DMX REFERENCE

Nando 1202

Ayrton Nando 1202

Ayrton



Manufacturer	Ayrton
GDTF file	Ayrton_Nando_1202_161672.gdtf
GDTF revision	V1.11 · 2026-09-23
Generated	2026-11-23

Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Product description 5
5 Installation 5
6 Connections 5
7 Operation 6
8 Functions at a glance 7
9 DMX channels 11
Mode Extended Pixel 1U 12
Mode Extended Ring 1U 21
Mode Standard 25
Mode Basic 27
Mode Extended Pixel 2U 29
Mode Extended Ring 2U 32
10 Technical specifications 35
11 Maintenance and cleaning 35
12 Troubleshooting 36
13 Disposal 36

1 About this manual

This document describes the Ayrton Nando 1202 by Ayrton. It was compiled from the GDTF file Ayrton_Nando_1202_161672.gdtf from the GDTF-Share library.

File revision: “V1.11”.

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 Ayrton; 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

DMX modes

Mode	Channels	Units in one universe	First start addresses
Extended Pixel 1U	150	3	1, 151, 301
Extended Ring 1U	50	10	1, 51, 101, 151, ...
Standard	37	13	1, 38, 75, 112, ...
Basic	26	19	1, 27, 53, 79, ...
Extended Pixel 2U	150	3	1, 151, 301
Extended Ring 2U	50	10	1, 51, 101, 151, ...

No light? Check these channels

- Extended Pixel 1U: CH 16 Shutter at 32–63 or 96–127; CH 17 Dimmer 1 above 0; CH 35 Dimmer 2 above 0; CH 36 Back Chase Dimmer above 0
- Extended Ring 1U: CH 16 Shutter at 32–63 or 96–127; CH 17 Dimmer 1 above 0; CH 35 Dimmer 2 above 0; CH 36 Back Chase Dimmer above 0
- Standard: CH 16 Shutter at 32–63 or 96–127; CH 17 Dimmer 1 above 0; CH 35 Dimmer 2 above 0; CH 36 Back Chase Dimmer above 0
- Basic: CH 16 Shutter at 32–63 or 96–127; CH 17 Dimmer above 0
- Extended Pixel 2U: CH 16 Shutter at 32–63 or 96–127; CH 17 Dimmer 1 above 0; CH 35 Dimmer 2 above 0; CH 36 Back Chase Dimmer above 0
- Extended Ring 2U: CH 16 Shutter at 32–63 or 96–127; CH 17 Dimmer 1 above 0; CH 35 Dimmer 2 above 0; CH 36 Back Chase 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.

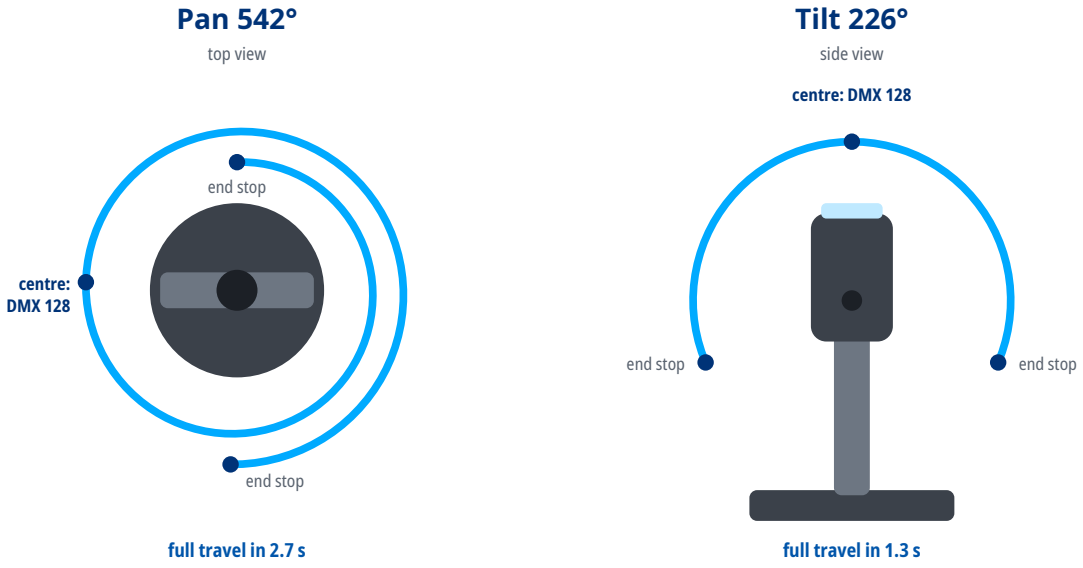
⚠ CAUTION

- 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



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.
> - 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.

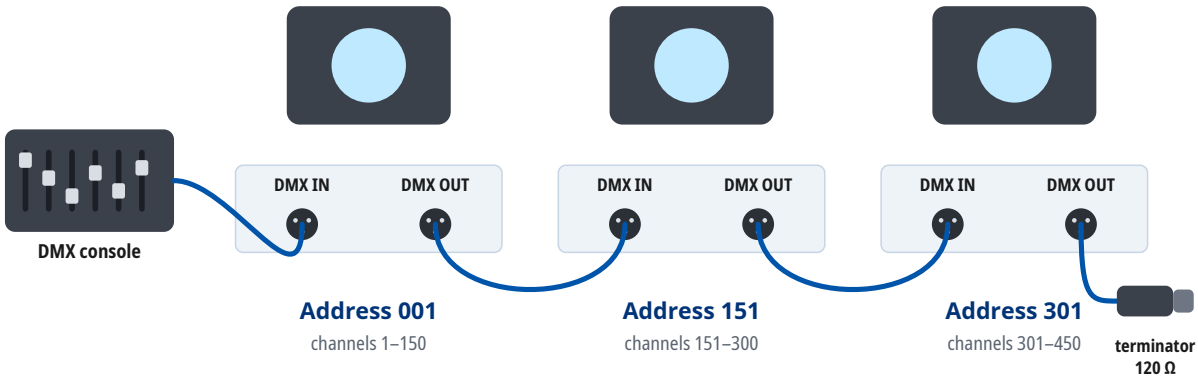
6 Connections

- 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 Extended Pixel 1U: every unit occupies 150 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 “Extended Pixel 1U”: 150.
- 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 “Extended Pixel 1U”, you can use, for example, the start addresses 1, 151, 301.
- 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

	Extended Pixel 1U 150 channels	Extended Ring 1U 50 channels	Standard 37 channels	Basic 26 channels	Extended Pixel 2U 150 channels	Extended Ring 2U 50 channels
Pan / Tilt	1, 3	1, 3	1, 3	1, 3	1, 3	1, 3
Dimmer	17, 35	17, 35	17, 35	17	17, 35	17, 35
Shutter / strobe	16, 37	16, 37	16, 37	16	16, 37	16, 37
Color mixing	1–19, 31–34, 39–150	20 channels (8–50)	8 channels (8–34)	4× (8–14)	1–150	1–12, 14, 31–34
Color temperature	19	19	19	19	19	19
Color wheel	20	20	20	20	20	20
Zoom	23	23	23	23	23	23
Pixel control	28 cells	✓	✓		28 cells	✓

Color wheel

1. Open — DMX 0
2. LAVENDER TINT — DMX 3
3. MEDIUM BASTARD AMBER — DMX 4
4. PALE YELLOW — DMX 7
5. DARK SALMON — DMX 8
6. PALE AMBER GOLD — DMX 9
7. MEDIUM YELLOW — DMX 10
8. STRAW TINT — DMX 13
9. DEEP STRAW — DMX 15
10. SURPRISE PEACH — DMX 17
11. MEDIUM AMBER — DMX 20
12. GOLD AMBER — DMX 21
13. DARK AMBER — DMX 22
14. SCARLET — DMX 24
15. SUNSET RED — DMX 25
16. BRIGHT RED — DMX 26
17. PALSA RED — DMX 29
18. LIGHT PINK — DMX 35
19. MEDIUM PINK — DMX 36
20. DARK MAGENTA — DMX 46
21. DARK PURPLE — DMX 48
22. LIGHT LAVENDER — DMX 52
23. PALE LAVENDER — DMX 53
24. LAVENDER — DMX 58

25 PALE BLUE **DMX 63**

26 SKY BLUE **DMX 68**

27 TOKIO BLUE **DMX 71**

28 EVENING BLUE **DMX 75**

29 JUST BLUE **DMX 79**

30 DEEPER BLUE **DMX 85**

31 LIME GREEN **DMX 88**

32 MOSS GREEN **DMX 89**

33 DARKYELLOW GREEN **DMX 90**

34 SPRING YELLOW **DMX 100**

35 YELLOW **DMX 101**

36 LIGHT AMBER **DMX 102**

37 STRAW **DMX 103**

38 DEEP AMBER **DMX 104**

39 ORANGE **DMX 105**

40 PRIMAY RED **DMX 106**

41 LIGHT ROSE **DMX 107**

42 ENGLISH ROSE **DMX 108**

43 LIGHT SALMON **DMX 109**

44 MIDDLE ROSE **DMX 110**

45 DARK PINK **DMX 111**

46 MAGENTA **DMX 113**

47 MEDIUM BLUE GREEN **DMX 116**

48 LIGHT BLUE **DMX 118**

49 DARK BLUE **DMX 119**

50 DEEP BLUE **DMX 120**

51 DARK GREEN **DMX 124**

52 MAUVE **DMX 126**

53 SMOKEY PINK **DMX 127**

54 BRIGHT PINK **DMX 128**

55 MEDIUM BLUE **DMX 132**

56 GOLDEN AMBER **DMX 134**

57 PALE LAVENDER 1 **DMX 136**

58 SPECIAL LAVENDER **DMX 137**

59 PALE GREEN **DMX 138**

60 PRIMARY GREEN **DMX 139**

61 SUMMER BLUE **DMX 140**

62 BRIGHT BLUE **DMX 141**

63 PALE VIOLET **DMX 142**

64 PALE NAVY BLUE **DMX 143**

65 APRICOT **DMX 147**

66 BRIGHT ROSE **DMX 148**

67 GOLD TINT **DMX 151**

68 PALE GOLD **DMX 152**

69 PALE SALMON **DMX 153**

70 PALE ROSE **DMX 154**

71 CHOCOLATE **DMX 156**

72 DEEP ORANGE **DMX 158**

73 NO COLOR STRAW DMX 159

74 SLATE BLUE DMX 161

75 BASTARD AMBER DMX 162

76 FLAME RED DMX 164

77 DAYLIGHT BLUE DMX 165

78 LILAC TINT DMX 169

79 DEEP LAVENDER DMX 170

80 LAGOON BLUE DMX 172

81 DARK STEEL BLUE DMX 174

82 LOVING AMBER DMX 176

83 CHROME ORANGE DMX 179

84 DARK LAVENDER DMX 180

85 CONGO BLUE DMX 181

86 LIGHT RED DMX 182

87 MOONLIGHT BLUE DMX 183

88 FLESH PINK DMX 192

89 ROSY AMBER DMX 193

90 SURPRISE PINK DMX 194

91 ZENITH BLUE DMX 195

92 TRUE BLUE DMX 196

93 ALICE BLUE DMX 197

94 PALACE BLUE DMX 198

95 FULL CT BLUE DMX 201

96 1/2 CT BLUE DMX 202

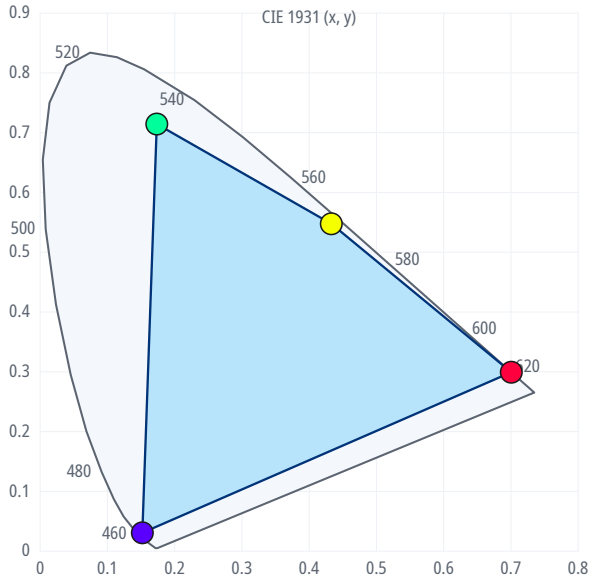
97 1/4 CT BLUE DMX 203

98 FULL CT ORANGE DMX 204

99 1/2 CT ORANGE DMX 205

100 1/4 CT ORANGE DMX 206

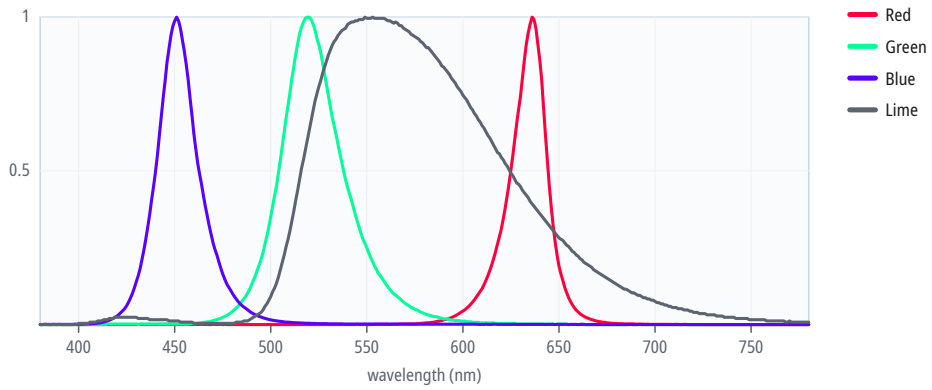
LED colors and the colors they mix



LED	x	y	nm
Red	0.701	0.299	636
Green	0.173	0.714	519
Blue	0.152	0.031	451
Lime	0.433	0.548	546

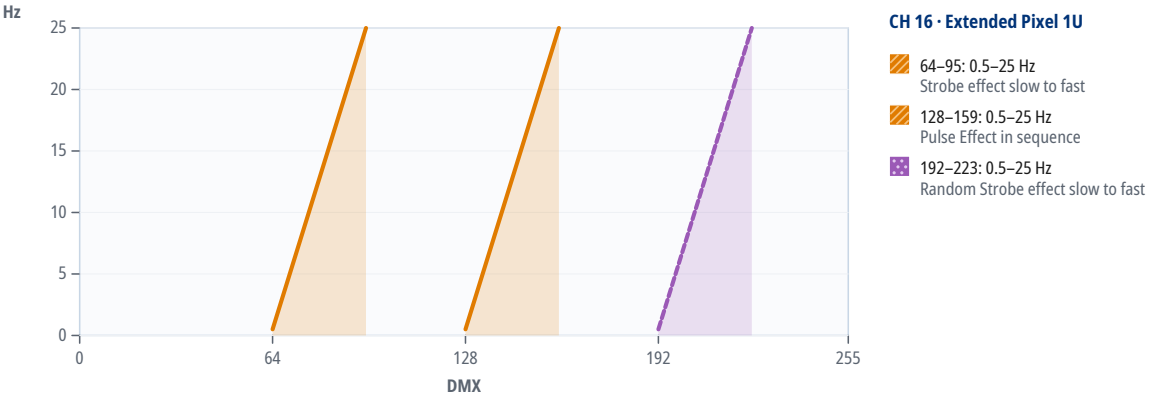
The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Spectra of the light sources

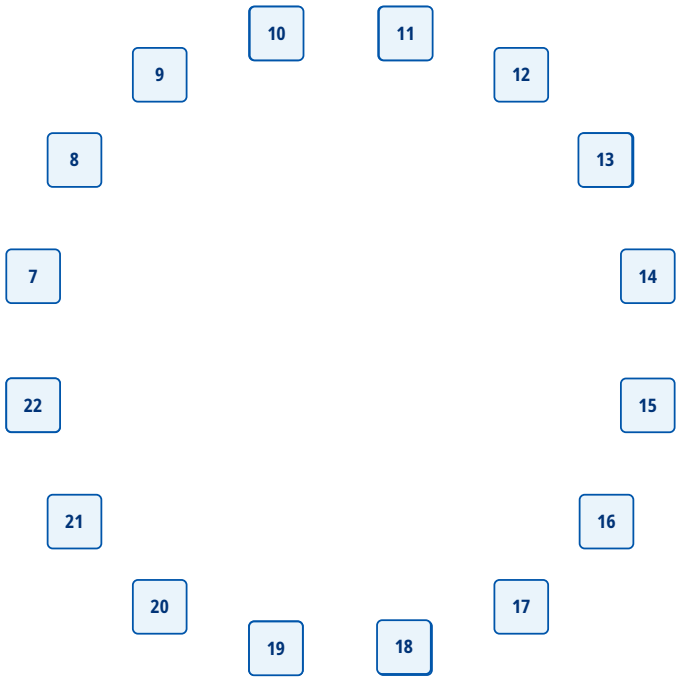


Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

Strobe rate



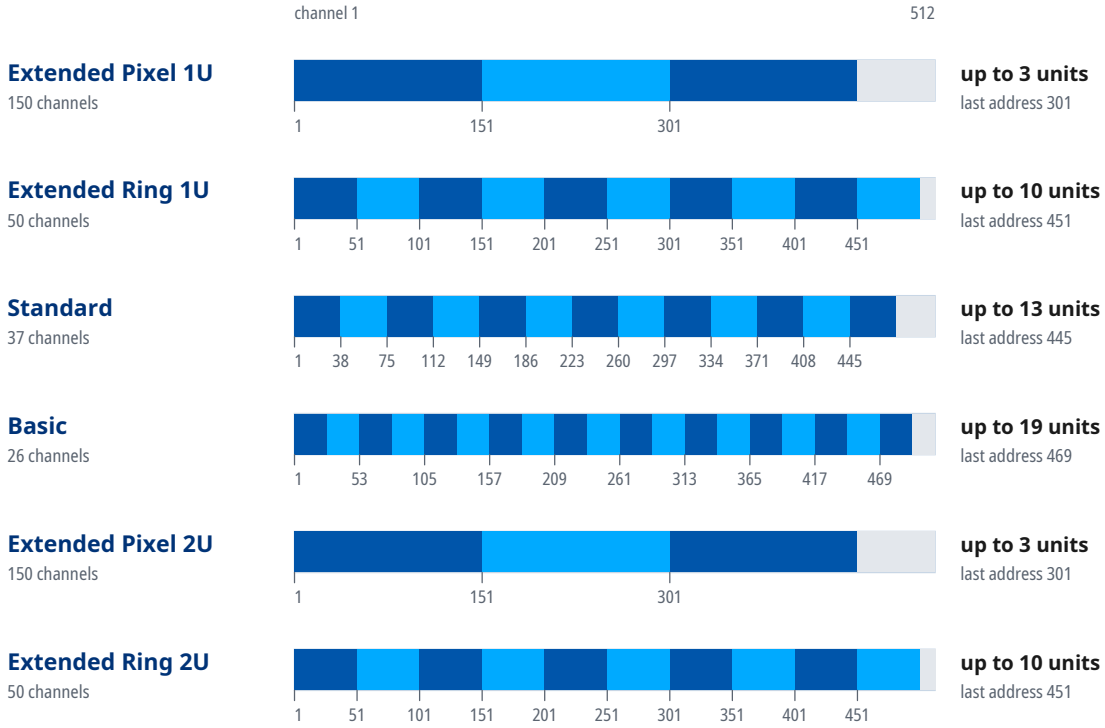
Cells (pixels)



Cells where the GDTF file places them (seen from above), 22 in all; numbered in the order of their first DMX channel in the mode “Extended Pixel 1U”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Extended Pixel 1U”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 301	11	U4 · 151	16	U6 · 1
2	151	7	U3 · 1	12	U4 · 301	17	U6 · 151
3	301	8	U3 · 151	13	U5 · 1	18	U6 · 301
4	U2 · 1	9	U3 · 301	14	U5 · 151	19	U7 · 1
5	U2 · 151	10	U4 · 1	15	U5 · 301	20	U7 · 151

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

RDM personalities

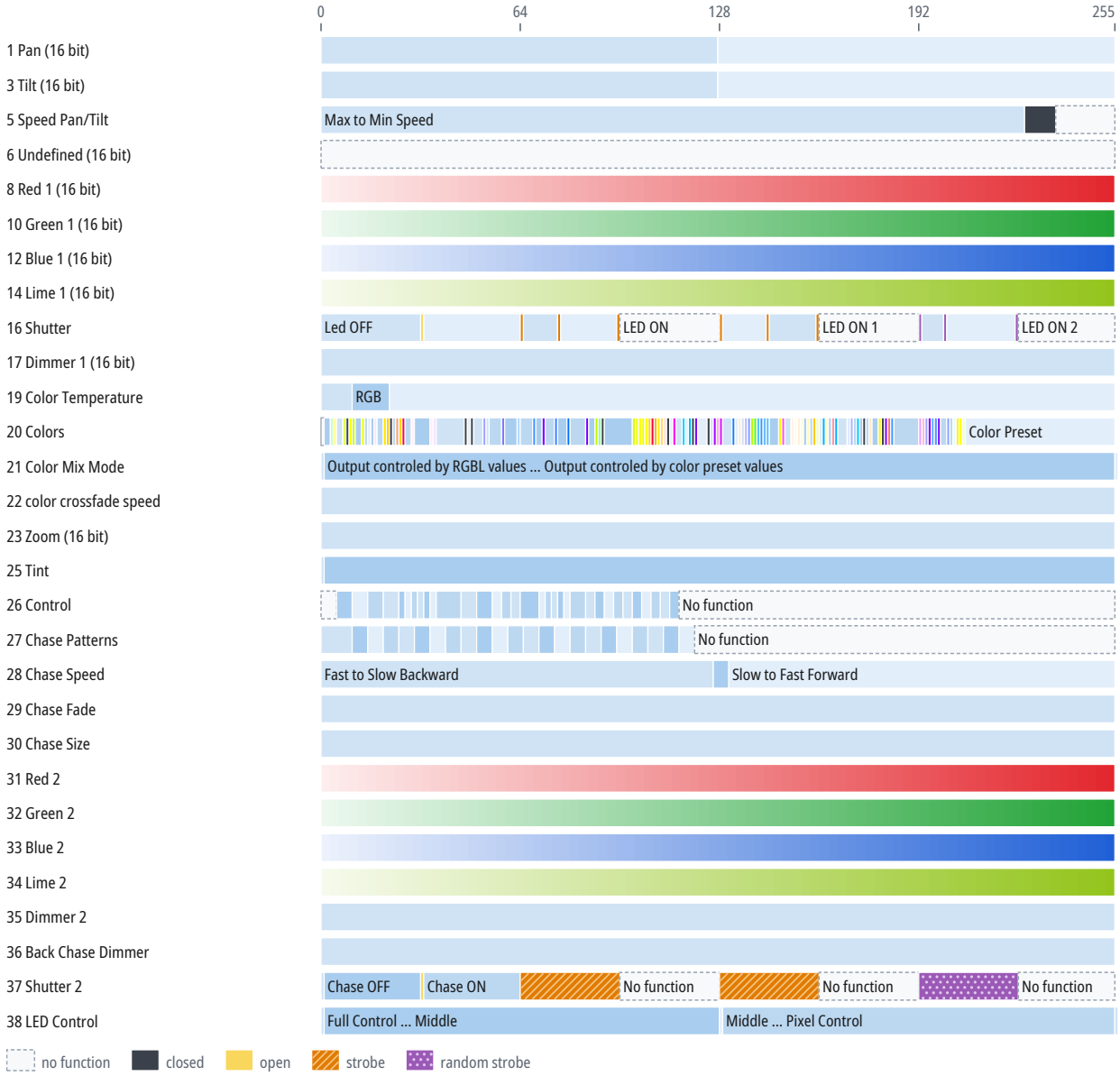
Mode	Channels	RDM personality
Extended Pixel 1U	150	4
Extended Ring 1U	50	3
Standard	37	1
Basic	26	2
Extended Pixel 2U	150	4
Extended Ring 2U	50	3

Mode Extended Pixel 1U

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 16 Shutter at 32–63 or 96–127; CH 17 Dimmer 1 above 0; CH 35 Dimmer 2 above 0; CH 36 Back Chase Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 8 Red 1 255, CH 10 Green 1 255, CH 12 Blue 1 255, CH 14 Lime 1 255, CH 16 Shutter 32, CH 17 Dimmer 1 255, CH 19 Color Temperature 0, CH 20 Colors 0, CH 21 Color Mix Mode 0, CH 37 Shutter 2 32, CH 39 Red 255 (the same in each of the 28 cells), CH 40 Green 255 (the same in each of the 28 cells), CH 41 Blue 255 (the same in each of the 28 cells), CH 42 Lime 255 (the same in each of the 28 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan 1
		128	Home
		128–255	Pan 1

CH	Function	DMX	Description
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt 1
		128	Home
		128–255	Tilt 1
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–225	Max to Min Speed
		226–235	Blackout by movement
		236–255	No Fonction
6	Undefined	0–255	
7	Undefined Fine	0–255	Fine adjustment of CH 6
8	Red 1	0–255	
9	Red 1 Fine	0–255	Fine adjustment of CH 8
10	Green 1	0–255	
11	Green 1 Fine	0–255	Fine adjustment of CH 10
12	Blue 1	0–255	
13	Blue 1 Fine	0–255	Fine adjustment of CH 12
14	Lime 1	0–255	
15	Lime 1 Fine	0–255	Fine adjustment of CH 14
16	Shutter	0–31	Led OFF
		32–63	Led ON
		64	Strobe slow
		65–75	Strobe slow ... Strobe Mid
		76	Strobe Mid
		77–94	Strobe Mid ... Strobe Fast
		95	Strobe Fast
		96–127	LED ON
		128	Pulse Slow
		129–142	Pulse Slow ... Pulse Mid
		143	Pulse Mid
		144–158	Pulse Mid ... Pulse Fast
		159	Pulse Fast
		160–191	LED ON 1
		192	Random Slow
		193–199	Random Slow ... Random Mid
		200	Random Mid
		201–222	Random Mid ... Random Fast
		223	Random Fast
		224–255	LED ON 2
17	Dimmer 1	0–255	
18	Dimmer 1 Fine	0–255	Fine adjustment of CH 17
19	Color Temperature	0–9	RGBL
		10–21	RGB

CH	Function	DMX	Description
19	Color Temperature (continued)	22–255	CTC (8000–2500 K)
20	Colors	0	Open
		1–2	Open … LAVENDER TINT
		3	LAVENDER TINT
		4	MEDIUM BASTARD AMBER
		5–6	MEDIUM BASTARD AMBER … PALE YELLOW
		7	PALE YELLOW
		8	DARK SALMON
		9	PALE AMBER GOLD
		10	MEDIUM YELLOW
		11–12	MEDIUM YELLOW … STRAW TINT
		13	STRAW TINT
		14	STRAW TINT … DEEP STRAW
		15	DEEP STRAW
		16	DEEP STRAW … SURPRISE PEACH
		17	SURPRISE PEACH
		18–19	SURPRISE PEACH … MEDIUM AMBER
		20	MEDIUM AMBER
		21	GOLD AMBER
		22	DARK AMBER
		23	DARK AMBER … SCARLET
		24	SCARLET
		25	SUNSET RED
		26	BRIGHT RED
		27–28	BRIGHT RED … PALSA RED
		29	PALSA RED
		30–34	PALSA RED … LIGHT PINK
		35	LIGHT PINK
		36	MEDIUM PINK
		37–45	MEDIUM PINK … DARK MAGENTA
		46	DARK MAGENTA
		47	DARK MAGENTA … DARK PURPLE
		48	DARK PURPLE
		49–51	DARK PURPLE … LIGHT LAVENDER
		52	LIGHT LAVENDER
		53	PALE LAVENDER
		54–57	PALE LAVENDER … LAVENDER
		58	LAVENDER
		59–62	LAVENDER … PALE BLUE
		63	PALE BLUE
		64–67	PALE BLUE … SKY BLUE
		68	SKY BLUE

CH	Function	DMX	Description
20	Colors (continued)	69–70	SKY BLUE ... TOKIO BLUE
		71	TOKIO BLUE
		72–74	TOKIO BLUE ... EVENING BLUE
		75	EVENING BLUE
		76–78	EVENING BLUE ... JUST BLUE
		79	JUST BLUE
		80–84	JUST BLUE ... DEEPER BLUE
		85	DEEPER BLUE
		86–87	DEEPER BLUE ... LIME GREEN
		88	LIME GREEN
		89	MOSS GREEN
		90	DARKYELLOW GREEN
		91–99	DARKYELLOW GREEN ... SPRING YELLOW
		100	SPRING YELLOW
		101	YELLOW
		102	LIGHT AMBER
		103	STRAW
		104	DEEP AMBER
		105	ORANGE
		106	PRIMAY RED
		107	LIGHT ROSE
		108	ENGLISH ROSE
		109	LIGHT SALMON
		110	MIDDLE ROSE
		111	DARK PINK
		112	DARK PINK ... MAGENTA
		113	MAGENTA
		114–115	MAGENTA ... MEDIUM BLUE GREEN
		116	MEDIUM BLUE GREEN
		117	MEDIUM BLUE GREEN ... LIGHT BLUE
		118	LIGHT BLUE
		119	DARK BLUE
		120	DEEP BLUE
		121–123	DEEP BLUE ... DARK GREEN
		124	DARK GREEN
		125	DARK GREEN ... MAUVE
		126	MAUVE
		127	SMOKEY PINK
		128	BRIGHT PINK
		129–131	BRIGHT PINK ... MEDIUM BLUE
		132	MEDIUM BLUE
		133	MEDIUM BLUE ... GOLDEN AMBER

CH	Function	DMX	Description
20	Colors (continued)	134	GOLDEN AMBER
		135	GOLDEN AMBER ... PALE LAVENDER 1
		136	PALE LAVENDER 1
		137	SPECIAL LAVENDER
		138	PALE GREEN
		139	PRIMARY GREEN
		140	SUMMER BLUE
		141	BRIGHT BLUE
		142	PALE VIOLET
		143	PALE NAVY BLUE
		144–146	PALE NAVY BLUE ... APRICOT
		147	APRICOT
		148	BRIGHT ROSE
		149–150	BRIGHT ROSE ... GOLD TINT
		151	GOLD TINT
		152	PALE GOLD
		153	PALE SALMON
		154	PALE ROSE
		155	PALE ROSE ... CHOCOLATE
		156	CHOCOLATE
		157	CHOCOLATE ... DEEP ORANGE
		158	DEEP ORANGE
		159	NO COLOR STRAW
		160	NO COLOR STRAW ... SLATE BLUE
		161	SLATE BLUE
		162	BASTARD AMBER
		163	BASTARD AMBER ... FLAME RED
		164	FLAME RED
		165	DAYLIGHT BLUE
		166–168	DAYLIGHT BLUE ... LILAC TINT
		169	LILAC TINT
		170	DEEP LAVENDER
		171	DEEP LAVENDER ... LAGOON BLUE
		172	LAGOON BLUE
		173	LAGOON BLUE ... DARK STEEL BLUE
		174	DARK STEEL BLUE
		175	DARK STEEL BLUE ... LOVING AMBER
		176	LOVING AMBER
		177–178	LOVING AMBER ... CHROME ORANGE
		179	CHROME ORANGE
		180	DARK LAVENDER
		181	CONGO BLUE

CH	Function	DMX	Description
20	Colors (continued)	182	LIGHT RED
		183	MOONLIGHT BLUE
		184–191	MOONLIGHT BLUE ... FLESH PINK
		192	FLESH PINK
		193	ROSY AMBER
		194	SURPRISE PINK
		195	ZENITH BLUE
		196	TRUE BLUE
		197	ALICE BLUE
		198	PALACE BLUE
		199–200	PALACE BLUE ... FULL CT BLUE
		201	FULL CT BLUE
		202	1/2 CT BLUE
		203	1/4 CT BLUE
		204	FULL CT ORANGE
		205	1/2 CT ORANGE
		206	1/4 CT ORANGE
		207–255	Color Preset
21	Color Mix Mode	0	Output controled by RGBL values
		1–254	Output controled by RGBL values ... Output controled by color preset values
		255	Output controled by color preset values
22	color crossfade speed	0–255	0.01–5 s
23	Zoom	0–255	65–3.5°
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Tint	0	Tint Off
		1–255	Tint
26	Control	0–4	Unused
		5–9	Display Off
		10–14	Display On
		15–19	Display Inv Off
		20–24	Display Inv On
		25–26	Auto Fan
		27–28	Stage Fan
		29–30	Silence Fan
		31–32	Super Silence Fan
		33–34	Constant Fan OFF
		35–36	Constant Fan ON
		37–44	Unused
		45–49	Square Law
		50–54	Linear
		55–57	1200 Hz

CH	Function	DMX	Description
26	Control (continued)	58–60	2400 Hz
		61–63	16000 Hz
		64–69	25000 Hz
		70–71	Lamp 500W
		72–73	Lamp 1000W
		74–75	Lamp 2500W
		76–77	Lamp 5000W
		78–79	Lamp OFF
		80–84	All Motor Reset
		85–87	P/T Motor Reset
		88–90	ZoomMotor Reset
		91–93	Pixel Rotation 0
		94–96	Pixel Rotation 90
		97–99	Pixel Rotation 180
		100–102	Pixel Rotation 270
		103–105	Pixel Rotation
		106–108	Fog fan off
		109–111	Fog fan auto
		112–114	Fog fan on
		115–255	No function
27	Chase Patterns	0–9	Chse OFF
		10–14	Chase 1
		15–19	Chase 2
		20–24	Chase 3
		25–29	Chase 4
		30–34	Chase 5
		35–39	Chase 6
		40–44	Chase 7
		45–49	Chase 8
		50–54	Chase 9
		55–59	Chase 10
		60–64	Chase 11
		65–69	Chase 12
		70–74	Chase 13
		75–79	Chase 14
		80–84	Chase 15
		85–89	Chase 16
		90–94	Chase 17
		95–99	Chase 18
		100–104	Chase 19
		105–109	Chase 20
		110–114	Chase 21

CH	Function	DMX	Description
27	Chase Patterns (continued)	115–119	Chase 22
		120–255	No function
28	Chase Speed	0–125	Fast to Slow Backward
		126–130	Empty Channel Set
		131–255	Slow to Fast Forward
29	Chase Fade	0–255	
30	Chase Size	0–255	
31	Red 2	0–255	
32	Green 2	0–255	
33	Blue 2	0–255	
34	Lime 2	0–255	
35	Dimmer 2	0–255	
36	Back Chase Dimmer	0–255	
37	Shutter 2	0	Chase dimmer OFF
		1–31	Chase OFF
		32	Chase Dimmer ON
		33–63	Chase ON
		64–95	Shutter 1 Strobe 3
		96–127	No function
		128–159	Shutter 1 Strobe Pulse 5
		160–191	No function
		192–223	Shutter 1 Strobe Random 7
		224–255	No function
38	LED Control		Pixel mode
		0	Full Control
		1–127	Full Control ... Middle
		128	Middle
		129–254	Middle ... Pixel Control
		255	Pixel Control
39	Red 3	0–255	
40	Green 3	0–255	
41	Blue 3	0–255	
42	Lime 3	0–255	

CH 39–150: 28 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 39–42); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Lime	Cell	Red	Green	Blue	Lime
1	39	40	41	42	2	43	44	45	46
3	47	48	49	50	4	51	52	53	54
5	55	56	57	58	6	59	60	61	62
7	63	64	65	66	8	67	68	69	70
9	71	72	73	74	10	75	76	77	78
11	79	80	81	82	12	83	84	85	86

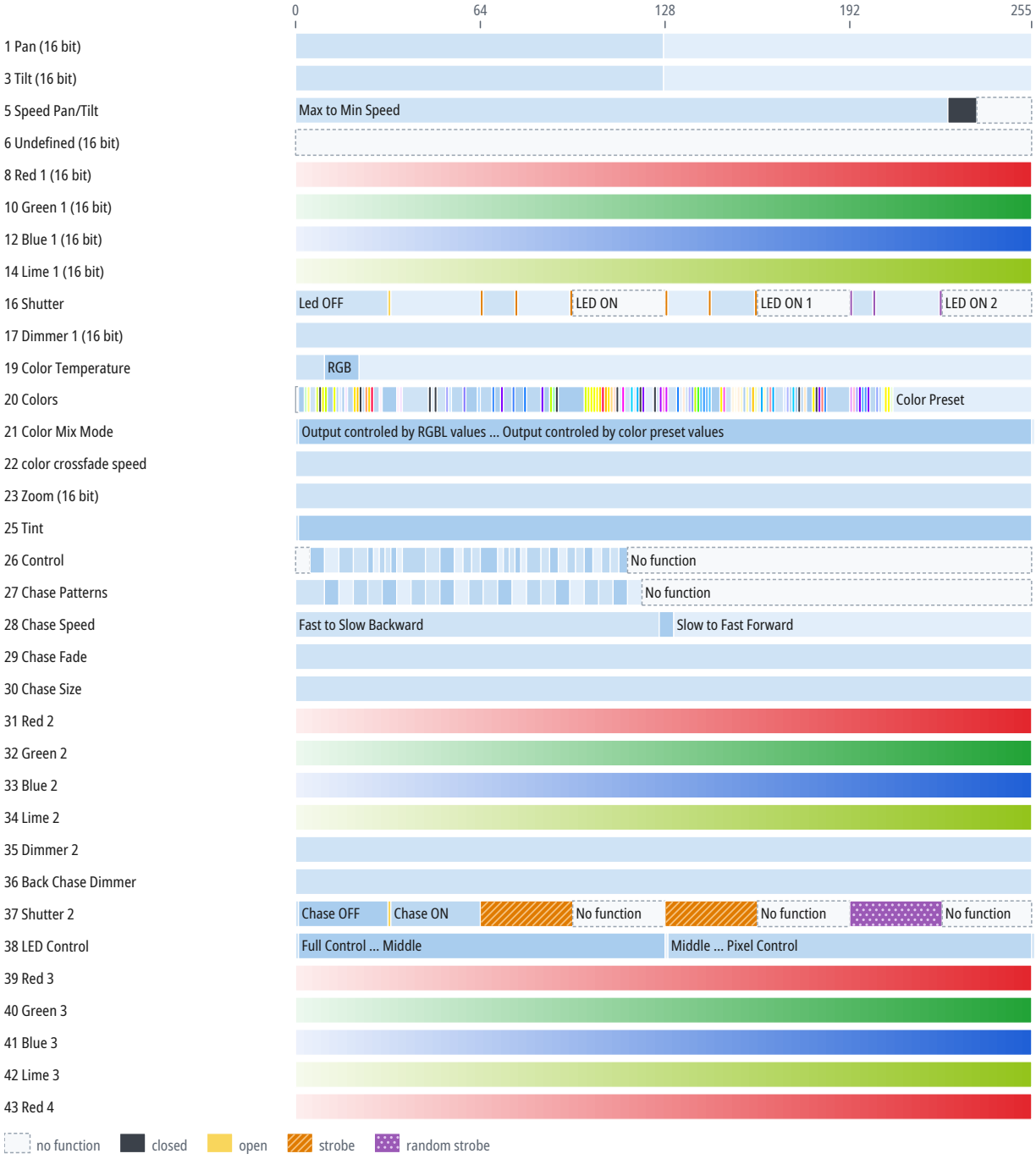
Cell	Red	Green	Blue	Lime	Cell	Red	Green	Blue	Lime
13	87	88	89	90	14	91	92	93	94
15	95	96	97	98	16	99	100	101	102
17	103	104	105	106	18	107	108	109	110
19	111	112	113	114	20	115	116	117	118
21	119	120	121	122	22	123	124	125	126
23	127	128	129	130	24	131	132	133	134
25	135	136	137	138	26	139	140	141	142
27	143	144	145	146	28	147	148	149	150

Mode Extended Ring 1U

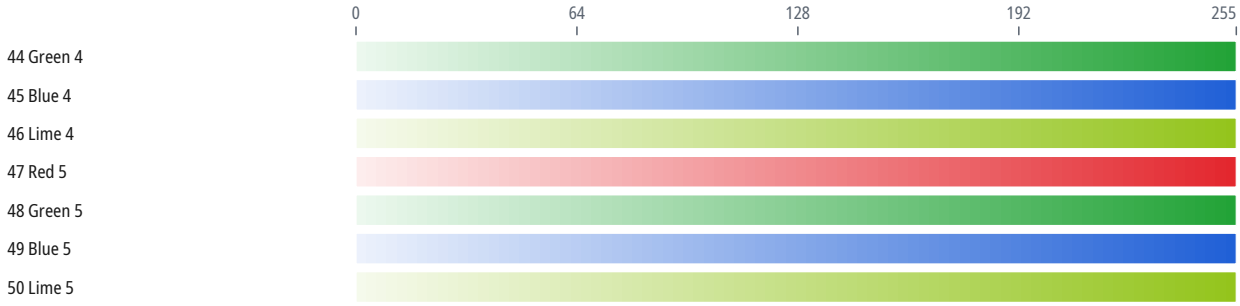
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 16 Shutter at 32–63 or 96–127; CH 17 Dimmer 1 above 0; CH 35 Dimmer 2 above 0; CH 36 Back Chase Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 8 Red 1 255, CH 10 Green 1 255, CH 12 Blue 1 255, CH 14 Lime 1 255, CH 16 Shutter 32, CH 17 Dimmer 1 255, CH 19 Color Temperature 0, CH 20 Colors 0, CH 21 Color Mix Mode 0, CH 37 Shutter 2 32, CH 39 Red 3 255, CH 40 Green 3 255, CH 41 Blue 3 255, CH 42 Lime 3 255, CH 43 Red 4 255, CH 44 Green 4 255, CH 45 Blue 4 255, CH 46 Lime 4 255, CH 47 Red 5 255, CH 48 Green 5 255, CH 49 Blue 5 255, CH 50 Lime 5 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Extended Pixel 1U” (p. 12)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended Pixel 1U” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “Extended Pixel 1U” (p. 13)
6	Undefined	0–255	
7	Undefined Fine	0–255	Fine adjustment of CH 6
8	Red 1	0–255	
9	Red 1 Fine	0–255	Fine adjustment of CH 8
10	Green 1	0–255	
11	Green 1 Fine	0–255	Fine adjustment of CH 10
12	Blue 1	0–255	
13	Blue 1 Fine	0–255	Fine adjustment of CH 12
14	Lime 1	0–255	
15	Lime 1 Fine	0–255	Fine adjustment of CH 14
16	Shutter		Same as CH 16 in the mode “Extended Pixel 1U” (p. 13)
17	Dimmer 1	0–255	
18	Dimmer 1 Fine	0–255	Fine adjustment of CH 17
19	Color Temperature		Same as CH 19 in the mode “Extended Pixel 1U” (p. 13)
20	Colors		Same as CH 20 in the mode “Extended Pixel 1U” (p. 14)
21	Color Mix Mode		Same as CH 21 in the mode “Extended Pixel 1U” (p. 17)
22	color crossfade speed	0–255	0.01–5 s
23	Zoom	0–255	65–3.5°
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Tint		Same as CH 25 in the mode “Extended Pixel 1U” (p. 17)
26	Control		Same as CH 26 in the mode “Extended Pixel 1U” (p. 17)
27	Chase Patterns		Same as CH 27 in the mode “Extended Pixel 1U” (p. 18)
28	Chase Speed		Same as CH 28 in the mode “Extended Pixel 1U” (p. 19)
29	Chase Fade	0–255	
30	Chase Size	0–255	
31	Red 2	0–255	
32	Green 2	0–255	
33	Blue 2	0–255	
34	Lime 2	0–255	
35	Dimmer 2	0–255	
36	Back Chase Dimmer	0–255	
37	Shutter 2		Same as CH 37 in the mode “Extended Pixel 1U” (p. 19)
38	LED Control		Same as CH 38 in the mode “Extended Pixel 1U” (p. 19)
39	Red 3	0–255	
40	Green 3	0–255	

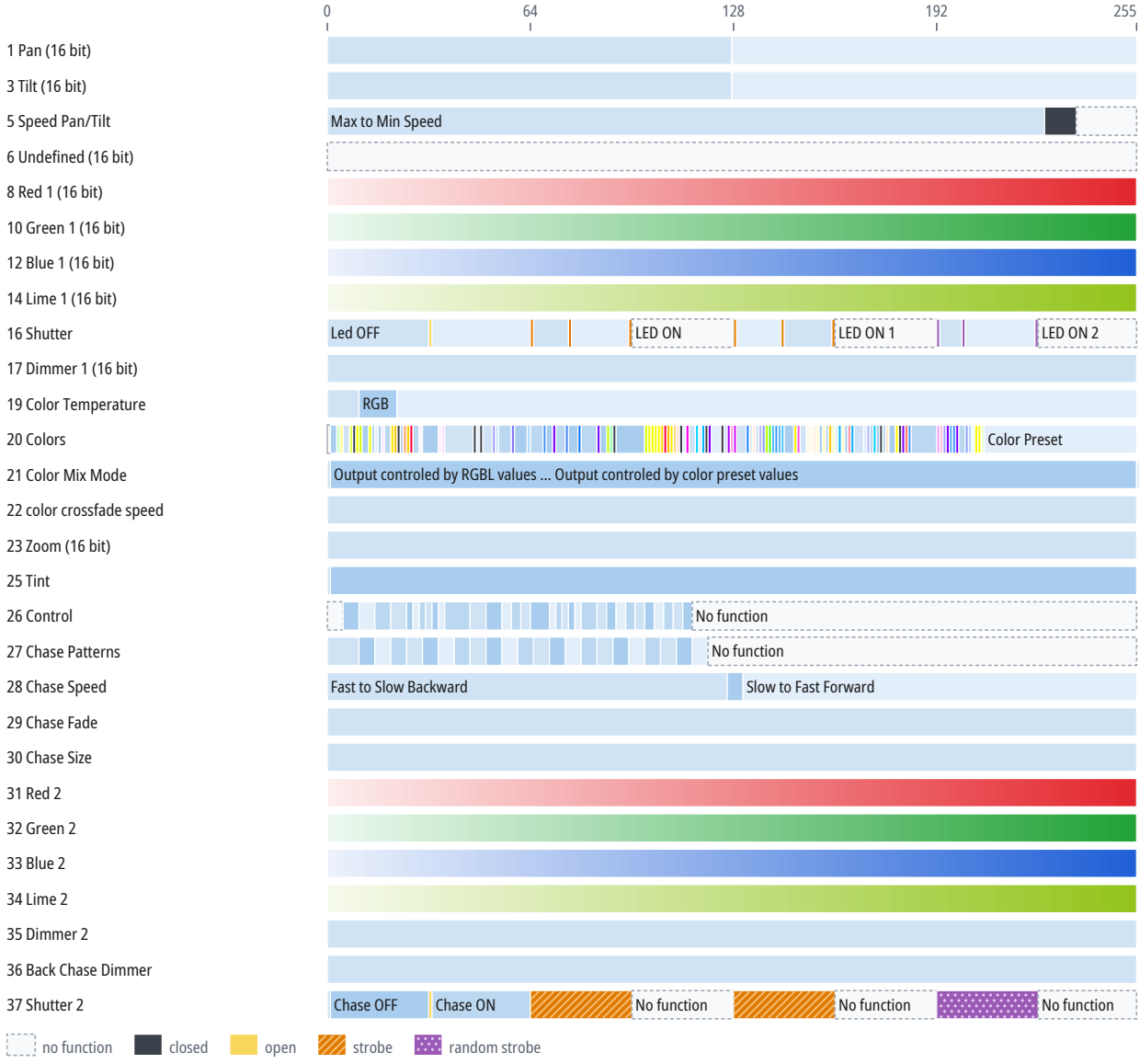
CH	Function	DMX	Description
41	Blue 3	0–255	
42	Lime 3	0–255	
43	Red 4	0–255	
44	Green 4	0–255	
45	Blue 4	0–255	
46	Lime 4	0–255	
47	Red 5	0–255	
48	Green 5	0–255	
49	Blue 5	0–255	
50	Lime 5	0–255	

Mode Standard

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 16 Shutter at 32–63 or 96–127; CH 17 Dimmer 1 above 0; CH 35 Dimmer 2 above 0; CH 36 Back Chase Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 8 Red 1 255, CH 10 Green 1 255, CH 12 Blue 1 255, CH 14 Lime 1 255, CH 16 Shutter 32, CH 17 Dimmer 1 255, CH 19 Color Temperature 0, CH 20 Colors 0, CH 21 Color Mix Mode 0, CH 37 Shutter 2 32.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Extended Pixel 1U” (p. 12)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended Pixel 1U” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “Extended Pixel 1U” (p. 13)
6	Undefined	0–255	

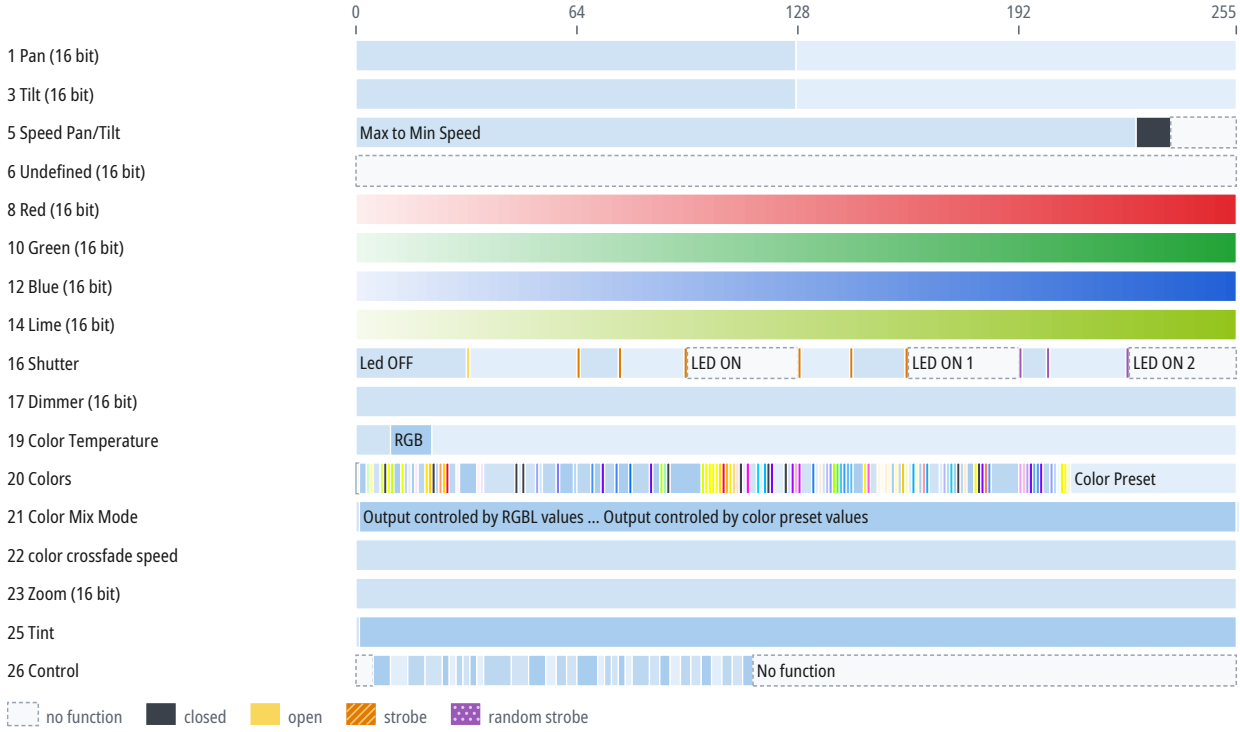
CH	Function	DMX	Description
7	Undefined Fine	0–255	Fine adjustment of CH 6
8	Red 1	0–255	
9	Red 1 Fine	0–255	Fine adjustment of CH 8
10	Green 1	0–255	
11	Green 1 Fine	0–255	Fine adjustment of CH 10
12	Blue 1	0–255	
13	Blue 1 Fine	0–255	Fine adjustment of CH 12
14	Lime 1	0–255	
15	Lime 1 Fine	0–255	Fine adjustment of CH 14
16	Shutter		Same as CH 16 in the mode “Extended Pixel 1U” (p. 13)
17	Dimmer 1	0–255	
18	Dimmer 1 Fine	0–255	Fine adjustment of CH 17
19	Color Temperature		Same as CH 19 in the mode “Extended Pixel 1U” (p. 13)
20	Colors		Same as CH 20 in the mode “Extended Pixel 1U” (p. 14)
21	Color Mix Mode		Same as CH 21 in the mode “Extended Pixel 1U” (p. 17)
22	color crossfade speed	0–255	0.01–5 s
23	Zoom	0–255	65–3.5°
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Tint		Same as CH 25 in the mode “Extended Pixel 1U” (p. 17)
26	Control		Same as CH 26 in the mode “Extended Pixel 1U” (p. 17)
27	Chase Patterns		Same as CH 27 in the mode “Extended Pixel 1U” (p. 18)
28	Chase Speed		Same as CH 28 in the mode “Extended Pixel 1U” (p. 19)
29	Chase Fade	0–255	
30	Chase Size	0–255	
31	Red 2	0–255	
32	Green 2	0–255	
33	Blue 2	0–255	
34	Lime 2	0–255	
35	Dimmer 2	0–255	
36	Back Chase Dimmer	0–255	
37	Shutter 2		Same as CH 37 in the mode “Extended Pixel 1U” (p. 19)

Mode Basic

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 16 Shutter at 32–63 or 96–127; CH 17 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 8 Red 255, CH 10 Green 255, CH 12 Blue 255, CH 14 Lime 255, CH 16 Shutter 32, CH 17 Dimmer 255, CH 19 Color Temperature 0, CH 20 Colors 0, CH 21 Color Mix Mode 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Extended Pixel 1U” (p. 12)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended Pixel 1U” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “Extended Pixel 1U” (p. 13)
6	Undefined	0–255	
7	Undefined Fine	0–255	Fine adjustment of CH 6
8	Red	0–255	
9	Red Fine	0–255	Fine adjustment of CH 8
10	Green	0–255	
11	Green Fine	0–255	Fine adjustment of CH 10
12	Blue	0–255	
13	Blue Fine	0–255	Fine adjustment of CH 12
14	Lime	0–255	
15	Lime Fine	0–255	Fine adjustment of CH 14
16	Shutter		Same as CH 16 in the mode “Extended Pixel 1U” (p. 13)

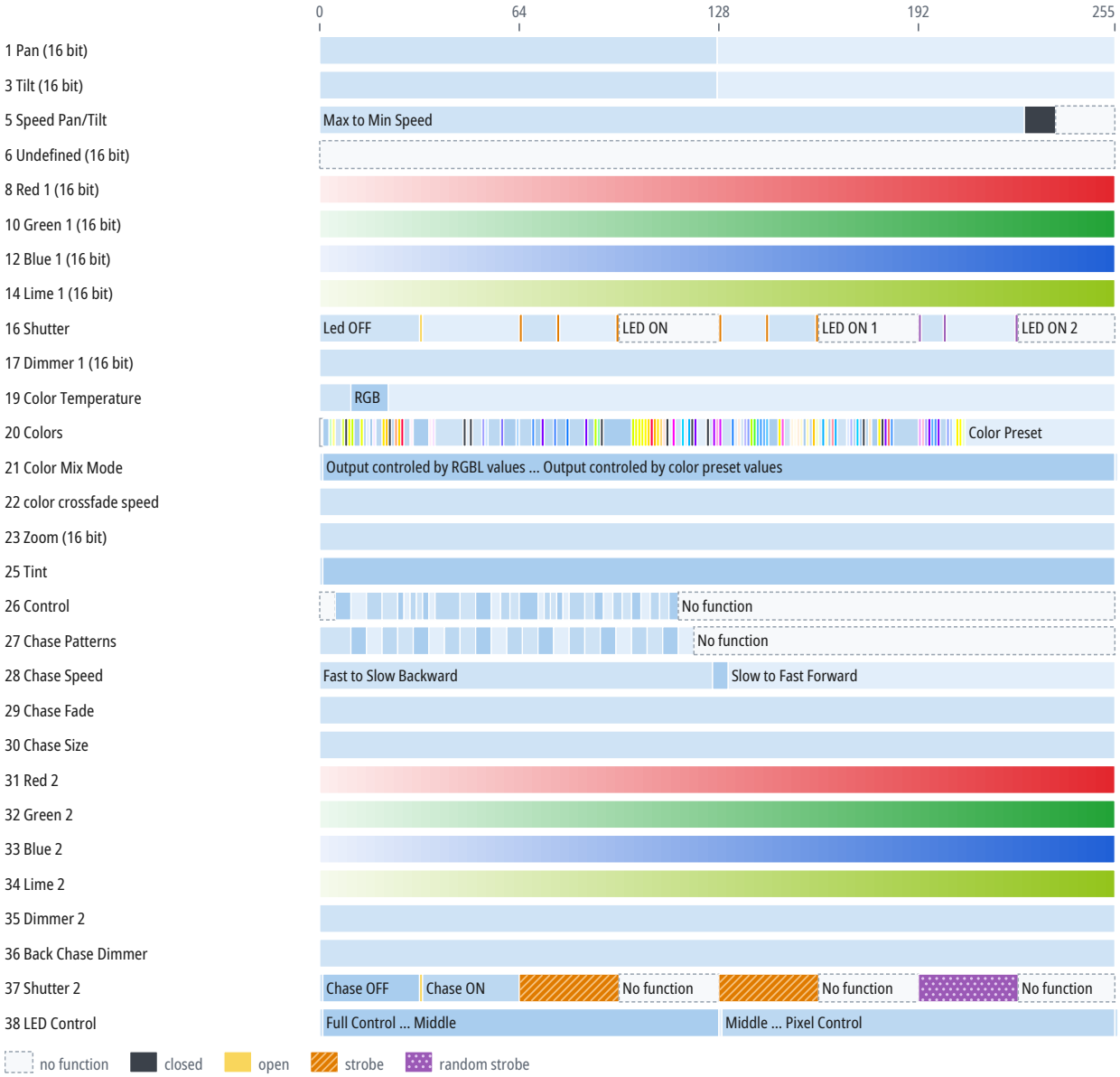
CH	Function	DMX	Description
17	Dimmer	0–255	
18	Dimmer Fine	0–255	Fine adjustment of CH 17
19	Color Temperature		Same as CH 19 in the mode “Extended Pixel 1U” (p. 13)
20	Colors		Same as CH 20 in the mode “Extended Pixel 1U” (p. 14)
21	Color Mix Mode		Same as CH 21 in the mode “Extended Pixel 1U” (p. 17)
22	color crossfade speed	0–255	0.01–5 s
23	Zoom	0–255	65–3.5°
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Tint		Same as CH 25 in the mode “Extended Pixel 1U” (p. 17)
26	Control		Same as CH 26 in the mode “Extended Pixel 1U” (p. 17)

Mode Extended Pixel 2U

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 16 Shutter at 32–63 or 96–127; CH 17 Dimmer 1 above 0; CH 35 Dimmer 2 above 0; CH 36 Back Chase Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 8 Red 1 255, CH 10 Green 1 255, CH 12 Blue 1 255, CH 14 Lime 1 255, CH 16 Shutter 32, CH 17 Dimmer 1 255, CH 19 Color Temperature 0, CH 20 Colors 0, CH 21 Color Mix Mode 0, CH 37 Shutter 2 32, CH 39 Red 255 (the same in each of the 28 cells), CH 40 Green 255 (the same in each of the 28 cells), CH 41 Blue 255 (the same in each of the 28 cells), CH 42 Lime 255 (the same in each of the 28 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Extended Pixel 1U” (p. 12)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended Pixel 1U” (p. 13)

CH	Function	DMX	Description
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “Extended Pixel 1U” (p. 13)
6	Undefined	0–255	
7	Undefined Fine	0–255	Fine adjustment of CH 6
8	Red 1	0–255	
9	Red 1 Fine	0–255	Fine adjustment of CH 8
10	Green 1	0–255	
11	Green 1 Fine	0–255	Fine adjustment of CH 10
12	Blue 1	0–255	
13	Blue 1 Fine	0–255	Fine adjustment of CH 12
14	Lime 1	0–255	
15	Lime 1 Fine	0–255	Fine adjustment of CH 14
16	Shutter		Same as CH 16 in the mode “Extended Pixel 1U” (p. 13)
17	Dimmer 1	0–255	
18	Dimmer 1 Fine	0–255	Fine adjustment of CH 17
19	Color Temperature		Same as CH 19 in the mode “Extended Pixel 1U” (p. 13)
20	Colors		Same as CH 20 in the mode “Extended Pixel 1U” (p. 14)
21	Color Mix Mode		Same as CH 21 in the mode “Extended Pixel 1U” (p. 17)
22	color crossfade speed	0–255	0.01–5 s
23	Zoom	0–255	65–3.5°
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Tint		Same as CH 25 in the mode “Extended Pixel 1U” (p. 17)
26	Control		Same as CH 26 in the mode “Extended Pixel 1U” (p. 17)
27	Chase Patterns		Same as CH 27 in the mode “Extended Pixel 1U” (p. 18)
28	Chase Speed		Same as CH 28 in the mode “Extended Pixel 1U” (p. 19)
29	Chase Fade	0–255	
30	Chase Size	0–255	
31	Red 2	0–255	
32	Green 2	0–255	
33	Blue 2	0–255	
34	Lime 2	0–255	
35	Dimmer 2	0–255	
36	Back Chase Dimmer	0–255	
37	Shutter 2		Same as CH 37 in the mode “Extended Pixel 1U” (p. 19)
38	LED Control		Same as CH 38 in the mode “Extended Pixel 1U” (p. 19)
39	Red 3	0–255	
40	Green 3	0–255	
41	Blue 3	0–255	
42	Lime 3	0–255	

CH 39–150: 28 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 39–42); the table below gives each cell's channel numbers.

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

Mode Extended Ring 2U

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 16 Shutter at 32–63 or 96–127; CH 17 Dimmer 1 above 0; CH 35 Dimmer 2 above 0; CH 36 Back Chase Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 8 Red 1 255, CH 10 Green 1 255, CH 12 Blue 1 255, CH 14 Lime 1 255, CH 16 Shutter 32, CH 17 Dimmer 1 255, CH 19 Color Temperature 0, CH 20 Colors 0, CH 21 Color Mix Mode 0, CH 37 Shutter 2 32, CH 39 Red 3 255, CH 40 Green 3 255, CH 41 Blue 3 255, CH 42 Lime 3 255, CH 43 Red 4 255, CH 44 Green 4 255, CH 45 Blue 4 255, CH 46 Lime 4 255, CH 47 Red 5 255, CH 48 Green 5 255, CH 49 Blue 5 255, CH 50 Lime 5 255.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Extended Pixel 1U” (p. 12)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended Pixel 1U” (p. 13)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “Extended Pixel 1U” (p. 13)
6	Undefined	0–255	
7	Undefined Fine	0–255	Fine adjustment of CH 6
8	Red 1	0–255	
9	Red 1 Fine	0–255	Fine adjustment of CH 8
10	Green 1	0–255	
11	Green 1 Fine	0–255	Fine adjustment of CH 10
12	Blue 1	0–255	
13	Blue 1 Fine	0–255	Fine adjustment of CH 12
14	Lime 1	0–255	
15	Lime 1 Fine	0–255	Fine adjustment of CH 14
16	Shutter		Same as CH 16 in the mode “Extended Pixel 1U” (p. 13)
17	Dimmer 1	0–255	
18	Dimmer 1 Fine	0–255	Fine adjustment of CH 17
19	Color Temperature		Same as CH 19 in the mode “Extended Pixel 1U” (p. 13)
20	Colors		Same as CH 20 in the mode “Extended Pixel 1U” (p. 14)
21	Color Mix Mode		Same as CH 21 in the mode “Extended Pixel 1U” (p. 17)
22	color crossfade speed	0–255	0.01–5 s
23	Zoom	0–255	65–3.5°
24	Zoom Fine	0–255	Fine adjustment of CH 23
25	Tint		Same as CH 25 in the mode “Extended Pixel 1U” (p. 17)
26	Control		Same as CH 26 in the mode “Extended Pixel 1U” (p. 17)
27	Chase Patterns		Same as CH 27 in the mode “Extended Pixel 1U” (p. 18)
28	Chase Speed		Same as CH 28 in the mode “Extended Pixel 1U” (p. 19)
29	Chase Fade	0–255	
30	Chase Size	0–255	
31	Red 2	0–255	
32	Green 2	0–255	
33	Blue 2	0–255	

CH	Function	DMX	Description
34	Lime 2	0–255	
35	Dimmer 2	0–255	
36	Back Chase Dimmer	0–255	
37	Shutter 2		Same as CH 37 in the mode “Extended Pixel 1U” (p. 19)
38	LED Control		Same as CH 38 in the mode “Extended Pixel 1U” (p. 19)
39	Red 3	0–255	
40	Green 3	0–255	
41	Blue 3	0–255	
42	Lime 3	0–255	
43	Red 4	0–255	
44	Green 4	0–255	
45	Blue 4	0–255	
46	Lime 4	0–255	
47	Red 5	0–255	
48	Green 5	0–255	
49	Blue 5	0–255	
50	Lime 5	0–255	

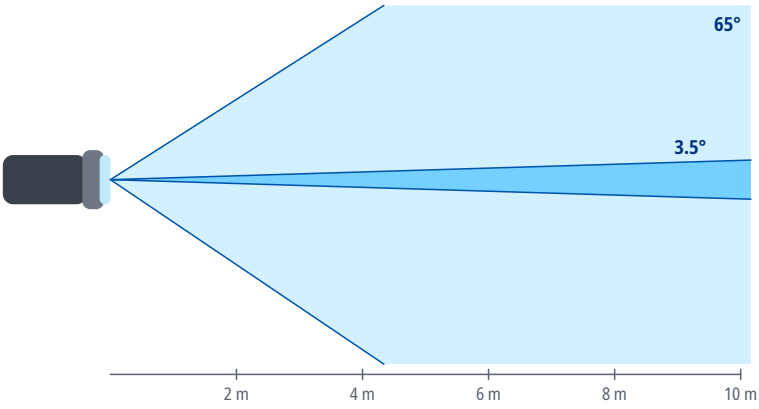
10 Technical specifications

Parameter	Value
Optics	
Zoom	3.5–65°
Movement	
Pan	542.1°
Tilt	225.9°
Control	
DMX connection	5-pin XLR IN/OUT
RJ45 connectors	RJ45 IN
RDM	yes (manufacturer ID 0x4179, device model ID 0x0B26)
Electrical	
Power connectors	powerCONTRUE1TOP IN
Operating environment	
Operating temperature	-10 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	2500–8000 K
Strobe frequency	0.5–25 Hz
LED frequency	1200–16000 Hz

Spot diameter



Distance	Ø 3.5°	Ø 65°
2 m	0.12 m	2.5 m
4 m	0.24 m	5.1 m
6 m	0.37 m	7.6 m
8 m	0.49 m	10.2 m
10 m	0.61 m	12.7 m
15 m	0.92 m	19.1 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.