DMX REFERENCE

Ayrton Perseo Profile

Black Light Design



Manufacturer	Black Light Design
GDTF file	Black_Light_Design_Ayrton_Perseo_Profile_109950.gdtf
GDTF revision	2025-09-07
Generated	2026-11-23

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1 About this manual

This document describes the Ayrton Perseo Profile by Black Light Design. It was compiled from the GDTF file Black_Light_Design_Ayrton_Perseo_Profile_109950.gdtf from the GDTF-Share library.

File revision: “2025-09-07”.

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 Black Light Design; 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	800 W
Weight	38.8 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Extended_540	61	8	1, 62, 123, 184, ...
Standard_540	40	12	1, 41, 81, 121, ...
Basic_540	38	13	1, 39, 77, 115, ...
GhibliExt_540	58	8	1, 59, 117, 175, ...

No light? Check these channels

- Extended_540: CH 6 Shutter at 11–20, 118–126, 181–191 or 246–255 “open”; CH 7 Dimmer above 0
- Standard_540: CH 6 Shutter at 11–20, 118–126, 181–191 or 246–255 “open”; CH 7 Dimmer above 0
- Basic_540: CH 4 Shutter at 11–20, 118–126, 181–191 or 246–255 “open”; CH 5 Dimmer above 0
- GhibliExt_540: CH 6 Shutter at 11–20, 118–126, 181–191 or 246–255 “open”; CH 7 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

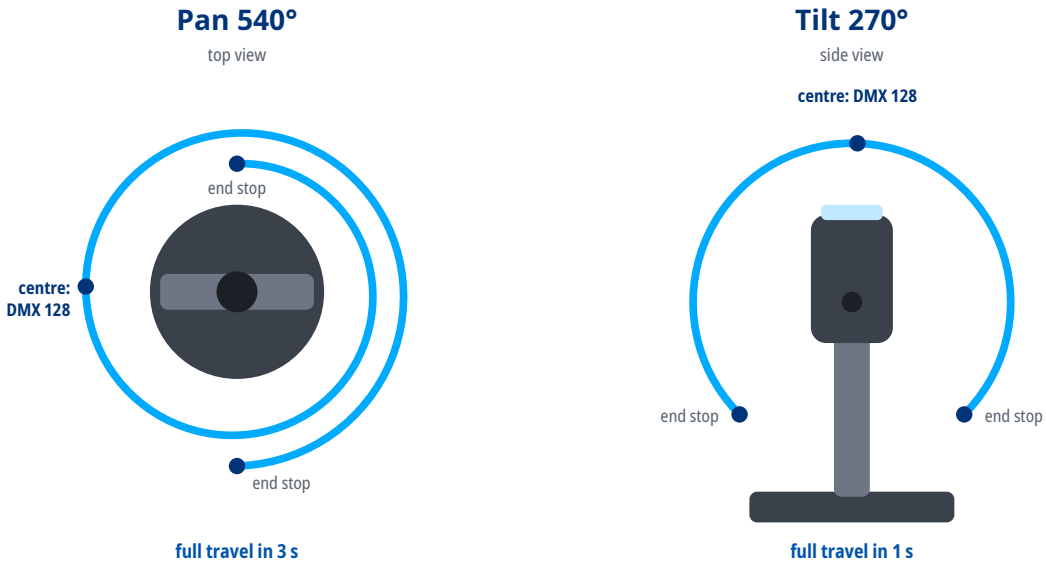
- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do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

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

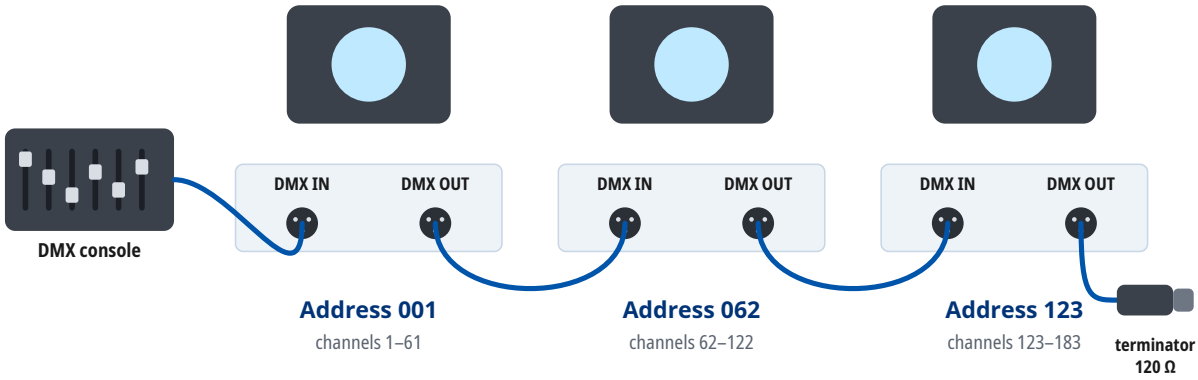
⚠ **WARNING**

- 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: 38.8 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 Extended_540: every unit occupies 61 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 “Extended_540”: 61.
- 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_540”, you can use, for example, the start addresses 1, 62, 123, 184.
- 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

	Extended_540 61 channels	Standard_540 40 channels	Basic_540 38 channels	GhibliExt_540 58 channels
Pan / Tilt	1, 3	1, 3	1, 2	1, 3
Pan / Tilt resolution	16 bit	16 bit	8 bit	16 bit
Dimmer	7	7	5	7
Dimmer resolution	16 bit	8 bit	8 bit	16 bit
Shutter / strobe	6	6	4	6
Color mixing	20, 22, 24	16–18	14–16	20, 22, 24
Color temperature	26	19	17	26
Color wheel	18	15	13	18
Gobo wheel	28, 31	20, 22	18, 20	28, 31
Gobo rotation	29	21	19	29
Prism	35, 36, 38, 39	25–28	23–26	35, 36
Frost	41, 42	29, 30	27, 28	38, 39
Zoom	12	11	9	12
Focus	14, 16, 17	12–14	10–12	14, 16, 17
Iris	33	24	22	33
Animation wheel	32	23	21	32

Color wheel 1

1. Color 1: Open
   DMX 0–3
2. Color 1: Half Minus Green
   DMX 4–7
3. Color 1: Magenta
   DMX 8–11
4. Color 1: Congo Blue
   DMX 12–15
5. Color 1: Green
   DMX 16–19
6. Color 1: Orange
   DMX 20–23
7. Color 1: Blue
   DMX 24–27
8. Red
   DMX 28–32

Gobo wheel 1

1
Gobo: Open
DMX 0–9

2 
Gobo: DotLine11
DMX 10–19

3 
Gobo: Stardust
DMX 20–29

4 
Gobo: NestedTriangle
DMX 30–39

5 
Gobo: InfinitStairs
DMX 40–49

6 
Gobo: Vortex
DMX 50–59

7 
Gobo: BlackAndWhiteTarget
DMX 60–69

8 
NestedRingsYellow
DMX 70–78

Gobo wheel 2

1
Gobo: Open
DMX 0–13

2 
Gobo: ConicalTunnelEffect
DMX 14–18

3 
Gobo: SmokeRings
DMX 19–23

4 
Gobo: Fireworks
DMX 24–28

5 
Gobo: AbstractSquare
DMX 29–33

6 
Gobo: IronFilings
DMX 34–38

7 
Gobo: LostInTheBrain
DMX 39–43

8 
Gobo: DeepForest
DMX 44–48

9 
Gobo: TreeBark
DMX 49–53

10 
Gobo: MirrorBall
DMX 54–58

11 
Gobo: Digital
DMX 59–63

12 
StainedGlass
DMX 64–69

Color wheel 2

1
Open

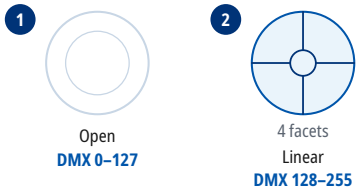
2
QuarterCTB

Prism 1

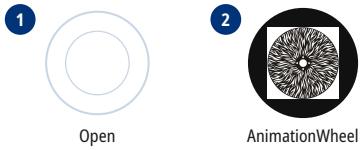
1
Open
DMX 0–127

2 
5 facets
5-Facet
DMX 128–255

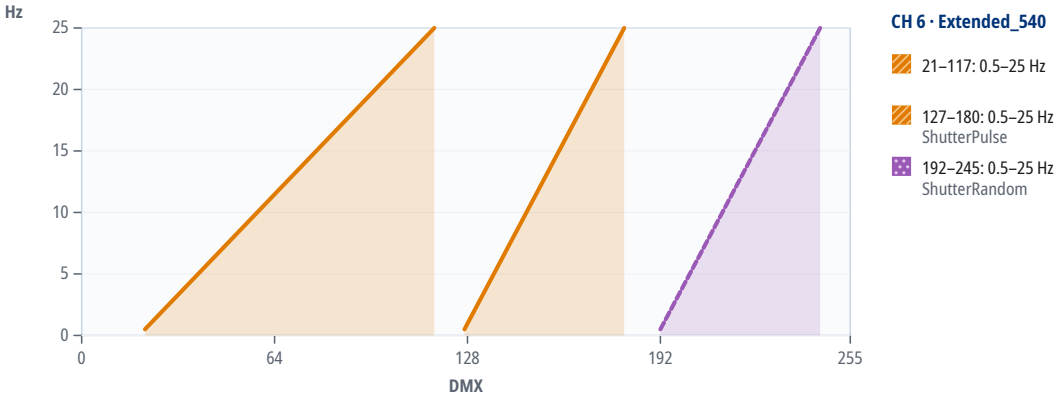
Prism 2



Animation wheel

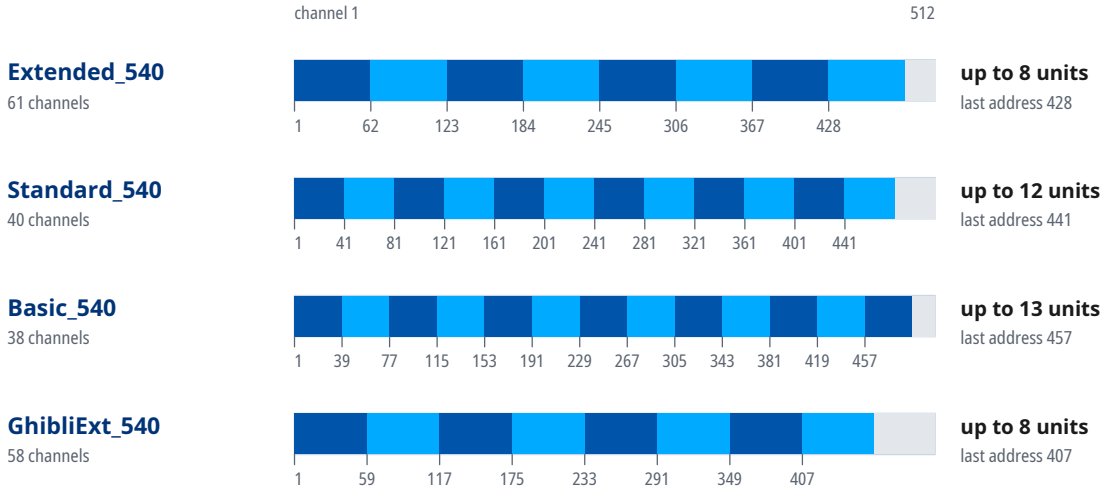


Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Extended_540”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	306	11	U2 · 123	16	U2 · 428
2	62	7	367	12	U2 · 184	17	U3 · 1
3	123	8	428	13	U2 · 245	18	U3 · 62
4	184	9	U2 · 1	14	U2 · 306	19	U3 · 123
5	245	10	U2 · 62	15	U2 · 367	20	U3 · 184

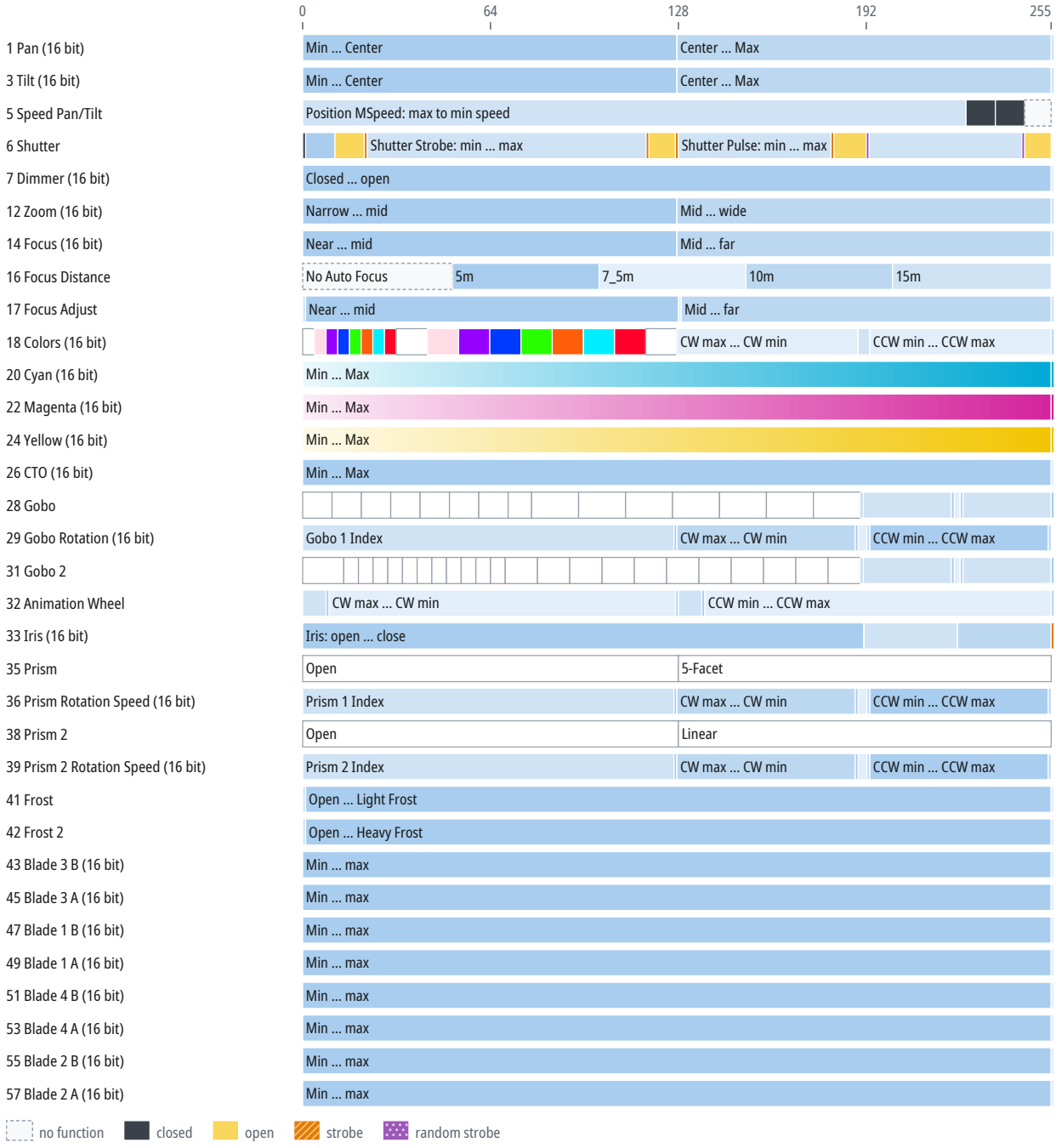
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode Extended_540

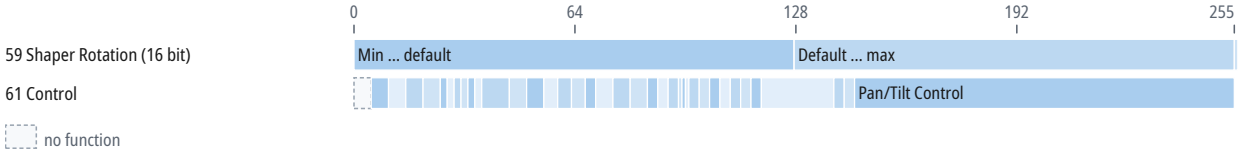
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 6 Shutter at 11–20, 118–126, 181–191 or 246–255 “open”; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 11, CH 7 Dimmer 255, CH 18 Colors 0, CH 20 Cyan 0, CH 22 Magenta 0, CH 24 Yellow 0, CH 26 CTO 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Min ... Center
		128–255	Center ... Max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Min ... Center
		128–255	Center ... Max
		255	Max
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–225	Position MSpeed: max to min speed
		226–235	Blackout by movement
		236–245	Blackout by all wheels
		246–255	No function
6	Shutter	0	LED OFF: Closed
		1–10	LED OFF
		11–20	LED ON: open
		21	Shutter Strobe: min
		22–116	Shutter Strobe: min ... max
		117	Shutter Strobe: max
		118–126	LED ON: open
		127	Shutter Pulse: min
		128–179	Shutter Pulse: min ... max
		180	Shutter Pulse: max
		181–191	LED ON: open
		192	Shutter Random: min
		193–244	Shutter Random: min ... max
		245	Shutter Random: max
		246–255	LED ON: open
7	Dimmer	0–255	Closed ... open
		255	Open
8	Dimmer Fine	0–255	Fine adjustment of CH 7
12	Zoom	0–127	Narrow ... mid
		128–255	Mid ... wide
		255	Wide
13	Zoom Fine	0–255	Fine adjustment of CH 12
14	Focus		When CH 16 is 0–50:

CH	Function	DMX	Description
14	Focus (continued)	0–127	Near ... mid
		128–255	Mid ... far
		255	Far
			When CH 16 is 51–255:
		0–255	
15	Focus Fine	0–255	Fine adjustment of CH 14
16	Focus Distance	0–50	No Auto Focus
		51–100	5m
		101–150	7_5m
		151–200	10m
		201–255	15m
17	Focus Adjust		When CH 16 is 51–255:
		0	Near
		1–127	Near ... mid
		128	Mid
		129–254	Mid ... far
		255	Far
			When CH 16 is 0–50:
		0–255	
18	Colors	0–3	Color 1: Open
		4–7	Color 1: Half Minus Green
		8–11	Color 1: Magenta
		12–15	Color 1: Congo Blue
		16–19	Color 1: Green
		20–23	Color 1: Orange
		24–27	Color 1: Blue
		28–31	Color 1: Red
		32–42	Color 1 Index: Open
		42–53	Color 1 Index: Half Minus Green
		53–64	Color 1 Index: Magenta
		64–74	Color 1 Index: Congo Blue
		74–85	Color 1 Index: Green
		85–96	Color 1 Index: Orange
		96–106	Color 1 Index: Blue
		106–117	Color 1 Index: Red
		117–127	Color 1 Index: Open
		128–189	CW max ... CW min
		189	CW min
		190–193	Rainbow: stop
		194–255	CCW min ... CCW max
		255	CCW max
19	Colors Fine	0–255	Fine adjustment of CH 18

CH	Function	DMX	Description
20	Cyan	0–255	Min … Max
		255	Max
21	Cyan Fine	0–255	Fine adjustment of CH 20
22	Magenta	0–255	Min … Max
		255	Max
23	Magenta Fine	0–255	Fine adjustment of CH 22
24	Yellow	0–255	Min … Max
		255	Max
25	Yellow Fine	0–255	Fine adjustment of CH 24
26	CTO	0–255	Min … Max
		255	Max
27	CTO Fine	0–255	Fine adjustment of CH 26
28	Gobo	0–9	Gobo: Open
		10–19	Gobo: DotLine11
		20–29	Gobo: Stardust
		30–39	Gobo: NestedTriangle
		40–49	Gobo: InfinitStairs
		50–59	Gobo: Vortex
		60–69	Gobo: BlackAndWhiteTarget
		70–77	Gobo: NestedRingsYellow
		78–93	Gobo 1 Shake: DotLine11 (0.5–10 Hz)
		94–109	Gobo 1 Shake: Stardust (0.5–10 Hz)
		110–125	Gobo 1 Shake: NestedTriangle (0.5–10 Hz)
		126–141	Gobo 1 Shake: InfinitStairs (0.5–10 Hz)
		142–157	Gobo 1 Shake: Vortex (0.5–10 Hz)
		158–173	Gobo 1 Shake: BlackAndWhiteTarget (0.5–10 Hz)
		174–189	Gobo 1 Shake: NestedRingsYellow (0.5–10 Hz)
		190	CW max
		191–220	CW max … CW min
		221	CW min
		222–223	Gobo 1 Wheel Rotation: Stop
		224	CCW min
		225–254	CCW min … CCW max
		255	CCW max
29	Gobo Rotation	0–127	Gobo 1 Index (360°)
		128–188	CW max … CW min
		189	CW min … stop
		190–193	Gobo 1 Rotation: stop
		193	Stop … CCW min
		194–254	CCW min … CCW max
		255	CCW max
30	Gobo Rotation Fine	0–255	Fine adjustment of CH 29

CH	Function	DMX	Description
31	Gobo 2	0–13	Gobo: Open
		14–18	Gobo: ConicalTunnelEffect
		19–23	Gobo: SmokeRings
		24–28	Gobo: Fireworks
		29–33	Gobo: AbstractSquare
		34–38	Gobo: IronFilings
		39–43	Gobo: LostInTheBrain
		44–48	Gobo: DeepForest
		49–53	Gobo: TreeBark
		54–58	Gobo: MirrorBall
		59–63	Gobo: Digital
		64–68	Gobo: StainedGlass
		69–79	Gobo 2 Shake: ConicalTunnelEffect (0.5–10 Hz)
		80–90	Gobo 2 Shake: SmokeRings (0.5–10 Hz)
		91–101	Gobo 2 Shake: Fireworks (0.5–10 Hz)
		102–112	Gobo 2 Shake: AbstractSquare (0.5–10 Hz)
		113–123	Gobo 2 Shake: IronFilings (0.5–10 Hz)
		124–134	Gobo 2 Shake: LostInTheBrain (0.5–10 Hz)
		135–145	Gobo 2 Shake: DeepForest (0.5–10 Hz)
		146–156	Gobo 2 Shake: TreeBark (0.5–10 Hz)
		157–167	Gobo 2 Shake: MirrorBall (0.5–10 Hz)
		168–178	Gobo 2 Shake: Digital (0.5–10 Hz)
		179–189	Gobo 2 Shake: StainedGlass (0.5–10 Hz)
		190	CW max
		191–220	CW max … CW min
		221	CW min
		222–223	Gobo 2 Wheel Rotation: Stop
		224	CCW min
		225–254	CCW min … CCW max
		255	CCW max
32	Animation Wheel	0–7	Animation Wheel: open
		8	CW max
		9–126	CW max … CW min
		127	CW min
		128–135	Animation Wheel 1 Spin: stop
		136	CCW min
		137–254	CCW min … CCW max
		255	CCW max
33	Iris	0–191	Iris: open … close
		191	Iris: close
		192–223	Pulse max … pulse min
		223	Pulse min

CH	Function	DMX	Description
33	Iris (continued)	224–255	Pulse slow ... Pulse fast
		255	Pulse fast
34	Iris Fine	0–255	Fine adjustment of CH 33
35	Prism	0–127	Open
		128–255	5-Facet
36	Prism Rotation Speed	0–127	Prism 1 Index
		128–188	CW max ... CW min
		189	CW min ... stop
		190–193	Prism 1 Rotation: stop
		193	Stop ... CCW min
		194–254	CCW min ... CCW max
		255	CCW max
37	Prism Rotation Speed Fine	0–255	Fine adjustment of CH 36
38	Prism 2	0–127	Open
		128–255	Linear
39	Prism 2 Rotation Speed	0–127	Prism 2 Index
		128–188	CW max ... CW min
		189	CW min ... stop
		190–193	Prism 2 Rotation: stop
		193	Stop ... CCW min
		194–254	CCW min ... CCW max
		255	CCW max
40	Prism 2 Rotation Speed Fine	0–255	Fine adjustment of CH 39
41	Frost	0	Open
		1–254	Open ... Light Frost
		255	Light Frost
42	Frost 2	0	Open
		1–254	Open ... Heavy Frost
		255	Heavy Frost
43	Blade 3 B	0–255	Min ... max
		255	Max
44	Blade 3 B Fine	0–255	Fine adjustment of CH 43
45	Blade 3 A	0–255	Min ... max
		255	Max
46	Blade 3 A Fine	0–255	Fine adjustment of CH 45
47	Blade 1 B	0–255	Min ... max
		255	Max
48	Blade 1 B Fine	0–255	Fine adjustment of CH 47
49	Blade 1 A	0–255	Min ... max
		255	Max
50	Blade 1 A Fine	0–255	Fine adjustment of CH 49
51	Blade 4 B	0–255	Min ... max

CH	Function	DMX	Description
51	Blade 4 B (continued)	255	Max
52	Blade 4 B Fine	0–255	Fine adjustment of CH 51
53	Blade 4 A	0–255	Min … max
		255	Max
54	Blade 4 A Fine	0–255	Fine adjustment of CH 53
55	Blade 2 B	0–255	Min … max
		255	Max
56	Blade 2 B Fine	0–255	Fine adjustment of CH 55
57	Blade 2 A	0–255	Min … max
		255	Max
58	Blade 2 A Fine	0–255	Fine adjustment of CH 57
59	Shaper Rotation	0–127	Min … default
		128–255	Default … max
		255	Max
60	Shaper Rotation Fine	0–255	Fine adjustment of CH 59
61	Control	0–4	No Function
		5–9	Display Off
		10–14	Display On
		15–19	Display Inv Off
		20–24	Display Inv On
		25–26	Auto Fan
		27–28	Stage Fan
		29–30	Silence Fan
		31–32	Super Silence Fan
		33–34	Constant Fan OFF
		35–36	Constant Fan ON
		37–44	Fan Control Mode: unused
		45–49	Square Law
		50–54	Linear
		55–58	1200 Hz
		59–62	2400 Hz
		63–66	16000 Hz
		67–69	25000 Hz
		70–74	Gobo Correction Off
		75–79	Gobo Correction On
		80–84	All Motor Reset
		85–87	Scan Motor Reset
		88–90	Color Motor Reset
		91–93	Gobo Motor Reset
		94	Motor Reset: unused
		95	Head Heater Off
		96	Head Heater On

CH	Function	DMX	Description
61	Control (continued)	97–99	Other Motor Reset
		100–102	Prerig INIT Off
		103–105	Prerig INIT On
		106–108	P/T Speed Fast
		109–111	P/T Speed Medium
		112–114	P/T Speed Slow
		115–117	P/T Speed FS Mode
		118–138	P/T Speed FS Mode ... Pan Degree 540
		139–141	Pan Degree 540
		142–144	Pan Degree 630
		145–255	Pan/Tilt Control

Mode Standard_540

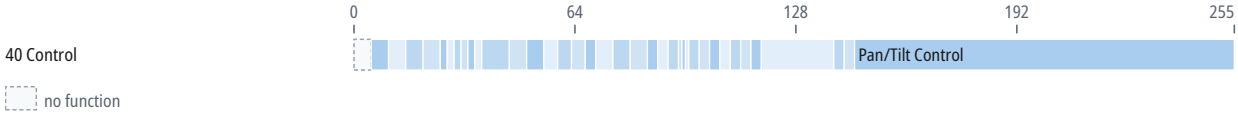
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 6 Shutter at 11–20, 118–126, 181–191 or 246–255 “open”; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 11, CH 7 Dimmer 255, CH 15 Colors 0, CH 16 Cyan 0, CH 17 Magenta 0, CH 18 Yellow 0, CH 19 CTO 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Extended_540” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended_540” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “Extended_540” (p. 13)
6	Shutter		Same as CH 6 in the mode “Extended_540” (p. 13)
7	Dimmer	0	Closed
		1–254	Closed ... open
		255	Open
11	Zoom	0	Narrow
		1–127	Narrow ... mid
		128	Mid
		129–254	Mid ... wide
		255	Wide
12	Focus		When CH 13 is 0–50:
		0	Near
		1–127	Near ... mid
		128	Mid
		129–254	Mid ... far
		255	Far
			When CH 13 is 51–255:
		0–255	
13	Focus Distance		Same as CH 16 in the mode “Extended_540” (p. 14)
14	Focus Adjust		When CH 13 is 51–255:
		0	Near
		1–127	Near ... mid
		128	Mid
		129–254	Mid ... far
		255	Far
			When CH 13 is 0–50:
		0–255	
15	Colors	0–3	Color 1: Open
		4–7	Color 1: Half Minus Green
		8–11	Color 1: Magenta
		12–15	Color 1: Congo Blue
		16–19	Color 1: Green

CH	Function	DMX	Description
15	Colors (continued)	20–23	Color 1: Orange
		24–27	Color 1: Blue
		28–31	Color 1: Red
		32–42	Color 1 Index: Open
		43–52	Color 1 Index: Half Minus Green
		53–63	Color 1 Index: Magenta
		64–73	Color 1 Index: Congo Blue
		74–84	Color 1 Index: Green
		85–95	Color 1 Index: Orange
		96–105	Color 1 Index: Blue
		106–116	Color 1 Index: Red
		117–127	Color 1 Index: Open
		128	CW max
		129–188	CW max ... CW min
		189	CW min
		190–193	Rainbow: stop
		194	CCW min
		195–254	CCW min ... CCW max
		255	CCW max
16	Cyan	0	Min
		1–254	Min ... Max
		255	Max
17	Magenta	0	Min
		1–254	Min ... Max
		255	Max
18	Yellow	0	Min
		1–254	Min ... Max
		255	Max
19	CTO	0	Min
		1–254	Min ... Max
		255	Max
20	Gobo		Same as CH 28 in the mode “Extended_540” (p. 15)
21	Gobo Rotation	0–126	Gobo 1 Index (360°)
		127	Gobo 1 Rotation
		128	CW max
		129–187	CW max ... CW min
		188	CW min
		189–192	Gobo 1 Rotation: stop
		193	CCW min
		194–253	CCW min ... CCW max
		254	CCW max
		255	Gobo 1 Rotation

CH	Function	DMX	Description
22	Gobo 2		Same as CH 31 in the mode “Extended_540” (p. 16)
23	Animation Wheel		Same as CH 32 in the mode “Extended_540” (p. 16)
24	Iris	0	Iris: open
		1–190	Iris: open ... close
		191	Iris: close
		192	Pulse max
		193–222	Pulse max ... pulse min
		223	Pulse min
		224	Pulse slow
		225–254	Pulse slow ... Pulse fast
		255	Pulse fast
25	Prism		Same as CH 35 in the mode “Extended_540” (p. 17)
26	Prism Rotation Speed	0–126	Prism 1 Index
		127	Prism 1 Rotation
		128	CW max
		129–187	CW max ... CW min
		188	CW min
		189–192	Prism 1 Rotation: stop
		193	CCW min
		194–253	CCW min ... CCW max
		254	CCW max
		255	Prism 1 Rotation
27	Prism 2		Same as CH 38 in the mode “Extended_540” (p. 17)
28	Prism 2 Rotation Speed	0–126	Prism 2 Index
		127	Prism 2 Rotation
		128	CW max
		129–187	CW max ... CW min
		188	CW min
		189–192	Prism 2 Rotation: stop
		193	CCW min
		194–253	CCW min ... CCW max
		254	CCW max
		255	Prism 2 Rotation
29	Frost		Same as CH 41 in the mode “Extended_540” (p. 17)
30	Frost 2		Same as CH 42 in the mode “Extended_540” (p. 17)
31	Blade 3 B	0	Min
		1–254	Min ... max
		255	Max
32	Blade 3 A	0	Min
		1–254	Min ... max
		255	Max
33	Blade 1 B	0	Min

CH	Function	DMX	Description
33	Blade 1 B (continued)	1–254	Min ... max
		255	Max
34	Blade 1 A	0	Min
		1–254	Min ... max
		255	Max
35	Blade 4 B	0	Min
		1–254	Min ... max
		255	Max
36	Blade 4 A	0	Min
		1–254	Min ... max
		255	Max
37	Blade 2 B	0	Min
		1–254	Min ... max
		255	Max
38	Blade 2 A	0	Min
		1–254	Min ... max
		255	Max
39	Shaper Rotation	0	Min
		1–127	Min ... default
		128	Default
		129–254	Default ... max
		255	Max
40	Control		Same as CH 61 in the mode “Extended_540” (p. 18)

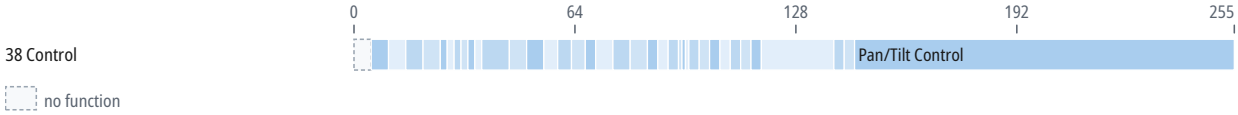
Mode Basic_540

If the device receives DMX in this mode but gives no light, check these channels: CH 4 Shutter at 11–20, 118–126, 181–191 or 246–255 “open”; CH 5 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 4 Shutter 11, CH 5 Dimmer 255, CH 13 Colors 0, CH 14 Cyan 0, CH 15 Magenta 0, CH 16 Yellow 0, CH 17 CTO 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0	Min
		1–127	Min … Center
		128	Center
		129–254	Center … Max
		255	Max
2	Tilt	0	Min
		1–127	Min … Center
		128	Center
		129–254	Center … Max
		255	Max
3	Speed Pan/Tilt		Same as CH 5 in the mode “Extended_540” (p. 13)
4	Shutter		Same as CH 6 in the mode “Extended_540” (p. 13)
5	Dimmer		Same as CH 7 in the mode “Standard_540” (p. 21)
9	Zoom		Same as CH 11 in the mode “Standard_540” (p. 21)
10	Focus		When CH 11 is 0–50:
		0	Near
		1–127	Near … mid
		128	Mid
		129–254	Mid … far
		255	Far
			When CH 11 is 51–255:
		0–255	
11	Focus Distance		Same as CH 16 in the mode “Extended_540” (p. 14)
12	Focus Adjust		When CH 11 is 51–255:
		0	Near
		1–127	Near … mid
		128	Mid
		129–254	Mid … far
		255	Far
			When CH 11 is 0–50:
		0–255	
13	Colors		Same as CH 15 in the mode “Standard_540” (p. 21)
14	Cyan		Same as CH 16 in the mode “Standard_540” (p. 22)
15	Magenta		Same as CH 17 in the mode “Standard_540” (p. 22)
16	Yellow		Same as CH 18 in the mode “Standard_540” (p. 22)
17	CTO		Same as CH 19 in the mode “Standard_540” (p. 22)

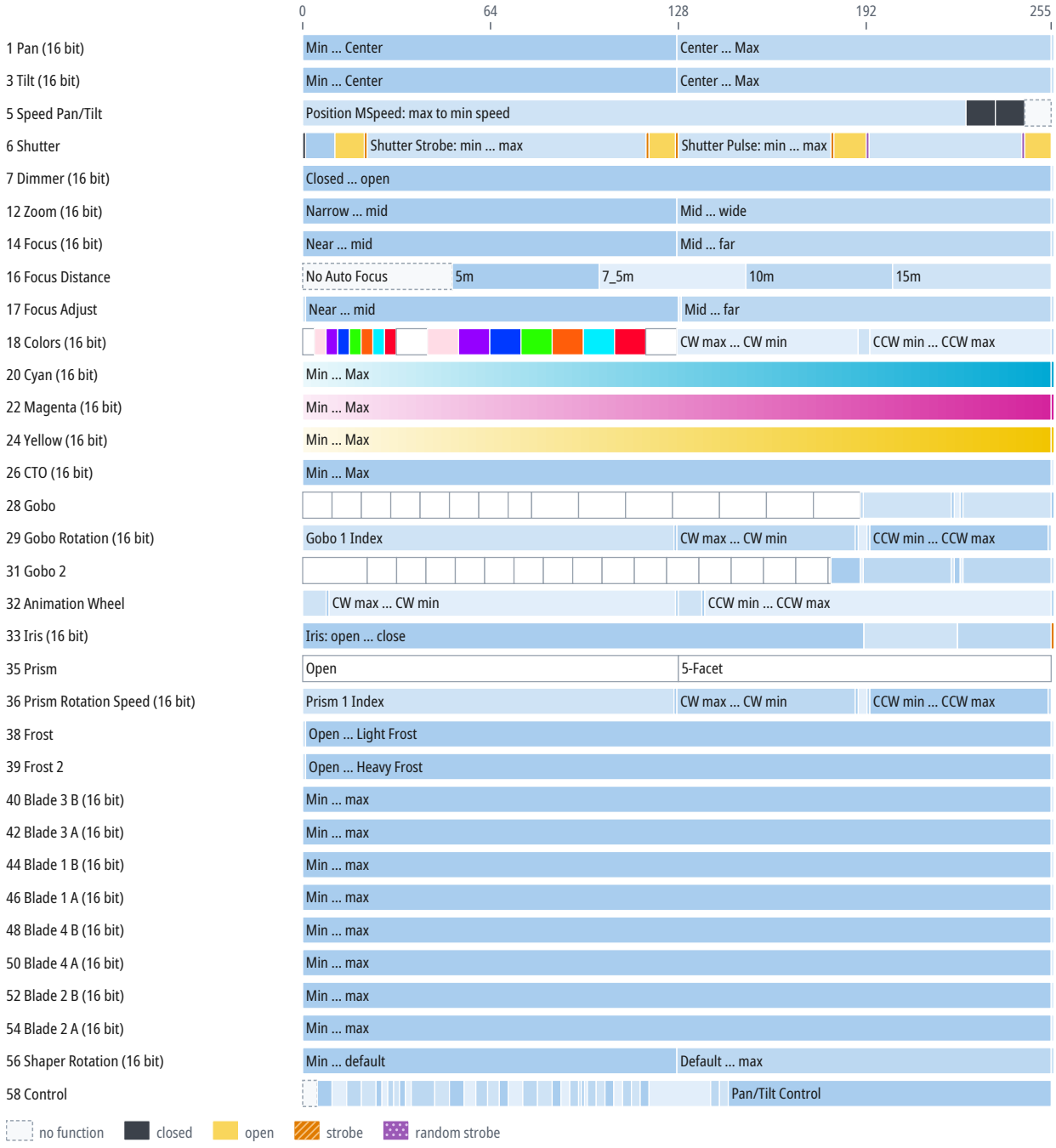
CH	Function	DMX	Description
18	Gobo		Same as CH 28 in the mode “Extended_540” (p. 15)
19	Gobo Rotation		Same as CH 21 in the mode “Standard_540” (p. 22)
20	Gobo 2		Same as CH 31 in the mode “Extended_540” (p. 16)
21	Animation Wheel		Same as CH 32 in the mode “Extended_540” (p. 16)
22	Iris		Same as CH 24 in the mode “Standard_540” (p. 23)
23	Prism		Same as CH 35 in the mode “Extended_540” (p. 17)
24	Prism Rotation Speed		Same as CH 26 in the mode “Standard_540” (p. 23)
25	Prism 2		Same as CH 38 in the mode “Extended_540” (p. 17)
26	Prism 2 Rotation Speed		Same as CH 28 in the mode “Standard_540” (p. 23)
27	Frost		Same as CH 41 in the mode “Extended_540” (p. 17)
28	Frost 2		Same as CH 42 in the mode “Extended_540” (p. 17)
29	Blade 3 B		Same as CH 31 in the mode “Standard_540” (p. 23)
30	Blade 3 A		Same as CH 32 in the mode “Standard_540” (p. 23)
31	Blade 1 B		Same as CH 33 in the mode “Standard_540” (p. 23)
32	Blade 1 A		Same as CH 34 in the mode “Standard_540” (p. 24)
33	Blade 4 B		Same as CH 35 in the mode “Standard_540” (p. 24)
34	Blade 4 A		Same as CH 36 in the mode “Standard_540” (p. 24)
35	Blade 2 B		Same as CH 37 in the mode “Standard_540” (p. 24)
36	Blade 2 A		Same as CH 38 in the mode “Standard_540” (p. 24)
37	Shaper Rotation		Same as CH 39 in the mode “Standard_540” (p. 24)
38	Control		Same as CH 61 in the mode “Extended_540” (p. 18)

Mode GhibliExt_540

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 6 Shutter at 11–20, 118–126, 181–191 or 246–255 “open”; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 11, CH 7 Dimmer 255, CH 18 Colors 0, CH 20 Cyan 0, CH 22 Magenta 0, CH 24 Yellow 0, CH 26 CTO 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Extended_540” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended_540” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “Extended_540” (p. 13)
6	Shutter		Same as CH 6 in the mode “Extended_540” (p. 13)
7	Dimmer		Same as CH 7 in the mode “Extended_540” (p. 13)
8	Dimmer Fine	0–255	Fine adjustment of CH 7
12	Zoom		Same as CH 12 in the mode “Extended_540” (p. 13)
13	Zoom Fine	0–255	Fine adjustment of CH 12
14	Focus		Same as CH 14 in the mode “Extended_540” (p. 13)
15	Focus Fine	0–255	Fine adjustment of CH 14
16	Focus Distance		Same as CH 16 in the mode “Extended_540” (p. 14)
17	Focus Adjust		Same as CH 17 in the mode “Extended_540” (p. 14)
18	Colors		Same as CH 18 in the mode “Extended_540” (p. 14)
19	Colors Fine	0–255	Fine adjustment of CH 18
20	Cyan		Same as CH 20 in the mode “Extended_540” (p. 15)
21	Cyan Fine	0–255	Fine adjustment of CH 20
22	Magenta		Same as CH 22 in the mode “Extended_540” (p. 15)
23	Magenta Fine	0–255	Fine adjustment of CH 22
24	Yellow		Same as CH 24 in the mode “Extended_540” (p. 15)
25	Yellow Fine	0–255	Fine adjustment of CH 24
26	CTO		Same as CH 26 in the mode “Extended_540” (p. 15)
27	CTO Fine	0–255	Fine adjustment of CH 26
28	Gobo		Same as CH 28 in the mode “Extended_540” (p. 15)
29	Gobo Rotation		Same as CH 29 in the mode “Extended_540” (p. 15)
30	Gobo Rotation Fine	0–255	Fine adjustment of CH 29
31	Gobo 2	0–21	Gobo: Open
		22–31	Gobo: ConicalTunnelEffect
		32–41	Gobo: SmokeRings
		42–51	Gobo: Fireworks
		52–61	Gobo: AbstractSquare
		62–71	Gobo: IronFilings
		72–81	Gobo: LostInTheBrain
		82–91	Gobo: DeepForest
		92–101	Gobo: TreeBark
		102–112	Gobo 2 Shake: ConicalTunnelEffect (0.5–10 Hz)
		113–123	Gobo 2 Shake: SmokeRings (0.5–10 Hz)
		124–134	Gobo 2 Shake: Fireworks (0.5–10 Hz)
		135–145	Gobo 2 Shake: AbstractSquare (0.5–10 Hz)

CH	Function	DMX	Description
31	Gobo 2 (continued)	146–156	Gobo 2 Shake: IronFilings (0.5–10 Hz)
		157–167	Gobo 2 Shake: LostInTheBrain (0.5–10 Hz)
		168–178	Gobo 2 Shake: DeepForest (0.5–10 Hz)
		179	Gobo 2 Shake: TreeBark (0.5–10 Hz)
		180–189	Gobo 2 Shake
		190	CW max
		191–220	CW max ... CW min
		221	CW min
		222–223	Gobo 2 Wheel Rotation: Stop
		224	CCW min
		225–254	CCW min ... CCW max
		255	CCW max
32	Animation Wheel		Same as CH 32 in the mode “Extended_540” (p. 16)
33	Iris		Same as CH 33 in the mode “Extended_540” (p. 16)
34	Iris Fine	0–255	Fine adjustment of CH 33
35	Prism		Same as CH 35 in the mode “Extended_540” (p. 17)
36	Prism Rotation Speed		Same as CH 36 in the mode “Extended_540” (p. 17)
37	Prism Rotation Speed Fine	0–255	Fine adjustment of CH 36
38	Frost		Same as CH 41 in the mode “Extended_540” (p. 17)
39	Frost 2		Same as CH 42 in the mode “Extended_540” (p. 17)
40	Blade 3 B		Same as CH 43 in the mode “Extended_540” (p. 17)
41	Blade 3 B Fine	0–255	Fine adjustment of CH 40
42	Blade 3 A		Same as CH 45 in the mode “Extended_540” (p. 17)
43	Blade 3 A Fine	0–255	Fine adjustment of CH 42
44	Blade 1 B		Same as CH 47 in the mode “Extended_540” (p. 17)
45	Blade 1 B Fine	0–255	Fine adjustment of CH 44
46	Blade 1 A		Same as CH 49 in the mode “Extended_540” (p. 17)
47	Blade 1 A Fine	0–255	Fine adjustment of CH 46
48	Blade 4 B		Same as CH 51 in the mode “Extended_540” (p. 17)
49	Blade 4 B Fine	0–255	Fine adjustment of CH 48
50	Blade 4 A		Same as CH 53 in the mode “Extended_540” (p. 18)
51	Blade 4 A Fine	0–255	Fine adjustment of CH 50
52	Blade 2 B		Same as CH 55 in the mode “Extended_540” (p. 18)
53	Blade 2 B Fine	0–255	Fine adjustment of CH 52
54	Blade 2 A		Same as CH 57 in the mode “Extended_540” (p. 18)
55	Blade 2 A Fine	0–255	Fine adjustment of CH 54
56	Shaper Rotation		Same as CH 59 in the mode “Extended_540” (p. 18)
57	Shaper Rotation Fine	0–255	Fine adjustment of CH 56
58	Control		Same as CH 61 in the mode “Extended_540” (p. 18)

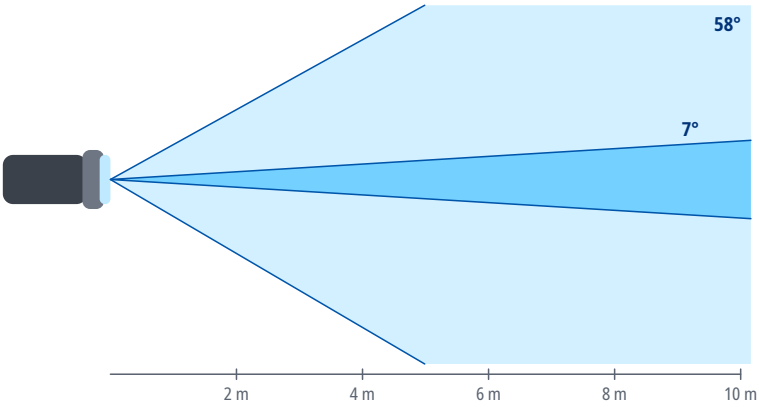
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	500 W
Luminous flux	32,000 lm
Color temperature	7,000 K
Color rendering index (CRI)	72
Optics	
Zoom	7–58°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	5-pin XLR IN/OUT
RJ45 connectors	RJ45 IN/OUT
RDM	yes (manufacturer ID 0x4179, device model ID 0x0A95)
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	800 W
Power connectors	powerCONTRUE1TOP IN
Dimensions and construction	
Weight	38.8 kg
Operating environment	
Operating temperature	-10 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	3200–7000 K
Strobe frequency	0.5–25 Hz
LED frequency	1200–25000 Hz
Color wheel 1 rotation	up to 1800 °/s (300 rpm)
Gobo 1 rotation	up to 600 °/s (100 rpm)
Prism 1 rotation	up to 3600 °/s (600 rpm)
Prism 2 rotation	up to 3600 °/s (600 rpm)
Animation wheel rotation	up to 1800 °/s (300 rpm)

Spot diameter



Distance	Ø 7°	Ø 58°
2 m	0.24 m	2.2 m
4 m	0.49 m	4.4 m
6 m	0.73 m	6.7 m
8 m	0.98 m	8.9 m
10 m	1.2 m	11.1 m
15 m	1.8 m	16.6 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.