DMX REFERENCE

COLORado PXL Bar 16

Chauvet Professional



Manufacturer	Chauvet Professional
GDTF file	Chauvet_Professional_COLORado_PXL_Bar_16_146713.gdtf
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1 About this manual

This document describes the COLORado PXL Bar 16 by Chauvet Professional. It was compiled from the GDTF file Chauvet_Professional_COLORado_PXL_Bar_16_146713.gdtf from the GDTF-Share library.

File revision: “Rev 1.1.0”.

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.

2 Quick reference

Parameter	Value
Weight	20.7 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Single Control: Basic2 Mode 19ch	19	26	1, 20, 39, 58, ...
Single Control: Basic Mode 20ch	20	25	1, 21, 41, 61, ...
Single Control: Standard Mode 84ch	84	6	1, 85, 169, 253, ...
Single Control: Advanced Mode 154ch	154	3	1, 155, 309
Single Control: Tour Mode 186ch	186	2	1, 187
Dual Control Movement: Basic2 7ch	7	73	1, 8, 15, 22, ...
Dual Control Movement: Basic 8ch	8	64	1, 9, 17, 25, ...
Dual Control Movement: Standard 20ch	20	25	1, 21, 41, 61, ...
Dual Control Movement: Advanced 26ch	26	19	1, 27, 53, 79, ...
Dual Control Pixels:Basic 48ch	48	10	1, 49, 97, 145, ...
Dual Control Pixels:Standard 64ch	64	8	1, 65, 129, 193, ...
Dual Control Pixels : Advanced Mode 128ch	128	4	1, 129, 257, 385
Single Control: Full PXL Mode 182ch	182	2	1, 183



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.

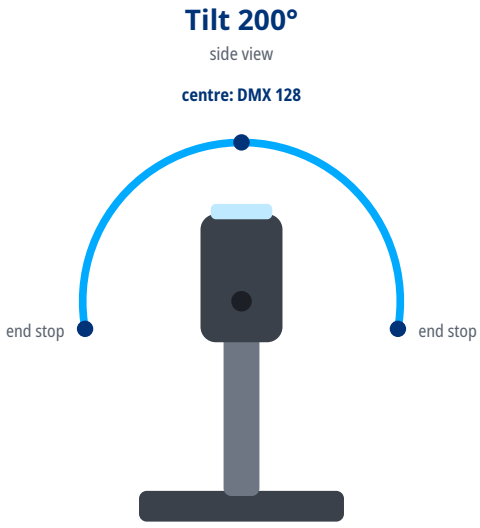
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do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

“COLORado PXL Bar 16 is a motorized, outdoor-ready tilting batten with capabilities to zoom for tight and wide pixel-mappable looks. This bright, moving pixel bar also features seamless edge-to-edge mounting and includes virtual gobo and movement macros with separate foreground and background color control for more design options than ever before. Slotted Omega brackets make it quick and easy to hang the fixture on truss. The COLORado PXL Bar 16 can also be positioned on the ground, which allows for a variety of different light angles. With two zones of control, the power is in your hands and the possibilities are endless!”

Range of movement



5 Installation

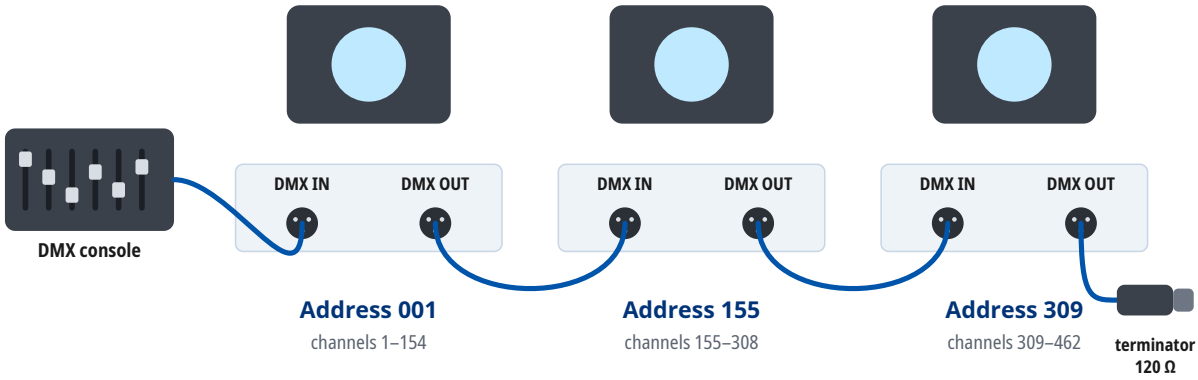
⚠ **WARNING**

- 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: 20.7 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: Advanced Mode 154ch: every unit occupies 154 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 Mode 186ch”: 186.
- 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 Mode 186ch”, you can use, for example, the start addresses 1, 187.
- 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

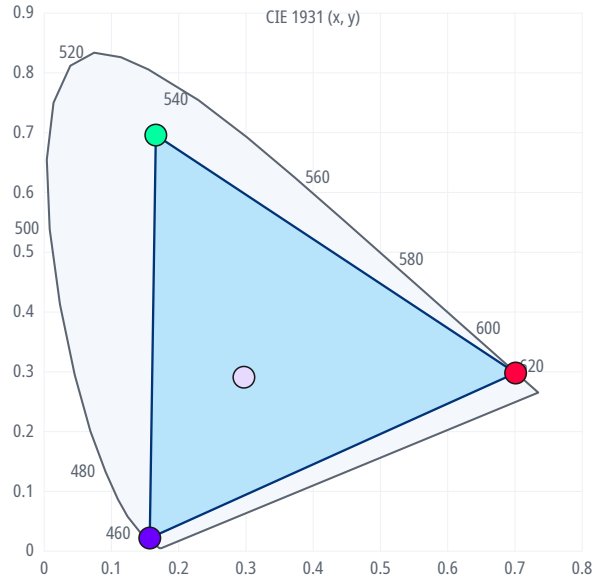
Functions in each DMX mode

	Single Control: Basic2 Mode 19ch 19 channels	Single Control: Basic Mode 20ch 20 channels	Single Control: Standard Mode 84ch 84 channels	Single Control: Advanced Mode 154ch 154 channels	Single Control: Tour Mode 186ch 186 channels	Dual Control Movement: Basic2 7ch 7 channels	Dual Control Movement: Basic 8ch 8 channels	Dual Control Movement: Standard 20ch 20 channels
Pan / Tilt	1	1	1	1	1	1	1	1
Dimmer	12	12	12	13	17 channels (13–177)	4	4	12
Dimmer resolution	8 bit	8 bit	8 bit	16 bit	16 bit	8 bit	8 bit	8 bit
Shutter / strobe	13	13	13	15	15	5	5	13
Color mixing	16–19	17–20	21–84	64× (27–153)	64 channels (29–185)			
Color temperature	4, 5, 10	4, 5, 10	4, 5, 10	4, 5, 10	4, 5, 10			4, 5, 10
Zoom	14	14, 15	14, 15	16, 17	16, 17	6	6, 7	14, 15
Effects / macros	5–10	5–10	5–10	5–10	5–10			5–10
Pixel control			16 cells	16 cells	16 cells			

Color wheel



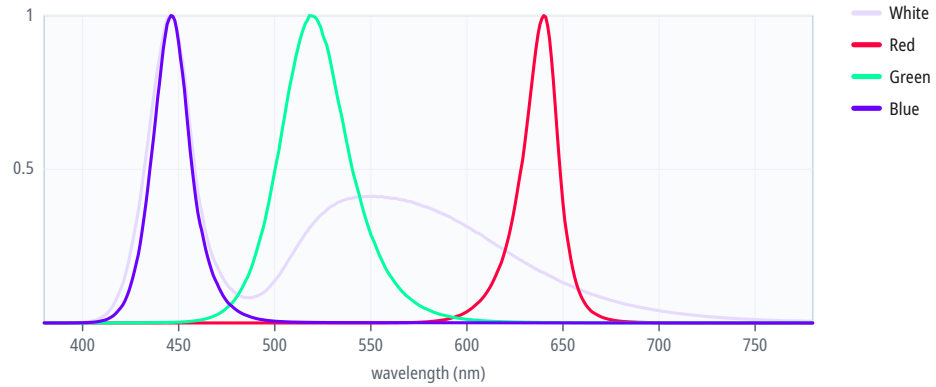
LED colors and the colors they mix



LED	x	y	nm
White	0.297	0.291	
Red	0.701	0.298	626
Green	0.166	0.696	525
Blue	0.157	0.022	451

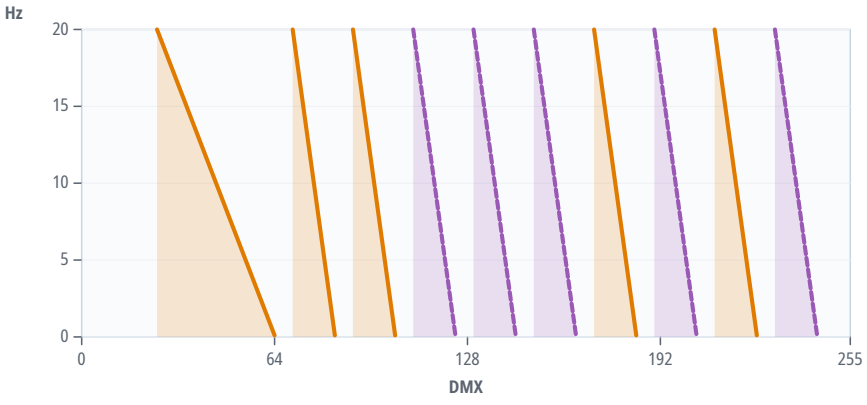
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

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 9 · Single Control: Full PXL Mode 182ch

- 25–64: 20–0.1 Hz
  STROBE
- 70–84: 20–0.1 Hz
  STROBE 100-0%
- 90–104: 20–0.1 Hz
  STROBE 0-100%
- 110–124: 20–0.1 Hz
  RANDOM STROBE
- 130–144: 20–0.1 Hz
  RANDOM STROBE 100-0%
- 150–164: 20–0.1 Hz
  RANDOM STROBE 0-100%
- 170–184: 20–0.1 Hz
  PULSE STROBE
- 190–204: 20–0.1 Hz
  RANDOM PULSE STROBE

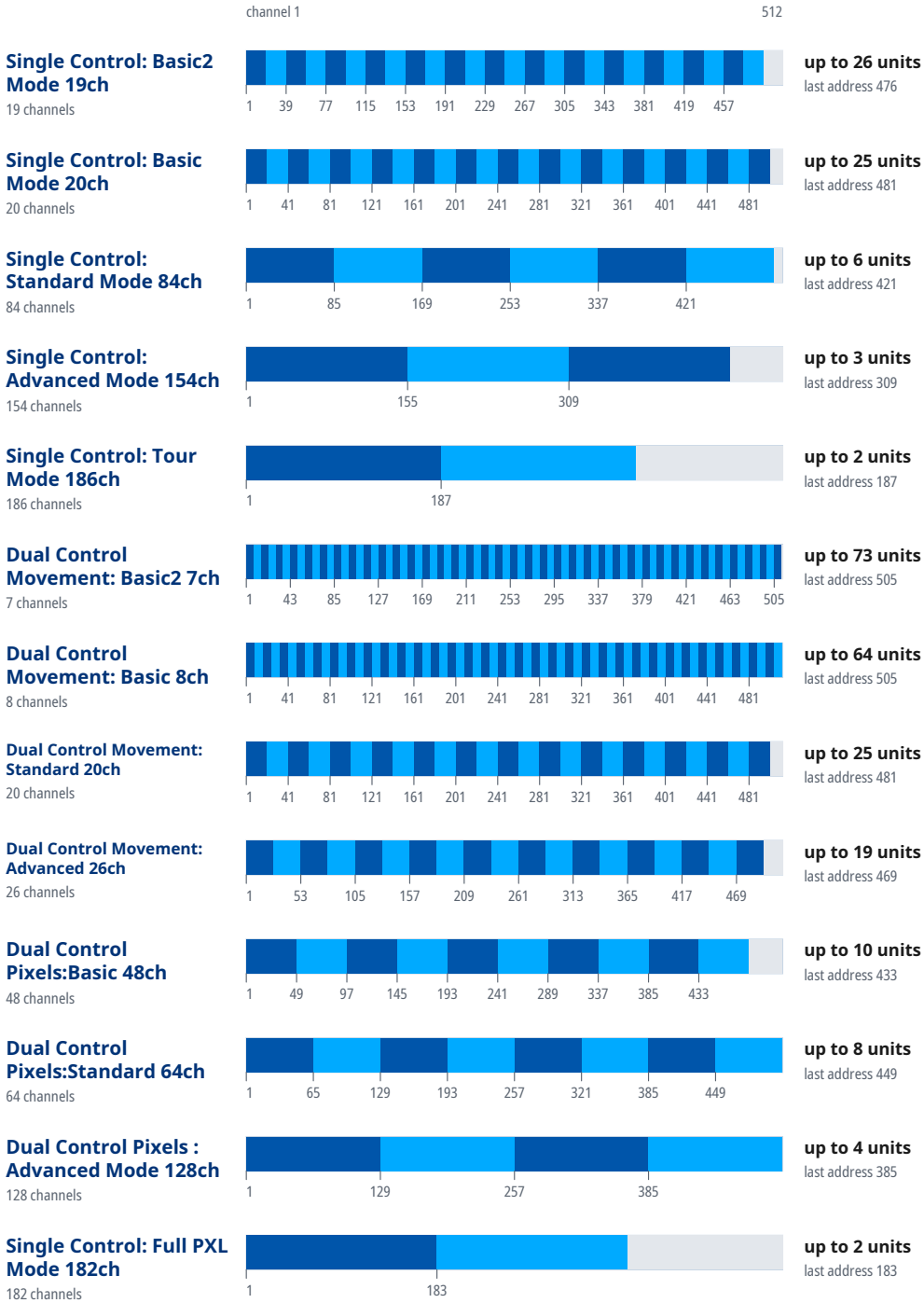
Cells (pixels)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

16 cells where the GDTF file places them (seen from above), numbered in the file's order; the mode “Single Control: Full PXL Mode 182ch” drives them together.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Single Control: Tour Mode 186ch”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U3 · 187	11	U6 · 1	16	U8 · 187
2	187	7	U4 · 1	12	U6 · 187	17	U9 · 1
3	U2 · 1	8	U4 · 187	13	U7 · 1	18	U9 · 187
4	U2 · 187	9	U5 · 1	14	U7 · 187	19	U10 · 1
5	U3 · 1	10	U5 · 187	15	U8 · 1	20	U10 · 187

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: Basic2 Mode 19ch	19	1
Single Control: Basic Mode 20ch	20	2
Single Control: Standard Mode 84ch	84	3
Single Control: Advanced Mode 154ch	154	4
Single Control: Tour Mode 186ch	186	5
Dual Control Movement: Basic2 7ch	7	6
Dual Control Movement: Basic 8ch	8	7
Dual Control Movement: Standard 20ch	20	8
Dual Control Movement: Advanced 26ch	26	9
Dual Control Pixels:Basic 48ch	48	10
Dual Control Pixels:Standard 64ch	64	11
Dual Control Pixels : Advanced Mode 128ch	128	12
Single Control: Full PXL Mode 182ch	182	19

Mode Single Control: Basic2 Mode 19ch

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 13 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 “Shutter Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Color Temperature 0, CH 5 Color Macro 0, CH 10 Color Macro 2 0, CH 12 Dimmer 255, CH 16 Red 255, CH 17 Green 255, CH 18 Blue 255, CH 19 White 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt	0–127	Min ... Home
		127	Home
		128–255	Home ... Max
		255	Max
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt		P/T SPEED
		0	Min
		1–254	Min > Max
		255	Max
4	Color Temperature	0	CTC OFF: Open
		1	19000K - CTC
		2	18900K - CTC
		3	18900K - CTC ... 18800K - CTC
		4	18800K - CTC
		5	18800K - CTC ... 18700K - CTC
		6	18700K - CTC
		7	18600K - CTC
		8–9	18500K - CTC
		10	18400K - CTC
		11	18400K - CTC ... 18300K - CTC
		12	18300K - CTC
		13	18200K - CTC
		14	18200K - CTC ... 18100K - CTC
		15	18100K - CTC
		16	18000K - CTC
		17	18000K - CTC ... 17900K - CTC
		18	17900K - CTC
		19	17800K - CTC
		20	17800K - CTC ... 17700K - CTC
		21	17700K - CTC
		22	17600K - CTC
		23	17600K - CTC ... 17500K - CTC
		24	17500K - CTC
		25	17500K - CTC ... 17400K - CTC
		26	17400K - CTC
		27	17300K - CTC
		28	17300K - CTC ... 17200K - CTC
		29	17200K - CTC
		30	17100K - CTC
		31	17100K - CTC ... 17000K - CTC
		32	17000K - CTC
		33	16900K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	34	16900K - CTC ... 16800K - CTC
		35	16800K - CTC
		36	16800K - CTC ... 16700K - CTC
		37	16700K - CTC
		38	16600K - CTC
		39	16600K - CTC ... 16500K - CTC
		40	16500K - CTC
		41	16400K - CTC
		42	16400K - CTC ... 16300K - CTC
		43	16300K - CTC
		44	16200K - CTC
		45	16200K - CTC ... 16100K - CTC
		46	16100K - CTC
		47	16000K - CTC
		48	16000K - CTC ... 15900K - CTC
		49	15900K - CTC
		50	15900K - CTC ... 15800K - CTC
		51	15800K - CTC
		52	15700K - CTC
		53	15700K - CTC ... 157600K - CTC
		54	157600K - CTC
		55	15500K - CTC
		56	15500K - CTC ... 15400K - CTC
		57	15400K - CTC
		58	15300K - CTC
		59	15300K - CTC ... 15200K - CTC
		60	15200K - CTC
		61	15200K - CTC ... 15100K - CTC
		62	15100K - CTC
		63	15000K - CTC
		64	15000K - CTC ... 14900K - CTC
		65	14900K - CTC
		66	14800K - CTC
		67	14800K - CTC ... 14700K - CTC
		68	14700K - CTC
		69	14600K - CTC
		70	14600K - CTC ... 14500K - CTC
		71	14500K - CTC
		72	14400K - CTC
		73	14400K - CTC ... 14300K - CTC
		74	14300K - CTC
		75	14300K - CTC ... 14200K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	76	14200K - CTC
		77	14100K - CTC
		78	14100K - CTC ... 14000K - CTC
		79	14000K - CTC
		80	13900K - CTC
		81	13900K - CTC ... 13800K - CTC
		82	13800K - CTC
		83	13700K - CTC
		84	13700K - CTC ... 13600K - CTC
		85	13600K - CTC
		86	13500K - CTC
		87	13500K - CTC ... 13400K - CTC
		88	13400K - CTC
		89	13400K - CTC ... 13300K - CTC
		90	13300K - CTC
		91	13200K - CTC
		92	13200K - CTC ... 13100K - CTC
		93	13100K - CTC
		94	13000K - CTC
		95	13000K - CTC ... 12900K - CTC
		96	12900K - CTC
		97	12800K - CTC
		98	12800K - CTC ... 12700K - CTC
		99	12700K - CTC
		100	12700K - CTC ... 12600K - CTC
		101	12600K - CTC
		102	12500K - CTC
		103	12500K - CTC ... 12400K - CTC
		104	12400K - CTC
		105	12300K - CTC
		106	12300K - CTC ... 12200K - CTC
		107	12200K - CTC
		108	12100K - CTC
		109	12100K - CTC ... 12000K - CTC
		110	12000K - CTC
		111	12000K - CTC ... 11900K - CTC
		112	11900K - CTC
		113	11800K - CTC
		114	11800K - CTC ... 11700K - CTC
		115	11700K - CTC
		116	11600K - CTC
		117	11600K - CTC ... 11500K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	118	11500K - CTC
		119	11400K - CTC
		120	11400K - CTC ... 11300K - CTC
		121	11300K - CTC
		122	11200K - CTC
		123	11200K - CTC ... 11100K - CTC
		124	11100K - CTC
		125	11000K - CTC
		126	11000K - CTC ... 10900K - CTC
		127	10900K - CTC
		128	10900K - CTC ... 10800K - CTC
		129	10800K - CTC
		130	10700K - CTC
		131	10700K - CTC ... 10600K - CTC
		132	10600K - CTC
		133	10500K - CTC
		134	10500K - CTC ... 10400K - CTC
		135	10400K - CTC
		136	10300K - CTC
		137	10300K - CTC ... 10200K - CTC
		138	10200K - CTC
		139	10200K - CTC ... 10100K - CTC
		140	10100K - CTC
		141	10000K - CTC
		142	10000K - CTC ... 9900K - CTC
		143	9900K - CTC
		144	9800K - CTC
		145	9800K - CTC ... 9700K - CTC
		146	9700K - CTC
		147	9600K - CTC
		148	9600K - CTC ... 9500K - CTC
		149	9500K - CTC
		150	9400K - CTC
		151	9400K - CTC ... 9300K - CTC
		152	9300K - CTC
		153	9300K - CTC ... 9200K - CTC
		154	9200K - CTC
		155	9100K - CTC
		156	9100K - CTC ... 9000K - CTC
		157	9000K - CTC
		158	8900K - CTC
		159	8900K - CTC ... 8800K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	160	8800K - CTC
		161	8700K - CTC
		162	8700K - CTC ... 8600K - CTC
		163	8600K - CTC
		164	8500K - CTC
		165	8500K - CTC ... 8400K - CTC
		166	8400K - CTC
		167	8300K - CTC
		168	8300K - CTC ... 8200K - CTC
		169	8200K - CTC
		170	8200K - CTC ... 8100K - CTC
		171	8100K - CTC
		172	8000K - CTC
		173	8000K - CTC ... 7900K - CTC
		174	7900K - CTC
		175	7800K - CTC
		176	7800K - CTC ... 7700K - CTC
		177	7700K - CTC
		178	7600K - CTC
		179	7600K - CTC ... 7500K - CTC
		180	7500K - CTC
		181	7500K - CTC ... 7400K - CTC
		182	7400K - CTC
		183	7300K - CTC
		184	7300K - CTC ... 7200K - CTC
		185	7200K - CTC
		186	7100K - CTC
		187	7100K - CTC ... 7000K - CTC
		188	7000K - CTC
		189	6900K - CTC
		190	6900K - CTC ... 6800K - CTC
		191	6800K - CTC
		192	6800K - CTC ... 6700K - CTC
		193	6700K - CTC
		194	6600K - CTC
		195	6600K - CTC ... 6500K - CTC
		196	6500K - CTC
		197	6400K - CTC
		198	6400K - CTC ... 6300K - CTC
		199	6300K - CTC
		200	6200K - CTC
		201	6200K - CTC ... 6100K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	202	6100K - CTC
		203	6000K - CTC
		204	6000K - CTC ... 5900K - CTC
		205	5900K - CTC
		206	5900K - CTC ... 5800K - CTC
		207	5800K - CTC
		208	5700K - CTC
		209	5700K - CTC ... 5600K - CTC
		210	5600K - CTC
		211	5500K - CTC
		212	5500K - CTC ... 5400K - CTC
		213	5400K - CTC
		214	5300K - CTC
		215	5300K - CTC ... 5200K - CTC
		216	5200K - CTC
		217	5100K - CTC
		218	5100K - CTC ... 5000K - CTC
		219	5000K - CTC
		220	5000K - CTC ... 4900K - CTC
		221	4900K - CTC
		222	4800K - CTC
		223	4800K - CTC ... 4700K - CTC
		224	4700K - CTC
		225	4600K - CTC
		226	4600K - CTC ... 4500K - CTC
		227	4500K - CTC
		228	4400K - CTC
		229	4400K - CTC ... 4300K - CTC
		230	4300K - CTC
		231	4300K - CTC ... 4200K - CTC
		232	4200K - CTC
		233	4100K - CTC
		234	4100K - CTC ... 4000K - CTC
		235	4000K - CTC
		236	3900K - CTC
		237	3900K - CTC ... 3800K - CTC
		238	3800K - CTC
		239	3700K - CTC
		240	3700K - CTC ... 3600K - CTC
		241	3600K - CTC
		242–243	3500K - CTC
		244	3400K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	245	3400K - CTC ... 3300K - CTC
		246	3300K - CTC
		247	3200K - CTC
		248	3200K - CTC ... 3100K - CTC
		249	3100K - CTC
		250	3000K - CTC
		251	3000K - CTC ... 2900K - CTC
		252	2900K - CTC
		253	2800K - CTC
		254	2800K - CTC ... 2700K - CTC
		255	2700K - CTC
5	Color Macro	0	COLOR MACRO OPEN: Open
		1–2	White 2700K - CTC
		3–4	White 3200K - CTC
		5–6	White 4200K - CTC
		7–8	White 5600K - CTC
		9–10	White 8000K - CTC
		11	Blue
		12–48	+Green
		49	Cyan
		50–86	-Blue
		87	Green
		88–124	+Red
		125	Yellow
		126–162	-Green
		163	Red
		164–200	+Blue
		201	Magenta
		202–238	-Red
		239	Blue
		240	COLOR EFFECT FADE: Fast
		241–246	COLOR EFFECT FADE: Fast > Slow
		247	COLOR EFFECT FADE: Slow
		248	COLOR EFFECT SNAP: Fast
		249–254	COLOR EFFECT SNAP: Fast > Slow
		255	COLOR EFFECT SNAP: Slow
6	Effects	0	PATTERNS OPEN: Open
		1–246	Pattern 1...246 - Macro
		247–248	Pattern 247 - Macro
		249–255	Pattern 249...255 - Macro
7	Effects 2	0–15	LED Built-In Open
		16–17	LED Built-In 1 - Macro

CH	Function	DMX	Description
7	Effects 2 (continued)	18–19	LED Built-In 2 - Macro
		20–21	LED Built-In 3 - Macro
		22–23	LED Built-In 4 - Macro
		24–25	LED Built-In 5 - Macro
		26–27	LED Built-In 6 - Macro
		28–29	LED Built-In 7 - Macro
		30–31	LED Built-In 8 - Macro
		32–33	LED Built-In 9 - Macro
		34–35	LED Built-In 10 - Macro
		36–37	LED Built-In 11 - Macro
		38–39	LED Built-In 12 - Macro
		40–41	LED Built-In 13 - Macro
		42–43	LED Built-In 14 - Macro
		44–45	LED Built-In 15 - Macro
		46–47	LED Built-In 16 - Macro
		48–49	LED Built-In 17 - Macro
		50–51	LED Built-In 18 - Macro
		52–53	LED Built-In 19 - Macro
		54–55	LED Built-In 20 - Macro
		56–57	LED Built-In 21 - Macro
		58–59	LED Built-In 22 - Macro
		60–61	LED Built-In 23 - Macro
		62–63	LED Built-In 24 - Macro
		64–65	LED Built-In 25 - Macro
		66–67	LED Built-In 26 - Macro
		68–69	LED Built-In 27 - Macro
		70–71	LED Built-In 28 - Macro
		72–73	LED Built-In 29 - Macro
		74–75	LED Built-In 30 - Macro
		76–77	LED Built-In 31 - Macro
		78–79	LED Built-In 32 - Macro
		80–81	LED Built-In 33 - Macro
		82–83	LED Built-In 34 - Macro
		84–85	LED Built-In 35 - Macro
		86–87	LED Built-In 36 - Macro
		88–89	LED Built-In 37 - Macro
		90–91	LED Built-In 38 - Macro
		92–93	LED Built-In 39 - Macro
		94–95	LED Built-In 40 - Macro
		96–97	LED Built-In 41 - Macro
		98–99	LED Built-In 42 - Macro
		100–101	LED Built-In 43 - Macro

CH	Function	DMX	Description
7	Effects 2 (continued)	102–103	LED Built-In 44 - Macro
		104–105	LED Built-In 45 - Macro
		106–107	LED Built-In 46 - Macro
		108–109	LED Built-In 47 - Macro
		110–111	LED Built-In 48 - Macro
		112–113	LED Built-In 49 - Macro
		114–115	LED Built-In 50 - Macro
		116–117	LED Built-In 51 - Macro
		118–119	LED Built-In 52 - Macro
		120–121	LED Built-In 53 - Macro
		122–123	LED Built-In 54 - Macro
		124–125	LED Built-In 55 - Macro
		126–127	LED Built-In 56 - Macro
		128–129	LED Built-In 57 - Macro
		130–131	LED Built-In 58 - Macro
		132–133	LED Built-In 59 - Macro
		134–135	LED Built-In 60 - Macro
		136–137	LED Built-In 61 - Macro
		138–139	LED Built-In 62 - Macro
		140–141	LED Built-In 63 - Macro
		142–143	LED Built-In 64 - Macro
		144–145	LED Built-In 65 - Macro
		146–147	LED Built-In 66 - Macro
		148–149	LED Built-In 67 - Macro
		150–151	LED Built-In 68 - Macro
		152–153	LED Built-In 69 - Macro
		154–155	LED Built-In 70 - Macro
		156–157	LED Built-In 71 - Macro
		158–159	LED Built-In 72 - Macro
		160–161	LED Built-In 73 - Macro
		162–163	LED Built-In 74 - Macro
		164–165	LED Built-In 75 - Macro
		166–167	LED Built-In 76 - Macro
		168–169	LED Built-In 77 - Macro
		170–171	LED Built-In 78 - Macro
		172–173	LED Built-In 79 - Macro
		174–175	LED Built-In 80 - Macro
		176–177	LED Built-In 81 - Macro
		178–179	LED Built-In 82 - Macro
		180–181	LED Built-In 83 - Macro
		182–183	LED Built-In 84 - Macro
		184–185	LED Built-In 85 - Macro

CH	Function	DMX	Description
7	Effects 2 (continued)	186–187	LED Built-In 86 - Macro
		188–189	LED Built-In 87 - Macro
		190–191	LED Built-In 88 - Macro
		192–193	LED Built-In 89 - Macro
		194–195	LED Built-In 90 - Macro
		196–197	LED Built-In 91 - Macro
		198–199	LED Built-In 92 - Macro
		200–201	LED Built-In 93 - Macro
		202–203	LED Built-In 94 - Macro
		204–205	LED Built-In 95 - Macro
		206–207	LED Built-In 96- Macro
		208–209	LED Built-In 97 - Macro
		210–211	LED Built-In 98 - Macro
		212–213	LED Built-In 99 - Macro
		214–215	LED Built-In 100 - Macro
		216–217	LED Built-In 101 - Macro
		218–219	LED Built-In 102 - Macro
		220–221	LED Built-In 103 - Macro
		222–223	LED Built-In 104 - Macro
		224–225	LED Built-In 105 - Macro
		226–227	LED Built-In 106 - Macro
		228–229	LED Built-In 107 - Macro
		230–231	LED Built-In 108 - Macro
		232–233	LED Built-In 109 - Macro
		234–235	LED Built-In 110 - Macro
		236–237	LED Built-In 111 - Macro
		238–239	LED Built-In 112 - Macro
		240–241	LED Built-In 113 - Macro
		242–243	LED Built-In 114 - Macro
		244–245	LED Built-In 115 - Macro
		246–247	LED Built-In 116 - Macro
		248–249	LED Built-In 117 - Macro
		250–251	LED Built-In 118 - Macro
		252–253	LED Built-In 119 - Macro
		254–255	LED Built-In 120 - Macro
8	Effects 2 Speed		LED BUILT-IN SPEED
		0–127	Fast > Slow (10–0.1 Hz)
		128	Stop
		129–255	Slow > Fast (0.1–10 Hz)
9	Effects 2 Adjust 1		LED BUILT-IN DELAY
		0	Min
		1–254	Min > Max

CH	Function	DMX	Description
9	Effects 2 Adjust 1 (continued)	255	Max
10	Color Macro 2	0	BACKGROUND COLOR MACRO: Open
		1–2	White 2700K - CTC
		3–4	White 3200K - CTC
		5–6	White 4200K - CTC
		7–8	White 5600K - CTC
		9–10	White 8000K - CTC
		11	Blue
		12–48	+Green
		49	Cyan
		50–86	-Blue
		87	Green
		88–124	+Red
		125	Yellow
		126–162	-Green
		163	Red
		164–200	+Blue
		201	Magenta
		202–238	-Red
		239	Blue
		240	BACKGROUND COLOR EFFECT FADE: Fast
		241–246	BACKGROUND COLOR EFFECT FADE: Fast > Slow
		247	BACKGROUND COLOR EFFECT FADE: Slow
		248	BACKGROUND COLOR EFFECT SNAP: Fast
		249–254	BACKGROUND COLOR EFFECT SNAP: Fast > Slow
		255	BACKGROUND COLOR EFFECT SNAP: Slow
11	Background Dimmer		BACKGROUND COLOR DIMMER
		0	Min
		1–254	Min > Max
		255	Max
12	Dimmer	0	Min
		1–254	Min > Max
		255	Max
13	Shutter	0–19	Shutter Closed
		20–24	STROBE CLOSE/OPEN: Shutter Open
		25	STROBE: Fast
		26–63	STROBE: Fast > Slow
		64	STROBE: Slow
		65–69	STROBE OPEN: Shutter Open
		70	STROBE 100-0%: Fast
		71–83	STROBE 100-0%: Fast > Slow
		84	STROBE 100-0%: Slow

CH	Function	DMX	Description
13	Shutter (continued)	85–89	STROBE OPEN: Shutter Open
		90	STROBE 0-100%: Fast
		91–103	STROBE 0-100%: Fast > Slow
		104	STROBE 0-100%: Slow
		105–109	STROBE OPEN: Shutter Open
		110	RANDOM STROBE: Fast
		111–123	RANDOM STROBE: Fast > Slow
		124	RANDOM STROBE: Slow
		125–129	STROBE OPEN: Shutter Open
		130	RANDOM STROBE 100-0%: Fast
		131–143	RANDOM STROBE 100-0%: Fast > Slow
		144	RANDOM STROBE 100-0%: Slow
		145–149	STROBE OPEN: Shutter Open
		150	RANDOM STROBE 0-100%: Fast
		151–163	RANDOM STROBE 0-100%: Fast > Slow
		164	RANDOM STROBE 0-100%: Slow
		165–169	STROBE OPEN: Shutter Open
		170	PULSE STROBE: Fast
		171–183	PULSE STROBE: Fast > Slow
		184	PULSE STROBE: Slow
		185–189	STROBE OPEN: Shutter Open
		190	RANDOM PULSE STROBE: Fast
		191–203	RANDOM PULSE STROBE: Fast > Slow
		204	RANDOM PULSE STROBE: Slow
		205–209	STROBE OPEN: Shutter Open
		210	STROBE 0-100-0%: Fast
		211–223	STROBE 0-100-0%: Fast > Slow
		224	STROBE 0-100-0%: Slow
		225–229	STROBE OPEN: Shutter Open
		230	RANDOM PULSE STROBE: Fast
		231–243	RANDOM PULSE STROBE: Fast > Slow
		244	RANDOM PULSE STROBE: Slow
		245–255	STROBE OPEN: Shutter Open
14	Zoom	0	Wide
		1–254	Wide > Narrow
		255	Narrow
15	Control	0–9	No Function
		10–14	Blackout On Tilt
		15–19	Reserved
		20–24	RGBW Color Mixing Mode
		25–29	CMY Color Mixing Mode
		30–39	Reserved

CH	Function	DMX	Description
15	Control (continued)	40–44	Defrost Fan On
		45–49	Defrost Fan Off
		50–54	Reserved
		55–59	Tilt Reset
		60–64	Zoom Reset
		65–69	Reserved
		70–74	Reset All
		75	PWM 600Hz
		76	PWM 1200Hz
		77	PWM 2000Hz
		78	PWM 4000Hz
		79	PWM 6000Hz
		80	PWM 15000Hz
		81	Reserved
		82–84	Cell Order 1-16
		85–89	Cell Order 16-1
		90–94	Tilt Reverse
		95–99	Reserved
		100–104	Tilt Reverse Disable
		105–119	Reserved
		120–124	Fan ECO
		125–129	Fan Full
		130–134	Fan Auto
		135–139	Dimmer Fast
		140–144	Dimmer Smooth
		145–149	Linear
		150–154	Square
		155–159	Inverse Square
		160–164	S Square
		165–169	White Mode
		170–174	Full Mode
		175–239	Color Macros HTP On
		240–247	Color Macros HTP Off
		248–255	Reserved
16	Red	0	Min
		1–254	Min > Max
		255	Max
17	Green	0	Min
		1–254	Min > Max
		255	Max
18	Blue	0	Min
		1–254	Min > Max

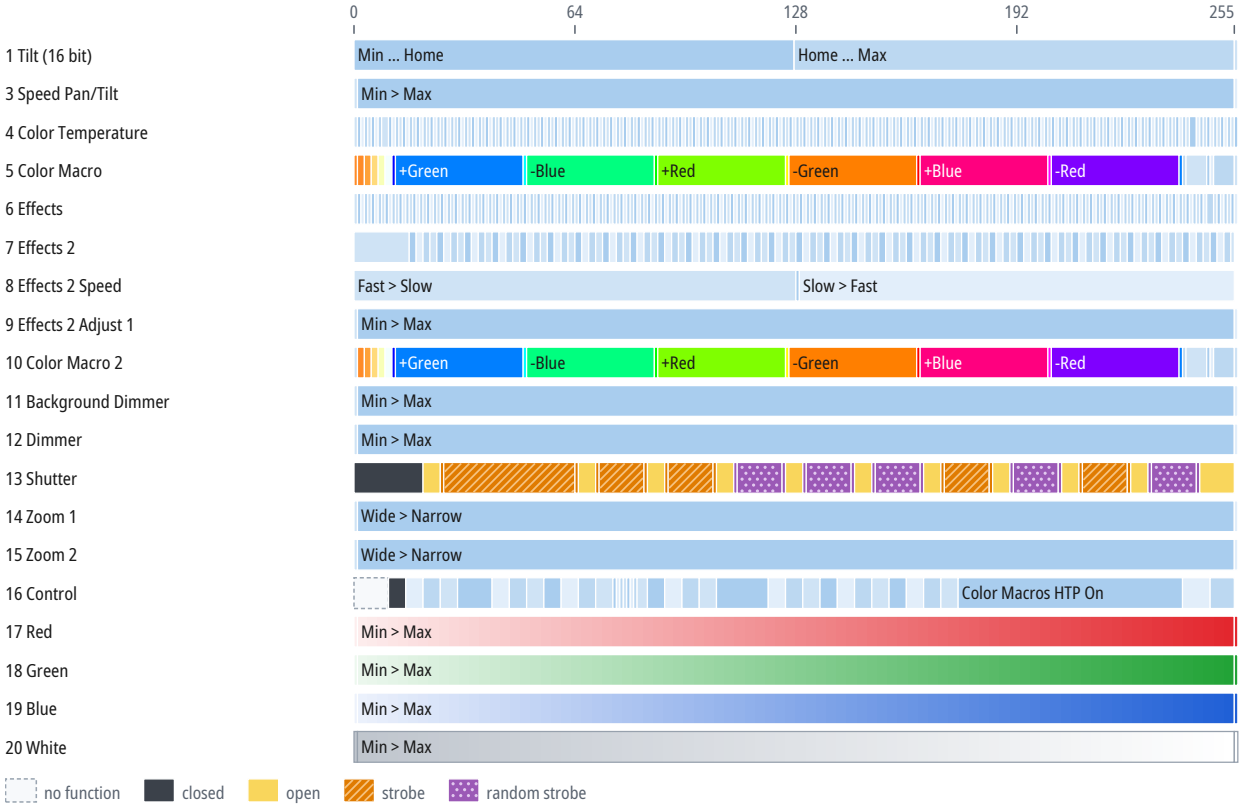
CH	Function	DMX	Description
18	Blue (continued)	255	Max
19	White	0	Min
		1–254	Min > Max
		255	Max

Mode Single Control: Basic Mode 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 13 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 “Shutter Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Color Temperature 0, CH 5 Color Macro 0, CH 10 Color Macro 2 0, CH 12 Dimmer 255, CH 17 Red 255, CH 18 Green 255, CH 19 Blue 255, CH 20 White 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt		Same as CH 3 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
4	Color Temperature	0	CTC OPEN: Open
		1	19000K - CTC
		2	18900K - CTC
		3	18900K - CTC ... 18800K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	4	18800K - CTC
		5	18800K - CTC ... 18700K - CTC
		6	18700K - CTC
		7	18600K - CTC
		8–9	18500K - CTC
		10	18400K - CTC
		11	18400K - CTC ... 18300K - CTC
		12	18300K - CTC
		13	18200K - CTC
		14	18200K - CTC ... 18100K - CTC
		15	18100K - CTC
		16	18000K - CTC
		17	18000K - CTC ... 17900K - CTC
		18	17900K - CTC
		19	17800K - CTC
		20	17800K - CTC ... 17700K - CTC
		21	17700K - CTC
		22	17600K - CTC
		23	17600K - CTC ... 17500K - CTC
		24	17500K - CTC
		25	17500K - CTC ... 17400K - CTC
		26	17400K - CTC
		27	17300K - CTC
		28	17300K - CTC ... 17200K - CTC
		29	17200K - CTC
		30	17100K - CTC
		31	17100K - CTC ... 17000K - CTC
		32	17000K - CTC
		33	16900K - CTC
		34	16900K - CTC ... 16800K - CTC
		35	16800K - CTC
		36	16800K - CTC ... 16700K - CTC
		37	16700K - CTC
		38	16600K - CTC
		39	16600K - CTC ... 16500K - CTC
		40	16500K - CTC
		41	16400K - CTC
		42	16400K - CTC ... 16300K - CTC
		43	16300K - CTC
		44	16200K - CTC
		45	16200K - CTC ... 16100K - CTC
		46	16100K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	47	16000K - CTC
		48	16000K - CTC ... 15900K - CTC
		49	15900K - CTC
		50	15900K - CTC ... 15800K - CTC
		51	15800K - CTC
		52	15700K - CTC
		53	15700K - CTC ... 157600K - CTC
		54	157600K - CTC
		55	15500K - CTC
		56	15500K - CTC ... 15400K - CTC
		57	15400K - CTC
		58	15300K - CTC
		59	15300K - CTC ... 15200K - CTC
		60	15200K - CTC
		61	15200K - CTC ... 15100K - CTC
		62	15100K - CTC
		63	15000K - CTC
		64	15000K - CTC ... 14900K - CTC
		65	14900K - CTC
		66	14800K - CTC
		67	14800K - CTC ... 14700K - CTC
		68	14700K - CTC
		69	14600K - CTC
		70	14600K - CTC ... 14500K - CTC
		71	14500K - CTC
		72	14400K - CTC
		73	14400K - CTC ... 14300K - CTC
		74	14300K - CTC
		75	14300K - CTC ... 14200K - CTC
		76	14200K - CTC
		77	14100K - CTC
		78	14100K - CTC ... 14000K - CTC
		79	14000K - CTC
		80	13900K - CTC
		81	13900K - CTC ... 13800K - CTC
		82	13800K - CTC
		83	13700K - CTC
		84	13700K - CTC ... 13600K - CTC
		85	13600K - CTC
		86	13500K - CTC
		87	13500K - CTC ... 13400K - CTC
		88	13400K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	89	13400K - CTC ... 13300K - CTC
		90	13300K - CTC
		91	13200K - CTC
		92	13200K - CTC ... 13100K - CTC
		93	13100K - CTC
		94	13000K - CTC
		95	13000K - CTC ... 12900K - CTC
		96	12900K - CTC
		97	12800K - CTC
		98	12800K - CTC ... 12700K - CTC
		99	12700K - CTC
		100	12700K - CTC ... 12600K - CTC
		101	12600K - CTC
		102	12500K - CTC
		103	12500K - CTC ... 12400K - CTC
		104	12400K - CTC
		105	12300K - CTC
		106	12300K - CTC ... 12200K - CTC
		107	12200K - CTC
		108	12100K - CTC
		109	12100K - CTC ... 12000K - CTC
		110	12000K - CTC
		111	12000K - CTC ... 11900K - CTC
		112	11900K - CTC
		113	11800K - CTC
		114	11800K - CTC ... 11700K - CTC
		115	11700K - CTC
		116	11600K - CTC
		117	11600K - CTC ... 11500K - CTC
		118	11500K - CTC
		119	11400K - CTC
		120	11400K - CTC ... 11300K - CTC
		121	11300K - CTC
		122	11200K - CTC
		123	11200K - CTC ... 11100K - CTC
		124	11100K - CTC
		125	11000K - CTC
		126	11000K - CTC ... 10900K - CTC
		127	10900K - CTC
		128	10900K - CTC ... 10800K - CTC
		129	10800K - CTC
		130	10700K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	131	10700K - CTC ... 10600K - CTC
		132	10600K - CTC
		133	10500K - CTC
		134	10500K - CTC ... 10400K - CTC
		135	10400K - CTC
		136	10300K - CTC
		137	10300K - CTC ... 10200K - CTC
		138	10200K - CTC
		139	10200K - CTC ... 10100K - CTC
		140	10100K - CTC
		141	10000K - CTC
		142	10000K - CTC ... 9900K - CTC
		143	9900K - CTC
		144	9800K - CTC
		145	9800K - CTC ... 9700K - CTC
		146	9700K - CTC
		147	9600K - CTC
		148	9600K - CTC ... 9500K - CTC
		149	9500K - CTC
		150	9400K - CTC
		151	9400K - CTC ... 9300K - CTC
		152	9300K - CTC
		153	9300K - CTC ... 9200K - CTC
		154	9200K - CTC
		155	9100K - CTC
		156	9100K - CTC ... 9000K - CTC
		157	9000K - CTC
		158	8900K - CTC
		159	8900K - CTC ... 8800K - CTC
		160	8800K - CTC
		161	8700K - CTC
		162	8700K - CTC ... 8600K - CTC
		163	8600K - CTC
		164	8500K - CTC
		165	8500K - CTC ... 8400K - CTC
		166	8400K - CTC
		167	8300K - CTC
		168	8300K - CTC ... 8200K - CTC
		169	8200K - CTC
		170	8200K - CTC ... 8100K - CTC
		171	8100K - CTC
		172	8000K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	173	8000K - CTC ... 7900K - CTC
		174	7900K - CTC
		175	7800K - CTC
		176	7800K - CTC ... 7700K - CTC
		177	7700K - CTC
		178	7600K - CTC
		179	7600K - CTC ... 7500K - CTC
		180	7500K - CTC
		181	7500K - CTC ... 7400K - CTC
		182	7400K - CTC
		183	7300K - CTC
		184	7300K - CTC ... 7200K - CTC
		185	7200K - CTC
		186	7100K - CTC
		187	7100K - CTC ... 7000K - CTC
		188	7000K - CTC
		189	6900K - CTC
		190	6900K - CTC ... 6800K - CTC
		191	6800K - CTC
		192	6800K - CTC ... 6700K - CTC
		193	6700K - CTC
		194	6600K - CTC
		195	6600K - CTC ... 6500K - CTC
		196	6500K - CTC
		197	6400K - CTC
		198	6400K - CTC ... 6300K - CTC
		199	6300K - CTC
		200	6200K - CTC
		201	6200K - CTC ... 6100K - CTC
		202	6100K - CTC
		203	6000K - CTC
		204	6000K - CTC ... 5900K - CTC
		205	5900K - CTC
		206	5900K - CTC ... 5800K - CTC
		207	5800K - CTC
		208	5700K - CTC
		209	5700K - CTC ... 5600K - CTC
		210	5600K - CTC
		211	5500K - CTC
		212	5500K - CTC ... 5400K - CTC
		213	5400K - CTC
		214	5300K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	215	5300K - CTC ... 5200K - CTC
		216	5200K - CTC
		217	5100K - CTC
		218	5100K - CTC ... 5000K - CTC
		219	5000K - CTC
		220	5000K - CTC ... 4900K - CTC
		221	4900K - CTC
		222	4800K - CTC
		223	4800K - CTC ... 4700K - CTC
		224	4700K - CTC
		225	4600K - CTC
		226	4600K - CTC ... 4500K - CTC
		227	4500K - CTC
		228	4400K - CTC
		229	4400K - CTC ... 4300K - CTC
		230	4300K - CTC
		231	4300K - CTC ... 4200K - CTC
		232	4200K - CTC
		233	4100K - CTC
		234	4100K - CTC ... 4000K - CTC
		235	4000K - CTC
		236	3900K - CTC
		237	3900K - CTC ... 3800K - CTC
		238	3800K - CTC
		239	3700K - CTC
		240	3700K - CTC ... 3600K - CTC
		241	3600K - CTC
		242–243	3500K - CTC
		244	3400K - CTC
		245	3400K - CTC ... 3300K - CTC
		246	3300K - CTC
		247	3200K - CTC
		248	3200K - CTC ... 3100K - CTC
		249	3100K - CTC
		250	3000K - CTC
		251	3000K - CTC ... 2900K - CTC
		252	2900K - CTC
		253	2800K - CTC
		254	2800K - CTC ... 2700K - CTC
		255	2700K - CTC
5	Color Macro		Same as CH 5 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)

CH	Function	DMX	Description
6	Effects		Same as CH 6 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
7	Effects 2		Same as CH 7 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
8	Effects 2 Speed		Same as CH 8 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
9	Effects 2 Adjust 1		Same as CH 9 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
10	Color Macro 2		Same as CH 10 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
11	Background Dimmer		Same as CH 11 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
12	Dimmer		Same as CH 12 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
13	Shutter		Same as CH 13 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
14	Zoom 1	0	Wide
		1–254	Wide > Narrow
		255	Narrow
15	Zoom 2	0	Wide
		1–254	Wide > Narrow
		255	Narrow
16	Control		Same as CH 15 in the mode “Single Control: Basic2 Mode 19ch” (p. 24)
17	Red		Same as CH 16 in the mode “Single Control: Basic2 Mode 19ch” (p. 25)
18	Green		Same as CH 17 in the mode “Single Control: Basic2 Mode 19ch” (p. 25)
19	Blue		Same as CH 18 in the mode “Single Control: Basic2 Mode 19ch” (p. 25)
20	White		Same as CH 19 in the mode “Single Control: Basic2 Mode 19ch” (p. 26)

Mode Single Control: Standard Mode 84ch

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 13 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 “Shutter Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Color Temperature 0, CH 5 Color Macro 0, CH 12 Dimmer 255, CH 21 Red 255 (the same in each of the 16 cells), CH 22 Green 255 (the same in each of the 16 cells), CH 23 Blue 255 (the same in each of the 16 cells), CH 24 White 255 (the same in each of the 16 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt	0–127	MIn ... Home
		127	Home
		128–255	Home ... Max
		255	Max
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt		Same as CH 3 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
4	Color Temperature		Same as CH 4 in the mode “Single Control: Basic Mode 20ch” (p. 26)
5	Color Macro		Same as CH 5 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
6	Effects		Same as CH 6 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
7	Effects 2		Same as CH 7 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
8	Effects 2 Speed		Same as CH 8 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
9	Effects 2 Adjust 1		Same as CH 9 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
10	Color Macro 2		Same as CH 10 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
11	Background Dimmer		Same as CH 11 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
12	Dimmer		Same as CH 12 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
13	Shutter		Same as CH 13 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
14	Zoom 1		Same as CH 14 in the mode “Single Control: Basic Mode 20ch” (p. 33)
15	Zoom 2		Same as CH 15 in the mode “Single Control: Basic Mode 20ch” (p. 33)
16	Control		Same as CH 15 in the mode “Single Control: Basic2 Mode 19ch” (p. 24)
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

CH	Function	DMX	Description
20	W Overwrite		WHITE OVERWRITE
		0	Min
		1–254	Min > Max
		255	Max
21	Red 1	0	Min
		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 21–84: 16 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
13	69	70	71	72	14	73	74	75	76
15	77	78	79	80	16	81	82	83	84

Mode Single Control: Advanced Mode 154ch

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 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255 “Shutter Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Color Temperature 0, CH 5 Color Macro 0, CH 13 Dimmer 255, CH 27 Red 255 (the same in each of the 16 cells), CH 29 Green 255 (the same in each of the 16 cells), CH 31 Blue 255 (the same in each of the 16 cells), CH 33 White 255 (the same in each of the 16 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt		Same as CH 3 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
4	Color Temperature	0	No Function - Custom
		1	19000K - CTC
		2	18900K - CTC
		3	18900K - CTC ... 18800K - CTC
		4	18800K - CTC
		5	18800K - CTC ... 18700K - CTC
		6	18700K - CTC
		7	18600K - CTC
		8–9	18500K - CTC
		10	18400K - CTC
		11	18400K - CTC ... 18300K - CTC
		12	18300K - CTC
		13	18200K - CTC
		14	18200K - CTC ... 18100K - CTC
		15	18100K - CTC
		16	18000K - CTC
		17	18000K - CTC ... 17900K - CTC
		18	17900K - CTC
		19	17800K - CTC
		20	17800K - CTC ... 17700K - CTC
		21	17700K - CTC
		22	17600K - CTC
		23	17600K - CTC ... 17500K - CTC
		24	17500K - CTC
		25	17500K - CTC ... 17400K - CTC
		26	17400K - CTC
		27	17300K - CTC
		28	17300K - CTC ... 17200K - CTC
		29	17200K - CTC
		30	17100K - CTC
		31	17100K - CTC ... 17000K - CTC
		32	17000K - CTC
		33	16900K - CTC
		34	16900K - CTC ... 16800K - CTC
		35	16800K - CTC
		36	16800K - CTC ... 16700K - CTC
		37	16700K - CTC
		38	16600K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	39	16600K - CTC ... 16500K - CTC
		40	16500K - CTC
		41	16400K - CTC
		42	16400K - CTC ... 16300K - CTC
		43	16300K - CTC
		44	16200K - CTC
		45	16200K - CTC ... 16100K - CTC
		46	16100K - CTC
		47	16000K - CTC
		48	16000K - CTC ... 15900K - CTC
		49	15900K - CTC
		50	15900K - CTC ... 15800K - CTC
		51	15800K - CTC
		52	15700K - CTC
		53	15700K - CTC ... 157600K - CTC
		54	157600K - CTC
		55	15500K - CTC
		56	15500K - CTC ... 15400K - CTC
		57	15400K - CTC
		58	15300K - CTC
		59	15300K - CTC ... 15200K - CTC
		60	15200K - CTC
		61	15200K - CTC ... 15100K - CTC
		62	15100K - CTC
		63	15000K - CTC
		64	15000K - CTC ... 14900K - CTC
		65	14900K - CTC
		66	14800K - CTC
		67	14800K - CTC ... 14700K - CTC
		68	14700K - CTC
		69	14600K - CTC
		70	14600K - CTC ... 14500K - CTC
		71	14500K - CTC
		72	14400K - CTC
		73	14400K - CTC ... 14300K - CTC
		74	14300K - CTC
		75	14300K - CTC ... 14200K - CTC
		76	14200K - CTC
		77	14100K - CTC
		78	14100K - CTC ... 14000K - CTC
		79	14000K - CTC
		80	13900K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	81	13900K - CTC ... 13800K - CTC
		82	13800K - CTC
		83	13700K - CTC
		84	13700K - CTC ... 13600K - CTC
		85	13600K - CTC
		86	13500K - CTC
		87	13500K - CTC ... 13400K - CTC
		88	13400K - CTC
		89	13400K - CTC ... 13300K - CTC
		90	13300K - CTC
		91	13200K - CTC
		92	13200K - CTC ... 13100K - CTC
		93	13100K - CTC
		94	13000K - CTC
		95	13000K - CTC ... 12900K - CTC
		96	12900K - CTC
		97	12800K - CTC
		98	12800K - CTC ... 12700K - CTC
		99	12700K - CTC
		100	12700K - CTC ... 12600K - CTC
		101	12600K - CTC
		102	12500K - CTC
		103	12500K - CTC ... 12400K - CTC
		104	12400K - CTC
		105	12300K - CTC
		106	12300K - CTC ... 12200K - CTC
		107	12200K - CTC
		108	12100K - CTC
		109	12100K - CTC ... 12000K - CTC
		110	12000K - CTC
		111	12000K - CTC ... 11900K - CTC
		112	11900K - CTC
		113	11800K - CTC
		114	11800K - CTC ... 11700K - CTC
		115	11700K - CTC
		116	11600K - CTC
		117	11600K - CTC ... 11500K - CTC
		118	11500K - CTC
		119	11400K - CTC
		120	11400K - CTC ... 11300K - CTC
		121	11300K - CTC
		122	11200K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	123	11200K - CTC ... 11100K - CTC
		124	11100K - CTC
		125	11000K - CTC
		126	11000K - CTC ... 10900K - CTC
		127	10900K - CTC
		128	10900K - CTC ... 10800K - CTC
		129	10800K - CTC
		130	10700K - CTC
		131	10700K - CTC ... 10600K - CTC
		132	10600K - CTC
		133	10500K - CTC
		134	10500K - CTC ... 10400K - CTC
		135	10400K - CTC
		136	10300K - CTC
		137	10300K - CTC ... 10200K - CTC
		138	10200K - CTC
		139	10200K - CTC ... 10100K - CTC
		140	10100K - CTC
		141	10000K - CTC
		142	10000K - CTC ... 9900K - CTC
		143	9900K - CTC
		144	9800K - CTC
		145	9800K - CTC ... 9700K - CTC
		146	9700K - CTC
		147	9600K - CTC
		148	9600K - CTC ... 9500K - CTC
		149	9500K - CTC
		150	9400K - CTC
		151	9400K - CTC ... 9300K - CTC
		152	9300K - CTC
		153	9300K - CTC ... 9200K - CTC
		154	9200K - CTC
		155	9100K - CTC
		156	9100K - CTC ... 9000K - CTC
		157	9000K - CTC
		158	8900K - CTC
		159	8900K - CTC ... 8800K - CTC
		160	8800K - CTC
		161	8700K - CTC
		162	8700K - CTC ... 8600K - CTC
		163	8600K - CTC
		164	8500K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	165	8500K - CTC ... 8400K - CTC
		166	8400K - CTC
		167	8300K - CTC
		168	8300K - CTC ... 8200K - CTC
		169	8200K - CTC
		170	8200K - CTC ... 8100K - CTC
		171	8100K - CTC
		172	8000K - CTC
		173	8000K - CTC ... 7900K - CTC
		174	7900K - CTC
		175	7800K - CTC
		176	7800K - CTC ... 7700K - CTC
		177	7700K - CTC
		178	7600K - CTC
		179	7600K - CTC ... 7500K - CTC
		180	7500K - CTC
		181	7500K - CTC ... 7400K - CTC
		182	7400K - CTC
		183	7300K - CTC
		184	7300K - CTC ... 7200K - CTC
		185	7200K - CTC
		186	7100K - CTC
		187	7100K - CTC ... 7000K - CTC
		188	7000K - CTC
		189	6900K - CTC
		190	6900K - CTC ... 6800K - CTC
		191	6800K - CTC
		192	6800K - CTC ... 6700K - CTC
		193	6700K - CTC
		194	6600K - CTC
		195	6600K - CTC ... 6500K - CTC
		196	6500K - CTC
		197	6400K - CTC
		198	6400K - CTC ... 6300K - CTC
		199	6300K - CTC
		200	6200K - CTC
		201	6200K - CTC ... 6100K - CTC
		202	6100K - CTC
		203	6000K - CTC
		204	6000K - CTC ... 5900K - CTC
		205	5900K - CTC
		206	5900K - CTC ... 5800K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	207	5800K - CTC
		208	5700K - CTC
		209	5700K - CTC ... 5600K - CTC
		210	5600K - CTC
		211	5500K - CTC
		212	5500K - CTC ... 5400K - CTC
		213	5400K - CTC
		214	5300K - CTC
		215	5300K - CTC ... 5200K - CTC
		216	5200K - CTC
		217	5100K - CTC
		218	5100K - CTC ... 5000K - CTC
		219	5000K - CTC
		220	5000K - CTC ... 4900K - CTC
		221	4900K - CTC
		222	4800K - CTC
		223	4800K - CTC ... 4700K - CTC
		224	4700K - CTC
		225	4600K - CTC
		226	4600K - CTC ... 4500K - CTC
		227	4500K - CTC
		228	4400K - CTC
		229	4400K - CTC ... 4300K - CTC
		230	4300K - CTC
		231	4300K - CTC ... 4200K - CTC
		232	4200K - CTC
		233	4100K - CTC
		234	4100K - CTC ... 4000K - CTC
		235	4000K - CTC
		236	3900K - CTC
		237	3900K - CTC ... 3800K - CTC
		238	3800K - CTC
		239	3700K - CTC
		240	3700K - CTC ... 3600K - CTC
		241	3600K - CTC
		242–243	3500K - CTC
		244	3400K - CTC
		245	3400K - CTC ... 3300K - CTC
		246	3300K - CTC
		247	3200K - CTC
		248	3200K - CTC ... 3100K - CTC
		249	3100K - CTC

CH	Function	DMX	Description
4	Color Temperature (continued)	250	3000K - CTC
		251	3000K - CTC ... 2900K - CTC
		252	2900K - CTC
		253	2800K - CTC
		254	2800K - CTC ... 2700K - CTC
		255	2700K - CTC
5	Color Macro		Same as CH 5 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
6	Effects		Same as CH 6 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
7	Effects 2		Same as CH 7 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
8	Effects 2 Speed		Same as CH 8 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
9	Effects 2 Adjust 1		Same as CH 9 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
10	Color Macro 2		Same as CH 10 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
11	Background Dimmer		BACKGROUND COLOR DIMMER
		0	Min
		0–255	Min > Max
		255	Max
12	Background Dimmer Fine	0–255	Fine adjustment of CH 11
13	Dimmer	0	Min
		0–255	Min > Max
		255	Max
14	Dimmer Fine	0–255	Fine adjustment of CH 13
15	Shutter		Same as CH 13 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
16	Zoom 1		Same as CH 14 in the mode “Single Control: Basic Mode 20ch” (p. 33)
17	Zoom 2		Same as CH 15 in the mode “Single Control: Basic Mode 20ch” (p. 33)
18	Control		Same as CH 15 in the mode “Single Control: Basic2 Mode 19ch” (p. 24)
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

CH	Function	DMX	Description
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	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
154	White 16 Fine	0–255	Fine adjustment of CH 153

CH 26–153: 16 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
13	122	123	124	125	126	127	128	129

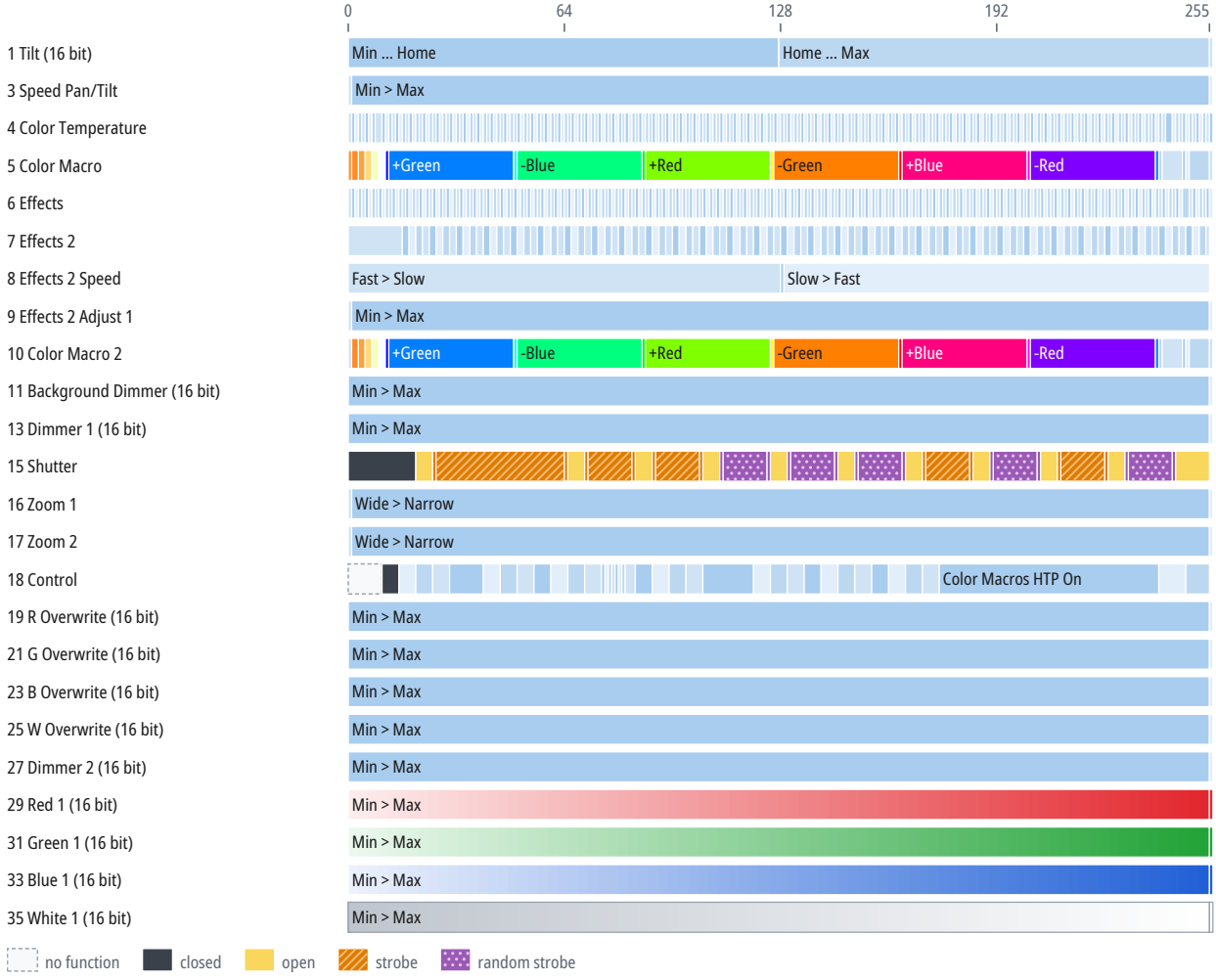
Cell	W Overwrite Fine	Red	Red Fine	Green	Green Fine	Blue	Blue Fine	White
14	130	131	132	133	134	135	136	137
15	138	139	140	141	142	143	144	145
16	146	147	148	149	150	151	152	153

Mode Single Control: Tour Mode 186ch

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 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255 “Shutter Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Color Temperature 0, CH 5 Color Macro 0, CH 13 Dimmer 1 255, CH 27 Dimmer 255 (the same in each of the 16 cells), CH 29 Red 255 (the same in each of the 16 cells), CH 31 Green 255 (the same in each of the 16 cells), CH 33 Blue 255 (the same in each of the 16 cells), CH 35 White 255 (the same in each of the 16 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt		Same as CH 3 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)

CH	Function	DMX	Description
4	Color Temperature		Same as CH 4 in the mode “Single Control: Advanced Mode 154ch” (p. 36)
5	Color Macro	0	COLOR MACRO: Open
		1–2	White 2700K - CTC
		3–4	White 3200K - CTC
		5–6	White 4200K - CTC
		7–8	White 5600K - CTC
		9–10	White 8000K - CTC
		11	Blue
		12–48	+Green
		49	Cyan
		50–86	-Blue
		87	Green
		88–124	+Red
		125	Yellow
		126–162	-Green
		163	Red
		164–200	+Blue
		201	Magenta
		202–238	-Red
		239	Blue
		240	COLOR EFFECT FADE: Fast
		241–246	COLOR EFFECT FADE: Fast > Slow
		247	COLOR EFFECT FADE: Slow
		248	COLOR EFFECT SNAP: Fast
		249–254	COLOR EFFECT SNAP: Fast > Slow
		255	COLOR EFFECT SNAP: Slow
6	Effects		Same as CH 6 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
7	Effects 2		Same as CH 7 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
8	Effects 2 Speed		Same as CH 8 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
9	Effects 2 Adjust 1		Same as CH 9 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
10	Color Macro 2		Same as CH 10 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
11	Background Dimmer		Same as CH 11 in the mode “Single Control: Advanced Mode 154ch” (p. 42)
12	Background Dimmer Fine	0–255	Fine adjustment of CH 11
13	Dimmer 1	0	Min
		0–255	Min > Max
		255	Max
14	Dimmer 1 Fine	0–255	Fine adjustment of CH 13

CH	Function	DMX	Description
15	Shutter		Same as CH 13 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
16	Zoom 1		Same as CH 14 in the mode “Single Control: Basic Mode 20ch” (p. 33)
17	Zoom 2		Same as CH 15 in the mode “Single Control: Basic Mode 20ch” (p. 33)
18	Control		Same as CH 15 in the mode “Single Control: Basic2 Mode 19ch” (p. 24)
19	R Overwrite		Same as CH 19 in the mode “Single Control: Advanced Mode 154ch” (p. 42)
20	R Overwrite Fine	0–255	Fine adjustment of CH 19
21	G Overwrite		Same as CH 21 in the mode “Single Control: Advanced Mode 154ch” (p. 42)
22	G Overwrite Fine	0–255	Fine adjustment of CH 21
23	B Overwrite		Same as CH 23 in the mode “Single Control: Advanced Mode 154ch” (p. 43)
24	B Overwrite Fine	0–255	Fine adjustment of CH 23
25	W Overwrite		Same as CH 25 in the mode “Single Control: Advanced Mode 154ch” (p. 43)
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
		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
186	White 16 Fine	0–255	Fine adjustment of CH 185

CH 26–185: 16 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

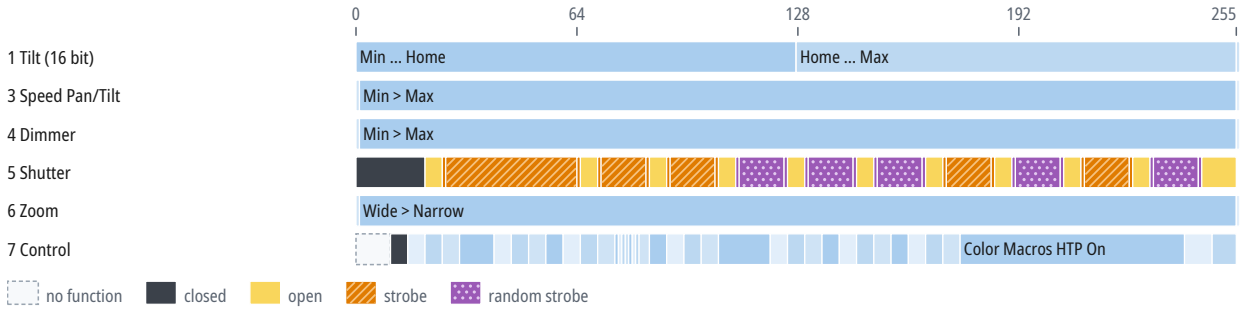
Cell	W Overwrite Fine	Dimmer	Dimmer Fine	Red	Red Fine	Green	Green Fine	Blue	Blue Fine	White
2	36	37	38	39	40	41	42	43	44	45
3	46	47	48	49	50	51	52	53	54	55
4	56	57	58	59	60	61	62	63	64	65
5	66	67	68	69	70	71	72	73	74	75
6	76	77	78	79	80	81	82	83	84	85
7	86	87	88	89	90	91	92	93	94	95
8	96	97	98	99	100	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
13	146	147	148	149	150	151	152	153	154	155
14	156	157	158	159	160	161	162	163	164	165
15	166	167	168	169	170	171	172	173	174	175
16	176	177	178	179	180	181	182	183	184	185

Mode Dual Control Movement: Basic2 7ch

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

If the device receives DMX in this mode but gives no light, check these channels: CH 5 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 “Shutter Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt		Same as CH 3 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
4	Dimmer		Same as CH 12 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
5	Shutter		Same as CH 13 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
6	Zoom		Same as CH 14 in the mode “Single Control: Basic2 Mode 19ch” (p. 24)

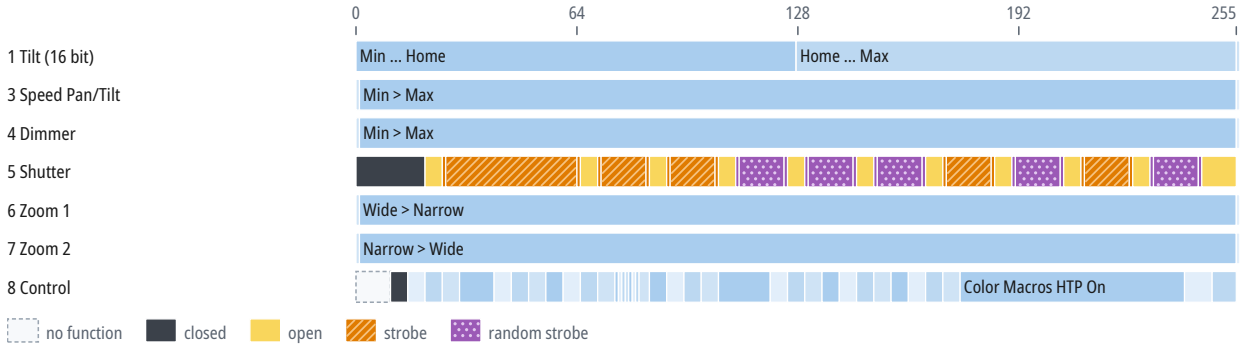
CH	Function	DMX	Description
7	Control		Same as CH 15 in the mode “Single Control: Basic2 Mode 19ch” (p. 24)

Mode Dual Control 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 5 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 “Shutter Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt		Same as CH 3 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
4	Dimmer		Same as CH 12 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
5	Shutter		Same as CH 13 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
6	Zoom 1		Same as CH 14 in the mode “Single Control: Basic Mode 20ch” (p. 33)
7	Zoom 2	0	Narrow
		1–254	Narrow > Wide
		255	Wide
8	Control		Same as CH 15 in the mode “Single Control: Basic2 Mode 19ch” (p. 24)

Mode Dual Control 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 13 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 “Shutter Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Color Temperature 0, CH 5 Color Macro 0, CH 12 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt		Same as CH 3 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
4	Color Temperature		Same as CH 4 in the mode “Single Control: Basic Mode 20ch” (p. 26)
5	Color Macro		Same as CH 5 in the mode “Single Control: Tour Mode 186ch” (p. 45)
6	Effects		Same as CH 6 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
7	Effects 2		Same as CH 7 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
8	Effects 2 Speed		Same as CH 8 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
9	Effects 2 Adjust 1		Same as CH 9 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
10	Color Macro 2		Same as CH 10 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
11	Background Dimmer		Same as CH 11 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
12	Dimmer		Same as CH 12 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
13	Shutter		Same as CH 13 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
14	Zoom 1		Same as CH 14 in the mode “Single Control: Basic Mode 20ch” (p. 33)
15	Zoom 2		Same as CH 15 in the mode “Single Control: Basic Mode 20ch” (p. 33)
16	Control		Same as CH 15 in the mode “Single Control: Basic2 Mode 19ch” (p. 24)
17	R Overwrite		Same as CH 17 in the mode “Single Control: Standard Mode 84ch” (p. 34)
18	G Overwrite		Same as CH 18 in the mode “Single Control: Standard Mode 84ch” (p. 34)
19	B Overwrite		Same as CH 19 in the mode “Single Control: Standard Mode 84ch” (p. 34)
20	W Overwrite		Same as CH 20 in the mode “Single Control: Standard Mode 84ch” (p. 35)

Mode Dual Control 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 15 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 “Shutter Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Color Temperature 0, CH 5 Color Macro 0, CH 13 Dimmer 255.

Channel functions at a glance



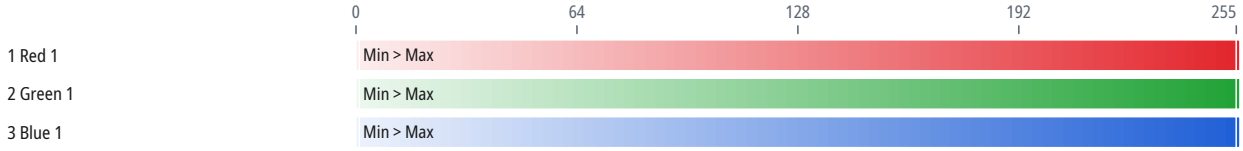
CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt		Same as CH 3 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
4	Color Temperature		Same as CH 4 in the mode “Single Control: Basic Mode 20ch” (p. 26)
5	Color Macro		Same as CH 5 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
6	Effects		Same as CH 6 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
7	Effects 2		Same as CH 7 in the mode “Single Control: Basic2 Mode 19ch” (p. 19)
8	Effects 2 Speed		Same as CH 8 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
9	Effects 2 Adjust 1		Same as CH 9 in the mode “Single Control: Basic2 Mode 19ch” (p. 22)
10	Color Macro 2		Same as CH 10 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
11	Background Dimmer		Same as CH 11 in the mode “Single Control: Advanced Mode 154ch” (p. 42)
12	Background Dimmer Fine	0–255	Fine adjustment of CH 11
13	Dimmer		Same as CH 13 in the mode “Single Control: Advanced Mode 154ch” (p. 42)
14	Dimmer Fine	0–255	Fine adjustment of CH 13
15	Shutter		Same as CH 13 in the mode “Single Control: Basic2 Mode 19ch” (p. 23)
16	Zoom 1		Same as CH 14 in the mode “Single Control: Basic Mode 20ch” (p. 33)
17	Zoom 2		Same as CH 15 in the mode “Single Control: Basic Mode 20ch” (p. 33)
18	Control		Same as CH 15 in the mode “Single Control: Basic2 Mode 19ch” (p. 24)
19	R Overwrite		Same as CH 19 in the mode “Single Control: Advanced Mode 154ch” (p. 42)
20	R Overwrite Fine	0–255	Fine adjustment of CH 19
21	G Overwrite		Same as CH 21 in the mode “Single Control: Advanced Mode 154ch” (p. 42)
22	G Overwrite Fine	0–255	Fine adjustment of CH 21
23	B Overwrite		Same as CH 23 in the mode “Single Control: Advanced Mode 154ch” (p. 43)
24	B Overwrite Fine	0–255	Fine adjustment of CH 23
25	W Overwrite		Same as CH 25 in the mode “Single Control: Advanced Mode 154ch” (p. 43)
26	W Overwrite Fine	0–255	Fine adjustment of CH 25

Mode Dual Control Pixels:Basic 48ch

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255 (the same in each of

the 16 cells), CH 2 Green 255 (the same in each of the 16 cells), CH 3 Blue 255 (the same in each of the 16 cells).

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

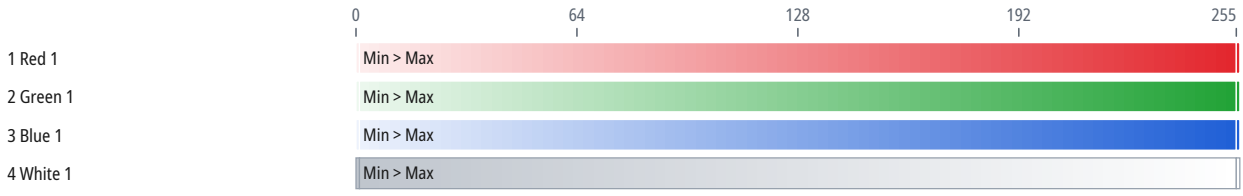
CH 1–48: 16 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 1–3); the table below gives each cell's channel numbers.

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
13	37	38	39	14	40	41	42	15	43	44	45
16	46	47	48								

Mode Dual Control Pixels:Standard 64ch

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255 (the same in each of the 16 cells), CH 2 Green 255 (the same in each of the 16 cells), CH 3 Blue 255 (the same in each of the 16 cells), CH 4 White 255 (the same in each of the 16 cells).

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

CH	Function	DMX	Description
2	Green 1 (continued)	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 1–64: 16 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.

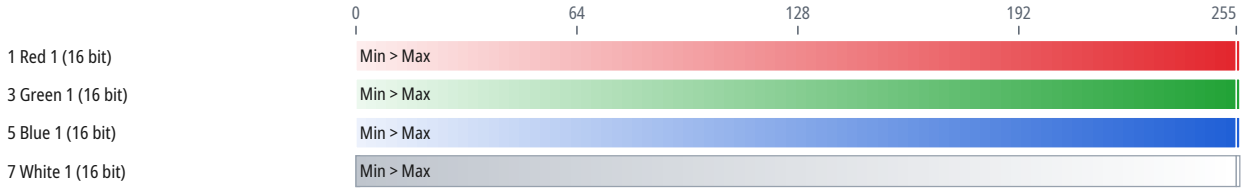
Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	1	2	3	4	2	5	6	7	8
3	9	10	11	12	4	13	14	15	16
5	17	18	19	20	6	21	22	23	24
7	25	26	27	28	8	29	30	31	32
9	33	34	35	36	10	37	38	39	40
11	41	42	43	44	12	45	46	47	48
13	49	50	51	52	14	53	54	55	56
15	57	58	59	60	16	61	62	63	64

Mode Dual Control Pixels : Advanced Mode 128ch

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 16 cells), CH 3 Green 255 (the same in each of the 16 cells), CH 5 Blue 255 (the same in each of the 16 cells), CH 7 White 255 (the same in each of the 16 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

CH	Function	DMX	Description
5	Blue 1 (continued)	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 1–128: 16 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.

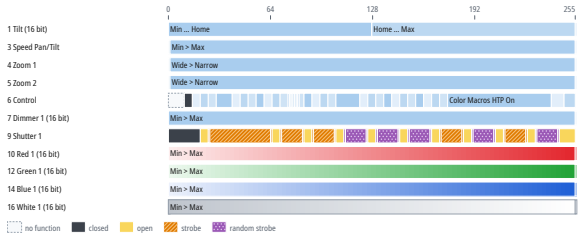
Cell	Red	Red Fine	Green	Green Fine	Blue	Blue Fine	White	White Fine
1	1	2	3	4	5	6	7	8
2	9	10	11	12	13	14	15	16
3	17	18	19	20	21	22	23	24
4	25	26	27	28	29	30	31	32
5	33	34	35	36	37	38	39	40
6	41	42	43	44	45	46	47	48
7	49	50	51	52	53	54	55	56
8	57	58	59	60	61	62	63	64
9	65	66	67	68	69	70	71	72
10	73	74	75	76	77	78	79	80
11	81	82	83	84	85	86	87	88
12	89	90	91	92	93	94	95	96
13	97	98	99	100	101	102	103	104
14	105	106	107	108	109	110	111	112
15	113	114	115	116	117	118	119	120
16	121	122	123	124	125	126	127	128

Mode Single Control: Full PXL Mode 182ch

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 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255 “Shutter Open” (the same in each of the 16 cells). The GDTF file gives these values for a console's Highlight function: CH 7 Dimmer 255 (the same in each of the 16 cells), CH 10 Red 255 (the same in each of the 16 cells), CH 12 Green 255 (the same in each of the 16 cells), CH 14 Blue 255 (the same in each of the 16 cells), CH 16 White 255 (the same in each of the 16 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Speed Pan/Tilt		Same as CH 3 in the mode “Single Control: Basic2 Mode 19ch” (p. 13)
4	Zoom 1		Same as CH 14 in the mode “Single Control: Basic Mode 20ch” (p. 33)
5	Zoom 2		Same as CH 15 in the mode “Single Control: Basic Mode 20ch” (p. 33)
6	Control		Same as CH 15 in the mode “Single Control: Basic2 Mode 19ch” (p. 24)
7	Dimmer 1	0	Min
		0–255	Min > Max
		255	Max
8	Dimmer 1 Fine	0–255	Fine adjustment of CH 7
9	Shutter 1	0–19	Shutter Closed
		20–24	STROBE CLOSE/OPEN: Shutter Open
		25	STROBE: Fast
		26–63	STROBE: Fast > Slow
		64	STROBE: Slow
		65–69	STROBE OPEN: Shutter Open
		70	STROBE 100-0%: Fast
		71–83	STROBE 100-0%: Fast > Slow
		84	STROBE 100-0%: Slow
		85–89	STROBE OPEN: Shutter Open
		90	STROBE 0-100%: Fast
		91–103	STROBE 0-100%: Fast > Slow
		104	STROBE 0-100%: Slow
		105–109	STROBE OPEN: Shutter Open
		110	RANDOM STROBE: Fast
		111–123	RANDOM STROBE: Fast > Slow
		124	RANDOM STROBE: Slow
		125–129	STROBE OPEN: Shutter Open
		130	RANDOM STROBE 100-0%: Fast
		131–143	RANDOM STROBE 100-0%: Fast > Slow
		144	RANDOM STROBE 100-0%: Slow
		145–149	STROBE OPEN: Shutter Open
		150	RANDOM STROBE 0-100%: Fast
		151–163	RANDOM STROBE 0-100%: Fast > Slow
		164	RANDOM STROBE 0-100%: Slow
		165–169	STROBE OPEN: Shutter Open
		170	PULSE STROBE: Fast
		171–183	PULSE STROBE: Fast > Slow

CH	Function	DMX	Description
9	Shutter 1 (continued)	184	PULSE STROBE: Slow
		185–189	STROBE OPEN: Shutter Open
		190	RANDOM PULSE STROBE: Fast
		191–203	RANDOM PULSE STROBE: Fast > Slow
		204	RANDOM PULSE STROBE: Slow
		205–209	STROBE OPEN: Shutter Open
		210	STROBE 0-100-0%: Fast
		211–223	STROBE 0-100-0%: Fast > Slow
		224	STROBE 0-100-0%: Slow
		225–229	STROBE OPEN: Shutter Open
		230	RANDOM PULSE STROBE: Fast
		231–243	RANDOM PULSE STROBE: Fast > Slow
		244	RANDOM PULSE STROBE: Slow
		245–255	STROBE OPEN: Shutter Open
10	Red 1	0	Min
		0–255	Min > Max
		255	Max
11	Red 1 Fine	0–255	Fine adjustment of CH 10
12	Green 1	0	Min
		0–255	Min > Max
		255	Max
13	Green 1 Fine	0–255	Fine adjustment of CH 12
14	Blue 1	0	Min
		0–255	Min > Max
		255	Max
15	Blue 1 Fine	0–255	Fine adjustment of CH 14
16	White 1	0	Min
		0–255	Min > Max
		255	Max
17	White 1 Fine	0–255	Fine adjustment of CH 16

CH 7–182: 16 cells of 11 channels each. Every cell works as cell 1 in the table above (CH 7–17); the table below gives each cell's channel numbers.

Cell	Dimmer	Dimmer Fine	Shutter	Red	Red Fine	Green	Green Fine	Blue	Blue Fine	White	White Fine
1	7	8	9	10	11	12	13	14	15	16	17
2	18	19	20	21	22	23	24	25	26	27	28
3	29	30	31	32	33	34	35	36	37	38	39
4	40	41	42	43	44	45	46	47	48	49	50
5	51	52	53	54	55	56	57	58	59	60	61
6	62	63	64	65	66	67	68	69	70	71	72
7	73	74	75	76	77	78	79	80	81	82	83
8	84	85	86	87	88	89	90	91	92	93	94
9	95	96	97	98	99	100	101	102	103	104	105

Cell	Dimmer	Dimmer Fine	Shutter	Red	Red Fine	Green	Green Fine	Blue	Blue Fine	White	White Fine
10	106	107	108	109	110	111	112	113	114	115	116
11	117	118	119	120	121	122	123	124	125	126	127
12	128	129	130	131	132	133	134	135	136	137	138
13	139	140	141	142	143	144	145	146	147	148	149
14	150	151	152	153	154	155	156	157	158	159	160
15	161	162	163	164	165	166	167	168	169	170	171
16	172	173	174	175	176	177	178	179	180	181	182

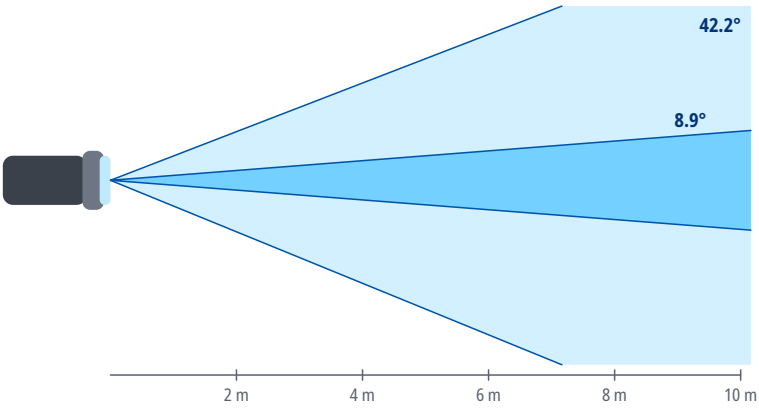
10 Technical specifications

Parameter	Value
Light source	LED
Zoom	8.9–42.2°
Tilt	200°
RDM	yes (manufacturer ID 0x21A4, device model ID 0x073F)
Weight	20.7 kg
Operating temperature	-20 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2700–19000 K
Strobe frequency	0.1–20 Hz

Spot diameter



Distance	Ø 8.9°	Ø 42.2°
2 m	0.31 m	1.5 m
4 m	0.62 m	3.1 m
6 m	0.93 m	4.6 m
8 m	1.2 m	6.2 m
10 m	1.6 m	7.7 m
15 m	2.3 m	11.6 m

Spot diameter square to the beam axis, calculated from the beam angle.

11 Maintenance and cleaning

- Before cleaning and maintenance, switch the device off, disconnect it from the power supply and let it cool down.
- Clean the housing with a soft, dry or slightly damp cloth. Do not use solvents, abrasive cleaners or pressure washers, and make sure no liquid gets into the device.
- Clean optical parts (lenses, front glass), if the device has any, with a soft lint-free cloth and a cleaner intended for optics or glass.
- Regularly inspect the housing, cables, connectors and fixings. Have damaged parts replaced by a service center.
- How often to clean depends on the environment; dust, smoke and fog make the device dirty much faster.

12 Troubleshooting

Problem	Remedy
The device does not switch on	Check the supply voltage, the cables and the fuse, if the device has one.

Problem	Remedy
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.