DMX REFERENCE

DAYTONA

Starway



Manufacturer	Starway
GDTF file	Starway_Daytona_82887.gdtf
GDTF revision	V104R · 2025-01-09
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Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Product description 5
5 Installation 5
6 Connections 5
7 Operation 6
8 Functions at a glance 7
9 DMX channels 9
Mode Pixel 16b Mode 163CH 10
Mode Pixel 8b Mode 93CH 13
Mode Standard 16b Mode 25CH 15
Mode Standard 8b Mode 21CH 18
Mode Basic 16b Mode 21CH 19
Mode Basic 8b Mode 17CH 20
Mode Extended 16b Mode 27CH 22
Mode Extended 8b Mode 23CH 24
10 Technical specifications 26
11 Maintenance and cleaning 26
12 Troubleshooting 27
13 Disposal 27

1 About this manual

This document describes the DAYTONA by Starway. It was compiled from the GDTF file Starway_Daytona_82887.gdtf from the GDTF-Share library.

File revision: “V104R”.

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 Starway; 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	19 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Pixel 16b Mode 163CH	163	3	1, 164, 327
Pixel 8b Mode 93CH	93	5	1, 94, 187, 280, ...
Standard 16b Mode 25CH	25	20	1, 26, 51, 76, ...
Standard 8b Mode 21CH	21	24	1, 22, 43, 64, ...
Basic 16b Mode 21CH	21	24	1, 22, 43, 64, ...
Basic 8b Mode 17CH	17	30	1, 18, 35, 52, ...
Extended 16b Mode 27CH	27	18	1, 28, 55, 82, ...
Extended 8b Mode 23CH	23	22	1, 24, 47, 70, ...

No light? Check these channels

- Pixel 16b Mode 163CH: CH 6 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”
- Pixel 8b Mode 93CH: CH 6 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”
- Standard 16b Mode 25CH: CH 6 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”
- Standard 8b Mode 21CH: CH 6 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”
- Basic 16b Mode 21CH: CH 6 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”
- Basic 8b Mode 17CH: CH 6 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”
- Extended 16b Mode 27CH: CH 6 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”; CH 17 Dimmer Wheel Color Foreground above 0; CH 19 Dimmer Wheel Color Background above 0
- Extended 8b Mode 23CH: CH 6 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”; CH 13 Dimmer Wheel Color Foreground above 0; CH 15 Dimmer Wheel Color Background above 0


Read the manual before use


Do not stare into the light


Indoor use only

3 Safety instructions



Read the manual before use



Do not stare into the light



Indoor use only

⚠ WARNING

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

⚠ WARNING

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

⚠ CAUTION

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

⚠ CAUTION

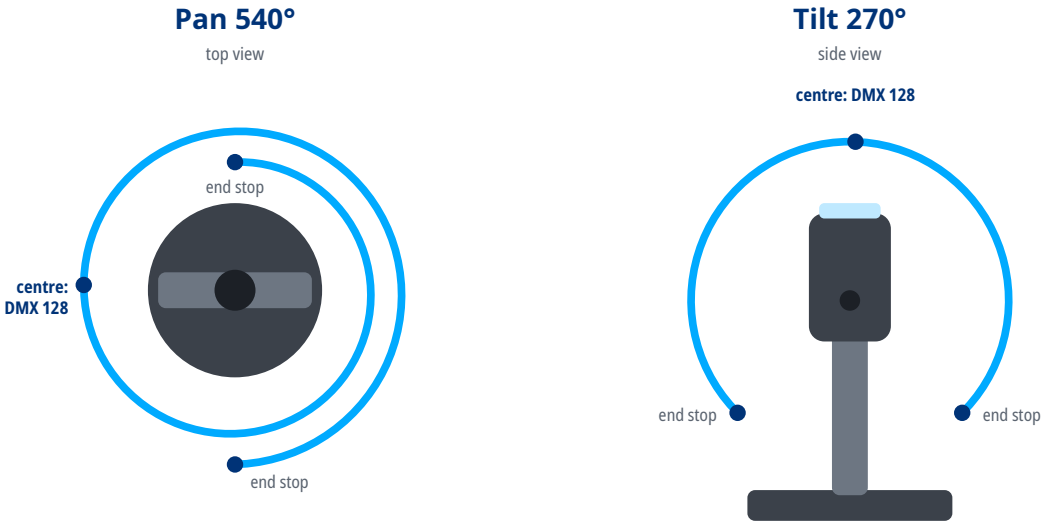
- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them longer than necessary.

⚠ WARNING

- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts, move them by hand, or obstruct their movement; this can cause injury (pinching) and damage the drive.
- Do not carry the device by its moving parts. If the device has a transport lock, engage it before transport and release it before switching on.

4 Product description

Range of movement



5 Installation

⚠ WARNING

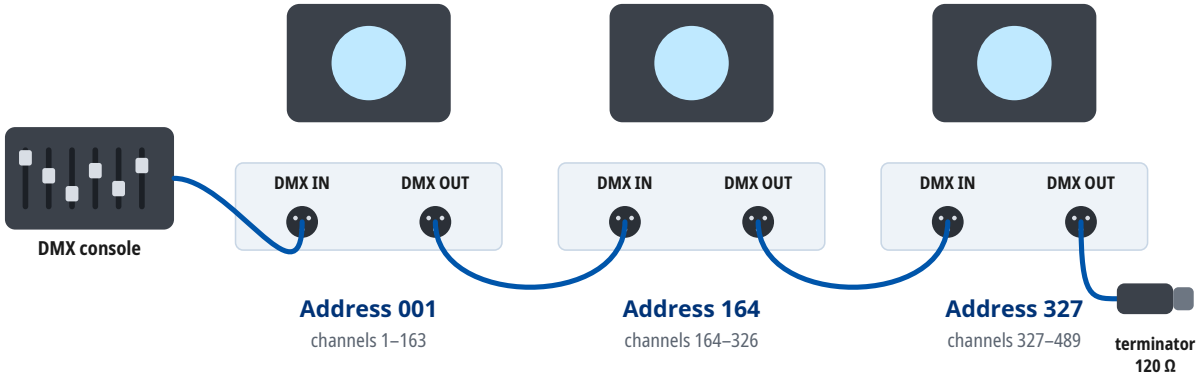
- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 19 kg.
- 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 Pixel 16b Mode 163CH: every unit occupies 163 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

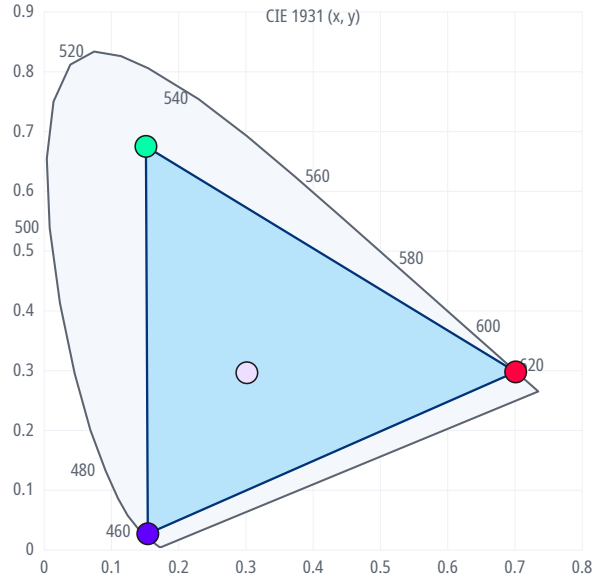
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Pixel 16b Mode 163CH”: 163.
- Choose start addresses so that the channels of individual devices do not overlap and the 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 “Pixel 16b Mode 163CH”, you can use, for example, the start addresses 1, 164, 327.
- 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

	Pixel 16b Mode 163CH 163 channels	Pixel 8b Mode 93CH 93 channels	Standard 16b Mode 25CH 25 channels	Standard 8b Mode 21CH 21 channels	Basic 16b Mode 21CH 21 channels	Basic 8b Mode 17CH 17 channels	Extended 16b Mode 27CH 27 channels	Extended 8b Mode 23CH 23 channels
Pan / Tilt	1, 3	1, 3	1, 3	1, 3	1, 3	1, 3	1, 3	1, 3
Dimmer	6	6	6	6	6	6	6	6
Shutter / strobe	8	8	8	8	8	8	8	8
Color mixing	76× (12–162)	117 channels (9–159)	4× (9–15)	9–12	4× (9–15)	9–12	4× (9–15)	9–12
Zoom	9	15	23	19	19	15	25	21
Effects / macros		13, 14	17–22	13–18	17, 18	13, 14	18, 20–24	14, 16–20

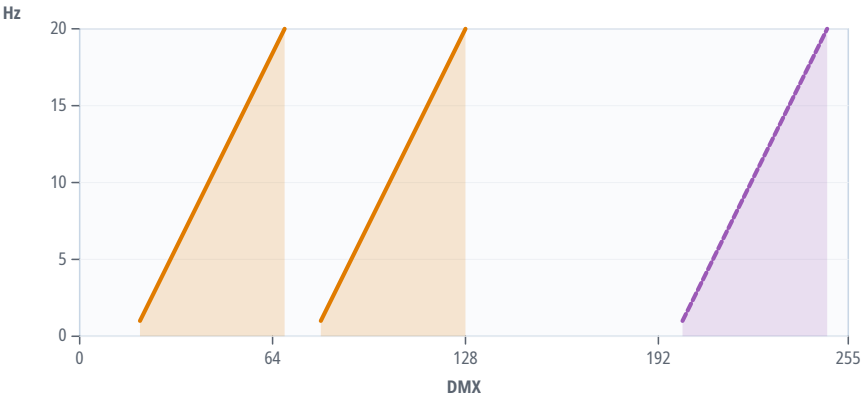
LED colors and the colors they mix



LED	x	y
Red	0.701	0.298
Green	0.151	0.675
Blue	0.154	0.027
White	0.301	0.297

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

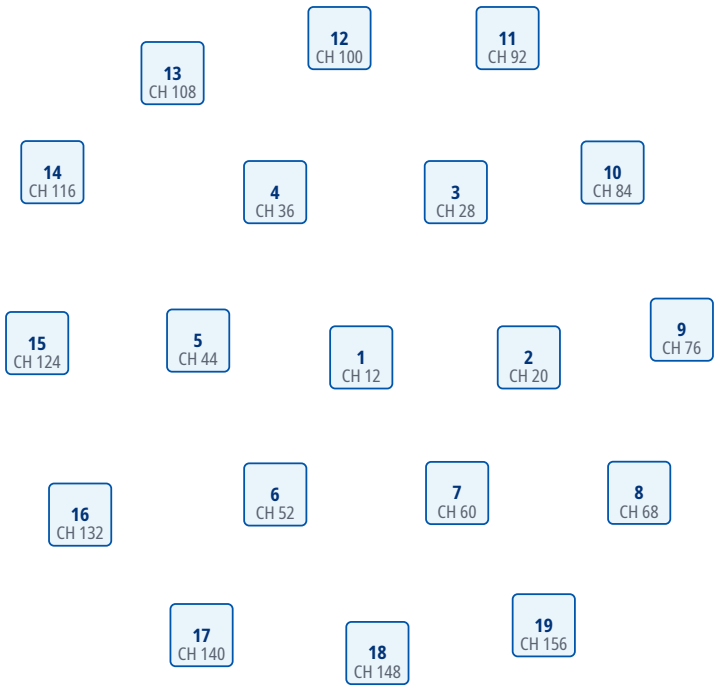
Strobe rate



CH 8 · Extended 16b Mode 27CH

- 20–68: 1–20 Hz
  Strobe
- 80–128: 1–20 Hz
  StrobePulse
- 200–248: 1–20 Hz
  StrobeRandom Pixel

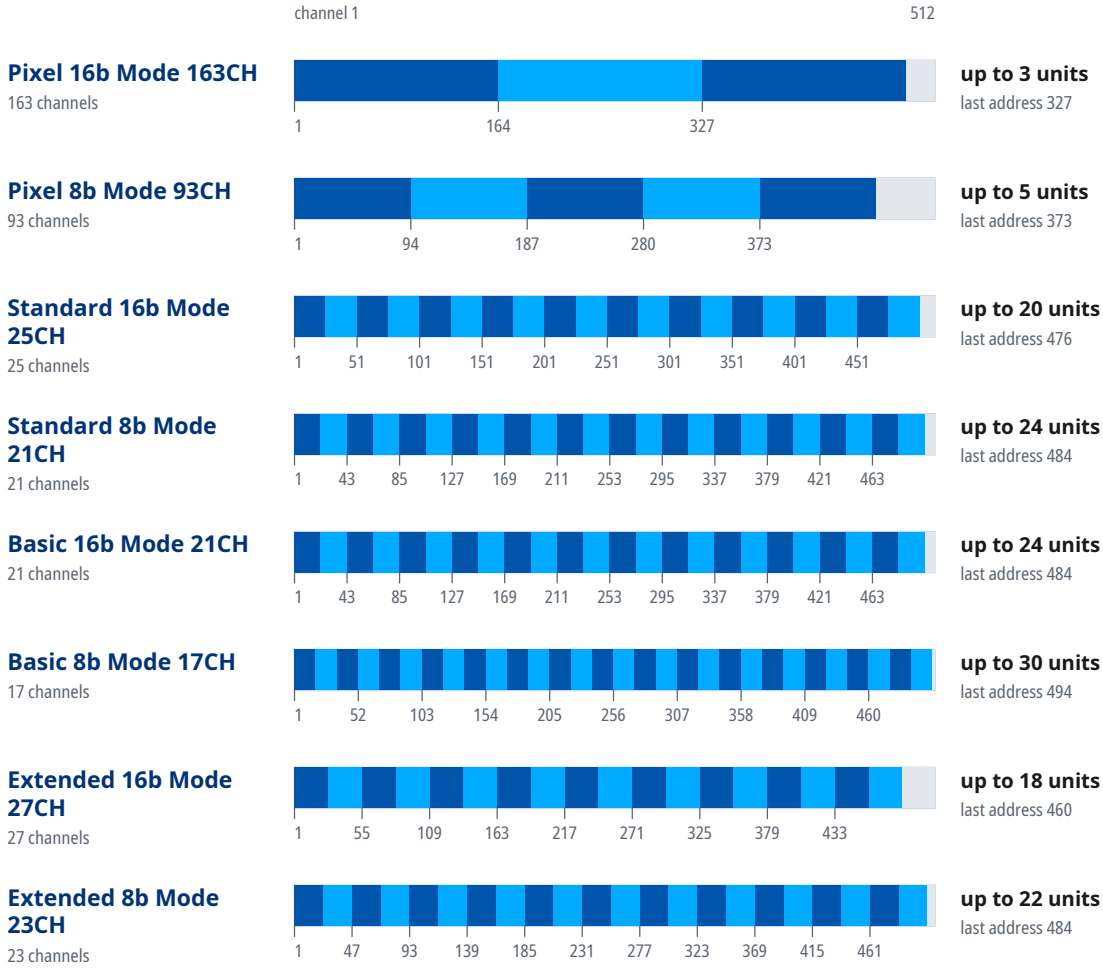
Cells (pixels)



19 cells where the GDTF file places them (seen from above), numbered by their first DMX channel (CH) in the mode “Extended 16b Mode 27CH ”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Pixel 16b Mode 163CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 327	11	U4 · 164	16	U6 · 1
2	164	7	U3 · 1	12	U4 · 327	17	U6 · 164
3	327	8	U3 · 164	13	U5 · 1	18	U6 · 327
4	U2 · 1	9	U3 · 327	14	U5 · 164	19	U7 · 1
5	U2 · 164	10	U4 · 1	15	U5 · 327	20	U7 · 164

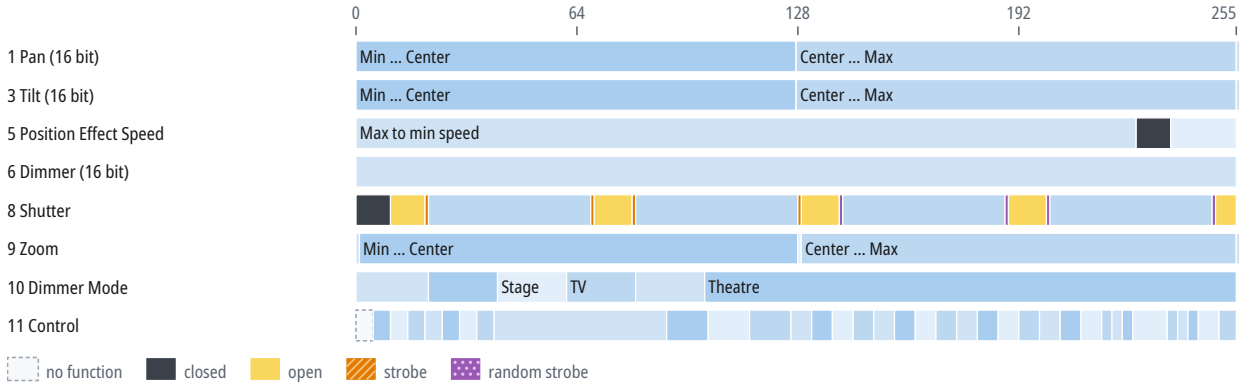
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode Pixel 16b Mode 163CH

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 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Min ... Center
		128–255	Center ... Max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Min ... Center
		128–255	Center ... Max
		255	Max
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Position Effect Speed	0–225	Max to min speed
		226–235	Blackout by movement
		236–255	Empty Channel Set
6	Dimmer	0–255	
7	Dimmer Fine	0–255	Fine adjustment of CH 6
8	Shutter	0–9	Shutter closed
		10–19	Shutter open/closed: shutter open
		20	Strobe effect Slow
		21–67	Strobe effect Slow ... Strobe effect Fast
		68	Strobe effect Fast
		69–79	Shutter open
		80	StrobePulse Slow
		81–127	StrobePulse Slow ... StrobePulse Fast
		128	StrobePulse Fast
		129–139	Shutter open
		140	StrobeRandom Slow
		141–187	StrobeRandom Slow ... StrobeRandom Fast

CH	Function	DMX	Description
8	Shutter (continued)	188	StrobeRandom Fast
		189–199	Shutter open
		200	StrobeRandom Pixel Slow
		201–247	StrobeRandom Pixel Slow ... StrobeRandom Pixel Fast
		248	StrobeRandom Pixel Fast
		249–255	Shutter open
9	Zoom	0	Min
		1–127	Min ... Center
		128	Center
		129–254	Center ... Max
		255	Max
10	Dimmer Mode	0–20	Default unit setting
		21–40	Standard
		41–60	Stage
		61–80	TV
		81–100	Architectural
		101–255	Theatre
11	Control	0–4	No function
		5–9	Invert Pan on (Hold 3s)
		10–14	Invert Pan off (Hold 3s)
		15–19	Invert Tilt on (Hold 3s)
		20–24	Invert Tilt off (Hold 3s)
		25–29	Fan Quiet (Hold 3s)
		30–34	Fan Auto (Hold 3s)
		35–39	Fan High (Hold 3s)
		40–89	Linear Dimmer Curve (hold 3s)
		90–101	Square Dimmer Curve (hold 3s)
		102–113	Inv-Square Dimmer Curve (hold 3s
		114–125	S - Dimmer Curve (hold 3s)
		126–131	Led Freq 900 Hz (hold 3s)
		132–137	Led Freq 1000 Hz (hold 3s)
		138–143	Led Freq 1100 Hz (hold 3s)
		144–149	Led Freq 1200 Hz (hold 3s)
		150–155	Led Freq 1300 Hz (hold 3s)
		156–161	Led Freq 1400 Hz (hold 3s)
		162–167	Led Freq 1500 Hz (hold 3s)
		168–173	Led Freq 2500 Hz (hold 3s)
		174–179	Led Freq 4000 Hz (hold 3s)
		180–185	Led Freq 5000 Hz (hold 3s)
		186–191	Led Freq 10000 Hz (hold 3s)
		192–197	Led Freq 15000 Hz (hold 3s)
		198–203	Led Freq 20000 Hz (hold 3s)

CH	Function	DMX	Description
11	Control (continued)	204–209	Led Freq 25000 Hz (hold 3s)
		210–215	Reset Pan/Tilt (Hold 3s)
		216–218	Reset only Head (Hold 3s)
		219–221	Reset All Functions (Hold 3s)
		222–224	No Used
		225–234	Klingnet Disable
		235–237	Leds controled Klingnet only
		238–240	Leds controled Klingnet + Dmx
		241–243	Klingnet Calibration OFF
		244–249	Klingnet Calibration ON
		250–255	No Used
12	Red 1	0–255	
13	Red 1 Fine	0–255	Fine adjustment of CH 12
14	Green 1	0–255	
15	Green 1 Fine	0–255	Fine adjustment of CH 14
16	Blue 1	0–255	
17	Blue 1 Fine	0–255	Fine adjustment of CH 16
18	White 1	0–255	
19	White 1 Fine	0–255	Fine adjustment of CH 18

CH 12–163: 19 cells of 8 channels each. Every cell works as cell 1 in the table above (CH 12–19); the table below gives each cell's channel numbers.

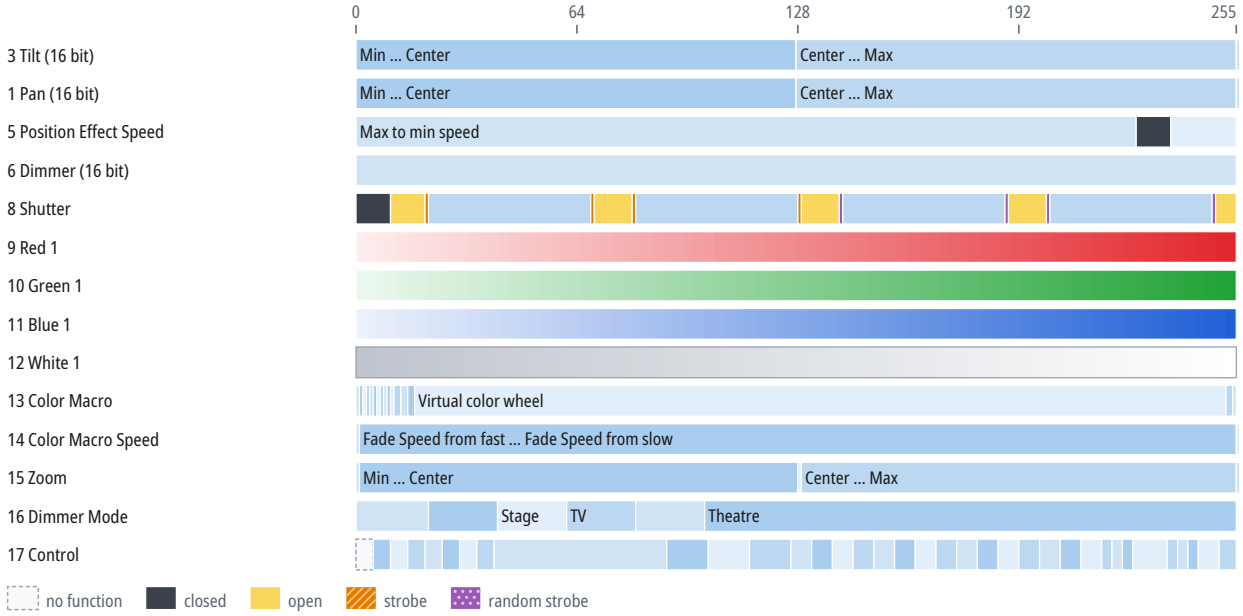
Cell	Red	Red Fine	Green	Green Fine	Blue	Blue Fine	White	White Fine
1	12	13	14	15	16	17	18	19
2	20	21	22	23	24	25	26	27
3	28	29	30	31	32	33	34	35
4	36	37	38	39	40	41	42	43
5	44	45	46	47	48	49	50	51
6	52	53	54	55	56	57	58	59
7	60	61	62	63	64	65	66	67
8	68	69	70	71	72	73	74	75
9	76	77	78	79	80	81	82	83
10	84	85	86	87	88	89	90	91
11	92	93	94	95	96	97	98	99
12	100	101	102	103	104	105	106	107
13	108	109	110	111	112	113	114	115
14	116	117	118	119	120	121	122	123
15	124	125	126	127	128	129	130	131
16	132	133	134	135	136	137	138	139
17	140	141	142	143	144	145	146	147
18	148	149	150	151	152	153	154	155
19	156	157	158	159	160	161	162	163

Mode Pixel 8b Mode 93CH

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 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Pixel 16b Mode 163CH” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Pixel 16b Mode 163CH” (p. 10)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Position Effect Speed		Same as CH 5 in the mode “Pixel 16b Mode 163CH” (p. 10)
6	Dimmer	0–255	
7	Dimmer Fine	0–255	Fine adjustment of CH 6
8	Shutter		Same as CH 8 in the mode “Pixel 16b Mode 163CH” (p. 10)
9	Red 1	0–255	
10	Green 1	0–255	
11	Blue 1	0–255	
12	White 1	0–255	
13	Color Macro	0	RGBW MAX
		1	10000K
		2	8000K
		3	6500K
		4	5600K
		5	5000K
		6	4500K
		7	4000K

CH	Function	DMX	Description
13	Color Macro (continued)	8	3200K
		9	3000K
		10	2700K
		11–12	Tungsten emulation 3200k
		13–14	Tungsten emulation 4000k
		15–16	Tungsten emulation 4500k
		17–251	Virtual color wheel
		252–253	Color Wheel rotation between the color level 12 to 250
		254–255	Color rotation backward
14	Color Macro Speed	0	Fade Speed from fast
		1–254	Fade Speed from fast ... Fade Speed from slow
		255	Fade Speed from slow
15	Zoom		Same as CH 9 in the mode “Pixel 16b Mode 163CH” (p. 11)
16	Dimmer Mode		Same as CH 10 in the mode “Pixel 16b Mode 163CH” (p. 11)
17	Control		Same as CH 11 in the mode “Pixel 16b Mode 163CH” (p. 11)
18	Red 2	0–255	
19	Green 2	0–255	
20	Blue 2	0–255	
21	White 2	0–255	

CH 18–93: 19 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 18–21); the table below gives each cell's channel numbers.

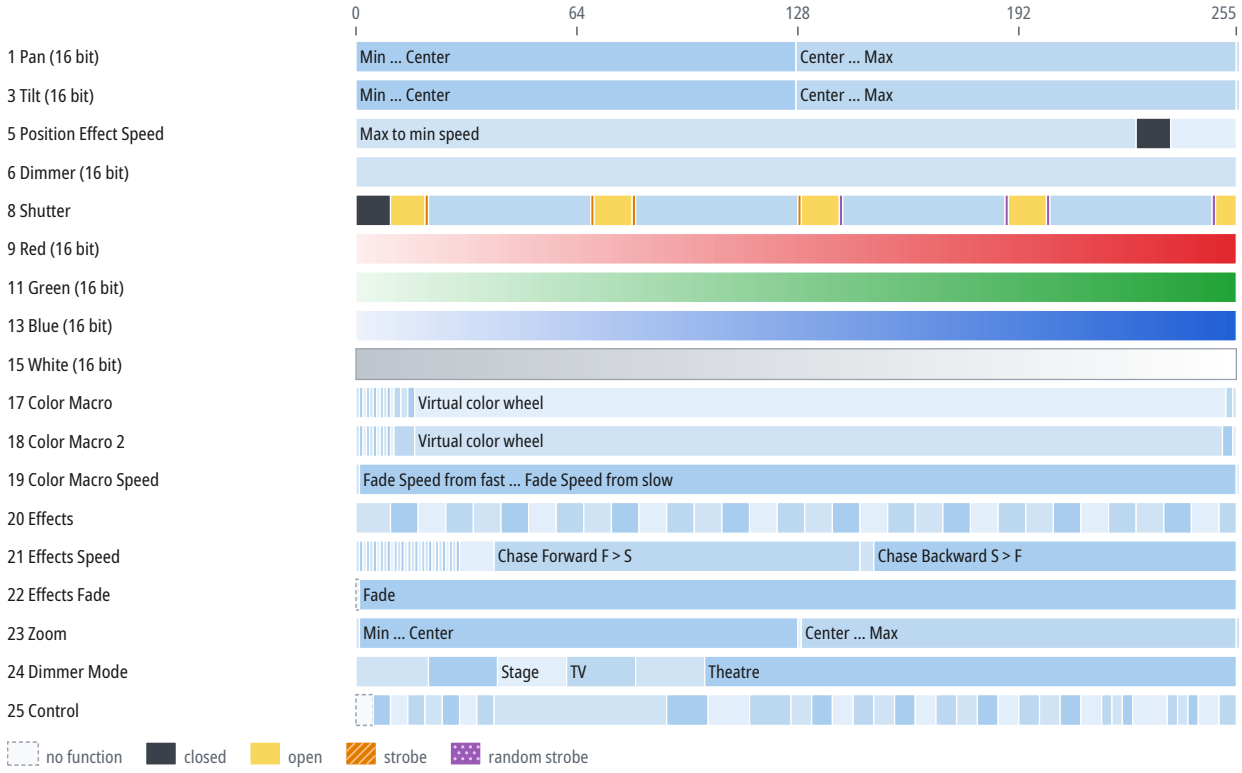
Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	18	19	20	21	2	22	23	24	25
3	26	27	28	29	4	30	31	32	33
5	34	35	36	37	6	38	39	40	41
7	42	43	44	45	8	46	47	48	49
9	50	51	52	53	10	54	55	56	57
11	58	59	60	61	12	62	63	64	65
13	66	67	68	69	14	70	71	72	73
15	74	75	76	77	16	78	79	80	81
17	82	83	84	85	18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

Mode Standard 16b Mode 25CH

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 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Pixel 16b Mode 163CH” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Pixel 16b Mode 163CH” (p. 10)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Position Effect Speed		Same as CH 5 in the mode “Pixel 16b Mode 163CH” (p. 10)
6	Dimmer	0–255	
7	Dimmer Fine	0–255	Fine adjustment of CH 6
8	Shutter		Same as CH 8 in the mode “Pixel 16b Mode 163CH” (p. 10)
9	Red	0–255	
10	Red Fine	0–255	Fine adjustment of CH 9
11	Green	0–255	
12	Green Fine	0–255	Fine adjustment of CH 11
13	Blue	0–255	
14	Blue Fine	0–255	Fine adjustment of CH 13
15	White	0–255	
16	White Fine	0–255	Fine adjustment of CH 15

CH	Function	DMX	Description
17	Color Macro		Virtual Wheel Color forground
		0	RGBW MAX
		1	10000K
		2	8000K
		3	6500K
		4	5600K
		5	5000K
		6	4500K
		7	4000K
		8	3200K
		9	3000K
		10	2700K
		11–12	Tungsten emulation 3200k
		13–14	Tungsten emulation 4000k
		15–16	Tungsten emulation 4500k
		17–251	Virtual color wheel
		252–253	Color Wheel rotation between the color level 12 to 250
		254–255	Color rotation backward
18	Color Macro 2		Virtual Wheel Color Background
		0	RGBW MAX
		1	10000K
		2	8000K
		3	6500K
		4	5600K
		5	5000K
		6	4500K
		7	4000K
		8	3200K
		9	3000K
		10	2700K
		11–16	No effect
		17–250	Virtual color wheel
		251–253	Color Wheel rotation between the color level 12 to 250
		254–255	Color rotation backward
19	Color Macro Speed		Same as CH 14 in the mode “Pixel 8b Mode 93CH” (p. 14)
20	Effects		Patterns programs
		0–9	No Program
		10–17	Program 1
		18–25	Program 2
		26–33	Program 3
		34–41	Program 4
		42–49	Program 5

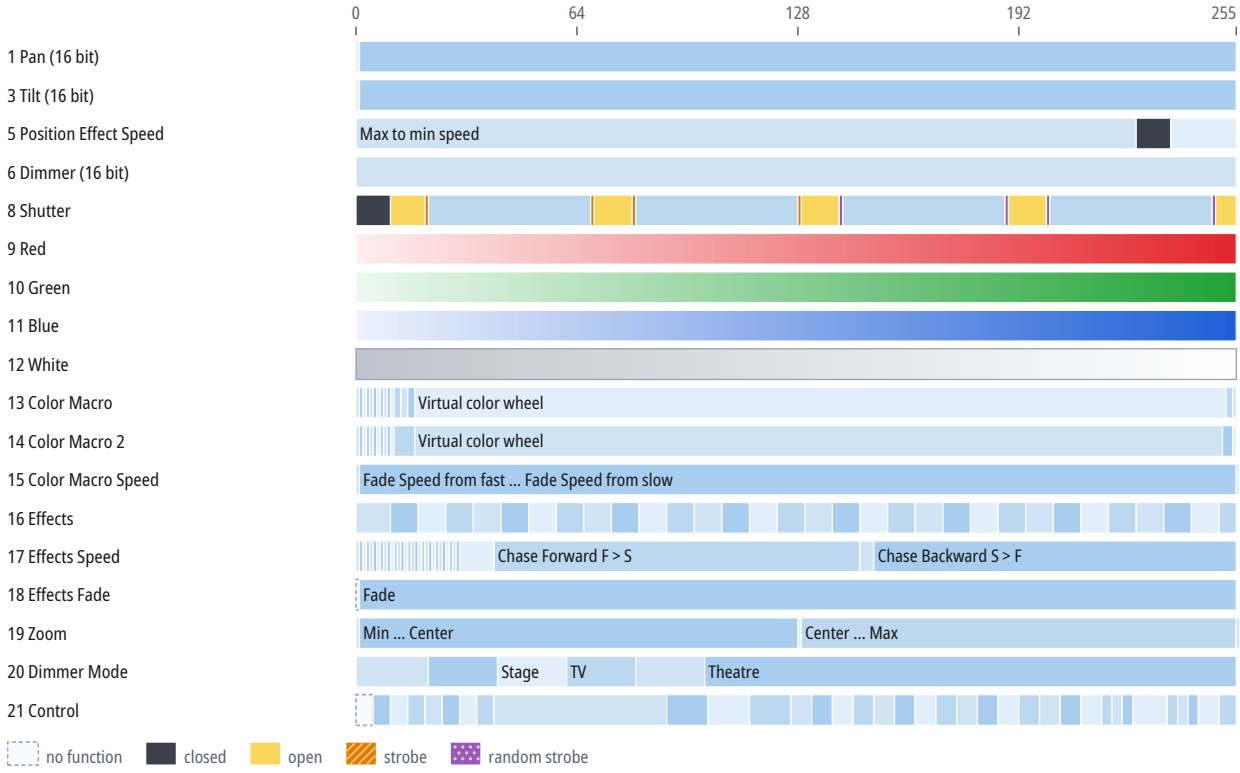
CH	Function	DMX	Description
20	Effects (continued)	50–57	Program 6
		58–65	Program 7
		66–73	Program 8
		74–81	Program 9
		82–89	Program 10
		90–97	Program 11
		98–105	Program 12
		106–113	Program 13
		114–121	Program 14
		122–129	Program 15
		130–137	Program 16
		138–145	Program 17
		146–153	Program 18
		154–161	Program 19
		162–169	Program 20
		170–177	Program 21
		178–185	Program 22
		186–193	Program 23
		194–201	Program 24
		202–209	Program 25
		210–217	Program 26
		218–225	Program 27
		226–233	Program 28
		234–241	Program 29
		242–249	Program 30
		250–255	No use
21	Effects Speed		Patterns Programs manual step
		0	Patterns Programs manual step
		1–29	Static step 1...29
		30–39	Static step 30
		40–145	Chase Forward F > S
		146–149	Stop
		150–255	Chase Backward S > F
22	Effects Fade		Programs Fade
		0	No Function
		1–255	Fade
23	Zoom		Same as CH 9 in the mode “Pixel 16b Mode 163CH” (p. 11)
24	Dimmer Mode		Same as CH 10 in the mode “Pixel 16b Mode 163CH” (p. 11)
25	Control		Same as CH 11 in the mode “Pixel 16b Mode 163CH” (p. 11)

Mode Standard 8b Mode 21CH

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 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0	Min ... Center
		0	Center ... Max
		0	Max
		1–255	Pan 1
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0	Min ... Center
		0	Center ... Max
		0	Max
		1–255	Tilt 1
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Position Effect Speed		Same as CH 5 in the mode “Pixel 16b Mode 163CH” (p. 10)
6	Dimmer	0–255	
7	Dimmer Fine	0–255	Fine adjustment of CH 6
8	Shutter		Same as CH 8 in the mode “Pixel 16b Mode 163CH” (p. 10)
9	Red	0–255	
10	Green	0–255	

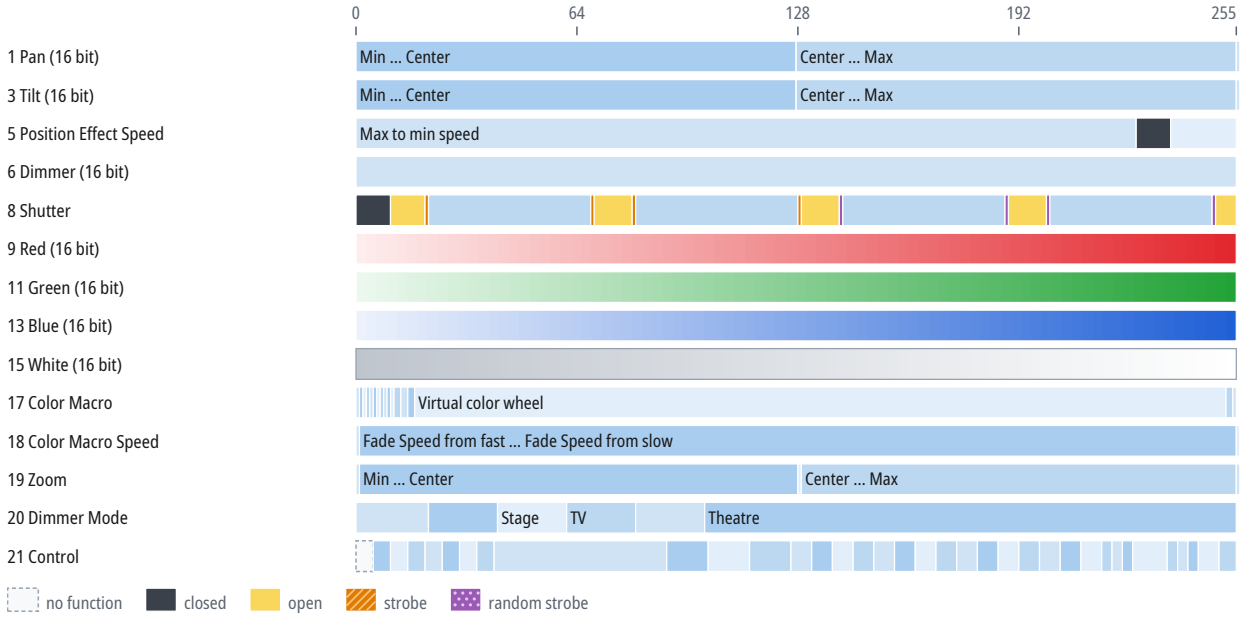
CH	Function	DMX	Description
11	Blue	0–255	
12	White	0–255	
13	Color Macro		Same as CH 17 in the mode “Standard 16b Mode 25CH” (p. 16)
14	Color Macro 2		Same as CH 18 in the mode “Standard 16b Mode 25CH” (p. 16)
15	Color Macro Speed		Same as CH 14 in the mode “Pixel 8b Mode 93CH” (p. 14)
16	Effects		Same as CH 20 in the mode “Standard 16b Mode 25CH” (p. 16)
17	Effects Speed		Same as CH 21 in the mode “Standard 16b Mode 25CH” (p. 17)
18	Effects Fade		Same as CH 22 in the mode “Standard 16b Mode 25CH” (p. 17)
19	Zoom		Same as CH 9 in the mode “Pixel 16b Mode 163CH” (p. 11)
20	Dimmer Mode		Same as CH 10 in the mode “Pixel 16b Mode 163CH” (p. 11)
21	Control		Same as CH 11 in the mode “Pixel 16b Mode 163CH” (p. 11)

Mode Basic 16b Mode 21CH

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 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Pixel 16b Mode 163CH” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Pixel 16b Mode 163CH” (p. 10)
4	Tilt Fine	0–255	Fine adjustment of CH 3

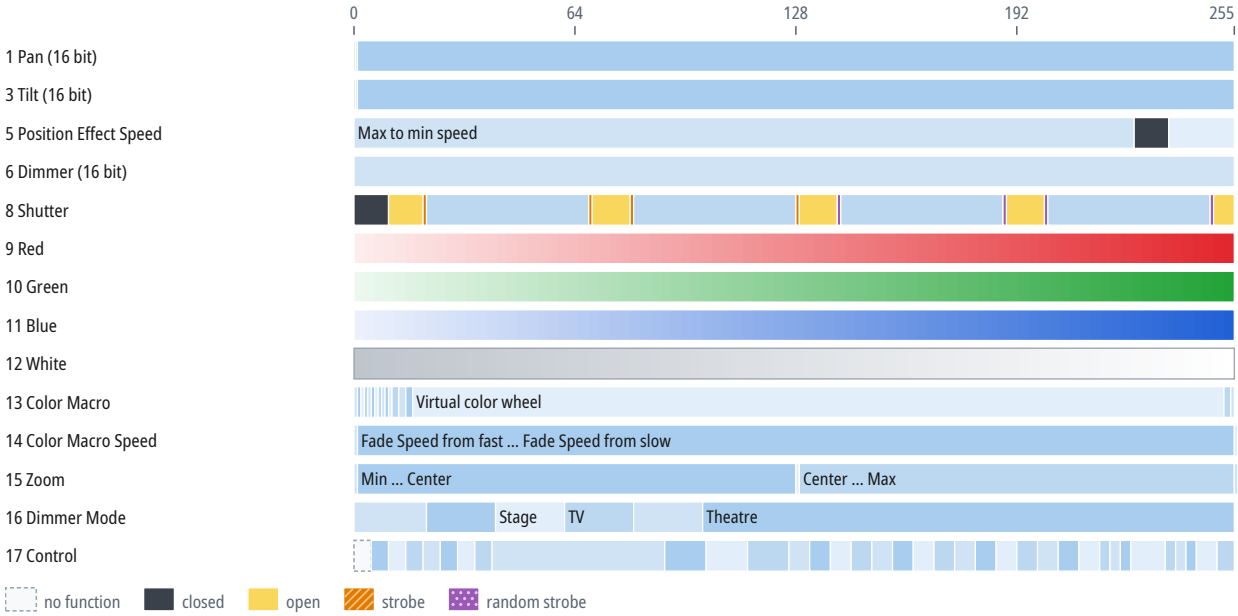
CH	Function	DMX	Description
5	Position Effect Speed		Same as CH 5 in the mode “Pixel 16b Mode 163CH” (p. 10)
6	Dimmer	0–255	
7	Dimmer Fine	0–255	Fine adjustment of CH 6
8	Shutter		Same as CH 8 in the mode “Pixel 16b Mode 163CH” (p. 10)
9	Red	0–255	
10	Red Fine	0–255	Fine adjustment of CH 9
11	Green	0–255	
12	Green Fine	0–255	Fine adjustment of CH 11
13	Blue	0–255	
14	Blue Fine	0–255	Fine adjustment of CH 13
15	White	0–255	
16	White Fine	0–255	Fine adjustment of CH 15
17	Color Macro		Same as CH 17 in the mode “Standard 16b Mode 25CH” (p. 16)
18	Color Macro Speed		Same as CH 14 in the mode “Pixel 8b Mode 93CH” (p. 14)
19	Zoom		Same as CH 9 in the mode “Pixel 16b Mode 163CH” (p. 11)
20	Dimmer Mode		Same as CH 10 in the mode “Pixel 16b Mode 163CH” (p. 11)
21	Control		Same as CH 11 in the mode “Pixel 16b Mode 163CH” (p. 11)

Mode Basic 8b Mode 17CH

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 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255.

Channel functions at a glance



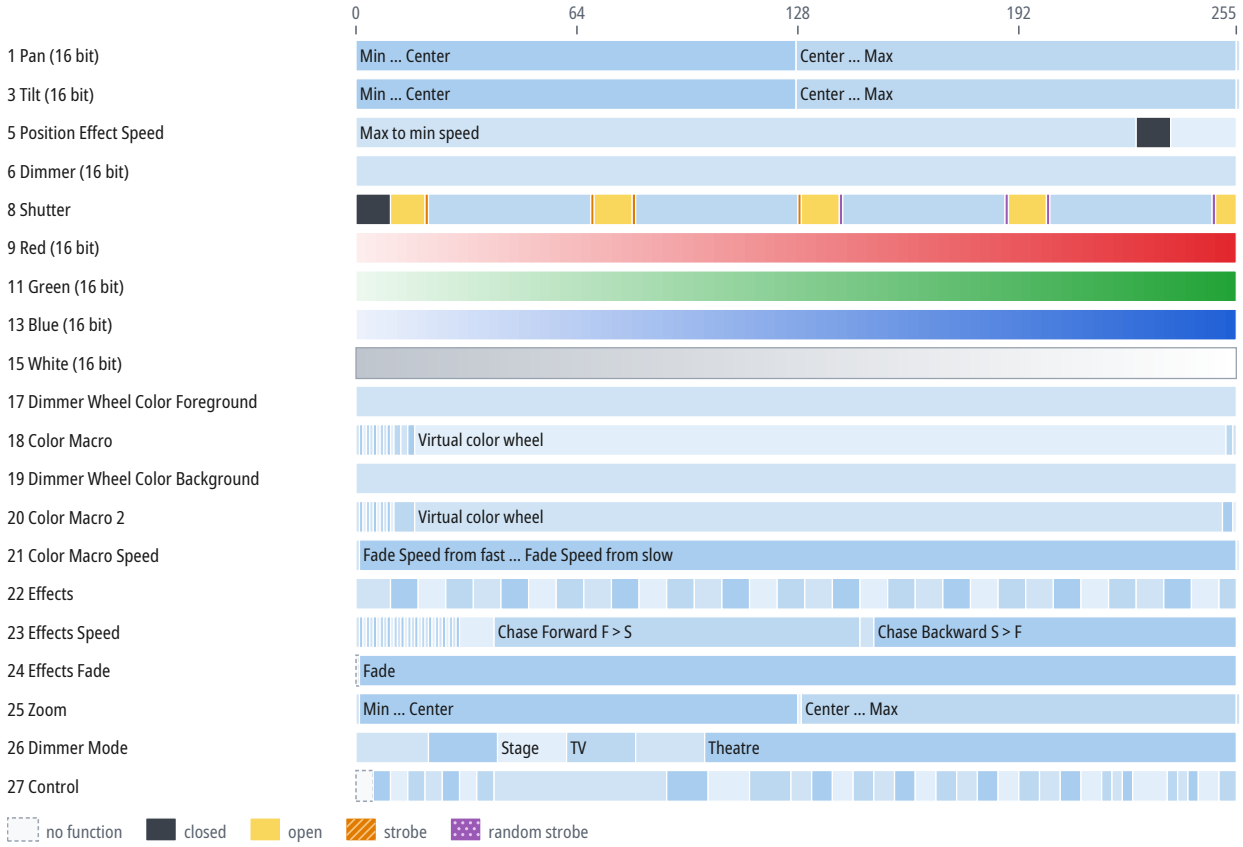
CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Standard 8b Mode 21CH” (p. 18)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Standard 8b Mode 21CH” (p. 18)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Position Effect Speed		Same as CH 5 in the mode “Pixel 16b Mode 163CH” (p. 10)
6	Dimmer	0–255	
7	Dimmer Fine	0–255	Fine adjustment of CH 6
8	Shutter		Same as CH 8 in the mode “Pixel 16b Mode 163CH” (p. 10)
9	Red	0–255	
10	Green	0–255	
11	Blue	0–255	
12	White	0–255	
13	Color Macro		Same as CH 17 in the mode “Standard 16b Mode 25CH” (p. 16)
14	Color Macro Speed		Same as CH 14 in the mode “Pixel 8b Mode 93CH” (p. 14)
15	Zoom		Same as CH 9 in the mode “Pixel 16b Mode 163CH” (p. 11)
16	Dimmer Mode		Same as CH 10 in the mode “Pixel 16b Mode 163CH” (p. 11)
17	Control		Same as CH 11 in the mode “Pixel 16b Mode 163CH” (p. 11)

Mode Extended 16b Mode 27CH

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 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”; CH 17 Dimmer Wheel Color Foreground above 0; CH 19 Dimmer Wheel Color Background above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Pixel 16b Mode 163CH” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Pixel 16b Mode 163CH” (p. 10)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Position Effect Speed		Same as CH 5 in the mode “Pixel 16b Mode 163CH” (p. 10)
6	Dimmer	0–255	
7	Dimmer Fine	0–255	Fine adjustment of CH 6
8	Shutter		Same as CH 8 in the mode “Pixel 16b Mode 163CH” (p. 10)
9	Red	0–255	
10	Red Fine	0–255	Fine adjustment of CH 9
11	Green	0–255	
12	Green Fine	0–255	Fine adjustment of CH 11
13	Blue	0–255	

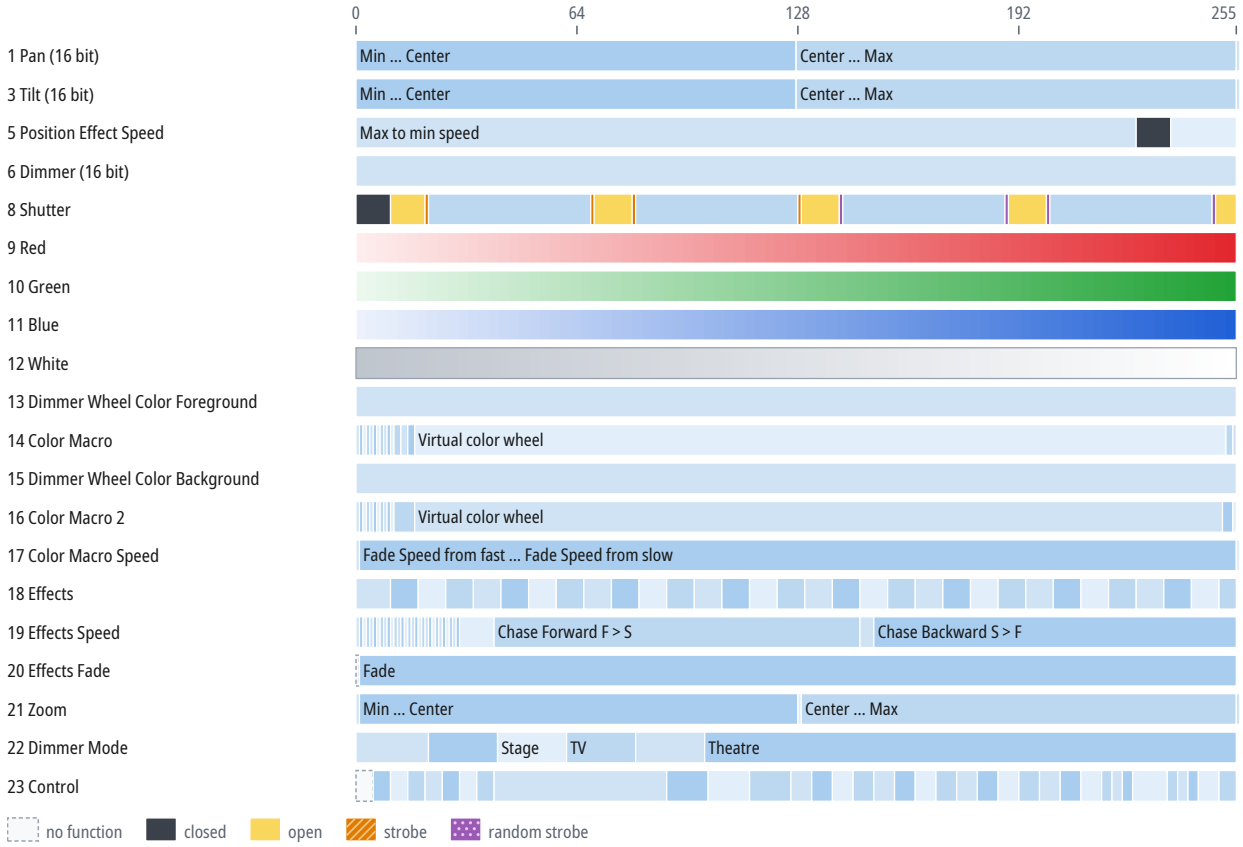
CH	Function	DMX	Description
14	Blue Fine	0–255	Fine adjustment of CH 13
15	White	0–255	
16	White Fine	0–255	Fine adjustment of CH 15
17	Dimmer Wheel Color Foreground	0–255	
18	Color Macro		Same as CH 17 in the mode “Standard 16b Mode 25CH” (p. 16)
19	Dimmer Wheel Color Background	0–255	
20	Color Macro 2		Same as CH 18 in the mode “Standard 16b Mode 25CH” (p. 16)
21	Color Macro Speed		Same as CH 14 in the mode “Pixel 8b Mode 93CH” (p. 14)
22	Effects		Same as CH 20 in the mode “Standard 16b Mode 25CH” (p. 16)
23	Effects Speed		Same as CH 21 in the mode “Standard 16b Mode 25CH” (p. 17)
24	Effects Fade		Same as CH 22 in the mode “Standard 16b Mode 25CH” (p. 17)
25	Zoom		Same as CH 9 in the mode “Pixel 16b Mode 163CH” (p. 11)
26	Dimmer Mode		Same as CH 10 in the mode “Pixel 16b Mode 163CH” (p. 11)
27	Control		Same as CH 11 in the mode “Pixel 16b Mode 163CH” (p. 11)

Mode Extended 8b Mode 23CH

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 Dimmer above 0; CH 8 Shutter at 10–19, 69–79, 129–139, 189–199 or 249–255 “shutter open”; CH 13 Dimmer Wheel Color Foreground above 0; CH 15 Dimmer Wheel Color Background above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Pixel 16b Mode 163CH” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Pixel 16b Mode 163CH” (p. 10)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Position Effect Speed		Same as CH 5 in the mode “Pixel 16b Mode 163CH” (p. 10)
6	Dimmer	0–255	
7	Dimmer Fine	0–255	Fine adjustment of CH 6
8	Shutter		Same as CH 8 in the mode “Pixel 16b Mode 163CH” (p. 10)
9	Red	0–255	
10	Green	0–255	
11	Blue	0–255	
12	White	0–255	
13	Dimmer Wheel Color Foreground	0–255	

CH	Function	DMX	Description
14	Color Macro		Same as CH 17 in the mode “Standard 16b Mode 25CH” (p. 16)
15	Dimmer Wheel Color Background	0–255	
16	Color Macro 2		Same as CH 18 in the mode “Standard 16b Mode 25CH” (p. 16)
17	Color Macro Speed		Same as CH 14 in the mode “Pixel 8b Mode 93CH” (p. 14)
18	Effects		Same as CH 20 in the mode “Standard 16b Mode 25CH” (p. 16)
19	Effects Speed		Same as CH 21 in the mode “Standard 16b Mode 25CH” (p. 17)
20	Effects Fade		Same as CH 22 in the mode “Standard 16b Mode 25CH” (p. 17)
21	Zoom		Same as CH 9 in the mode “Pixel 16b Mode 163CH” (p. 11)
22	Dimmer Mode		Same as CH 10 in the mode “Pixel 16b Mode 163CH” (p. 11)
23	Control		Same as CH 11 in the mode “Pixel 16b Mode 163CH” (p. 11)

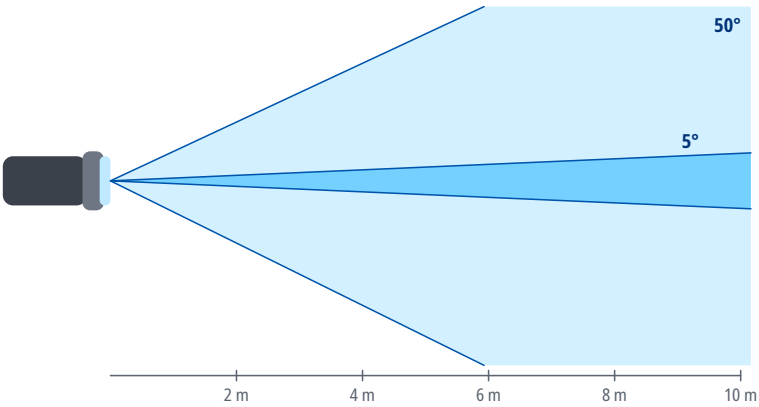
10 Technical specifications

Parameter	Value
Light	
Light source	LED
Optics	
Zoom	5–50°
Movement	
Pan	540°
Tilt	270°
Control	
DMX connection	5-pin XLR IN/OUT
RJ45 connectors	RJ45 IN
RDM	yes (manufacturer ID 0x09E9, device model ID 0x000F)
Electrical	
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	19 kg
Operating environment	
Operating temperature	-40 to 45 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–20 Hz

Spot diameter



Distance	Ø 5°	Ø 50°
2 m	0.17 m	1.9 m
4 m	0.35 m	3.7 m
6 m	0.52 m	5.6 m
8 m	0.7 m	7.5 m
10 m	0.87 m	9.3 m
15 m	1.3 m	14 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.