DMX REFERENCE

V2s IP

User Test



Manufacturer	User Test
GDTF file	User_Test_V2s_IP_53126.gdtf
GDTF revision	23-12-18 Release, Uploaded to GDTF Share. · 2023-12-18
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1 About this manual

This document describes the V2s IP by User Test. It was compiled from the GDTF file User_Test_V2s_IP_53126.gdtf from the GDTF-Share library.

File revision: “23-12-18 Release, Uploaded to GDTF Share.”.

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

This document was not issued or endorsed by User Test; 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	26 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
36 CH	36	14	1, 37, 73, 109, ...
29 CH	29	17	1, 30, 59, 88, ...
24 CH	24	21	1, 25, 49, 73, ...

No light? Check these channels

- 36 CH: CH 20 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254
- 29 CH: CH 15 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254
- 24 CH: CH 12 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.

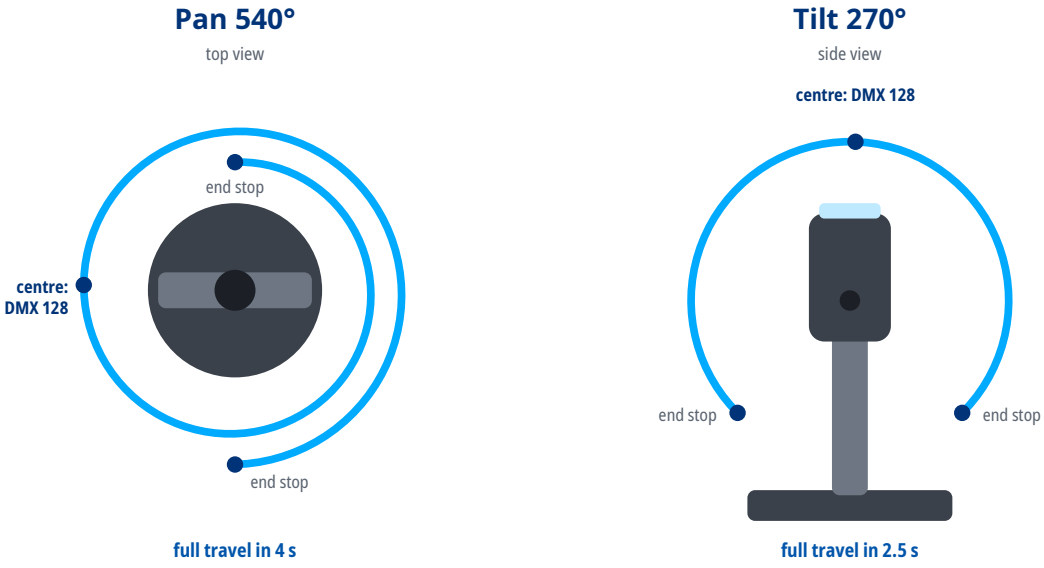
⚠ CAUTION

- 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

Range of movement



Full-travel times as stated in the GDTF file.

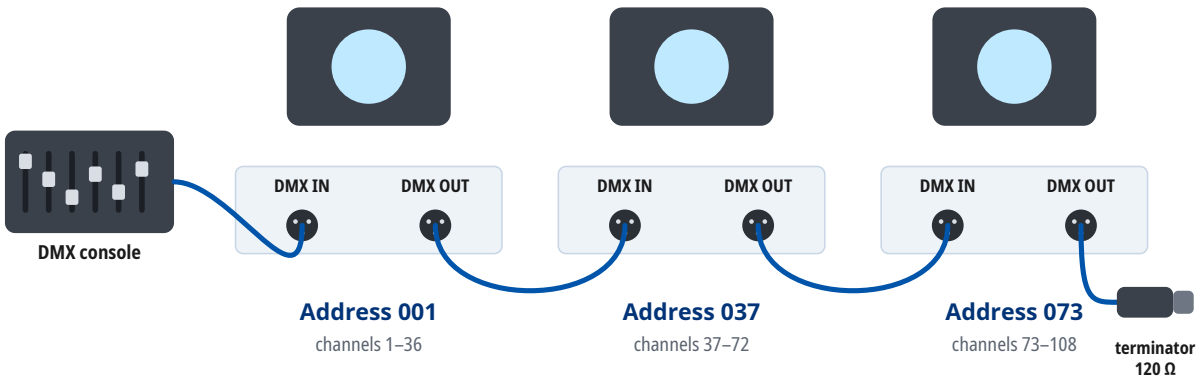
5 Installation

> ⚠ **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: 26 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 36 CH: every unit occupies 36 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 “36 CH”: 36.
- 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 “36 CH”, you can use, for example, the start addresses 1, 37, 73, 109.
- 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

	36 CH 36 channels	29 CH 29 channels	24 CH 24 channels
Pan / Tilt	1, 3	1, 3	1, 2
Pan / Tilt resolution	16 bit	16 bit	8 bit
Dimmer	21	16	13
Dimmer resolution	16 bit	16 bit	8 bit
Shutter / strobe	20	15	12
Color mixing	5, 7, 9	5–7	3–5
Color temperature	11	8	6
Color wheel	13, 14	9, 10	7, 8
Gobo wheel	16, 19	12, 14	9, 11
Gobo rotation	17	13	10
Prism	23, 24	18, 19	14, 15
Frost	29, 30	22, 23	18, 19
Zoom	27	21	17
Focus	25	20	16
Animation wheel	31	24	20
Effects / macros	15, 23, 34	11, 18, 27	14, 22

Color wheel 1

1. Red
DMX 18–30
2. Medium Blue
DMX 44–56
3. Green
DMX 70–82
4. Amber
DMX 96–108
5. Orange
DMX 122–134
6. High CRI Filter
DMX 148–160
7. CTB
DMX 174–186
8. Color Select: Open
DMX 0–4

Animation wheel

1. Animation Wheel

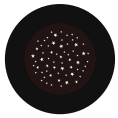
Gobo wheel 1

1
Gobo 1 - 7 Index: Open
DMX 0–9

2 
Gobo 1
DMX 10–19

3 
Gobo 2
DMX 20–29

4 
Gobo 3
DMX 30–39

5 
Gobo 4
DMX 40–49

6 
Gobo 5
DMX 50–59

7 
Gobo 6
DMX 60–69

8 
Gobo 7
DMX 70–80

Gobo wheel 2

1
Gobo wheel: 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

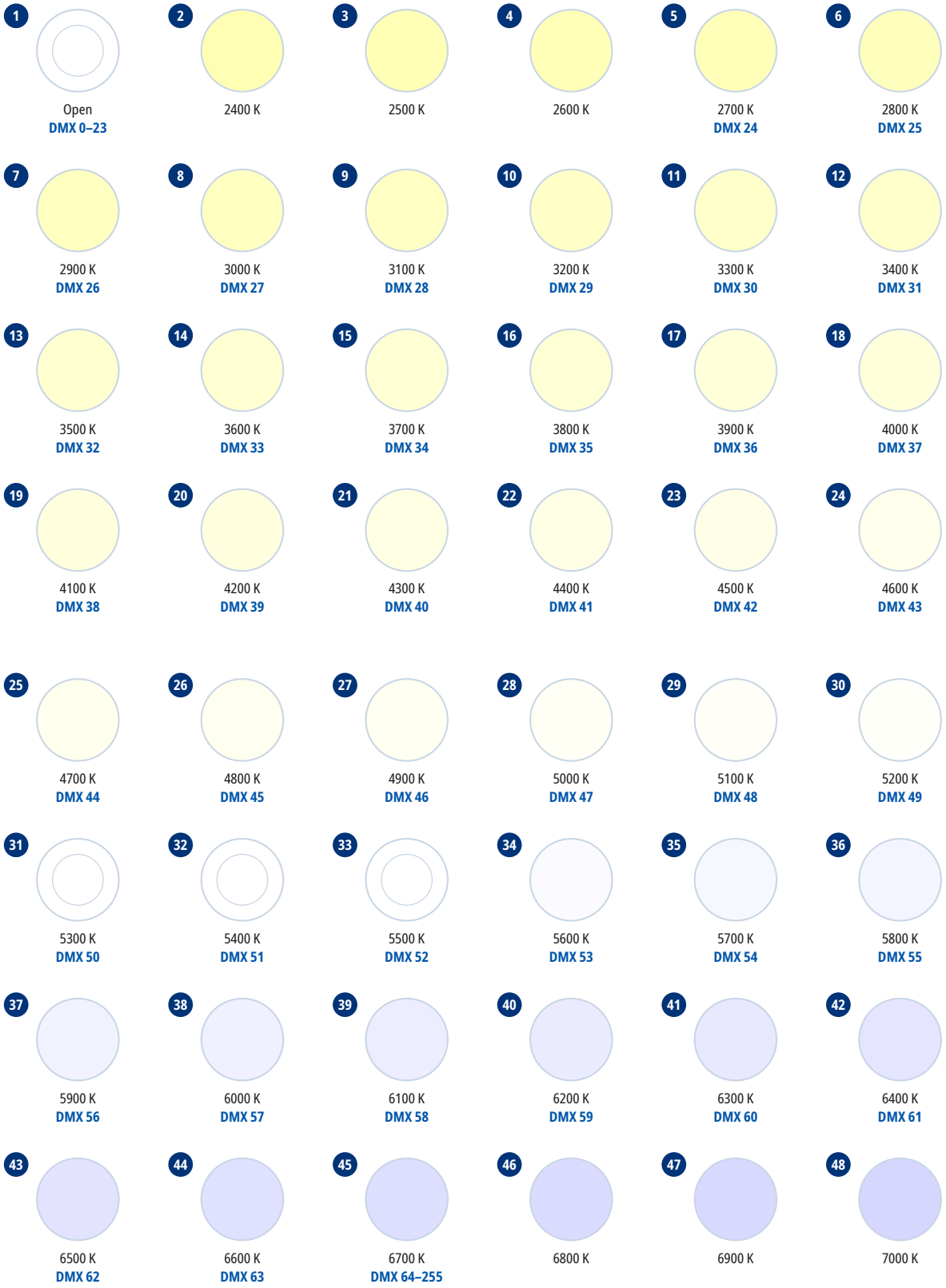
9 
Gobo 8
DMX 69–78

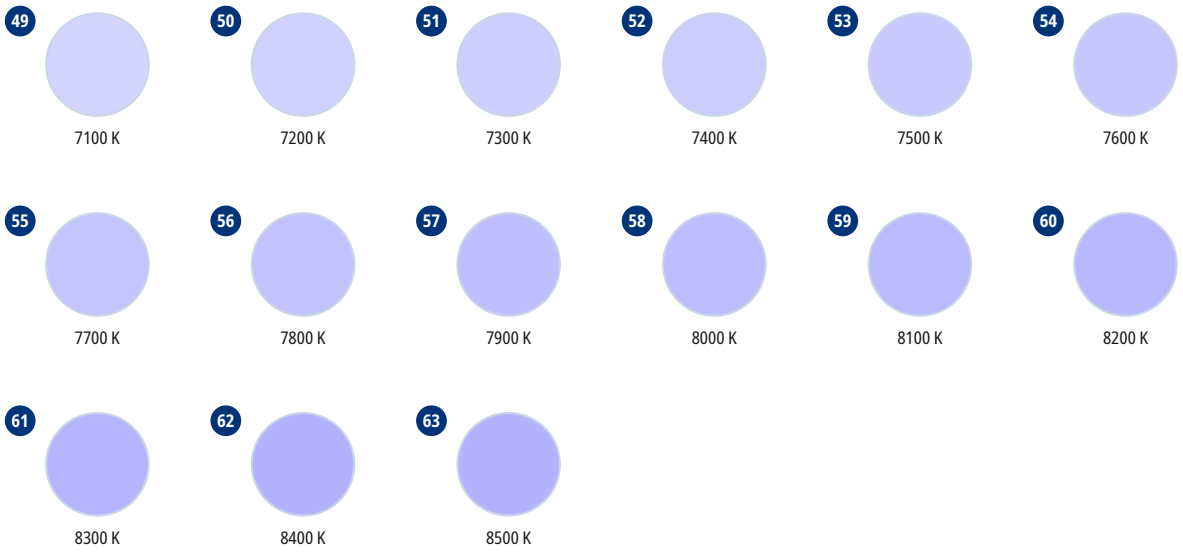
Prism

1 
6 facets
6 Linear Prism
DMX 6–67

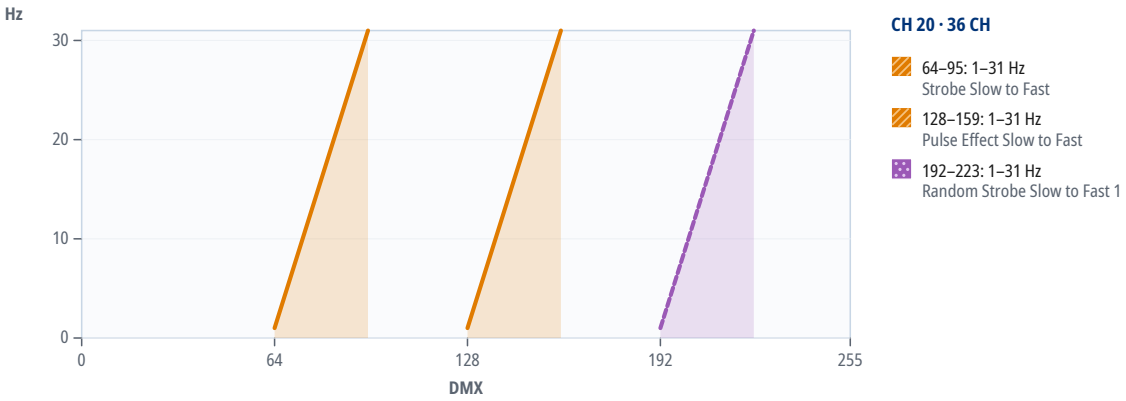
2 
4 facets
4 Facet Prism
DMX 67–128

Color wheel 2



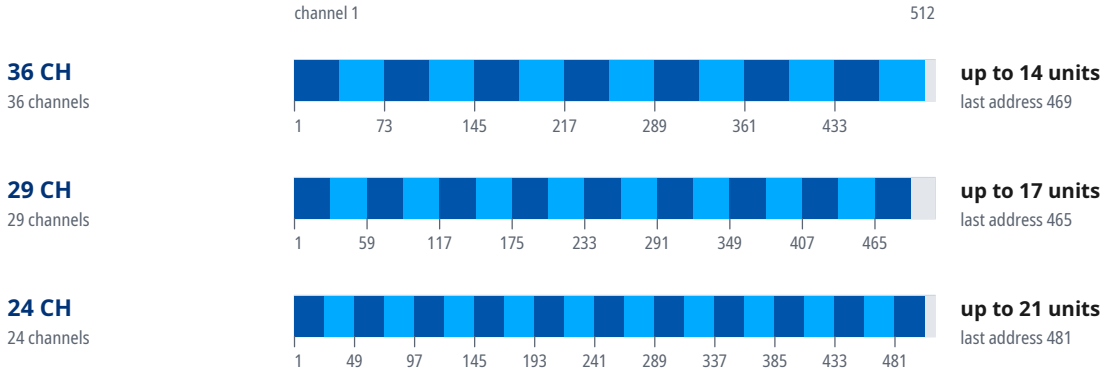

49
7100 K
50
7200 K
51
7300 K
52
7400 K
53
7500 K
54
7600 K
55
7700 K
56
7800 K
57
7900 K
58
8000 K
59
8100 K
60
8200 K
61
8300 K
62
8400 K
63
8500 K

Strobe rate


Hz
30
20
10
0
0
64
128
192
255
DMX
CH 20 · 36 CH
64–95: 1–31 Hz
Strobe Slow to Fast
128–159: 1–31 Hz
Pulse Effect Slow to Fast
192–223: 1–31 Hz
Random Strobe Slow to Fast 1

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “36 CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	181	11	361	16	U2 · 37
2	37	7	217	12	397	17	U2 · 73
3	73	8	253	13	433	18	U2 · 109
4	109	9	289	14	469	19	U2 · 145
5	145	10	325	15	U2 · 1	20	U2 · 181

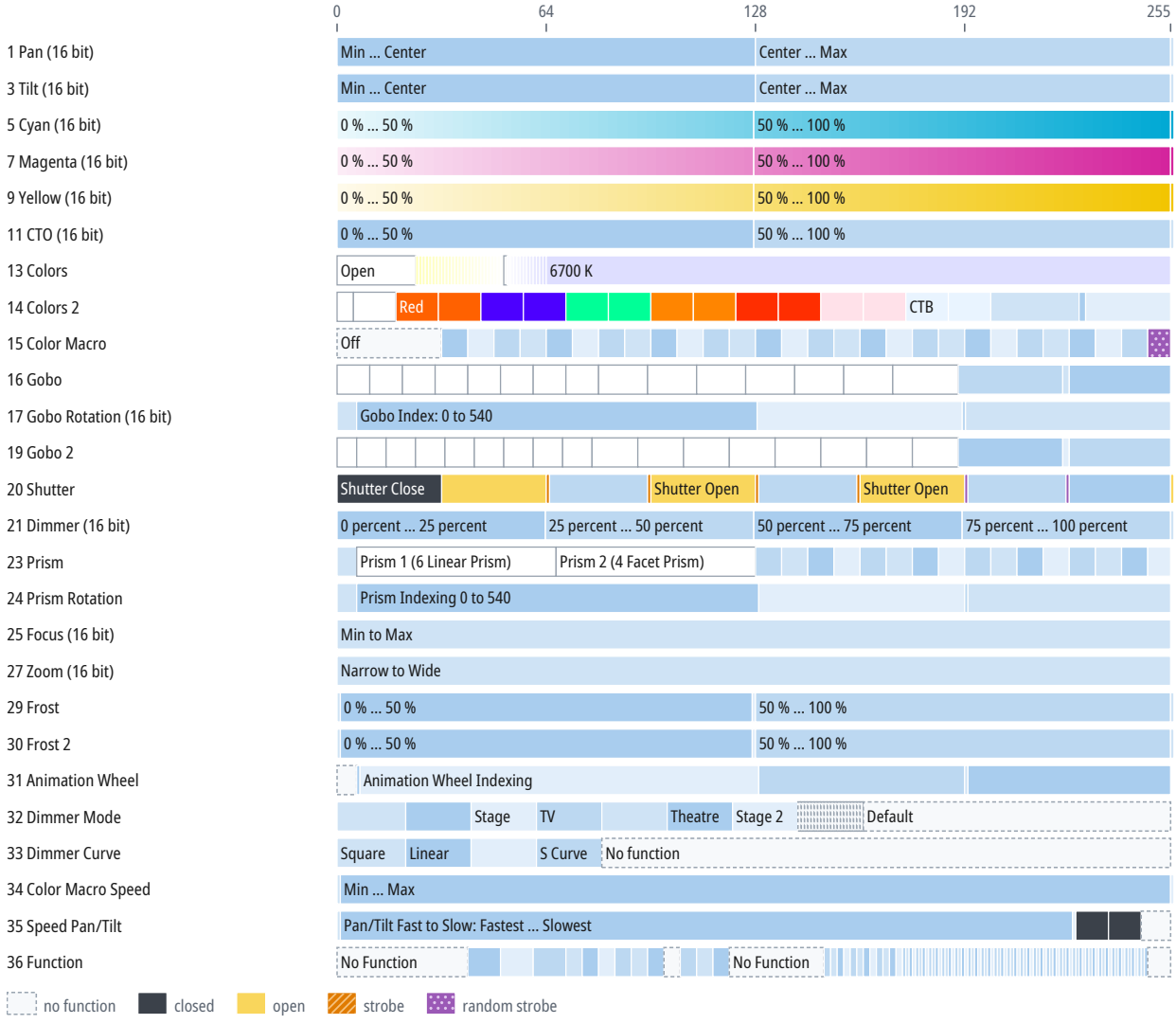
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 36 CH

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 20 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 5 Cyan 0, CH 7 Magenta 0, CH 9 Yellow 0, CH 20 Shutter 32, CH 21 Dimmer 255.

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	Cyan	0–127	0 % ... 50 %

CH	Function	DMX	Description
5	Cyan (continued)	127	50 %
		128–255	50 % … 100 %
		255	100 %
6	Cyan Fine	0–255	Fine adjustment of CH 5
7	Magenta	0–127	0 % … 50 %
		127	50 %
		128–255	50 % … 100 %
		255	100 %
8	Magenta Fine	0–255	Fine adjustment of CH 7
9	Yellow	0–127	0 % … 50 %
		127	50 %
		128–255	50 % … 100 %
		255	100 %
10	Yellow Fine	0–255	Fine adjustment of CH 9
11	CTO	0–127	0 % … 50 %
		127	50 %
		128–255	50 % … 100 %
		255	100 %
12	CTO Fine	0–255	Fine adjustment of CH 11
13	Colors	0–23	Open
		24	2700 K
		25	2800 K
		26	2900 K
		27	3000 K
		28	3100 K
		29	3200 K
		30	3300 K
		31	3400 K
		32	3500 K
		33	3600 K
		34	3700 K
		35	3800 K
		36	3900 K
		37	4000 K
		38	4100 K
		39	4200 K
		40	4300 K
		41	4400 K
		42	4500 K
		43	4600 K
		44	4700 K
		45	4800 K

CH	Function	DMX	Description
13	Colors (continued)	46	4900 K
		47	5000 K
		48	5100 K
		49	5200 K
		50	5300 K
		51	5400 K
		52	5500 K
		53	5600 K
		54	5700 K
		55	5800 K
		56	5900 K
		57	6000 K
		58	6100 K
		59	6200 K
		60	6300 K
		61	6400 K
		62	6500 K
		63	6600 K
		64–255	6700 K
14	Colors 2	0–4	Color Select: Open
		5–17	Open/Red
		18–30	Red
		31–43	Red/Medium Blue
		44–56	Medium Blue
		57–69	Medium Blue / Green
		70–82	Green
		83–95	Green / Amber
		96–108	Amber
		109–121	Amber / Orange
		122–134	Orange
		135–147	Orange / High CRI Filter
		148–160	High CRI Filter
		161–173	High CRI Filter / CTB
		174–186	CTB
		187–199	CTB / Open
		200–226	Clockwise Color Wheel Rotation fast to slow (0–360 °/s)
		227–228	No Rotation
		229–255	Counter-Clockwise Color Wheel Rotation slow to fast (0–360 °/s)
15	Color Macro	0–31	Off
		32–39	Color Macro 1
		40–47	Color Macro 2

CH	Function	DMX	Description
15	Color Macro (continued)	48–55	Color Macro 3
		56–63	Color Macro 4
		64–71	Color Macro 5
		72–79	Color Macro 6
		80–87	Color Macro 7
		88–95	Color Macro 8
		96–103	Color Macro 9
		104–111	Color Macro 10
		112–119	Color Macro 11
		120–127	Color Macro 12
		128–135	Color Macro 13
		136–143	Color Macro 14
		144–151	Color Macro 15
		152–159	Color Macro 16
		160–167	Color Macro 17
		168–175	Color Macro 18
		176–183	Color Macro 19
		184–191	Color Macro 20
		192–199	Color Macro 21
		200–207	Color Macro 22
		208–215	Color Macro 23
		216–223	Color Macro 24
		224–231	Color Macro 25
		232–239	Color Macro 26
		240–247	Color Macro 27
		248–255	Random CMY
16	Gobo	0–9	Gobo 1 - 7 Index: Open
		10–19	Gobo 1
		20–29	Gobo 2
		30–39	Gobo 3
		40–49	Gobo 4
		50–59	Gobo 5
		60–69	Gobo 6
		70–79	Gobo 7
		80–94	Gobo Shake 1 (1–5 Hz)
		95–109	Gobo Shake 2 (1–5 Hz)
		110–124	Gobo Shake 3 (1–5 Hz)
		125–139	Gobo Shake 4 (1–5 Hz)
		140–154	Gobo Shake 5 (1–5 Hz)
		155–169	Gobo Shake 6 (1–5 Hz)
		170–189	Gobo Shake 7 (1–5 Hz)
		190–221	Clockwise Gobo Wheel Rotation fast to slow (0–360 °/s)

CH	Function	DMX	Description
16	Gobo (continued)	222–223	No Rotation
		224–255	Counter-Clockwise Gobo Wheel Rotation slow to fast (0–360 °/s)
17	Gobo Rotation	0–5	Gobo 1 Rotation Off
		6–128	Gobo Index: 0 to 540
		129–191	Clockwise Gobo Rotation fast to slow (0–360 °/s)
		192	No Rotation
		193–255	Counter Clockwise Gobo Rotation slow to fast (0–360 °/s)
18	Gobo Rotation Fine	0–255	Fine adjustment of CH 17
19	Gobo 2	0–5	Gobo wheel: 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 (1–5 Hz)
		92–105	Gobo Shake 2 (1–5 Hz)
		106–119	Gobo Shake 3 (1–5 Hz)
		120–133	Gobo Shake 4 (1–5 Hz)
		134–147	Gobo Shake 5 (1–5 Hz)
		148–161	Gobo Shake 6 (1–5 Hz)
		162–175	Gobo Shake 7 (1–5 Hz)
		176–189	Gobo Shake 8 (1–5 Hz)
		190–221	Clockwise Gobo Wheel Rotation Fast to Slow (0–360 °/s)
		222–223	No rotation
		224–255	Counter-Clockwise Gobo Wheel Rotation slow to fast (0–360 °/s)
20	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

CH	Function	DMX	Description
20	Shutter (continued)	224–254	Shutter Open 2
		255	Shutter Open
21	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
22	Dimmer Fine	0–255	Fine adjustment of CH 21
23	Prism	0–5	No Prism(Open)
		6–66	Prism 1 (6 Linear Prism)
		67–127	Prism 2 (4 Facet Prism)
		128–135	Macro 1
		136–143	Macro 2
		144–151	Macro 3
		152–159	Macro 4
		160–167	Macro 5
		168–175	Macro 6
		176–183	Macro 7
		184–191	Macro 8
		192–199	Macro 9
		200–207	Macro 10
		208–215	Macro 11
		216–223	Macro 12
		224–231	Macro 13
		232–239	Macro 14
		240–247	Macro 15
		248–255	Macro 16
24	Prism Rotation	0–5	Prism Rotation OFF
		6–128	Prism Indexing 0 to 540
		129–191	Clockwise Prism Rotation fast to slow (0–360 °/s)
		192	No Rotation
		193–255	Counter-Clockwise Prism Rotation slow to fast (0–360 °/s)
25	Focus	0–255	Min to Max
26	Focus Fine	0–255	Fine adjustment of CH 25
27	Zoom	0–255	Narrow to Wide (8–41°)
28	Zoom Fine	0–255	Fine adjustment of CH 27
29	Frost		Medium Frost
		0	0 %
		1–126	0 % … 50 %

CH	Function	DMX	Description
29	Frost (continued)	127	50 %
		128–254	50 % … 100 %
		255	100 %
30	Frost 2		Heavy Frost
		0	0 %
		1–126	0 % … 50 %
		127	50 %
		128–254	50 % … 100 %
		255	100 %
31	Animation Wheel	0–5	Animation Wheel Indexing: Off
		6	Animation Wheel Indexing: 0 to 540
		7–128	Animation Wheel Indexing
		129–191	Clockwise Animation Rotation fast to slow (0–360 °/s)
		192	No Rotation
		193–255	Counter-Clockwise Animation Rotation slow to fast (0–360 °/s)
32	Dimmer Mode	0–20	Default to unit setting
		21–40	Standard
		41–60	Stage
		61–80	TV
		81–100	Architectural
		101–120	Theatre
		121–140	Stage 2
		141	0/1s Delay
		142	0/2s Delay
		143	0/3s Delay
		144	0/4s Delay
		145	0/5s Delay
		146	0/6s Delay
		147	0/7s Delay
		148	0/8s Delay
		149	0/9s Delay
		150	1s Delay
		151	1/5s Delay
		152–160	2…10s Delay
		161–255	Default
33	Dimmer Curve		Dimmer Curves
		0–20	Square
		21–40	Linear
		41–60	Inverted Square
		61–80	S Curve
		81–255	No function

CH	Function	DMX	Description
34	Color Macro Speed		CMY / Color Macro Speed
		0	Min
		1–254	Min ... Max
		255	Max
35	Speed Pan/Tilt	0	Pan/Tilt Fast to Slow: Fastest
		1–224	Pan/Tilt Fast to Slow: Fastest ... Slowest
		225	Pan/Tilt Fast to Slow: Slowest
		226–235	Blackout by movement
		236–245	Blackout by all wheel changing
		246–255	No Function
36	Function	0–39	No Function
		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	No Function
		105–109	Other motors Reset (Hold 3s)
		110–114	Enable Zoom Speed Fast (Hold 3s)
		115–119	Disable Zoom Speed Fast (Hold 5s)
		120–148	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

CH	Function	DMX	Description
36	Function (continued)	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
		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

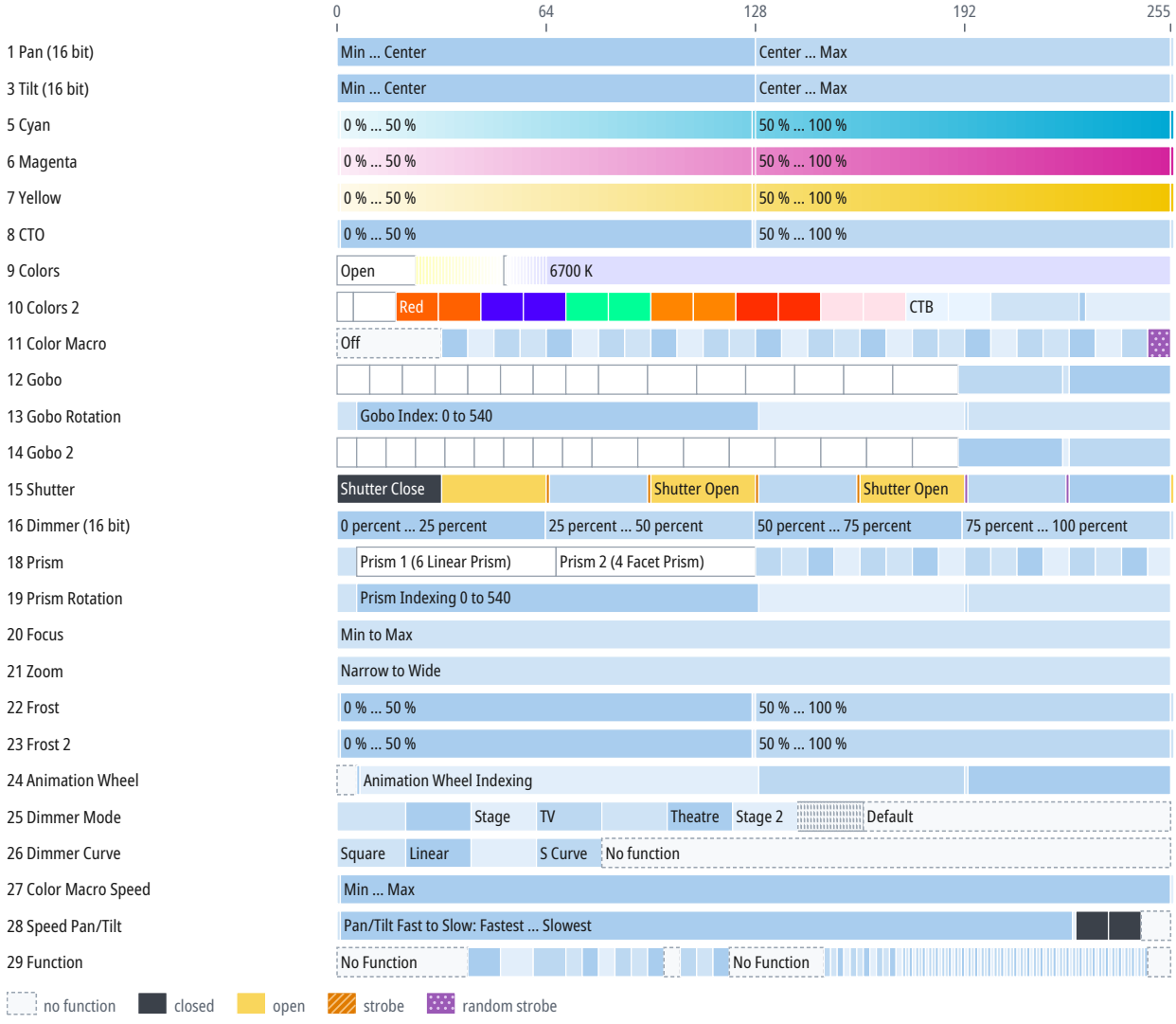
CH	Function	DMX	Description
36	Function (continued)	220	1380 Hz
		221	1390 Hz
		222	1400 Hz
		223	1410 Hz
		224	1420 Hz
		225	1430 Hz
		226	1440 Hz
		227	1450 Hz
		228	1460 Hz
		229	1470 Hz
		230	1480 Hz
		231	1490 Hz
		232	1500 Hz
		233	2500 Hz
		234	4000 Hz
		235	5000 Hz
		236	6000 Hz
		237	10000 Hz
		238	15000 Hz
		239	20000 Hz
		240	25000 Hz
		241–247	Internal program 1...7
		248–255	Internal Programs: No Function

Mode 29 CH

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 15 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 5 Cyan 0, CH 6 Magenta 0, CH 7 Yellow 0, CH 15 Shutter 32, CH 16 Dimmer 255.

Channel functions at a glance



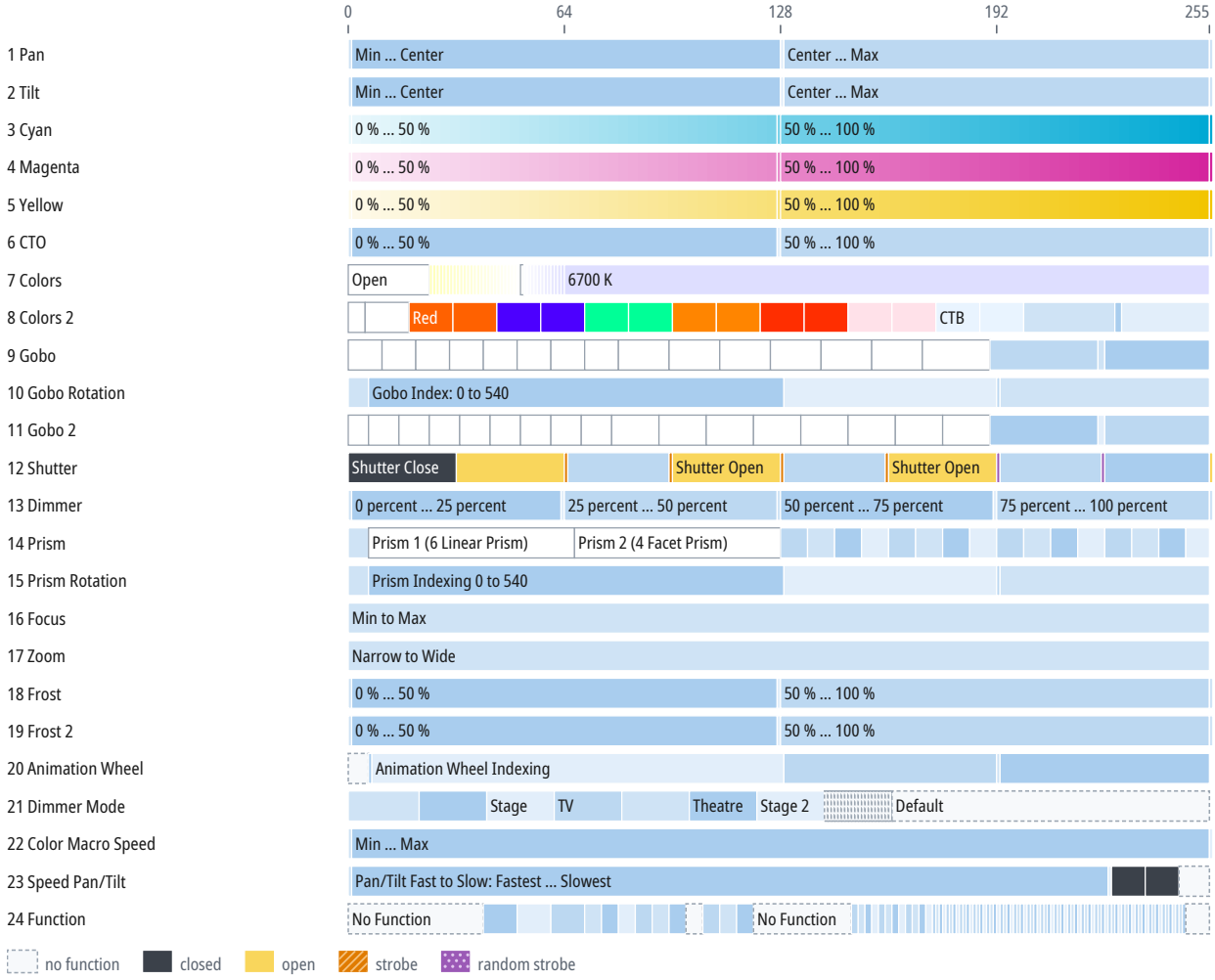
CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “36 CH” (p. 12)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “36 CH” (p. 12)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Cyan	0	0 %
		1–126	0 % ... 50 %
		127	50 %
		128–254	50 % ... 100 %
		255	100 %

CH	Function	DMX	Description
6	Magenta	0	0 %
		1–126	0 % … 50 %
		127	50 %
		128–254	50 % … 100 %
		255	100 %
7	Yellow	0	0 %
		1–126	0 % … 50 %
		127	50 %
		128–254	50 % … 100 %
		255	100 %
8	CTO	0	0 %
		1–126	0 % … 50 %
		127	50 %
		128–254	50 % … 100 %
		255	100 %
9	Colors		Same as CH 13 in the mode “36 CH” (p. 13)
10	Colors 2		Same as CH 14 in the mode “36 CH” (p. 14)
11	Color Macro		Same as CH 15 in the mode “36 CH” (p. 14)
12	Gobo		Same as CH 16 in the mode “36 CH” (p. 15)
13	Gobo Rotation		Same as CH 17 in the mode “36 CH” (p. 16)
14	Gobo 2		Same as CH 19 in the mode “36 CH” (p. 16)
15	Shutter		Same as CH 20 in the mode “36 CH” (p. 16)
16	Dimmer		Same as CH 21 in the mode “36 CH” (p. 17)
17	Dimmer Fine	0–255	Fine adjustment of CH 16
18	Prism		Same as CH 23 in the mode “36 CH” (p. 17)
19	Prism Rotation		Same as CH 24 in the mode “36 CH” (p. 17)
20	Focus	0–255	Min to Max
21	Zoom	0–255	Narrow to Wide (8–41°)
22	Frost		Same as CH 29 in the mode “36 CH” (p. 17)
23	Frost 2		Same as CH 30 in the mode “36 CH” (p. 18)
24	Animation Wheel		Same as CH 31 in the mode “36 CH” (p. 18)
25	Dimmer Mode		Same as CH 32 in the mode “36 CH” (p. 18)
26	Dimmer Curve		Same as CH 33 in the mode “36 CH” (p. 18)
27	Color Macro Speed		Same as CH 34 in the mode “36 CH” (p. 19)
28	Speed Pan/Tilt		Same as CH 35 in the mode “36 CH” (p. 19)
29	Function		Same as CH 36 in the mode “36 CH” (p. 19)

Mode 24 CH

If the device receives DMX in this mode but gives no light, check these channels: CH 12 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 3 Cyan 0, CH 4 Magenta 0, CH 5 Yellow 0, CH 12 Shutter 32, CH 13 Dimmer 255.

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	Cyan		Same as CH 5 in the mode “29 CH” (p. 22)
4	Magenta		Same as CH 6 in the mode “29 CH” (p. 23)

CH	Function	DMX	Description
5	Yellow		Same as CH 7 in the mode “29 CH” (p. 23)
6	CTO		Same as CH 8 in the mode “29 CH” (p. 23)
7	Colors		Same as CH 13 in the mode “36 CH” (p. 13)
8	Colors 2		Same as CH 14 in the mode “36 CH” (p. 14)
9	Gobo		Same as CH 16 in the mode “36 CH” (p. 15)
10	Gobo Rotation		Same as CH 17 in the mode “36 CH” (p. 16)
11	Gobo 2		Same as CH 19 in the mode “36 CH” (p. 16)
12	Shutter		Same as CH 20 in the mode “36 CH” (p. 16)
13	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
14	Prism		Same as CH 23 in the mode “36 CH” (p. 17)
15	Prism Rotation		Same as CH 24 in the mode “36 CH” (p. 17)
16	Focus	0–255	Min to Max
17	Zoom	0–255	Narrow to Wide (8–41°)
18	Frost		Same as CH 29 in the mode “36 CH” (p. 17)
19	Frost 2		Same as CH 30 in the mode “36 CH” (p. 18)
20	Animation Wheel		Same as CH 31 in the mode “36 CH” (p. 18)
21	Dimmer Mode		Same as CH 32 in the mode “36 CH” (p. 18)
22	Color Macro Speed		Same as CH 34 in the mode “36 CH” (p. 19)
23	Speed Pan/Tilt		Same as CH 35 in the mode “36 CH” (p. 19)
24	Function		Same as CH 36 in the mode “36 CH” (p. 19)

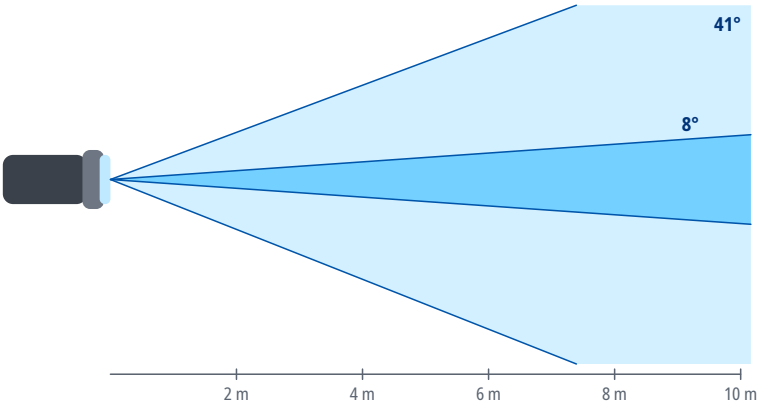
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	320 W
Luminous flux	15,000 lm
Color temperature	8,000 K
Color rendering index (CRI)	70
Optics	
Zoom	8–41°
Movement	
Pan	540°
Tilt	270°
Control	
RDM	yes (manufacturer ID 0x1900, device model ID 0x1550)
Dimensions and construction	
Weight	26 kg
Operating environment	
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–31 Hz
Color wheel 1 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 360 °/s (60 rpm)
Prism rotation	up to 360 °/s (60 rpm)
Animation wheel rotation	up to 360 °/s (60 rpm)

Spot diameter



Distance	Ø 8°	Ø 41°
2 m	0.28 m	1.5 m
4 m	0.56 m	3 m
6 m	0.84 m	4.5 m
8 m	1.1 m	6 m
10 m	1.4 m	7.5 m
15 m	2.1 m	11.2 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.