DMX REFERENCE

Focus Hybrid

ADJ



Manufacturer	ADJ
GDTF file	ADJ_Focus_Hybrid_36179.gdtf
GDTF revision	2023-07-03 First Release · 2023-03-07
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Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Product description 5
5 Installation 6
6 Connections 6
7 Operation 7
8 Functions at a glance 8
9 DMX channels 10
Mode Extended Mode 25ch Pan540 11
Mode Extended Mode 25ch Pan630 19
Mode Standard Mode 23ch Pan540 21
Mode Standard Mode 23ch Pan630 24
Mode Basic Mode 19ch Pan540 26
Mode Basic Mode 19ch Pan630 28
10 Technical specifications 30
11 Maintenance and cleaning 30
12 Troubleshooting 31
13 Disposal 31

1 About this manual

This document describes the Focus Hybrid by ADJ. It was compiled from the GDTF file ADJ_Focus_Hybrid_36179.gdtf from the GDTF-Share library.

File revision: “2023-07-03 First Release”.

The DMX modes, the channel functions and the technical data are given as the GDTF file states them. Installation, operation from the device's control panel, service and safety instructions are described in the manufacturer's original user manual, which takes precedence over this document.

This document was not issued or endorsed by ADJ; 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	14.1 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Extended Mode 25ch Pan540	25	20	1, 26, 51, 76, ...
Extended Mode 25ch Pan630	25	20	1, 26, 51, 76, ...
Standard Mode 23ch Pan540	23	22	1, 24, 47, 70, ...
Standard Mode 23ch Pan630	23	22	1, 24, 47, 70, ...
Basic Mode 19ch Pan540	19	26	1, 20, 39, 58, ...
Basic Mode 19ch Pan630	19	26	1, 20, 39, 58, ...

No light? Check these channels

- Extended Mode 25ch Pan540: CH 9 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254
- Extended Mode 25ch Pan630: CH 9 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254
- Standard Mode 23ch Pan540: CH 9 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254
- Standard Mode 23ch Pan630: CH 9 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254
- Basic Mode 19ch Pan540: CH 7 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254
- Basic Mode 19ch Pan630: CH 7 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254



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.

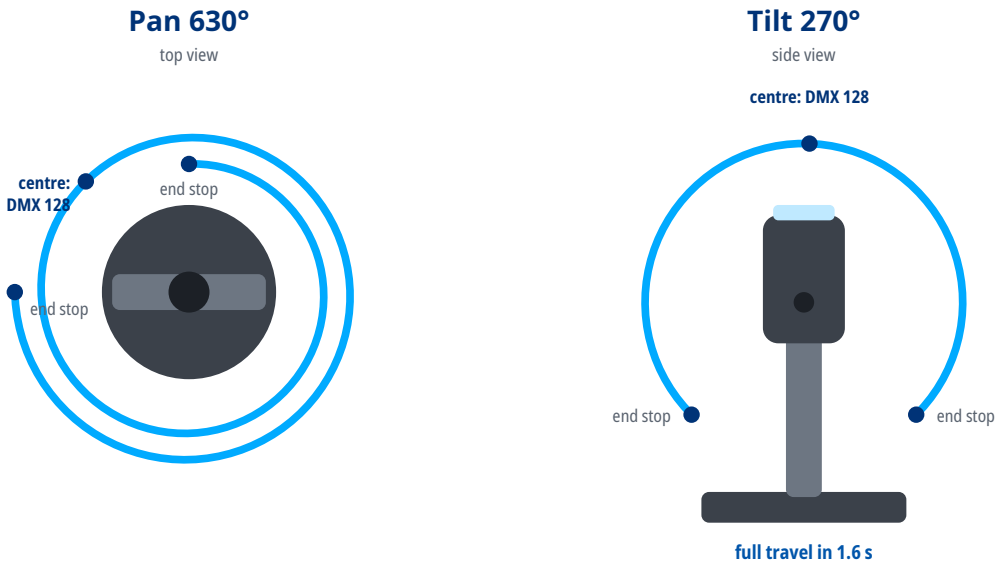
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do 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

“Offering an efficient 200W LED light source combined with an extensive feature set, the ADJ Focus Hybrid is a versatile moving head luminaire. It can function interchangeably as a spot, wash or beam fixture, making it ideal for rental and event production applications as well as for installation in venues that require a moving light which can deliver a high degree of flexibility. It features motorized zoom and focus, two GOBO wheels, an independent color wheel, two rotating prisms and a replaceable frost filter.”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

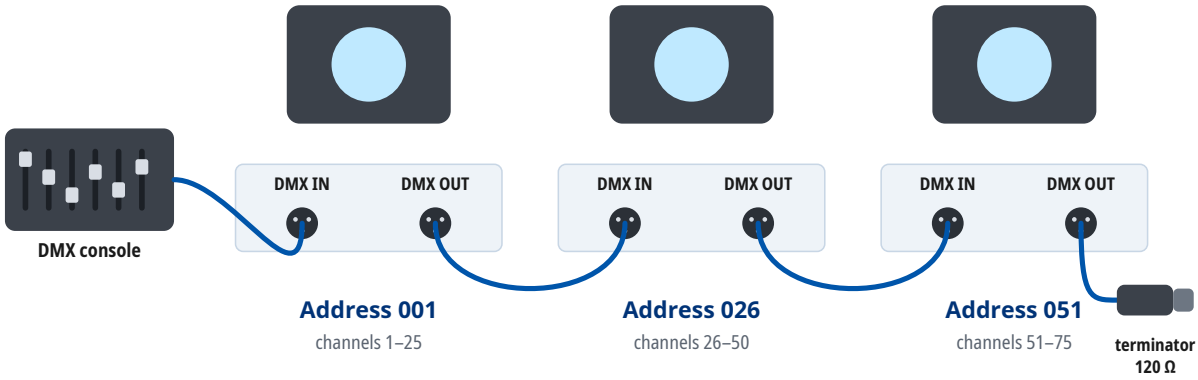
⚠ WARNING

- 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: 14.1 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 Mode 25ch Pan540: every unit occupies 25 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

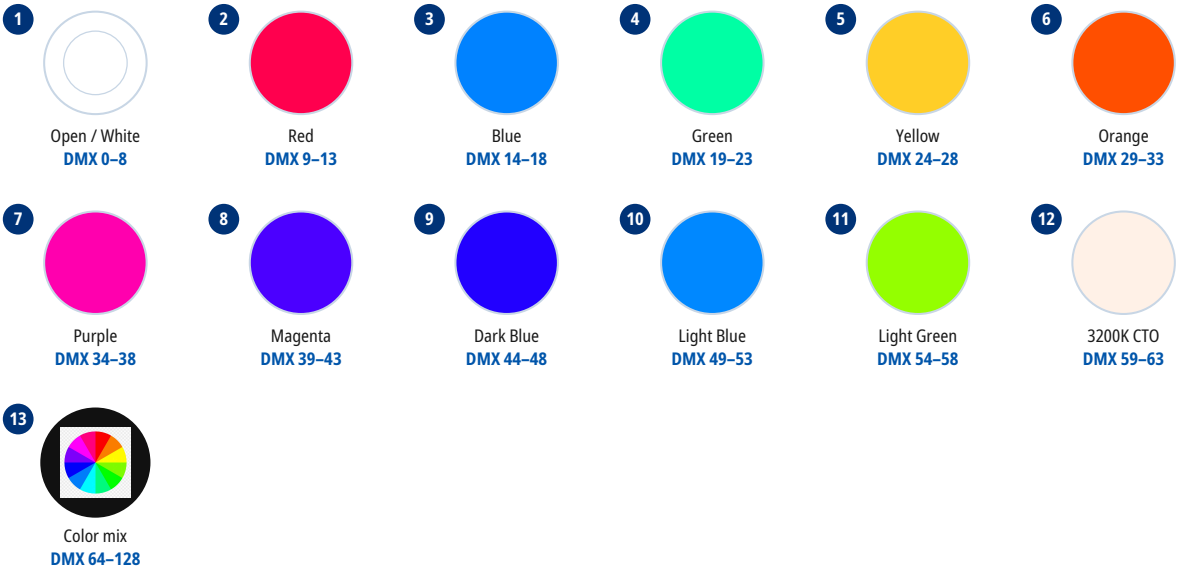
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Extended Mode 25ch Pan540”: 25.
- Choose start addresses so that the channels of individual devices do not overlap and 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 Mode 25ch Pan540”, you can use, for example, the start addresses 1, 26, 51, 76.
- 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 Mode 25ch Pan540 25 channels	Extended Mode 25ch Pan630 25 channels	Standard Mode 23ch Pan540 23 channels	Standard Mode 23ch Pan630 23 channels	Basic Mode 19ch Pan540 19 channels	Basic Mode 19ch Pan630 19 channels
Pan / Tilt	1, 3	1, 3	1, 3	1, 3	1, 2	1, 2
Pan / Tilt resolution	16 bit	16 bit	16 bit	16 bit	8 bit	8 bit
Dimmer	10	10	10	10	8	8
Dimmer resolution	16 bit	16 bit	16 bit	16 bit	8 bit	8 bit
Shutter / strobe	9	9	9	9	7	7
Color wheel	5	5	5	5	3	3
Gobo wheel	6–8	6–8	6–8	6–8	4–6	4–6
Gobo rotation	7	7	7	7	5	5
Prism	12–17	12–17	12–17	12–17	9–14	9–14
Frost	21	21	20	20	17	17
Zoom	19	19	19	19	16	16
Focus	18	18	18	18	15	15
Effects / macros	14, 17	14, 17	14, 17	14, 17	11, 14	11, 14

Gobo wheel 1



Gobo wheel 2

1
Gobo 1 - 7 Index: Open
DMX 0–5

2 
Gobo 1
DMX 6–14

3 
Gobo 2
DMX 15–23

4 
Gobo 3
DMX 24–32

5 
Gobo 4
DMX 33–41

6 
Gobo 5
DMX 42–50

7 
Gobo 6
DMX 51–59

8 
Gobo 7
DMX 60–68

9 
Gobo 8
DMX 69–78

Gobo wheel 3

1
Gobo 1 - 7 Index: Open
DMX 0–9

2 
Gobo 1
DMX 10–13

3 
Gobo 2
DMX 14–17

4 
Gobo 3
DMX 18–21

5 
Gobo 4
DMX 22–25

6 
Gobo 5
DMX 26–29

7 
Gobo 6
DMX 30–33

8 
Gobo 7
DMX 34–37

9 
Gobo 8
DMX 38–41

10 
Gobo 9
DMX 42–45

11 
Gobo 10
DMX 46–49

12 
Gobo 11
DMX 50–53

13 
Gobo 12
DMX 54–57

14 
Gobo 13
DMX 58–61

15 
Gobo 14
DMX 62–65

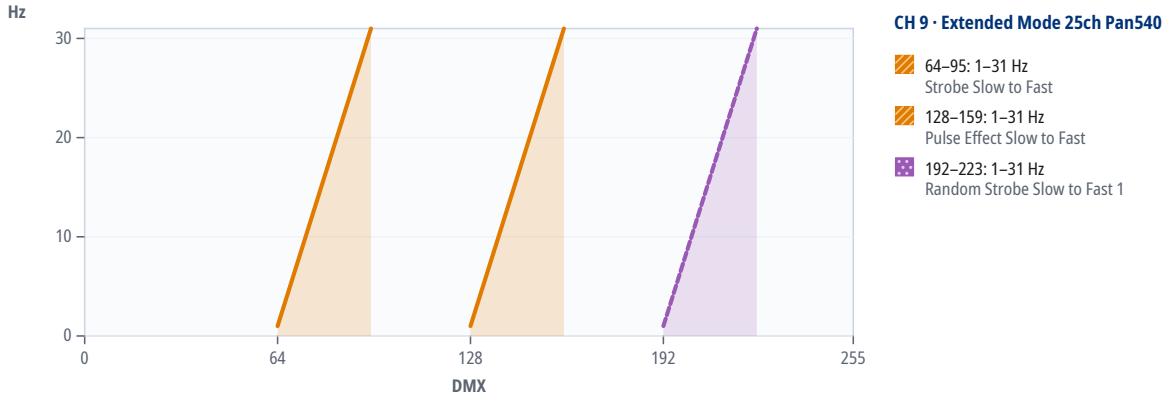
16
Gobo 15 (open 15mm)
DMX 66–70

Prism

1 
8 facets
Prism 1 (8 circular facet)
CH 12: DMX 32–255

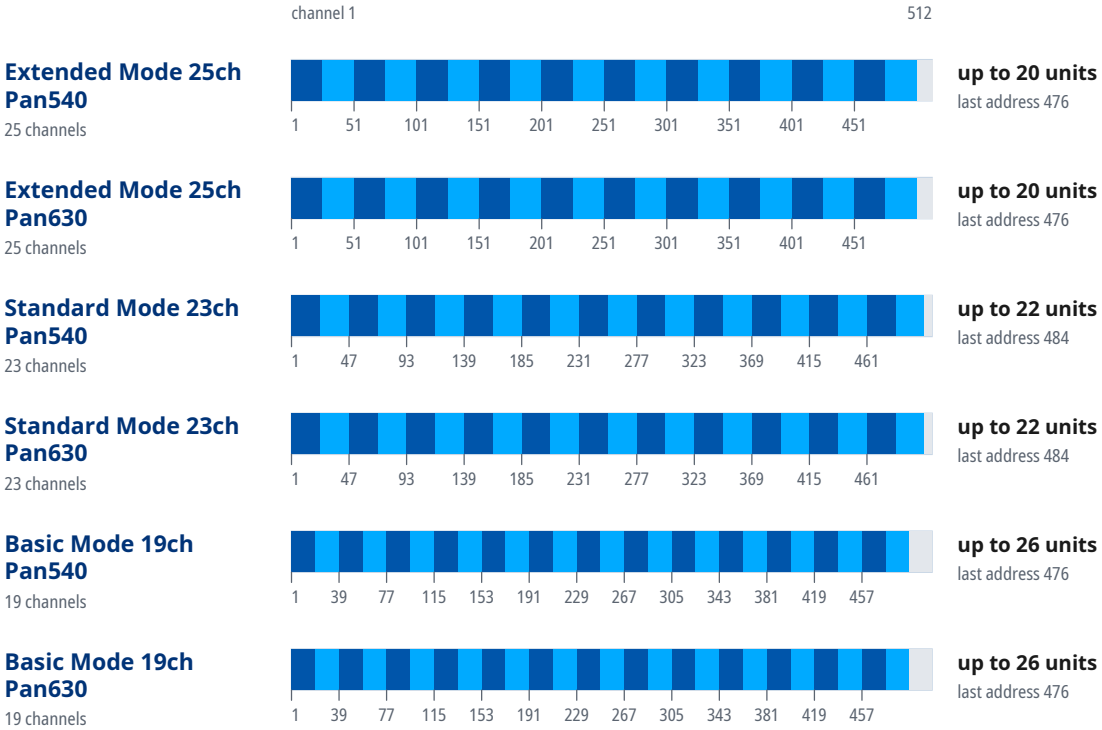
2 
6 facets
Prism 2 (6 facet linear)
CH 15: DMX 32–255

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Extended Mode 25ch Pan540”

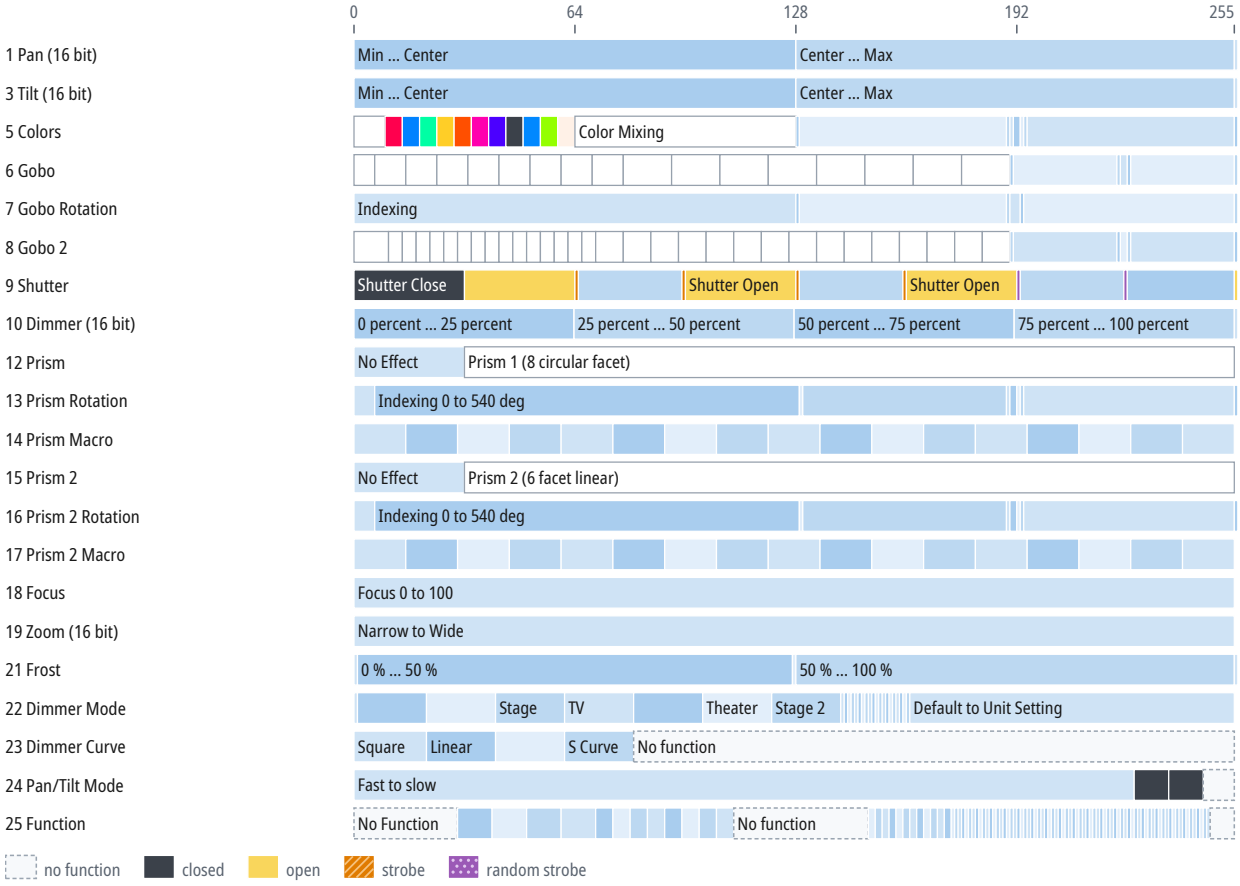
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	126	11	251	16	376
2	26	7	151	12	276	17	401
3	51	8	176	13	301	18	426
4	76	9	201	14	326	19	451
5	101	10	226	15	351	20	476

Mode Extended Mode 25ch Pan540

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 9 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254. The GDTF file gives these values for a console's Highlight function: CH 9 Shutter 32, CH 10 Dimmer 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–128	Min ... Center
		128–255	Center ... Max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–128	Min ... Center
		128–255	Center ... Max
		255	Max
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Colors	0–8	Open / White
		9–13	Red
		14–18	Blue
		19–23	Green
		24–28	Yellow

CH	Function	DMX	Description
5	Colors (continued)	29–33	Orange
		34–38	Purple
		39–43	Magenta
		44–48	Dark Blue
		49–53	Light Blue
		54–58	Light Green
		59–63	3200K CTO
		64–127	Color Mixing
		128	Clockwise Color Wheel Rotation Fast to Slow: Fastest
		129–188	Clockwise Color Wheel Rotation Fast to Slow: Fastest ... Slowest
		189	Clockwise Color Wheel Rotation Fast to Slow: Slowest
		190–193	No Rotation
		194	Counter Clockwise Color Wheel Rotation Slow to Fast: Slowest
		195–254	Counter Clockwise Color Wheel Rotation Slow to Fast: Slowest ... Fastest
		255	Counter Clockwise Color Wheel Rotation Slow to Fast: Fastest
6	Gobo	0–5	Gobo 1 - 7 Index: Open
		6–14	Gobo 1
		15–23	Gobo 2
		24–32	Gobo 3
		33–41	Gobo 4
		42–50	Gobo 5
		51–59	Gobo 6
		60–68	Gobo 7
		69–77	Gobo 8
		78–91	Gobo Shake 1
		92–105	Gobo Shake 2
		106–119	Gobo Shake 3
		120–133	Gobo Shake 4
		134–147	Gobo Shake 5
		148–161	Gobo Shake 6
		162–175	Gobo Shake 7
		176–189	Gobo Shake 8
		190	Clockwise Gobo Wheel Rotation fast to slow: Fastest
		191–220	Clockwise Gobo Wheel Rotation fast to slow: Fastest ... Slowest
		221	Clockwise Gobo Wheel Rotation fast to slow: Slowest
		222–223	No Rotation
		224	Counter-Clockwise Gobo Wheel Rotation Slow to Fast: Slowest
		225–254	Counter-Clockwise Gobo Wheel Rotation Slow to Fast: Slowest ... Fastest
		255	Counter-Clockwise Gobo Wheel Rotation Slow to Fast: Fastest

CH	Function	DMX	Description
7	Gobo Rotation	0–127	Indexing (360°)
		128	Clockwise Gobo Rotation fast to slow: Fastest
		129–188	Clockwise Gobo Rotation fast to slow: Fastest ... Slowest
		189	Clockwise Gobo Rotation fast to slow: Slowest
		190–192	No Rotation
		193	Counter-Clockwise Gobo Rotation slow to fast: Slowest
		194–254	Counter-Clockwise Gobo Rotation slow to fast: Slowest ... Fastest
		255	Counter-Clockwise Gobo Rotation slow to fast: Fastest
8	Gobo 2	0–9	Gobo 1 - 7 Index: Open
		10–13	Gobo 1
		14–17	Gobo 2
		18–21	Gobo 3
		22–25	Gobo 4
		26–29	Gobo 5
		30–33	Gobo 6
		34–37	Gobo 7
		38–41	Gobo 8
		42–45	Gobo 9
		46–49	Gobo 10
		50–53	Gobo 11
		54–57	Gobo 12
		58–61	Gobo 13
		62–65	Gobo 14
		66–69	Gobo 15 (open 15mm)
		70–77	Gobo Shake 1
		78–85	Gobo Shake 2
		86–93	Gobo Shake 3
		94–101	Gobo Shake 4
		102–109	Gobo Shake 5
		110–117	Gobo Shake 6
		118–125	Gobo Shake 7
		126–133	Gobo Shake 8
		134–141	Gobo Shake 9
		142–149	Gobo Shake 10
		150–157	Gobo Shake 11
		158–165	Gobo Shake 12
		166–173	Gobo Shake 13
		174–181	Gobo Shake 14
		182–189	Gobo Shake 15
		190	Clockwise Gobo Wheel Rotation fast to slow: Fastest
		191–220	Clockwise Gobo Wheel Rotation fast to slow: Fastest ... Slowest

CH	Function	DMX	Description
8	Gobo 2 (continued)	221	Clockwise Gobo Wheel Rotation fast to slow: Slowest
		222–223	No rotation
		224	Counter-Clockwise Gobo Wheel Rotation: Slowest
		225–254	Counter-Clockwise Gobo Wheel Rotation: Slowest ... Fastest
		255	Counter-Clockwise Gobo Wheel Rotation: Fastest
9	Shutter	0–31	Shutter Close
		32–63	Shutter Open/Close: Shutter Open
		64	Strobe Slow to Fast: Slowest Strobe
		65–94	Strobe Slow to Fast: Slowest Strobe ... Fastest Strobe
		95	Strobe Slow to Fast: Fastest Strobe
		96–127	Shutter Open
		128	Slowest Pulse
		129–158	Slowest Pulse ... Fastest Pulse
		159	Fastest Pulse
		160–191	Shutter Open
		192	Random Strobe Slow to Fast: Slowest Strobe
		193–222	Random Strobe Slow to Fast: Slowest Strobe ... Fastest Strobe
		223	Random Strobe Slow to Fast: Fastest Strobe
		224–254	Shutter Open 2
		255	Shutter Open
10	Dimmer	0–63	0 percent ... 25 percent
		63	25 percent
		64–127	25 percent ... 50 percent
		127	50 percent
		128–191	50 percent ... 75 percent
		191	75 percent
		192–255	75 percent ... 100 percent
		255	100 percent
11	Dimmer Fine	0–255	Fine adjustment of CH 10
12	Prism	0–31	No Effect
		32–255	Prism 1 (8 circular facet)
13	Prism Rotation	0–5	Prism Rotation Off
		6–128	Indexing 0 to 540 deg (540°)
		129	Clockwise Prism Rotation fast to slow: Fastest
		130–188	Clockwise Prism Rotation fast to slow: Fastest ... Slowest
		189	Clockwise Prism Rotation fast to slow: Slowest
		190–191	Clockwise Prism Rotation fast to slow
		192	No Rotation
		193	Prism 1 Pos Rotate: Slowest
		194–254	Prism 1 Pos Rotate: Slowest ... Fastest
		255	Prism 1 Pos Rotate: Fastest
14	Prism Macro	0–14	No Prism - Open

CH	Function	DMX	Description
14	Prism Macro (continued)	15–29	Macro 1
		30–44	Macro 2
		45–59	Macro 3
		60–74	Macro 4
		75–89	Macro 5
		90–104	Macro 6
		105–119	Macro 7
		120–134	Macro 8
		135–149	Macro 9
		150–164	Macro 10
		165–179	Macro 11
		180–194	Macro 12
		195–209	Macro 13
		210–224	Macro 14
		225–239	Macro 15
		240–255	Macro 16
15	Prism 2	0–31	No Effect
		32–255	Prism 2 (6 facet linear)
16	Prism 2 Rotation	0–5	Prism Rotation Off
		6–128	Indexing 0 to 540 deg (540°)
		129	Clockwise Prism Rotation fast to slow: Fastest
		130–188	Clockwise Prism Rotation fast to slow: Fastest ... Slowest
		189	Clockwise Prism Rotation fast to slow: Slowest
		190–191	Clockwise Prism Rotation fast to slow
		192	No Rotation
		193	Prism 1 Pos Rotate: Slowest
		194–254	Prism 1 Pos Rotate: Slowest ... Fastest
		255	Prism 1 Pos Rotate: Fastest
17	Prism 2 Macro	0–14	No Prism - Open
		15–29	Macro 1
		30–44	Macro 2
		45–59	Macro 3
		60–74	Macro 4
		75–89	Macro 5
		90–104	Macro 6
		105–119	Macro 7
		120–134	Macro 8
		135–149	Macro 9
		150–164	Macro 10
		165–179	Macro 11
		180–194	Macro 12
		195–209	Macro 13

CH	Function	DMX	Description
17	Prism 2 Macro (continued)	210–224	Macro 14
		225–239	Macro 15
		240–255	Macro 16
18	Focus	0–255	Focus 0 to 100
19	Zoom	0–255	Narrow to Wide (2–24°)
20	Zoom Fine	0–255	Fine adjustment of CH 19
21	Frost	0	0 %
		1–126	0 % ... 50 %
		127	50 %
		128–254	50 % ... 100 %
		255	100 %
22	Dimmer Mode	0	Default to Unit Setting
		1–20	Default to Unit Setting ... Standard
		21–40	Standard
		41–60	Stage
		61–80	TV
		81–100	Architectural
		101–120	Theater
		121–140	Stage 2
		141	0*1 second
		142	0*2 seconds
		143	0*3 seconds
		144	0*4 seconds
		145	0*5 seconds
		146	0*6 seconds
		147	0*7 seconds
		148	0*8 seconds
		149	0*9 seconds
		150	1 second
		151	1*5 seconds
		152–160	2...10 seconds
		161–255	Default to Unit Setting
23	Dimmer Curve		Dimmer Curves
		0–20	Square
		21–40	Linear
		41–60	Inverted Square
		61–80	S Curve
		81–255	No function
24	Pan/Tilt Mode		Pan/Tilt Fast to Slow
		0–225	Fast to slow
		226–235	Blackout by movement
		236–245	Blackout by all wheel changing

CH	Function	DMX	Description
24	Pan/Tilt Mode (continued)	246–255	No Function
25	Function	0–29	No Function
		30–39	Fan Control - Mute (hold 3s)
		40–49	Fan Control - Low (Hold 3s)
		50–59	Fan Control - High (Hold 3s)
		60–69	Fan Control - Auto (Default) (Hold 3s)
		70–74	All motor Reset (Hold 3s)
		75–79	Pan / Tilt Reset (Hold 3s)
		80–84	Color Reset (Hold 3s)
		85–89	Gobo Reset (Hold 3s)
		90–94	Focus and Zoom Reset (Hold 3s)
		95–99	Shutter Reset (Hold 3s)
		100–104	Prism Reset
		105–109	Other motors Reset (Hold 3s)
		110–148	No function
		149–150	Wifly ON (Default) (Hold 3s)
		151–152	Wifly OFF (Hold 5s)
		153–154	Hibernation Enable (Hold 3s)
		155–156	Hibernation OFF (Hold 5s)
		157–158	Display Backlight ON (Hold 3s)
		159–160	Display Backlight OFF (Hold 5s)
		161–162	Pan/Tilt Speed 1 (Default) (Hold 5s)
		163–164	Pan/Tilt Speed 2 (Hold 5s)
		165–166	Invert Pan ON (Hold 3s)
		167–168	Invert Pan OFF (Hold 5s)
		169–170	Invert Tilt ON (Hold 3s)
		171–172	Invert Tilt OFF (Hold 5s)
		173	900 Hz
		174	910 Hz
		175	920 Hz
		176	930 Hz
		177	940 Hz
		178	950 Hz
		179	960 Hz
		180	970 Hz
		181	980 Hz
		182	990 Hz
		183	1000 Hz
		184	1010 Hz
		185	1020 Hz
		186	1030 Hz
		187	1040 Hz

CH	Function	DMX	Description
25	Function (continued)	188	1050 Hz
		189	1060 Hz
		190	1070 Hz
		191	1080 Hz
		192	1090 Hz
		193	1100 Hz
		194	1110 Hz
		195	1120 Hz
		196	1130 Hz
		197	1140 Hz
		198	1150 Hz
		199	1160 Hz
		200	1170 Hz
		201	1180 Hz
		202	1190 Hz
		203	1210 Hz
		204	1220 Hz
		205	1230 Hz
		206	1240 Hz
		207	1250 Hz
		208	1260 Hz
		209	1270 Hz
		210	1280 Hz
		211	1290 Hz
		212	1300 Hz
		213	1310 Hz
		214	1320 Hz
		215	1330 Hz
		216	1340 Hz
		217	1350 Hz
		218	1360 Hz
		219	1370 Hz
		220	1380 Hz
		221	1390 Hz
		222	1400 Hz
		223	1410 Hz
		224	1420 Hz
		225	1430 Hz
		226	1440 Hz
		227	1450 Hz
		228	1460 Hz
		229	1470 Hz

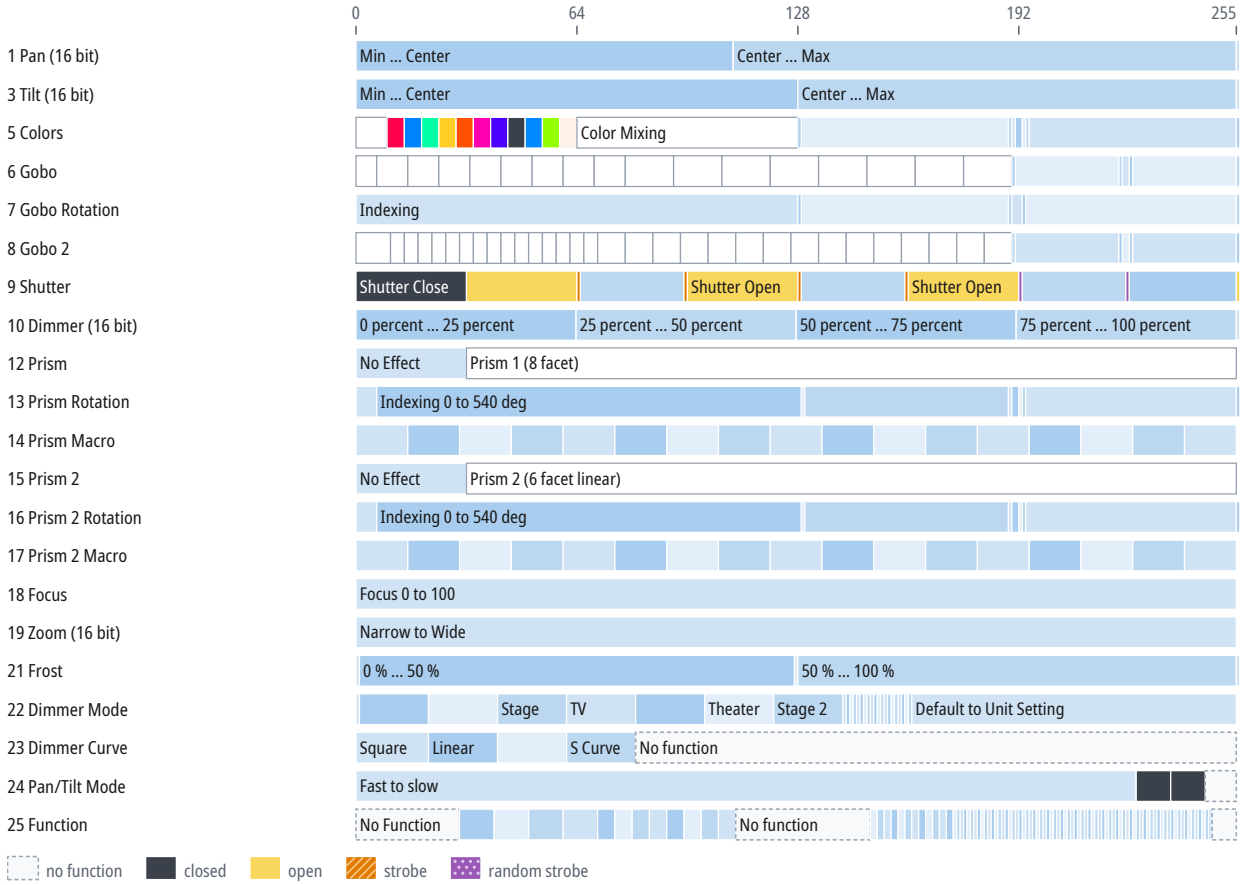
CH	Function	DMX	Description
25	Function (continued)	230	1480 Hz
		231	1490 Hz
		232	1500 Hz
		233	2500 Hz
		234	4000 Hz
		235	5000 Hz
		236	6000 Hz
		237	10000 Hz
		238	15000 Hz
		239	20000 Hz
		240	25000 Hz
		241–247	Internal program 1...7
		248–255	Internal Programs: No Function

Mode Extended Mode 25ch Pan630

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 9 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254. The GDTF file gives these values for a console's Highlight function: CH 9 Shutter 32, CH 10 Dimmer 0.

Channel functions at a glance



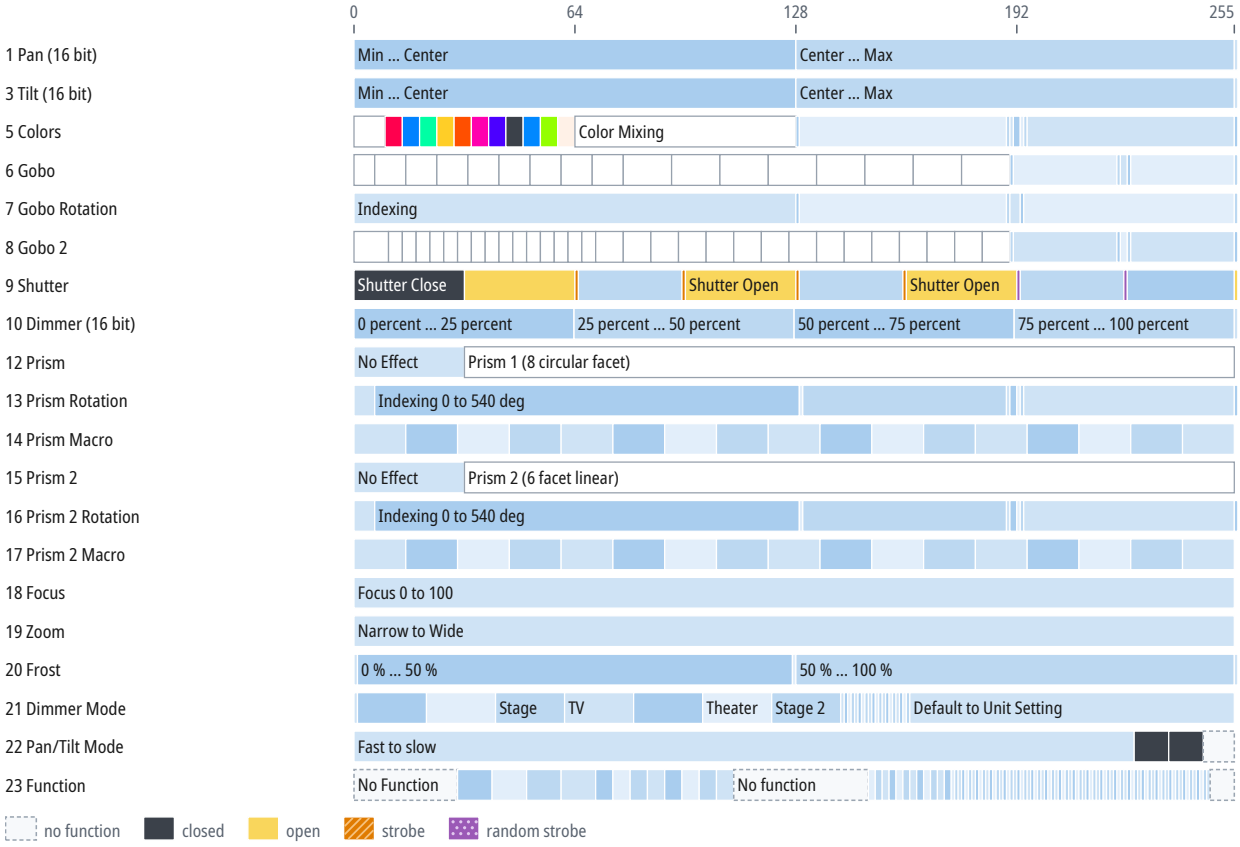
CH	Function	DMX	Description
1	Pan	0–109	Min ... Center
		109–255	Center ... Max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended Mode 25ch Pan540” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Colors		Same as CH 5 in the mode “Extended Mode 25ch Pan540” (p. 11)
6	Gobo		Same as CH 6 in the mode “Extended Mode 25ch Pan540” (p. 12)
7	Gobo Rotation		Same as CH 7 in the mode “Extended Mode 25ch Pan540” (p. 13)
8	Gobo 2		Same as CH 8 in the mode “Extended Mode 25ch Pan540” (p. 13)
9	Shutter		Same as CH 9 in the mode “Extended Mode 25ch Pan540” (p. 14)
10	Dimmer		Same as CH 10 in the mode “Extended Mode 25ch Pan540” (p. 14)
11	Dimmer Fine	0–255	Fine adjustment of CH 10
12	Prism	0–31	No Effect
		32–255	Prism 1 (8 facet)
13	Prism Rotation		Same as CH 13 in the mode “Extended Mode 25ch Pan540” (p. 14)
14	Prism Macro		Same as CH 14 in the mode “Extended Mode 25ch Pan540” (p. 14)
15	Prism 2		Same as CH 15 in the mode “Extended Mode 25ch Pan540” (p. 15)
16	Prism 2 Rotation		Same as CH 16 in the mode “Extended Mode 25ch Pan540” (p. 15)
17	Prism 2 Macro		Same as CH 17 in the mode “Extended Mode 25ch Pan540” (p. 15)
18	Focus	0–255	Focus 0 to 100
19	Zoom	0–255	Narrow to Wide (2–24°)
20	Zoom Fine	0–255	Fine adjustment of CH 19
21	Frost		Same as CH 21 in the mode “Extended Mode 25ch Pan540” (p. 16)
22	Dimmer Mode		Same as CH 22 in the mode “Extended Mode 25ch Pan540” (p. 16)
23	Dimmer Curve		Same as CH 23 in the mode “Extended Mode 25ch Pan540” (p. 16)
24	Pan/Tilt Mode		Same as CH 24 in the mode “Extended Mode 25ch Pan540” (p. 16)
25	Function		Same as CH 25 in the mode “Extended Mode 25ch Pan540” (p. 17)

Mode Standard Mode 23ch Pan540

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 9 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254. The GDTF file gives these values for a console's Highlight function: CH 9 Shutter 32, CH 10 Dimmer 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Extended Mode 25ch Pan540” (p. 11)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended Mode 25ch Pan540” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Colors		Same as CH 5 in the mode “Extended Mode 25ch Pan540” (p. 11)
6	Gobo	0–5	Gobo 1 -: Open
		6–14	Gobo 1
		15–23	Gobo 2
		24–32	Gobo 3
		33–41	Gobo 4
		42–50	Gobo 5
		51–59	Gobo 6

CH	Function	DMX	Description
6	Gobo (continued)	60–68	Gobo 7
		69–77	Gobo 8
		78–91	Gobo Shake 1
		92–105	Gobo Shake 2
		106–119	Gobo Shake 3
		120–133	Gobo Shake 4
		134–147	Gobo Shake 5
		148–161	Gobo Shake 6
		162–175	Gobo Shake 7
		176–189	Gobo Shake 8
		190	Clockwise Gobo Wheel Rotation fast to slow: Fastest
		191–220	Clockwise Gobo Wheel Rotation fast to slow: Fastest ... Slowest
		221	Clockwise Gobo Wheel Rotation fast to slow: Slowest
		222–223	No Rotation
		224	Counter-Clockwise Gobo Wheel Rotation Slow to Fast: Slowest
		225–254	Counter-Clockwise Gobo Wheel Rotation Slow to Fast: Slowest ... Fastest
		255	Counter-Clockwise Gobo Wheel Rotation Slow to Fast: Fastest
7	Gobo Rotation		Same as CH 7 in the mode “Extended Mode 25ch Pan540” (p. 13)
8	Gobo 2		Same as CH 8 in the mode “Extended Mode 25ch Pan540” (p. 13)
9	Shutter		Same as CH 9 in the mode “Extended Mode 25ch Pan540” (p. 14)
10	Dimmer		Same as CH 10 in the mode “Extended Mode 25ch Pan540” (p. 14)
11	Dimmer Fine	0–255	Fine adjustment of CH 10
12	Prism		Same as CH 12 in the mode “Extended Mode 25ch Pan540” (p. 14)
13	Prism Rotation	0–5	Prism Rotation Off
		6–128	Indexing 0 to 540 deg (540°)
		129	Clockwise Prism Rotation fast to slow: Fastest
		130–188	Clockwise Prism Rotation fast to slow: Fastest ... Slowest
		189	Clockwise Prism Rotation fast to slow: Slowest
		190–191	Clockwise Prism Rotation fast to slow
		192	No Rotation
		193	Counter Clockwise Prism Rotation slow to fast: Slowest
		194–254	Counter Clockwise Prism Rotation slow to fast: Slowest ... Fastest
		255	Counter Clockwise Prism Rotation slow to fast: Fastest
14	Prism Macro		Same as CH 14 in the mode “Extended Mode 25ch Pan540” (p. 14)

CH	Function	DMX	Description
15	Prism 2		Same as CH 15 in the mode “Extended Mode 25ch Pan540” (p. 15)
16	Prism 2 Rotation	0–5	Prism Rotation Off
		6–128	Indexing 0 to 540 deg (540°)
		129	Clockwise Prism Rotation fast to slow: Fastest
		130–188	Clockwise Prism Rotation fast to slow: Fastest ... Slowest
		189	Clockwise Prism Rotation fast to slow: Slowest
		190–191	Clockwise Prism Rotation fast to slow
		192	No Rotation
		193	Counter Clockwise Prism Rotation slow to fast: Slowest
		194–254	Counter Clockwise Prism Rotation slow to fast: Slowest ... Fastest
		255	Counter Clockwise Prism Rotation slow to fast: Fastest
17	Prism 2 Macro		Same as CH 17 in the mode “Extended Mode 25ch Pan540” (p. 15)
18	Focus	0–255	Focus 0 to 100
19	Zoom	0–255	Narrow to Wide (2–24°)
20	Frost		Same as CH 21 in the mode “Extended Mode 25ch Pan540” (p. 16)
21	Dimmer Mode		Same as CH 22 in the mode “Extended Mode 25ch Pan540” (p. 16)
22	Pan/Tilt Mode		Same as CH 24 in the mode “Extended Mode 25ch Pan540” (p. 16)
23	Function		Same as CH 25 in the mode “Extended Mode 25ch Pan540” (p. 17)

Mode Standard Mode 23ch Pan630

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 9 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254. The GDTF file gives these values for a console's Highlight function: CH 9 Shutter 32, CH 10 Dimmer 0.

Channel functions at a glance



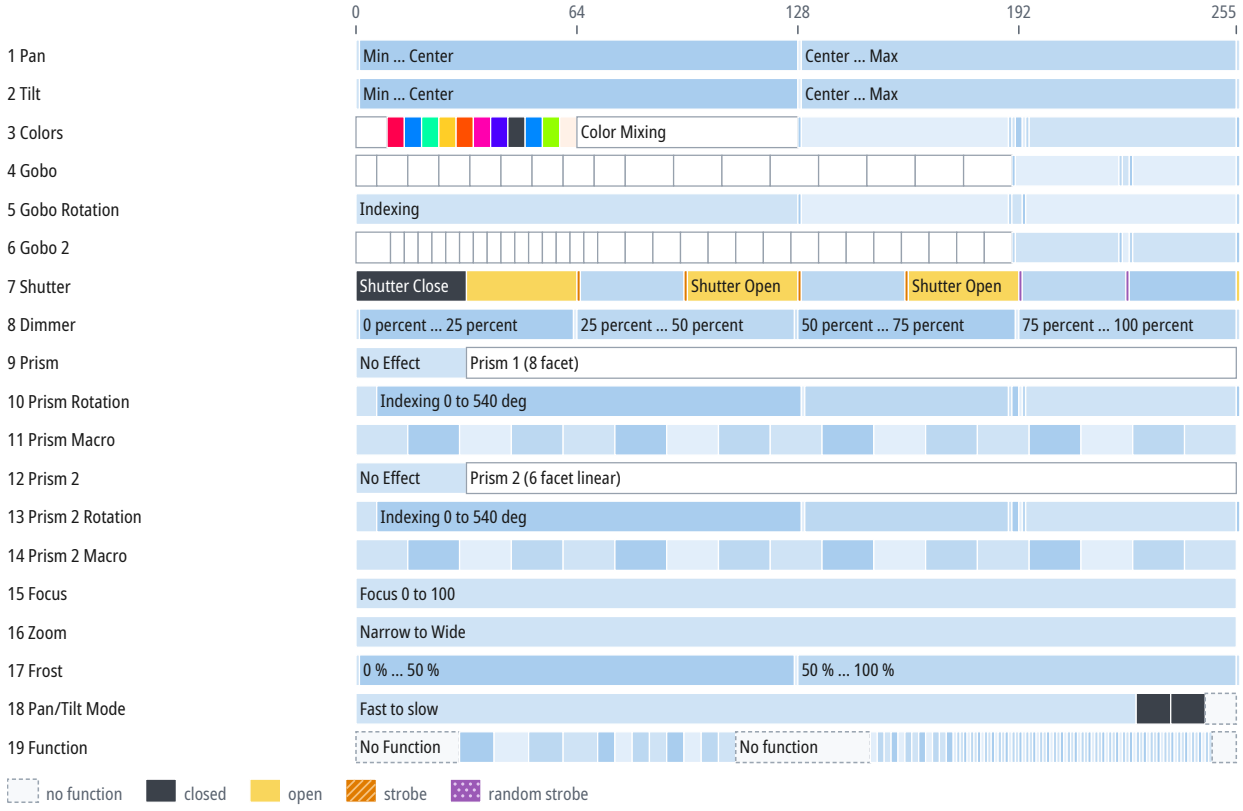
CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Extended Mode 25ch Pan630” (p. 20)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended Mode 25ch Pan540” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Colors		Same as CH 5 in the mode “Extended Mode 25ch Pan540” (p. 11)
6	Gobo		Same as CH 6 in the mode “Extended Mode 25ch Pan540” (p. 12)
7	Gobo Rotation		Same as CH 7 in the mode “Extended Mode 25ch Pan540” (p. 13)
8	Gobo 2		Same as CH 8 in the mode “Extended Mode 25ch Pan540” (p. 13)
9	Shutter		Same as CH 9 in the mode “Extended Mode 25ch Pan540” (p. 14)

CH	Function	DMX	Description
10	Dimmer		Same as CH 10 in the mode “Extended Mode 25ch Pan540” (p. 14)
11	Dimmer Fine	0–255	Fine adjustment of CH 10
12	Prism		Same as CH 12 in the mode “Extended Mode 25ch Pan630” (p. 20)
13	Prism Rotation		Same as CH 13 in the mode “Standard Mode 23ch Pan540” (p. 22)
14	Prism Macro		Same as CH 14 in the mode “Extended Mode 25ch Pan540” (p. 14)
15	Prism 2		Same as CH 15 in the mode “Extended Mode 25ch Pan540” (p. 15)
16	Prism 2 Rotation		Same as CH 16 in the mode “Standard Mode 23ch Pan540” (p. 23)
17	Prism 2 Macro		Same as CH 17 in the mode “Extended Mode 25ch Pan540” (p. 15)
18	Focus	0–255	Focus 0 to 100
19	Zoom	0–255	Narrow to Wide (2–24°)
20	Frost		Same as CH 21 in the mode “Extended Mode 25ch Pan540” (p. 16)
21	Dimmer Mode		Same as CH 22 in the mode “Extended Mode 25ch Pan540” (p. 16)
22	Pan/Tilt Mode		Same as CH 24 in the mode “Extended Mode 25ch Pan540” (p. 16)
23	Function		Same as CH 25 in the mode “Extended Mode 25ch Pan540” (p. 17)

Mode Basic Mode 19ch Pan540

If the device receives DMX in this mode but gives no light, check these channels: CH 7 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254. The GDTF file gives these values for a console's Highlight function: CH 7 Shutter 32, CH 8 Dimmer 0.

Channel functions at a glance



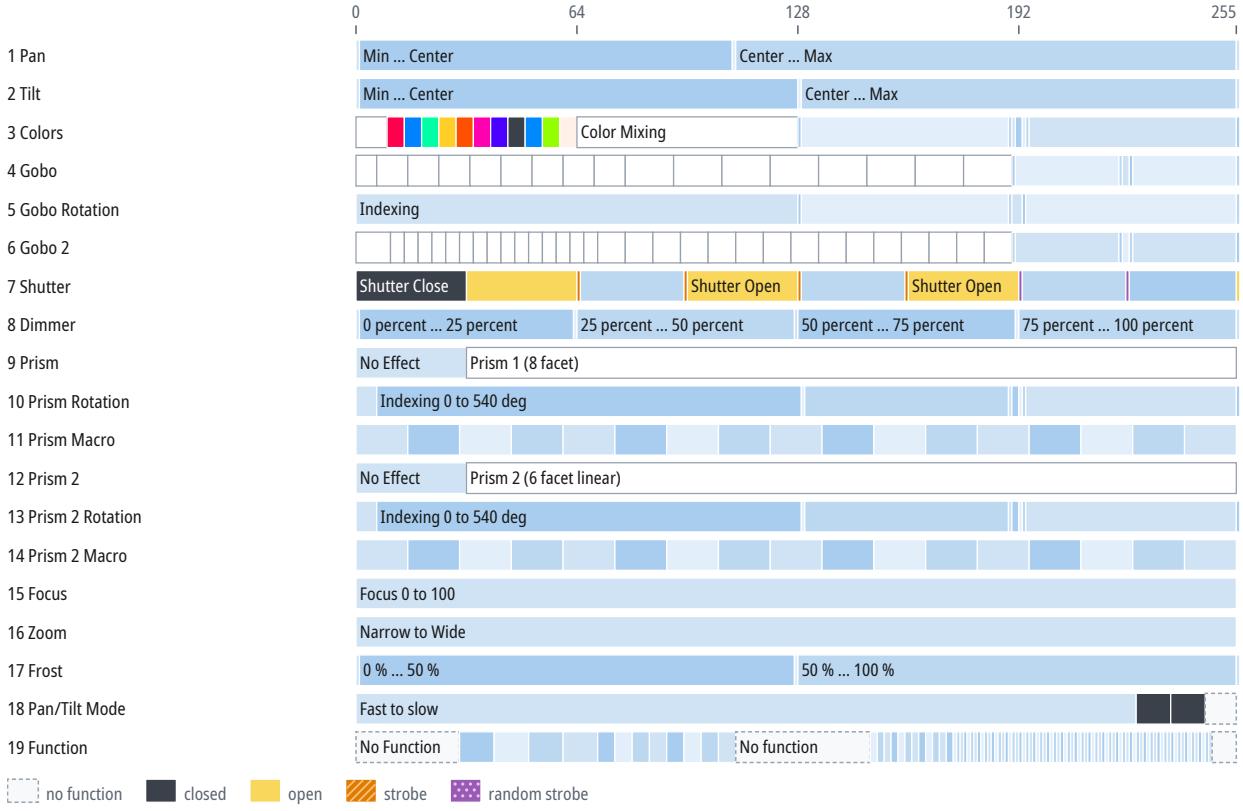
CH	Function	DMX	Description
1	Pan	0	Min
		1–127	Min ... Center
		128	Center
		129–254	Center ... Max
		255	Max
2	Tilt	0	Min
		1–127	Min ... Center
		128	Center
		129–254	Center ... Max
		255	Max
3	Colors		Same as CH 5 in the mode “Extended Mode 25ch Pan540” (p. 11)
4	Gobo		Same as CH 6 in the mode “Extended Mode 25ch Pan540” (p. 12)
5	Gobo Rotation		Same as CH 7 in the mode “Extended Mode 25ch Pan540” (p. 13)

CH	Function	DMX	Description
6	Gobo 2		Same as CH 8 in the mode “Extended Mode 25ch Pan540” (p. 13)
7	Shutter		Same as CH 9 in the mode “Extended Mode 25ch Pan540” (p. 14)
8	Dimmer	0	0 percent
		1–62	0 percent ... 25 percent
		63	25 percent
		64–126	25 percent ... 50 percent
		127	50 percent
		128–190	50 percent ... 75 percent
		191	75 percent
		192–254	75 percent ... 100 percent
		255	100 percent
9	Prism		Same as CH 12 in the mode “Extended Mode 25ch Pan630” (p. 20)
10	Prism Rotation		Same as CH 13 in the mode “Standard Mode 23ch Pan540” (p. 22)
11	Prism Macro		Same as CH 14 in the mode “Extended Mode 25ch Pan540” (p. 14)
12	Prism 2		Same as CH 15 in the mode “Extended Mode 25ch Pan540” (p. 15)
13	Prism 2 Rotation		Same as CH 16 in the mode “Standard Mode 23ch Pan540” (p. 23)
14	Prism 2 Macro		Same as CH 17 in the mode “Extended Mode 25ch Pan540” (p. 15)
15	Focus	0–255	Focus 0 to 100
16	Zoom	0–255	Narrow to Wide (2–24°)
17	Frost		Same as CH 21 in the mode “Extended Mode 25ch Pan540” (p. 16)
18	Pan/Tilt Mode		Same as CH 24 in the mode “Extended Mode 25ch Pan540” (p. 16)
19	Function		Same as CH 25 in the mode “Extended Mode 25ch Pan540” (p. 17)

Mode Basic Mode 19ch Pan630

If the device receives DMX in this mode but gives no light, check these channels: CH 7 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254. The GDTF file gives these values for a console's Highlight function: CH 7 Shutter 32, CH 8 Dimmer 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0	Min
		1–108	Min ... Center
		109	Center
		110–254	Center ... Max
		255	Max
2	Tilt		Same as CH 2 in the mode “Basic Mode 19ch Pan540” (p. 26)
3	Colors		Same as CH 5 in the mode “Extended Mode 25ch Pan540” (p. 11)
4	Gobo		Same as CH 6 in the mode “Extended Mode 25ch Pan540” (p. 12)
5	Gobo Rotation		Same as CH 7 in the mode “Extended Mode 25ch Pan540” (p. 13)
6	Gobo 2		Same as CH 8 in the mode “Extended Mode 25ch Pan540” (p. 13)
7	Shutter		Same as CH 9 in the mode “Extended Mode 25ch Pan540” (p. 14)
8	Dimmer		Same as CH 8 in the mode “Basic Mode 19ch Pan540” (p. 27)

CH	Function	DMX	Description
9	Prism		Same as CH 12 in the mode “Extended Mode 25ch Pan630” (p. 20)
10	Prism Rotation		Same as CH 13 in the mode “Standard Mode 23ch Pan540” (p. 22)
11	Prism Macro		Same as CH 14 in the mode “Extended Mode 25ch Pan540” (p. 14)
12	Prism 2		Same as CH 15 in the mode “Extended Mode 25ch Pan540” (p. 15)
13	Prism 2 Rotation		Same as CH 16 in the mode “Standard Mode 23ch Pan540” (p. 23)
14	Prism 2 Macro		Same as CH 17 in the mode “Extended Mode 25ch Pan540” (p. 15)
15	Focus	0–255	Focus 0 to 100
16	Zoom	0–255	Narrow to Wide (2–24°)
17	Frost		Same as CH 21 in the mode “Extended Mode 25ch Pan540” (p. 16)
18	Pan/Tilt Mode		Same as CH 24 in the mode “Extended Mode 25ch Pan540” (p. 16)
19	Function		Same as CH 25 in the mode “Extended Mode 25ch Pan540” (p. 17)

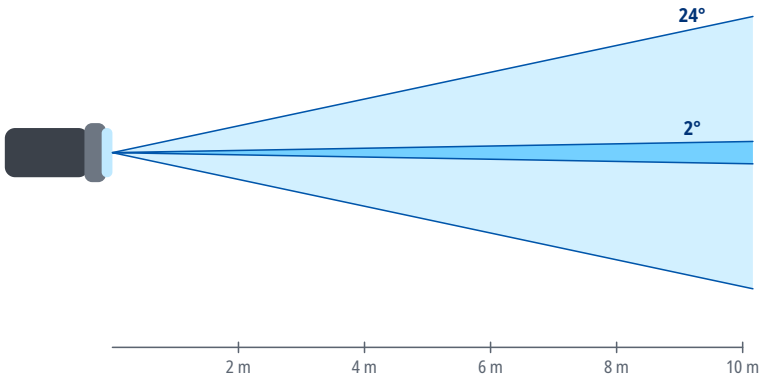
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	200 W
Luminous flux	41,000 lm
Color temperature	7,500 K
Color rendering index (CRI)	70
Optics	
Zoom	2–24°
Movement	
Pan	630°
Tilt	270°
Control	
RDM	yes (manufacturer ID 0x1900, device model ID 0x002B)
Dimensions and construction	
Weight	14.1 kg
Operating environment	
Operating temperature	-25 to 45 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–31 Hz
Prism rotation	up to 540 °/s (90 rpm)
Prism rotation	up to 540 °/s (90 rpm)

Spot diameter



Distance	Ø 2°	Ø 24°
2 m	0.07 m	0.85 m
4 m	0.14 m	1.7 m
6 m	0.21 m	2.6 m
8 m	0.28 m	3.4 m
10 m	0.35 m	4.3 m
15 m	0.52 m	6.4 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.