DMX REFERENCE

SUPER DOTLINE (AV GROUP TEST)

SUPER DOTLINE(TB 1060 INT)

ACME



Manufacturer	ACME
GDTF file	ACME_SUPER_DOTLINE_AV_GROUP_TEST_63379.gdtf
GDTF revision	v1.2 (Correct to degree value) · 2024-05-06
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1 About this manual

This document describes the SUPER DOTLINE(TB 1060 INT) by ACME. It was compiled from the GDTF file ACME_SUPER_DOTLINE_AV_GROUP_TEST_63379.gdtf from the GDTF-Share library.

File revision: “v1.2 (Correct to degree value)”.

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 ACME; 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	23 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Mode 1 168 DMX	168	3	1, 169, 337
Mode 2 108 DMX	108	4	1, 109, 217, 325
Mode 3 99 DMX	99	5	1, 100, 199, 298, ...
Mode 4 27 DMX	27	18	1, 28, 55, 82, ...
Mode 5 17 DMX	17	30	1, 18, 35, 52, ...
Mode 6 8 DMX	8	64	1, 9, 17, 25, ...

No light? Check these channels

- Mode 1 168 DMX: CH 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255
- Mode 2 108 DMX: CH 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255
- Mode 3 99 DMX: CH 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255
- Mode 4 27 DMX: CH 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255
- Mode 5 17 DMX: CH 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255
- Mode 6 8 DMX: CH 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255



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

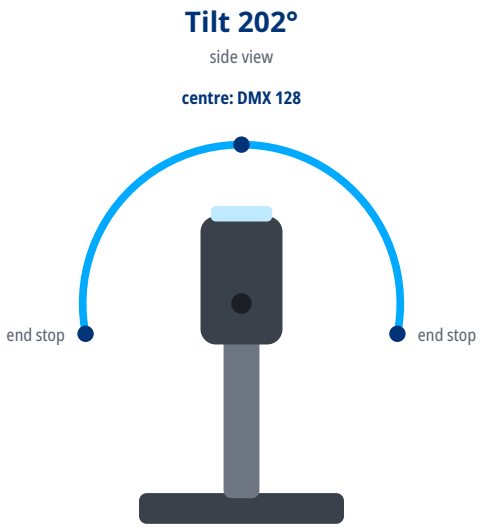
- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them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

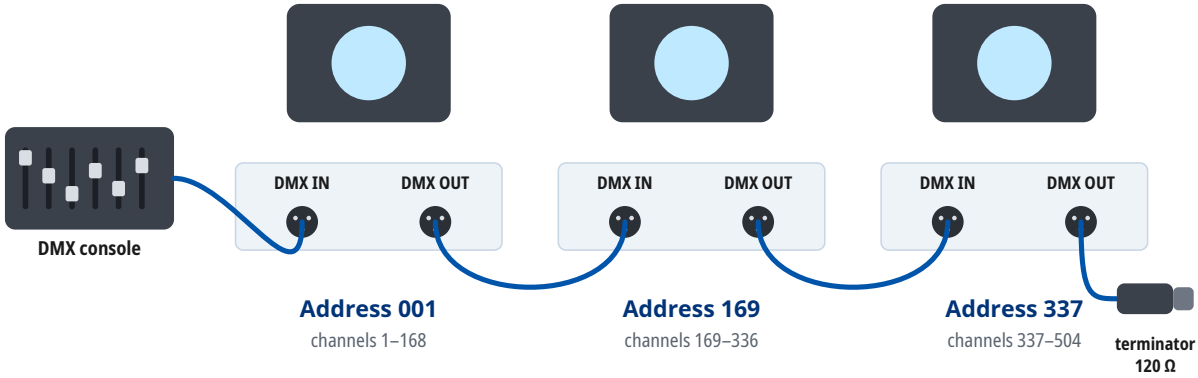
- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 23 kg.
- 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 1 168 DMX: every unit occupies 168 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

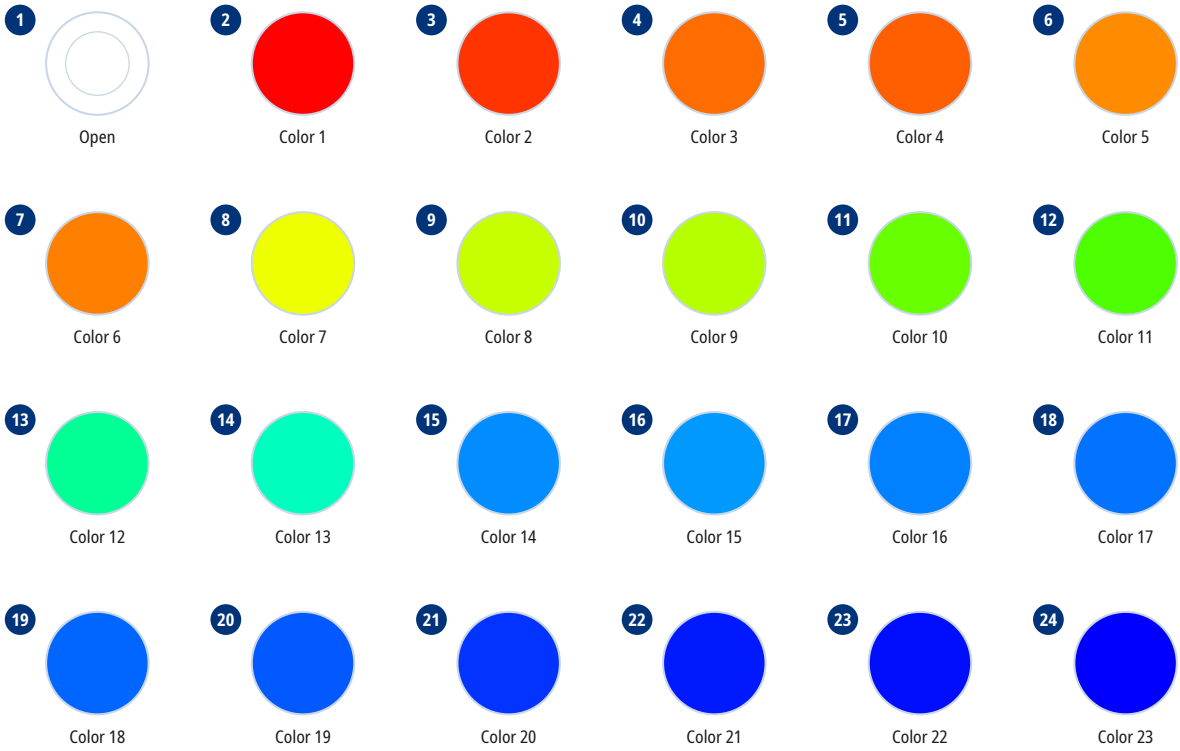
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Mode 1 168 DMX”: 168.
- Choose start addresses so that the channels of individual devices do not overlap and the last 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 “Mode 1 168 DMX”, you can use, for example, the start addresses 1, 169, 337.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

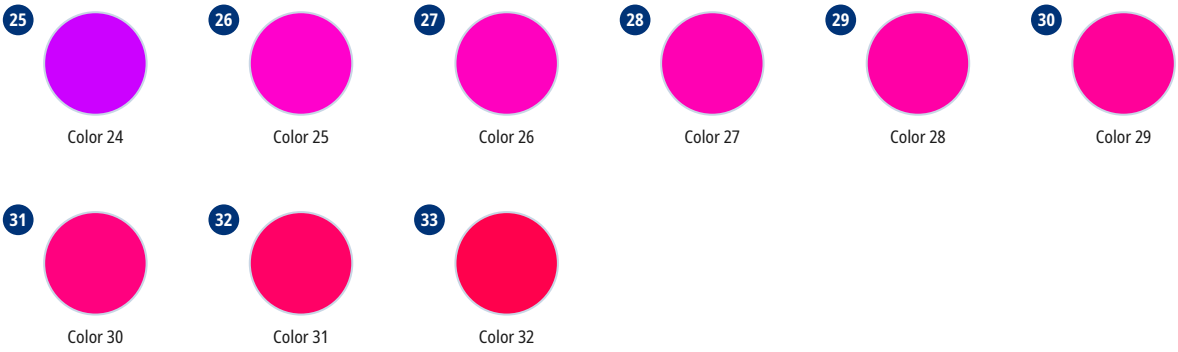
8 Functions at a glance

Functions in each DMX mode

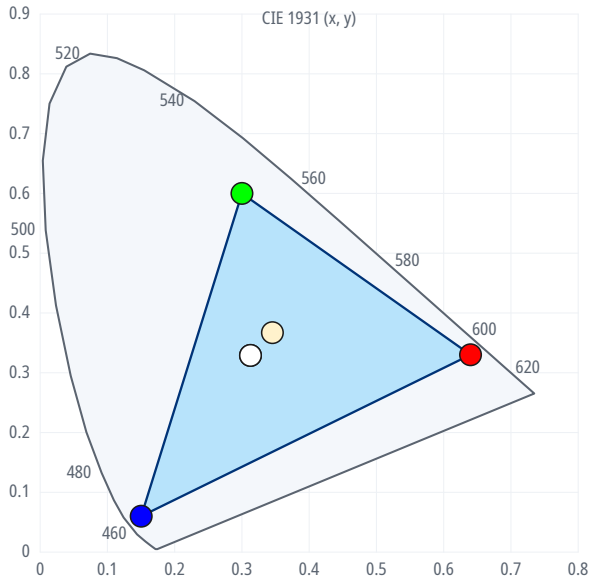
	Mode 1 168 DMX 168 channels	Mode 2 108 DMX 108 channels	Mode 3 99 DMX 99 channels	Mode 4 27 DMX 27 channels	Mode 5 17 DMX 17 channels	Mode 6 8 DMX 8 channels
Pan / Tilt	1	1	1	1	1	1
Dimmer	4	4	4	4	4	4
Shutter / strobe	5–7	5–7	5–7	5–7	5–7	5–7
Color mixing	9–168	9–108	9–99	9–12, 17, 18, 22–24	9–17	
Color temperature				13, 19		
Color wheel				14, 25		
Zoom	3	3	3	3	3	3
Effects / macros				15, 20, 26		
Pixel control	10 + 24 + 24 cells	10 + 12 + 12 cells	10 + 24 cells	✓	✓	

Color wheel





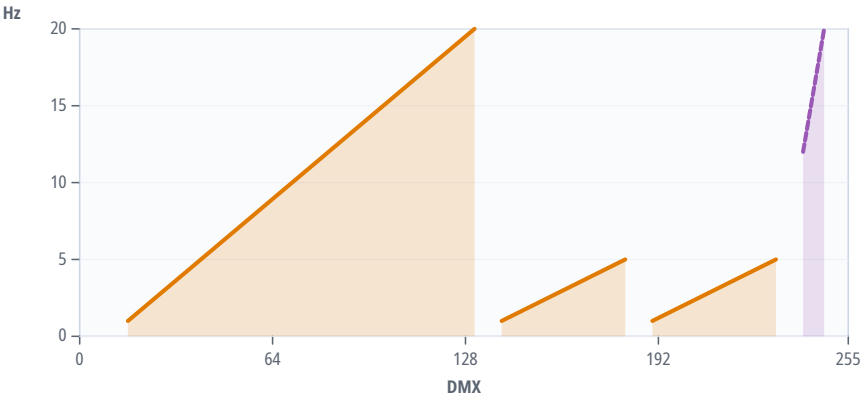
LED colors and the colors they mix



LED	x	y
Red	0.640	0.330
Green	0.300	0.600
Blue	0.150	0.060
White	0.313	0.329
WW	0.345	0.367
CW	0.313	0.329

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

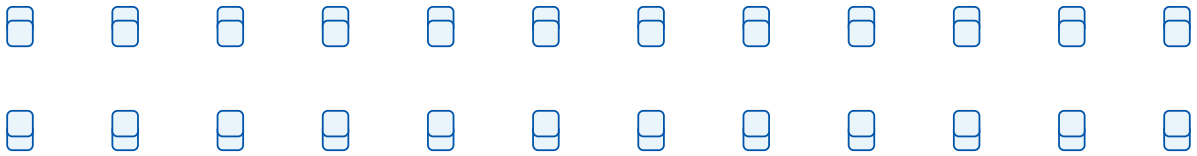
Strobe rate



CH 5 · Mode 1 168 DMX

- 16–131: 1–20 Hz
  Strboe
- 140–181: 1–5 Hz
  Pulse Open
- 190–231: 1–5 Hz
  Pulse Close
- 240–247: 12–20 Hz
  Strobe Random

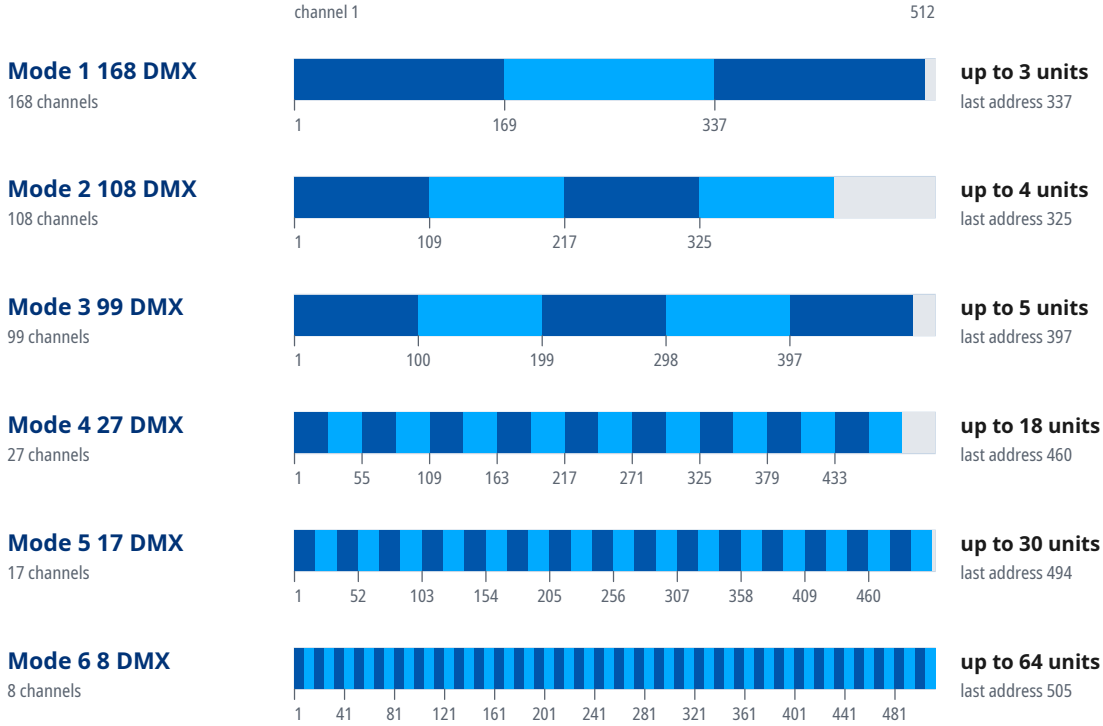
Cells (pixels)



Cells where the GDTF file places them (seen from above), 48 in all in the mode “Mode 1 168 DMX”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Mode 1 168 DMX”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 337	11	U4 · 169	16	U6 · 1
2	169	7	U3 · 1	12	U4 · 337	17	U6 · 169
3	337	8	U3 · 169	13	U5 · 1	18	U6 · 337
4	U2 · 1	9	U3 · 337	14	U5 · 169	19	U7 · 1
5	U2 · 169	10	U4 · 1	15	U5 · 337	20	U7 · 169

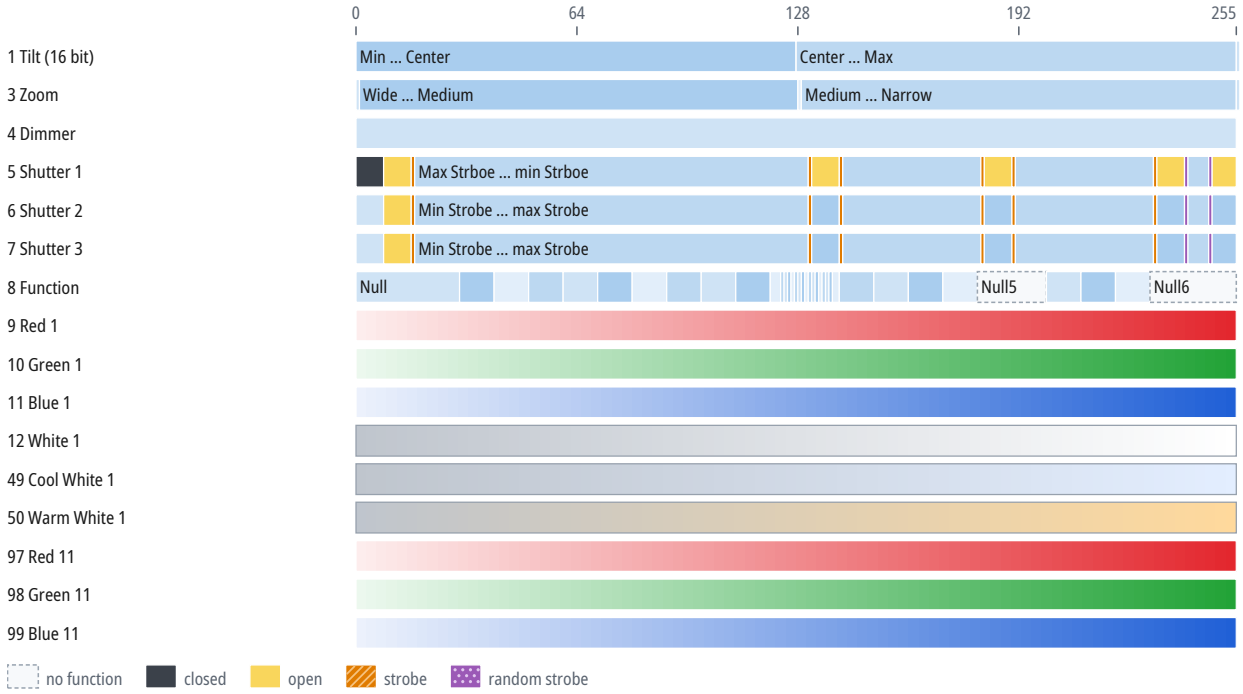
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 1 168 DMX

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 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 4 Dimmer 100, CH 5 Shutter 1 12, CH 6 Shutter 2 12, CH 7 Shutter 3 12, CH 9 Red 255 (the same in each of the 10 cells), CH 10 Green 255 (the same in each of the 10 cells), CH 11 Blue 255 (the same in each of the 10 cells), CH 12 White 0 (the same in each of the 10 cells), CH 49 Cool White 255 (the same in each of the 24 cells), CH 50 Warm White 0 (the same in each of the 24 cells), CH 97 Red 255 (the same in each of the 24 cells), CH 98 Green 255 (the same in each of the 24 cells), CH 99 Blue 255 (the same in each of the 24 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt	0–127	Min ... Center
		127–255	Center ... Max
		255	Max
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Zoom	0	Wide
		1–127	Wide ... Medium
		128	Medium
		129–254	Medium ... Narrow
		255	Narrow
4	Dimmer	0–255	
5	Shutter 1	0–7	OFF: Closed
		8–15	Open

CH	Function	DMX	Description
5	Shutter 1 (continued)	16	Max Strboe
		17–130	Max Strboe ... min Strboe
		131	Min Strboe
		132–139	Open 2
		140	Min PulseOpen
		141–180	Min PulseOpen ... max PulseOpen
		181	Max PulseOpen
		182–189	Open 3
		190	Min PulseClose
		191–230	Min PulseClose ... max PulseClose
		231	Max PulseClose
		232–239	Open 4
		240	Min Strobe Ran
		241–246	Min Strobe Ran ... max Strobe Ran
		247	Max Strobe Ran
		248–255	Open 5
6	Shutter 2	0–7	OFF
		8–15	Open
		16	Min Strobe
		17–130	Min Strobe ... max Strobe
		131	Max Strobe
		132–139	Open 2
		140	Min PulseOpen
		141–180	Min PulseOpen ... max PulseOpen
		181	Max PulseOpen
		182–189	Open 3
		190	Min PulseClose
		191–230	Min PulseClose ... max PulseClose
		231	Max PulseClose
		232–239	Open 4
		240	Min Strobe Ran
		241–246	Min Strobe Ran ... max Strobe Ran
		247	Max Strobe Ran
		248–255	Open 5
7	Shutter 3	0–7	OFF
		8–15	Open
		16	Min Strobe
		17–130	Min Strobe ... max Strobe
		131	Max Strobe
		132–139	Open 2
		140	Min PulseOpen
		141–180	Min PulseOpen ... max PulseOpen

CH	Function	DMX	Description
7	Shutter 3 (continued)	181	Max PulseOpen
		182–189	Open 3
		190	Min PulseClose
		191–230	Min PulseClose ... max PulseClose
		231	Max PulseClose
		232–239	Open 4
		240	Min Strobe Ran
		241–246	Min Strobe Ran ... max Strobe Ran
		247	Max Strobe Ran
		248–255	Open 5
8	Function	0–29	Null
		30–39	Dim Linear
		40–49	Square Law
		50–59	Inv SQ Law
		60–69	S Curve
		70–79	Standard
		80–89	Null2
		90–99	Quiet
		100–109	Frequency Enable
		110–119	Frequency Disable
		120–122	Null3
		123	900HZ
		124	1000HZ
		125	1100HZ
		126	1200HZ
		127	1300HZ
		128	1400HZ
		129	1500HZ
		130	2500HZ
		131	4000HZ
		132	5000HZ
		133	6000HZ
		134	10K HZ
		135	15K HZ
		136	20K HZ
		137	25K HZ
		138–139	Null4
		140–149	Tilt Reset
		150–159	Zoom Reset
		160–169	CCI ON
		170–179	CCI OFF
		180–199	Null5

CH	Function	DMX	Description
8	Function (continued)	200–209	Reset
		210–219	Dim Fast
		220–229	Dim Smooth
		230–255	Null6
9	Red 1	0–255	
10	Green 1	0–255	
11	Blue 1	0–255	
12	White 1	0–255	
49	Cool White 1	0–255	
50	Warm White 1	0–255	
97	Red 11	0–255	
98	Green 11	0–255	
99	Blue 11	0–255	

CH 9–48: 10 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 9–12); the table below gives each cell's channel numbers.

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

CH 49–96: 24 cells of 2 channels each. Every cell works as cell 1 in the table above (CH 49–50); the table below gives each cell's channel numbers.

Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White
1	49	50	2	51	52	3	53	54	4	55	56
5	57	58	6	59	60	7	61	62	8	63	64
9	65	66	10	67	68	11	69	70	12	71	72
13	73	74	14	75	76	15	77	78	16	79	80
17	81	82	18	83	84	19	85	86	20	87	88
21	89	90	22	91	92	23	93	94	24	95	96

CH 97–168: 24 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 97–99); the table below gives each cell's channel numbers.

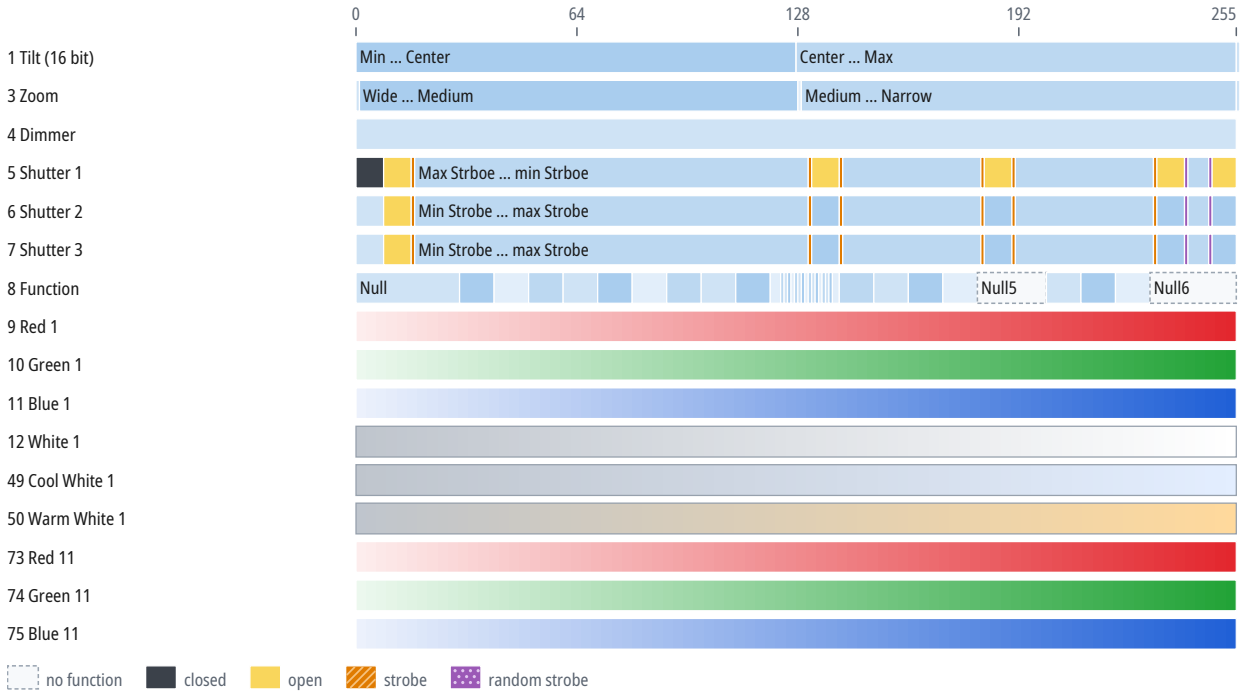
Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	97	98	99	2	100	101	102	3	103	104	105
4	106	107	108	5	109	110	111	6	112	113	114
7	115	116	117	8	118	119	120	9	121	122	123
10	124	125	126	11	127	128	129	12	130	131	132
13	133	134	135	14	136	137	138	15	139	140	141
16	142	143	144	17	145	146	147	18	148	149	150
19	151	152	153	20	154	155	156	21	157	158	159
22	160	161	162	23	163	164	165	24	166	167	168

Mode 2 108 DMX

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 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 4 Dimmer 100, CH 5 Shutter 1 12, CH 6 Shutter 2 12, CH 7 Shutter 3 12, CH 9 Red 255 (the same in each of the 10 cells), CH 10 Green 255 (the same in each of the 10 cells), CH 11 Blue 255 (the same in each of the 10 cells), CH 12 White 0 (the same in each of the 10 cells), CH 49 Cool White 255 (the same in each of the 12 cells), CH 50 Warm White 0 (the same in each of the 12 cells), CH 73 Red 255 (the same in each of the 12 cells), CH 74 Green 255 (the same in each of the 12 cells), CH 75 Blue 255 (the same in each of the 12 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Mode 1 168 DMX” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Zoom		Same as CH 3 in the mode “Mode 1 168 DMX” (p. 10)
4	Dimmer	0–255	
5	Shutter 1		Same as CH 5 in the mode “Mode 1 168 DMX” (p. 10)
6	Shutter 2		Same as CH 6 in the mode “Mode 1 168 DMX” (p. 11)
7	Shutter 3		Same as CH 7 in the mode “Mode 1 168 DMX” (p. 11)
8	Function		Same as CH 8 in the mode “Mode 1 168 DMX” (p. 12)
9	Red 1	0–255	
10	Green 1	0–255	
11	Blue 1	0–255	
12	White 1	0–255	
49	Cool White 1	0–255	
50	Warm White 1	0–255	
73	Red 11	0–255	
74	Green 11	0–255	
75	Blue 11	0–255	

CH 9–48: 10 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 9–12); the table below gives each cell's channel numbers.

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

CH 49–72: 12 cells of 2 channels each. Every cell works as cell 1 in the table above (CH 49–50); the table below gives each cell's channel numbers.

Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White
1	49	50	2	51	52	3	53	54	4	55	56
5	57	58	6	59	60	7	61	62	8	63	64
9	65	66	10	67	68	11	69	70	12	71	72

CH 73–108: 12 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 73–75); the table below gives each cell's channel numbers.

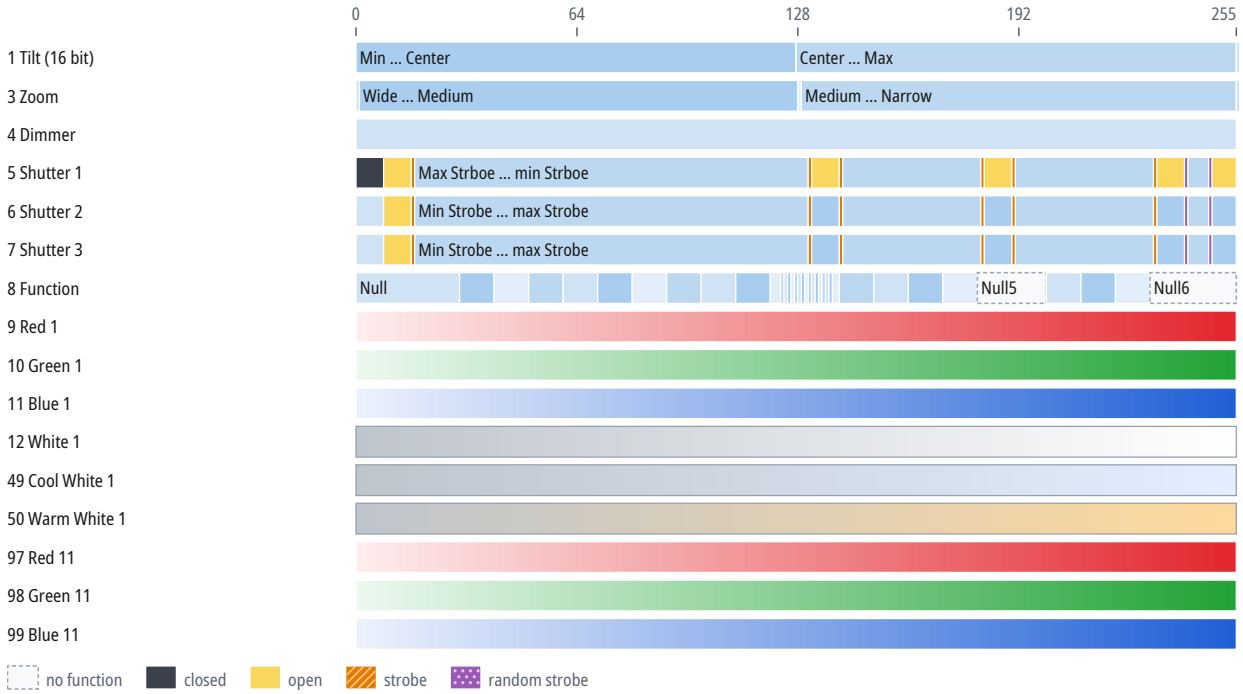
Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	73	74	75	2	76	77	78	3	79	80	81
4	82	83	84	5	85	86	87	6	88	89	90
7	91	92	93	8	94	95	96	9	97	98	99
10	100	101	102	11	103	104	105	12	106	107	108

Mode 3 99 DMX

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 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 4 Dimmer 100, CH 5 Shutter 1 12, CH 6 Shutter 2 12, CH 7 Shutter 3 12, CH 9 Red 255 (the same in each of the 10 cells), CH 10 Green 255 (the same in each of the 10 cells), CH 11 Blue 255 (the same in each of the 10 cells), CH 12 White 0 (the same in each of the 10 cells), CH 49 Cool White 255 (the same in each of the 24 cells), CH 50 Warm White 0 (the same in each of the 24 cells), CH 97 Red 11 255, CH 98 Green 11 255, CH 99 Blue 11 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Mode 1 168 DMX” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Zoom		Same as CH 3 in the mode “Mode 1 168 DMX” (p. 10)
4	Dimmer	0–255	
5	Shutter 1		Same as CH 5 in the mode “Mode 1 168 DMX” (p. 10)
6	Shutter 2		Same as CH 6 in the mode “Mode 1 168 DMX” (p. 11)
7	Shutter 3		Same as CH 7 in the mode “Mode 1 168 DMX” (p. 11)
8	Function		Same as CH 8 in the mode “Mode 1 168 DMX” (p. 12)
9	Red 1	0–255	
10	Green 1	0–255	
11	Blue 1	0–255	
12	White 1	0–255	
49	Cool White 1	0–255	

CH	Function	DMX	Description
50	Warm White 1	0–255	
97	Red 11	0–255	
98	Green 11	0–255	
99	Blue 11	0–255	

CH 9–48: 10 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 9–12); the table below gives each cell's channel numbers.

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

CH 49–96: 24 cells of 2 channels each. Every cell works as cell 1 in the table above (CH 49–50); the table below gives each cell's channel numbers.

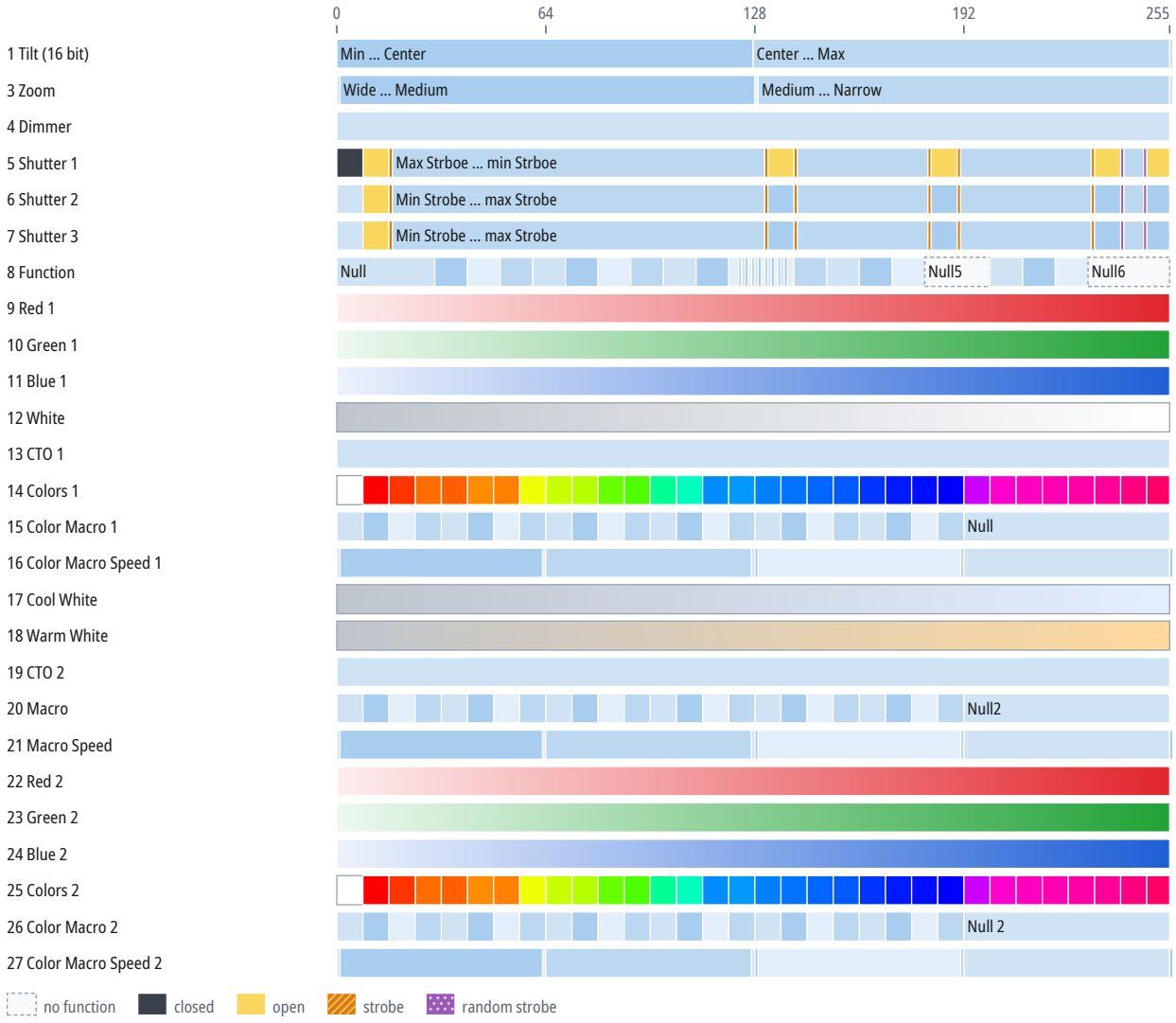
Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White	Cell	Cool White	Warm White
1	49	50	2	51	52	3	53	54	4	55	56
5	57	58	6	59	60	7	61	62	8	63	64
9	65	66	10	67	68	11	69	70	12	71	72
13	73	74	14	75	76	15	77	78	16	79	80
17	81	82	18	83	84	19	85	86	20	87	88
21	89	90	22	91	92	23	93	94	24	95	96

Mode 4 27 DMX

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 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 4 Dimmer 100, CH 5 Shutter 1 12, CH 6 Shutter 2 12, CH 7 Shutter 3 12, CH 9 Red 1 255, CH 10 Green 1 255, CH 11 Blue 1 255, CH 12 White 0, CH 13 CTO 1 0, CH 14 Colors 1 0, CH 15 Color Macro 1 0, CH 16 Color Macro Speed 1 0, CH 17 Cool White 255, CH 18 Warm White 0, CH 22 Red 2 255, CH 23 Green 2 255, CH 24 Blue 2 255, CH 25 Colors 2 0, CH 26 Color Macro 2 0, CH 27 Color Macro Speed 2 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Mode 1 168 DMX” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Zoom		Same as CH 3 in the mode “Mode 1 168 DMX” (p. 10)
4	Dimmer	0–255	
5	Shutter 1		Same as CH 5 in the mode “Mode 1 168 DMX” (p. 10)

CH	Function	DMX	Description
6	Shutter 2		Same as CH 6 in the mode “Mode 1 168 DMX” (p. 11)
7	Shutter 3		Same as CH 7 in the mode “Mode 1 168 DMX” (p. 11)
8	Function		Same as CH 8 in the mode “Mode 1 168 DMX” (p. 12)
9	Red 1	0–255	
10	Green 1	0–255	
11	Blue 1	0–255	
12	White	0–255	
13	CTO 1	0–255	8000–2500 K
14	Colors 1	0–7	Open
		8–15	Color 1
		16–23	Color 2
		24–31	Color 3
		32–39	Color 4
		40–47	Color 5
		48–55	Color 6
		56–63	Color 7
		64–71	Color 8
		72–79	Color 9
		80–87	Color 10
		88–95	Color 11
		96–103	Color 12
		104–111	Color 13
		112–119	Color 14
		120–127	Color 15
		128–135	Color 16
		136–143	Color 17
		144–151	Color 18
		152–159	Color 19
		160–167	Color 20
		168–175	Color 21
		176–183	Color 22
		184–191	Color 23
		192–199	Color 24
		200–207	Color 25
		208–215	Color 26
		216–223	Color 27
		224–231	Color 28
		232–239	Color 29
		240–247	Color 30
		248–255	Color 31
15	Color Macro 1	0–7	Open

CH	Function	DMX	Description
15	Color Macro 1 (continued)	8–15	Macro 1
		16–23	Macro 2
		24–31	Macro 3
		32–39	Macro 4
		40–47	Macro 5
		48–55	Macro 6
		56–63	Macro 7
		64–71	Macro 8
		72–79	Macro 9
		80–87	Macro 10
		88–95	Macro 11
		96–103	Macro 12
		104–111	Macro 13
		112–119	Macro 14
		120–127	Macro 15
		128–135	Macro 16
		136–143	Macro 17
		144–151	Macro 18
		152–159	Macro 19
		160–167	Macro 20
		168–175	Macro 21
		176–183	Macro 22
		184–191	Macro 23
		192–255	Null
16	Color Macro Speed 1	0	Color Macro Speed: Speed >
		1–62	Color Macro Speed: Speed > ... Speed >>
		63	Color Macro Speed: Speed >>
		64–126	Color Macro Speed: Speed >> ... Speed >>>
		127	Color Macro Speed: Speed >>>
		128	Speed Fade >
		129–190	Speed Fade > ... Speed Fade >>
		191	Speed Fade >>
		192–254	Speed Fade >> ... Speed Fade >>>
		255	Speed Fade >>>
17	Cool White	0–255	
18	Warm White	0–255	
19	CTO 2	0–255	8000–2500 K
20	Macro	0–7	Null
		8–15	Macro 1
		16–23	Macro 2
		24–31	Macro 3

CH	Function	DMX	Description
20	Macro (continued)	32–39	Macro 4
		40–47	Macro 5
		48–55	Macro 6
		56–63	Macro 7
		64–71	Macro 8
		72–79	Macro 9
		80–87	Macro 10
		88–95	Macro 11
		96–103	Macro 12
		104–111	Macro 13
		112–119	Macro 14
		120–127	Macro 15
		128–135	Macro 16
		136–143	Macro 17
		144–151	Macro 18
		152–159	Macro 19
		160–167	Macro 20
		168–175	Macro 21
		176–183	Macro 22
		184–191	Macro 23
		192–255	Null2
21	Macro Speed	0	Macro Speed: Speed >
		1–62	Macro Speed: Speed > ... Speed >>
		63	Macro Speed: Speed >>
		64–126	Macro Speed: Speed >> ... Speed >>>
		127	Macro Speed: Speed >>>
		128	Speed Fade >
		129–190	Speed Fade > ... Speed Fade >>
		191	Speed Fade >>
		192–254	Speed Fade >> ... Speed Fade >>>
		255	Speed Fade >>>
22	Red 2	0–255	
23	Green 2	0–255	
24	Blue 2	0–255	
25	Colors 2	0–7	Null
		8–15	Color 1
		16–23	Color 2
		24–31	Color 3
		32–39	Color 4
		40–47	Color 5
		48–55	Color 6
		56–63	Color 7

CH	Function	DMX	Description
25	Colors 2 (continued)	64–71	Color 8
		72–79	Color 9
		80–87	Color 10
		88–95	Color 11
		96–103	Color 12
		104–111	Color 13
		112–119	Color 14
		120–127	Color 15
		128–135	Color 16
		136–143	Color 17
		144–151	Color 18
		152–159	Color 19
		160–167	Color 20
		168–175	Color 21
		176–183	Color 22
		184–191	Color 23
		192–199	Color 24
		200–207	Color 25
		208–215	Color 26
		216–223	Color 27
		224–231	Color 28
		232–239	Color 29
		240–247	Color 30
		248–255	Color 31
26	Color Macro 2	0–7	Null
		8–15	Macro 1
		16–23	Macro 2
		24–31	Macro 3
		32–39	Macro 4
		40–47	Macro 5
		48–55	Macro 6
		56–63	Macro 7
		64–71	Macro 8
		72–79	Macro 9
		80–87	Macro 10
		88–95	Macro 11
		96–103	Macro 12
		104–111	Macro 13
		112–119	Macro 14
		120–127	Macro 15
		128–135	Macro 16
		136–143	Macro 17

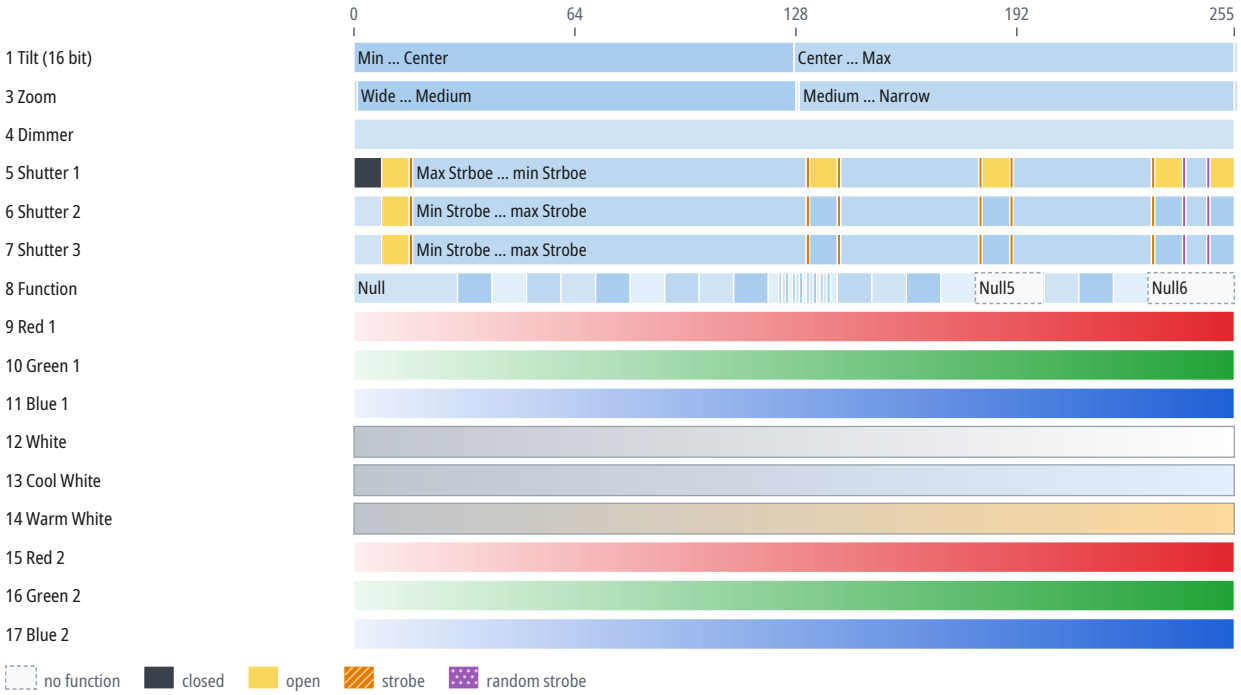
CH	Function	DMX	Description
26	Color Macro 2 (continued)	144–151	Macro 18
		152–159	Macro 19
		160–167	Macro 20
		168–175	Macro 21
		176–183	Macro 22
		184–191	Macro 23
		192–255	Null 2
27	Color Macro Speed 2	0	Color Macro Speed: Speed >
		1–62	Color Macro Speed: Speed > ... Speed >>
		63	Color Macro Speed: Speed >>
		64–126	Color Macro Speed: Speed >> ... Speed >>>
		127	Color Macro Speed: Speed >>>
		128	Speed Fade >
		129–190	Speed Fade > ... Speed Fade >>
		191	Speed Fade >>
		192–254	Speed Fade >> ... Speed Fade >>>
		255	Speed Fade >>>

Mode 5 17 DMX

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 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 4 Dimmer 100, CH 5 Shutter 1 12, CH 6 Shutter 2 12, CH 7 Shutter 3 12, CH 9 Red 1 255, CH 10 Green 1 255, CH 11 Blue 1 255, CH 12 White 0, CH 13 Cool White 255, CH 14 Warm White 0, CH 15 Red 2 255, CH 16 Green 2 255, CH 17 Blue 2 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Mode 1 168 DMX” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Zoom		Same as CH 3 in the mode “Mode 1 168 DMX” (p. 10)
4	Dimmer	0–255	
5	Shutter 1		Same as CH 5 in the mode “Mode 1 168 DMX” (p. 10)
6	Shutter 2		Same as CH 6 in the mode “Mode 1 168 DMX” (p. 11)
7	Shutter 3		Same as CH 7 in the mode “Mode 1 168 DMX” (p. 11)
8	Function		Same as CH 8 in the mode “Mode 1 168 DMX” (p. 12)
9	Red 1	0–255	
10	Green 1	0–255	
11	Blue 1	0–255	
12	White	0–255	
13	Cool White	0–255	
14	Warm White	0–255	

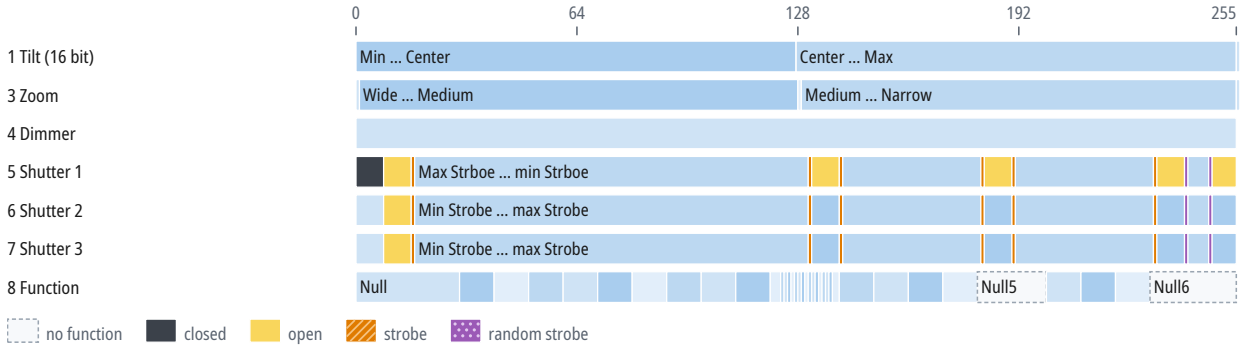
CH	Function	DMX	Description
15	Red 2	0–255	
16	Green 2	0–255	
17	Blue 2	0–255	

Mode 6 8 DMX

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 4 Dimmer above 0; CH 5 Shutter 1 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 6 Shutter 2 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255; CH 7 Shutter 3 at 8–15 “Open” or 132–139 or 182–189 or 232–239 or 248–255. The GDTF file gives these values for a console's Highlight function: CH 4 Dimmer 100, CH 5 Shutter 1 12, CH 6 Shutter 2 12, CH 7 Shutter 3 12.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “Mode 1 168 DMX” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Zoom		Same as CH 3 in the mode “Mode 1 168 DMX” (p. 10)
4	Dimmer	0–255	
5	Shutter 1		Same as CH 5 in the mode “Mode 1 168 DMX” (p. 10)
6	Shutter 2		Same as CH 6 in the mode “Mode 1 168 DMX” (p. 11)
7	Shutter 3		Same as CH 7 in the mode “Mode 1 168 DMX” (p. 11)
8	Function		Same as CH 8 in the mode “Mode 1 168 DMX” (p. 12)

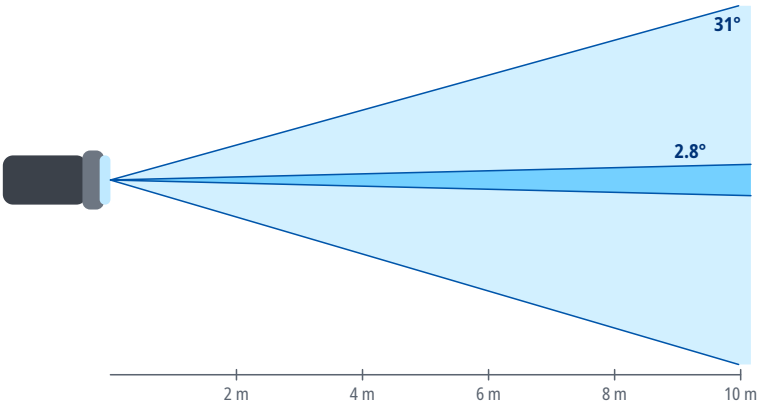
10 Technical specifications

Parameter	Value
Light source	discharge lamp
Zoom	2.8–31°
Tilt	202°
Weight	23 kg
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2500–8000 K
Strobe frequency	1–20 Hz

Spot diameter



Distance	Ø 2.8°	Ø 31°
2 m	0.1 m	1.1 m
4 m	0.2 m	2.2 m
6 m	0.29 m	3.3 m
8 m	0.39 m	4.4 m
10 m	0.49 m	5.5 m
15 m	0.73 m	8.3 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.