DMX REFERENCE

Aquarius Wash 19 IP

Osten



Manufacturer	Osten
GDTF file	Osten_Aquarius_Wash_19_IP_167878.gdtf
GDTF revision	Aquarius Wash 19 V1 · 2026-11-04
Generated	2026-11-24

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1 About this manual

This document describes the Aquarius Wash 19 IP by Osten. It was compiled from the GDTF file Osten_Aquarius_Wash_19_IP_167878.gdtf from the GDTF-Share library.

File revision: “Aquarius Wash 19 V1”.

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 Osten; 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	22 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
26CH	26	19	1, 27, 53, 79, ...
98CH	98	5	1, 99, 197, 295, ...
251CH	251	2	1, 252
321CH	321	1	1

No light? Check these channels

- 26CH: CH 10 Dimmer above 0
- 98CH: CH 10 Dimmer 1 above 0; CH 18 Dimmer 2 above 0
- 251CH: CH 10 Dimmer 1 above 0; CH 21 Dimmer 2 above 0
- 321CH: CH 10 Dimmer 1 above 0; CH 13 Dimmer 2 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

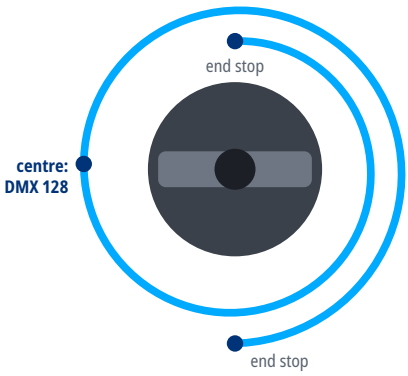
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts, 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

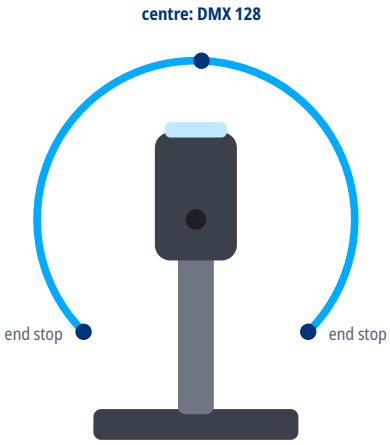
Pan 540°

top view



Tilt 270°

side view



5 Installation

⚠ WARNING

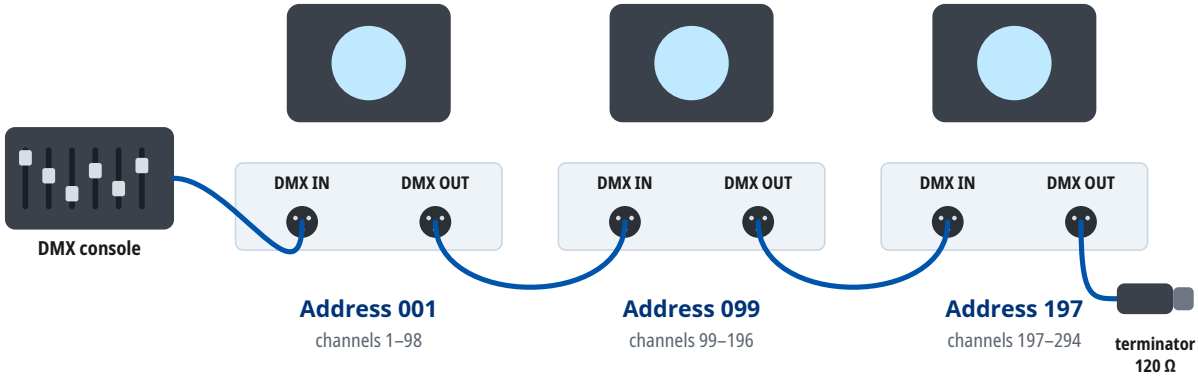
- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 22 kg.
- 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 98CH: every unit occupies 98 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

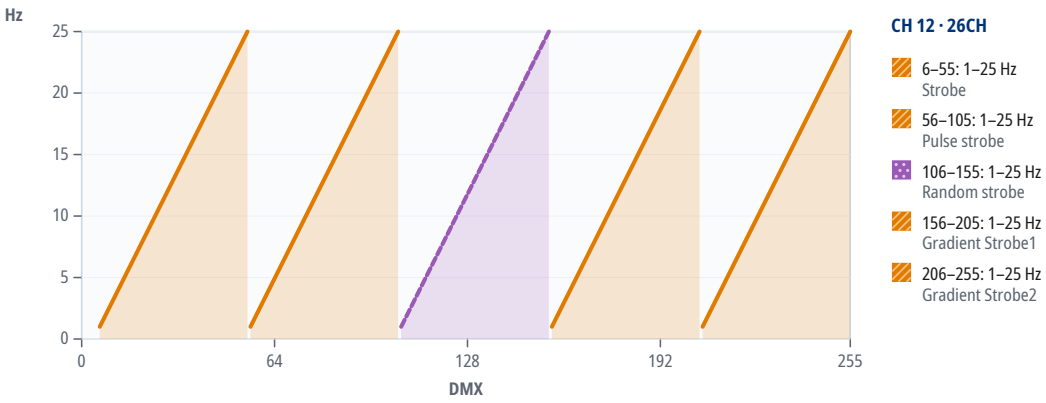
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “321CH”: 321.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied channel does not exceed 512. Devices with the same start address and mode respond identically.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

8 Functions at a glance

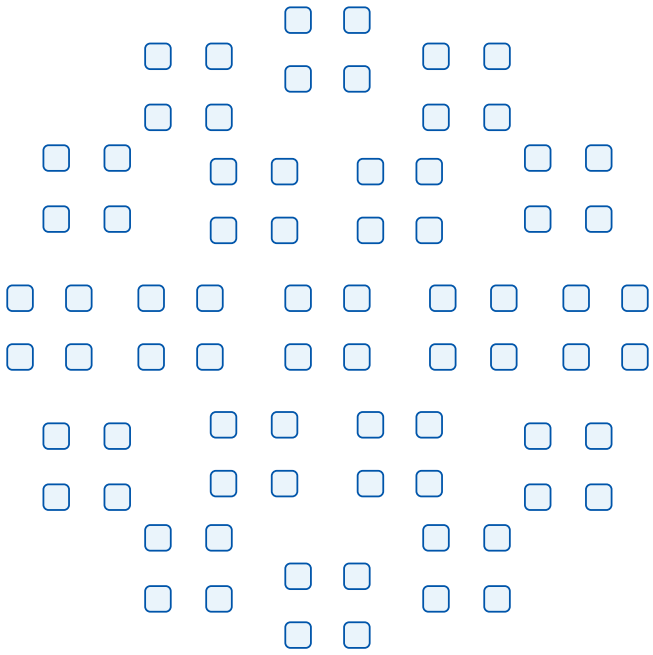
Functions in each DMX mode

	26CH 26 channels	98CH 98 channels	251CH 251 channels	321CH 321 channels
Pan / Tilt	1, 3	1, 3	1, 3	1, 3
Dimmer	10	10, 18	10, 21	10, 13
Shutter / strobe	12, 13	12, 20	12, 23	12, 15
Color mixing	14–20	13–15, 23–98	13–16, 24–251	18–321
Color temperature	26	22	20	17
Zoom	6, 8	6, 8	6, 8	6, 8
Effects / macros	21–25	16, 17, 21	17–19	16
Pixel control				19 + 76 cells

Strobe rate



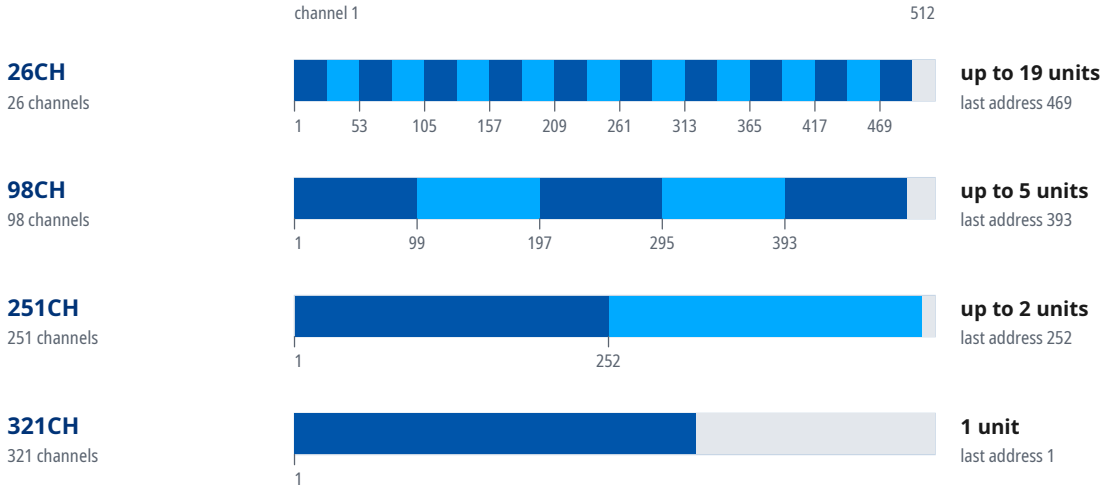
Cells (pixels)



Cells where the GDTF file places them (seen from above), 76 in all in the mode “26CH”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “321CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U6 · 1	11	U11 · 1	16	U16 · 1
2	U2 · 1	7	U7 · 1	12	U12 · 1	17	U17 · 1
3	U3 · 1	8	U8 · 1	13	U13 · 1	18	U18 · 1
4	U4 · 1	9	U9 · 1	14	U14 · 1	19	U19 · 1
5	U5 · 1	10	U10 · 1	15	U15 · 1	20	U20 · 1

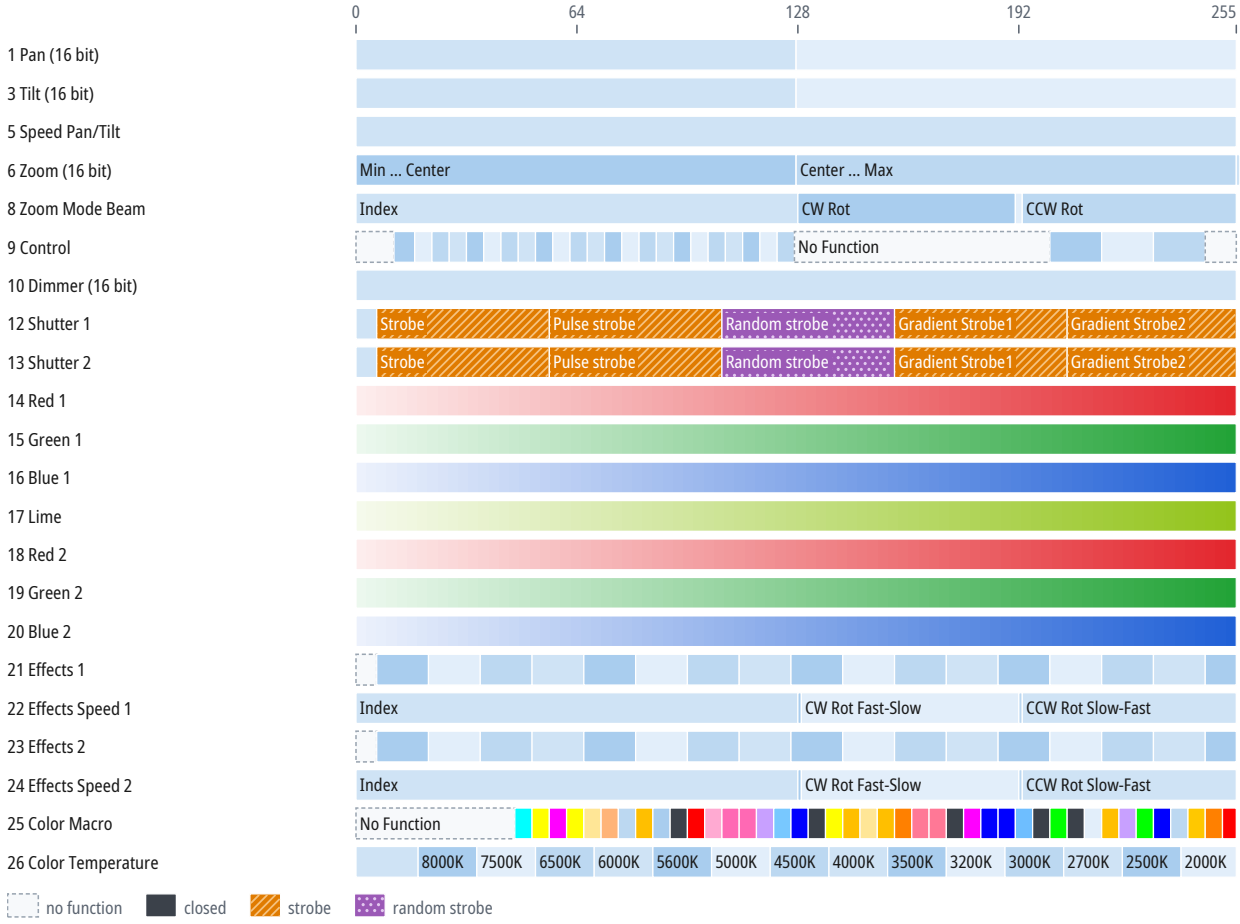
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 26CH

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 10 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 10 Dimmer 255, CH 14 Red 1 255, CH 15 Green 1 255, CH 16 Blue 1 255, CH 18 Red 2 255, CH 19 Green 2 255, CH 20 Blue 2 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan 1
		127	Home
		128–255	Pan 1
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt 1
		127	Home
		128–255	Tilt 1
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Zoom	0–127	Min ... Center
		127	Center
		128–255	Center ... Max
		255	Max

CH	Function	DMX	Description
7	Zoom Fine	0–255	Fine adjustment of CH 6
8	Zoom Mode Beam	0–127	Index
		128–190	CW Rot
		191–192	Stop
		193–255	CCW Rot
9	Control	0–10	No Function
		11–16	Dimmer Smooth
		17–21	Dimmer Fast
		22–26	LED 400Hz
		27–31	LED 1200Hz
		32–36	LED 2000Hz
		37–41	LED 4000Hz
		42–46	LED 6000Hz
		47–51	LED 8000Hz
		52–56	LED 16000Hz
		57–61	LED 24000Hz
		62–66	Dimmer Linear
		67–71	Dimmer Square
		72–76	Dimmer I-Square
		77–81	Dimmer S-Shape
		82–86	Fan Auto
		87–91	Fan Silent
		92–96	Fan Full
		97–101	Screen Lock YES
		102–106	Screen Lock NO
		107–111	Display ON
		112–116	Display 10S
		117–121	Display 30S
		122–126	Display 1min
		127–200	No Function
		201–215	Reset Effect
		216–230	Reset PanTilt
		231–245	Reset All
		246–255	No Function
10	Dimmer	0–255	
11	Dimmer Fine	0–255	Fine adjustment of CH 10
12	Shutter 1	0–5	Opne
		6–55	Strobe (1–25 Hz)
		56–105	Pulse strobe (1–25 Hz)
		106–155	Random strobe (1–25 Hz)
		156–205	Gradient Strobe1 (1–25 Hz)
		206–255	Gradient Strobe2 (1–25 Hz)

CH	Function	DMX	Description
13	Shutter 2	0–5	Opne
		6–55	Strobe (1–25 Hz)
		56–105	Pulse strobe (1–25 Hz)
		106–155	Random strobe (1–25 Hz)
		156–205	Gradient Strobe1 (1–25 Hz)
		206–255	Gradient Strobe2 (1–25 Hz)
14	Red 1	0–255	
15	Green 1	0–255	
16	Blue 1	0–255	
17	Lime	0–255	
18	Red 2	0–255	
19	Green 2	0–255	
20	Blue 2	0–255	
21	Effects 1	0–5	No Function
		6–20	Program 1
		21–35	Program 2
		36–50	Program 3
		51–65	Program 4
		66–80	Program 5
		81–95	Program 6
		96–110	Program 7
		111–125	Program 8
		126–140	Program 9
		141–155	Program 10
		156–170	Program 11
		171–185	Program 12
		186–200	Program 13
		201–215	Program 14
		216–230	Program 15
		231–245	Program 16
		246–255	Auto Program
22	Effects Speed 1	0–127	Index
		128	Stop
		129–191	CW Rot Fast-Slow
		192	Stop
		193–255	CCW Rot Slow-Fast
23	Effects 2	0–5	No Function
		6–20	Program 1
		21–35	Program 2
		36–50	Program 3
		51–65	Program 4
		66–80	Program 5

CH	Function	DMX	Description
23	Effects 2 (continued)	81–95	Program 6
		96–110	Program 7
		111–125	Program 8
		126–140	Program 9
		141–155	Program 10
		156–170	Program 11
		171–185	Program 12
		186–200	Program 13
		201–215	Program 14
		216–230	Program 15
		231–245	Program 16
		246–255	Auto Program
24	Effects Speed 2	0–127	Index
		128	Stop
		129–191	CW Rot Fast-Slow
		192	Stop
		193–255	CCW Rot Slow-Fast
25	Color Macro	0–45	No Function
		46–50	Cyan
		51–55	Yellow
		56–60	Magenta
		61–65	Medium Yellow
		66–70	Straw Tint
		71–75	Surprise Peach
		76–80	Fire
		81–85	Medium Amber
		86–90	Gold Amber
		91–95	Dark Amber
		96–100	Sunrise Red
		101–105	Light Pink
		106–110	Medium Pink
		111–115	Pink Carnation
		116–120	Light Lavender
		121–125	Sky Blue
		126–130	Just Blue
		131–135	Dark Yellow Green
		136–140	Spring Yellow
		141–145	Light Amber
		146–150	Straw Tint
		151–155	Deep Amber
		156–160	Orange
		161–165	Light Rose

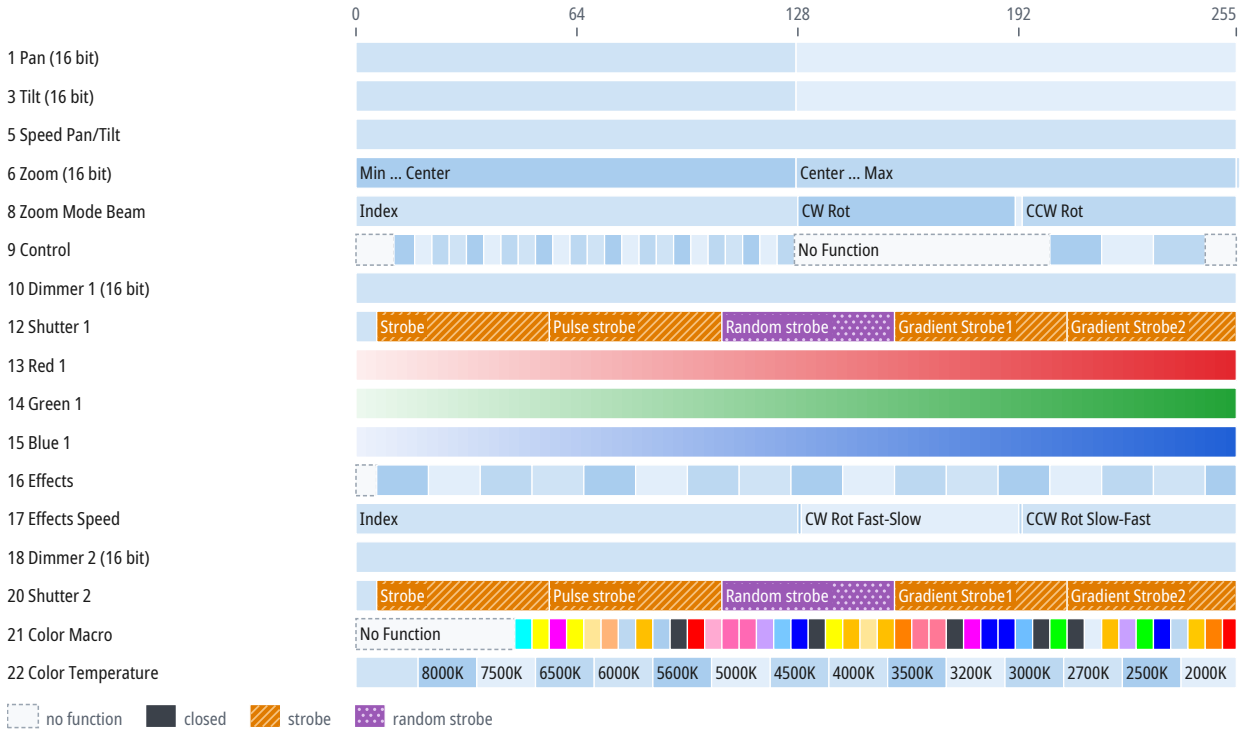
CH	Function	DMX	Description
25	Color Macro (continued)	166–170	Middle Rose
		171–175	Dark Pink
		176–180	Magenta
		181–185	Peacock Blue
		186–190	Steel Blue
		191–195	Light Blue
		196–200	Dark Blue
		201–205	Leaf Green
		206–210	Dark Green
		211–215	Mauve
		216–220	Deep Golden Amber
		221–225	Pale Lavender
		226–230	Primary Green
		231–235	Bright Blue
		236–240	Apricot
		241–245	Pale Gold
		246–250	Deep Orange
		251–255	Flame Red
26	Color Temperature	0–17	Off light
		18–34	8000K
		35–51	7500K
		52–68	6500K
		69–85	6000K
		86–102	5600K
		103–119	5000K
		120–136	4500K
		137–153	4000K
		154–170	3500K
		171–187	3200K
		188–204	3000K
		205–221	2700K
		222–238	2500K
		239–255	2000K

Mode 98CH

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 10 Dimmer 1 above 0; CH 18 Dimmer 2 above 0. The GDTF file gives these values for a console's Highlight function: CH 10 Dimmer 1 255, CH 13 Red 1 255, CH 14 Green 1 255, CH 15 Blue 1 255, CH 18 Dimmer 2 255, CH 23 Red 255 (the same in each of the 19 cells), CH 24 Green 255 (the same in each of the 19 cells), CH 25 Blue 255 (the same in each of the 19 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “26CH” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “26CH” (p. 10)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Zoom		Same as CH 6 in the mode “26CH” (p. 10)
7	Zoom Fine	0–255	Fine adjustment of CH 6
8	Zoom Mode Beam		Same as CH 8 in the mode “26CH” (p. 11)
9	Control		Same as CH 9 in the mode “26CH” (p. 11)
10	Dimmer 1	0–255	
11	Dimmer 1 Fine	0–255	Fine adjustment of CH 10
12	Shutter 1		Same as CH 12 in the mode “26CH” (p. 11)
13	Red 1	0–255	
14	Green 1	0–255	
15	Blue 1	0–255	

CH	Function	DMX	Description
16	Effects	0–5	No Function
		6–20	Program 1
		21–35	Program 2
		36–50	Program 3
		51–65	Program 4
		66–80	Program 5
		81–95	Program 6
		96–110	Program 7
		111–125	Program 8
		126–140	Program 9
		141–155	Program 10
		156–170	Program 11
		171–185	Program 12
		186–200	Program 13
		201–215	Program 14
		216–230	Program 15
		231–245	Program 16
		246–255	Auto Program
17	Effects Speed	0–127	Index
		128	Stop
		129–191	CW Rot Fast-Slow
		192	Stop
		193–255	CCW Rot Slow-Fast
18	Dimmer 2	0–255	
19	Dimmer 2 Fine	0–255	Fine adjustment of CH 18
20	Shutter 2		Same as CH 13 in the mode “26CH” (p. 12)
21	Color Macro		Same as CH 25 in the mode “26CH” (p. 13)
22	Color Temperature		Same as CH 26 in the mode “26CH” (p. 14)
23	Red 2	0–255	
24	Green 2	0–255	
25	Blue 2	0–255	
26	Lime 1	0–255	

CH 23–98: 19 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 23–26); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Lime	Cell	Red	Green	Blue	Lime
1	23	24	25	26	2	27	28	29	30
3	31	32	33	34	4	35	36	37	38
5	39	40	41	42	6	43	44	45	46
7	47	48	49	50	8	51	52	53	54
9	55	56	57	58	10	59	60	61	62
11	63	64	65	66	12	67	68	69	70
13	71	72	73	74	14	75	76	77	78

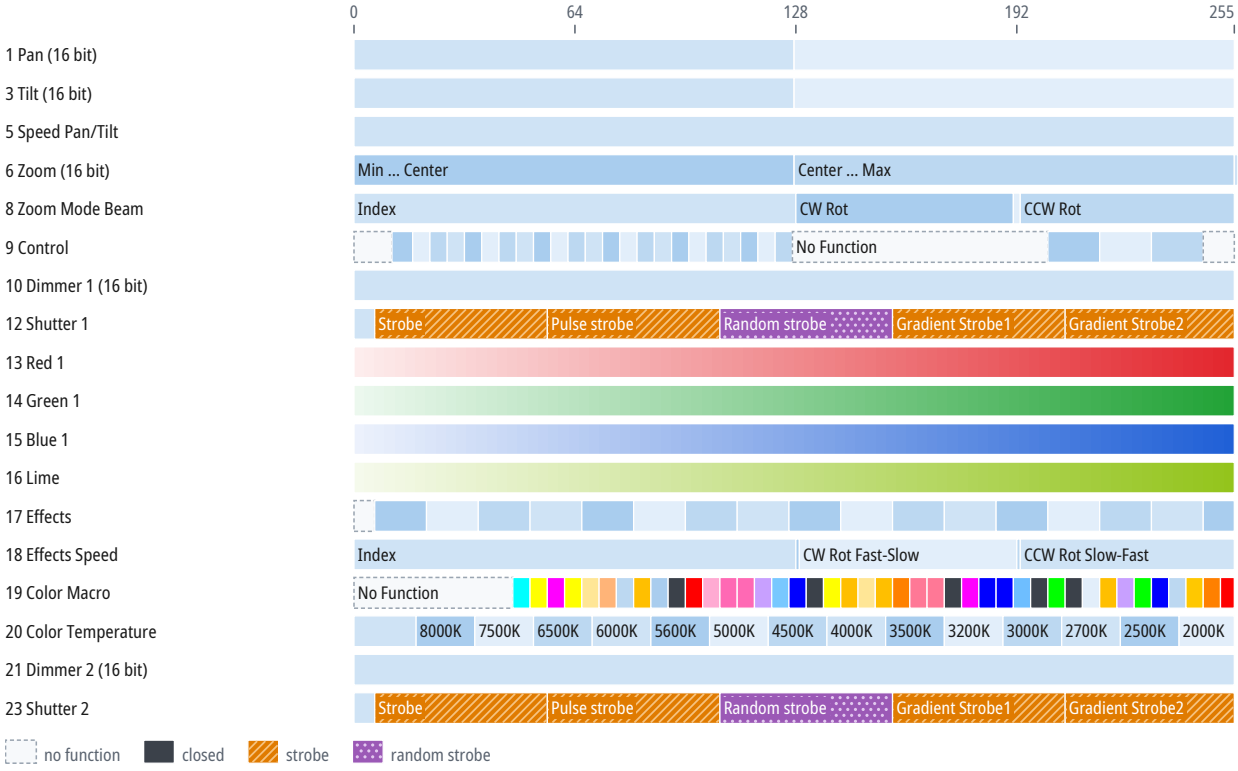
Cell	Red	Green	Blue	Lime	Cell	Red	Green	Blue	Lime
15	79	80	81	82	16	83	84	85	86
17	87	88	89	90	18	91	92	93	94
19	95	96	97	98					

Mode 251CH

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 10 Dimmer 1 above 0; CH 21 Dimmer 2 above 0. The GDTF file gives these values for a console's Highlight function: CH 10 Dimmer 1 255, CH 13 Red 1 255, CH 14 Green 1 255, CH 15 Blue 1 255, CH 21 Dimmer 2 0, CH 24 Red 255 (the same in each of the 76 cells), CH 25 Green 255 (the same in each of the 76 cells), CH 26 Blue 255 (the same in each of the 76 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “26CH” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “26CH” (p. 10)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Zoom		Same as CH 6 in the mode “26CH” (p. 10)
7	Zoom Fine	0–255	Fine adjustment of CH 6
8	Zoom Mode Beam		Same as CH 8 in the mode “26CH” (p. 11)
9	Control		Same as CH 9 in the mode “26CH” (p. 11)
10	Dimmer 1	0–255	

CH	Function	DMX	Description
11	Dimmer 1 Fine	0–255	Fine adjustment of CH 10
12	Shutter 1		Same as CH 12 in the mode “26CH” (p. 11)
13	Red 1	0–255	
14	Green 1	0–255	
15	Blue 1	0–255	
16	Lime	0–255	
17	Effects		Same as CH 16 in the mode “98CH” (p. 16)
18	Effects Speed		Same as CH 17 in the mode “98CH” (p. 16)
19	Color Macro		Same as CH 25 in the mode “26CH” (p. 13)
20	Color Temperature		Same as CH 26 in the mode “26CH” (p. 14)
21	Dimmer 2	0–255	
22	Dimmer 2 Fine	0–255	Fine adjustment of CH 21
23	Shutter 2		Same as CH 13 in the mode “26CH” (p. 12)
24	Red 2	0–255	
25	Green 2	0–255	
26	Blue 2	0–255	

CH 24–251: 76 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 24–26); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	24	25	26	2	27	28	29	3	30	31	32
4	33	34	35	5	36	37	38	6	39	40	41
7	42	43	44	8	45	46	47	9	48	49	50
10	51	52	53	11	54	55	56	12	57	58	59
13	60	61	62	14	63	64	65	15	66	67	68
16	69	70	71	17	72	73	74	18	75	76	77
19	78	79	80	20	81	82	83	21	84	85	86
22	87	88	89	23	90	91	92	24	93	94	95
25	96	97	98	26	99	100	101	27	102	103	104
28	105	106	107	29	108	109	110	30	111	112	113
31	114	115	116	32	117	118	119	33	120	121	122
34	123	124	125	35	126	127	128	36	129	130	131
37	132	133	134	38	135	136	137	39	138	139	140
40	141	142	143	41	144	145	146	42	147	148	149
43	150	151	152	44	153	154	155	45	156	157	158
46	159	160	161	47	162	163	164	48	165	166	167
49	168	169	170	50	171	172	173	51	174	175	176
52	177	178	179	53	180	181	182	54	183	184	185
55	186	187	188	56	189	190	191	57	192	193	194
58	195	196	197	59	198	199	200	60	201	202	203
61	204	205	206	62	207	208	209	63	210	211	212
64	213	214	215	65	216	217	218	66	219	220	221
67	222	223	224	68	225	226	227	69	228	229	230

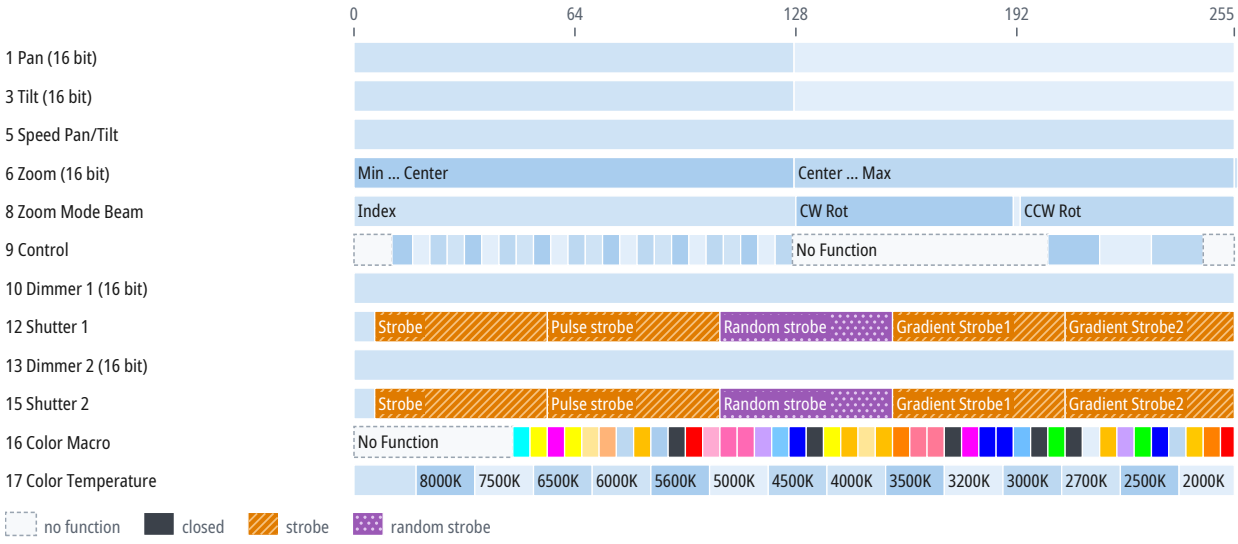
Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
70	231	232	233	71	234	235	236	72	237	238	239
73	240	241	242	74	243	244	245	75	246	247	248
76	249	250	251								

Mode 321CH

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 10 Dimmer 1 above 0; CH 13 Dimmer 2 above 0. The GDTF file gives these values for a console's Highlight function: CH 10 Dimmer 1 255, CH 13 Dimmer 2 255, CH 18 Red 255 (the same in each of the 19 cells), CH 19 Green 255 (the same in each of the 19 cells), CH 20 Blue 255 (the same in each of the 19 cells), CH 94 Red 255 (the same in each of the 76 cells), CH 95 Green 255 (the same in each of the 76 cells), CH 96 Blue 255 (the same in each of the 76 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “26CH” (p. 10)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “26CH” (p. 10)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Zoom		Same as CH 6 in the mode “26CH” (p. 10)
7	Zoom Fine	0–255	Fine adjustment of CH 6
8	Zoom Mode Beam		Same as CH 8 in the mode “26CH” (p. 11)
9	Control		Same as CH 9 in the mode “26CH” (p. 11)
10	Dimmer 1	0–255	
11	Dimmer 1 Fine	0–255	Fine adjustment of CH 10
12	Shutter 1		Same as CH 12 in the mode “26CH” (p. 11)
13	Dimmer 2	0–255	

CH	Function	DMX	Description
14	Dimmer 2 Fine	0–255	Fine adjustment of CH 13
15	Shutter 2		Same as CH 13 in the mode “26CH” (p. 12)
16	Color Macro		Same as CH 25 in the mode “26CH” (p. 13)
17	Color Temperature		Same as CH 26 in the mode “26CH” (p. 14)
18	Red 1	0–255	
19	Green 1	0–255	
20	Blue 1	0–255	
21	Lime 1	0–255	
94	Red 20	0–255	
95	Green 20	0–255	
96	Blue 20	0–255	

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

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

CH 94–321: 76 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 94–96); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	94	95	96	2	97	98	99	3	100	101	102
4	103	104	105	5	106	107	108	6	109	110	111
7	112	113	114	8	115	116	117	9	118	119	120
10	121	122	123	11	124	125	126	12	127	128	129
13	130	131	132	14	133	134	135	15	136	137	138
16	139	140	141	17	142	143	144	18	145	146	147
19	148	149	150	20	151	152	153	21	154	155	156
22	157	158	159	23	160	161	162	24	163	164	165
25	166	167	168	26	169	170	171	27	172	173	174
28	175	176	177	29	178	179	180	30	181	182	183
31	184	185	186	32	187	188	189	33	190	191	192
34	193	194	195	35	196	197	198	36	199	200	201
37	202	203	204	38	205	206	207	39	208	209	210
40	211	212	213	41	214	215	216	42	217	218	219

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
43	220	221	222	44	223	224	225	45	226	227	228
46	229	230	231	47	232	233	234	48	235	236	237
49	238	239	240	50	241	242	243	51	244	245	246
52	247	248	249	53	250	251	252	54	253	254	255
55	256	257	258	56	259	260	261	57	262	263	264
58	265	266	267	59	268	269	270	60	271	272	273
61	274	275	276	62	277	278	279	63	280	281	282
64	283	284	285	65	286	287	288	66	289	290	291
67	292	293	294	68	295	296	297	69	298	299	300
70	301	302	303	71	304	305	306	72	307	308	309
73	310	311	312	74	313	314	315	75	316	317	318
76	319	320	321								

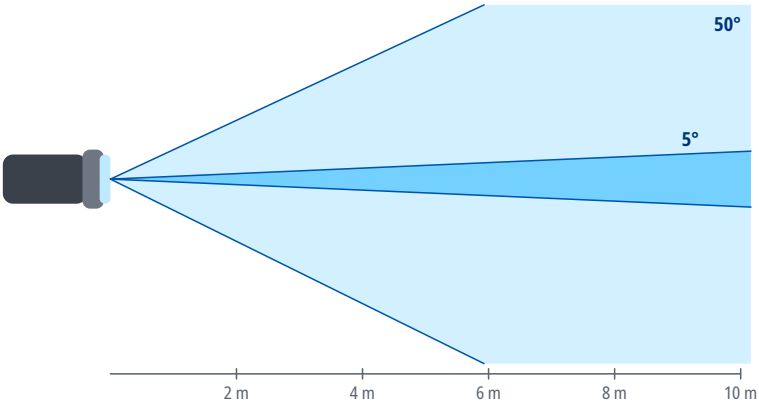
10 Technical specifications

Parameter	Value
Light source	LED
Zoom	5–50°
Pan	540°
Tilt	270°
Weight	22 kg
Operating temperature	-20 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2000–8000 K
Strobe frequency	1–25 Hz

Spot diameter



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

Spot diameter square to the beam axis, calculated from the beam angle.

11 Maintenance and cleaning

- Before cleaning and maintenance, switch the device off, disconnect it from the power supply and let

it cool down.

- Clean the housing with a soft, dry or slightly damp cloth. Do not use solvents, abrasive cleaners or pressure washers, and make sure no liquid gets into the device.
- Clean optical parts (lenses, front glass), if the device has any, with a soft lint-free cloth and a cleaner intended for optics or glass.
- Regularly inspect the housing, cables, connectors and fixings. Have damaged parts replaced by a service center.
- How often to clean depends on the environment; dust, smoke and fog make the device dirty much faster.

12 Troubleshooting

Problem	Remedy
The device does not switch on	Check the supply voltage, the cables and the fuse, if the device has one.
The device does not respond to DMX	Check the start address, the selected DMX mode and whether it matches the profile in the controller, the cable connection to DMX IN, and the controller output (universe).
The device behaves erratically or flickers	Check the terminator at the end of the line, the condition and wiring of the cables (shield on pin 1 only), the number of devices on the line (32 at most), and that the line is not split without a splitter.
Only some devices on the line respond	Check the cable and connectors between the last working and the first non-working device, and make sure all devices on the line are switched on.
Devices respond to the wrong channels or affect each other	Check that the addresses do not overlap and that the DMX mode on the devices matches the patch in the controller.
The device or the connected load does not light up although it receives DMX	Check the values of the dimmer, shutter and strobe channels against the DMX channel table. For the DMX modes for which the sources state it, the chapter DMX channels gives under the mode's heading which channels must be open.
Movement is reversed	Check whether Pan/Tilt inversion is enabled in the device menu or in the controller.
Moving parts do not reach the correct position after power-on or transport	Switch the device off and on again to reset the position, and make sure the transport lock, if any, is released. If this does not help, contact a service center.
Movement is jerky	Check the value of the Pan/Tilt speed channel, if the device has one, and the stability of the DMX signal.

13 Disposal

The crossed-out wheeled bin symbol on the product, in the manual or on the packaging means that the product must not be disposed of with unsorted household waste at the end of its life.

Take the end-of-life equipment to a collection point, for example a municipal collection site or a retailer. Proper disposal enables materials to be recycled and helps prevent possible negative effects on the environment and human health.

Follow the regulations applicable in your country; in the Czech Republic, take-back is governed by Act No. 542/2020 Coll., on End-of-Life Products.

Recycle the packaging materials according to their type.