DMX REFERENCE

Maverick MK2 Wash

Chauvet Professional



Manufacturer	Chauvet Professional
GDTF file	Chauvet_Professional_Maverick_MK2_Wash_112502.gdtf
GDTF revision	Virtual Dimmers on 68ch Mode v1 · 2025-10-01
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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 11
Mode Single Control: Tour 146ch 13
Mode Single Control: Advanced 122ch 18
Mode Single Control: Standard 68ch 20
Mode Single Control: Basic 20ch 23
Mode Dual Control Mode Movement: Advan... 25
Mode Dual Control Mode Movement: Standa... 27
Mode Dual Control Mode Movement: Basic 8... 28
Mode Dual Control Mode Pixels: Advanced 9... 29
Mode Dual Control Mode Pixels: Standard 48... 30
Mode Dual Control Mode Pixels: Basic 36ch 31
10 Technical specifications 32
11 Maintenance and cleaning 32
12 Troubleshooting 33
13 Disposal 33

1 About this manual

This document describes the Maverick MK2 Wash by Chauvet Professional. It was compiled from the GDTF file Chauvet_Professional_Maverick_MK2_Wash_112502.gdtf from the GDTF-Share library.

File revision: “Virtual Dimmers on 68ch Mode v1”.

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 Chauvet Professional; 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.

Note in the GDTF file

“- Built in colors for quick design possibilities - Built in virtual gobo wheel with background colors for impressive atmospheric effects fast movement of pan, tilt, and zoom”

2 Quick reference

Parameter	Value
Weight	14.8 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Single Control: Tour 146ch	146	3	1, 147, 293
Single Control: Advanced 122ch	122	4	1, 123, 245, 367
Single Control: Standard 68ch	68	7	1, 69, 137, 205, ...
Single Control: Basic 20ch	20	25	1, 21, 41, 61, ...
Dual Control Mode Movement: Advanced 26ch	26	19	1, 27, 53, 79, ...
Dual Control Mode Movement: Standard 20ch	20	25	1, 21, 41, 61, ...
Dual Control Mode Movement: Basic 8ch	8	64	1, 9, 17, 25, ...
Dual Control Mode Pixels: Advanced 96ch	96	5	1, 97, 193, 289, ...
Dual Control Mode Pixels: Standard 48ch	48	10	1, 49, 97, 145, ...
Dual Control Mode Pixels: Basic 36ch	36	14	1, 37, 73, 109, ...



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

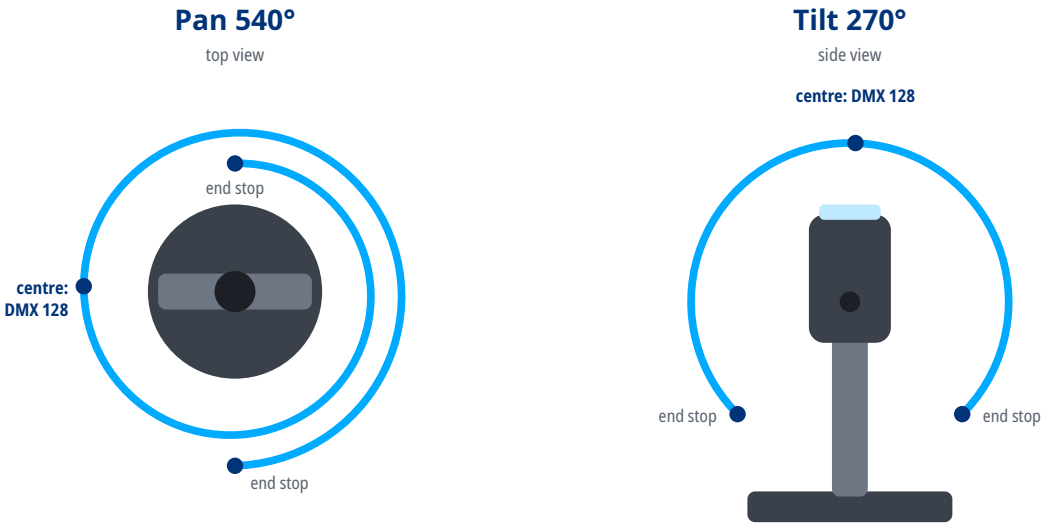
Description in the GDTF file

“Standard Mode has Virtual Dimmer for Beam RGBW. Maverick MK2 Wash rewrites the rules on wash fixtures with its flawlessly even output, custom designed optics, full pixel mapping, virtual gobo wheel with background colors, pre-programmed colors and 7º-49º zoom range. Powered by 12 (40 W) Osram RGBW LEDs, it has the muscle to handle any application, even aerial washing, with ease. Take control with DMX, sACN, Art-Net, KlingNet or WDMX.”

“Features:”

“- Fully featured RGBW LED yoke wash fixture with pixel mapping and zoom - 16-bit Dimming of master dimmer as well as individual colors for smooth control of fades - Quiet operation for a wide range of installation situations - DMX, WDMX, S ACN, Art-Net, and Kling-Net control for full flexibility - Converts TCP/IP Protocol to DMX for shorter data cable runs - 7° - 49° Zoom angle for variable beam sizes - True 1 compatible power input”

Range of movement



5 Installation

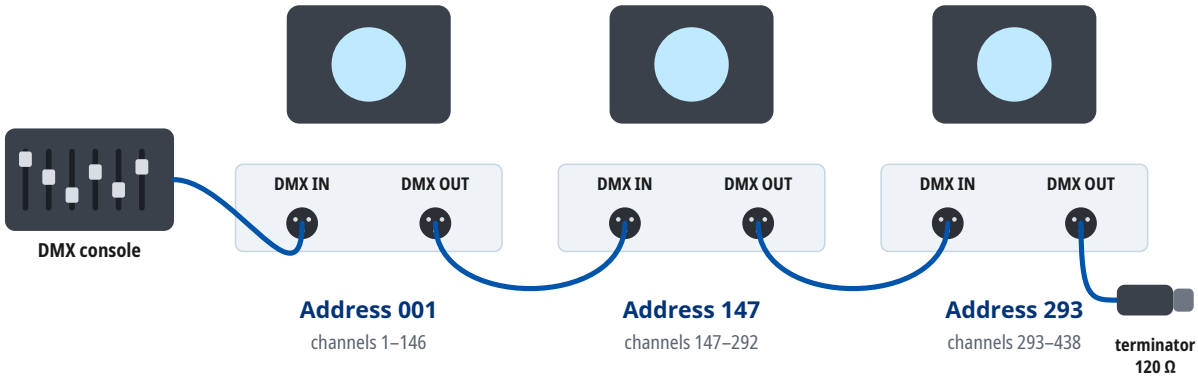
⚠ **WARNING**

- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 14.8 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 Single Control: Tour 146ch: every unit occupies 146 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 “Single Control: Tour 146ch”: 146.
- 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 “Single Control: Tour 146ch”, you can use, for example, the start addresses 1, 147, 293.
- 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

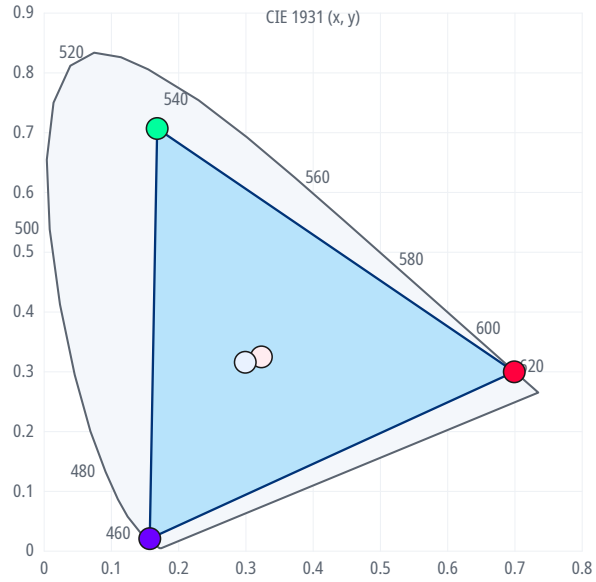
Functions in each DMX mode

	Single Control: Tour 146ch 146 channels	Single Control: Advanced 122ch 122 channels	Single Control: Standard 68ch 68 channels	Single Control: Basic 20ch 20 channels	Dual Control Mode Movement: Advanced 26ch 26 channels	Dual Control Mode Movement: Standard 20ch 20 channels	Dual Control Mode Movement: Basic 8ch 8 channels	Dual Control Mode Pixels: Advanced 96ch 96 channels
Pan / Tilt	**1, 3, 18**	**1, 3, 18**	**1, 3, 16**	**1, 3, 16**	**1, 3, 18**	**1, 3, 16**	**1, 3, 8**	
Dimmer	13 channels (14–137)	**14**	**13**	**13**	**14**	**13**	**5**	
Dimmer resolution	16 bit	16 bit	8 bit	8 bit	16 bit	8 bit	8 bit	
Shutter / strobe	**16**	**16**	**14**	**14**	**16**	**14**	**6**	
Color mixing	48 channels (29–145)	**48× (27–121)**	**21–68**	**17–20**				**48× (1–95)**
Color temperature	**5**	**5**	**5**	**5**	**5**	**5**		
Color wheel	**11**	**11**	**11**	**11**	**11**	**11**		
Zoom	**17**	**17**	**15**	**15**	**17**	**15**	**7**	
Effects / macros	**6–10, 12**	**6–10, 12**	**6–10, 12**	**6–10, 12**	**6–10, 12**	**6–10, 12**		
Pixel control	**12 cells**	**12 cells**	**12 cells**					**12 cells**

Color wheel

1. 2700K - Color — **DMX 1–2**
2. 3200K - Color — **DMX 3–4**
3. 4200K - Color — **DMX 5–6**
4. 5600K - Color — **DMX 7–8**
5. 8000K - Color — **DMX 9–10**
6. Blue - Color — **DMX 11**
7. + Green - Color — **DMX 12–48**
8. Cyan - Color — **DMX 49**
9. - Blue - Color — **DMX 50–86**
10. Green - Color — **DMX 87**
11. + Red - Color — **DMX 88–124**
12. Yellow - Color — **DMX 125**
13. - Green - Color — **DMX 126–162**
14. Red - Color — **DMX 163**
15. + Blue - Color — **DMX 164–200**
16. Magenta - Color — **DMX 201**
17. - Red - Color — **DMX 202–238**

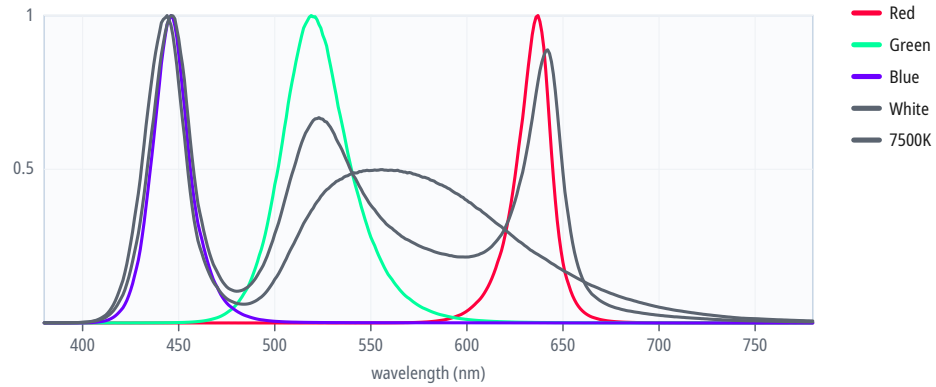
LED colors and the colors they mix



LED	x	y	nm
Red	0.699	0.300	625
Green	0.168	0.707	526
Blue	0.157	0.021	451
White	0.323	0.325	
7500K	0.299	0.316	

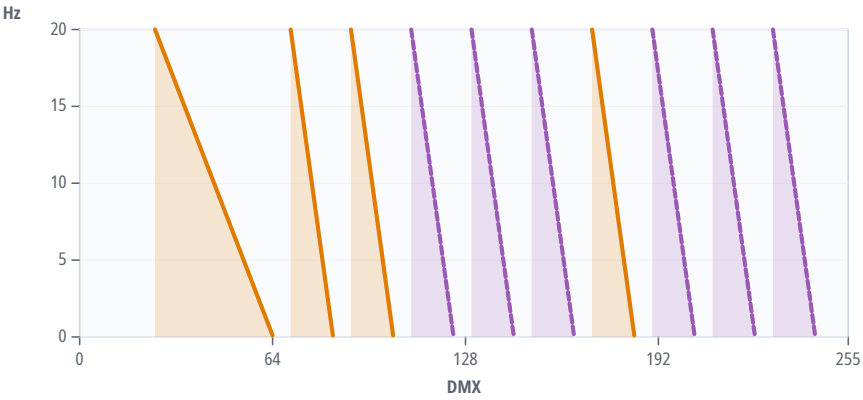
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Spectra of the light sources



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

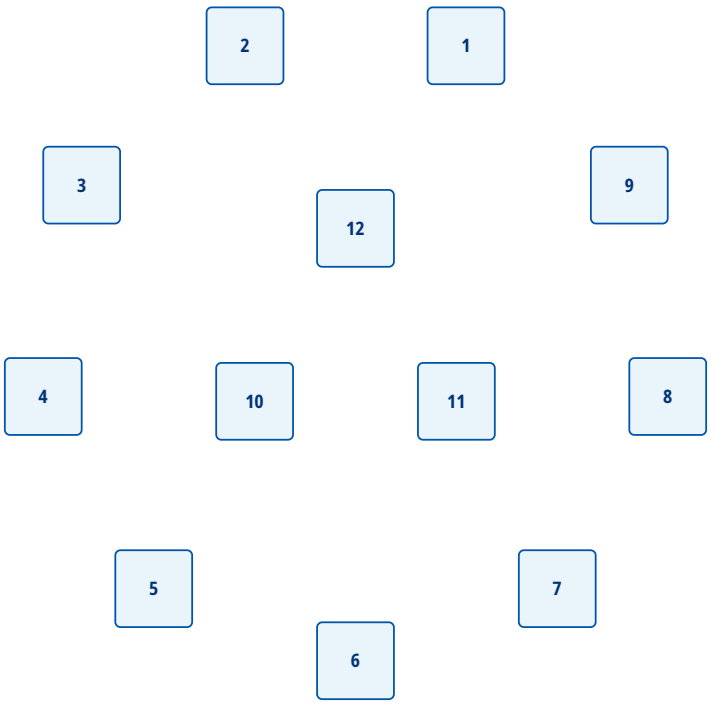
Strobe rate



CH 16 · Single Control: Tour 146ch

- 25–64: 20–0.1 Hz
  Strobe F > S - Strobe
- 70–84: 20–0.1 Hz
  Strobe 100-0% F > S - Strobe
- 90–104: 20–0.1 Hz
  Strobe 0-100% F > S - Strobe
- 110–124: 20–0.1 Hz
  Random Strobe F > S - Strobe Random
- 130–144: 20–0.1 Hz
  Random Strobe 100-0% F > S - Strobe Random
- 150–164: 20–0.1 Hz
  Random Strobe 0-100% F > S - Strobe Random
- 170–184: 20–0.1 Hz
  Pulse Strobe F > S - Strobe Pulse Random
- 190–204: 20–0.1 Hz
  Random Pulse Strobe F > S - Strobe Pulse Random

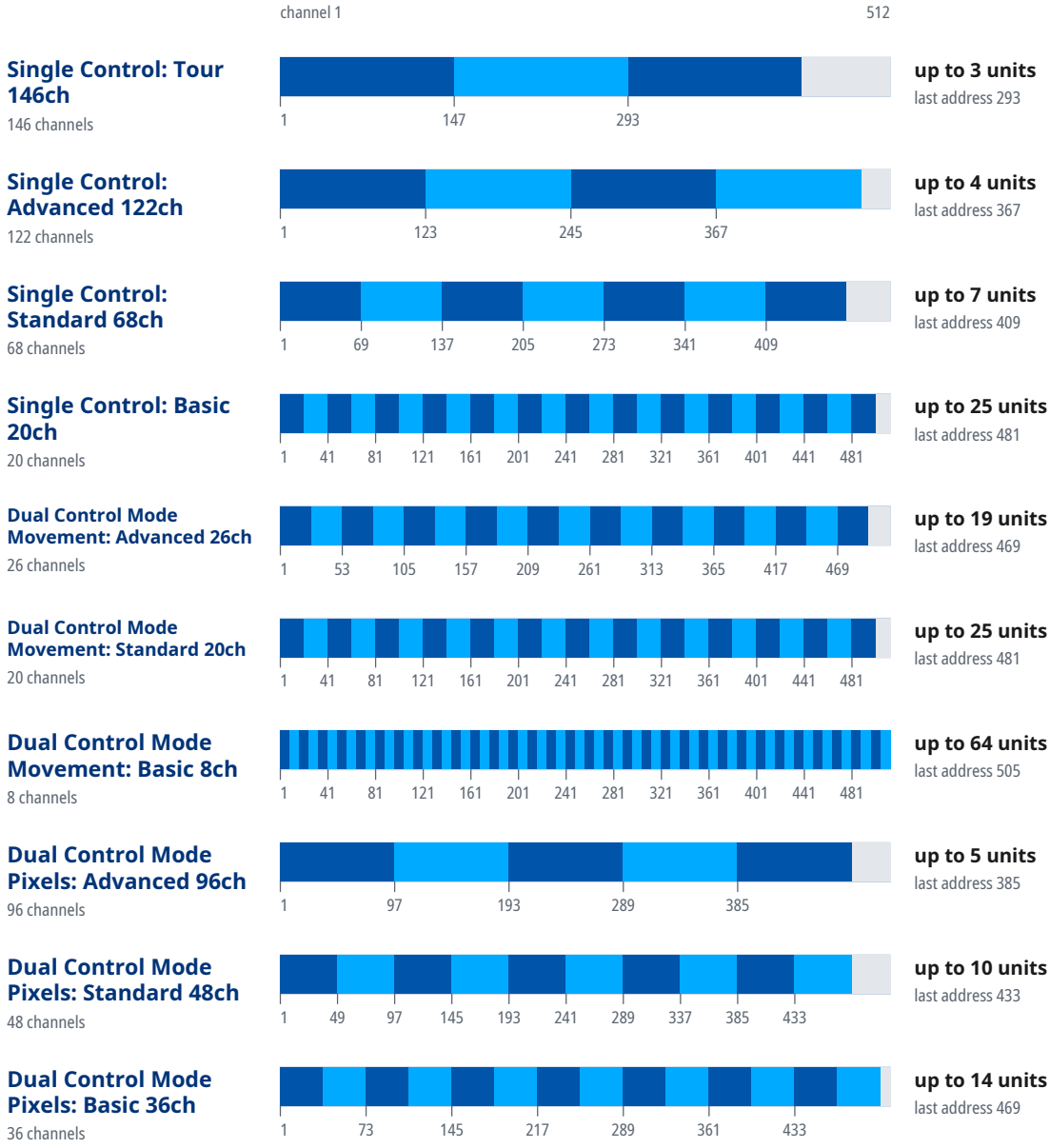
Cells (pixels)



12 cells where the GDTF file places them (seen from above), numbered in the file's order; the mode “Single Control: Tour 146ch” drives them together.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Single Control: Tour 146ch”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 293	11	U4 · 147	16	U6 · 1
2	147	7	U3 · 1	12	U4 · 293	17	U6 · 147
3	293	8	U3 · 147	13	U5 · 1	18	U6 · 293
4	U2 · 1	9	U3 · 293	14	U5 · 147	19	U7 · 1
5	U2 · 147	10	U4 · 1	15	U5 · 293	20	U7 · 147

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.

RDM personalities

Mode	Channels	RDM personality
Single Control: Tour 146ch	146	1
Single Control: Advanced 122ch	122	2
Single Control: Standard 68ch	68	3
Single Control: Basic 20ch	20	4
Dual Control Mode Movement: Advanced 26ch	26	5
Dual Control Mode Movement: Standard 20ch	20	6
Dual Control Mode Movement: Basic 8ch	8	7
Dual Control Mode Pixels: Advanced 96ch	96	8
Dual Control Mode Pixels: Standard 48ch	48	9
Dual Control Mode Pixels: Basic 36ch	36	10

Mode Single Control: Tour 146ch

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 16 Shutter at 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255. The GDTF file gives these values for a console's Highlight function: CH 14 Dimmer 1 255, CH 27 Dimmer 255 (the same in each of the 12 cells), CH 29 Red 255 (the same in each of the 12 cells), CH 31 Green 255 (the same in each of the 12 cells), CH 33 Blue 255 (the same in each of the 12 cells), CH 35 White 255 (the same in each of the 12 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	PAN
		127	Home
		128–255	PAN
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	TILT
		127	Home
		128–255	TILT
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Color Temperature	0	No Func - Custom

CH	Function	DMX	Description
5	Color Temperature (continued)	1–255	2800K > 10000K - CTC (2800–10000 K)
6	Color Macro	0	No Func - Custom
		1–255	Color Macro - Macro
7	Effects	0	No Func - Custom
		1–255	Gobo 1...255 - Effect
8	Effects 2	0–15	No Func - Custom
		16–135	LED Macros - Macro
		136–255	Auto Programs - Macro
9	Effects 2 Speed	0–127	F > S - Speed (10–0.1 Hz)
		128	Hold - Stop Loop
		129–255	S > F - Speed (0.1–10 Hz)
10	Effects 2 Adjust 1		LED BUILT-IN DELAY
		0	Min
		1–254	Min > Max
		255	Max
11	Colors	0	No Func - Custom
		1–2	2700K - Color
		3–4	3200K - Color
		5–6	4200K - Color
		7–8	5600K - Color
		9–10	8000K - Color
		11	Blue - Color
		12–48	+ Green - Color
		49	Cyan - Color
		50–86	- Blue - Color
		87	Green - Color
		88–124	+ Red - Color
		125	Yellow - Color
		126–162	- Green - Color
		163	Red - Color
		164–200	+ Blue - Color
		201	Magenta - Color
		202–238	- Red - Color
		239	Blue - Color
		240–247	Color Change F > S - Rotate Random (10–0.1 Hz)
		248–255	Color Jump F > S - Rotate Random (10–0.1 Hz)
12	Effects 3		BACKGROUND DIMMER
		0	Min
		0–255	Min > Max
		255	Max
13	Effects 3 Fine	0–255	Fine adjustment of CH 12
14	Dimmer 1	0	Min

CH	Function	DMX	Description
14	Dimmer 1 (continued)	0–255	Min > Max
		255	Max
15	Dimmer 1 Fine	0–255	Fine adjustment of CH 14
16	Shutter	0–19	Closed - Shutter Closed
		20–24	STROBE: Open - Shutter Open
		25–64	Strobe F > S - Strobe (20–0.1 Hz)
		65–69	STROBE: Open - Shutter Open
		70–84	Strobe 100-0% F > S - Strobe (20–0.1 Hz)
		85–89	STROBE: Open - Shutter Open
		90–104	Strobe 0-100% F > S - Strobe (20–0.1 Hz)
		105–109	STROBE: Open - Shutter Open
		110–124	Random Strobe F > S - Strobe Random (20–0.1 Hz)
		125–129	STROBE: Open - Shutter Open
		130–144	Random Strobe 100-0% F > S - Strobe Random (20–0.1 Hz)
		145–149	STROBE: Open - Shutter Open
		150–164	Random Strobe 0-100% F > S - Strobe Random (20–0.1 Hz)
		165–169	STROBE: Open - Shutter Open
		170–184	Pulse Strobe F > S - Strobe Pulse Random (20–0.1 Hz)
		185–189	STROBE: Open - Shutter Open
		190–204	Random Pulse Strobe F > S - Strobe Pulse Random (20–0.1 Hz)
		205–209	STROBE: Open - Shutter Open
		210–224	Strobe 0-100-0% F > S - Strobe (20–0.1 Hz)
		225–229	STROBE: Open - Shutter Open
		230–244	Random Pulse Strobe F > S - Strobe Pulse Random (20–0.1 Hz)
		245–255	STROBE: Open - Shutter Open
17	Zoom	0	Narrow
		1–254	Narrow > Wide
		255	Wide
18	Control	0–9	CONTROL: No Func - Custom
		10–14	P/T BO - Blackout
		15–19	CONTROL: No Func - Custom
		20–24	RGBW Color Mixing Mode - Custom
		25–29	CMY Color Mixing Mode - Custom
		30–49	CONTROL: No Func - Custom
		50–54	Pan Reset - Reset
		55–59	Tilt Reset - Reset
		60–64	Zoom Reset - Reset
		65–69	CONTROL: No Func - Custom
		70–74	Reset All - Reset
		75–109	CONTROL: No Func - Custom
		110–114	P/T Speed Fast - Speed
		115–119	P/T Speed Slow - Speed

CH	Function	DMX	Description
18	Control (continued)	120–124	Fan Mode Slow - Speed
		125–129	Fan Mode Full - Speed
		130–134	Fan Mode Auto - Speed
		135–139	Dimmer Mode Fast - Speed
		140–144	Dimmer Mode Slow - Speed
		145–223	CONTROL: No Func - Custom
		224–231	White Mode On - Custom
		232–239	White Mode Off - Custom
		240–255	No Function - Custom
19	R Overwrite		RED OVERWRITE
		0	Min
		0–255	Min > Max
		255	Max
20	R Overwrite Fine	0–255	Fine adjustment of CH 19
21	G Overwrite		GREEN OVERWRITE
		0	Min
		0–255	Min > Max
		255	Max
22	G Overwrite Fine	0–255	Fine adjustment of CH 21
23	B Overwrite		BLUE OVERWRITE
		0	Min
		0–255	Min > Max
		255	Max
24	B Overwrite Fine	0–255	Fine adjustment of CH 23
25	W Overwrite		WHITE OVERWRITE
		0	Min
		0–255	Min > Max
		255	Max
26	W Overwrite Fine	0–255	Fine adjustment of CH 25
27	Dimmer 2	0	Min
		0–255	Min > Max
		255	Max
28	Dimmer 2 Fine	0–255	Fine adjustment of CH 27
29	Red 1	0	Min
		0–255	Min > Max
		255	Max
30	Red 1 Fine	0–255	Fine adjustment of CH 29
31	Green 1	0	Min
		0–255	Min > Max
		255	Max
32	Green 1 Fine	0–255	Fine adjustment of CH 31
33	Blue 1	0	Min

CH	Function	DMX	Description
33	Blue 1 (continued)	0–255	Min > Max
		255	Max
34	Blue 1 Fine	0–255	Fine adjustment of CH 33
35	White 1	0	Min
		0–255	Min > Max
		255	Max
146	White 12 Fine	0–255	Fine adjustment of CH 145

CH 26–145: 12 cells of 10 channels each. Every cell works as cell 1 in the table above (CH 26–35); the table below gives each cell's channel numbers.

Cell	W Overwrite Fine	Dimmer	Dimmer Fine	Red	Red Fine	Green	Green Fine	Blue	Blue Fine	White
1	26	27	28	29	30	31	32	33	34	35
2	36	37	38	39	40	41	42	43	44	45
3	46	47	48	49	50	51	52	53	54	55
4	56	57	58	59	60	61	62	63	64	65
5	66	67	68	69	70	71	72	73	74	75
6	76	77	78	79	80	81	82	83	84	85
7	86	87	88	89	90	91	92	93	94	95
8	96	97	98	99	100	101	102	103	104	105
9	106	107	108	109	110	111	112	113	114	115
10	116	117	118	119	120	121	122	123	124	125
11	126	127	128	129	130	131	132	133	134	135
12	136	137	138	139	140	141	142	143	144	145

Mode Single Control: Advanced 122ch

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 16 Shutter at 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255. The GDTF file gives these values for a console's Highlight function: CH 14 Dimmer 255, CH 27 Red 255 (the same in each of the 12 cells), CH 29 Green 255 (the same in each of the 12 cells), CH 31 Blue 255 (the same in each of the 12 cells), CH 33 White 255 (the same in each of the 12 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Single Control: Tour 146ch” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Single Control: Tour 146ch” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Color Temperature		Same as CH 5 in the mode “Single Control: Tour 146ch” (p. 13)
6	Color Macro		Same as CH 6 in the mode “Single Control: Tour 146ch” (p. 14)
7	Effects		Same as CH 7 in the mode “Single Control: Tour 146ch” (p. 14)
8	Effects 2		Same as CH 8 in the mode “Single Control: Tour 146ch” (p. 14)
9	Effects 2 Speed		Same as CH 9 in the mode “Single Control: Tour 146ch” (p. 14)
10	Effects 2 Adjust 1		Same as CH 10 in the mode “Single Control: Tour 146ch” (p. 14)

CH	Function	DMX	Description
11	Colors		Same as CH 11 in the mode “Single Control: Tour 146ch” (p. 14)
12	Effects 3		Same as CH 12 in the mode “Single Control: Tour 146ch” (p. 14)
13	Effects 3 Fine	0–255	Fine adjustment of CH 12
14	Dimmer	0	Min
		0–255	Min > Max
		255	Max
15	Dimmer Fine	0–255	Fine adjustment of CH 14
16	Shutter		Same as CH 16 in the mode “Single Control: Tour 146ch” (p. 15)
17	Zoom		Same as CH 17 in the mode “Single Control: Tour 146ch” (p. 15)
18	Control		Same as CH 18 in the mode “Single Control: Tour 146ch” (p. 15)
19	R Overwrite		Same as CH 19 in the mode “Single Control: Tour 146ch” (p. 16)
20	R Overwrite Fine	0–255	Fine adjustment of CH 19
21	G Overwrite		Same as CH 21 in the mode “Single Control: Tour 146ch” (p. 16)
22	G Overwrite Fine	0–255	Fine adjustment of CH 21
23	B Overwrite		Same as CH 23 in the mode “Single Control: Tour 146ch” (p. 16)
24	B Overwrite Fine	0–255	Fine adjustment of CH 23
25	W Overwrite		Same as CH 25 in the mode “Single Control: Tour 146ch” (p. 16)
26	W Overwrite Fine	0–255	Fine adjustment of CH 25
27	Red 1	0	Min
		0–255	Min > Max
		255	Max
28	Red 1 Fine	0–255	Fine adjustment of CH 27
29	Green 1	0	Min
		0–255	Min > Max
		255	Max
30	Green 1 Fine	0–255	Fine adjustment of CH 29
31	Blue 1	0	Min
		0–255	Min > Max
		255	Max
32	Blue 1 Fine	0–255	Fine adjustment of CH 31
33	White 1	0	Min
		0–255	Min > Max
		255	Max
122	White 12 Fine	0–255	Fine adjustment of CH 121

CH 26–121: 12 cells of 8 channels each. Every cell works as cell 1 in the table above (CH 26–33); the table

below gives each cell's channel numbers.

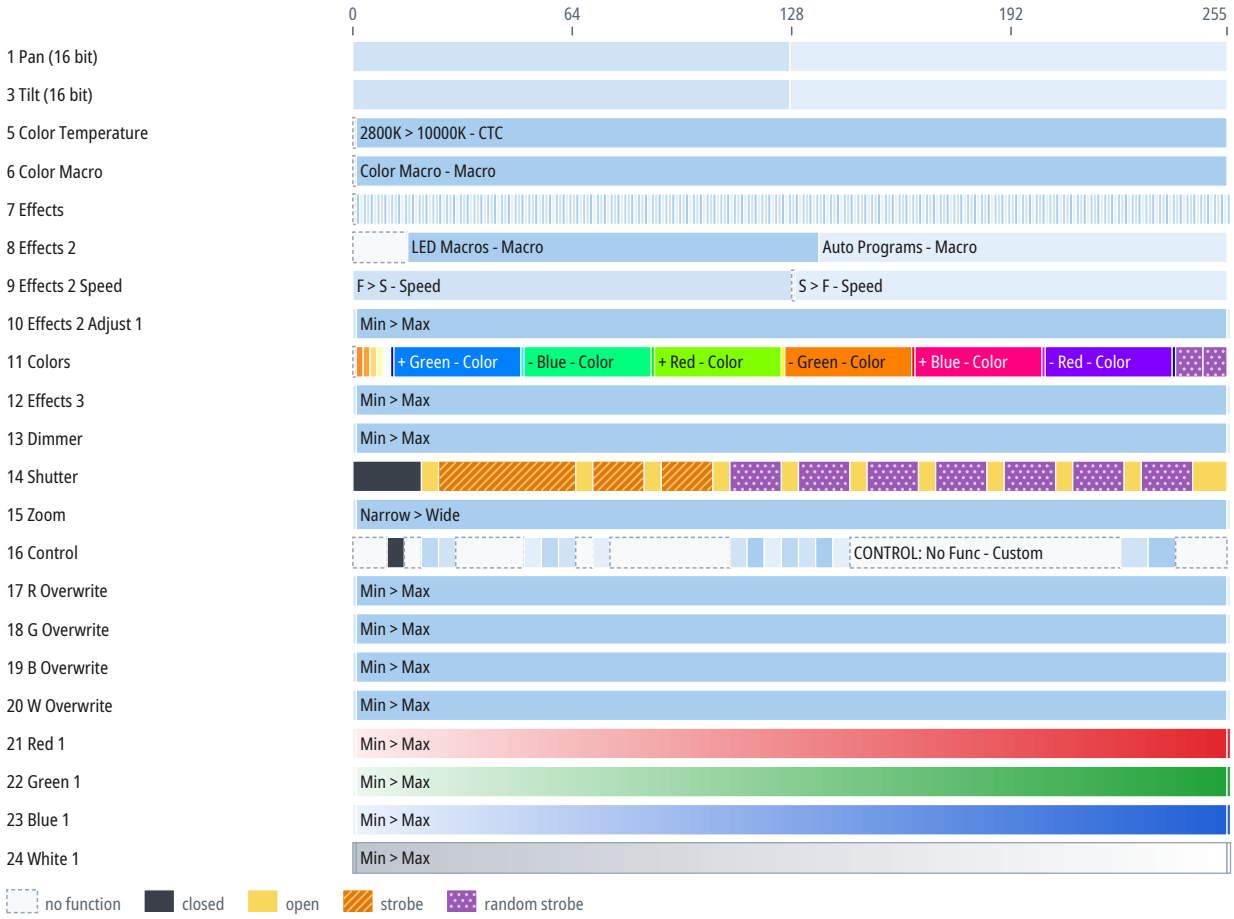
Cell	W Overwrite Fine	Red	Red Fine	Green	Green Fine	Blue	Blue Fine	White
1	26	27	28	29	30	31	32	33
2	34	35	36	37	38	39	40	41
3	42	43	44	45	46	47	48	49
4	50	51	52	53	54	55	56	57
5	58	59	60	61	62	63	64	65
6	66	67	68	69	70	71	72	73
7	74	75	76	77	78	79	80	81
8	82	83	84	85	86	87	88	89
9	90	91	92	93	94	95	96	97
10	98	99	100	101	102	103	104	105
11	106	107	108	109	110	111	112	113
12	114	115	116	117	118	119	120	121

Mode Single Control: Standard 68ch

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 14 Shutter at 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255. The GDTF file gives these values for a console's Highlight function: CH 13 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Single Control: Tour 146ch” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Single Control: Tour 146ch” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Color Temperature		Same as CH 5 in the mode “Single Control: Tour 146ch” (p. 13)
6	Color Macro		Same as CH 6 in the mode “Single Control: Tour 146ch” (p. 14)
7	Effects		Same as CH 7 in the mode “Single Control: Tour 146ch” (p. 14)
8	Effects 2		Same as CH 8 in the mode “Single Control: Tour 146ch” (p. 14)
9	Effects 2 Speed		Same as CH 9 in the mode “Single Control: Tour 146ch” (p. 14)
10	Effects 2 Adjust 1		Same as CH 10 in the mode “Single Control: Tour 146ch” (p. 14)
11	Colors		Same as CH 11 in the mode “Single Control: Tour 146ch” (p. 14)
12	Effects 3		BACKGROUND DIMMER
		0	Min
		1–254	Min > Max
		255	Max
13	Dimmer	0	Min
		1–254	Min > Max
		255	Max
14	Shutter		Same as CH 16 in the mode “Single Control: Tour 146ch” (p. 15)
15	Zoom		Same as CH 17 in the mode “Single Control: Tour 146ch” (p. 15)
16	Control		Same as CH 18 in the mode “Single Control: Tour 146ch” (p. 15)
17	R Overwrite		RED OVERWRITE
		0	Min
		1–254	Min > Max
		255	Max
18	G Overwrite		GREEN OVERWRITE
		0	Min
		1–254	Min > Max
		255	Max
19	B Overwrite		BLUE OVERWRITE
		0	Min
		1–254	Min > Max
		255	Max
20	W Overwrite		WHITE OVERWRITE
		0	Min
		1–254	Min > Max
		255	Max
21	Red 1	0	Min

CH	Function	DMX	Description
21	Red 1 (continued)	1–254	Min > Max
		255	Max
22	Green 1	0	Min
		1–254	Min > Max
		255	Max
23	Blue 1	0	Min
		1–254	Min > Max
		255	Max
24	White 1	0	Min
		1–254	Min > Max
		255	Max

CH 21–68: 12 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 21–24); the table below gives each cell's channel numbers.

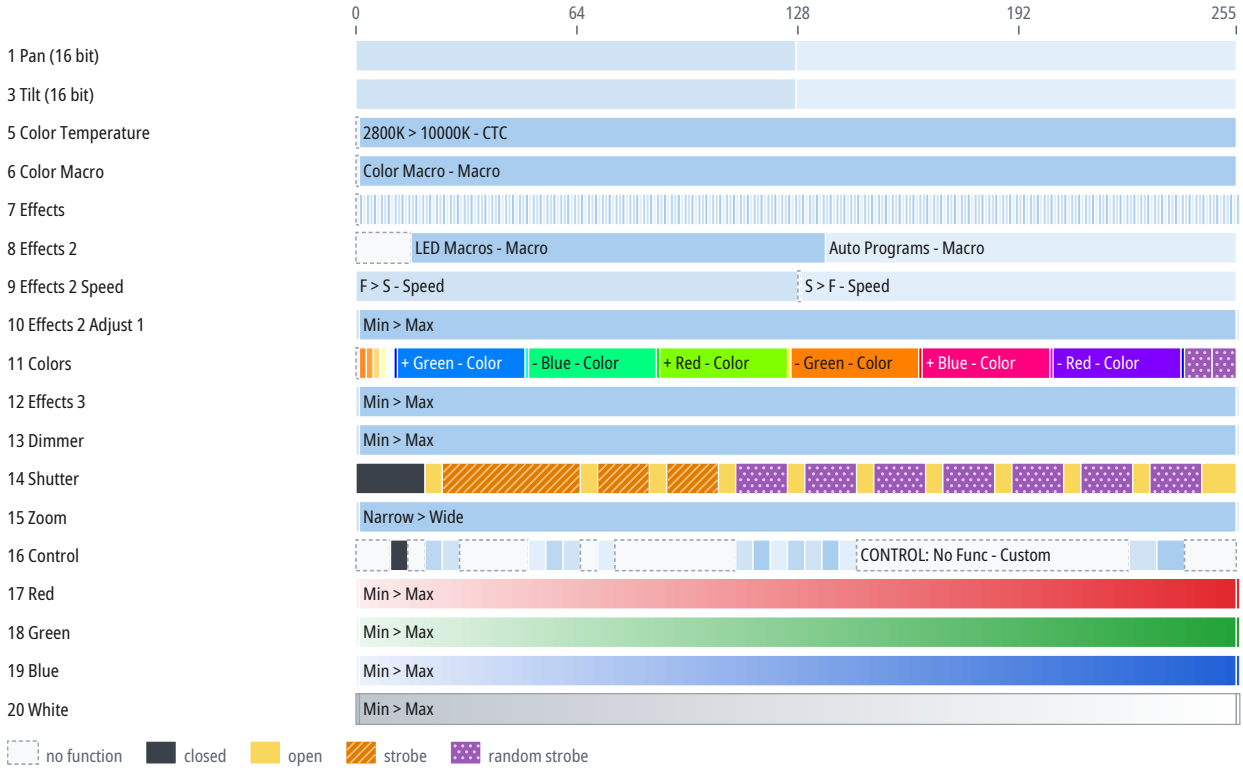
Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	21	22	23	24	2	25	26	27	28
3	29	30	31	32	4	33	34	35	36
5	37	38	39	40	6	41	42	43	44
7	45	46	47	48	8	49	50	51	52
9	53	54	55	56	10	57	58	59	60
11	61	62	63	64	12	65	66	67	68

Mode Single Control: Basic 20ch

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 14 Shutter at 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Single Control: Tour 146ch” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Single Control: Tour 146ch” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Color Temperature		Same as CH 5 in the mode “Single Control: Tour 146ch” (p. 13)
6	Color Macro		Same as CH 6 in the mode “Single Control: Tour 146ch” (p. 14)
7	Effects		Same as CH 7 in the mode “Single Control: Tour 146ch” (p. 14)
8	Effects 2		Same as CH 8 in the mode “Single Control: Tour 146ch” (p. 14)
9	Effects 2 Speed		Same as CH 9 in the mode “Single Control: Tour 146ch” (p. 14)
10	Effects 2 Adjust 1		Same as CH 10 in the mode “Single Control: Tour 146ch” (p. 14)
11	Colors		Same as CH 11 in the mode “Single Control: Tour 146ch” (p. 14)
12	Effects 3		Same as CH 12 in the mode “Single Control: Standard 68ch” (p. 21)
13	Dimmer		Same as CH 13 in the mode “Single Control: Standard 68ch” (p. 21)

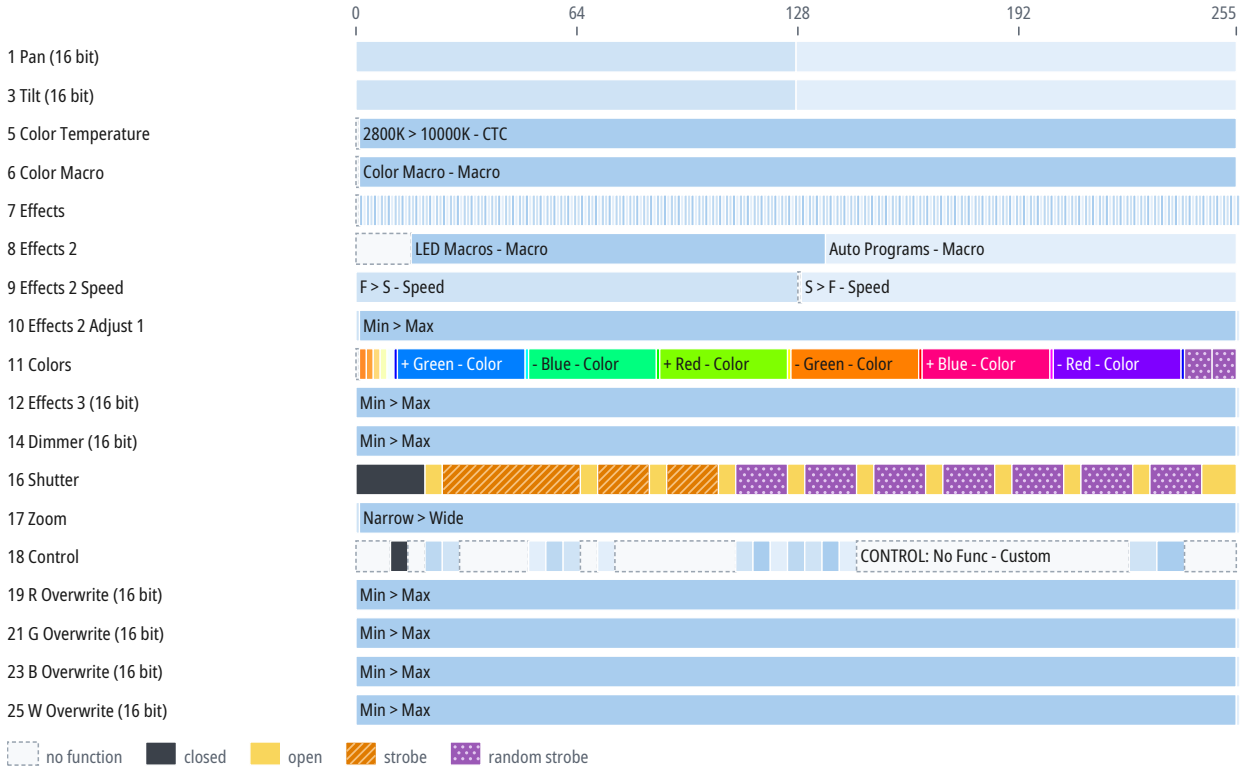
CH	Function	DMX	Description
14	Shutter		Same as CH 16 in the mode “Single Control: Tour 146ch” (p. 15)
15	Zoom		Same as CH 17 in the mode “Single Control: Tour 146ch” (p. 15)
16	Control		Same as CH 18 in the mode “Single Control: Tour 146ch” (p. 15)
17	Red	0	Min
		1–254	Min > Max
		255	Max
18	Green	0	Min
		1–254	Min > Max
		255	Max
19	Blue	0	Min
		1–254	Min > Max
		255	Max
20	White	0	Min
		1–254	Min > Max
		255	Max

Mode Dual Control Mode Movement: Advanced 26ch

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 16 Shutter at 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255. The GDTF file gives these values for a console's Highlight function: CH 14 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Single Control: Tour 146ch” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Single Control: Tour 146ch” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Color Temperature		Same as CH 5 in the mode “Single Control: Tour 146ch” (p. 13)
6	Color Macro		Same as CH 6 in the mode “Single Control: Tour 146ch” (p. 14)
7	Effects		Same as CH 7 in the mode “Single Control: Tour 146ch” (p. 14)
8	Effects 2		Same as CH 8 in the mode “Single Control: Tour 146ch” (p. 14)
9	Effects 2 Speed		Same as CH 9 in the mode “Single Control: Tour 146ch” (p. 14)
10	Effects 2 Adjust 1		Same as CH 10 in the mode “Single Control: Tour 146ch” (p. 14)
11	Colors		Same as CH 11 in the mode “Single Control: Tour 146ch” (p. 14)
12	Effects 3		Same as CH 12 in the mode “Single Control: Tour 146ch” (p. 14)
13	Effects 3 Fine	0–255	Fine adjustment of CH 12

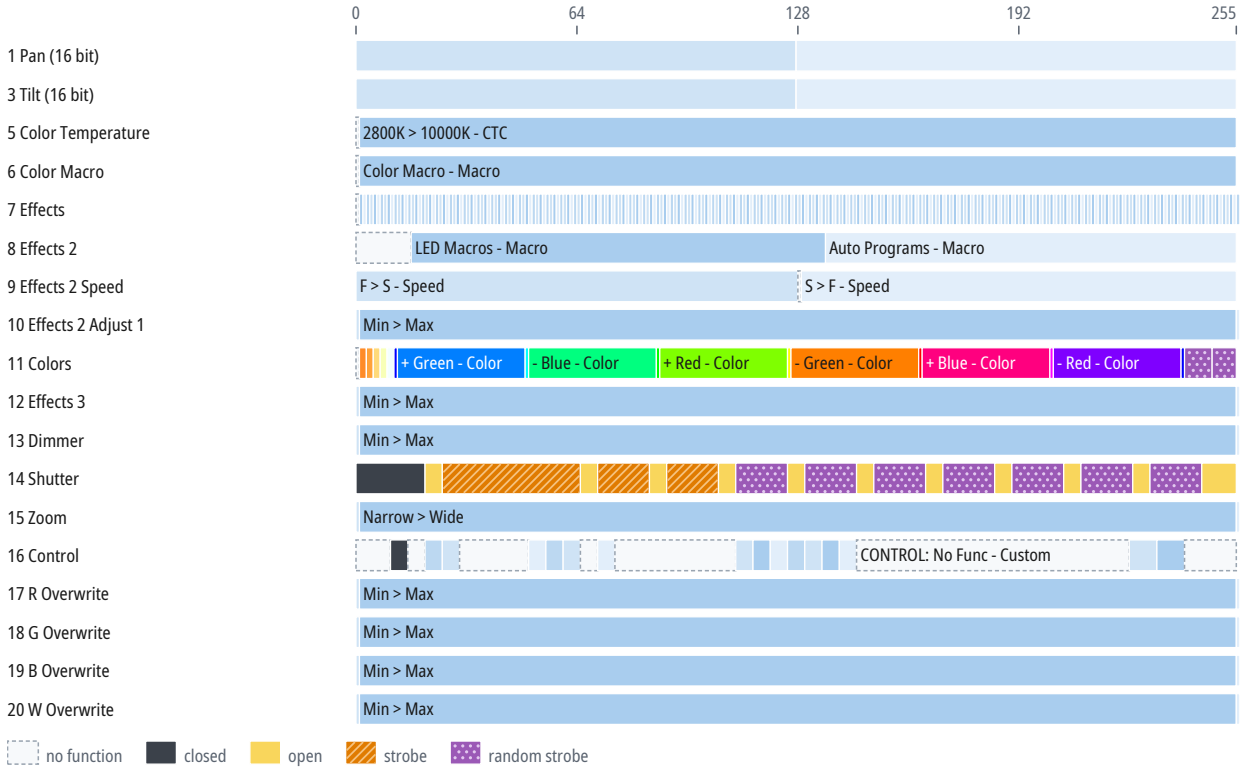
CH	Function	DMX	Description
14	Dimmer		Same as CH 14 in the mode “Single Control: Advanced 122ch” (p. 19)
15	Dimmer Fine	0–255	Fine adjustment of CH 14
16	Shutter		Same as CH 16 in the mode “Single Control: Tour 146ch” (p. 15)
17	Zoom		Same as CH 17 in the mode “Single Control: Tour 146ch” (p. 15)
18	Control		Same as CH 18 in the mode “Single Control: Tour 146ch” (p. 15)
19	R Overwrite		Same as CH 19 in the mode “Single Control: Tour 146ch” (p. 16)
20	R Overwrite Fine	0–255	Fine adjustment of CH 19
21	G Overwrite		Same as CH 21 in the mode “Single Control: Tour 146ch” (p. 16)
22	G Overwrite Fine	0–255	Fine adjustment of CH 21
23	B Overwrite		Same as CH 23 in the mode “Single Control: Tour 146ch” (p. 16)
24	B Overwrite Fine	0–255	Fine adjustment of CH 23
25	W Overwrite		Same as CH 25 in the mode “Single Control: Tour 146ch” (p. 16)
26	W Overwrite Fine	0–255	Fine adjustment of CH 25

Mode Dual Control Mode Movement: Standard 20ch

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 14 Shutter at 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Single Control: Tour 146ch” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Single Control: Tour 146ch” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Color Temperature		Same as CH 5 in the mode “Single Control: Tour 146ch” (p. 13)
6	Color Macro		Same as CH 6 in the mode “Single Control: Tour 146ch” (p. 14)
7	Effects		Same as CH 7 in the mode “Single Control: Tour 146ch” (p. 14)
8	Effects 2		Same as CH 8 in the mode “Single Control: Tour 146ch” (p. 14)
9	Effects 2 Speed		Same as CH 9 in the mode “Single Control: Tour 146ch” (p. 14)
10	Effects 2 Adjust 1		Same as CH 10 in the mode “Single Control: Tour 146ch” (p. 14)
11	Colors		Same as CH 11 in the mode “Single Control: Tour 146ch” (p. 14)
12	Effects 3		Same as CH 12 in the mode “Single Control: Standard 68ch” (p. 21)
13	Dimmer		Same as CH 13 in the mode “Single Control: Standard 68ch” (p. 21)

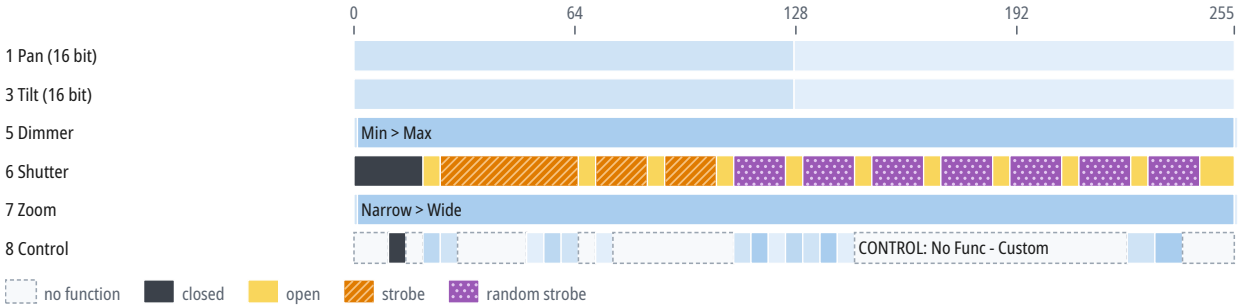
CH	Function	DMX	Description
14	Shutter		Same as CH 16 in the mode “Single Control: Tour 146ch” (p. 15)
15	Zoom		Same as CH 17 in the mode “Single Control: Tour 146ch” (p. 15)
16	Control		Same as CH 18 in the mode “Single Control: Tour 146ch” (p. 15)
17	R Overwrite		Same as CH 17 in the mode “Single Control: Standard 68ch” (p. 21)
18	G Overwrite		Same as CH 18 in the mode “Single Control: Standard 68ch” (p. 21)
19	B Overwrite		Same as CH 19 in the mode “Single Control: Standard 68ch” (p. 21)
20	W Overwrite		Same as CH 20 in the mode “Single Control: Standard 68ch” (p. 21)

Mode Dual Control Mode Movement: Basic 8ch

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 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255.

Channel functions at a glance



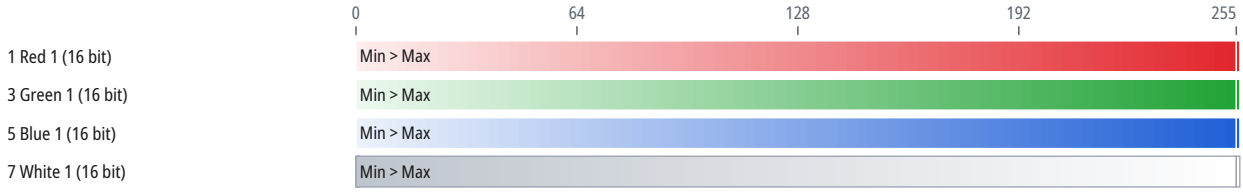
CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Single Control: Tour 146ch” (p. 13)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Single Control: Tour 146ch” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Dimmer		Same as CH 13 in the mode “Single Control: Standard 68ch” (p. 21)
6	Shutter		Same as CH 16 in the mode “Single Control: Tour 146ch” (p. 15)
7	Zoom		Same as CH 17 in the mode “Single Control: Tour 146ch” (p. 15)
8	Control		Same as CH 18 in the mode “Single Control: Tour 146ch” (p. 15)

Mode Dual Control Mode Pixels: Advanced 96ch

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

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255 (the same in each of the 12 cells), CH 3 Green 255 (the same in each of the 12 cells), CH 5 Blue 255 (the same in each of the 12 cells), CH 7 White 255 (the same in each of the 12 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0	Min
		0–255	Min > Max
		255	Max
2	Red 1 Fine	0–255	Fine adjustment of CH 1
3	Green 1	0	Min
		0–255	Min > Max
		255	Max
4	Green 1 Fine	0–255	Fine adjustment of CH 3
5	Blue 1	0	Min
		0–255	Min > Max
		255	Max
6	Blue 1 Fine	0–255	Fine adjustment of CH 5
7	White 1	0	Min
		0–255	Min > Max
		255	Max
8	White 1 Fine	0–255	Fine adjustment of CH 7

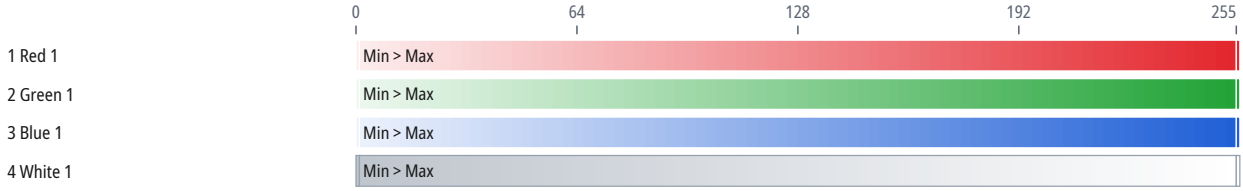
CH 1–96: 12 cells of 8 channels each. Every cell works as cell 1 in the table above (CH 1–8); the table below gives each cell's channel numbers.

Cell	Red	Red Fine	Green	Green Fine	Blue	Blue Fine	White	White Fine
1	1	2	3	4	5	6	7	8
2	9	10	11	12	13	14	15	16
3	17	18	19	20	21	22	23	24
4	25	26	27	28	29	30	31	32
5	33	34	35	36	37	38	39	40
6	41	42	43	44	45	46	47	48
7	49	50	51	52	53	54	55	56
8	57	58	59	60	61	62	63	64
9	65	66	67	68	69	70	71	72

Cell	Red	Red Fine	Green	Green Fine	Blue	Blue Fine	White	White Fine
10	73	74	75	76	77	78	79	80
11	81	82	83	84	85	86	87	88
12	89	90	91	92	93	94	95	96

Mode Dual Control Mode Pixels: Standard 48ch

Channel functions at a glance



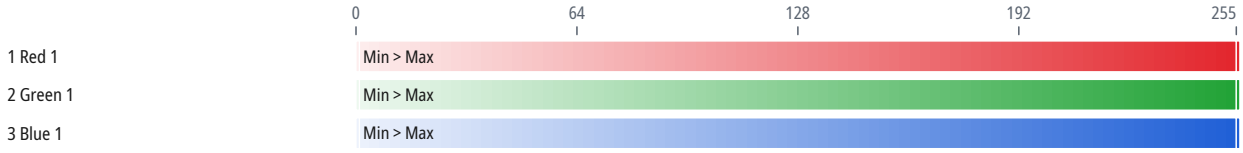
CH	Function	DMX	Description
1	Red 1	0	Min
		1–254	Min > Max
		255	Max
2	Green 1	0	Min
		1–254	Min > Max
		255	Max
3	Blue 1	0	Min
		1–254	Min > Max
		255	Max
4	White 1	0	Min
		1–254	Min > Max
		255	Max

CH 1–48: 12 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 1–4); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	1	2	3	4	2	5	6	7	8
3	9	10	11	12	4	13	14	15	16
5	17	18	19	20	6	21	22	23	24
7	25	26	27	28	8	29	30	31	32
9	33	34	35	36	10	37	38	39	40
11	41	42	43	44	12	45	46	47	48

Mode Dual Control Mode Pixels: Basic 36ch

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0	Min
		1–254	Min > Max
		255	Max
2	Green 1	0	Min
		1–254	Min > Max
		255	Max
3	Blue 1	0	Min
		1–254	Min > Max
		255	Max

CH 1–36: 12 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 1–3); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	1	2	3	2	4	5	6	3	7	8	9
4	10	11	12	5	13	14	15	6	16	17	18
7	19	20	21	8	22	23	24	9	25	26	27
10	28	29	30	11	31	32	33	12	34	35	36

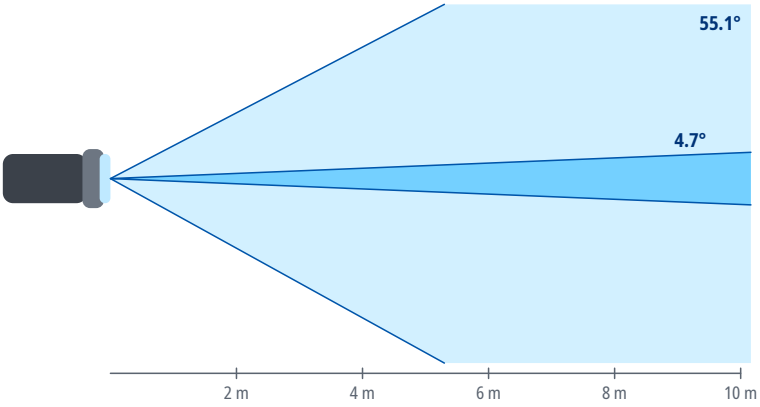
10 Technical specifications

Parameter	Value
Light source	discharge lamp
Zoom	4.7–55.1°
Pan	540°
Tilt	270°
RDM	yes (manufacturer ID 0x21A4, device model ID 0x04B1)
Weight	14.8 kg
Operating temperature	0 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	2800–10000 K
Strobe frequency	0.1–20 Hz

Spot diameter



Distance	Ø 4.7°	Ø 55.1°
2 m	0.16 m	2.1 m
4 m	0.33 m	4.2 m
6 m	0.49 m	6.3 m
8 m	0.66 m	8.3 m
10 m	0.82 m	10.4 m
15 m	1.2 m	15.7 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.