DMX REFERENCE

ADJ Focus Flex L19

OGSON fixtures



Manufacturer	OGSON fixtures
GDTF file	OGSON_fixtures_ADJ_Focus_Flex_L19_147051.gdtf
GDTF revision	ogi_v1_basic shit · 2026-06-15
Generated	2026-11-24

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1 About this manual

This document describes the ADJ Focus Flex L19 by OGSON fixtures. It was compiled from the GDTF file OGSON_fixtures_ADJ_Focus_Flex_L19_147051.gdtf from the GDTF-Share library.

File revision: “ogi_v1_basic shit”.

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 OGSON fixtures; 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
Basic 22 ch	22	23	1, 23, 45, 67, ...
Standard 31ch	31	16	1, 32, 63, 94, ...

No light? Check these channels

- Basic 22 ch: CH 16 Dimmer above 0
- Standard 31ch: CH 21 Dimmer above 0; CH 25 Dimmer Mode above 0; CH 26 Dimmer Curve 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

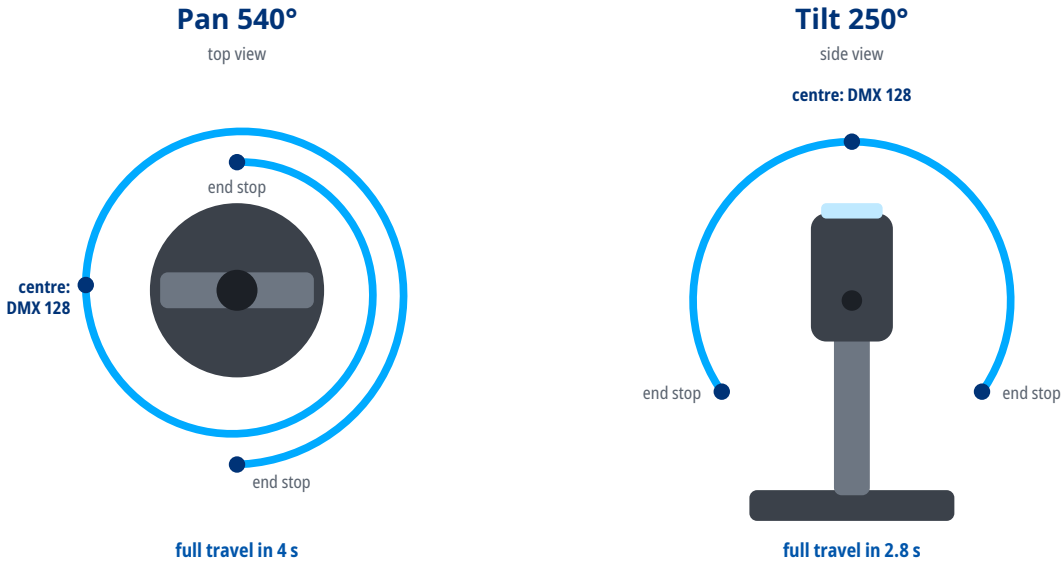
- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them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



Full-travel times as stated in the GDTF file.

5 Installation

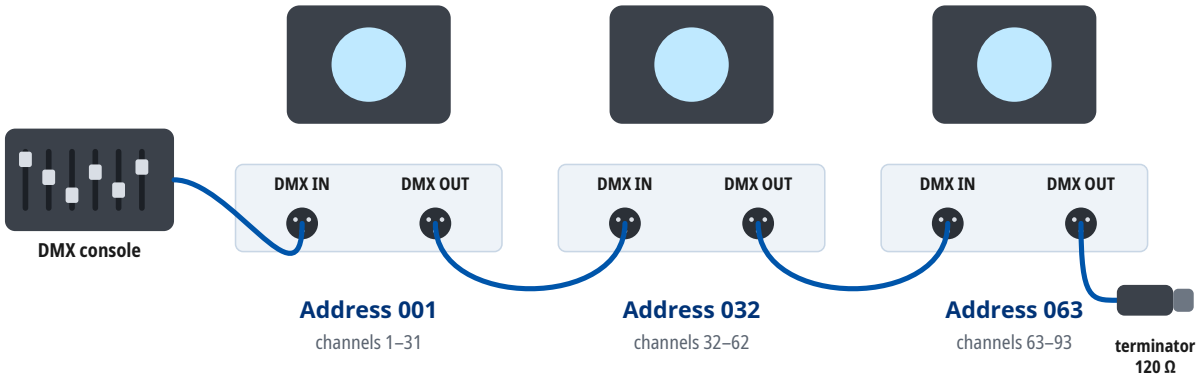
⚠ WARNING

- 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 Standard 31ch: every unit occupies 31 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 “Standard 31ch”: 31.
- 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 “Standard 31ch”, you can use, for example, the start addresses 1, 32, 63, 94.
- 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

	Basic 22 ch 22 channels	Standard 31ch 31 channels
Pan / Tilt	**1, 2**	**1, 3**
Pan / Tilt resolution	8 bit	16 bit
Dimmer	**16**	**21**
Dimmer resolution	8 bit	16 bit
Shutter / strobe	**15**	**20**
Color mixing	**3–6**	**5–8**
Color temperature	**7**	**10**
Zoom	**17**	**23**
Effects / macros	**8–14, 18–20**	**9, 11–19, 27–29**

Color wheel 1

1. LEE 007 - Pale Yellow
2. LEE 103 - Straw
3. LEE 151 - Gold Tint
4. LEE 100 - Spring Yellow
5. LEE 010 - Medium Yellow
6. LEE 101 - Yellow
7. LEE 104 - Deep Amber
8. LEE 015 - Deep Straw
9. LEE 179 - Chrome Orange
10. LEE 021 - Gold Amber
11. LEE 105 - Orange
12. LEE 158 - Deep Orange
13. LEE 022 - Dark Amber
14. LEE 778 - Millenium Gold
15. LEE 135 - Deep Gold Amber
16. LEE 024 - Scarlet
17. LEE 106 - Primary Red
18. LEE 026 - Bright Red
19. LEE 027 - Medium Red
20. LEE 019 - Fire
21. LEE 157 - Pink
22. LEE 036 - Medium Pink
23. LEE 111 - Dark Pink
24. LEE 128 - Bright Pink

25 LEE 148 - Bright Rose

26 LEE 332 - Special Rose Pink

27 LEE 793 - Vanity Fair

28 LEE 113 - Magenta

29 LEE 046 - Dark Magenta

30 LEE 048 - Rose Purple

31 LEE 126 - Mauve

32 LEE 049 - Medium Purple

33 LEE 058 - Lavender

34 LEE 197 - Alice Blue

35 LEE 119 - Dark Blue

36 LEE 132 - Medium Blue

37 LEE 120 - Deep Blue

38 LEE 165 - Daylight Blue

39 LEE 161 - Slate Blue

40 LEE 118 - Light Blue

41 LEE 068 - Sky Blue

42 LEE 143 - Pale Navy Blue

43 LEE 131 - Marine Blue

44 LEE 115 - Peacock Blue

45 LEE 172 - Lagoon Blue

46 LEE 116 - Medium Blue Green

47 LEE 090 - Dark Yellow Green

48 LEE 139 - Primary Green

49 LEE 122 - Fern Green

50 LEE 089 - Moss Green

51 LEE 124 - Dark Green

52 LEE 088 - Lime Green

53 LEE 138 - Pale Green

54 LEE 203 - Quarter C T Blue

55 LEE 202 - Half C T Blue

56 LEE 201 - Full C T Blue

57 LEE 200 - Double C T Blue

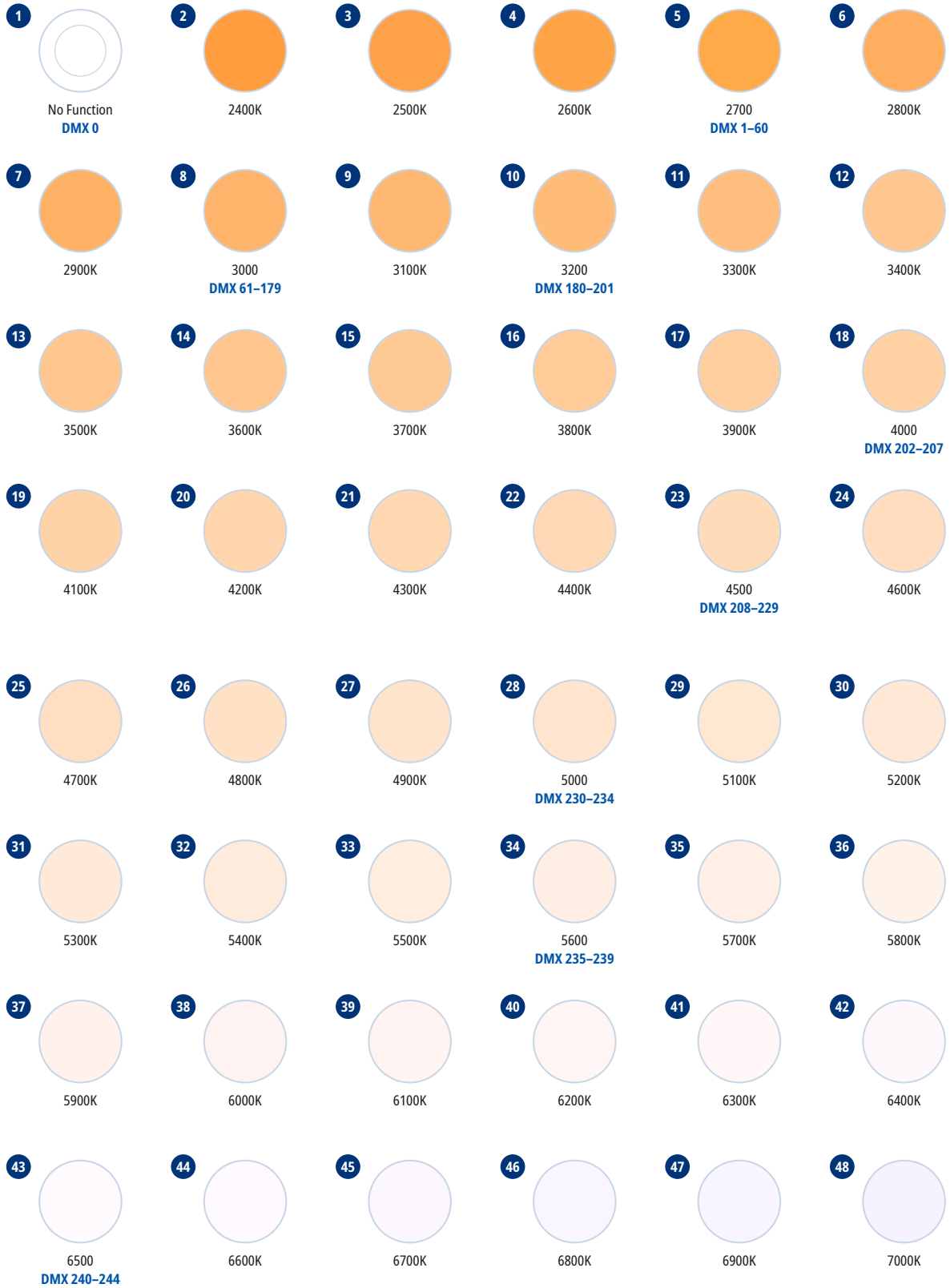
58 LEE 206 - Quarter C T Orange

59 LEE 205 - Half C T Orange

60 LEE 204 - Full C T Orange

61 Open

Color wheel 2



49 7100K
50 7200K
51 7300K
52 7400K
53 7500K
54 7600K
55 7700K
56 7800K
57 7900K
58 8000K
DMX 245–249
59 8100K
60 8200K
61 8300K
62 8400K
63 8500K
64 10000K
DMX 250–255

Color wheel 3

1 Open
2 Color Macro 1
3 Color Macro 2
4 Color Macro 3
5 Color Macro 4
6 Color Macro 5
7 Color Macro 6
8 Color Macro 7
9 Color Macro 8
10 Color Macro 9
11 Color Macro 10
12 Color Macro 11
13 Color Macro 12
14 Color Macro 13
15 Color Macro 14
16 Color Macro 15
17 Color Macro 16
18 Color Macro 17
19 Color Macro 18
20 Color Macro 19
21 Color Macro 20
22 Color Macro 21
23 Color Macro 22
24 Color Macro 23

25 Color Macro 24

26 Color Macro 25

27 Color Macro 26

28 Color Macro 27

29 Color Macro 28

30 Color Macro 29

31 Color Macro 30

32 Color Macro 31

33 Color Macro 32

34 Color Macro 33

35 Color Macro 34

36 Color Macro 35

37 Color Macro 36

38 Color Macro 37

39 Color Macro 38

40 Color Macro 39

41 Color Macro 40

42 Color Macro 41

43 Color Macro 42

44 Color Macro 43

45 Color Macro 44

46 Color Macro 45

47 Color Macro 46

48 Color Macro 47

49 Color Macro 48

50 Color Macro 49

51 Color Macro 50

52 Color Macro 51

53 Color Macro 52

54 Color Macro 53

55 Color Macro 54

56 Color Macro 55

57 Color Macro 56

58 Color Macro 57

59 Color Macro 58

60 Color Macro 59

61 Color Macro 60

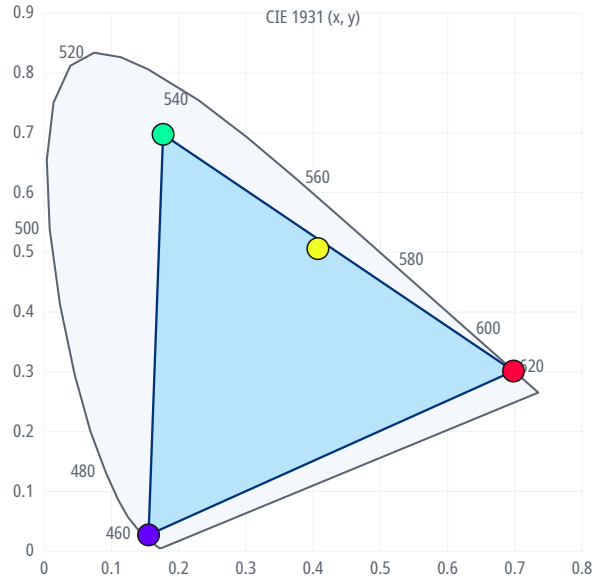
62 Color Macro 61

63 Color Macro 62

64 Color Macro 63

65 Color Macro 64

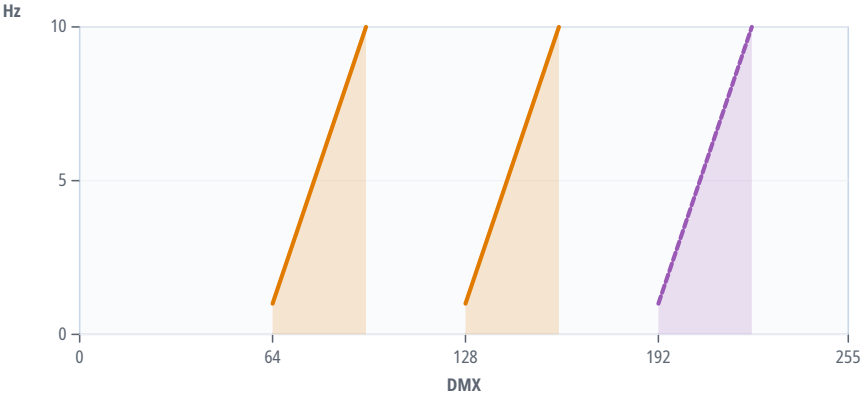
LED colors and the colors they mix



LED	x	y	nm
Red	0.698	0.301	499
Green	0.177	0.697	499
Blue	0.155	0.027	499
Lime	0.407	0.506	499

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

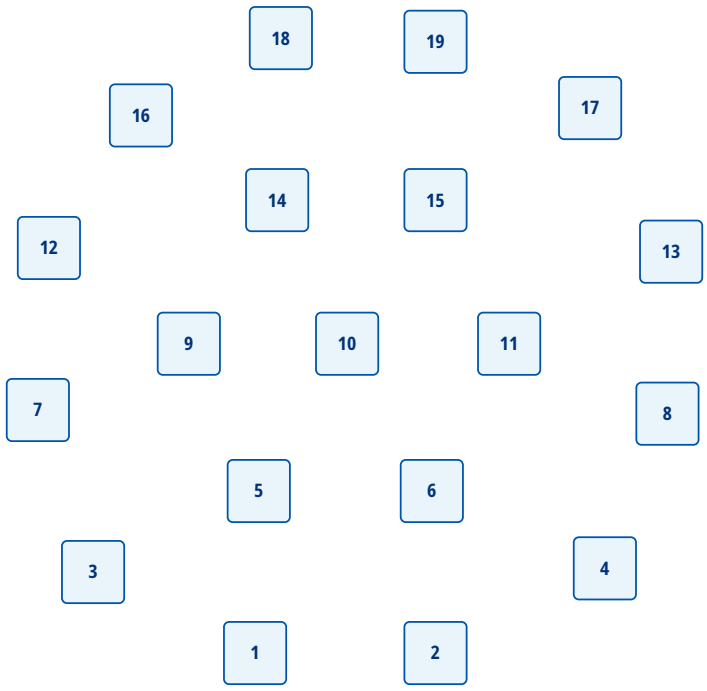
Strobe rate



CH 20 · Standard 31ch

- 64–95: 1–10 Hz
  Strobe Effect Slow to Fast
- 128–159: 1–10 Hz
  Pulse-Effect in Sequences
- 192–223: 1–10 Hz
  Random Strobe Effect Slow to Fast

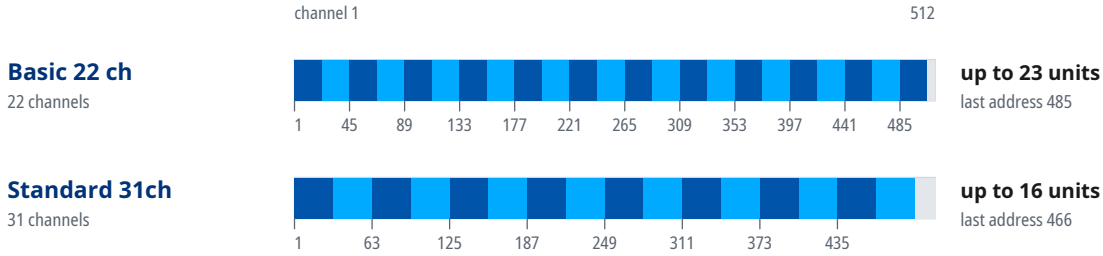
Cells (pixels)



19 cells where the GDTF file places them (seen from above), numbered in the file's order; the mode “Standard 31ch” drives them together.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Standard 31ch”

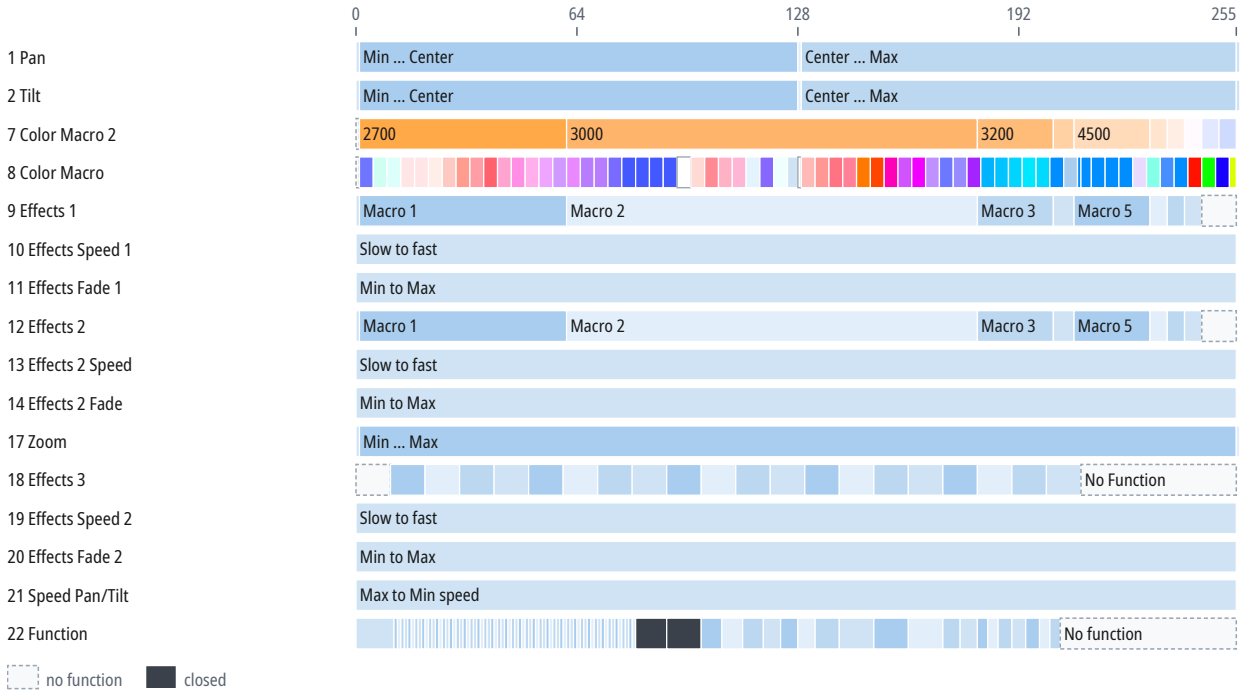
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	156	11	311	16	466
2	32	7	187	12	342	17	U2 · 1
3	63	8	218	13	373	18	U2 · 32
4	94	9	249	14	404	19	U2 · 63
5	125	10	280	15	435	20	U2 · 94

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 Basic 22 ch

If the device receives DMX in this mode but gives no light, check these channels: CH 16 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 3 Red 255, CH 4 Green 255, CH 5 Blue 255, CH 6 Lime 255, CH 15 Shutter 255, CH 16 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0	Min
		1–127	Min … Center
		128	Center
		129–254	Center … Max
		255	Max
2	Tilt	0	Min
		1–127	Min … Center
		128	Center
		129–254	Center … Max
		255	Max
3	Red	0	Min
		1–254	Min … Max
		255	Max
4	Green	0	Min
		1–254	Min … Max
		255	Max
5	Blue	0	Min
		1–254	Min … Max
		255	Max
6	Lime	0	Min
		1–254	Min … Max
		255	Max
7	Color Macro 2		Linear From 2700 K to 10000 K
		0	No Function
		1–60	2700
		61–179	3000
		180–201	3200
		202–207	4000
		208–229	4500
		230–234	5000
		235–239	5600
		240–244	6500
		245–249	8000K (9702–9821 K)
		250–255	10000K (9851–10000 K)
8	Color Macro	0	Off
		1–4	Color Macro 1
		5–8	Color Macro 2
		9–12	Color Macro 3
		13–16	Color Macro 4
		17–20	Color Macro 5
		21–24	Color Macro 6

CH	Function	DMX	Description
8	Color Macro (continued)	25–28	Color Macro 7
		29–32	Color Macro 8
		33–36	Color Macro 9
		37–40	Color Macro 10
		41–44	Color Macro 11
		45–48	Color Macro 12
		49–52	Color Macro 13
		53–56	Color Macro 14
		57–60	Color Macro 15
		61–64	Color Macro 16
		65–68	Color Macro 17
		69–72	Color Macro 18
		73–76	Color Macro 19
		77–80	Color Macro 20
		81–84	Color Macro 21
		85–88	Color Macro 22
		89–92	Color Macro 23
		93–96	Color Macro 24
		97–100	Color Macro 25
		101–104	Color Macro 26
		105–108	Color Macro 27
		109–112	Color Macro 28
		113–116	Color Macro 29
		117–120	Color Macro 30
		121–124	Color Macro 31
		125–127	Color Macro 31 … Color Macro 32
		128	Color Macro 32
		129–132	Color Macro 33
		133–136	Color Macro 34
		137–140	Color Macro 35
		141–144	Color Macro 36
		145–148	Color Macro 37
		149–152	Color Macro 38
		153–156	Color Macro 39
		157–160	Color Macro 40
		161–164	Color Macro 41
		165–168	Color Macro 42
		169–172	Color Macro 43
		173–176	Color Macro 44
		177–180	Color Macro 45
		181–184	Color Macro 46
		185–188	Color Macro 47

CH	Function	DMX	Description
8	Color Macro (continued)	189–192	Color Macro 48
		193–196	Color Macro 49
		197–200	Color Macro 50
		201–204	Color Macro 51
		205–208	Color Macro 51 … Color Macro 52
		209	Color Macro 52
		210–212	Color Macro 53
		213–216	Color Macro 54
		217–220	Color Macro 55
		221–224	Color Macro 56
		225–228	Color Macro 57
		229–232	Color Macro 58
		233–236	Color Macro 59
		237–240	Color Macro 60
		241–244	Color Macro 61
		245–248	Color Macro 62
		249–252	Color Macro 63
		253–255	Color Macro 64
9	Effects 1		Foreground Effect Macro
		0	Open
		1–60	Macro 1
		61–179	Macro 2
		180–201	Macro 3
		202–207	Macro 4
		208–229	Macro 5
		230–234	Macro 6
		235–239	Macro 7
		240–244	Macro 8
		245–255	No Function
10	Effects Speed 1		Foreground Effect Macro Speed
		0–255	Slow to fast
11	Effects Fade 1		Foreground Effect Macro Fade
		0–255	Min to Max
12	Effects 2		Background Effect Macro
		0	Open
		1–60	Macro 1
		61–179	Macro 2
		180–201	Macro 3
		202–207	Macro 4
		208–229	Macro 5
		230–234	Macro 6
		235–239	Macro 7

CH	Function	DMX	Description
12	Effects 2 (continued)	240–244	Macro 8
		245–255	No Function
13	Effects 2 Speed		Background Effect Macro Speed
		0–255	Slow to fast
14	Effects 2 Fade		Background Effect Macro Fade
		0–255	Min to Max
15	Shutter	0–31	Shutter Closed
		32–63	No Function (Shutter Open)
		64–95	Strobe Effect Slow to Fast (1–10 Hz)
		96–127	No Function (Shutter Open)
		128–159	Pulse-Effect in Sequences (1–10 Hz)
		160–191	No Function (Shutter Open)
		192–223	Random Strobe Effect Slow to Fast (1–10 Hz)
		224–255	No Function (Shutter Open)
16	Dimmer	0	Closed
		1–254	Closed ... Open
		255	Open
17	Zoom	0	Min
		1–254	Min ... Max
		255	Max
18	Effects 3	0–9	No Function
		10–19	Program 1
		20–29	Program 2
		30–39	Program 3
		40–49	Program 4
		50–59	Program 5
		60–69	Program 6
		70–79	Program 7
		80–89	Program 8
		90–99	Program 9
		100–109	Program 10
		110–119	Program 11
		120–129	Program 12
		130–139	Program 13
		140–149	Program 14
		150–159	Program 15
		160–169	Program 16
		170–179	Program 17
		180–189	Program 18
		190–199	Program 19
		200–209	Program 20
		210–255	No Function

CH	Function	DMX	Description
19	Effects Speed 2		Program Speed
		0–255	Slow to fast
20	Effects Fade 2		Program Fade
		0–255	Min to Max
21	Speed Pan/Tilt	0–255	Max to Min speed
22	Function	0–10	Default refresh rates (1200)
		11	900 Hz
		12	910 Hz
		13	920 Hz
		14	930 Hz
		15	940 Hz
		16	950 Hz
		17	960 Hz
		18	970 Hz
		19	980 Hz
		20	990 Hz
		21	1000 Hz
		22	1010 Hz
		23	1020 Hz
		24	1030 Hz
		25	1040 Hz
		26	1050 Hz
		27	1060 Hz
		28	1070 Hz
		29	1080 Hz
		30	1090 Hz
		31	1100 Hz
		32	1110 Hz
		33	1120 Hz
		34	1130 Hz
		35	1140 Hz
		36	1150 Hz
		37	1160 Hz
		38	1170 Hz
		39	1180 Hz
		40	1190 Hz
		41	1210 Hz
		42	1220 Hz
		43	1230 Hz
		44	1240 Hz
		45	1250 Hz
		46	1260 Hz

CH	Function	DMX	Description
22	Function (continued)	47	1270 Hz
		48	1280 Hz
		49	1290 Hz
		50	1300 Hz
		51	1310 Hz
		52	1320 Hz
		53	1330 Hz
		54	1340 Hz
		55	1350 Hz
		56	1360 Hz
		57	1370 Hz
		58	1380 Hz
		59	1390 Hz
		60	1400 Hz
		61	1410 Hz
		62	1420 Hz
		63	1430 Hz
		64	1440 Hz
		65	1450 Hz
		66	1460 Hz
		67	1470 Hz
		68	1480 Hz
		69	1490 Hz
		70	1500 Hz
		71	2500 Hz
		72	4000 Hz
		73	5000 Hz
		74	6000 Hz
		75	10000 Hz
		76	15000 Hz
		77	20000 Hz
		78	25000 Hz
		79	Disable LED refresh Rates
		80	Special Functions
		81–89	Enable blackout while pan/tilt moving
		90–99	Disable blackout while pan/tilt moving
		100–105	Fan Mode Low (hold 3s)
		106–111	Fan Mode High (hold 3s)
		112–117	Fan Mode Auto (hold 3s)
		118–122	Enable Pan Invert (hold 3s)
		123–127	Disable Pan Invert (hold 3s)
		128–132	Enable Tilt Invert (hold 3s)

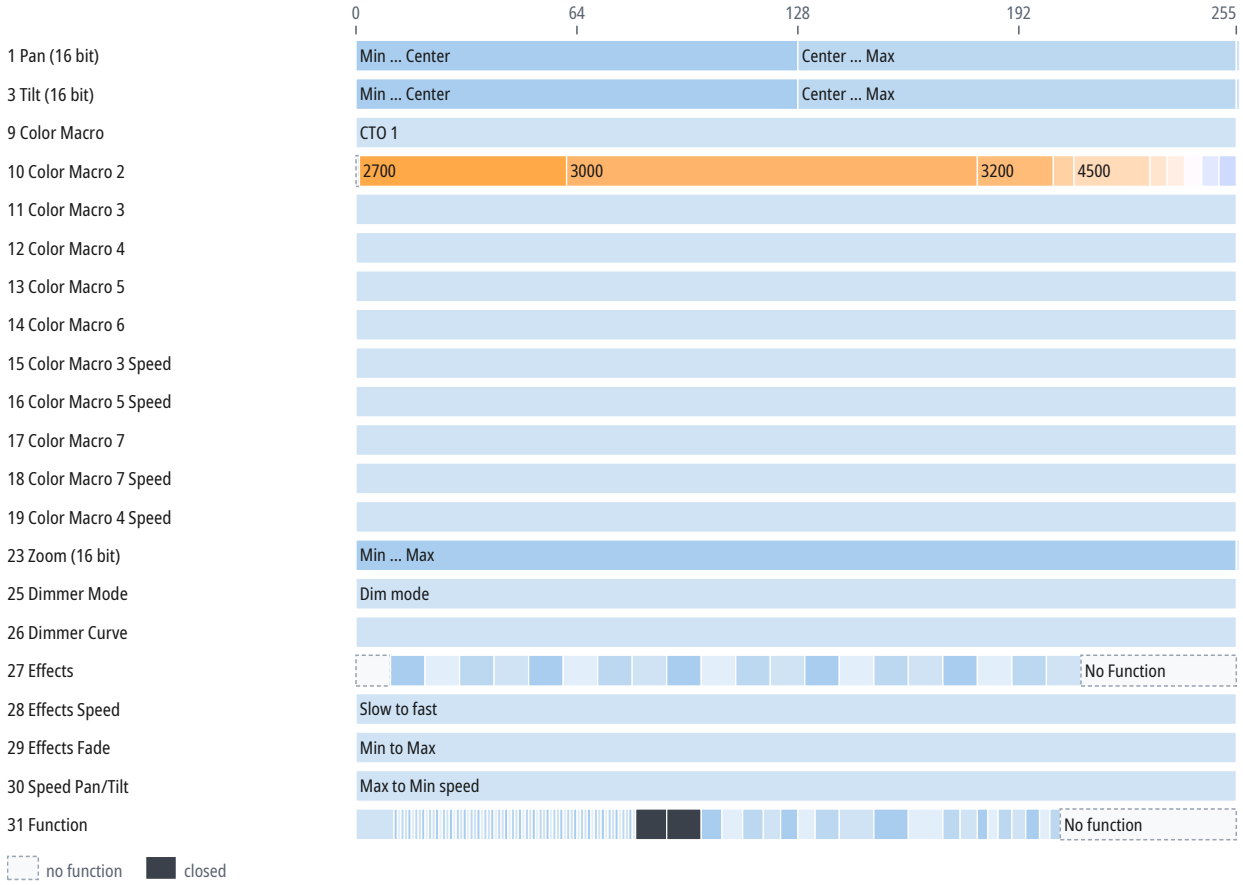
CH	Function	DMX	Description
22	Function (continued)	133–139	Disable Tilt Invert (hold 3s)
		140–149	Reset All
		150–159	Reset Pan/Tilt
		160–169	Reset Effect
		170–174	Enable Zoom Speed Fast
		175–179	Disable Zoom Speed Fast
		180–182	Enable White Calibration (hold 3s)
		183–185	Disable White Calibration (hold 3s)
		186–189	Fan Mode Mute (hold 3s)
		190–193	Enable Zoom Mode 2 (hold 2s)
		194–197	Disable Zoom Mode 2 (hold 3s)
		198–200	Enable LP Mode 1 (Hold 3s)
		201–203	Enable LP Mode 2 (Hold 3s)
		204–255	No function

Mode Standard 31ch

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 21 Dimmer above 0; CH 25 Dimmer Mode above 0; CH 26 Dimmer Curve 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 20 Shutter 255, CH 21 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–128	Min ... Center
		128–255	Center ... Max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–128	Min ... Center
		128–255	Center ... Max
		255	Max
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Red		Same as CH 3 in the mode “Basic 22 ch” (p. 15)
6	Green		Same as CH 4 in the mode “Basic 22 ch” (p. 15)
7	Blue		Same as CH 5 in the mode “Basic 22 ch” (p. 15)
8	Lime		Same as CH 6 in the mode “Basic 22 ch” (p. 15)
9	Color Macro		CTO 1

CH	Function	DMX	Description
9	Color Macro (continued)	0–255	CTO 1
10	Color Macro 2		Same as CH 7 in the mode “Basic 22 ch” (p. 15)
11	Color Macro 3	0–255	
12	Color Macro 4	0–255	
13	Color Macro 5	0–255	
14	Color Macro 6	0–255	
15	Color Macro 3 Speed	0–255	
16	Color Macro 5 Speed	0–255	
17	Color Macro 7	0–255	
18	Color Macro 7 Speed	0–255	
19	Color Macro 4 Speed	0–255	
20	Shutter		Same as CH 15 in the mode “Basic 22 ch” (p. 18)
21	Dimmer	0–255	Closed ... Open
		255	Open
22	Dimmer Fine	0–255	Fine adjustment of CH 21
23	Zoom	0–255	Min ... Max
		255	Max
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Dimmer Mode		Dim mode
		0–255	Dim mode
26	Dimmer Curve	0–255	
27	Effects	0–9	No Function
		10–19	Program 1
		20–29	Program 2
		30–39	Program 3
		40–49	Program 4
		50–59	Program 5
		60–69	Program 6
		70–79	Program 7
		80–89	Program 8
		90–99	Program 9
		100–109	Program 10
		110–119	Program 11
		120–129	Program 12
		130–139	Program 13
		140–149	Program 14
		150–159	Program 15
		160–169	Program 16
		170–179	Program 17
		180–189	Program 18
		190–199	Program 19

CH	Function	DMX	Description
27	Effects (continued)	200–209	Program 20
		210–255	No Function
28	Effects Speed		Program Speed
		0–255	Slow to fast
29	Effects Fade		Program Fade
		0–255	Min to Max
30	Speed Pan/Tilt	0–255	Max to Min speed
31	Function		Same as CH 22 in the mode “Basic 22 ch” (p. 19)

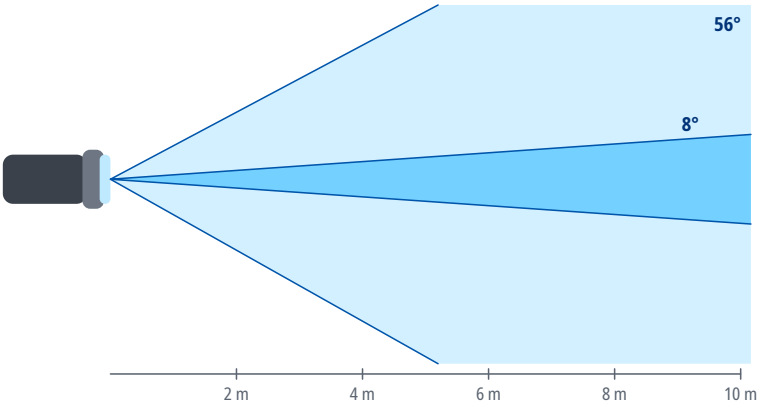
10 Technical specifications

Parameter	Value
Light source	LED
Zoom	8–56°
Pan	540°
Tilt	250°
RDM	yes (manufacturer ID 0x1900, device model ID 0x0038)
Weight	19 kg
Operating temperature	-10 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	2400–10000 K
Strobe frequency	1–10 Hz

Spot diameter



Distance	Ø 8°	Ø 56°
2 m	0.28 m	2.1 m
4 m	0.56 m	4.3 m
6 m	0.84 m	6.4 m
8 m	1.1 m	8.5 m
10 m	1.4 m	10.6 m
15 m	2.1 m	16 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.