DMX REFERENCE

MegaPix

High End Systems



Manufacturer	High End Systems
GDTF file	High_End_Systems_MegaPix_167375.gdtf
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1 About this manual

This document describes the MegaPix by High End Systems. It was compiled from the GDTF file High_End_Systems_MegaPix_167375.gdtf from the GDTF-Share library.

File revision: “v1.0.0 - 1, Uploaded to GDTF Share.”.

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

This document was not issued or endorsed by High End Systems; 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	9.2 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Base	25	20	1, 26, 51, 76, ...
Base+Flex	45	11	1, 46, 91, 136, ...
Base+Flex+Pixel	69	7	1, 70, 139, 208, ...
Base+Pixel	49	10	1, 50, 99, 148, ...
Wash	15	34	1, 16, 31, 46, ...
Flex / Macro	20	25	1, 21, 41, 61, ...
Pixel	24	21	1, 25, 49, 73, ...

No light? Check these channels

- Base: CH 14 Strobe at 0–15 “Off”; CH 15 Shutter at 230–255 “Open”; CH 16 Dimmer above 0
- Base+Flex: CH 14 Strobe at 0–15 “Off”; CH 15 Shutter at 230–255 “Open”; CH 16 Dimmer above 0
- Base+Flex+Pixel: CH 14 Strobe at 0–15 “Off”; CH 15 Shutter at 230–255 “Open”; CH 16 Dimmer above 0
- Base+Pixel: CH 14 Strobe at 0–15 “Off”; CH 15 Shutter at 230–255 “Open”; CH 16 Dimmer above 0
- Wash: CH 11 Strobe at 0–15 “Off”; CH 12 Shutter at 230–255 “Open”; CH 13 Dimmer 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.

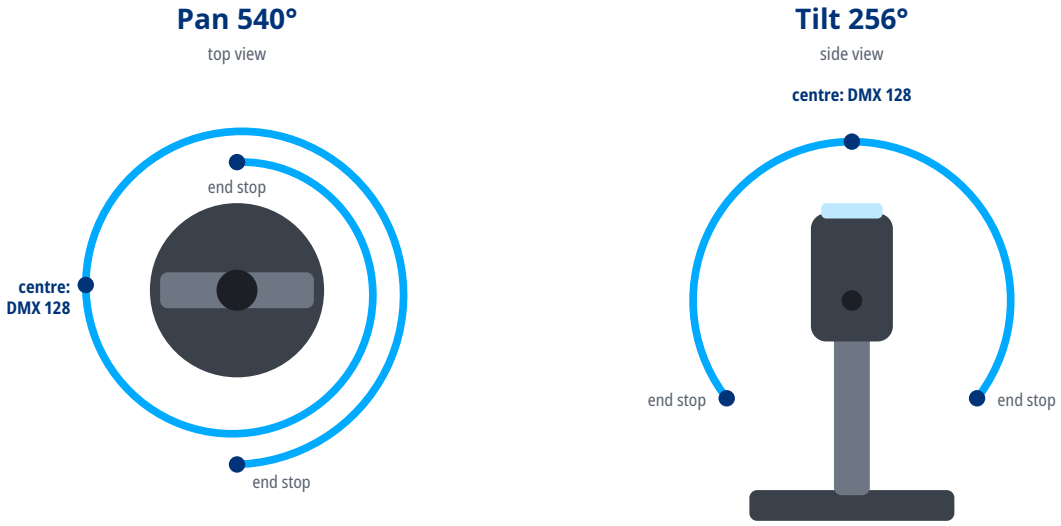
⚠ CAUTION

- 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

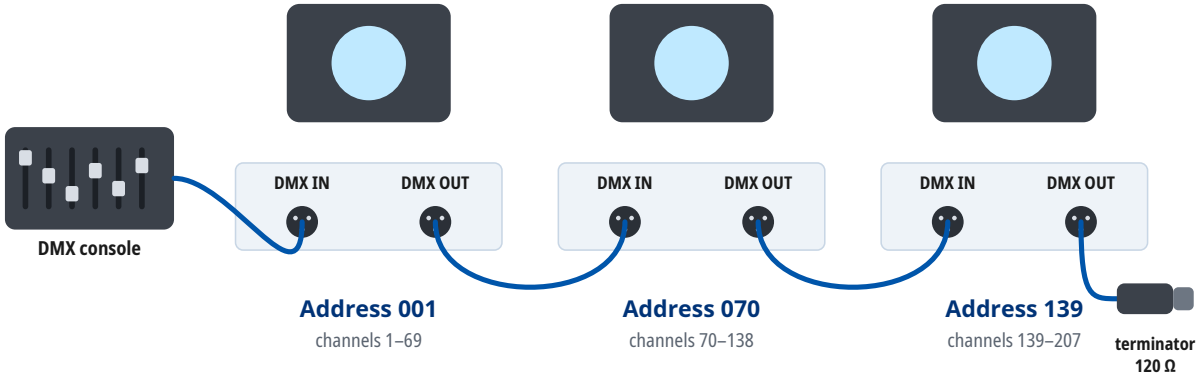
> ⚠ **WARNING**
>
> - Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
> - The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
> - Weight of the device: 9.2 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 Base+Flex+Pixel: every unit occupies 69 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

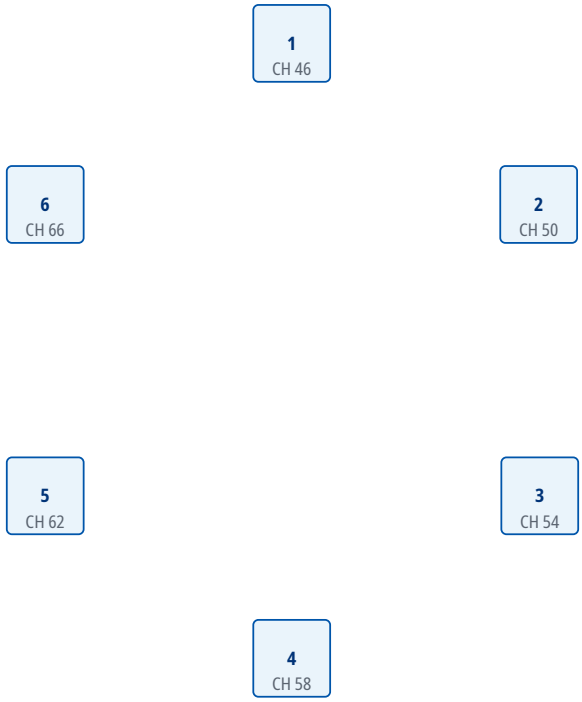
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Base+Flex+Pixel”: 69.
- Choose start addresses so that the channels of individual devices do not overlap and the last 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 “Base+Flex+Pixel”, you can use, for example, the start addresses 1, 70, 139, 208.
- 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

	Base 25 channels	Base+Flex 45 channels	Base+Flex+Pixel 69 channels	Base+Pixel 49 channels	Wash 15 channels	Flex / Macro 20 channels	Pixel 24 channels
Pan / Tilt	1, 3	1, 3	1, 3	1, 3	1, 3		
Dimmer	16	16	16	16	13		✓
Shutter / strobe	15	15	15	15	12		
Color mixing	6–9	6–9	6–9, 46–69	6–9, 26–49	5–8		1–24
Color temperature	10	10	10	10	9		
Zoom	12	12	12	12	10		
Effects / macros	21, 22	21, 22, 26–45	21, 22, 26–45	21, 22		1–20	
Pixel control			✓	✓			✓

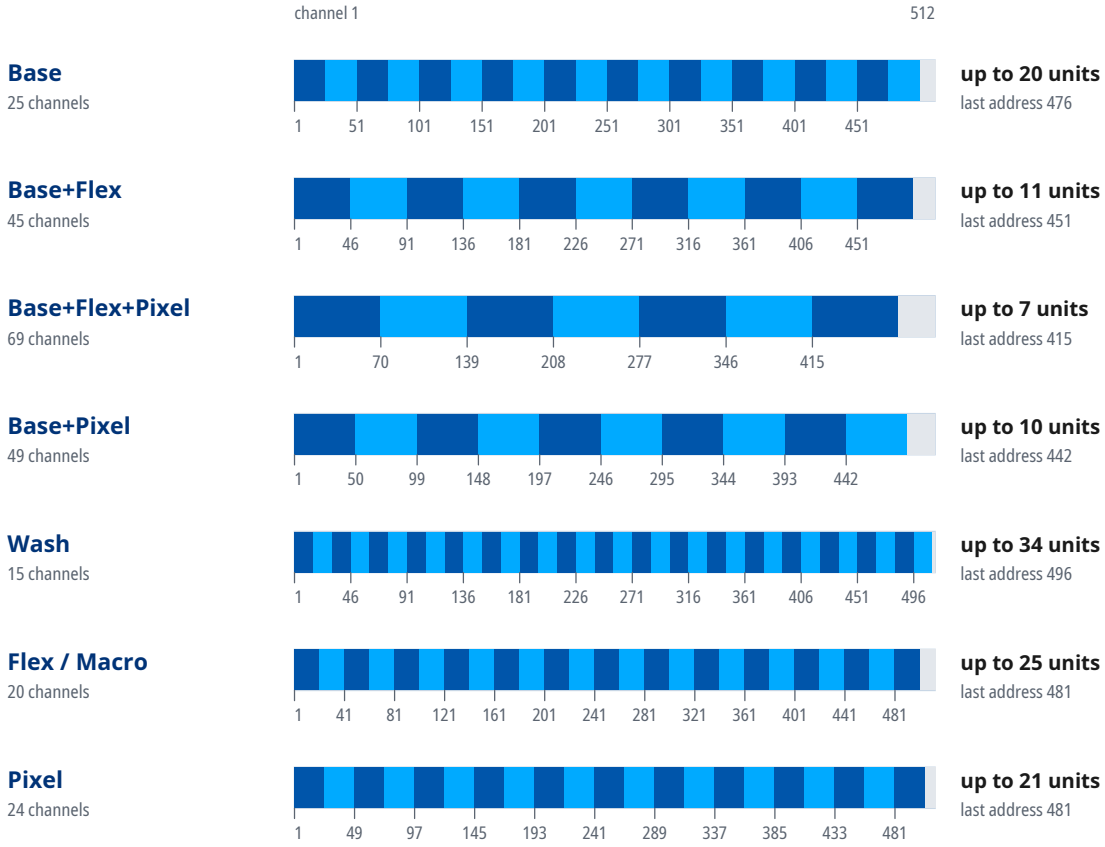
Cells (pixels)



6 cells where the GDTF file places them (seen from above), numbered by their first DMX channel (CH) in the mode “Base+Flex+Pixel”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Base+Flex+Pixel”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	346	11	U2 · 208	16	U3 · 70
2	70	7	415	12	U2 · 277	17	U3 · 139
3	139	8	U2 · 1	13	U2 · 346	18	U3 · 208
4	208	9	U2 · 70	14	U2 · 415	19	U3 · 277
5	277	10	U2 · 139	15	U3 · 1	20	U3 · 346

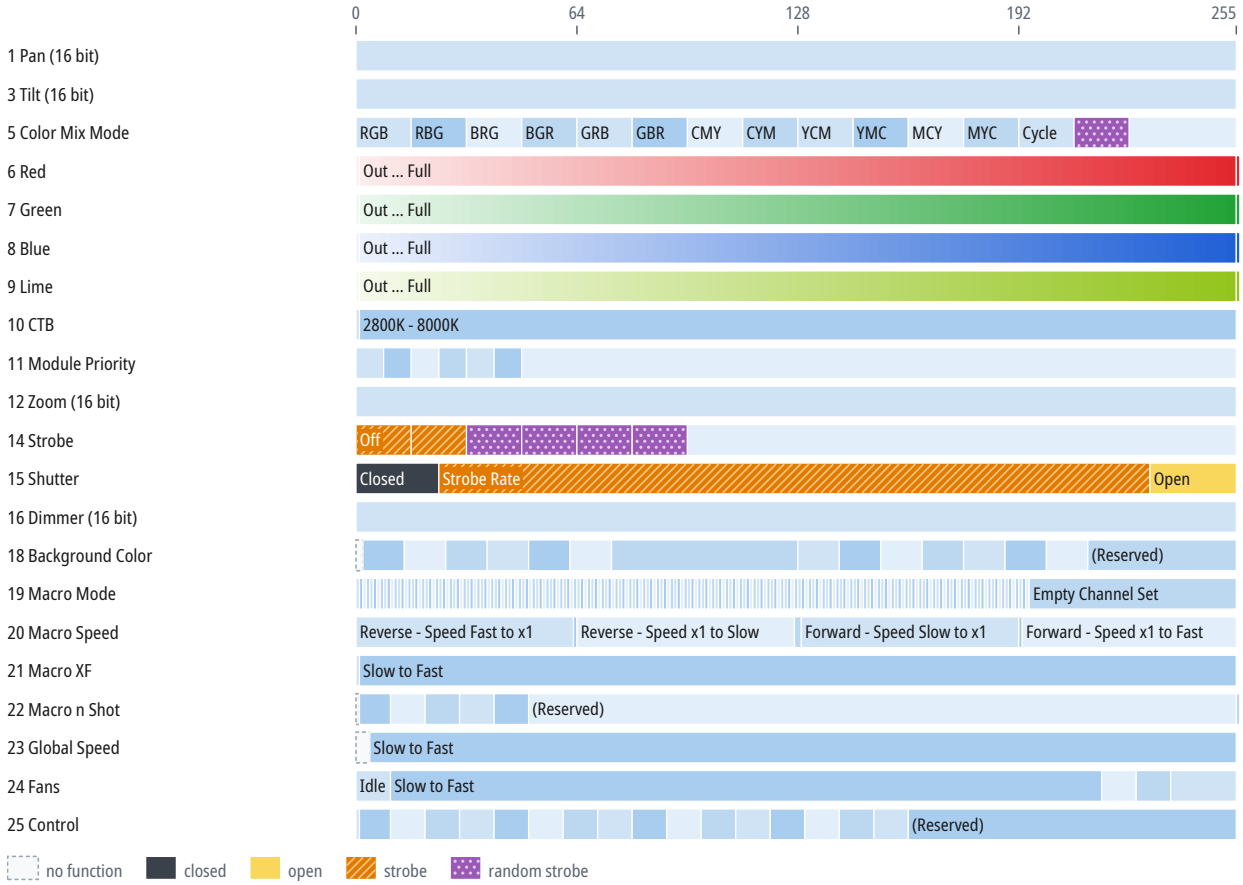
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode Base

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

If the device receives DMX in this mode but gives no light, check these channels: CH 14 Strobe at 0–15 “Off”; CH 15 Shutter at 230–255 “Open”; CH 16 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Red 255, CH 7 Green 255, CH 8 Blue 255, CH 9 Lime 255, CH 10 CTB 0, CH 16 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–255	540°
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–255	256°
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Color Mix Mode	0–15	RGB
		16–31	RBG
		32–47	BRG
		48–63	BGR
		64–79	GRB
		80–95	GBR
		96–111	CMY
		112–127	CYM
		128–143	YCM

CH	Function	DMX	Description
5	Color Mix Mode (continued)	144–159	YMC
		160–175	MCY
		176–191	MYC
		192–207	Cycle
		208–223	Random
		224–255	Color Mix Mode 1
6	Red	0	Out
		1–254	Out ... Full
		255	Full
7	Green	0	Out
		1–254	Out ... Full
		255	Full
8	Blue	0	Out
		1–254	Out ... Full
		255	Full
9	Lime	0	Out
		1–254	Out ... Full
		255	Full
10	CTB	0	Default
		1–255	2800K - 8000K (2800–8000 K)
11	Module Priority	0–7	Pixel > Macro > Base
		8–15	Macro > Pixel > Base
		16–23	Pixel > Base
		24–31	Macro > Base
		32–39	Base
		40–47	Pixel
		48–255	Module Priority 1
12	Zoom	0–255	4.5–60°
13	Zoom Fine	0–255	Fine adjustment of CH 12
14	Strobe	0–15	Off
		16–31	Synchronous
		32–47	Random
		48–63	Random Pixel
		64–79	Random Pixel / Color
		80–95	Synchronous Random
		96–255	Strobe Mode Strobe 1
15	Shutter	0–23	Closed
		24–229	Strobe Rate
		230–255	Open
16	Dimmer	0–255	
17	Dimmer Fine	0–255	Fine adjustment of CH 16
18	Background Color	0–1	Dim Tracking Mode: Off

CH	Function	DMX	Description
18	Background Color (continued)	2–13	Dim Tracking Mode: Red Background 3% - 12%
		14–25	Dim Tracking Mode: Green Background 3% - 12%
		26–37	Dim Tracking Mode: Blue Background 3% - 12%
		38–49	Dim Tracking Mode: Cyan Background 3% - 12%
		50–61	Dim Tracking Mode: Magenta Background 3% - 12%
		62–73	Dim Tracking Mode: Yellow Background 3% - 12%
		74–127	Dim Tracking Mode: White Background 3% - 12%
		128–139	Independent Dim Mode: Red Background 3% - 12%
		140–151	Independent Dim Mode: Green Background 3% - 12%
		152–163	Independent Dim Mode: Blue Background 3% - 12%
		164–175	Independent Dim Mode: Cyan Background 3% - 12%
		176–187	Independent Dim Mode: Magenta Background 3% - 12%
		188–199	Independent Dim Mode: Yellow Background 3% - 12%
		200–211	Independent Dim Mode: White Background 3% - 12%
		212–255	(Reserved)
19	Macro Mode	0	Macro Off
		1–36	Inclusive Macros: Macro 1...36
		37–85	Macro 37...85
		86–127	Inclusive Macros: Empty Channel Set
		128–163	Flex Macros: Macro 1...36
		164	Flex Macros: Off (Reserved)
		165–255	Flex Macros: Empty Channel Set
20	Macro Speed	0–62	Reverse - Speed Fast to x1
		63	Reverse - Speed x1
		64–126	Reverse - Speed x1 to Slow
		127–128	Stop
		129–191	Forward - Speed Slow to x1
		192	Forward - Speed x1
		193–255	Forward - Speed x1 to Fast
21	Macro XF	0	Stop
		1–255	Slow to Fast
22	Macro n Shot	0	Off
		1–9	1 Shot
		10–19	2 Shot
		20–29	3 Shot
		30–39	4 Shot
		40–49	5 Shot
		50–254	(Reserved)
		255	Continuous Run
23	Global Speed	0–3	Off
		4–255	Slow to Fast
24	Fans	0–9	Idle

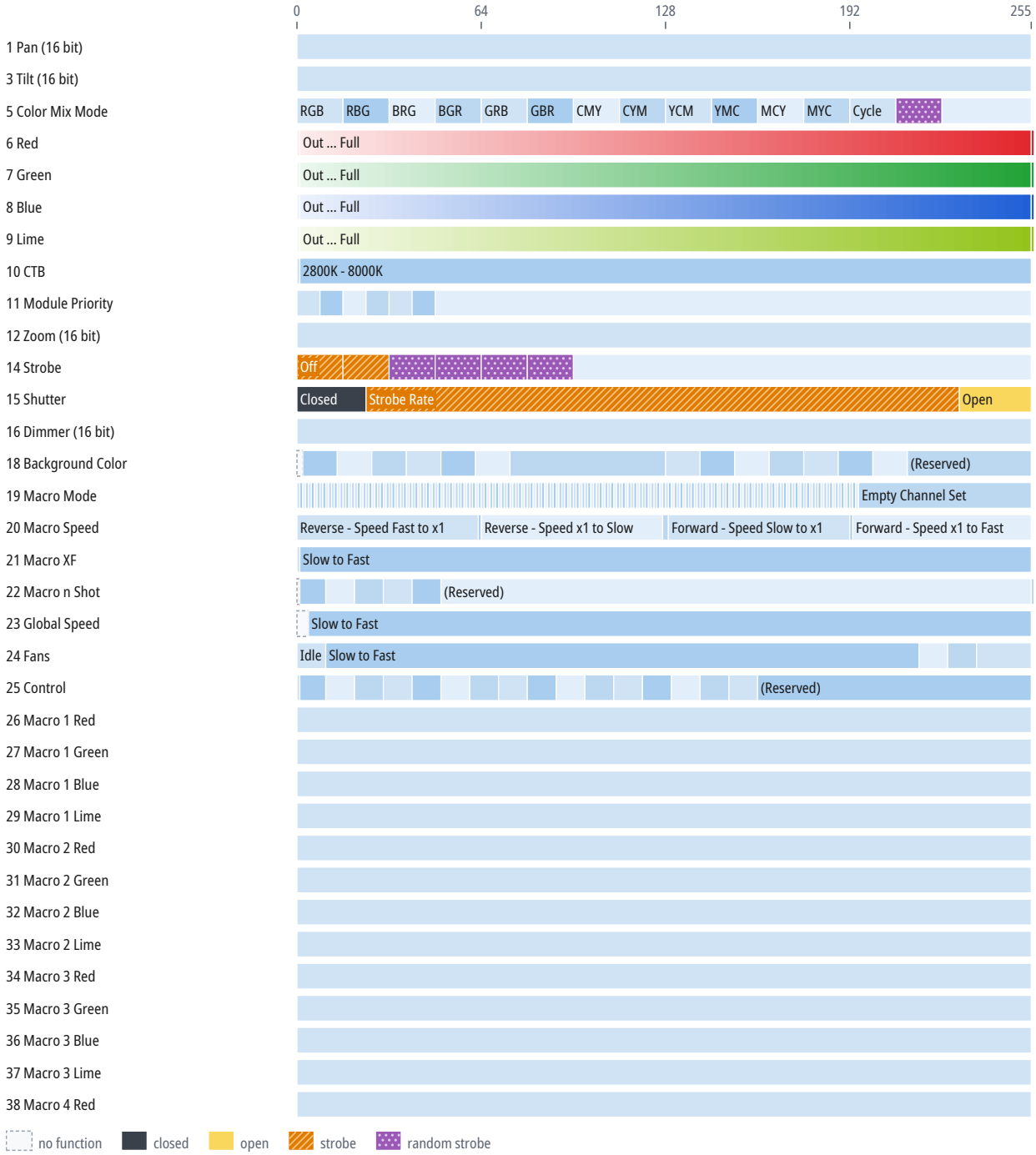
CH	Function	DMX	Description
24	Fans (continued)	10–215	Slow to Fast
		216–225	Auto
		226–235	Studio
		236–255	(Reserved)
25	Control	0	Safe
		1–9	Safe ... (Reserved)
		10–19	(Reserved)
		20–29	Display Off (3s)
		30–39	Display On (3s)
		40–49	(Reserved)
		50–59	Home All (3s)
		60–69	Shutdown (3s)
		70–79	Red Shift Off (3s)
		80–89	Red Shift On (3s)
		90–99	LED PWM 2400 Hz (3s)
		100–109	LED PWM 16 kHz (3s)
		110–119	LED PWM 25 kHz (3s)
		120–129	Independent Base Intensity (3s)
		130–139	Master Base Intensity (3s)
		140–149	Color Quadratic
		150–159	Color Linear
		160–255	(Reserved)

Mode Base+Flex

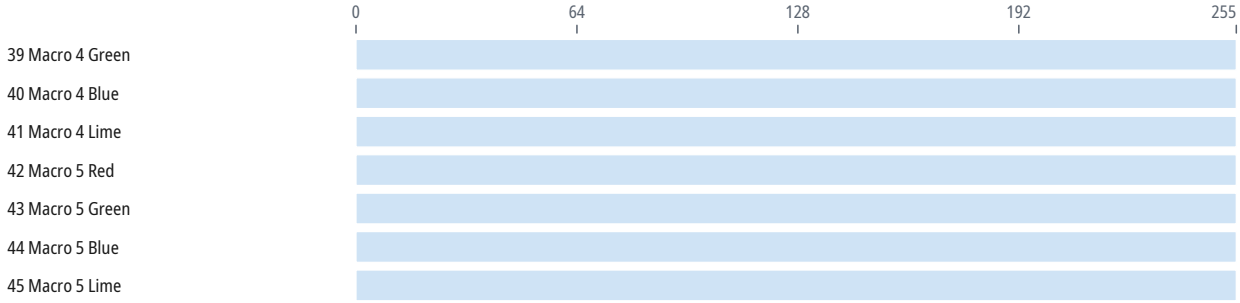
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 14 Strobe at 0–15 “Off”; CH 15 Shutter at 230–255 “Open”; CH 16 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Red 255, CH 7 Green 255, CH 8 Blue 255, CH 9 Lime 255, CH 10 CTB 0, CH 16 Dimmer 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–255	540°
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–255	256°
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Color Mix Mode		Same as CH 5 in the mode “Base” (p. 9)
6	Red		Same as CH 6 in the mode “Base” (p. 10)
7	Green		Same as CH 7 in the mode “Base” (p. 10)
8	Blue		Same as CH 8 in the mode “Base” (p. 10)
9	Lime		Same as CH 9 in the mode “Base” (p. 10)
10	CTB		Same as CH 10 in the mode “Base” (p. 10)
11	Module Priority		Same as CH 11 in the mode “Base” (p. 10)
12	Zoom	0–255	4.5–60°
13	Zoom Fine	0–255	Fine adjustment of CH 12
14	Strobe		Same as CH 14 in the mode “Base” (p. 10)
15	Shutter		Same as CH 15 in the mode “Base” (p. 10)
16	Dimmer	0–255	
17	Dimmer Fine	0–255	Fine adjustment of CH 16
18	Background Color		Same as CH 18 in the mode “Base” (p. 10)
19	Macro Mode		Same as CH 19 in the mode “Base” (p. 11)
20	Macro Speed		Same as CH 20 in the mode “Base” (p. 11)
21	Macro XF		Same as CH 21 in the mode “Base” (p. 11)
22	Macro n Shot		Same as CH 22 in the mode “Base” (p. 11)
23	Global Speed		Same as CH 23 in the mode “Base” (p. 11)
24	Fans		Same as CH 24 in the mode “Base” (p. 11)
25	Control		Same as CH 25 in the mode “Base” (p. 12)
26	Macro 1 Red	0–255	
27	Macro 1 Green	0–255	
28	Macro 1 Blue	0–255	
29	Macro 1 Lime	0–255	
30	Macro 2 Red	0–255	
31	Macro 2 Green	0–255	
32	Macro 2 Blue	0–255	

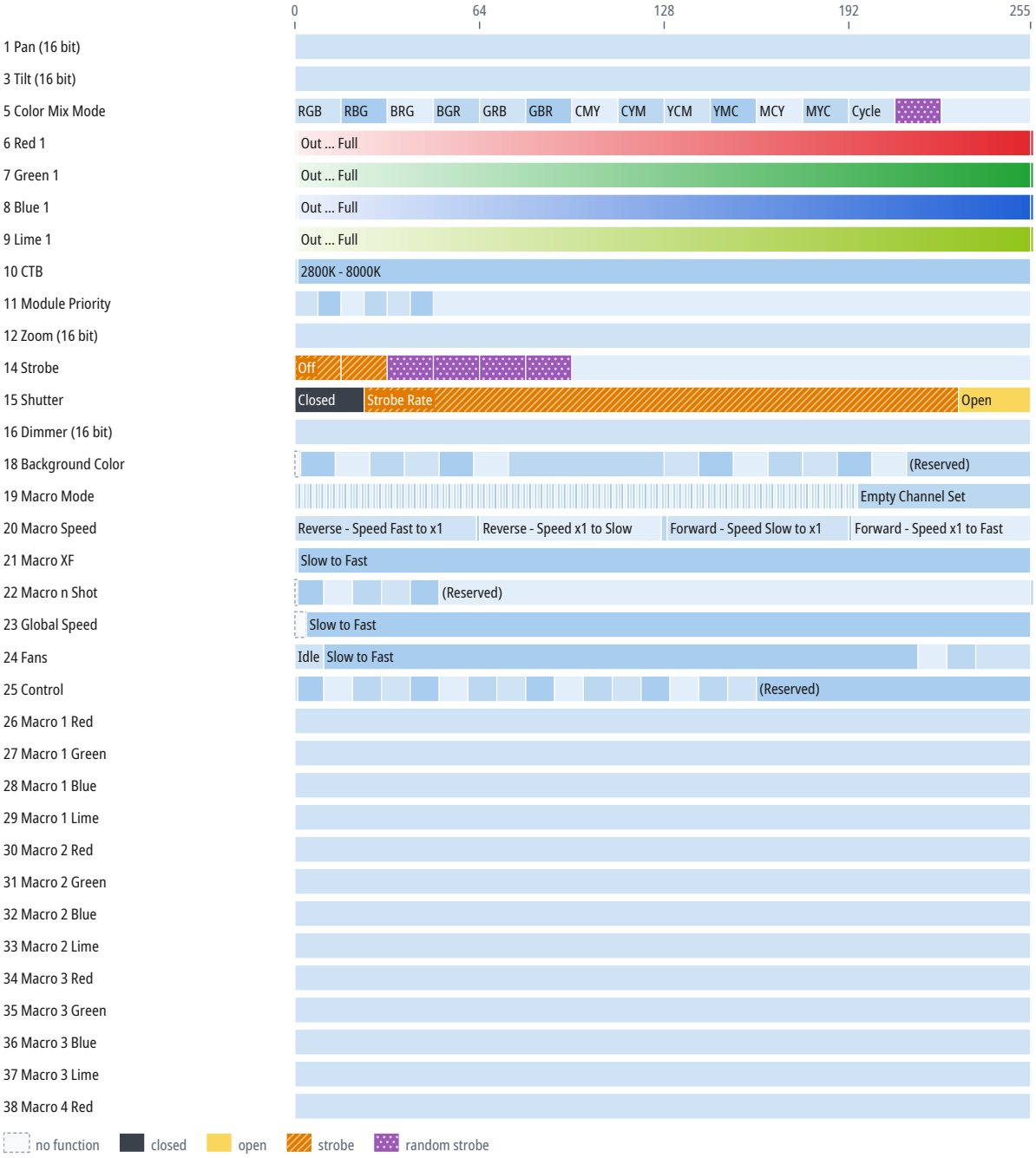
CH	Function	DMX	Description
33	Macro 2 Lime	0–255	
34	Macro 3 Red	0–255	
35	Macro 3 Green	0–255	
36	Macro 3 Blue	0–255	
37	Macro 3 Lime	0–255	
38	Macro 4 Red	0–255	
39	Macro 4 Green	0–255	
40	Macro 4 Blue	0–255	
41	Macro 4 Lime	0–255	
42	Macro 5 Red	0–255	
43	Macro 5 Green	0–255	
44	Macro 5 Blue	0–255	
45	Macro 5 Lime	0–255	

Mode Base+Flex+Pixel

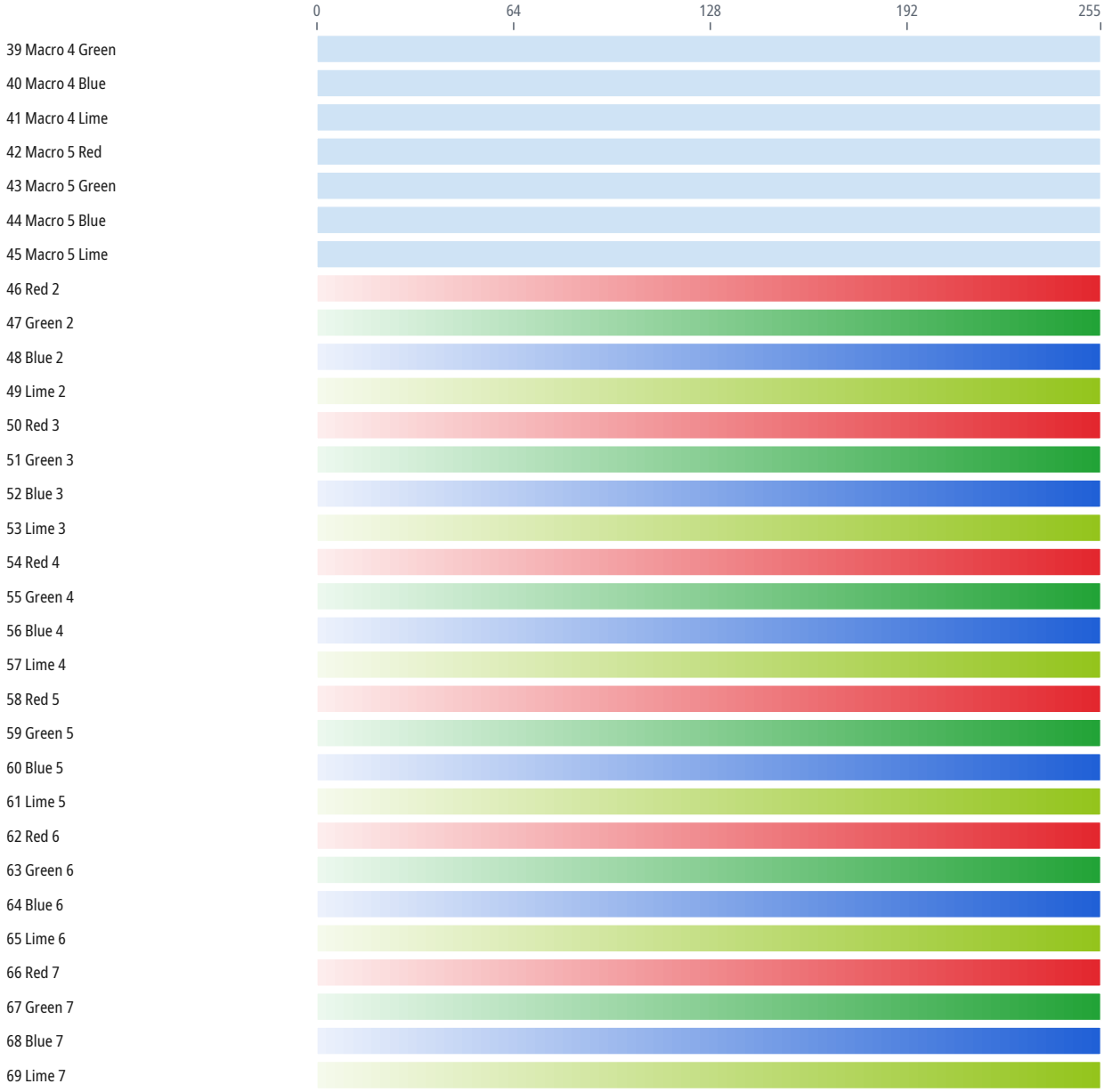
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 14 Strobe at 0–15 “Off”; CH 15 Shutter at 230–255 “Open”; CH 16 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Red 1 255, CH 7 Green 1 255, CH 8 Blue 1 255, CH 9 Lime 1 255, CH 10 CTB 0, CH 16 Dimmer 255, CH 46 Red 2 255, CH 47 Green 2 255, CH 48 Blue 2 255, CH 49 Lime 2 255, CH 50 Red 3 255, CH 51 Green 3 255, CH 52 Blue 3 255, CH 53 Lime 3 255, CH 54 Red 4 255, CH 55 Green 4 255, CH 56 Blue 4 255, CH 57 Lime 4 255, CH 58 Red 5 255, CH 59 Green 5 255, CH 60 Blue 5 255, CH 61 Lime 5 255, CH 62 Red 6 255, CH 63 Green 6 255, CH 64 Blue 6 255, CH 65 Lime 6 255, CH 66 Red 7 255, CH 67 Green 7 255, CH 68 Blue 7 255, CH 69 Lime 7 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–255	540°
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–255	256°
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Color Mix Mode		Same as CH 5 in the mode “Base” (p. 9)
6	Red 1	0	Out
		1–254	Out ... Full
		255	Full
7	Green 1	0	Out
		1–254	Out ... Full
		255	Full

CH	Function	DMX	Description
8	Blue 1	0	Out
		1–254	Out … Full
		255	Full
9	Lime 1	0	Out
		1–254	Out … Full
		255	Full
10	CTB		Same as CH 10 in the mode “Base” (p. 10)
11	Module Priority		Same as CH 11 in the mode “Base” (p. 10)
12	Zoom	0–255	4.5–60°
13	Zoom Fine	0–255	Fine adjustment of CH 12
14	Strobe		Same as CH 14 in the mode “Base” (p. 10)
15	Shutter		Same as CH 15 in the mode “Base” (p. 10)
16	Dimmer	0–255	
17	Dimmer Fine	0–255	Fine adjustment of CH 16
18	Background Color		Same as CH 18 in the mode “Base” (p. 10)
19	Macro Mode		Same as CH 19 in the mode “Base” (p. 11)
20	Macro Speed		Same as CH 20 in the mode “Base” (p. 11)
21	Macro XF		Same as CH 21 in the mode “Base” (p. 11)
22	Macro n Shot		Same as CH 22 in the mode “Base” (p. 11)
23	Global Speed		Same as CH 23 in the mode “Base” (p. 11)
24	Fans		Same as CH 24 in the mode “Base” (p. 11)
25	Control		Same as CH 25 in the mode “Base” (p. 12)
26	Macro 1 Red	0–255	
27	Macro 1 Green	0–255	
28	Macro 1 Blue	0–255	
29	Macro 1 Lime	0–255	
30	Macro 2 Red	0–255	
31	Macro 2 Green	0–255	
32	Macro 2 Blue	0–255	
33	Macro 2 Lime	0–255	
34	Macro 3 Red	0–255	
35	Macro 3 Green	0–255	
36	Macro 3 Blue	0–255	
37	Macro 3 Lime	0–255	
38	Macro 4 Red	0–255	
39	Macro 4 Green	0–255	
40	Macro 4 Blue	0–255	
41	Macro 4 Lime	0–255	
42	Macro 5 Red	0–255	
43	Macro 5 Green	0–255	
44	Macro 5 Blue	0–255	
45	Macro 5 Lime	0–255	

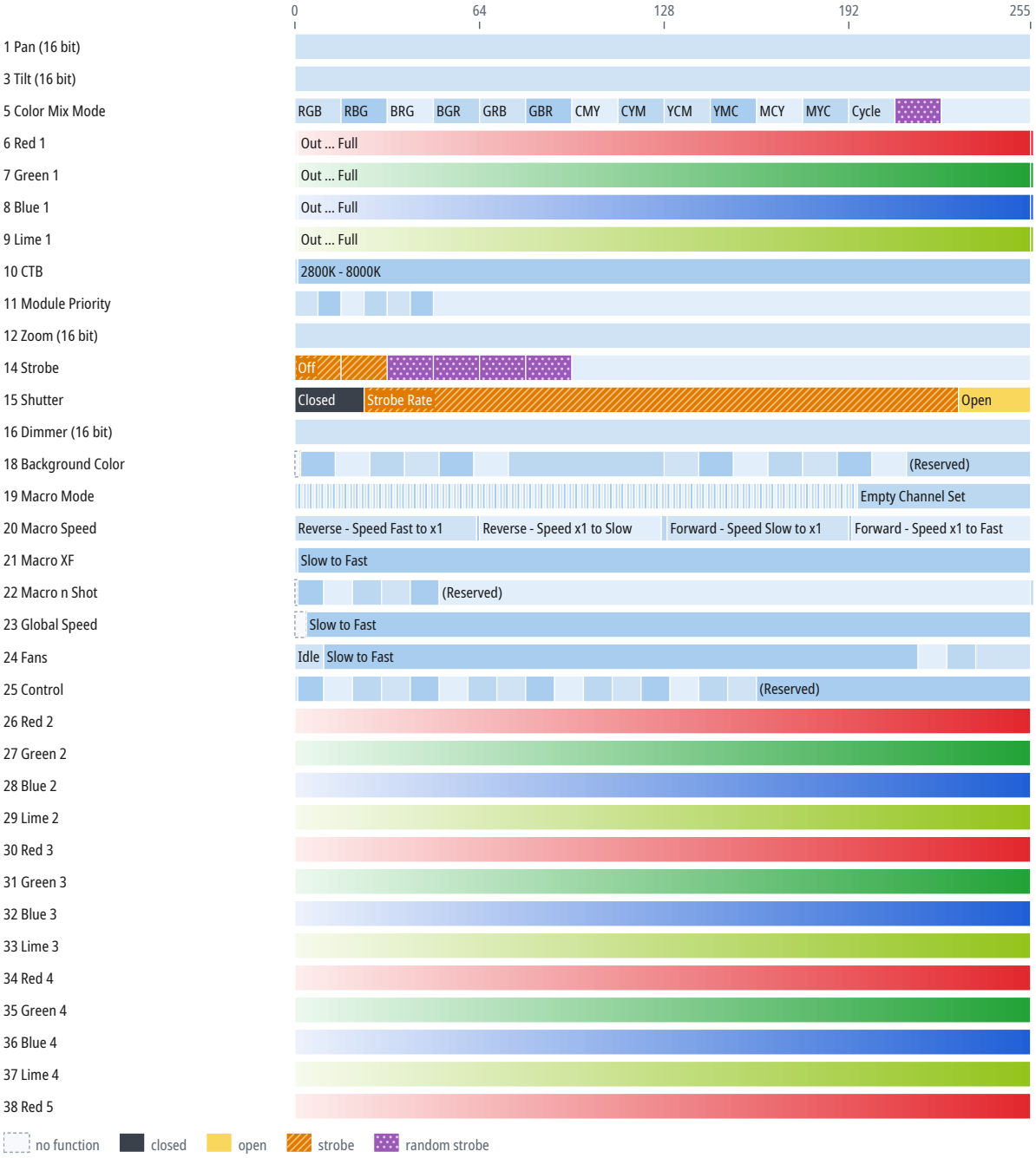
CH	Function	DMX	Description
46	Red 2	0–255	
47	Green 2	0–255	
48	Blue 2	0–255	
49	Lime 2	0–255	
50	Red 3	0–255	
51	Green 3	0–255	
52	Blue 3	0–255	
53	Lime 3	0–255	
54	Red 4	0–255	
55	Green 4	0–255	
56	Blue 4	0–255	
57	Lime 4	0–255	
58	Red 5	0–255	
59	Green 5	0–255	
60	Blue 5	0–255	
61	Lime 5	0–255	
62	Red 6	0–255	
63	Green 6	0–255	
64	Blue 6	0–255	
65	Lime 6	0–255	
66	Red 7	0–255	
67	Green 7	0–255	
68	Blue 7	0–255	
69	Lime 7	0–255	

Mode Base+Pixel

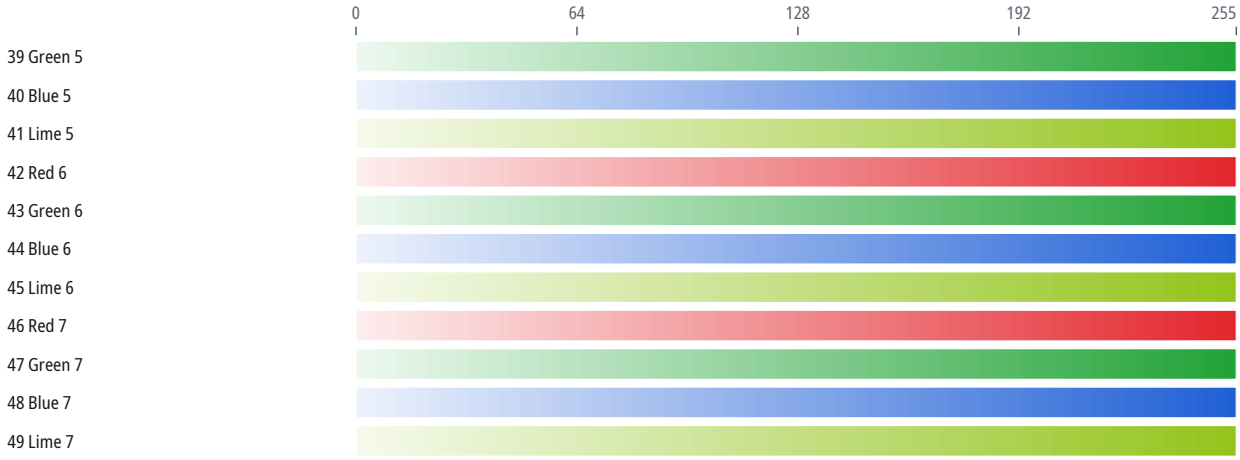
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 14 Strobe at 0–15 “Off”; CH 15 Shutter at 230–255 “Open”; CH 16 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Red 1 255, CH 7 Green 1 255, CH 8 Blue 1 255, CH 9 Lime 1 255, CH 10 CTB 0, CH 16 Dimmer 255, CH 26 Red 2 255, CH 27 Green 2 255, CH 28 Blue 2 255, CH 29 Lime 2 255, CH 30 Red 3 255, CH 31 Green 3 255, CH 32 Blue 3 255, CH 33 Lime 3 255, CH 34 Red 4 255, CH 35 Green 4 255, CH 36 Blue 4 255, CH 37 Lime 4 255, CH 38 Red 5 255, CH 39 Green 5 255, CH 40 Blue 5 255, CH 41 Lime 5 255, CH 42 Red 6 255, CH 43 Green 6 255, CH 44 Blue 6 255, CH 45 Lime 6 255, CH 46 Red 7 255, CH 47 Green 7 255, CH 48 Blue 7 255, CH 49 Lime 7 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–255	540°
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–255	256°
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Color Mix Mode		Same as CH 5 in the mode “Base” (p. 9)
6	Red 1		Same as CH 6 in the mode “Base+Flex+Pixel” (p. 17)
7	Green 1		Same as CH 7 in the mode “Base+Flex+Pixel” (p. 17)
8	Blue 1		Same as CH 8 in the mode “Base+Flex+Pixel” (p. 18)
9	Lime 1		Same as CH 9 in the mode “Base+Flex+Pixel” (p. 18)
10	CTB		Same as CH 10 in the mode “Base” (p. 10)
11	Module Priority		Same as CH 11 in the mode “Base” (p. 10)
12	Zoom	0–255	4.5–60°
13	Zoom Fine	0–255	Fine adjustment of CH 12
14	Strobe		Same as CH 14 in the mode “Base” (p. 10)
15	Shutter		Same as CH 15 in the mode “Base” (p. 10)
16	Dimmer	0–255	
17	Dimmer Fine	0–255	Fine adjustment of CH 16
18	Background Color		Same as CH 18 in the mode “Base” (p. 10)
19	Macro Mode		Same as CH 19 in the mode “Base” (p. 11)
20	Macro Speed		Same as CH 20 in the mode “Base” (p. 11)
21	Macro XF		Same as CH 21 in the mode “Base” (p. 11)
22	Macro n Shot		Same as CH 22 in the mode “Base” (p. 11)
23	Global Speed		Same as CH 23 in the mode “Base” (p. 11)
24	Fans		Same as CH 24 in the mode “Base” (p. 11)
25	Control		Same as CH 25 in the mode “Base” (p. 12)
26	Red 2	0–255	
27	Green 2	0–255	
28	Blue 2	0–255	
29	Lime 2	0–255	

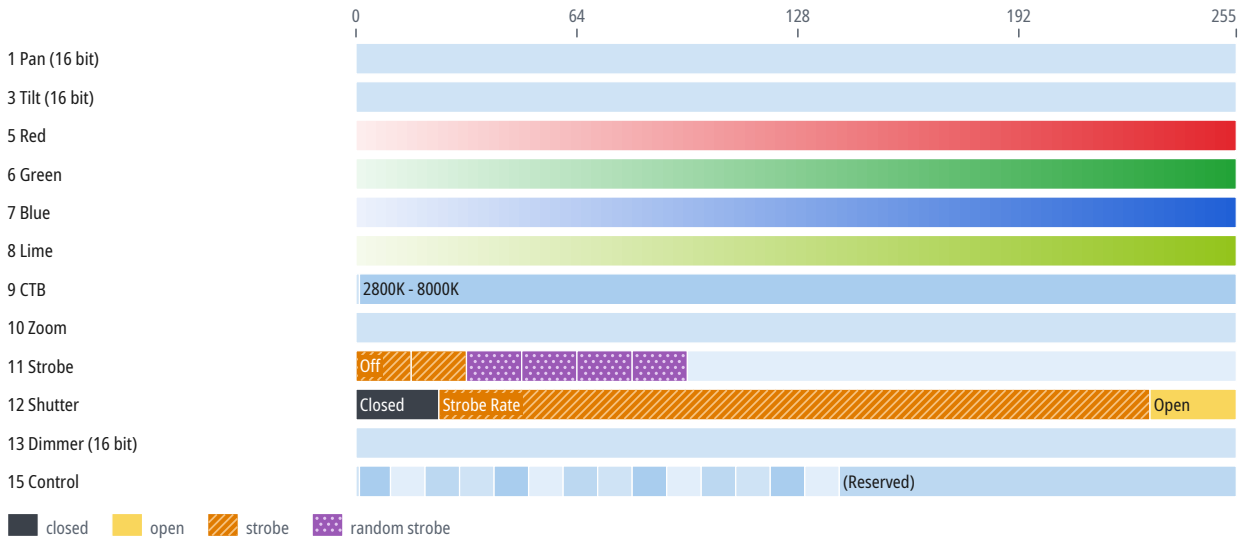
CH	Function	DMX	Description
30	Red 3	0–255	
31	Green 3	0–255	
32	Blue 3	0–255	
33	Lime 3	0–255	
34	Red 4	0–255	
35	Green 4	0–255	
36	Blue 4	0–255	
37	Lime 4	0–255	
38	Red 5	0–255	
39	Green 5	0–255	
40	Blue 5	0–255	
41	Lime 5	0–255	
42	Red 6	0–255	
43	Green 6	0–255	
44	Blue 6	0–255	
45	Lime 6	0–255	
46	Red 7	0–255	
47	Green 7	0–255	
48	Blue 7	0–255	
49	Lime 7	0–255	

Mode Wash

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 11 Strobe at 0–15 “Off”; CH 12 Shutter at 230–255 “Open”; CH 13 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 5 Red 255, CH 6 Green 255, CH 7 Blue 255, CH 8 Lime 255, CH 9 CTB 0.

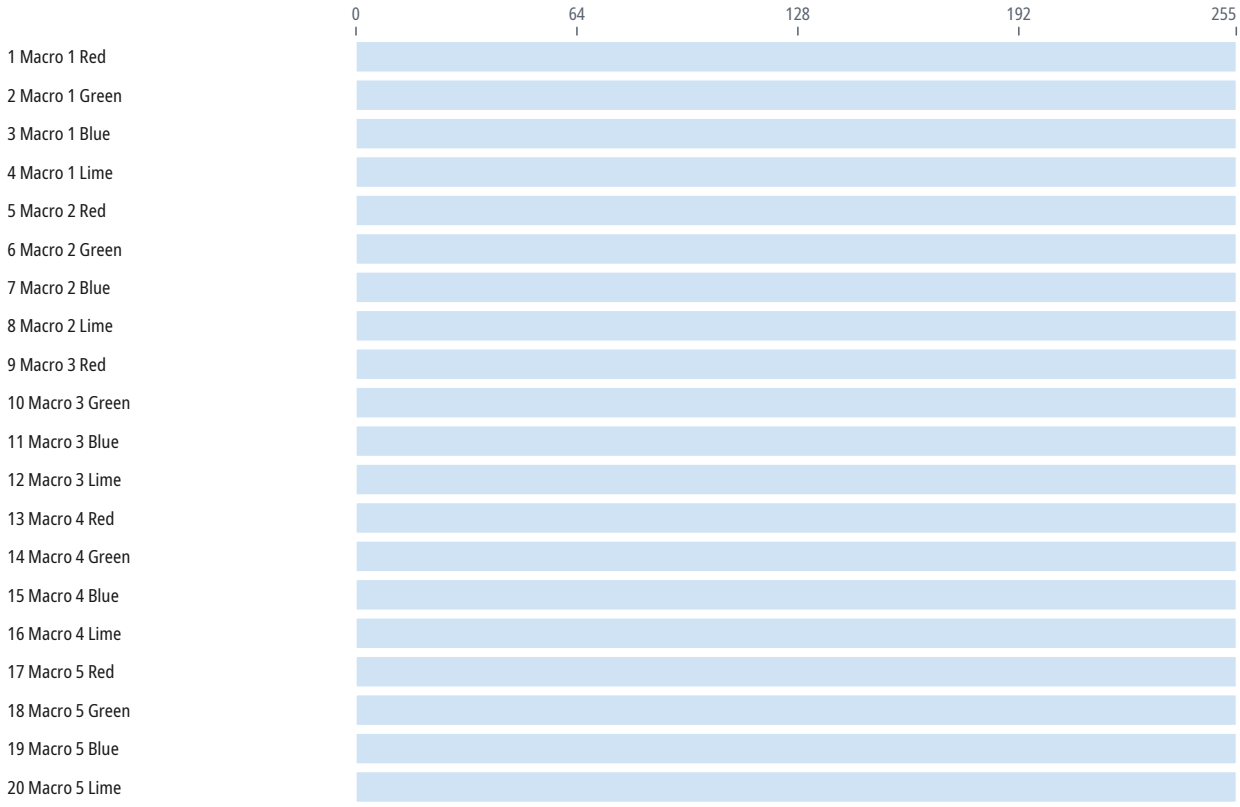
Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–255	540°
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–255	207°
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Red	0–255	
6	Green	0–255	
7	Blue	0–255	
8	Lime	0–255	
9	CTB		Same as CH 10 in the mode “Base” (p. 10)
10	Zoom	0–255	4.5–60°
11	Strobe		Same as CH 14 in the mode “Base” (p. 10)
12	Shutter		Same as CH 15 in the mode “Base” (p. 10)
13	Dimmer	0–255	
14	Dimmer Fine	0–255	Fine adjustment of CH 13
15	Control	0	Safe
		1–9	Safe ... (Reserved)
		10–19	(Reserved)
		20–29	Display Off (3s)
		30–39	Display On (3s)
		40–49	(Reserved)
		50–59	Home All (3s)
		60–69	Shutdown (3s)
		70–79	Red Shift Off (3s)
		80–89	Red Shift On (3s)
		90–99	LED PWM 2400 Hz (3s)
		100–109	LED PWM 16 kHz (3s)
		110–119	Independent Base Intensity (3s)
		120–129	Master Base Intensity (3s)
		130–139	Module Mirror (3s)
		140–255	(Reserved)

Mode Flex / Macro

Channel functions at a glance



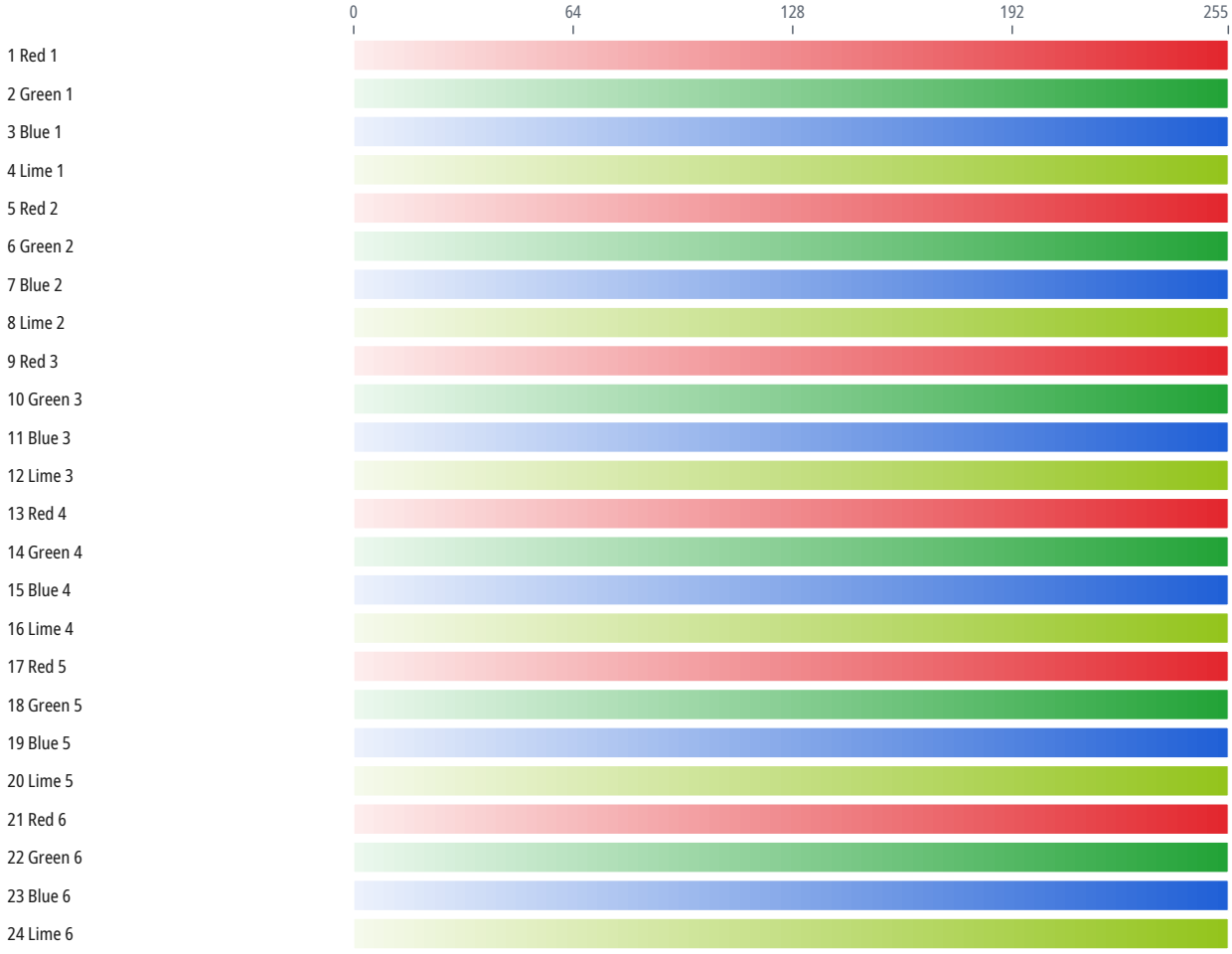
CH	Function	DMX	Description
1	Macro 1 Red	0–255	
2	Macro 1 Green	0–255	
3	Macro 1 Blue	0–255	
4	Macro 1 Lime	0–255	
5	Macro 2 Red	0–255	
6	Macro 2 Green	0–255	
7	Macro 2 Blue	0–255	
8	Macro 2 Lime	0–255	
9	Macro 3 Red	0–255	
10	Macro 3 Green	0–255	
11	Macro 3 Blue	0–255	
12	Macro 3 Lime	0–255	
13	Macro 4 Red	0–255	
14	Macro 4 Green	0–255	
15	Macro 4 Blue	0–255	
16	Macro 4 Lime	0–255	
17	Macro 5 Red	0–255	

CH	Function	DMX	Description
18	Macro 5 Green	0–255	
19	Macro 5 Blue	0–255	
20	Macro 5 Lime	0–255	

Mode Pixel

The GDTF file gives these values for a console's Highlight function: CH 1 Red 1 255, CH 2 Green 1 255, CH 3 Blue 1 255, CH 4 Lime 1 255, CH 5 Red 2 255, CH 6 Green 2 255, CH 7 Blue 2 255, CH 8 Lime 2 255, CH 9 Red 3 255, CH 10 Green 3 255, CH 11 Blue 3 255, CH 12 Lime 3 255, CH 13 Red 4 255, CH 14 Green 4 255, CH 15 Blue 4 255, CH 16 Lime 4 255, CH 17 Red 5 255, CH 18 Green 5 255, CH 19 Blue 5 255, CH 20 Lime 5 255, CH 21 Red 6 255, CH 22 Green 6 255, CH 23 Blue 6 255, CH 24 Lime 6 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1	0–255	
2	Green 1	0–255	
3	Blue 1	0–255	
4	Lime 1	0–255	
5	Red 2	0–255	
6	Green 2	0–255	

CH	Function	DMX	Description
7	Blue 2	0–255	
8	Lime 2	0–255	
9	Red 3	0–255	
10	Green 3	0–255	
11	Blue 3	0–255	
12	Lime 3	0–255	
13	Red 4	0–255	
14	Green 4	0–255	
15	Blue 4	0–255	
16	Lime 4	0–255	
17	Red 5	0–255	
18	Green 5	0–255	
19	Blue 5	0–255	
20	Lime 5	0–255	
21	Red 6	0–255	
22	Green 6	0–255	
23	Blue 6	0–255	
24	Lime 6	0–255	

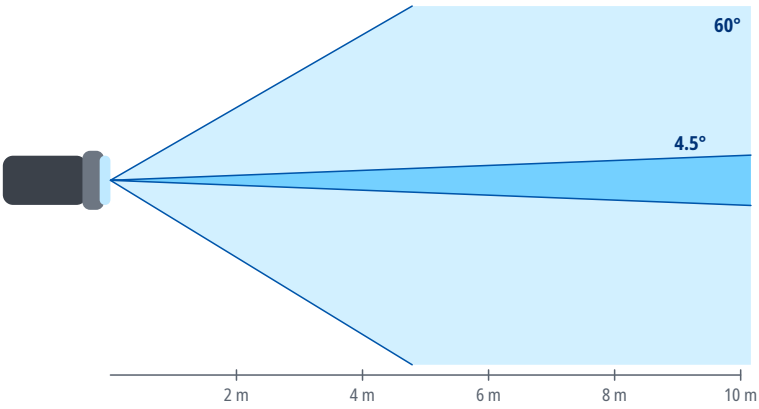
10 Technical specifications

Parameter	Value
Light source	LED
Zoom	4.5–60°
Pan	540°
Tilt	256°
RDM	yes (manufacturer ID 0x4C52, device model ID 0x2F19)
Weight	9.2 kg
Operating temperature	-10 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2800–8000 K

Spot diameter



Distance	Ø 4.5°	Ø 60°
2 m	0.16 m	2.3 m
4 m	0.31 m	4.6 m
6 m	0.47 m	6.9 m
8 m	0.63 m	9.2 m
10 m	0.79 m	11.5 m
15 m	1.2 m	17.3 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.