DMX REFERENCE

Ignite 300 BSW

BeamZ Pro



Manufacturer	BeamZ Pro
GDTF file	BeamZ_Pro_Ignite_300_BSW_121917.gdtf
GDTF revision	rev100a RELEASE · 2025-12-21
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1 About this manual

This document describes the Ignite300BSW by BeamZ Pro. It was compiled from the GDTF file BeamZ_Pro_Ignite_300_BSW_121917.gdtf from the GDTF-Share library.

File revision: “rev100a RELEASE”.

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 BeamZ Pro; 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
Power consumption	850 W
Weight	15.6 kg
Ingress protection	IP20

DMX modes

Mode	Channels	Units in one universe	First start addresses
20 Ch	20	25	1, 21, 41, 61, ...

No light? Check these channels

- 20 Ch: CH 7 Shutter at 240–255 “Shutter OPEN”


Read the manual before use


Risk of electric shock


Do not stare into the light



Indoor use only

3 Safety instructions


Read the manual before use


Risk of electric shock


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

- Connect the device only to a properly installed mains outlet with a protective earth (ground) contact. The outlet or other means of disconnection must remain easily accessible.
- Power supply: 100–240 V, 50/60 Hz. Before connecting, make sure that the mains voltage matches this value and the value on the rating plate of the device.
- Do not connect the device to a dimmer or to a dimmed circuit.
- Use only the original power cable or a cable with identical ratings. Protect the cable from damage, do not run it over sharp edges, and never unplug it by pulling on the cable.
- When connecting several devices to one circuit, do not exceed its permitted load.
- Do not touch the device with wet hands.

⚠ 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.
- Ingress protection rating: IP20.
- 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

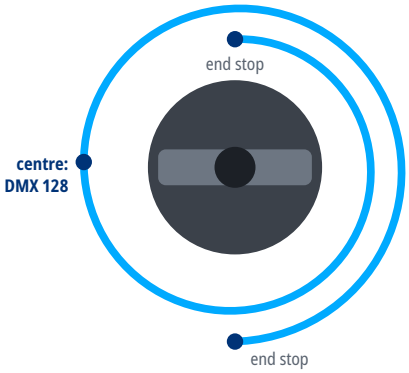
“Moving Head Hybrid LED Spot :: IP20 / 300 W LED 7000K / Color: Open + 8 / 7 -32 degree zoom range / 7 x Rotating Gobo / 9 x Fixed Gobo / 3-facet and 8-facet prism / frost filter”

“TBD: - correct gobos / color calibration”

Range of movement

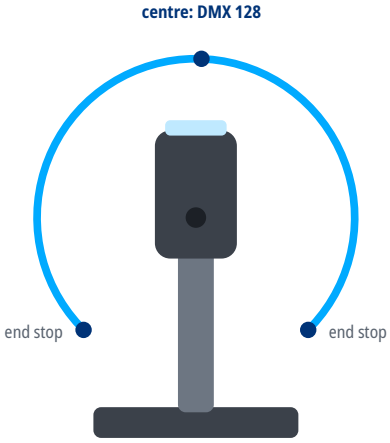
Pan 540°

top view



Tilt 270°

side view



5 Installation

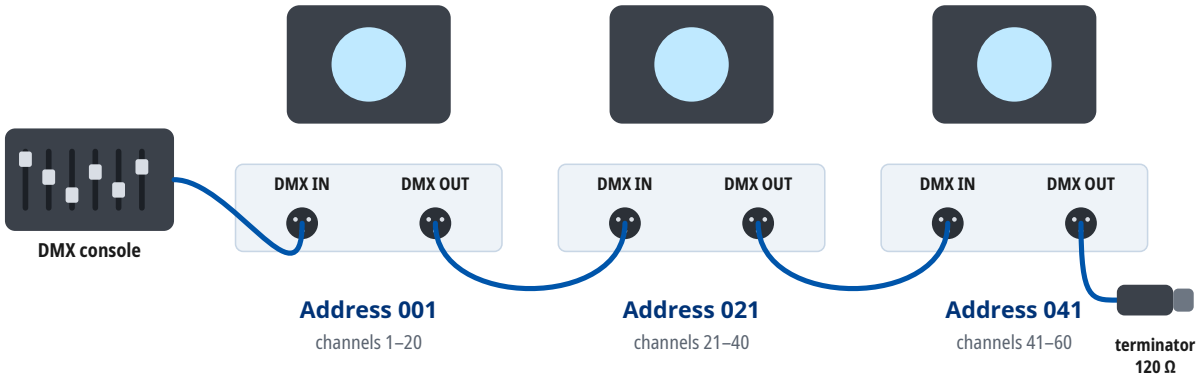
⚠ **WARNING**

- 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: 15.6 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 20 Ch: every unit occupies 20 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 “20 Ch”: 20.
- 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 “20 Ch”, you can use, for example, the start addresses 1, 21, 41, 61.
- 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

	20 Ch 20 channels
Pan / Tilt	1, 3
Dimmer	6
Shutter / strobe	7
Color wheel	8
Gobo wheel	13, 15
Gobo rotation	14
Prism	17–19
Frost	16
Zoom	10
Focus	11

Color wheel



1 Wheel Slot 0 DMX 0–19
2 Wheel Slot 1 DMX 20–39
3 Wheel Slot 2 DMX 40–59
4 Wheel Slot 3 DMX 60–79
5 Wheel Slot 4 DMX 80–99
6 Wheel Slot 5 DMX 100–119
7 Wheel Slot 6 DMX 120–139
8 Wheel Slot 7 DMX 140–159
9 Wheel Slot 8 DMX 160–180

Gobo wheel 1



1 Wheel Slot 0 DMX 0–17
2 Gobo 1 Select: Wheel Slot 1 DMX 18–31
3 Gobo 1 Select: Wheel Slot 2 DMX 32–45
4 Gobo 1 Select: Wheel Slot 3 DMX 46–59
5 Gobo 1 Select: Wheel Slot 4 DMX 60–73
6 Gobo 1 Select: Wheel Slot 5 DMX 74–87
7 Gobo 1 Select: Wheel Slot 6 DMX 88–101
8 Wheel Slot 7 DMX 102–116

Gobo wheel 2

1
Wheel Slot 0
DMX 0–9

2 
Gobo 2 Select: Wheel Slot 1
DMX 10–19

3 
Gobo 2 Select: Wheel Slot 2
DMX 20–29

4 
Gobo 2 Select: Wheel Slot 3
DMX 30–39

5 
Gobo 2 Select: Wheel Slot 4
DMX 40–49

6 
Gobo 2 Select: Wheel Slot 5
DMX 50–59

7 
Gobo 2 Select: Wheel Slot 6
DMX 60–69

8 
Gobo 2 Select: Wheel Slot 7
DMX 70–79

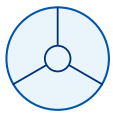
9 
Gobo 2 Select: Wheel Slot 8
DMX 80–89

10 
Wheel Slot 9
DMX 90–100

Prism

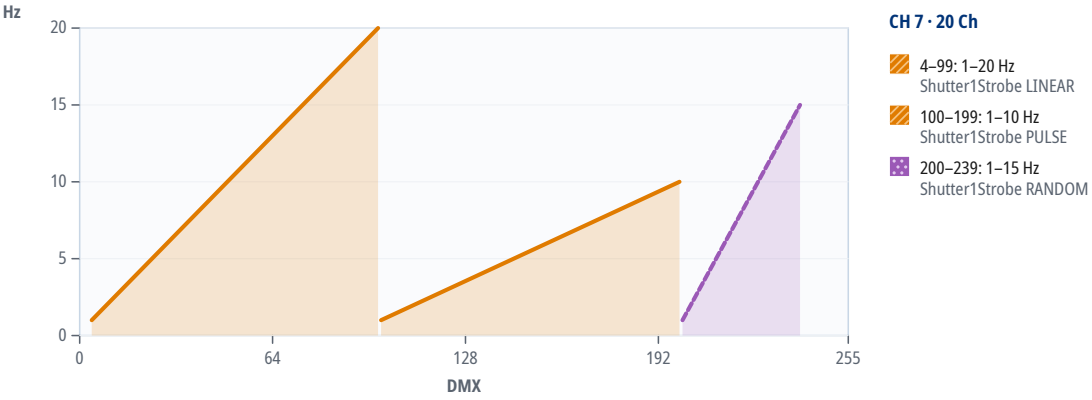
1 
1 facet
Prism1 OPEN
DMX 0–63

2 
5 facets
Prism1 5-FACE INSERT
DMX 64–127

3 
3 facets
Prism2 3-FACE INSERT
DMX 128–191

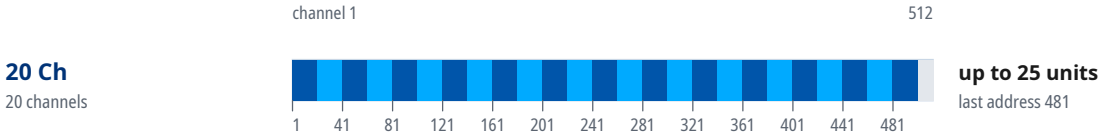
4 
8 facets
Prism1+2 dual
DMX 192–255

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “20 Ch”

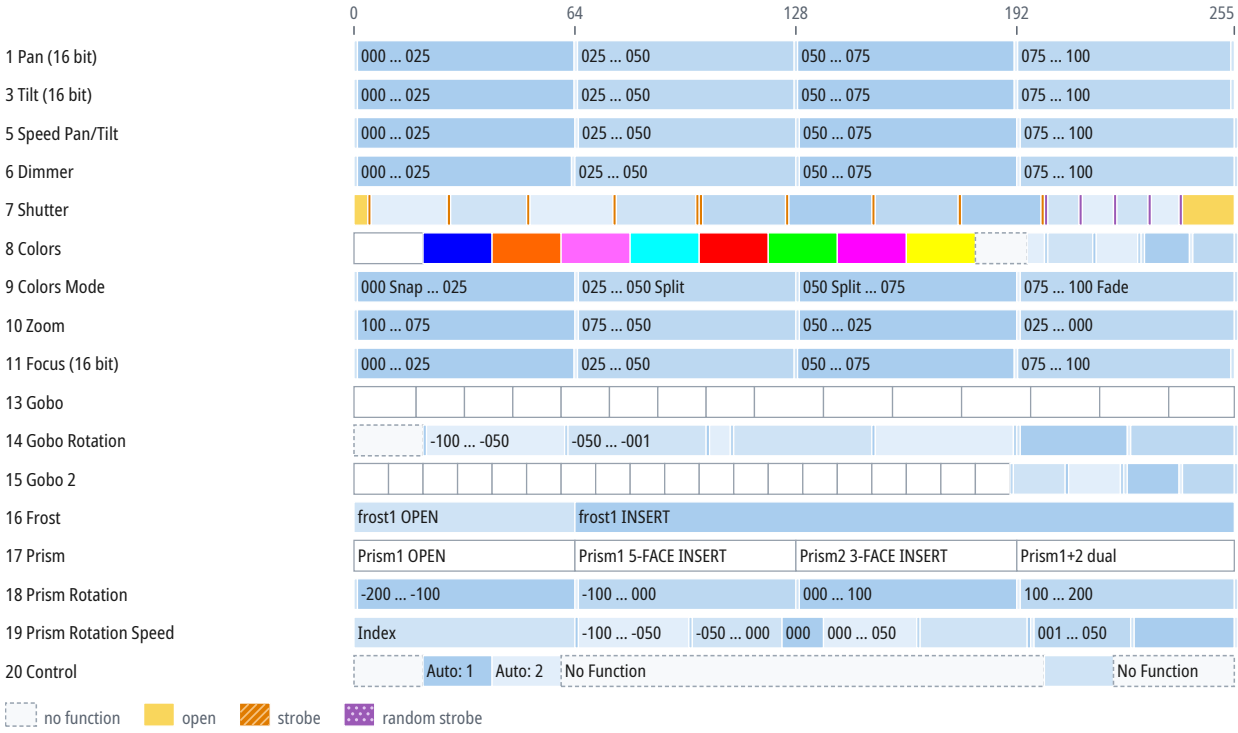
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	101	11	201	16	301
2	21	7	121	12	221	17	321
3	41	8	141	13	241	18	341
4	61	9	161	14	261	19	361
5	81	10	181	15	281	20	381

Mode 20 Ch

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 240–255 “Shutter OPEN”. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255, CH 7 Shutter 255, CH 8 Colors 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0	000
		1–63	000 … 025
		64	025
		65–127	025 … 050
		128	050
		129–191	050 … 075
		192	075
		193–254	075 … 100
		255	100
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0	000
		1–63	000 … 025
		64	025
		65–127	025 … 050
		128	050
		129–191	050 … 075
		192	075
		193–254	075 … 100
		255	100
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0	000
		1–63	000 … 025
		64	025
		65–127	025 … 050
		128	050
		129–191	050 … 075
		192	075
		193–254	075 … 100
		255	100
6	Dimmer	0	000
		1–62	000 … 025
		63	025
		64–127	025 … 050
		128	050
		129–191	050 … 075
		192	075
		193–254	075 … 100
		255	100
7	Shutter	0–3	Shutter 1 OPEN
		4	Shutter 1 Strobe LINEAR: 001

CH	Function	DMX	Description
7	Shutter (continued)	5–26	Shutter 1 Strobe LINEAR: 001 … 025
		27	Shutter 1 Strobe LINEAR: 025
		28–49	Shutter 1 Strobe LINEAR: 025 … 050
		50	Shutter 1 Strobe LINEAR: 050
		51–74	Shutter 1 Strobe LINEAR: 050 … 075
		75	Shutter 1 Strobe LINEAR: 075
		76–98	Shutter 1 Strobe LINEAR: 075 … 100
		99	Shutter 1 Strobe LINEAR: 100
		100	Shutter 1 Strobe PULSE: 001
		101–124	Shutter 1 Strobe PULSE: 001 … 025
		125	Shutter 1 Strobe PULSE: 025
		126–149	Shutter 1 Strobe PULSE: 025 … 050
		150	Shutter 1 Strobe PULSE: 050
		151–174	Shutter 1 Strobe PULSE: 050 … 075
		175	Shutter 1 Strobe PULSE: 075
		176–198	Shutter 1 Strobe PULSE: 075 … 100
		199	Shutter 1 Strobe PULSE: 100
		200	Shutter 1 Strobe RANDOM: 001
		201–209	Shutter 1 Strobe RANDOM: 001 … 025
		210	Shutter 1 Strobe RANDOM: 025
		211–219	Shutter 1 Strobe RANDOM: 025 … 050
		220	Shutter 1 Strobe RANDOM: 050
		221–229	Shutter 1 Strobe RANDOM: 050 … 075
		230	Shutter 1 Strobe RANDOM: 075
		231–238	Shutter 1 Strobe RANDOM: 075 … 100
		239	Shutter 1 Strobe RANDOM: 100
		240–255	Shutter OPEN
8	Colors	0–19	Wheel Slot 0
		20–39	Wheel Slot 1
		40–59	Wheel Slot 2
		60–79	Wheel Slot 3
		80–99	Wheel Slot 4
		100–119	Wheel Slot 5
		120–139	Wheel Slot 6
		140–159	Wheel Slot 7
		160–179	Wheel Slot 8
		180–194	No function
		195–199	Color 1 Wheel Snap 1
		200	-100
		201–213	-100 … -050
		214	-050

CH	Function	DMX	Description
8	Colors (continued)	215–226	-050 … -001
		227	-001
		228	001
		229–241	001 … 050
		242	050
		243–254	050 … 100
		255	100
9	Colors Mode	0	000 Snap
		1–63	000 Snap … 025
		64	025
		65–127	025 … 050 Split
		128	050 Split
		129–191	050 Split … 075
		192	075
		193–254	075 … 100 Fade
		255	100 Fade
10	Zoom	0	100
		1–63	100 … 075
		64	075
		65–127	075 … 050
		128	050
		129–191	050 … 025
		192	025
		193–254	025 … 000
		255	000
11	Focus	0	000
		1–63	000 … 025
		64	025
		65–127	025 … 050
		128	050
		129–191	050 … 075
		192	075
		193–254	075 … 100
		255	100
12	Focus Fine	0–255	Fine adjustment of CH 11
13	Gobo	0–17	Wheel Slot 0
		18–31	Gobo 1 Select: Wheel Slot 1
		32–45	Gobo 1 Select: Wheel Slot 2
		46–59	Gobo 1 Select: Wheel Slot 3
		60–73	Gobo 1 Select: Wheel Slot 4
		74–87	Gobo 1 Select: Wheel Slot 5

CH	Function	DMX	Description
13	Gobo (continued)	88–101	Gobo 1 Select: Wheel Slot 6
		102–115	Gobo 1 Select: Wheel Slot 7
		116–135	Gobo 1 Select Shake: Wheel Slot 1
		136–155	Gobo 1 Select Shake: Wheel Slot 2
		156–175	Gobo 1 Select Shake: Wheel Slot 3
		176–195	Gobo 1 Select Shake: Wheel Slot 4
		196–215	Gobo 1 Select Shake: Wheel Slot 5
		216–235	Gobo 1 Select Shake: Wheel Slot 6
		236–255	Gobo 1 Select Shake: Wheel Slot 7
14	Gobo Rotation	0–19	No Function
		20	-100
		21–60	-100 ... -050
		61	-050
		62–101	-050 ... -001
		102	-001
		103–108	000
		109	Gobo 1 Pos Rotate: 001
		110–149	Gobo 1 Pos Rotate: 001 ... 050
		150	Gobo 1 Pos Rotate: 050
		151–190	Gobo 1 Pos Rotate: 050 ... 100
		191	Gobo 1 Pos Rotate: 100
		192	Gobo 1 Pos Bounce: 001
		193–223	Gobo 1 Pos Bounce: 001 ... 050
		224	Gobo 1 Pos Bounce: 050
		225–254	Gobo 1 Pos Bounce: 050 ... 100
		255	Gobo 1 Pos Bounce: 100
15	Gobo 2	0–9	Wheel Slot 0
		10–19	Gobo 2 Select: Wheel Slot 1
		20–29	Gobo 2 Select: Wheel Slot 2
		30–39	Gobo 2 Select: Wheel Slot 3
		40–49	Gobo 2 Select: Wheel Slot 4
		50–59	Gobo 2 Select: Wheel Slot 5
		60–69	Gobo 2 Select: Wheel Slot 6
		70–79	Gobo 2 Select: Wheel Slot 7
		80–89	Gobo 2 Select: Wheel Slot 8
		90–99	Gobo 2 Select: Wheel Slot 9
		100–109	Gobo 2 Select Shake: Wheel Slot 1
		110–119	Gobo 2 Select Shake: Wheel Slot 2
		120–129	Gobo 2 Select Shake: Wheel Slot 3
		130–139	Gobo 2 Select Shake: Wheel Slot 4
		140–149	Gobo 2 Select Shake: Wheel Slot 5

CH	Function	DMX	Description
15	Gobo 2 (continued)	150–159	Gobo 2 Select Shake: Wheel Slot 6
		160–169	Gobo 2 Select Shake: Wheel Slot 7
		170–179	Gobo 2 Select Shake: Wheel Slot 8
		180–189	Gobo 2 Select Shake: Wheel Slot 9
		190	-100 CW
		191–205	-100 CW ... -050 CW
		206	-050 CW
		207–221	-050 CW ... -001 CW
		222	-001 CW
		223	001 CCW
		224–238	001 CCW ... 050 CCW
		239	050 CCW
		240–254	050 CCW ... 100 CCW
		255	100 CCW
16	Frost	0–63	frost1 OPEN
		64–255	frost1 INSERT
17	Prism	0–63	Prism1 OPEN
		64–127	Prism1 5-FACE INSERT
		128–191	Prism2 3-FACE INSERT
		192–255	Prism1+2 dual
18	Prism Rotation	0	-200
		1–63	-200 ... -100
		64	-100
		65–127	-100 ... 000
		128	000
		129–191	000 ... 100
		192	100
		193–254	100 ... 200
		255	200
19	Prism Rotation Speed	0–63	Index (180°)
		64	-100
		65–96	-100 ... -050
		97	-050
		98–123	-050 ... 000
		124–135	000
		136–162	000 ... 050
		163	Prism 1 Pos ROTATE: 050
		164–194	Prism 1 Pos ROTATE: 050 ... 100
		195	Prism 1 Pos ROTATE: 100
		196	001
		197–224	001 ... 050
		225	Prism 1 Pos Bounce: 050

CH	Function	DMX	Description
19	Prism Rotation Speed (continued)	226–254	Prism 1 Pos Bounce: 050 ... 100
		255	Prism 1 Pos Bounce: 100
20	Control	0–19	No Function
		20–39	Auto: 1
		40–59	Auto: 2
		60–199	No Function
		200–219	Reset: ALL
		220–255	No Function

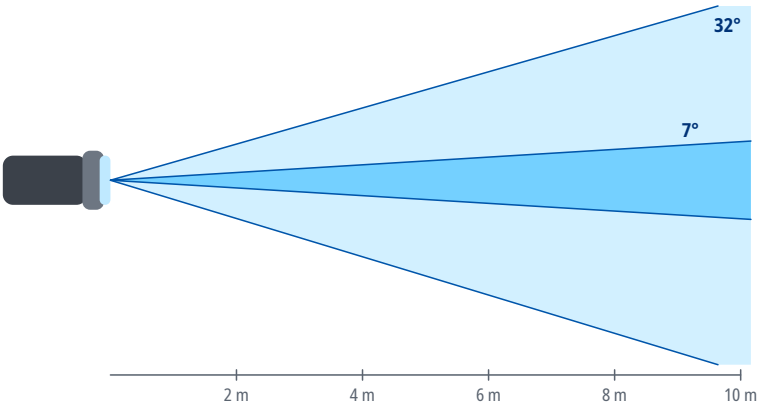
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	400 W
Luminous flux	2,000 lm
Color temperature	7,000 K
Color rendering index (CRI)	85
Optics	
Zoom	7–32°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	5-pin XLR IN/OUT, 3-pin XLR IN/OUT
RJ45 connectors	RJ45 IN
RDM	yes (manufacturer ID 0x076A, device model ID 0x0010)
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	850 W
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	15.6 kg
Operating environment	
Ingress protection	IP20
Meaning of the IP code (IEC 60529)	Protected against contact with a finger and solid objects of 12.5 mm diameter and larger; no protection against water
Operating temperature	-5 to 45 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–20 Hz
Color wheel rotation	up to 100 °/s (17 rpm)
Gobo wheel 2 rotation	up to 100 °/s (17 rpm)
Gobo 1 rotation	up to 100 °/s (17 rpm)
Prism rotation	up to 100 °/s (17 rpm)

Spot diameter



Distance	Ø 7°	Ø 32°
2 m	0.24 m	1.1 m
4 m	0.49 m	2.3 m
6 m	0.73 m	3.4 m
8 m	0.98 m	4.6 m
10 m	1.2 m	5.7 m
15 m	1.8 m	8.6 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.

Problem	Remedy
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.