DMX REFERENCE

HYU-7-40WB Mini Beam

295W Moving Head, 9300K,16 Gobos, 13 Colors, Halo Ring,

Hyulights



Manufacturer	Hyulights
GDTF file	Hyulights_HYU-7-40WB_Mini_Beam_148627.gdtf
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1 About this manual

This document describes the 295W Moving Head, 9300K,16 Gobos, 13 Colors, Halo Ring, by Hyulights. It was compiled from the GDTF file Hyulights_HYU-7-40WB_Mini_Beam_148627.gdtf from the GDTF-Share library.

File revision: “rev6”.

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 Hyulights; 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	450 W
Weight	8.2 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Mode 1	19	26	1, 20, 39, 58, ...

No light? Check these channels

- Mode 1: CH 7 Strobe at 0–3 “Off”; CH 8 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: 100–240 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.
- 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

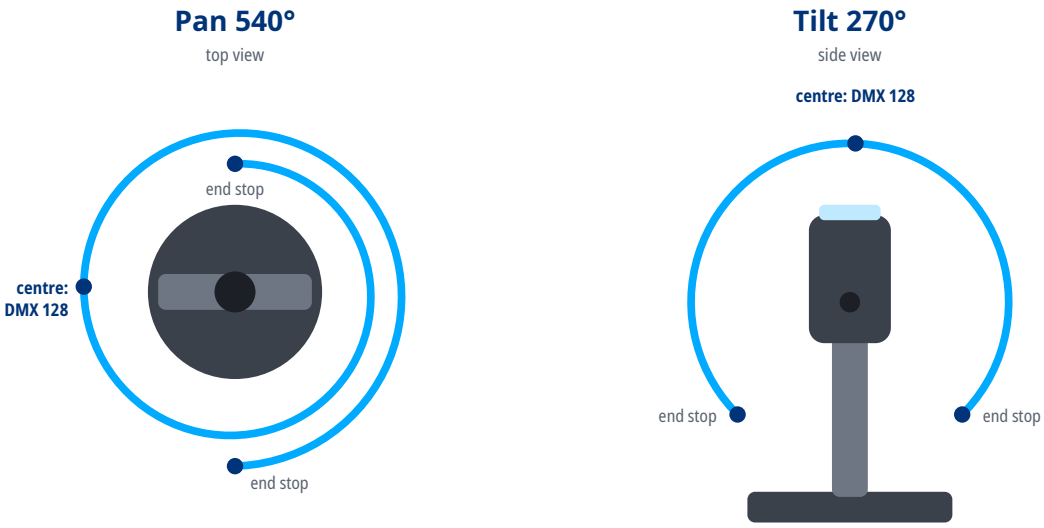
Description in the GDTF file

“295W Moving Head, 9300K,16 Gobos, 13 Colors, Halo Ring, 1.5-15° Zoom, Effect: Frost, 6 Rainbow, 48 Prism.”

“Product Page: https://www.aliexpress.com/item/1005009962697231.html Product Manual: https://ae-pic-a1.aliexpress-media.com/kf/S3ae08b718f9f4d0b8789067b46ddc57dV.pdf”

- RDM UUID: 7ff8:b0fbf6b7
- Protocol Major: 1
- Protocol Minor: 0
- Device Model: 43776
- Product Category: Moving yoke fixture
- Software Version: 622067712
- DMX Footprint: 20
- Current Personality: 1
- Personality Count: 2
- DMX Start Address: 1
- Sub Device Count: 1
- Sensor Count: 2

Range of movement



5 Installation

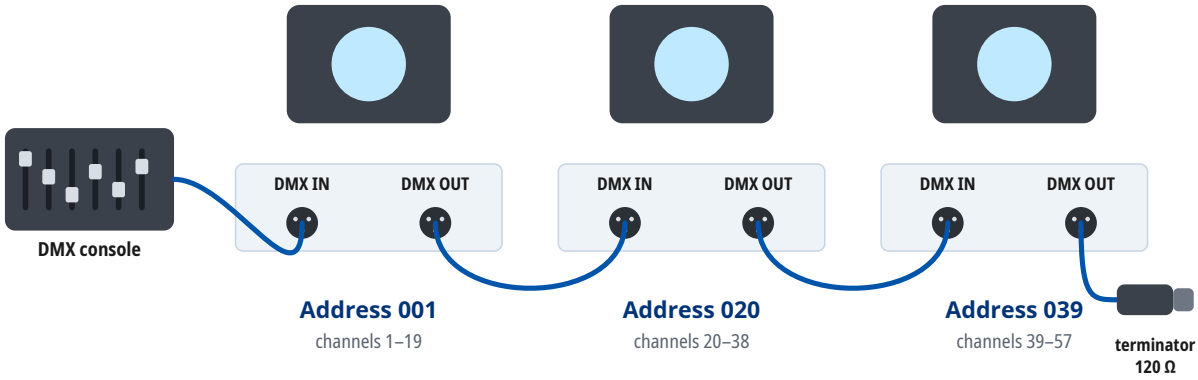
⚠ **WARNING**

- 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: 8.2 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 1: every unit occupies 19 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 “Mode 1”: 19.
- 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 “Mode 1”, you can use, for example, the start addresses 1, 20, 39, 58.
- 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

	Mode 1 19 channels
Pan / Tilt	1, 2
Dimmer	8
Shutter / strobe	7
Color wheel	9
Gobo wheel	6, 11, 12
Prism	14, 15
Zoom	13
Animation wheel	19

Prism

1. Open — DMX 0–7
2. Star — DMX 8–15
3. Crosshair — DMX 16–23
4. Spiral — DMX 24–31
5. Cross — DMX 32–39
6. Elements — DMX 40–47
7. Flower — DMX 48–55
8. InvStar — DMX 56–63
9. Tribal — DMX 64–71
10. Dots — DMX 72–79
11. Shards — DMX 80–87
12. DotLine — DMX 88–95
13. Triangle — DMX 96–103
14. Wave — DMX 104–111
15. Rosace — DMX 112–119
16. Tiger — DMX 120–127

Gobo wheel 1



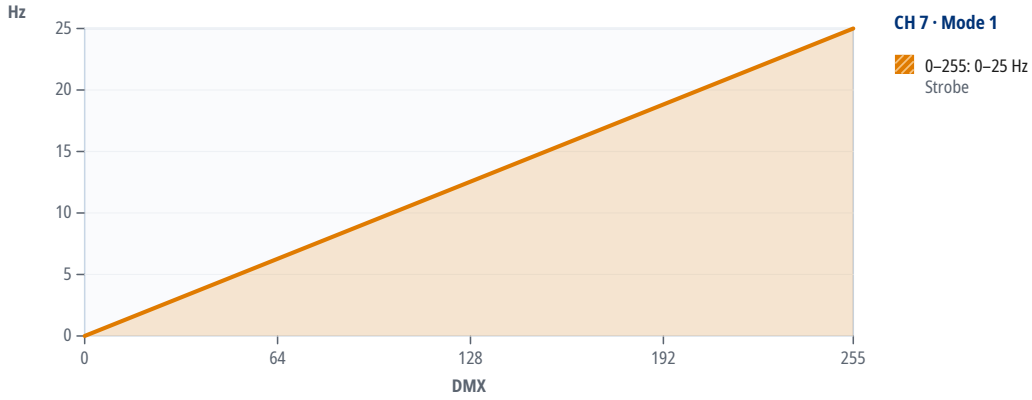
1. White — DMX 0–3
2. Red — DMX 8–11
3. Orange — DMX 16–19
4. Yellow — DMX 24–27
5. Green — DMX 32–35
6. Blue — DMX 40–43
7. Magenta — DMX 48–51
8. Cyan — DMX 56–59
9. UV — DMX 64–67
10. White — DMX 72–75
11. Sand — DMX 80–83
12. Emerald — DMX 88–91
13. Pink — DMX 96–99
14. White 3

Gobo wheel 2



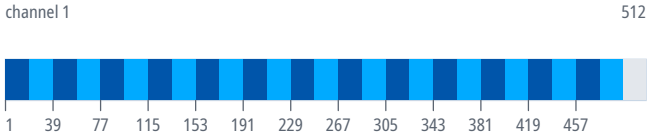
1. No Effect — DMX 0–79
2. Frost Effect — DMX 80–159
3. Rainbow Effect — DMX 160–255

Strobe rate



9 DMX channels

Units in one DMX universe



Mode 1
19 channels

up to 26 units
last address 476

Start addresses of 20 units in the mode “Mode 1”

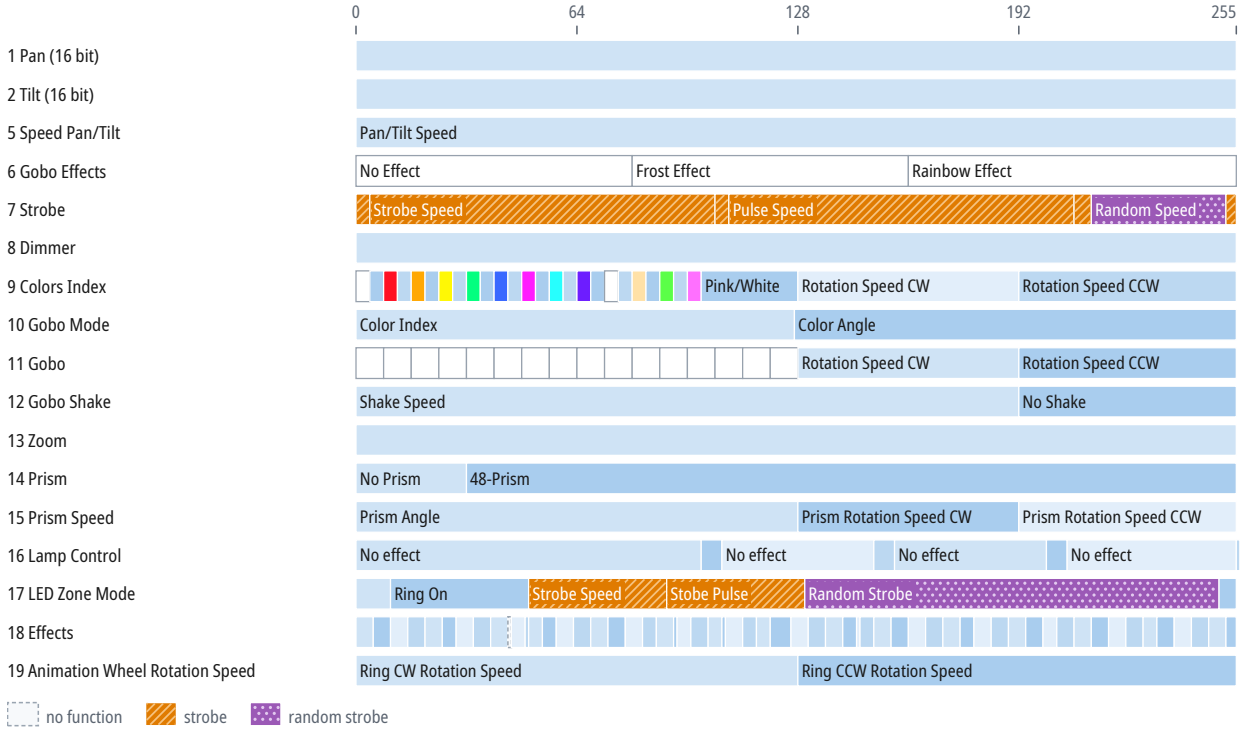
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	96	11	191	16	286
2	20	7	115	12	210	17	305
3	39	8	134	13	229	18	324
4	58	9	153	14	248	19	343
5	77	10	172	15	267	20	362

Mode 1

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 Strobe at 0–3 “Off”; CH 8 Dimmer above 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–255	540°
2	Tilt	0–255	270°
3	Pan Fine	0–255	Fine adjustment of CH 1
4	Tilt Fine	0–255	Fine adjustment of CH 2
5	Speed Pan/Tilt		Pan/Tilt Speed
		0–255	Pan/Tilt Speed
6	Gobo Effects		Frost/Rainbow Effect
		0–79	No Effect
		80–159	Frost Effect
		160–255	Rainbow Effect
7	Strobe	0–3	Off
		4–103	Strobe Speed (0–25 Hz)
		104–107	Bulb On
		108–207	Pulse Speed (0–25 Hz)
		208–212	Bulb On
		213–251	Random Speed (0–25 Hz)
		252–255	Bulb On
8	Dimmer	0–255	

CH	Function	DMX	Description
9	Colors Index		Color Wheel
		0–3	White
		4–7	White/Red
		8–11	Red
		12–15	Red/Orage
		16–19	Orange
		20–23	Orange/Yellow
		24–27	Yellow
		28–31	Yellow/Green
		32–35	Green
		36–39	Grenn/Blue
		40–43	Blue
		44–47	Blue/Magenta
		48–51	Magenta
		52–55	Magenta/Cyan
		56–59	Cyan
		60–63	Cyan/UV
		64–67	UV
		68–71	UV/White
		72–75	White
		76–79	White/Sand
		80–83	Sand
		84–87	Sand/Emerald
		88–91	Emerald
		92–95	Emerald/Pink
		96–99	Pink
		100–127	Pink/White
		128–191	Rotation Speed CW
		192–255	Rotation Speed CCW
10	Gobo Mode		Color Index
		0–126	Color Index
		127–255	Color Angle
11	Gobo	0–7	Open
		8–15	Star
		16–23	Crosshair
		24–31	Spiral
		32–39	Cross
		40–47	Elements
		48–55	Flower
		56–63	InvStar
		64–71	Tribal
		72–79	Dots

CH	Function	DMX	Description
11	Gobo (continued)	80–87	Shards
		88–95	DotLine
		96–103	Triangle
		104–111	Wave
		112–119	Rosace
		120–127	Tiger
		128–191	Rotation Speed CW
		192–255	Rotation Speed CCW
12	Gobo Shake	0–191	Shake Speed
		192–255	No Shake
13	Zoom	0–255	1.5–15°
14	Prism	0–31	No Prism
		32–255	48-Prism
15	Prism Speed	0–127	Prism Angle (360°)
		128–191	Prism Rotation Speed CW
		192–255	Prism Rotation Speed CCW
16	Lamp Control	0–99	No effect
		100–105	Bulb delay off
		106–149	No effect
		150–155	Bulb half power
		156–199	No effect
		200–205	Bulb delay on
		206–254	No effect
		255	Reset
17	LED Zone Mode		Ring Strobe
		0–9	Ring Off
		10–49	Ring On
		50–89	Strobe Speed
		90–129	Stobe Pulse
		130–249	Random Strobe
		250–255	Ring On
18	Effects		Rin Effects
		0–4	Full Red
		5–9	Full Green
		10–14	Full Blue
		15–19	Full Yellow
		20–24	Full Magenta
		25–28	Full Cyan
		29–33	Full White
		34–38	Full Cycle 20s
		39–43	Fulll Cylce 30s
		44	Off

CH	Function	DMX	Description
18	Effects (continued)	45–48	Off ... RGBW Sine
		49	RGBW Sine
		50–53	RGBW Sine ... Green Sine
		54–57	Green Sine
		58–62	Red Sine
		63–67	Blue Sine
		68–72	Yellow Sine
		73–77	Magenta Sine
		78–82	Cyan Sine
		83–86	White Sine
		87–91	Geen/Blue
		92	Blue/Red
		93–96	Blue/Red ... RYGW
		97–101	RYGW
		102–105	GCBM
		106	GCBM ... WWoff
		107–111	WWoff
		112–115	RRoff
		116–119	GGoff
		120–125	RWWWR
		126–130	GWWWG
		131–135	BWWWB
		136–140	YWWWY
		141–144	CWWWC
		145	MWWWM
		146–149	MWWWM ... WMCYM
		150–154	WMCYM
		155–159	RGBx2
		160–164	RGBx1
		165–169	CYMx1
		170–174	BRMx1
		175–178	GYCx1
		179–183	RGB gradient
		184–188	RBG+Wx3
		189–193	Progress Red
		194–198	Progress Green
		199–202	Progress Blue
		203–207	Progress Yellow
		208–212	Progress Cyan
		213–217	Progress Magenta
		218–222	Progress White
		223–227	RBBB

CH	Function	DMX	Description
18	Effects (continued)	228–231	BGGG
		232–236	BRRRR
		237–241	Wooo
		242–246	RGBW trail
		247–251	All colors dots
		252–255	All colors gradient
19	Animation Wheel Rotation Speed	0–127	Ring CW Rotation Speed
		128–255	Ring CCW Rotation Speed

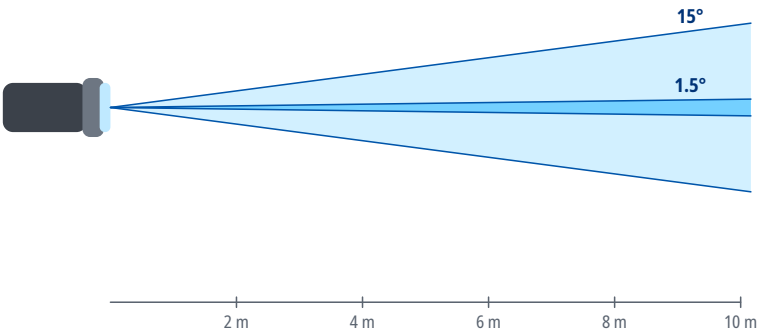
10 Technical specifications

Parameter	Value
Light	
Light source	halogen lamp
Lamp power	295 W
Luminous flux	12,000 lm
Color temperature	9,300 K
Color rendering index (CRI)	90
Optics	
Zoom	1.5–15°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	3-pin XLR IN/OUT
RDM	yes (manufacturer ID 0x7FF8, device model ID 0xF6B7)
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	450 W
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	8.2 kg
Operating environment	
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0–25 Hz

Spot diameter



Distance	Ø 1.5°	Ø 15°
2 m	0.05 m	0.53 m
4 m	0.1 m	1.1 m
6 m	0.16 m	1.6 m
8 m	0.21 m	2.1 m
10 m	0.26 m	2.6 m
15 m	0.39 m	3.9 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.