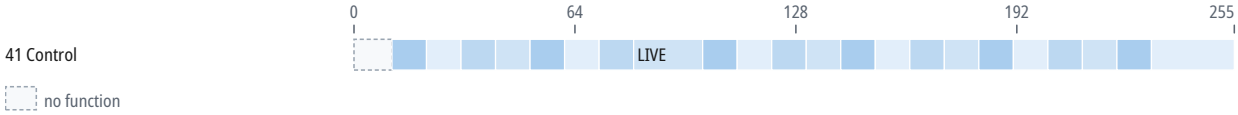
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 38 Dimmer above 1; CH 40 Shutter at 0–9, 100–109 or 180–189 “Open”. 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 38 Dimmer 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–1	Min
		1–255	Min … max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–1	Min
		1–255	Min … max
		255	Max
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 3 in the mode “Basic” (p. 11)
6	Cyan		Same as CH 4 in the mode “Basic” (p. 11)
7	Magenta		Same as CH 5 in the mode “Basic” (p. 11)
8	Yellow		Same as CH 6 in the mode “Basic” (p. 11)
9	CTO	0–255	6800–2700 K
10	Color Macro		Same as CH 8 in the mode “Basic” (p. 11)
11	Color Mix Speed		Same as CH 9 in the mode “Basic” (p. 12)
12	Colors		Same as CH 10 in the mode “Basic” (p. 12)
13	Gobo		Same as CH 11 in the mode “Basic” (p. 12)
14	Gobo Rotation		Same as CH 12 in the mode “Basic” (p. 12)
15	Gobo Rotation Fine	0–255	Fine adjustment of CH 14
16	Gobo 2		Same as CH 13 in the mode “Basic” (p. 13)
17	Animation Wheel		Same as CH 14 in the mode “Basic” (p. 13)
18	Animation Wheel Rotation Speed		Same as CH 15 in the mode “Basic” (p. 13)
19	Prism		Same as CH 16 in the mode “Basic” (p. 13)
20	Frost		Same as CH 17 in the mode “Basic” (p. 14)
21	Frost 2		Same as CH 18 in the mode “Basic” (p. 14)
22	Iris		Same as CH 19 in the mode “Basic” (p. 14)
23	Zoom	0–127	Wide … Center
		127	Center
		128–255	Center … Narrow
		255	Narrow
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Focus	0–1	Min
		1–255	Min … max
		255	Max
26	Focus Fine	0–255	Fine adjustment of CH 25
27	Focus Distance		Same as CH 22 in the mode “Basic” (p. 14)

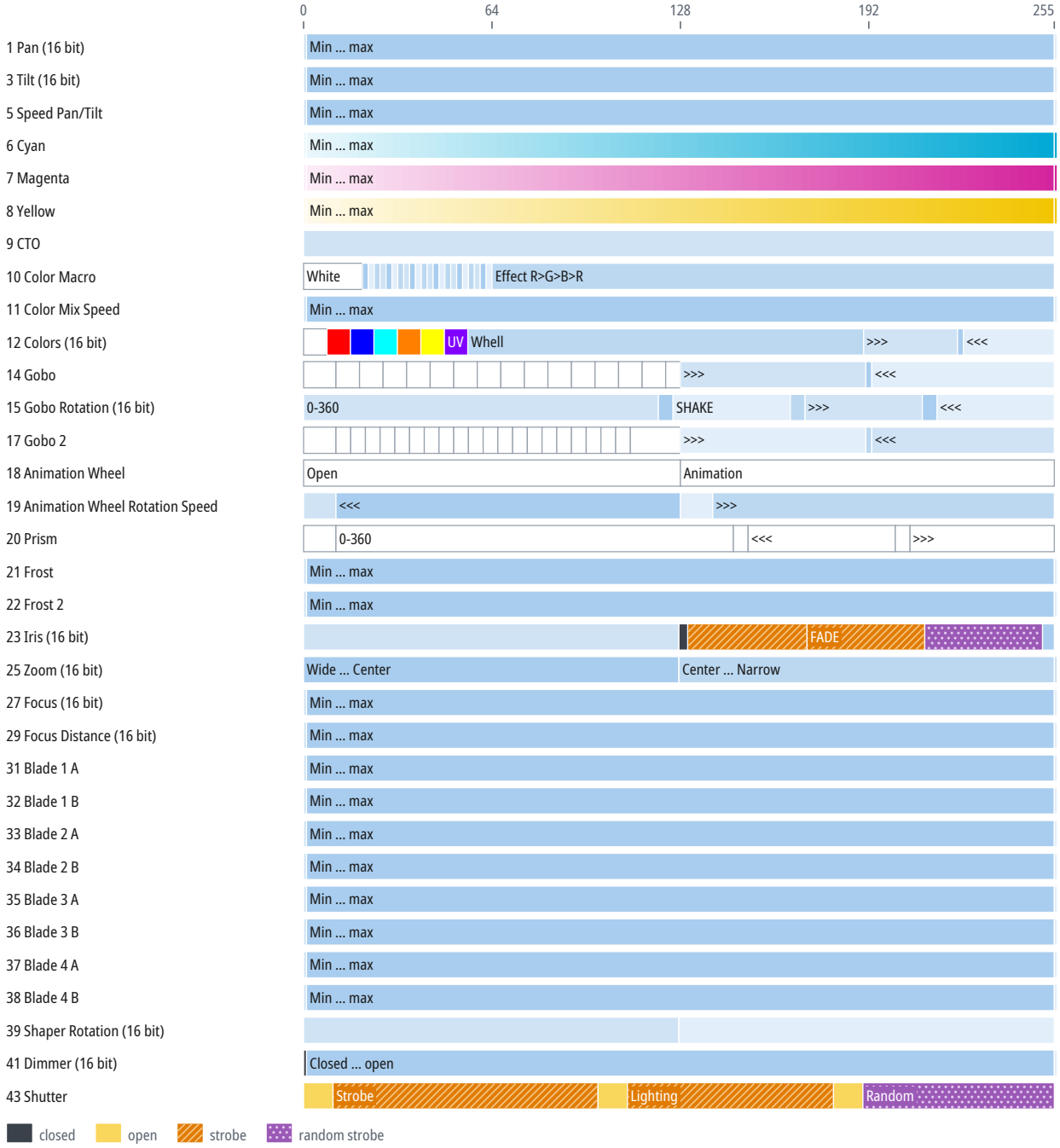
CH	Function	DMX	Description
28	Focus Distance Fine	0–255	Fine adjustment of CH 27
29	Blade 1 A		Same as CH 24 in the mode “Basic” (p. 14)
30	Blade 1 B		Same as CH 25 in the mode “Basic” (p. 14)
31	Blade 2 A		Same as CH 26 in the mode “Basic” (p. 14)
32	Blade 2 B		Same as CH 27 in the mode “Basic” (p. 14)
33	Blade 3 A		Same as CH 28 in the mode “Basic” (p. 14)
34	Blade 3 B		Same as CH 29 in the mode “Basic” (p. 14)
35	Blade 4 A		Same as CH 30 in the mode “Basic” (p. 15)
36	Blade 4 B		Same as CH 31 in the mode “Basic” (p. 15)
37	Shaper Rotation		Same as CH 32 in the mode “Basic” (p. 15)
38	Dimmer	0–1	Closed
		1–255	Closed … open
		255	Open
39	Dimmer Fine	0–255	Fine adjustment of CH 38
40	Shutter		Same as CH 34 in the mode “Basic” (p. 15)
41	Control		Same as CH 35 in the mode “Basic” (p. 15)

Mode Extended

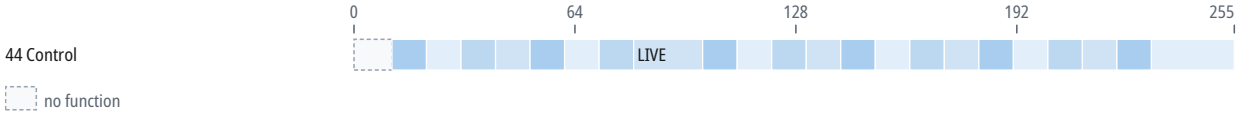
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 41 Dimmer above 1; CH 43 Shutter at 0–9, 100–109 or 180–189 “Open”. 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 41 Dimmer 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Standard” (p. 17)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Standard” (p. 17)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 3 in the mode “Basic” (p. 11)
6	Cyan		Same as CH 4 in the mode “Basic” (p. 11)
7	Magenta		Same as CH 5 in the mode “Basic” (p. 11)
8	Yellow		Same as CH 6 in the mode “Basic” (p. 11)
9	CTO	0–255	6800–2700 K
10	Color Macro		Same as CH 8 in the mode “Basic” (p. 11)
11	Color Mix Speed		Same as CH 9 in the mode “Basic” (p. 12)
12	Colors	0–7	White
		8–15	Red
		16–23	Blue
		24–31	Cyan
		32–39	Orange
		40–47	Yellow
		48–55	UV
		56–190	Whell
		191–222	>>> (30–0 °/s)
		223–224	RAINBOW: STOP
		225–255	<<< (0–30 °/s)
13	Colors Fine	0–255	Fine adjustment of CH 12
14	Gobo		Same as CH 11 in the mode “Basic” (p. 12)
15	Gobo Rotation		Same as CH 12 in the mode “Basic” (p. 12)
16	Gobo Rotation Fine	0–255	Fine adjustment of CH 15
17	Gobo 2		Same as CH 13 in the mode “Basic” (p. 13)
18	Animation Wheel		Same as CH 14 in the mode “Basic” (p. 13)
19	Animation Wheel Rotation Speed		Same as CH 15 in the mode “Basic” (p. 13)
20	Prism		Same as CH 16 in the mode “Basic” (p. 13)
21	Frost		Same as CH 17 in the mode “Basic” (p. 14)
22	Frost 2		Same as CH 18 in the mode “Basic” (p. 14)
23	Iris	0–127	Iris
		128–130	Iris: closed
		131–171	Iris Pulse Close: FAST (1–3 Hz)
		171–211	FADE (1–3 Hz)

CH	Function	DMX	Description
23	Iris (continued)	211–251	Iris Strobe Random: FAST (1–3 Hz)
		251–255	Close
24	Iris Fine	0–255	Fine adjustment of CH 23
25	Zoom		Same as CH 23 in the mode “Standard” (p. 17)
26	Zoom Fine	0–255	Fine adjustment of CH 25
27	Focus		Same as CH 25 in the mode “Standard” (p. 17)
28	Focus Fine	0–255	Fine adjustment of CH 27
29	Focus Distance		Same as CH 22 in the mode “Basic” (p. 14)
30	Focus Distance Fine	0–255	Fine adjustment of CH 29
31	Blade 1 A		Same as CH 24 in the mode “Basic” (p. 14)
32	Blade 1 B		Same as CH 25 in the mode “Basic” (p. 14)
33	Blade 2 A		Same as CH 26 in the mode “Basic” (p. 14)
34	Blade 2 B		Same as CH 27 in the mode “Basic” (p. 14)
35	Blade 3 A		Same as CH 28 in the mode “Basic” (p. 14)
36	Blade 3 B		Same as CH 29 in the mode “Basic” (p. 14)
37	Blade 4 A		Same as CH 30 in the mode “Basic” (p. 15)
38	Blade 4 B		Same as CH 31 in the mode “Basic” (p. 15)
39	Shaper Rotation	0–127	Shaper Rot 1
		127	Center
		128–255	Shaper Rot 1
40	Shaper Rotation Fine	0–255	Fine adjustment of CH 39
41	Dimmer		Same as CH 38 in the mode “Standard” (p. 18)
42	Dimmer Fine	0–255	Fine adjustment of CH 41
43	Shutter		Same as CH 34 in the mode “Basic” (p. 15)
44	Control		Same as CH 35 in the mode “Basic” (p. 15)

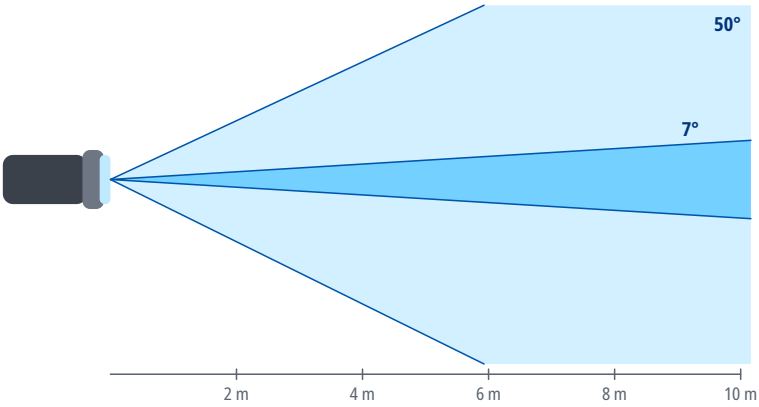
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	650 W
Luminous flux	15,000 lm
Color temperature	7,835 K
Color rendering index (CRI)	100
Optics	
Zoom	7–50°
Movement	
Pan	540°
Tilt	270°
Control	
RDM	yes (manufacturer ID 0x06CA, device model ID 0x1201)
Dimensions and construction	
Weight	35 kg
Operating environment	
Operating temperature	-20 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	2700–6800 K
Strobe frequency	1–25 Hz
Color wheel rotation	up to 30 °/s (5 rpm)
Gobo wheel 1 rotation	up to 300 °/s (50 rpm)
Gobo wheel 2 rotation	up to 300 °/s (50 rpm)
Gobo 2 rotation	up to 300 °/s (50 rpm)
Prism rotation	up to 108000 °/s (18000 rpm)
Animation wheel rotation	up to 300 °/s (50 rpm)

Spot diameter



Distance	Ø 7°	Ø 50°
2 m	0.24 m	1.9 m
4 m	0.49 m	3.7 m
6 m	0.73 m	5.6 m
8 m	0.98 m	7.5 m
10 m	1.2 m	9.3 m
15 m	1.8 m	14 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.