DMX REFERENCE

The Meg Beam One

Showtec



Manufacturer	Showtec
GDTF file	Showtec_The_Meg_Beam_One_94640.gdtf
GDTF revision	Louis KRS · 2025-04-24
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1 About this manual

This document describes the The Meg Beam One by Showtec. It was compiled from the GDTF file Showtec_The_Meg_Beam_One_94640.gdtf from the GDTF-Share library.

File revision: “Louis KRS”.

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 Showtec; 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	10.8 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
22 Channel	22	23	1, 23, 45, 67, ...
30 Channel	20	25	1, 21, 41, 61, ...

No light? Check these channels

- 22 Channel: CH 7 Shutter 1 at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 16 Shutter 2 at 0 “Open”
- 30 Channel: CH 7 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”


Read the manual before use


Do not stare into the light


Indoor use only

3 Safety instructions



Read the manual before use



Do not stare into the light



Indoor use only

⚠ WARNING

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

⚠ WARNING

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

⚠ CAUTION

- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do not aim the beam at flammable or heat-sensitive materials at close range.

⚠ CAUTION

- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them longer than necessary.

⚠ WARNING

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

4 Product description

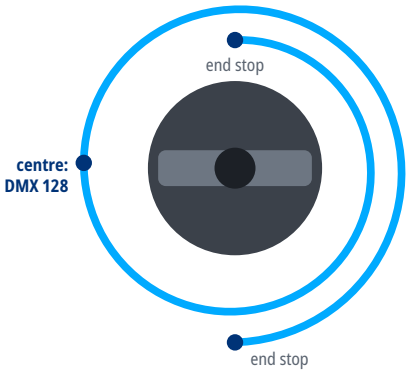
Description in the GDTF file

“Beam One is a compact but powerful 100 watt LED moving head with a very narrow beam angle of 1.6 degrees and lots of impressive effects, including a controllable LED ring effect.”

Range of movement

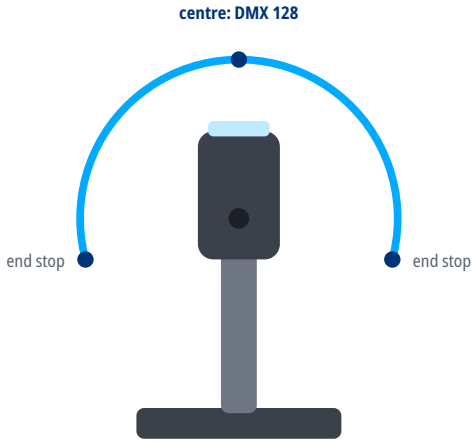
Pan 540°

top view



Tilt 210°

side view



5 Installation

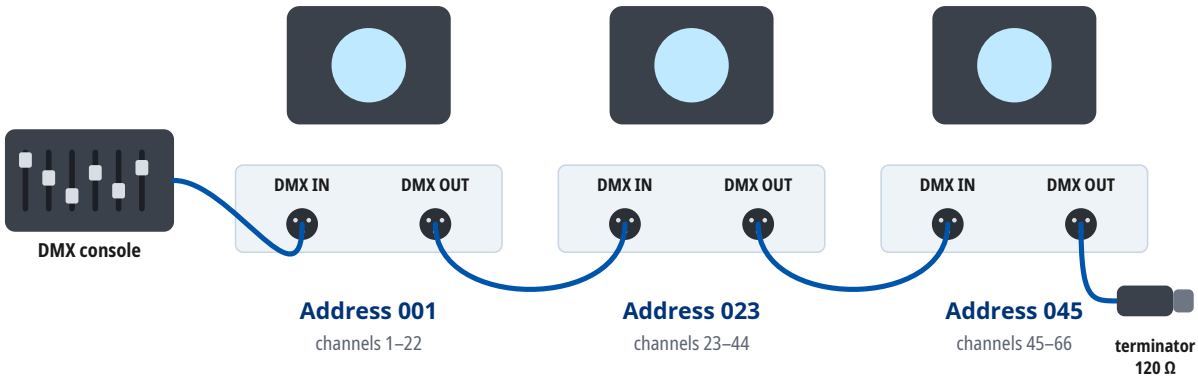
⚠ WARNING

- 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: 10.85 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 22 Channel: every unit occupies 22 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

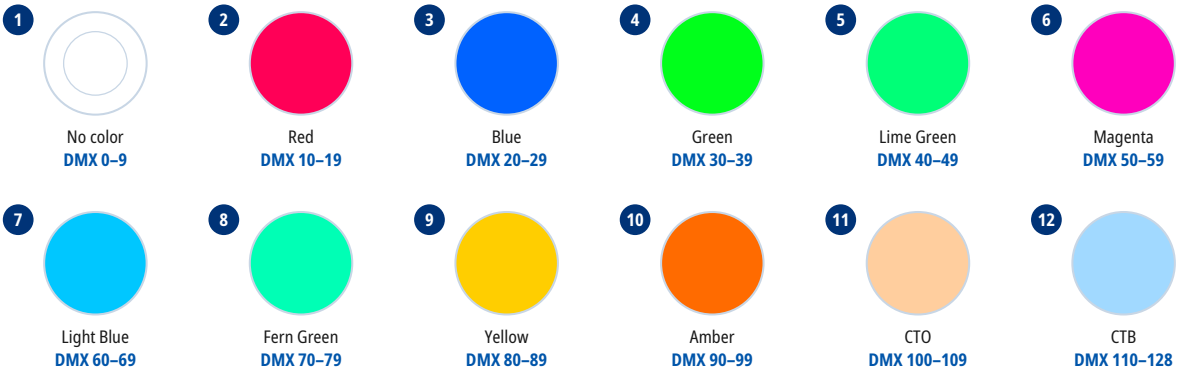
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “22 Channel”: 22.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “22 Channel”, you can use, for example, the start addresses 1, 23, 45, 67.
- 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

	22 Channel 22 channels	30 Channel 20 channels
Pan / Tilt	1, 3	1, 3
Dimmer	6, 15	8, 9
Shutter / strobe	7, 16	7
Color mixing	17–19	10–12
Color wheel	8	
Gobo wheel	9	17
Prism	11, 12	6, 18
Frost	13	
Focus	10	19
Effects / macros	21	14

Color wheel 1



Gobo wheel

1
Gobo 1: Open
DMX 0–6

2 
Gobo 1: Square
DMX 7–13

3 
Gobo 1: Cross
DMX 14–20

4 
Gobo 1: Fan
DMX 21–27

5 
Gobo 1: Moon
DMX 28–34

6 
Gobo 1: Star
DMX 35–41

7 
Gobo 1: Triangle
DMX 42–48

8 
Gobo 1: Stars
DMX 49–55

9 
Gobo 1: Curve
DMX 56–62

10 
Gobo 1: Cilinders
DMX 63–69

11 
Gobo 1: Dots
DMX 70–76

12 
Gobo 1: Radial
DMX 77–83

13 
Gobo 1: Swirl
DMX 84–90

14 
Gobo 1: Horizontal Bar
DMX 91–97

15 
Reducer
DMX 98–105

Prism 1

1
No Prism
DMX 0–5

2 
24 facets
24 Facet
DMX 6–128

Prism 2

1
No Prism
DMX 0–5

2 
16 facets
16 Facet
DMX 6–128

Color wheel 2

1 No Color
DMX 0

2 Red
DMX 1–15

3 Green
DMX 16–31

4 Blue
DMX 32–47

5 Red + Blue
DMX 48–63

6 Red + Green
DMX 64–79

7 Green + Blue
DMX 80–95

8 Red + Green + Blue
DMX 96–111

9 2700k
DMX 112–127

10 3200k
DMX 128–143

11 3500k
DMX 144–159

12 5000k
DMX 160–175

13 5500k
DMX 176–191

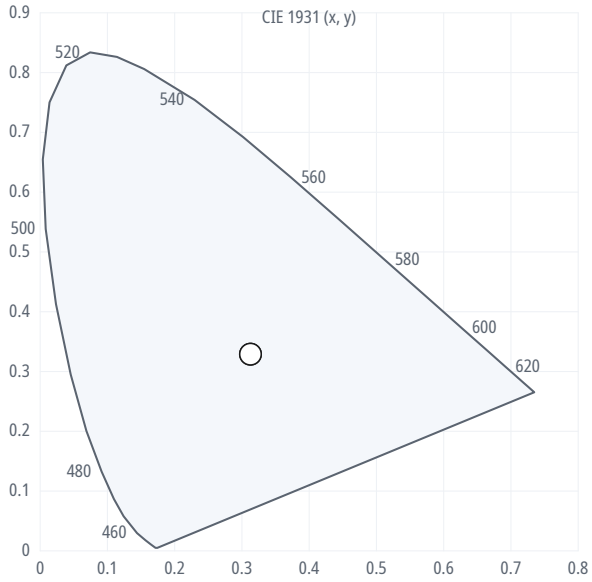
14 6000k
DMX 192–207

15 6500k
DMX 208–223

16 7000k
DMX 224–239

17 8000k
DMX 240–255

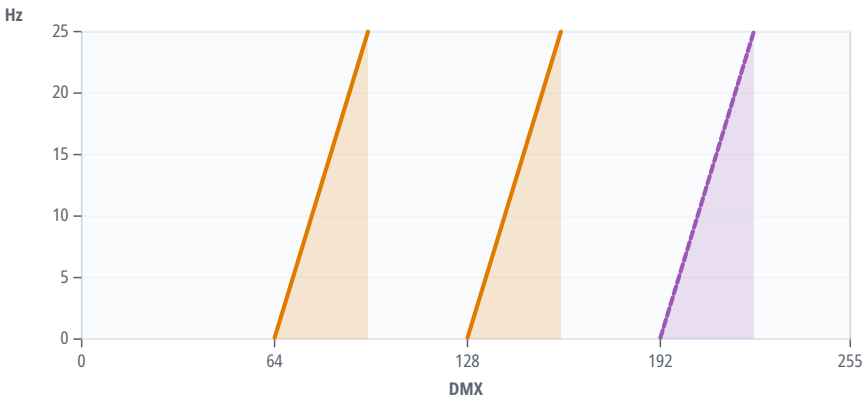
LED colors



LED	x	y
Emitter 1	0.313	0.329
Emitter 2	0.313	0.329

The dots are the LED colors the GDTF file states.

Strobe rate



CH 7 · 22 Channel

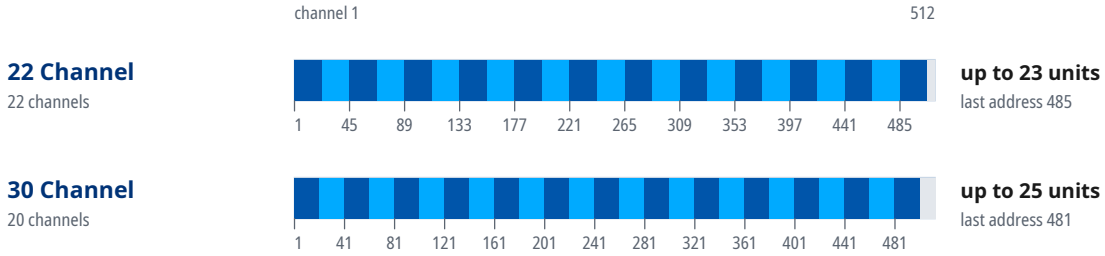
64–95: 0.1–25 Hz
Linear

128–159: 0.1–25 Hz
Pulse

192–223: 0.1–25 Hz
Random

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “22 Channel”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	111	11	221	16	331
2	23	7	133	12	243	17	353
3	45	8	155	13	265	18	375
4	67	9	177	14	287	19	397
5	89	10	199	15	309	20	419

Mode 22 Channel

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 7 Shutter 1 at 32–63, 96–127, 160–191 or 224–255 “Open”; CH 16 Shutter 2 at 0 “Open”. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 1 255, CH 7 Shutter 1 48, CH 8 Colors 1 0, CH 15 Dimmer 2 255, CH 17 Red 255, CH 18 Green 255, CH 19 Blue 255.

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	0–225	Fast to Slow
		226–235	Black Out during PT
		236–245	Black Out during Col Gob
		246–255	Position MSpeed 1
6	Dimmer 1	0–1	Zero

CH	Function	DMX	Description
6	Dimmer 1 (continued)	2–255	Full
7	Shutter 1	0–31	Open/Closed: Closed
		32–63	Open/Closed: Open
		64–95	Linear (0.1–25 Hz)
		96–127	Open
		128–159	Pulse (0.1–25 Hz)
		160–191	Open
		192–223	Random (0.1–25 Hz)
		224–255	Open
8	Colors 1	0–9	No color
		10–19	Red
		20–29	Blue
		30–39	Green
		40–49	Lime Green
		50–59	Magenta
		60–69	Light Blue
		70–79	Fern Green
		80–89	Yellow
		90–99	Amber
		100–109	CTO
		110–127	CTB
		128–189	CW (12–0.01 °/s)
		190–193	Color 1 Wheel Spin: Stop
		194–255	CCW (0.01–12 °/s)
9	Gobo	0–6	Gobo 1: Open
		7–13	Gobo 1: Square
		14–20	Gobo 1: Cross
		21–27	Gobo 1: Fan
		28–34	Gobo 1: Moon
		35–41	Gobo 1: Star
		42–48	Gobo 1: Triangle
		49–55	Gobo 1: Stars
		56–62	Gobo 1: Curve
		63–69	Gobo 1: Cilinders
		70–76	Gobo 1: Dots
		77–83	Gobo 1: Radial
		84–90	Gobo 1: Swirl
		91–97	Gobo 1: Horizontal Bar
		98–104	Gobo 1: Reducer
		105–111	Gobo 1 Select Shake: Reducer (0.833–15.2 Hz)
		112–118	Gobo 1 Select Shake: Horizontal Bar (0.833–15.2 Hz)
		119–125	Gobo 1 Select Shake: Swirl (0.833–15.2 Hz)

CH	Function	DMX	Description
9	Gobo (continued)	126–132	Gobo 1 Select Shake: Radial (0.833–15.2 Hz)
		133–139	Gobo 1 Select Shake: Dots (0.833–15.2 Hz)
		140–146	Gobo 1 Select Shake: Cilinders (0.833–15.2 Hz)
		147–153	Gobo 1 Select Shake: Curve (0.833–15.2 Hz)
		154–160	Gobo 1 Select Shake: Stars (0.833–15.2 Hz)
		161–167	Gobo 1 Select Shake: Triangle (0.833–15.2 Hz)
		168–174	Gobo 1 Select Shake: Star (0.833–15.2 Hz)
		175–181	Gobo 1 Select Shake: Moon (0.833–15.2 Hz)
		182–188	Gobo 1 Select Shake: Fan (0.833–15.2 Hz)
		189–195	Gobo 1 Select Shake: Cross (0.833–15.2 Hz)
		196–202	Gobo 1 Select Shake: Square (0.833–15.2 Hz)
		203–255	CW Rot (0–12 °/s)
10	Focus	0	Min
		1–254	Min ... Max
		255	Max
11	Prism	0–5	No Prism
		6–127	24 Facet
		128–189	CW Rot (12–0.47 °/s)
		190–193	Prism 1 Pos Rotate: Stop
		194–255	CCW Rot (0.47–12 °/s)
12	Prism 2	0–5	No Prism
		6–127	16 Facet
		128–189	CW Rot (12–0.47 °/s)
		190–193	Prism 2 Pos Rotate: Stop (up to 0.28 °/s (0 rpm))
		194–255	CCW Rot (0.47–12 °/s)
13	Frost	0–199	No Frost
		200–255	Frost
14	Control	0–79	No Function
		80–84	Reset All
		85–87	Reset PT
		88–90	Reset Color
		91–93	Reset Gobo
		94–96	Reset Other
		97–99	Auto Program 1
		100–119	Auto Program 2
		120–139	Auto Program 3
		140–159	Auto Program 4
		160–179	Auto Program 5
		180–199	Auto Program 6
		200–219	Auto Program 7
		220–239	Auto Program 8
		240–255	Sound Controlled

CH	Function	DMX	Description
15	Dimmer 2	0	Zero
		1–255	Full
16	Shutter 2	0	Shutter 1: Open
		1–255	Strobe (0–25 Hz)
17	Red	0	Min
		1–254	Min ... Max
		255	Max
18	Green	0	Min
		1–254	Min ... Max
		255	Max
19	Blue	0	Min
		1–254	Min ... Max
		255	Max
20	Colors 2	0	No Color
		1–15	Red
		16–31	Green
		32–47	Blue
		48–63	Red + Blue
		64–79	Red + Green
		80–95	Green + Blue
		96–111	Red + Green + Blue
		112–127	2700k
		128–143	3200k
		144–159	3500k
		160–175	5000k
		176–191	5500k
		192–207	6000k
		208–223	6500k
		224–239	7000k
		240–255	8000k
21	Pixel Macro	0–15	No Function
		16–29	Pix Dynamic Scene 1
		30–43	Pix Dynamic Scene 2
		44–57	Pix Dynamic Scene 3
		58–71	Pix Dynamic Scene 4
		72–85	Pix Dynamic Scene 5
		86–99	Pix Dynamic Scene 6
		100–113	Pix Dynamic Scene 7
		114–127	Pix Dynamic Scene 8
		128–141	Pix Dynamic Scene 9
		142–155	Pix Dynamic Scene 10
		156–169	Pix Dynamic Scene 11

CH	Function	DMX	Description
21	Pixel Macro (continued)	170–183	Pix Dynamic Scene 12
		184–197	Pix Dynamic Scene 13
		198–211	Pix Dynamic Scene 14
		212–225	Pix Dynamic Scene 15
		226–239	Pix Dynamic Scene 16
		240–255	Pix Dynamic Scene 17
22	Pixel Macro Speed	0–127	CW
		128–255	CCW

Mode 30 Channel

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 7 Shutter at 32–63, 96–127, 160–191 or 224–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 7 Shutter 48, CH 8 Dimmer 1 255, CH 9 Dimmer 2 255, CH 10 Red 255, CH 11 Green 255, CH 12 Blue 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “22 Channel” (p. 11)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “22 Channel” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “22 Channel” (p. 11)
6	Prism		Same as CH 11 in the mode “22 Channel” (p. 13)

CH	Function	DMX	Description
7	Shutter	0–31	Open/Closed: Closed
		32–63	Open/Closed: Open
		64–95	Linear (0.1–25 Hz)
		96–127	Open
		128–159	Pulse (0.1–25 Hz)
		160–191	Open
		192–223	Random (0.1–25 Hz)
		224–255	Open
8	Dimmer 1		Same as CH 6 in the mode “22 Channel” (p. 11)
9	Dimmer 2		Same as CH 15 in the mode “22 Channel” (p. 14)
10	Red		Same as CH 17 in the mode “22 Channel” (p. 14)
11	Green		Same as CH 18 in the mode “22 Channel” (p. 14)
12	Blue		Same as CH 19 in the mode “22 Channel” (p. 14)
13	Colors	0	No Color
		1–15	Red
		16–31	Green
		32–47	Blue
		48–63	Red + Blue
		64–79	Red + Green
		80–95	Green + Blue
		96–111	Red + Green + Blue
		112–127	2700k
		128–143	3200k
		144–159	3500k
		160–175	5000k
		176–191	5500k
		192–207	6000k
		208–223	6500k
		224–239	7000k
		240–255	8000k
14	Pixel Macro		Same as CH 21 in the mode “22 Channel” (p. 14)
15	Pixel Macro Speed		Same as CH 22 in the mode “22 Channel” (p. 15)
16	Color Wheel Speed	0–255	
17	Gobo		Same as CH 9 in the mode “22 Channel” (p. 12)
18	Prism 2		Same as CH 12 in the mode “22 Channel” (p. 13)
19	Focus		Same as CH 10 in the mode “22 Channel” (p. 13)
20	Control		Same as CH 14 in the mode “22 Channel” (p. 13)

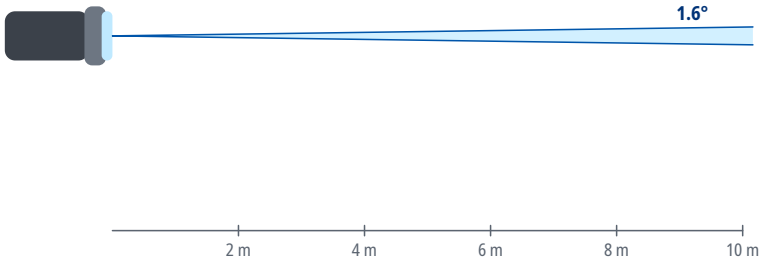
10 Technical specifications

Parameter	Value
Light source	LED
Pan	540°
Tilt	210°
Weight	10.8 kg
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0–25 Hz
Color wheel 1 rotation	up to 12 °/s (2 rpm)
Gobo wheel rotation	up to 12 °/s (2 rpm)
Prism 1 rotation	up to 12 °/s (2 rpm)
Prism 2 rotation	up to 12 °/s (2 rpm)

Spot diameter



Distance	Ø 1.6°
2 m	0.06 m
4 m	0.11 m
6 m	0.17 m
8 m	0.22 m
10 m	0.28 m
15 m	0.42 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.