DMX REFERENCE

Exterior Projection Pro Compact

Martin Professional



Manufacturer	Martin Professional
GDTF file	Martin_Professional_Exterior_Projection_Pro_Compact_147889.gdtf
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1 About this manual

This document describes the Exterior Projection Pro Compact by Martin Professional. It was compiled from the GDTF file Martin_Professional_Exterior_Projection_Pro_Compact_147889.gdtf from the GDTF-Share library.

File revision: “20260621, Uploaded to GDTF Share.”.

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.

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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	180 W
Weight	13.9 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Basic	13	39	1, 14, 27, 40, ...
Extended	14	36	1, 15, 29, 43, ...

No light? Check these channels

- Basic: CH 1 Dimmer above 0
- Extended: CH 1 Shutter at 20–49 or 201–210 “Open”; CH 2 Dimmer above 0


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: 100–277 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.
- 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.

4 Installation

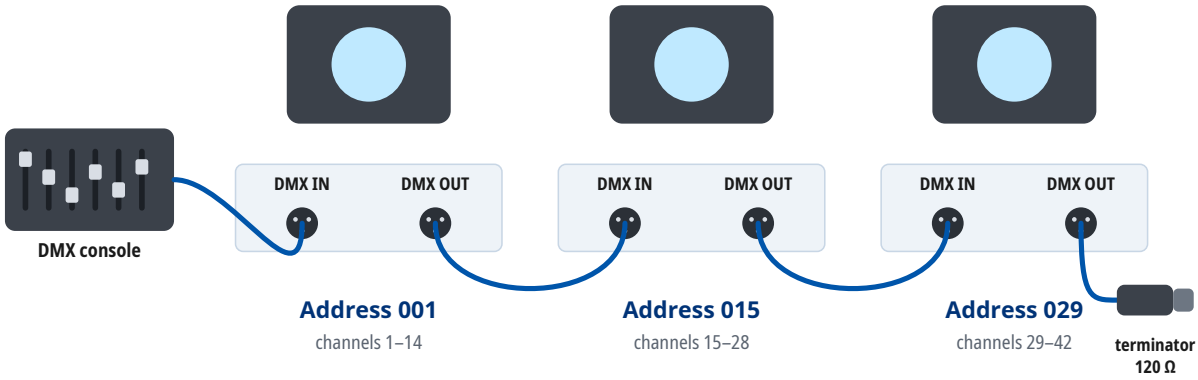
⚠ WARNING

- 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: 13.9 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.

5 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 14 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.

6 Operation

Setting the DMX address

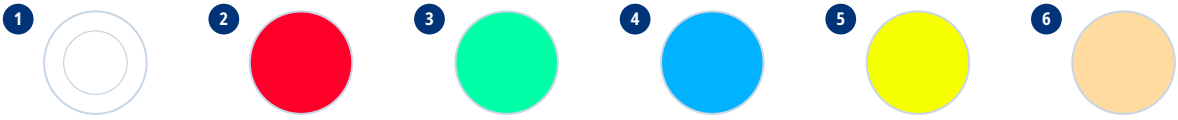
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Extended”: 14.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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, 15, 29, 43.
- 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.

7 Functions at a glance

Functions in each DMX mode

	Basic 13 channels	Extended 14 channels
Pan / Tilt	✓	✓
Dimmer	1	2
Shutter / strobe		1
Color wheel	3	4
Gobo wheel	4	5
Gobo rotation	5	6
Zoom	9	10
Focus	11	12
Animation wheel	7	8

Color wheel



1 Stepped Selection: Open
DMX 0–3

2 Stepped Selection: Red
DMX 4–7

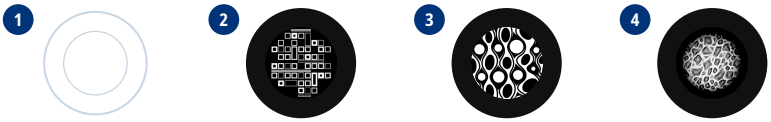
3 Stepped Selection: Green
DMX 8–11

4 Stepped Selection: Blue
DMX 12–15

5 Stepped Selection: Yellow
DMX 16–19

6 CTO
DMX 20–24

Gobo wheel



1 Stepped Selection: Open
DMX 0–5

2 Stepped Selection: Gobo 1
DMX 6–11

3 Stepped Selection: Gobo 2
DMX 12–17

4 Gobo 3
DMX 18–24

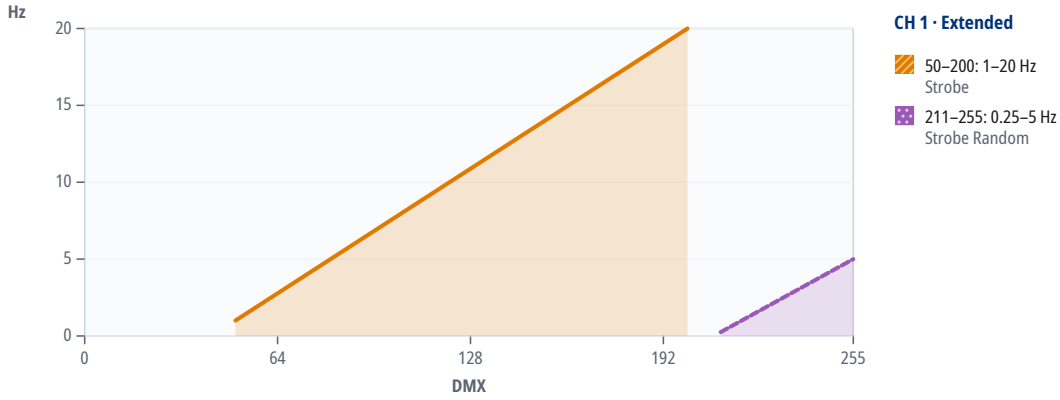
Animation wheel



1 Open

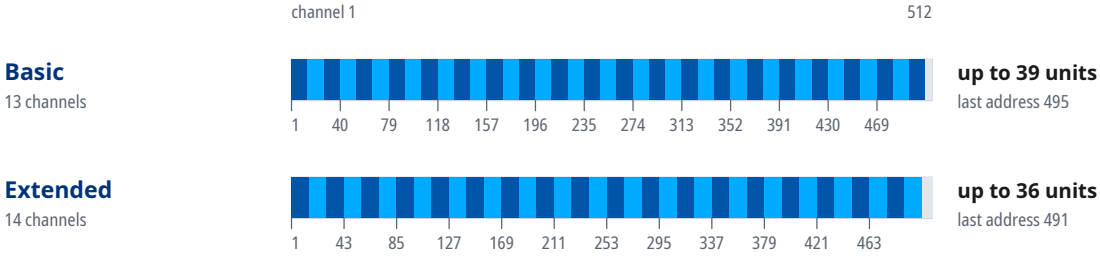
2 Animation Wheel
DMX 0

Strobe rate



8 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	71	11	141	16	211
2	15	7	85	12	155	17	225
3	29	8	99	13	169	18	239
4	43	9	113	14	183	19	253
5	57	10	127	15	197	20	267

RDM personalities

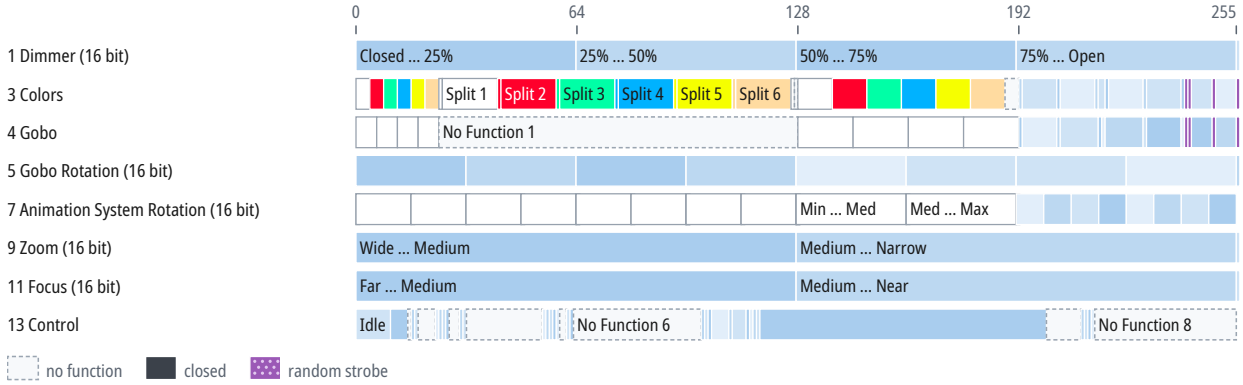
Mode	Channels	RDM personality
Basic	13	1
Extended	14	2

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 1 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Colors 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0–63	Closed ... 25%
		64–127	25% ... 50%
		128–191	50% ... 75%
		192–255	75% ... Open
		255	Open
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Colors	0–3	Stepped Selection: Open
		4–7	Stepped Selection: Red
		8–11	Stepped Selection: Green
		12–15	Stepped Selection: Blue
		16–19	Stepped Selection: Yellow
		20–23	Stepped Selection: CTO
		24	Wheel Index: Open
		25–40	Split 1
		41	Wheel Index: Red
		42–57	Split 2
		58	Wheel Index: Green
		59–74	Split 3
		75	Wheel Index: Blue
		76–91	Split 4
		92	Wheel Index: Yellow
		93–108	Split 5
		109	Wheel Index: CTO
		110–125	Split 6
		126	Wheel Index: Open
		127	No Function 1

CH	Function	DMX	Description
3	Colors (continued)	128–137	Wheel Shake: Open (0.14–2.5 Hz)
		138–147	Wheel Shake: Red (0.14–2.5 Hz)
		148–157	Wheel Shake: Green (0.14–2.5 Hz)
		158–167	Wheel Shake: Blue (0.14–2.5 Hz)
		168–177	Wheel Shake: Yellow (0.14–2.5 Hz)
		178–187	Wheel Shake: CTO (0.14–2.5 Hz)
		188–191	No Function 2
		192	CW Max
		193–202	CW Max ... CW Med
		203	CW Med
		204–213	CW Med ... CW Min
		214	CW Min
		215–216	Wheel Spin: Stop
		217	CCW Min
		218–227	CCW Min ... CCW Med
		228	CCW Med
		229–238	CCW Med ... CCW Max
		239	CCW Max
		240	Random Slots: Stop
		241	Random Slots: Min
		242–247	Min ... Med
		248	Med
		249–254	Med ... Max
		255	Random Slots: Max
4	Gobo	0–5	Stepped Selection: Open
		6–11	Stepped Selection: Gobo 1
		12–17	Stepped Selection: Gobo 2
		18–23	Stepped Selection: Gobo 3
		24–127	No Function 1
		128–143	Gobo Shake: Open (0.14–2.5 Hz)
		144–159	Gobo Shake: Gobo 1 (0.14–2.5 Hz)
		160–175	Gobo Shake: Gobo 2 (0.14–2.5 Hz)
		176–191	Gobo Shake: Gobo 3 (0.14–2.5 Hz)
		192	CW Max
		193–202	CW Max ... CW Med
		203	CW Med
		204–214	CW Med ... CW Min
		215	CW Min
		216	CCW Min
		217–227	CCW Min ... CCW Med
		228	CCW Med
		229–238	CCW Med ... CCW Max

CH	Function	DMX	Description
4	Gobo (continued)	239	CCW Max
		240	Random Slots: Stop
		241	Random Slots: Min
		242–247	Min ... Med
		248	Med
		249–254	Med ... Max
		255	Random Slots: Max
5	Gobo Rotation	0–31	-180 deg ... -90 deg
		32–63	-90 deg ... 0 deg
		63–64	0 deg
		64–95	0 deg ... 90 deg
		95	90 deg
		96–127	90 deg ... 180 deg
		127	180 deg
		128–159	CW Max ... CW Med
		159	CW Med
		160–191	CW Med ... CW Min
		191	CW Min
		191–192	Gobo Rotation: Stop
		192–223	CCW Min ... CCW Med
		224–255	CCW Med ... CCW Max
		255	CCW Max
6	Gobo Rotation Fine	0–255	Fine adjustment of CH 5
7	Animation System Rotation	0–15	-180 deg ... -90 deg
		16–31	-90 deg ... 0 deg
		31–32	0 deg
		32–47	0 deg ... 90 deg
		47	90 deg
		48–63	90 deg ... 180 deg
		63	180 deg
		64–79	CW Max ... CW Med
		79	CW Med
		80–95	CW Med ... CW Min
		95	CW Min
		95–96	Wheel Rotation: Stop
		96–111	CCW Min ... CCW Med
		112–127	CCW Med ... CCW Max
		127	CCW Max
		128	Wheel Bounce: Stop
		128	Wheel Bounce: Min
		128–159	Min ... Med
		160–191	Med ... Max

CH	Function	DMX	Description
7	Animation System Rotation (continued)	191	Wheel Bounce: Max
		192–199	Slot 1 (Open)
		200–207	Slot 2
		208–215	Slot 3
		216–223	Slot 4
		224–231	Slot 5
		232–239	Slot 6
		240–247	Slot 7
		248–255	Slot 8
8	Animation System Rotation Fine	0–255	Fine adjustment of CH 7
9	Zoom	0–127	Wide ... Medium
		128–255	Medium ... Narrow
		255	Narrow
10	Zoom Fine	0–255	Fine adjustment of CH 9
11	Focus	0–127	Far ... Medium
		128–255	Medium ... Near
		255	Near
12	Focus Fine	0–255	Fine adjustment of CH 11
13	Control	0–9	Idle
		10–14	Reset Entire Fixture (5s)
		15	No Function 1
		16	Reset Color Only (5s)
		17	Reset Beam Only (5s)
		18–22	No Function 2
		23	Linear (1s)
		24	Square Law (1s)
		25	Inverse Square Law (1s)
		26	S-Curve (1s)
		27–29	No Function 3
		30	Enable (1s)
		31	Disable (1s)
		32–53	No Function 4
		54	Regulated (1s)
		55	Constant Full (1s)
		56	Constant Medium (1s)
		57	Constant Low (1s)
		58	Constant Ultra Low (1s)
		59–60	No Function 5
		61	Enable (5s)
		62	Disable (5s)
		63–99	No Function 6
		100	Enable Calibration (5s)

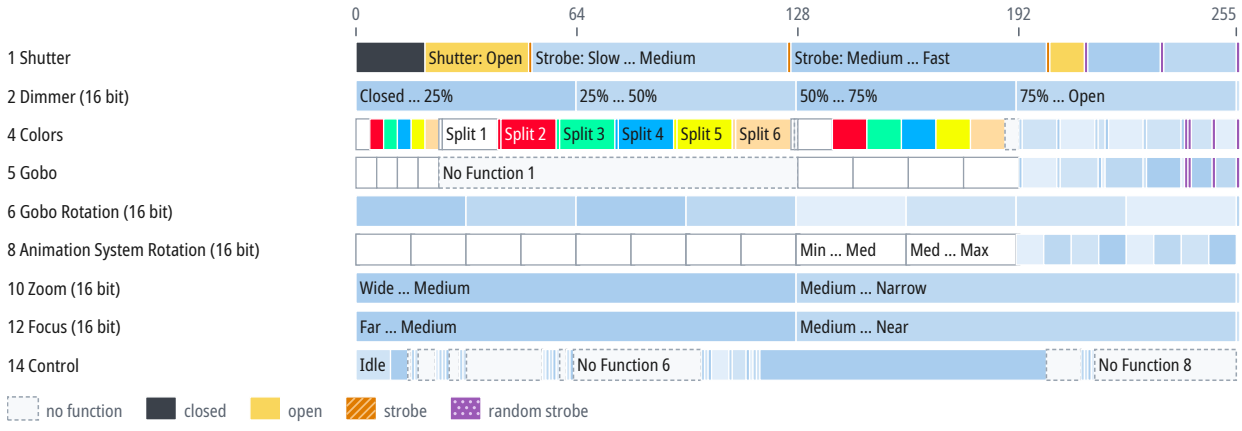
CH	Function	DMX	Description
13	Control (continued)	101	Enable Calibration (5s) ... Store Dimmer Calibration (5s)
		102	Store Dimmer Calibration (5s)
		103–107	Store Dimmer Calibration (5s) ... Store Gobo Calibration (5s)
		108	Store Gobo Calibration (5s)
		109–112	Store Gobo Calibration (5s) ... Store Focus Calibration (5s)
		113	Store Focus Calibration (5s)
		114	Store Zoom Calibration (5s)
		115	Store ColorWheel Calibration (5s)
		116	Store AnimationWheel Calibration (5s)
		117–199	Fixture Calibration
		200–209	No Function 7
		210	Outdoor Actions: Stop (1s)
		211	Stop (1s) ... Dry Out (1s)
		212	Dry Out (1s)
		213	Outdoor Actions
		214–255	No Function 8

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 1 Shutter at 20–49 or 201–210 “Open”; CH 2 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 30, CH 2 Dimmer 255, CH 4 Colors 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Shutter	0–19	Shutter: Closed
		20–49	Shutter: Open
		50	Strobe: Slow
		51–124	Strobe: Slow ... Medium
		125	Strobe: Medium
		126–199	Strobe: Medium ... Fast
		200	Strobe: Fast

CH	Function	DMX	Description
1	Shutter (continued)	201–210	Shutter: Open
		211	Strobe Random: Slow
		212–232	Strobe Random: Slow ... Medium
		233	Strobe Random: Medium
		234–254	Strobe Random: Medium ... Fast
		255	Strobe Random: Fast
2	Dimmer		Same as CH 1 in the mode “Basic” (p. 9)
3	Dimmer Fine	0–255	Fine adjustment of CH 2
4	Colors		Same as CH 3 in the mode “Basic” (p. 9)
5	Gobo		Same as CH 4 in the mode “Basic” (p. 10)
6	Gobo Rotation		Same as CH 5 in the mode “Basic” (p. 11)
7	Gobo Rotation Fine	0–255	Fine adjustment of CH 6
8	Animation System Rotation		Same as CH 7 in the mode “Basic” (p. 11)
9	Animation System Rotation Fine	0–255	Fine adjustment of CH 8
10	Zoom		Same as CH 9 in the mode “Basic” (p. 12)
11	Zoom Fine	0–255	Fine adjustment of CH 10
12	Focus		Same as CH 11 in the mode “Basic” (p. 12)
13	Focus Fine	0–255	Fine adjustment of CH 12
14	Control		Same as CH 13 in the mode “Basic” (p. 12)

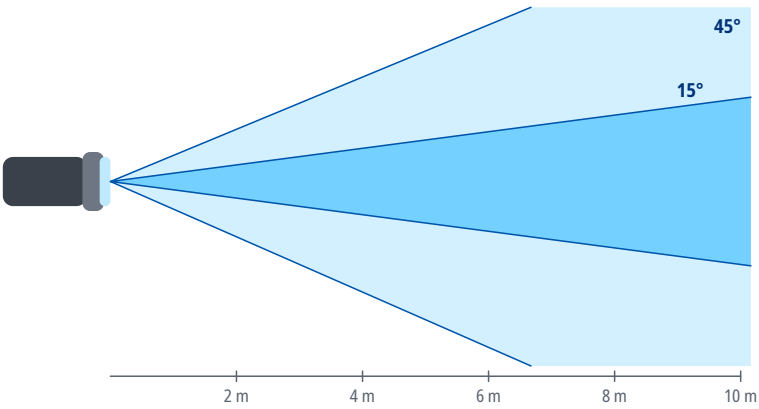
9 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	130 W
Luminous flux	4,700 lm
Color temperature	7,000 K
Color rendering index (CRI)	72
Optics	
Zoom	15–45°
Control	
DMX connection	TBLK IN/OUT
RDM	yes (manufacturer ID 0x4D50, device model ID 0x00D1)
Electrical	
Power supply	100–277 V, 50/60 Hz
Power consumption	180 W
Power connectors	TBLK IN
Dimensions and construction	
Weight	13.9 kg
Operating environment	
Operating temperature	-30 to 45 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–20 Hz
Color wheel rotation	up to 360 °/s (60 rpm)
Gobo wheel rotation	up to 360 °/s (60 rpm)
Gobo rotation	up to 780 °/s (130 rpm)

Spot diameter



Distance	Ø 15°	Ø 45°
2 m	0.53 m	1.7 m
4 m	1.1 m	3.3 m
6 m	1.6 m	5 m
8 m	2.1 m	6.6 m
10 m	2.6 m	8.3 m
15 m	3.9 m	12.4 m

Spot diameter square to the beam axis, calculated from the beam angle.

10 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.

11 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.

12 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.