DMX REFERENCE

AstraHybrid330

Prolights



Manufacturer	Prolights
GDTF file	Prolights_AstraHybrid330_108545.gdtf
GDTF revision	Rev 025 - Control Channel updated with GoboColorCorrection option · 2025-08-25
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1 About this manual

This document describes the AstraHybrid330 by Prolights. It was compiled from the GDTF file Prolights_AstraHybrid330_108545.gdtf from the GDTF-Share library.

File revision: “Rev 025 - Control Channel updated with GoboColorCorrection option”.

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 Prolights; 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	22 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Standard	29	17	1, 30, 59, 88, ...

No light? Check these channels

- Standard: CH 5 Dimmer above 0; CH 7 Shutter at 63–64, 126–127, 189–190 or 252–255 “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

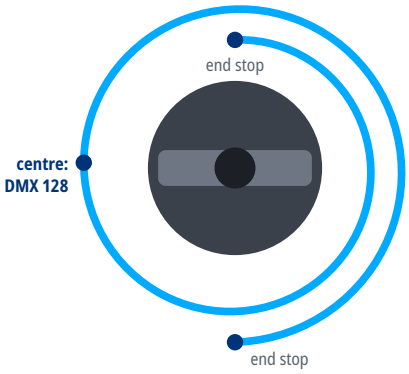
Description in the GDTF file

“The Astra Hybrid330 is an ultra compact LED hybrid moving head with phenomenal power for its size and delivering a stunning set of visual effects. The Astra Hybrid330 optical system ranges linearly from 3° to 46°, and it's equipped with a large 140mm front lens featuring both an high intensity beam and perfect spotlight, offering a tremendous lumen output and superior evenness compared with other lights in the same category. The extensive feature set of the Astra Hybrid330 includes functions like aerial effects with a fat and parallel beam and crisp projection textures and pattern effects, with linear CMY, three colour-wheels, an animation wheel, two overlapping prisms, frost and two gobo wheels.”

Range of movement

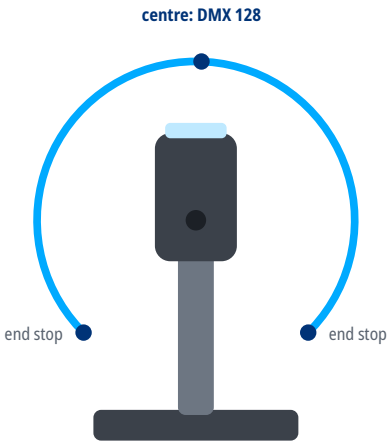
Pan 540°

top view



Tilt 270°

side view



5 Installation

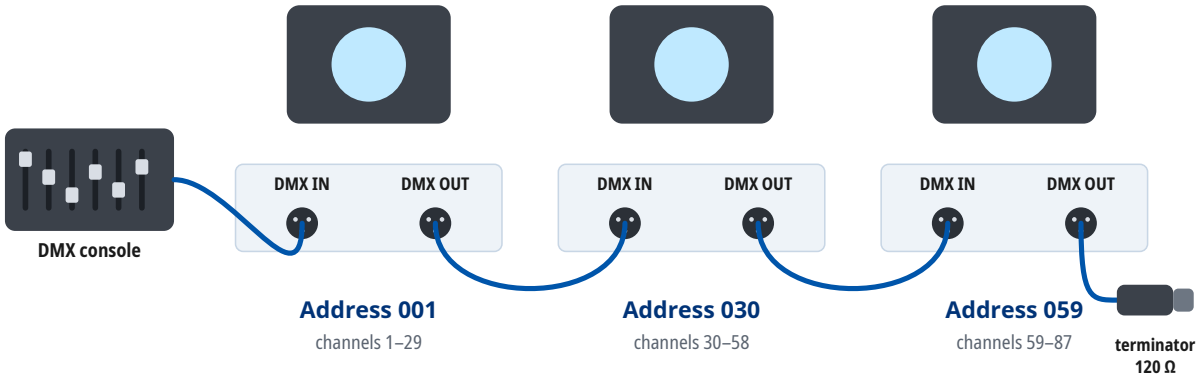
⚠ **WARNING**

- 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: 22 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 Standard: every unit occupies 29 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

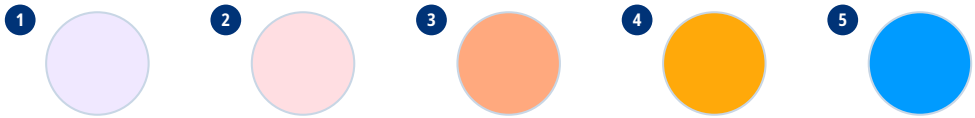
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Standard”: 29.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “Standard”, you can use, for example, the start addresses 1, 30, 59, 88.
- 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

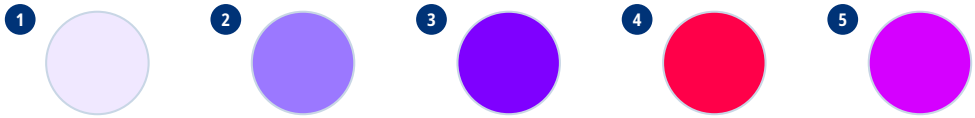
Functions in each DMX mode

	Standard 29 channels
Pan / Tilt	1, 3
Dimmer	5
Shutter / strobe	7
Color mixing	8–10
Color wheel	11–13
Gobo wheel	14, 17
Gobo rotation	15
Prism	18–21
Frost	22
Zoom	23
Focus	25
Animation wheel	27, 28

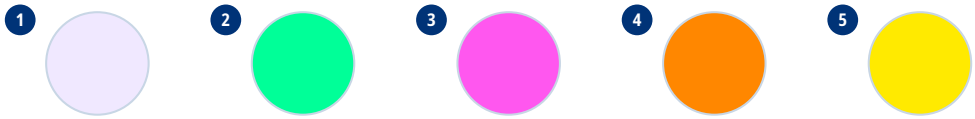
Color wheel 1



Color wheel 2



Color wheel 3



Gobo wheel 1

1
Gobo 1: Open
DMX 0–9

2 
Gobo 1: Gobo_1
DMX 10–19

3 
Gobo 1: Gobo_2
DMX 20–29

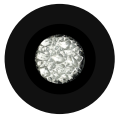
4 
Gobo 1: Gobo_3
DMX 30–39

5 
Gobo 1: Gobo_4
DMX 40–49

6 
Gobo 1: Gobo_5
DMX 50–59

7 
Gobo 1: Gobo_6
DMX 60–69

8 
Gobo 1: Gobo_7
DMX 70–79

9 
Gobo_8
DMX 80–90

Gobo wheel 2

1
Gobo: Open
DMX 0–5

2 
Gobo_1
DMX 6–11

3 
Gobo_2
DMX 12–17

4 
Gobo_3
DMX 18–23

5 
Gobo_4
DMX 24–29

6 
Gobo_5
DMX 30–35

7 
Gobo_6
DMX 36–41

8 
Gobo_7
DMX 42–47

9 
Gobo_8
DMX 48–53

10 
Gobo_9
DMX 54–59

11 
Gobo_10
DMX 60–65

12 
Gobo_11
DMX 66–76

Prism 1

1
Open
DMX 0–127

2
6F Linear Prism
DMX 128–255

Prism 2

1
Open
DMX 0–127

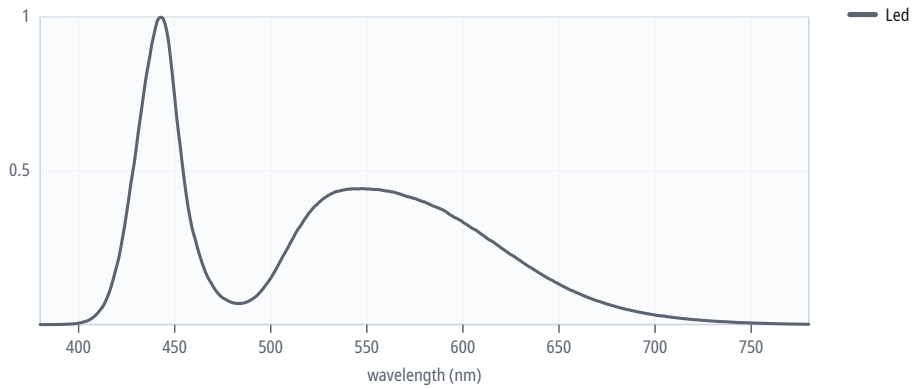
2
8 F Prism
DMX 128–255

Animation wheel

1
Open
DMX 0

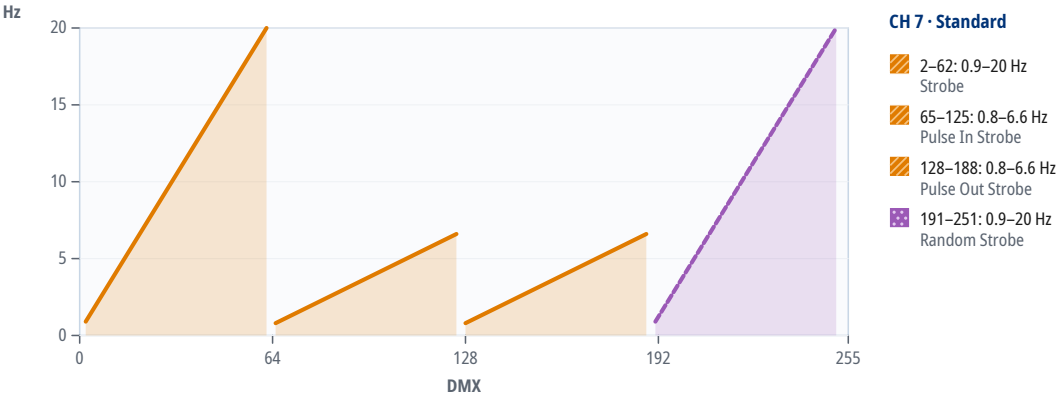
2 
Animation
DMX 1–255

Spectra of the light sources



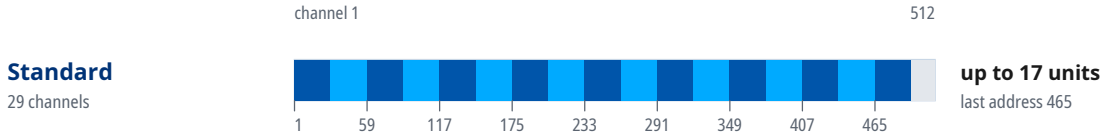
Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Standard”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	146	11	291	16	436
2	30	7	175	12	320	17	465
3	59	8	204	13	349	18	U2 · 1
4	88	9	233	14	378	19	U2 · 30
5	117	10	262	15	407	20	U2 · 59

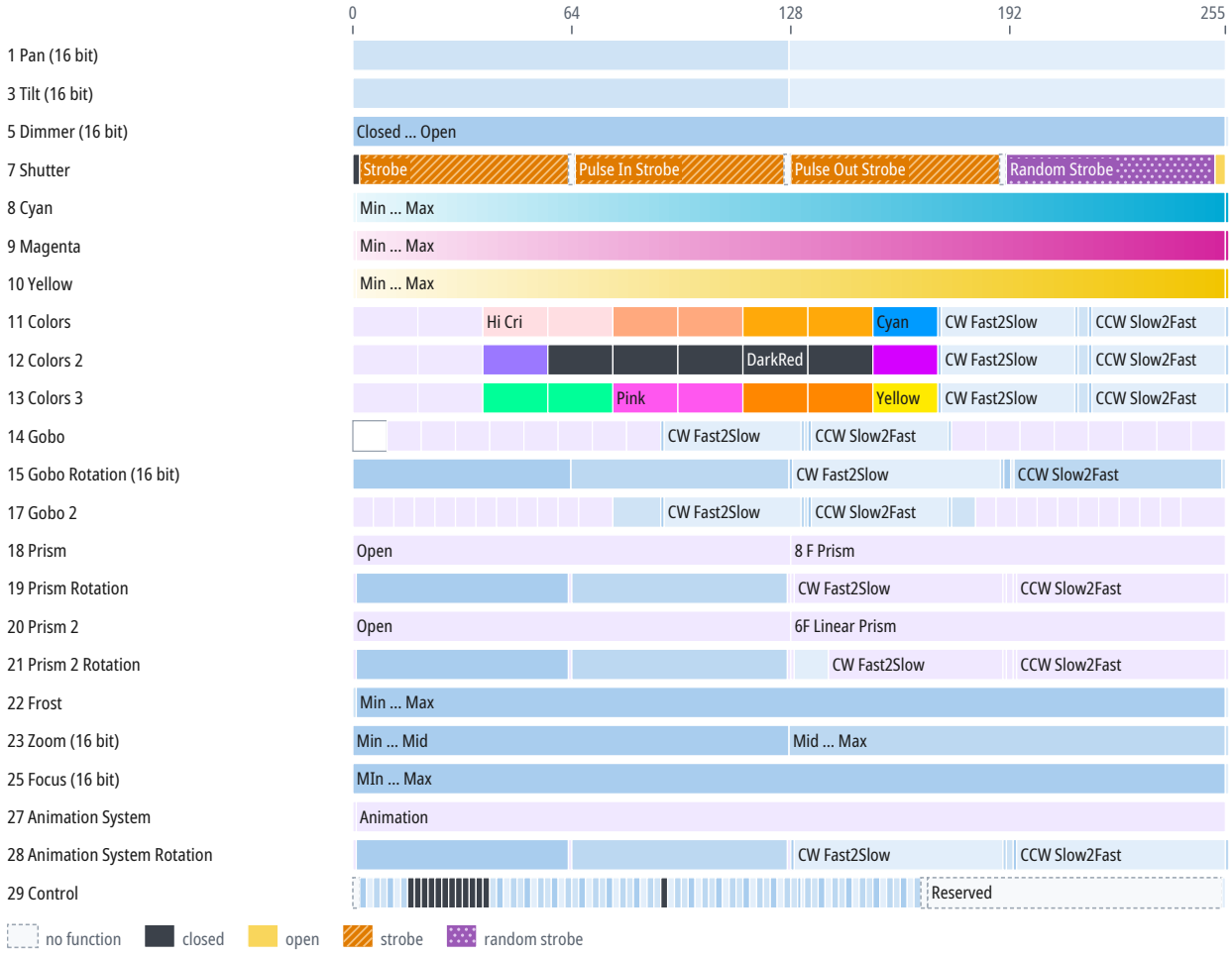
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 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 5 Dimmer above 0; CH 7 Shutter at 63–64, 126–127, 189–190 or 252–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 5 Dimmer 255, CH 7 Shutter 255, CH 8 Cyan 0, CH 9 Magenta 0, CH 10 Yellow 0, CH 11 Colors 0, CH 12 Colors 2 0, CH 13 Colors 3 0.

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	Dimmer	0–255	Closed ... Open
		255	Open
6	Dimmer Fine	0–255	Fine adjustment of CH 5

CH	Function	DMX	Description
7	Shutter	0–1	Closed
		2–62	Strobe (0.9–20 Hz)
		63–64	Open
		65–125	Pulse In Strobe (0.8–6.6 Hz)
		126–127	Open
		128–188	Pulse Out Strobe (0.8–6.6 Hz)
		189–190	Open
		191–251	Random Strobe (0.9–20 Hz)
		252–255	Open
8	Cyan	0	Min
		1–254	Min ... Max
		255	Max
9	Magenta	0	Min
		1–254	Min ... Max
		255	Max
10	Yellow	0	Min
		1–254	Min ... Max
		255	Max
11	Colors	0–18	Color 1: Open
		19–37	Open + Hi Cri
		38–56	Hi Cri
		57–75	Hi Cri + CTO 3200K
		76–94	CTO 3200K
		95–113	CTO 3200k + CTO 2400K
		114–132	CTO 2400K
		133–151	CTO 2400K + CYAN
		152–170	Cyan
		171	CW Fast
		172–210	CW Fast2Slow (351.4–25.7 °/s)
		211	CW Slow
		212–214	Color 1 Wheel Spin: Stop
		215	CCW Slow
		216–254	CCW Slow2Fast (25.7–351.4 °/s)
		255	CCW Fast
12	Colors 2	0–18	Color: Open
		19–37	Open + Lavender
		38–56	Lavender
		57–75	Lavender + DarkBlue
		76–94	DarkBlue
		95–113	Dark Blue + DarkRed
		114–132	DarkRed
		133–151	DarkRed + Magenta

CH	Function	DMX	Description
12	Colors 2 (continued)	152–170	Magenta
		171	CW Fast
		172–210	CW Fast2Slow (351.4–25.7 °/s)
		211	CW Slow
		212–214	Color 1 Wheel Spin: Stop
		215	CCW Slow
		216–254	CCW Slow2Fast (25.7–351.4 °/s)
		255	CCW Fast
13	Colors 3	0–18	Color 3: Open
		19–37	Open + Light Green
		38–56	Light Green
		57–75	Light Green + Pink
		76–94	Pink
		95–113	Pink + Light Orange
		114–132	Light Orange
		133–151	Light Orange + Yellow
		152–170	Yellow
		171	CW Fast
		172–210	CW Fast2Slow (351.4–25.7 °/s)
		211	CW Slow
		212–214	Color 3 Wheel Spin: Stop
		215	CCW Slow
		216–254	CCW Slow2Fast (25.7–351.4 °/s)
		255	CCW Fast
14	Gobo	0–9	Gobo 1: Open
		10–19	Gobo 1: Gobo_1
		20–29	Gobo 1: Gobo_2
		30–39	Gobo 1: Gobo_3
		40–49	Gobo 1: Gobo_4
		50–59	Gobo 1: Gobo_5
		60–69	Gobo 1: Gobo_6
		70–79	Gobo 1: Gobo_7
		80–89	Gobo 1: Gobo_8
		90	CW Fast
		91–130	CW Fast2Slow (351.4–17.1 °/s)
		131	CW Slow
		132	Spin Stop
		133	CCW Slow
		134–173	CCW Slow2Fast (17.1–351.4 °/s)
		174	CCW Fast
		175–184	Gobo 1 Select Shake: Gobo_1 (0.85–4 Hz)
		185–194	Gobo 1 Select Shake: Gobo_2 (0.85–4 Hz)

CH	Function	DMX	Description
14	Gobo (continued)	195–204	Gobo 1 Select Shake: Gobo_3 (0.85–4 Hz)
		205–214	Gobo 1 Select Shake: Gobo_4 (0.85–4 Hz)
		215–224	Gobo 1 Select Shake: Gobo_5 (0.85–4 Hz)
		225–234	Gobo 1 Select Shake: Gobo_6 (0.85–4 Hz)
		235–244	Gobo 1 Select Shake: Gobo_7 (0.85–4 Hz)
		245–255	Gobo 1 Select Shake: Gobo_8 (0.85–4 Hz)
15	Gobo Rotation	0–63	Min 0 degrees ... Mid 180 degrees
		63	Mid 180 degrees
		64–127	Mid 180 degrees ... Max 360 degrees
		127	Max 360 degrees
		128	CW Fast (1000–984.4 °/s)
		129–190	CW Fast2Slow (984.4–31.2 °/s)
		190	CW Fast2Slow ... CW Slow
		190	CW Slow
		191–192	Gobo 1 Pos Rotate: Stop
		193	CCW Slow (15.7–31.2 °/s)
		194–254	CCW Slow2Fast (31.3–984.4 °/s)
		255	CCW Fast (984.4–1000 °/s)
16	Gobo Rotation Fine	0–255	Fine adjustment of CH 15
17	Gobo 2	0–5	Gobo: Open
		6–11	Gobo_1
		12–17	Gobo_2
		18–23	Gobo_3
		24–29	Gobo_4
		30–35	Gobo_5
		36–41	Gobo_6
		42–47	Gobo_7
		48–53	Gobo_8
		54–59	Gobo_9
		60–65	Gobo_10
		66–75	Gobo_11
		76–89	Gobo 2 Wheel Spin 2
		90	CW Fast
		91–130	CW Fast2Slow (351.4–17.1 °/s)
		131	CW Slow
		132	Spin Stop
		133	CCW Slow
		134–173	CCW Slow2Fast (17.1–351.4 °/s)
		174	CCW Fast
		175–181	Gobo 2 Wheel Spin 2
		182–187	Gobo 2 Select Shake: Gobo_1 (0.85–4 Hz)
		188–193	Gobo 2 Select Shake: Gobo_2 (0.85–4 Hz)

CH	Function	DMX	Description
17	Gobo 2 (continued)	194–199	Gobo 2 Select Shake: Gobo_3 (0.85–4 Hz)
		200–205	Gobo 2 Select Shake: Gobo_4 (0.85–4 Hz)
		206–211	Gobo 2 Select Shake: Gobo_5 (0.85–4 Hz)
		212–217	Gobo 2 Select Shake: Gobo_6 (0.85–4 Hz)
		218–223	Gobo 2 Select Shake: Gobo_7 (0.85–4 Hz)
		224–229	Gobo 2 Select Shake: Gobo_8 (0.85–4 Hz)
		230–235	Gobo 2 Select Shake: Gobo_9 (0.85–4 Hz)
		236–241	Gobo 2 Select Shake: Gobo_10 (0.85–4 Hz)
		242–255	Gobo 2 Select Shake: Gobo_11 (0.85–4 Hz)
18	Prism		8 F Prism
		0–127	Open
		128–255	8 F Prism
19	Prism Rotation	0	Min 0 Degrees
		1–62	Min 0 Degrees ... Mid 180 Degrees
		63	Mid 180 Degrees
		64–126	Mid 180 Degrees ... Max 360 Degrees
		127	Max 360 Degrees
		128	CW Fast
		129–189	CW Fast2Slow (177.2–7.09 °/s)
		190	CW Slow
		191–192	Prism 1 Pos Rotate: Stop
		193	CCW Slow
		194–254	CCW Slow2Fast (7.09–177.2 °/s)
		255	CCW Fast
20	Prism 2		6 F Prism
		0–127	Open
		128–255	6F Linear Prism
21	Prism 2 Rotation	0	Min 0 Degrees
		1–62	Min 0 Degrees ... Mid 180 Degrees
		63	Mid 180 Degrees
		64–126	Mid 180 Degrees ... Max 360 Degrees
		127	Max 360 Degrees
		128	CW Fast
		129–138	CW Fast ... CW Fast2Slow
		139–189	CW Fast2Slow (148.8–7.09 °/s)
		190	CW Slow
		191–192	Prism 2 Pos Rotate: Stop
		193	CCW Slow
		194–254	CCW Slow2Fast (7.09–177.2 °/s)
		255	CCW Fast
22	Frost	0	Min
		1–254	Min ... Max

CH	Function	DMX	Description
22	Frost (continued)	255	Max
23	Zoom	0–127	Min ... Mid
		128–255	Mid ... Max
		255	Max
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Focus	0–255	MIn ... Max
		255	Max
26	Focus Fine	0–255	Fine adjustment of CH 25
27	Animation System	0	Open
		1–255	Animation
28	Animation System Rotation	0	Min 0 Degrees
		1–62	Min 0 Degrees ... Mid 180 Degrees
		63	Mid 180 Degrees
		64–126	Mid 180 Degrees ... Max 360 Degrees
		127	Max 360 Degrees
		128	CW Fast
		129–189	CW Fast2Slow
		190	CW Fast
		191–192	Animation System 1 Pos Rotate: Stop
		193	CCW Slow
		194–254	CCW Slow2Fast
		255	CCW Fast
29	Control	0–1	No function
		2–3	Pan Reverse ON
		4–5	Pan Resverse OFF
		6–7	Tilt Reverse ON
		8–9	Tilt Reverse OFF
		10–11	P/T Mode Fast
		12–13	P/T Mode Mid
		14–15	P/T Mode Slow
		16–17	MOVEMENT IN BLACKOUT ON
		18–19	MOVEMENT IN BLACKOUT OFF
		20–21	COLOR WHEEL 1 BLACKOUT ON (index)
		22–23	COLOR WHEEL 1 BLACKOUT OFF (index)
		24–25	COLOR WHEEL 2 BLACKOUT ON (index)
		26–27	COLOR WHEEL 2 BLACKOUT OFF (index)
		28–29	COLOR WHEEL 3 BLACKOUT ON (index)
		30–31	COLOR WHEEL 3 BLACKOUT OFF (index)
		32–33	ROTATING GOBO WHEEL BLACKOUT ON (index)
		34–35	ROTATING GOBO WHEEL BLACKOUT OFF (index)
		36–37	FIXED GOBO WHEEL BLACKOUT ON (index)
		38–39	FIXED GOBO WHEEL BLACKOUT OFF (index)

CH	Function	DMX	Description
29	Control (continued)	40–41	COLOR WHEEL 1 CONTINUOUS MOVEMENT (index)
		42–43	COLOR WHEEL 1 STEP MOVEMENT (index)
		44–45	COLOR WHEEL 2 CONTINUOUS MOVEMENT (index)
		46–47	COLOR WHEEL 2 STEP MOVEMENT (index)
		48–49	COLOR WHEEL 3 CONTINUOUS MOVEMENT (index)
		50–51	COLOR WHEEL 3 STEP MOVEMENT (index)
		52–53	ROTATING GOBO WHEEL CONTINUOUS MOVEMENT (index)
		54–55	ROTATING GOBO WHEEL STEP MOVEMENT (index)
		56–57	FIXED GOBO WHEEL CONTINUOUS MOVEMENT (index)
		58–59	FIXED GOBO WHEEL STEP MOVEMENT (index)
		60–61	HOME MODE STANDARD
		62–63	HOME MODE CUSTOM
		64–65	DISPLAY ON
		66–67	DISPLAY 10S
		68–69	DISPLAY 20S
		70–71	DISPLAY 30S
		72–73	FLIP DISPLAY ON
		74–75	FLIP DISPLAY OFF
		76–77	FLIP DISPLAY AUTO
		78–79	KEY LOCK ON
		80–81	KEY LOCK OFF
		82–83	Fan Mode: AUTO
		84–85	SILENT
		86–87	Fan Mode: HIGH
		88–89	NO SIGNAL HOLD
		90–91	NO SIGNAL BLACKOUT
		92–93	STATUS LED ON
		94–95	STATUS LED OFF
		96–97	LINEAR
		98–99	S-CURVE
		100–101	SQUARE LAW
		102–103	INVERSE SQUARE LAW
		104–105	Dimmer Speed: AUTO
		106–107	Dimmer Speed: FAST
		108–109	MEDIUM
		110–111	Dimmer Speed: SLOW
		112–113	600Hz
		114–115	1200Hz
		116–117	2000Hz
		118–119	4000Hz
		120–121	6000Hz
		122–123	25kHz

CH	Function	DMX	Description
29	Control (continued)	124–125	50kHz
		126–127	Invert Zoom OFF
		128–129	Invert Zoom ON
		130	RESET ALL
		131	Fixture Global Reset
		132–133	RESET PAN/TILT
		134–135	RESET PAN
		136–137	RESET TILT
		138–139	RESET COLOR WHEEL 1
		140–141	RESET COLOR WHEEL 2
		142–143	RESET COLOR WHEEL 3
		144–145	RESET ROTATING GOBO
		146–147	RESET GOBO ROTATION
		148–149	RESET FIXED GOBO
		150–151	RESET ZOOM
		152–153	RESET FOCUS
		154–155	RESET ANIMATION
		156–157	RESET 6F PRISM
		158–159	RESET 8F PRISM
		160–161	RESET FROST
		162–163	RESET OTHER
		164–165	Gobo Color Correction: ON
		166–167	Gobo Color Correction: OFF
		168–253	Reserved
		254–255	FACTORY DEFAULT OF CONTROL FUNCTIONS

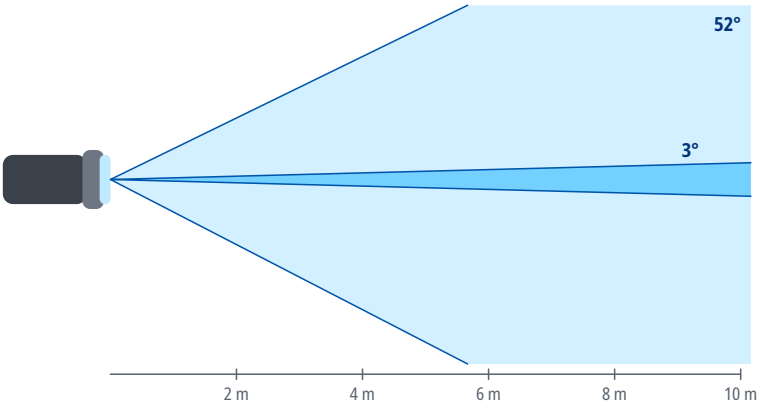
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	330 W
Luminous flux	10,976 lm
Color temperature	7,000 K
Color rendering index (CRI)	70
Optics	
Zoom	3–52°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	5-pin XLR IN/OUT
RJ45 connectors	RJ45 IN
RDM	yes (manufacturer ID 0x15D0, device model ID 0xA024)
Electrical	
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	22 kg
Operating environment	
Operating temperature	-10 to 45 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0.9–20 Hz
LED frequency	600–50000 Hz
Color wheel 1 rotation	up to 360 °/s (60 rpm)
Color wheel 2 rotation	up to 360 °/s (60 rpm)
Color wheel 3 rotation	up to 360 °/s (60 rpm)
Gobo wheel 1 rotation	up to 360 °/s (60 rpm)
Gobo wheel 2 rotation	up to 360 °/s (60 rpm)
Gobo 1 rotation	up to 1000 °/s (167 rpm)
Prism 1 rotation	up to 180 °/s (30 rpm)
Prism 2 rotation	up to 180 °/s (30 rpm)

Spot diameter



Distance	Ø 3°	Ø 52°
2 m	0.1 m	2 m
4 m	0.21 m	3.9 m
6 m	0.31 m	5.9 m
8 m	0.42 m	7.8 m
10 m	0.52 m	9.8 m
15 m	0.79 m	14.6 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.
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.