DMX REFERENCE

STROBEMAX1400 IP

TS 1400 IP

TIITEE



Manufacturer	TIITEE
GDTF file	TIITEE_STROBEMAX1400_IP_149727.gdtf
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1 About this manual

This document describes the TS 1400 IP by TIITEE. It was compiled from the GDTF file TIITEE_STROBEMAX1400_IP_149727.gdtf from the GDTF-Share library.

File revision: “2026761”.

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 TIITEE; 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	11.9 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
97Ch Mode	97	5	1, 98, 195, 292, ...
74Ch Mode	74	6	1, 75, 149, 223, ...
68Ch Mode	68	7	1, 69, 137, 205, ...
47Ch Mode	47	10	1, 48, 95, 142, ...
30Ch Mode	30	17	1, 31, 61, 91, ...
24Ch Mode	24	21	1, 25, 49, 73, ...
13Ch Mode	13	39	1, 14, 27, 40, ...
11Ch Mode	11	46	1, 12, 23, 34, ...
8Ch Mode	8	64	1, 9, 17, 25, ...
96Ch Mode	96	5	1, 97, 193, 289, ...



Read the manual before use



Do not stare into the light



Indoor use only

3 Safety instructions



Read the manual before use



Do not stare into the light



Indoor use only

⚠ WARNING

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

⚠ WARNING

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

⚠ CAUTION

- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do not aim the beam at flammable or heat-sensitive materials at close range.

⚠ CAUTION

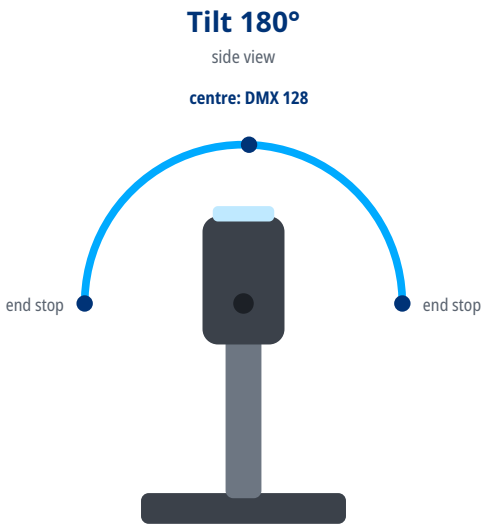
- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them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

⚠ WARNING

- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts, move them by hand, or obstruct their movement; this can cause injury (pinching) and damage the drive.
- Do not carry the device by its moving parts. If the device has a transport lock, engage it before transport and release it before switching on.

4 Product description

Range of movement



5 Installation

⚠ WARNING

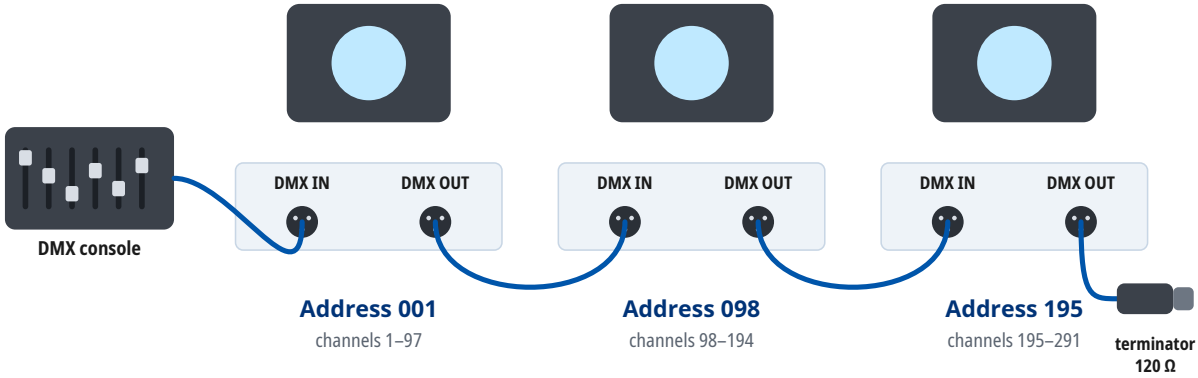
- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 11.9 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 97Ch Mode: every unit occupies 97 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 “97Ch Mode”: 97.
- 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 “97Ch Mode”, you can use, for example, the start addresses 1, 98, 195, 292.
- 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

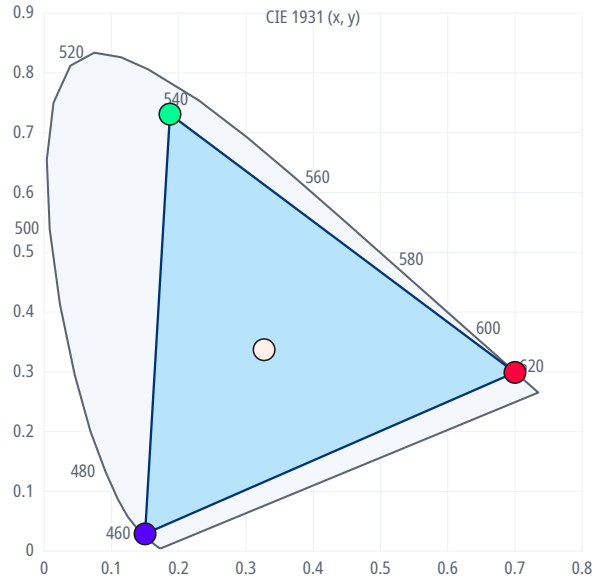
	97Ch Mode 97 channels	74Ch Mode 74 channels	68Ch Mode 68 channels	47Ch Mode 47 channels	30Ch Mode 30 channels	24Ch Mode 24 channels	13Ch Mode 13 channels	11Ch Mode 11 channels
Pan / Tilt	1	1	1	1	1	1	1	1
Dimmer	3–5, 52–79	3, 47–74	3, 8, 57–68	3–5, 33–46	3–5	3–5	3, 4	3, 11
Shutter / strobe	6–9	4	4, 5, 9, 10	6–9	6–9	6–9	5–8	4–7
Color mixing	10–51	5–46	12–14, 21–56	12–32	10–12	10–12	9–11	8–10
Effects / macros	80, 81, 83, 85–96		15–19	10, 11	13, 14, 16, 18–29	13, 14, 16, 18–23	12	
Pixel control	14 + 28 cells	14 + 28 cells	12 + 12 cells	14 cells				

Color wheel



1. White 2700K — DMX 1–2
2. White 3200K — DMX 3–4
3. White 4200K — DMX 5–6
4. White 5600K — DMX 7–8
5. White 8000K — DMX 9–11
6. Blue — DMX 11
7. Green+/Blue — DMX 12–48
8. Cyan — DMX 49
9. Green/Blue- — DMX 50–86
10. Green — DMX 87
11. Red+/Green — DMX 90–124
12. Yellow — DMX 125
13. Red/Green- — DMX 127–162
14. Red — DMX 163
15. Red/Blue- — DMX 164–200
16. Magenta — DMX 201
17. Red-/Blue — DMX 202–238

LED colors and the colors they mix



LED	x	y
RED	0.700	0.299
GREEN	0.187	0.731
BLUE	0.150	0.029
BEAM	0.327	0.337

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

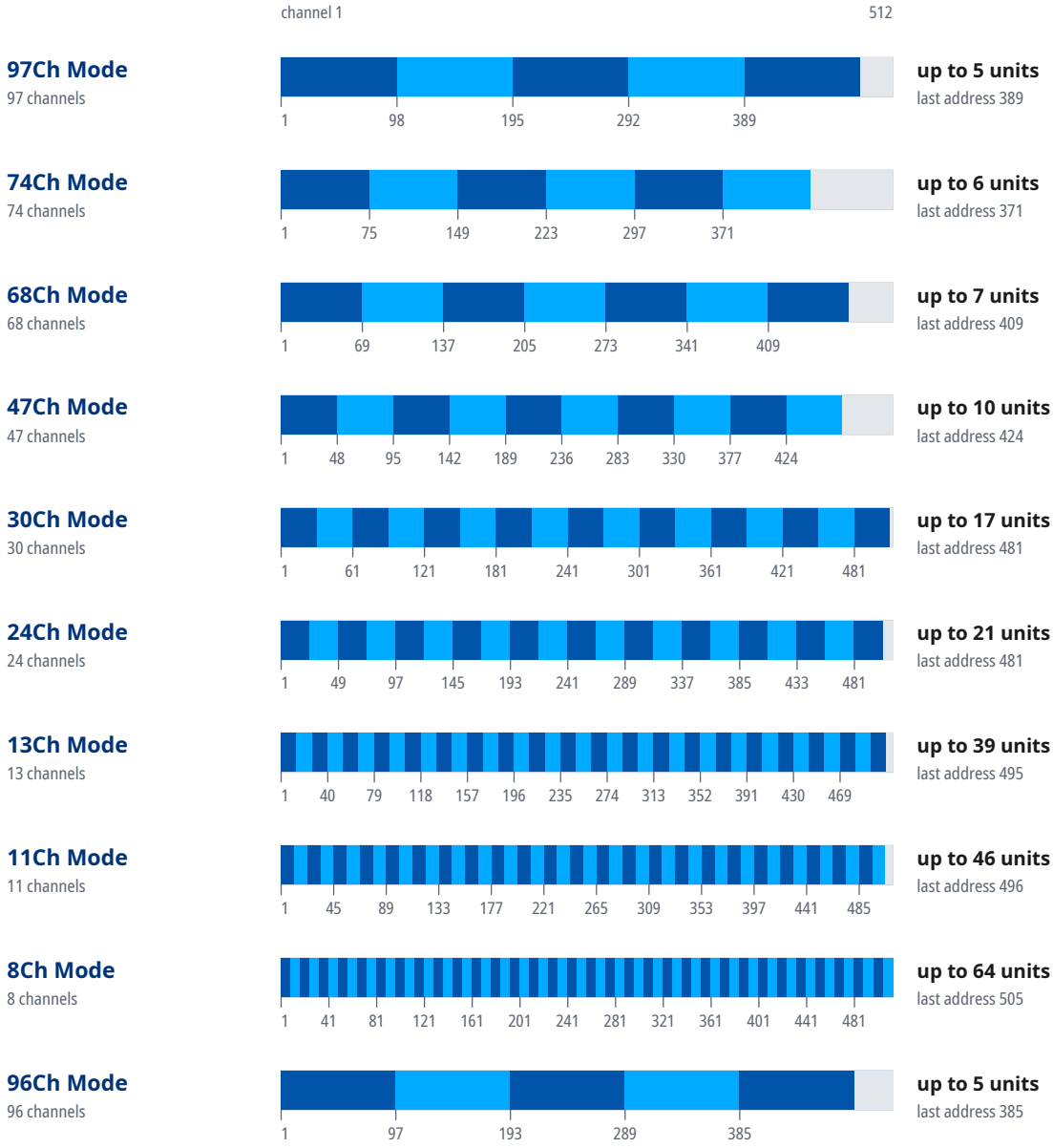
Cells (pixels)

15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	2	3	4	5	6	7	8	9	10	11	12	13	14

28 cells where the GDTF file places them (seen from above), numbered in the file's order; the mode “97Ch Mode ” drives them together.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “97Ch Mode”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 1	11	U3 · 1	16	U4 · 1
2	98	7	U2 · 98	12	U3 · 98	17	U4 · 98
3	195	8	U2 · 195	13	U3 · 195	18	U4 · 195
4	292	9	U2 · 292	14	U3 · 292	19	U4 · 292
5	389	10	U2 · 389	15	U3 · 389	20	U4 · 389

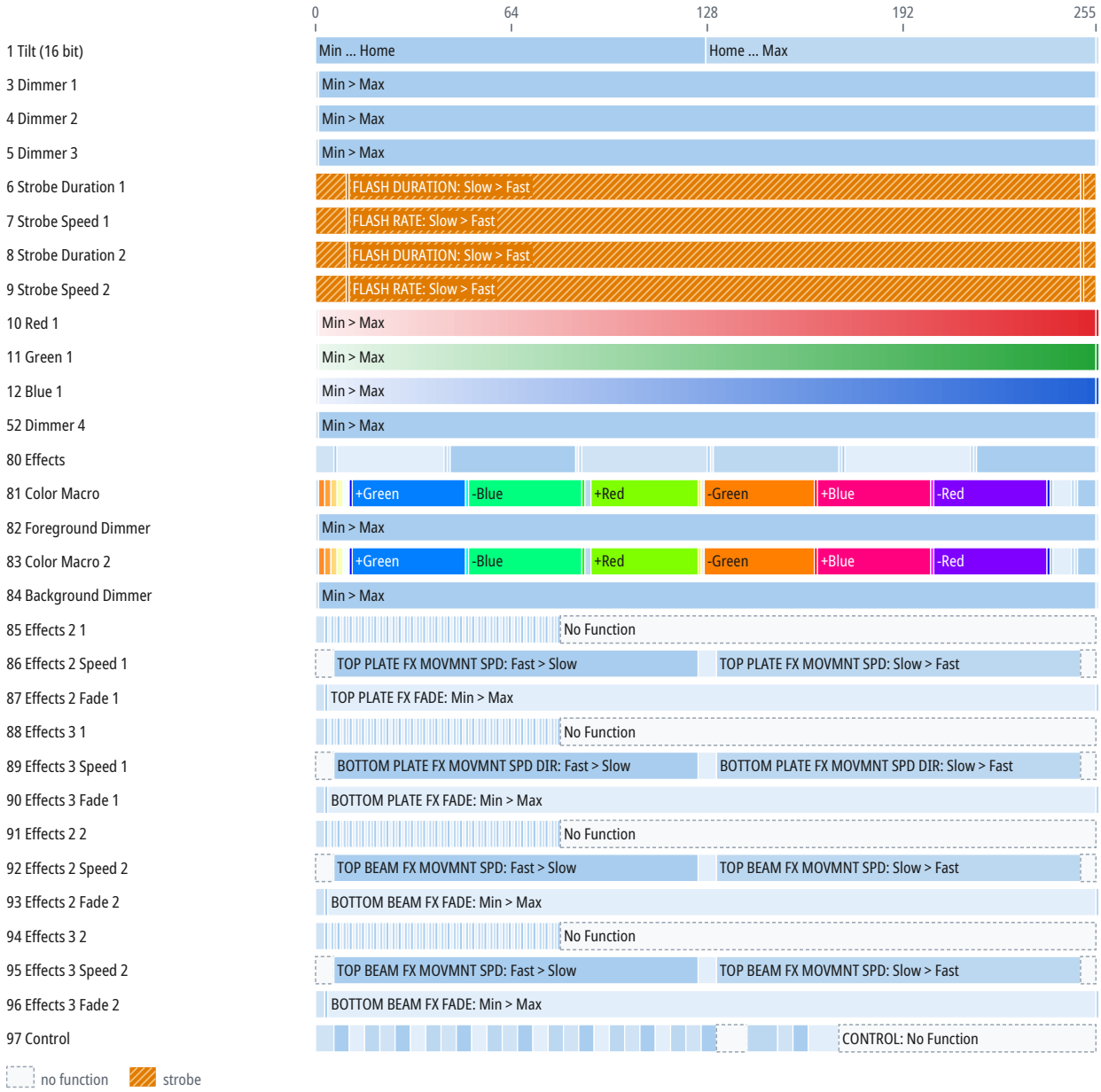
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 97Ch Mode

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 7 Strobe Speed 1 at 0–9 or 251–255 “Open”; CH 9 Strobe Speed 2 at 0–9 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 3 Dimmer 1 255, CH 4 Dimmer 2 255, CH 5 Dimmer 3 255, CH 6 Strobe Duration 1 0, CH 8 Strobe Duration 2 0, CH 10 Red 255 (the same in each of the 14 cells), CH 11 Green 255 (the same in each of the 14 cells), CH 12 Blue 255 (the same in each of the 14 cells), CH 52 Dimmer 255 (the same in each of the 28 cells), CH 81 Color Macro 0, CH 83 Color Macro 2 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt	0–127	Min ... Home
		127	Home
		128–255	Home ... Max

CH	Function	DMX	Description
1	Tilt (continued)	255	Max
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Dimmer 1	0	Min
		1–254	Min > Max
		255	Max
4	Dimmer 2	0	Min
		1–254	Min > Max
		255	Max
5	Dimmer 3	0	Min
		1–254	Min > Max
		255	Max
6	Strobe Duration 1	0–9	Classic Shutter Mode (1–0.1 s)
		10	FLASH DURATION: Slow
		11–249	FLASH DURATION: Slow > Fast
		250	FLASH DURATION: Fast
		251–255	No Function - Strobe Off
7	Strobe Speed 1	0–9	FLASH RATE OPEN: Open
		10	FLASH RATE: Slow (0.1–30 Hz)
		11–249	FLASH RATE: Slow > Fast
		250	FLASH RATE: Fast
		251–255	FLASH RATE OPEN: Open
8	Strobe Duration 2	0–9	Classic Shutter Mode (1–0.1 s)
		10	FLASH DURATION: Slow
		11–249	FLASH DURATION: Slow > Fast
		250	FLASH DURATION: Fast
		251–255	No Function - Strobe Off
9	Strobe Speed 2	0–9	FLASH RATE OPEN: Open
		10	FLASH RATE: Slow (0.1–30 Hz)
		11–249	FLASH RATE: Slow > Fast
		250	FLASH RATE: Fast
		251–255	FLASH RATE OPEN: Open
10	Red 1		PLATE RED
		0	Min
		1–254	Min > Max
		255	Max
11	Green 1		PLATE GREEN
		0	Min
		1–254	Min > Max
		255	Max
12	Blue 1		PLATE BLUE
		0	Min
		1–254	Min > Max

CH	Function	DMX	Description
12	Blue 1 (continued)	255	Max
52	Dimmer 4	0	Min
		1–254	Min > Max
		255	Max
80	Effects	0–5	BEAM FX OPEN: Open
		6	RAMP UP: Slow
		7–41	RAMP UP: Slow > Fast
		42	RAMP UP: Fast
		43	RAMP DOWN: Slow
		44–84	RAMP DOWN: Slow > Fast
		85	RAMP DOWN: Fast
		86	RAMP UP-DOWN: Slow
		87–127	RAMP UP-DOWN: Slow > Fast
		128	RAMP UP-DOWN: Fast
		129	RANDOM: Slow
		130–170	RANDOM: Slow > Fast
		171	RANDOM: Fast
		172	LIGHTNING: Slow
		173–213	LIGHTNING: Slow > Fast
		214	LIGHTNING: Fast
		215	SPIKES: Slow
		216–254	SPIKES: Slow > Fast
		255	SPIKES: Fast
81	Color Macro	0	COLOR MACRO: Open
		1–2	White 2700K - CTC
		3–4	White 3200K - CTC
		5–6	White 4200K - CTC
		7–8	White 5600K - CTC
		9–10	White 8000K - CTC
		11	Blue
		12–48	+Green
		49	Cyan
		50–86	-Blue
		87	Green
		88–89	Green ... +Red
		90–124	+Red
		125	Yellow
		126	Yellow ... -Green
		127–162	-Green
		163	Red
		164–200	+Blue
		201	Magenta

CH	Function	DMX	Description
81	Color Macro (continued)	202–238	-Red
		239	Blue
		240	COLOR EFFECT FADE: Fast
		241–246	COLOR EFFECT FADE: Fast > Slow
		247	COLOR EFFECT FADE: Slow
		248	COLOR EFFECT SNAP: Fast
		249–254	COLOR EFFECT SNAP: Fast > Slow
		255	COLOR EFFECT SNAP: Slow
82	Foreground Dimmer		PLATE FOREGROUND DIMMER
		0	Min
		1–254	Min > Max
		255	Max
83	Color Macro 2	0	COLOR MACRO: Open
		1–2	White 2700K - CTC
		3–4	White 3200K - CTC
		5–6	White 4200K - CTC
		7–8	White 5600K - CTC
		9–10	White 8000K - CTC
		11	Blue
		12–48	+Green
		49	Cyan
		50–86	-Blue
		87	Green
		88–89	Green ... +Red
		90–124	+Red
		125	Yellow
		126	Yellow ... -Green
		127–162	-Green
		163	Red
		164–200	+Blue
		201	Magenta
		202–238	-Red
		239	Blue
		240	COLOR EFFECT FADE: Fast
		241–246	COLOR EFFECT FADE: Fast > Slow
		247	COLOR EFFECT FADE: Slow
		248	COLOR EFFECT SNAP: Fast
		249–254	COLOR EFFECT SNAP: Fast > Slow
		255	COLOR EFFECT SNAP: Slow
84	Background Dimmer	0	Min
		1–254	Min > Max
		255	Max

CH	Function	DMX	Description
85	Effects 2 1	0–2	TOP PLATE FX SELECT: Open
		3–79	Plate Pattern 1...77 - Effect
		80–255	No Function
86	Effects 2 Speed 1	0–5	TOP PLATE FX MOVMNT SPD: No Function
		6–124	TOP PLATE FX MOVMNT SPD: Fast > Slow (10–0.1 Hz)
		125–130	TOP PLATE FX MOVMNT SPD: Stop
		131–249	TOP PLATE FX MOVMNT SPD: Slow > Fast (0.1–10 Hz)
		250–255	TOP PLATE FX MOVMNT SPD STOP: No Function
87	Effects 2 Fade 1	0–2	Snap From Pixel > Pixel
		3	TOP PLATE FX FADE: Min
		4–254	TOP PLATE FX FADE: Min > Max
		255	TOP PLATE FX FADE: Max
88	Effects 3 1	0–2	BOTTOM PLATE FX SELECT: Open
		3–79	Plate Pattern 1...77 - Effect
		80–255	No Function
89	Effects 3 Speed 1	0–5	BOTTOM PLATE FX MOVMNT SPD DIR: No Function
		6–124	BOTTOM PLATE FX MOVMNT SPD DIR: Fast > Slow
		125–130	BOTTOM PLATE FX MOVMNT SPD DIR: Stop
		131–249	BOTTOM PLATE FX MOVMNT SPD DIR: Slow > Fast
		250–255	BOTTOM PLATE FX MOVMNT SPD DIR: No Function
90	Effects 3 Fade 1	0–2	Snap From Pixel > Pixel
		3	BOTTOM PLATE FX FADE: Min
		4–254	BOTTOM PLATE FX FADE: Min > Max
		255	BOTTOM PLATE FX FADE: Max
91	Effects 2 2	0–2	TOP BEAM FX SELECT: Open
		3–79	Plate Pattern 1...77 - Effect
		80–255	No Function
92	Effects 2 Speed 2	0–5	TOP BEAM FX MOVMNT SPD: No Function
		6–124	TOP BEAM FX MOVMNT SPD: Fast > Slow (10–0.1 Hz)
		125–130	TOP BEAM FX MOVMNT SPD: Stop
		131–249	TOP BEAM FX MOVMNT SPD: Slow > Fast (0.1–10 Hz)
		250–255	TOP BEAM FX MOVMNT SPD STOP: No Function
93	Effects 2 Fade 2	0–2	Snap From Pixel > Pixel
		3	BOTTOM BEAM FX FADE: Min
		4–254	BOTTOM BEAM FX FADE: Min > Max
		255	BOTTOM BEAM FX FADE: Max
94	Effects 3 2	0–2	TOP BEAM FX SELECT: Open
		3–79	Plate Pattern 1...77 - Effect
		80–255	No Function
95	Effects 3 Speed 2	0–5	TOP BEAM FX MOVMNT SPD: No Function
		6–124	TOP BEAM FX MOVMNT SPD: Fast > Slow (10–0.1 Hz)
		125–130	TOP BEAM FX MOVMNT SPD: Stop

CH	Function	DMX	Description
95	Effects 3 Speed 2 (continued)	131–249	TOP BEAM FX MOVMNT SPD: Slow > Fast (0.1–10 Hz)
		250–255	TOP BEAM FX MOVMNT SPD STOP: No Function
96	Effects 3 Fade 2	0–2	Snap From Pixel > Pixel
		3	BOTTOM BEAM FX FADE: Min
		4–254	BOTTOM BEAM FX FADE: Min > Max
		255	BOTTOM BEAM FX FADE: Max
97	Control	0–5	No function
		6–10	Dimmer Off - Mode
		11–15	Dimmer 1 - Mode
		16–20	Dimmer 2 - Mode
		21–25	Dimmer 3 - Mode
		26–30	600Hz
		31–35	1200Hz
		36–40	2000Hz
		41–45	4000Hz
		46–50	6000Hz
		51–55	25kHz
		56–60	Auto (Fan Mode)
		61–65	On (Fan Mode)
		66–70	Tilt Reset
		71–75	Plate 1 Invert Off
		76–80	Plate 1 Invert On
		81–85	Plate 2 Invert Off
		86–90	Plate 2 Invert On
		91–95	Beam 1 Invert Off
		96–100	Beam 1 Invert On
		101–105	Beam 2 Invert Off
		106–110	Beam 2 Invert On
		111–115	Plate Swap On
		116–120	Plate Swap Off
		121–125	Beam Swap On
		126–130	Beam Swap Off
		131–140	LED INVERT ON/OFF: No Function
		141–150	FX Pattern Priority
		151–155	Color Mix HTP On
		156–160	Color Mix HTP Off
		161–170	Color Priority
		171–255	CONTROL: No Function

CH 10–51: 14 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 10–12); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	10	11	12	2	13	14	15	3	16	17	18
4	19	20	21	5	22	23	24	6	25	26	27
7	28	29	30	8	31	32	33	9	34	35	36
10	37	38	39	11	40	41	42	12	43	44	45
13	46	47	48	14	49	50	51				

CH 52–79: 28 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 52); the table below gives each cell's channel numbers.

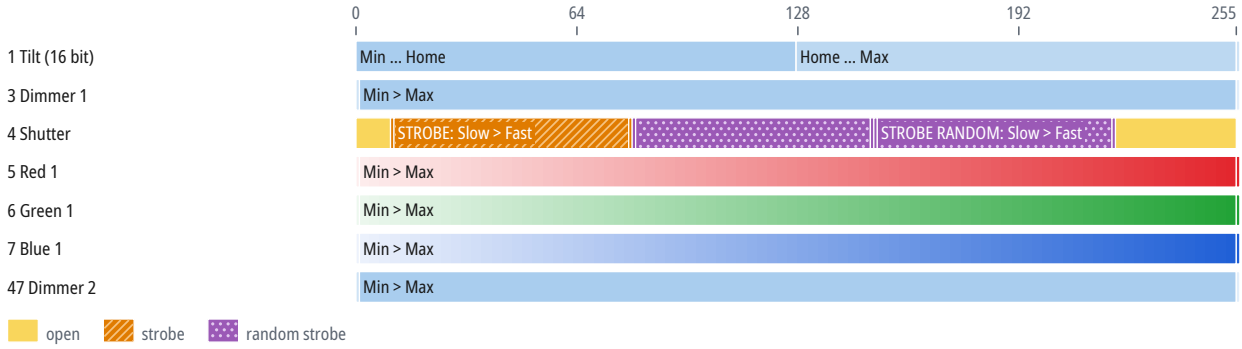
Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer
1	52	2	53	3	54	4	55	5	56	6	57
7	58	8	59	9	60	10	61	11	62	12	63
13	64	14	65	15	66	16	67	17	68	18	69
19	70	20	71	21	72	22	73	23	74	24	75
25	76	26	77	27	78	28	79				

Mode 74Ch Mode

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

If the device receives DMX in this mode but gives no light, check these channels: CH 4 Shutter at 0–9 or 220–255 “Shutter Open”. The GDTF file gives these values for a console's Highlight function: CH 3 Dimmer 1 255, CH 5 Red 255 (the same in each of the 14 cells), CH 6 Green 255 (the same in each of the 14 cells), CH 7 Blue 255 (the same in each of the 14 cells), CH 47 Dimmer 255 (the same in each of the 28 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “97Ch Mode” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Dimmer 1		Same as CH 3 in the mode “97Ch Mode” (p. 11)
4	Shutter	0–9	STROBE OPEN: Shutter Open
		10	STROBE: Slow (0.1–30 Hz)
		11–78	STROBE: Slow > Fast

CH	Function	DMX	Description
4	Shutter (continued)	79	STROBE: Fast
		80	STROBE PULSE RANDOM: Slow (0.1–30 Hz)
		81–148	STROBE PULSE RANDOM: Slow > Fast
		149	STROBE PULSE RANDOM: Fast
		150	STROBE RANDOM: Slow (0.1–30 Hz)
		151–218	STROBE RANDOM: Slow > Fast
		219	STROBE RANDOM: Fast
		220–255	STROBE OPEN: Shutter Open
5	Red 1		PLATE RED
		0	Min
		1–254	Min > Max
		255	Max
6	Green 1		PLATE GREEN
		0	Min
		1–254	Min > Max
		255	Max
7	Blue 1		PLATE BLUE
		0	Min
		1–254	Min > Max
		255	Max
47	Dimmer 2	0	Min
		1–254	Min > Max
		255	Max

CH 5–46: 14 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 5–7); the table below gives each cell's channel numbers.

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

CH 47–74: 28 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 47); the table below gives each cell's channel numbers.

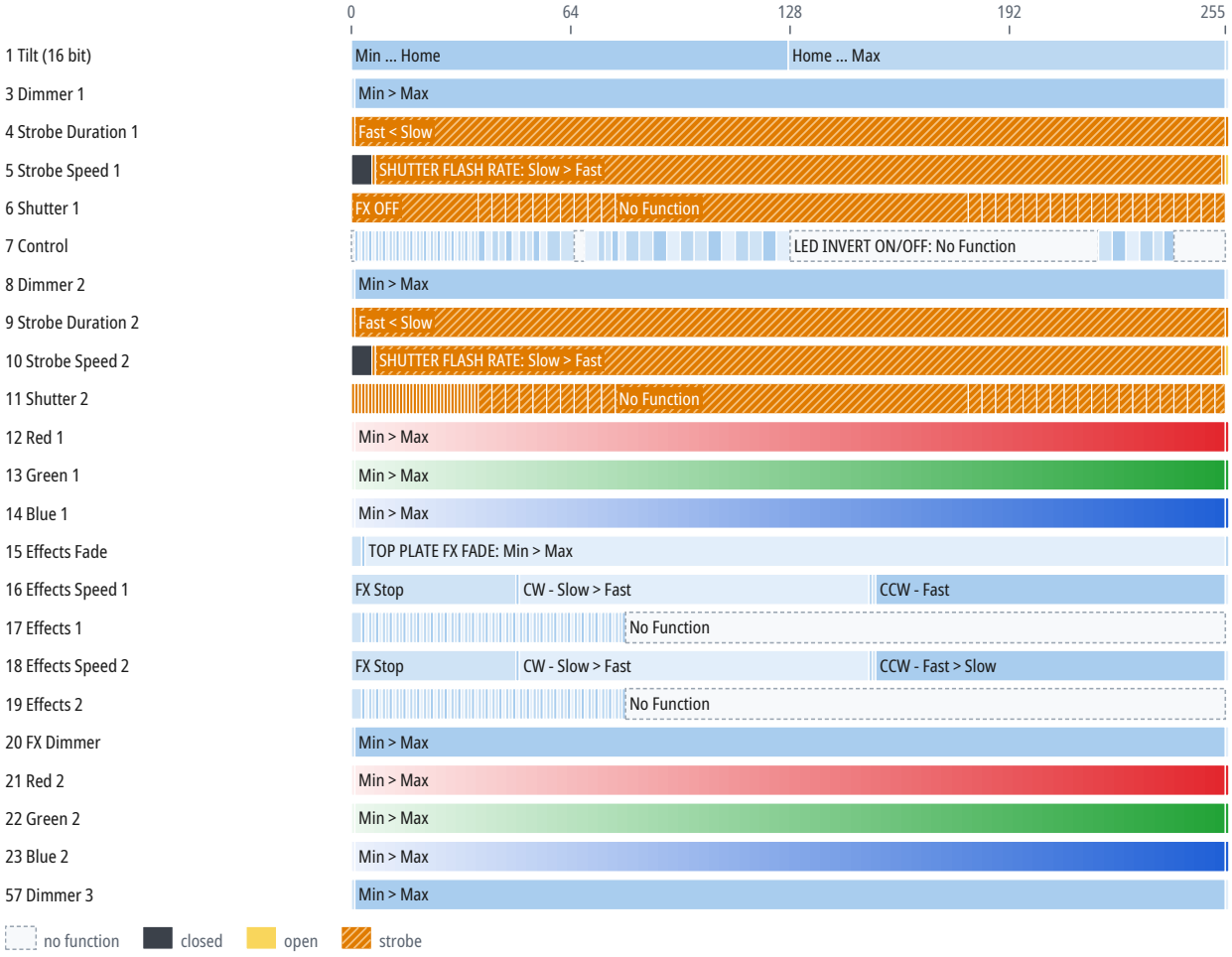
Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer
1	47	2	48	3	49	4	50	5	51	6	52
7	53	8	54	9	55	10	56	11	57	12	58
13	59	14	60	15	61	16	62	17	63	18	64
19	65	20	66	21	67	22	68	23	69	24	70
25	71	26	72	27	73	28	74				

Mode 68Ch Mode

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 5 Strobe Speed 1 at 255 “OPEN”; CH 6 Shutter 1 at 77–179 or 252–255 “No Function”; CH 10 Strobe Speed 2 at 255 “OPEN”; CH 11 Shutter 2 at 77–179 or 252–255 “No Function”. The GDTF file gives these values for a console's Highlight function: CH 3 Dimmer 1 255, CH 5 Strobe Speed 1 255, CH 8 Dimmer 2 255, CH 10 Strobe Speed 2 255, CH 11 Shutter 2 255, CH 12 Red 1 255, CH 13 Green 1 255, CH 14 Blue 1 255, CH 21 Red 255 (the same in each of the 12 cells), CH 22 Green 255 (the same in each of the 12 cells), CH 23 Blue 255 (the same in each of the 12 cells), CH 57 Dimmer 255 (the same in each of the 12 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “97Ch Mode” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Dimmer 1		Same as CH 3 in the mode “97Ch Mode” (p. 11)
4	Strobe Duration 1		Beam Strobe Duration
		0	Fast
		1–254	Fast < Slow
		255	Slow
5	Strobe Speed 1	0–5	SHUTTER CLOSED: Closed

CH	Function	DMX	Description
5	Strobe Speed 1 (continued)	6	SHUTTER FLASH RATE: Slow
		7–253	SHUTTER FLASH RATE: Slow > Fast
		254	SHUTTER FLASH RATE: Fast
		255	SHUTTER OPEN: OPEN
6	Shutter 1	0–36	FX OFF
		37–40	RAMP UP
		41–44	RAMP UP - RANDOM
		45–48	RAMP DOWN
		49–52	RAMP DOWN - RANDOM
		53–56	RAMP UP/DOWN
		57–60	RAMP UP /DOWN - RANDOM
		61–64	RANDOM WHITE
		65–68	RANDOM WHITE SINGLE PIXEL
		69–72	LIGHTING
		73–76	SPIKES
		77–179	No Function
		180–183	DOUBLE FLASH
		184–187	DOUBLE FLASH RANDOM
		188–191	DOUBLE FLASH BEAM COLOR
		192–195	DOUBLE FLASH BEAM COLOR RANDOM
		196–199	DOUBLE FLASH COLOR BEAM
		200–203	DOUBLE FLASH COLOR BEAM RANDOM
		204–207	TRIPLE FLASH
		208–211	TRIPLE FLASH RANDOM
		212–215	TRIPLE FLASH B-C-B
		216–219	TRIPLE FLASH B-C-B RANDOM
		220–223	TRIPLE FLASH C-B-C
		224–227	TRIPLE FLASH C-B-C RANDOM
		228–231	QUAD FLASH
		232–235	QUAD FLASH RANDOM
		236–239	QUAD FLASH B-C-B-C
		240–243	QUAD FLASH B-C-B-C RANDOM
		244–247	QUAD FLASH C-B-C-B
		248–251	QUAD FLASH C-B-C-B RANDOM
		252–255	No Function
7	Control	0	No Function
		1	10 - Degree
		2	20 - Degree
		3	30 - Degree
		4	40 - Degree
		5	50 - Degree
		6	60 - Degree

CH	Function	DMX	Description
7	Control (continued)	7	70 - Degree
		8	80 - Degree
		9	90 - Degree
		10	100 - Degree
		11	110 - Degree
		12	120 - Degree
		13	130 - Degree
		14	140 - Degree
		15	150 - Degree
		16	160 - Degree
		17	170 - Degree
		18	180 - Degree
		19	190 - Degree
		20	200 - Degree
		21	210 - Degree
		22	220 - Degree
		23	230 - Degree
		24	240 - Degree
		25	250 - Degree
		26	260 - Degree
		27	270 - Degree
		28	280 - Degree
		29	290 - Degree
		30	300 - Degree
		31	310 - Degree
		32	320 - Degree
		33	330 - Degree
		34	340 - Degree
		35	350 - Degree
		36	360 - Degree
		37–38	Dimmer Off - Mode
		39–40	Dimmer 1 - Mode
		41–42	Dimmer 2 - Mode
		43–44	Dimmer 3 - Mode
		45–46	600Hz
		47–48	1200Hz
		49–50	2000Hz
		51–52	4000Hz
		53–54	25kHz
		55–56	PWM FREQUENCY
		57–60	Auto (Fan Mode)
		61–64	On (Fan Mode)

CH	Function	DMX	Description
7	Control (continued)	65–67	No Function
		68–71	Tilt Reset
		72–73	Tilt Invert - Off
		74–75	Tilt Invert - On
		76–77	Tilt Disable - Off
		78–79	Tilt Disable - On
		80–83	Plate 1 Invert Off
		84–87	Plate 1 Invert On
		88–91	Plate 2 Invert Off
		92–95	Plate 2 Invert On
		96–99	Beam 1 Invert Off
		100–103	Beam 1 Invert On
		104–107	Beam 2 Invert Off
		108–111	Beam 2 Invert On
		112–115	Plate Swap On
		116–119	Plate Swap Off
		120–123	Beam Swap On
		124–127	Beam Swap Off
		128–217	LED INVERT ON/OFF: No Function
		218–221	Dimmer Flash Mode - On
		222–225	Dimmer Flash Mode - Off
		226–229	FX Pattern Priority
		230–233	Color Mix HTP On
		234–236	Color Mix HTP Off
		237–239	Color Priority
		240–255	No Function
8	Dimmer 2		Same as CH 4 in the mode “97Ch Mode” (p. 11)
9	Strobe Duration 2		Plate Strobe Duration
		0	Fast
		1–254	Fast < Slow
		255	Slow
10	Strobe Speed 2	0–5	SHUTTER CLOSED: Closed
		6	SHUTTER FLASH RATE: Slow
		7–253	SHUTTER FLASH RATE: Slow > Fast
		254	SHUTTER FLASH RATE: Fast
		255	SHUTTER OPEN: OPEN
11	Shutter 2	0	FX Off
		1	10 - Degree
		2	20 - Degree
		3	30 - Degree
		4	40 - Degree
		5	50 - Degree

CH	Function	DMX	Description
11	Shutter 2 (continued)	6	60 - Degree
		7	70 - Degree
		8	80 - Degree
		9	90 - Degree
		10	100 - Degree
		11	110 - Degree
		12	120 - Degree
		13	130 - Degree
		14	140 - Degree
		15	150 - Degree
		16	160 - Degree
		17	170 - Degree
		18	180 - Degree
		19	190 - Degree
		20	200 - Degree
		21	210 - Degree
		22	220 - Degree
		23	230 - Degree
		24	240 - Degree
		25	250 - Degree
		26	260 - Degree
		27	270 - Degree
		28	280 - Degree
		29	290 - Degree
		30	300 - Degree
		31	310 - Degree
		32	320 - Degree
		33	330 - Degree
		34	340 - Degree
		35	350 - Degree
		36	360 - Degree
		37–40	RAMP UP
		41–44	RAMP UP - RANDOM
		45–48	RAMP DOWN
		49–52	RAMP DOWN - RANDOM
		53–56	RAMP UP/DOWN
		57–60	RAMP UP /DOWN - RANDOM
		61–64	RANDOM WHITE
		65–68	RANDOM WHITE SINGLE PIXEL
		69–72	LIGHTING
		73–76	SPIKES
		77–179	No Function

CH	Function	DMX	Description
11	Shutter 2 (continued)	180–183	DOUBLE FLASH
		184–187	DOUBLE FLASH RANDOM
		188–191	DOUBLE FLASH BEAM COLOR
		192–195	DOUBLE FLASH BEAM COLOR RANDOM
		196–199	DOUBLE FLASH COLOR BEAM
		200–203	DOUBLE FLASH COLOR BEAM RANDOM
		204–207	TRIPLE FLASH
		208–211	TRIPLE FLASH RANDOM
		212–215	TRIPLE FLASH B-C-B
		216–219	TRIPLE FLASH B-C-B RANDOM
		220–223	TRIPLE FLASH C-B-C
		224–227	TRIPLE FLASH C-B-C RANDOM
		228–231	QUAD FLASH
		232–235	QUAD FLASH RANDOM
		236–239	QUAD FLASH B-C-B-C
		240–243	QUAD FLASH B-C-B-C RANDOM
		244–247	QUAD FLASH C-B-C-B
		248–251	QUAD FLASH C-B-C-B RANDOM
		252–255	No Function
12	Red 1		PLATE RED
		0	Min
		1–254	Min > Max
		255	Max
13	Green 1		PLATE GREEN
		0	Min
		1–254	Min > Max
		255	Max
14	Blue 1		PLATE BLUE
		0	Min
		1–254	Min > Max
		255	Max
15	Effects Fade	0–2	Snap From Pixel > Pixel
		3	TOP PLATE FX FADE: Min
		4–254	TOP PLATE FX FADE: Min > Max
		255	TOP PLATE FX FADE: Max
16	Effects Speed 1	0–47	FX Stop
		48	CW - Slow (10–0.1 Hz)
		49–150	CW - Slow > Fast (0.1–10 Hz)
		151	CW - Fast
		152–254	CCW - Fast
		255	CCW - Slow
17	Effects 1	0–2	PLATE FX SELECT: Open

CH	Function	DMX	Description
17	Effects 1 (continued)	3–79	Plate Pattern 1...77 - Effect
		80–255	No Function
18	Effects Speed 2	0–47	FX Stop
		48	CW - Slow (10–0.1 Hz)
		49–150	CW - Slow > Fast (0.1–10 Hz)
		151	CW - Fast
		152	CCW - Fast
		153–254	CCW - Fast > Slow
		255	CCW - Slow
19	Effects 2	0–2	BEAM FX SELECT: Open
		3–79	Plate Pattern 1...77 - Effect
		80–255	No Function
20	FX Dimmer	0	Min
		1–254	Min > Max
		255	Max
21	Red 2		PLATE RED 1
		0	Min
		1–254	Min > Max
		255	Max
22	Green 2		PLATE GREEN 1
		0	Min
		1–254	Min > Max
		255	Max
23	Blue 2		PLATE BLUE 1
		0	Min
		1–254	Min > Max
		255	Max
57	Dimmer 3	0	Min
		1–254	Min > Max
		255	Max

CH 21–56: 12 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 21–23); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	21	22	23	2	24	25	26	3	27	28	29
4	30	31	32	5	33	34	35	6	36	37	38
7	39	40	41	8	42	43	44	9	45	46	47
10	48	49	50	11	51	52	53	12	54	55	56

CH 57–68: 12 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 57); the table below gives each cell's channel numbers.

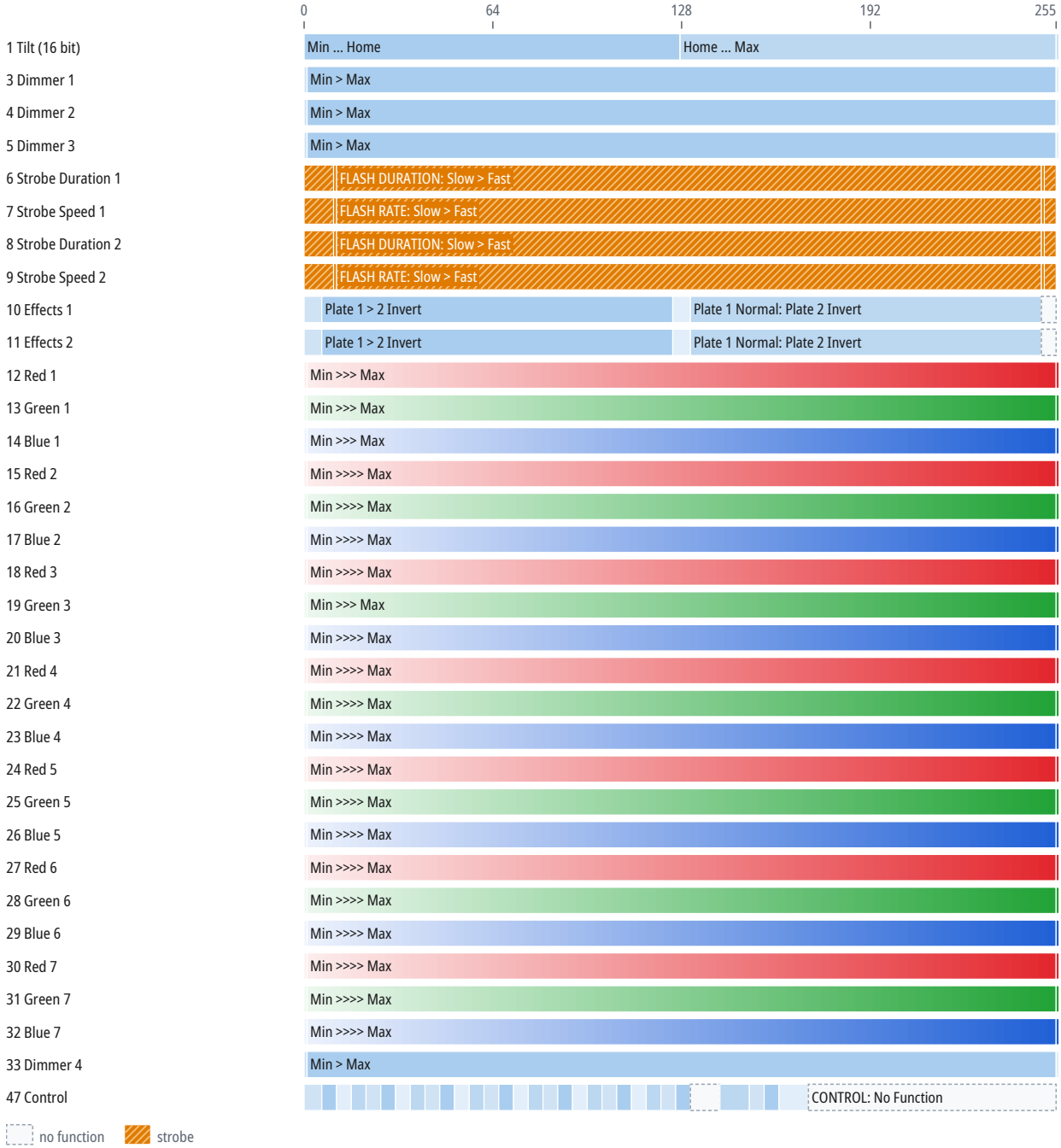
Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer
1	57	2	58	3	59	4	60	5	61	6	62
7	63	8	64	9	65	10	66	11	67	12	68

Mode 47Ch Mode

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 7 Strobe Speed 1 at 0–9 or 251–255 “Open”; CH 9 Strobe Speed 2 at 0–9 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 3 Dimmer 1 255, CH 4 Dimmer 2 255, CH 5 Dimmer 3 255, CH 6 Strobe Duration 1 0, CH 8 Strobe Duration 2 0, CH 12 Red 1 255, CH 13 Green 1 255, CH 14 Blue 1 255, CH 15 Red 2 255, CH 16 Green 2 255, CH 17 Blue 2 255, CH 18 Red 3 255, CH 19 Green 3 255, CH 20 Blue 3 255, CH 21 Red 4 255, CH 22 Green 4 255, CH 23 Blue 4 255, CH 24 Red 5 255, CH 25 Green 5 255, CH 26 Blue 5 255, CH 27 Red 6 255, CH 28 Green 6 255, CH 29 Blue 6 255, CH 30 Red 7 255, CH 31 Green 7 255, CH 32 Blue 7 255, CH 33 Dimmer 255 (the same in each of the 14 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “97Ch Mode” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Dimmer 1		Same as CH 3 in the mode “97Ch Mode” (p. 11)
4	Dimmer 2		Same as CH 4 in the mode “97Ch Mode” (p. 11)
5	Dimmer 3		Same as CH 5 in the mode “97Ch Mode” (p. 11)
6	Strobe Duration 1		Same as CH 6 in the mode “97Ch Mode” (p. 11)
7	Strobe Speed 1		Same as CH 7 in the mode “97Ch Mode” (p. 11)
8	Strobe Duration 2		Same as CH 8 in the mode “97Ch Mode” (p. 11)
9	Strobe Speed 2		Same as CH 9 in the mode “97Ch Mode” (p. 11)
10	Effects 1		PLATE INVERT CONTROL
		0–5	Normal Alignment
		6–124	Plate 1 > 2 Invert
		125–130	Plate 1 Invert: Plate 2 Normal
		131–249	Plate 1 Normal: Plate 2 Invert
		250–255	No Function
11	Effects 2		BEAM INVERT CONTROL
		0–5	Normal Alignment
		6–124	Plate 1 > 2 Invert
		125–130	Plate 1 Invert: Plate 2 Normal
		131–249	Plate 1 Normal: Plate 2 Invert
		250–255	No Function
12	Red 1		PLATE RED
		0	Min
		1–254	Min >>> Max
		255	Max
13	Green 1		PLATE GREEN
		0	Min
		1–254	Min >>> Max
		255	Max
14	Blue 1		PLATE BLUE
		0	Min
		1–254	Min >>> Max
		255	Max
15	Red 2		PLATE RED
		0	Min
		1–254	Min >>>> Max
		255	Max
16	Green 2		PLATE GREEN
		0	Min
		1–254	Min >>>> Max
		255	Max

CH	Function	DMX	Description
17	Blue 2		PLATE BLUE
		0	Min
		1–254	Min >>>> Max
		255	Max
18	Red 3		PLATE RED
		0	Min
		1–254	Min >>>> Max
		255	Max
19	Green 3		PLATE GREEN
		0	Min
		1–254	Min >>> Max
		255	Max
20	Blue 3		PLATE BLUE
		0	Min
		1–254	Min >>>> Max
		255	Max
21	Red 4		PLATE RED
		0	Min
		1–254	Min >>>> Max
		255	Max
22	Green 4		PLATE GREEN
		0	Min
		1–254	Min >>>> Max
		255	Max
23	Blue 4		PLATE BLUE
		0	Min
		1–254	Min >>>> Max
		255	Max
24	Red 5		PLATE RED
		0	Min
		1–254	Min >>>> Max
		255	Max
25	Green 5		PLATE GREEN
		0	Min
		1–254	Min >>>> Max
		255	Max
26	Blue 5		PLATE BLUE
		0	Min
		1–254	Min >>>> Max
		255	Max
27	Red 6		PLATE RED

CH	Function	DMX	Description
27	Red 6 (continued)	0	Min
		1–254	Min >>>> Max
		255	Max
28	Green 6		PLATE GREEN
		0	Min
		1–254	Min >>>> Max
		255	Max
29	Blue 6	0	Min
		1–254	Min >>>> Max
		255	Max
30	Red 7		PLATE RED
		0	Min
		1–254	Min >>>> Max
		255	Max
31	Green 7		PLATE GREEN
		0	Min
		1–254	Min >>>> Max
		255	Max
32	Blue 7		PLATE BLUE
		0	Min
		1–254	Min >>>> Max
		255	Max
33	Dimmer 4	0	Min
		1–254	Min > Max
		255	Max
47	Control		Same as CH 97 in the mode “97Ch Mode” (p. 15)

CH 33–46: 14 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 33); the table below gives each cell's channel numbers.

Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer
1	33	2	34	3	35	4	36	5	37	6	38
7	39	8	40	9	41	10	42	11	43	12	44
13	45	14	46								

Mode 30Ch Mode

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 7 Strobe Speed 1 at 0–9 or 251–255 “Open”; CH 9 Strobe Speed 2 at 0–9 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 3 Dimmer 1 255, CH 4 Dimmer 2 255, CH 5 Dimmer 3 255, CH 6 Strobe Duration 1 0, CH 8 Strobe Duration 2 0, CH 10 Red 255, CH 11 Green 255, CH 12 Blue 255, CH 14 Color Macro 0, CH 16 Color Macro 2 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “97Ch Mode” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Dimmer 1		Same as CH 3 in the mode “97Ch Mode” (p. 11)
4	Dimmer 2		Same as CH 4 in the mode “97Ch Mode” (p. 11)
5	Dimmer 3		Same as CH 5 in the mode “97Ch Mode” (p. 11)

CH	Function	DMX	Description
6	Strobe Duration 1		Same as CH 6 in the mode “97Ch Mode” (p. 11)
7	Strobe Speed 1		Same as CH 7 in the mode “97Ch Mode” (p. 11)
8	Strobe Duration 2		Same as CH 8 in the mode “97Ch Mode” (p. 11)
9	Strobe Speed 2		Same as CH 9 in the mode “97Ch Mode” (p. 11)
10	Red		PLATE RED
		0	Min
		1–254	Min > Max
		255	Max
11	Green		PLATE GREEN
		0	Min
		1–254	Min > Max
		255	Max
12	Blue		PLATE BLUE
		0	Min
		1–254	Min > Max
		255	Max
13	Effects		Same as CH 80 in the mode “97Ch Mode” (p. 12)
14	Color Macro		Same as CH 81 in the mode “97Ch Mode” (p. 12)
15	Foreground Dimmer		Same as CH 82 in the mode “97Ch Mode” (p. 13)
16	Color Macro 2		Same as CH 83 in the mode “97Ch Mode” (p. 13)
17	Background Dimmer		Same as CH 84 in the mode “97Ch Mode” (p. 13)
18	Effects 2 1		Same as CH 85 in the mode “97Ch Mode” (p. 14)
19	Effects 2 Speed 1		Same as CH 86 in the mode “97Ch Mode” (p. 14)
20	Effects 2 Fade 1		Same as CH 87 in the mode “97Ch Mode” (p. 14)
21	Effects 3 1		Same as CH 88 in the mode “97Ch Mode” (p. 14)
22	Effects 3 Speed 1		Same as CH 89 in the mode “97Ch Mode” (p. 14)
23	Effects 3 Fade 1		Same as CH 90 in the mode “97Ch Mode” (p. 14)
24	Effects 2 2		Same as CH 91 in the mode “97Ch Mode” (p. 14)
25	Effects 2 Speed 2		Same as CH 92 in the mode “97Ch Mode” (p. 14)
26	Effects 2 Fade 2		Same as CH 93 in the mode “97Ch Mode” (p. 14)
27	Effects 3 2		Same as CH 94 in the mode “97Ch Mode” (p. 14)
28	Effects 3 Speed 2		Same as CH 95 in the mode “97Ch Mode” (p. 14)
29	Effects 3 Fade 2		Same as CH 96 in the mode “97Ch Mode” (p. 15)
30	Control		Same as CH 97 in the mode “97Ch Mode” (p. 15)

Mode 24Ch Mode

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 7 Strobe Speed 1 at 0–9 or 251–255 “Open”; CH 9 Strobe Speed 2 at 0–9 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 3 Dimmer 1 255, CH 4 Dimmer 2 255, CH 5 Dimmer 3 255, CH 6 Strobe Duration 1 0, CH 8 Strobe Duration 2 0, CH 10 Red 255, CH 11 Green 255, CH 12 Blue 255, CH 14 Color Macro 0, CH 16 Color Macro 2 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “97Ch Mode” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Dimmer 1		Same as CH 3 in the mode “97Ch Mode” (p. 11)
4	Dimmer 2		Same as CH 4 in the mode “97Ch Mode” (p. 11)
5	Dimmer 3		Same as CH 5 in the mode “97Ch Mode” (p. 11)
6	Strobe Duration 1		Same as CH 6 in the mode “97Ch Mode” (p. 11)
7	Strobe Speed 1		Same as CH 7 in the mode “97Ch Mode” (p. 11)
8	Strobe Duration 2		Same as CH 8 in the mode “97Ch Mode” (p. 11)
9	Strobe Speed 2		Same as CH 9 in the mode “97Ch Mode” (p. 11)
10	Red		Same as CH 10 in the mode “30Ch Mode” (p. 31)

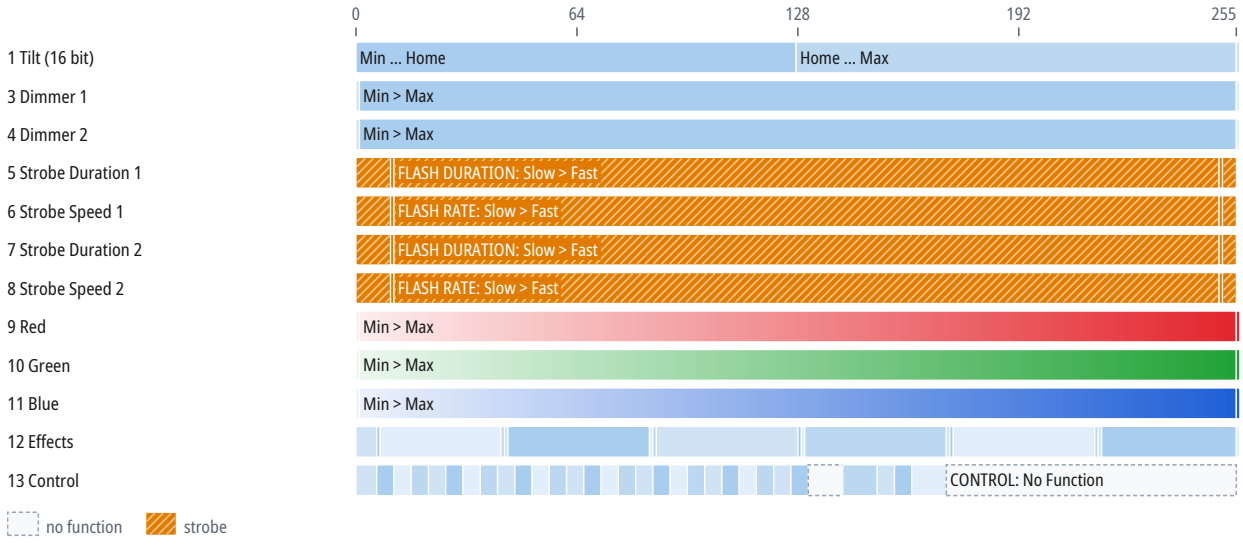
CH	Function	DMX	Description
11	Green		Same as CH 11 in the mode “30Ch Mode” (p. 31)
12	Blue		Same as CH 12 in the mode “30Ch Mode” (p. 31)
13	Effects		Same as CH 80 in the mode “97Ch Mode” (p. 12)
14	Color Macro		Same as CH 81 in the mode “97Ch Mode” (p. 12)
15	Foreground Dimmer		Same as CH 82 in the mode “97Ch Mode” (p. 13)
16	Color Macro 2		Same as CH 83 in the mode “97Ch Mode” (p. 13)
17	Background Dimmer		Same as CH 84 in the mode “97Ch Mode” (p. 13)
18	Effects 2 1	0–2	PLATE FX OPEN: Open
		3–79	Plate Pattern 1...77 - Effect
		80–255	No Function
19	Effects 2 Speed 1		Same as CH 86 in the mode “97Ch Mode” (p. 14)
20	Effects 2 Fade 1		Same as CH 87 in the mode “97Ch Mode” (p. 14)
21	Effects 2 2		Same as CH 91 in the mode “97Ch Mode” (p. 14)
22	Effects 2 Speed 2		Same as CH 92 in the mode “97Ch Mode” (p. 14)
23	Effects 2 Fade 2		Same as CH 93 in the mode “97Ch Mode” (p. 14)
24	Control		Same as CH 97 in the mode “97Ch Mode” (p. 15)

Mode 13Ch Mode

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 6 Strobe Speed 1 at 0–9 or 251–255 “Open”; CH 8 Strobe Speed 2 at 0–9 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 3 Dimmer 1 255, CH 4 Dimmer 2 255, CH 5 Strobe Duration 1 0, CH 7 Strobe Duration 2 0, CH 9 Red 255, CH 10 Green 255, CH 11 Blue 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “97Ch Mode” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Dimmer 1		Same as CH 3 in the mode “97Ch Mode” (p. 11)
4	Dimmer 2		Same as CH 4 in the mode “97Ch Mode” (p. 11)

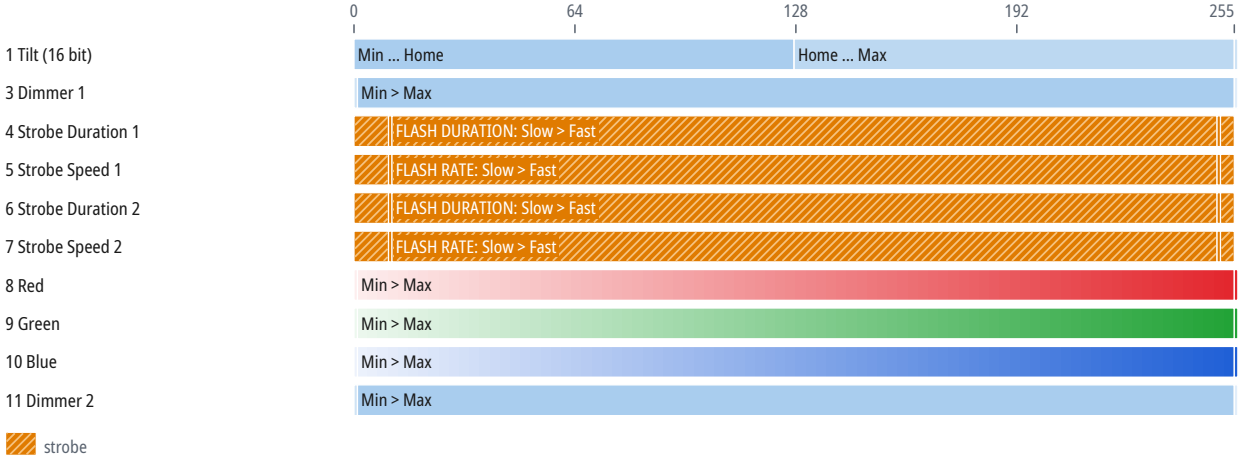
CH	Function	DMX	Description
5	Strobe Duration 1		Same as CH 6 in the mode “97Ch Mode” (p. 11)
6	Strobe Speed 1		Same as CH 7 in the mode “97Ch Mode” (p. 11)
7	Strobe Duration 2		Same as CH 8 in the mode “97Ch Mode” (p. 11)
8	Strobe Speed 2		Same as CH 9 in the mode “97Ch Mode” (p. 11)
9	Red		Same as CH 10 in the mode “30Ch Mode” (p. 31)
10	Green		Same as CH 11 in the mode “30Ch Mode” (p. 31)
11	Blue		Same as CH 12 in the mode “30Ch Mode” (p. 31)
12	Effects		Same as CH 80 in the mode “97Ch Mode” (p. 12)
13	Control		Same as CH 97 in the mode “97Ch Mode” (p. 15)

Mode 11Ch Mode

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 5 Strobe Speed 1 at 0–9 or 251–255 “Open”; CH 7 Strobe Speed 2 at 0–9 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 3 Dimmer 1 255, CH 4 Strobe Duration 1 0, CH 6 Strobe Duration 2 0, CH 8 Red 255, CH 9 Green 255, CH 10 Blue 255, CH 11 Dimmer 2 255.

Channel functions at a glance



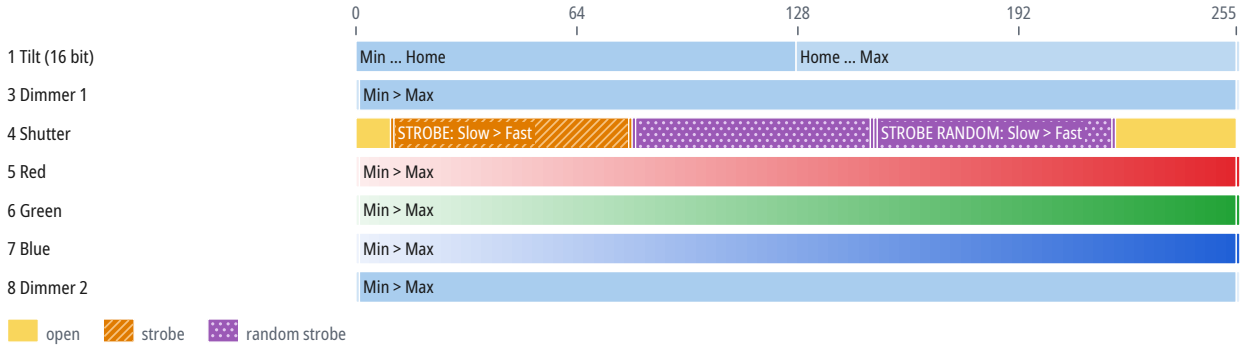
CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “97Ch Mode” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Dimmer 1		Same as CH 3 in the mode “97Ch Mode” (p. 11)
4	Strobe Duration 1		Same as CH 6 in the mode “97Ch Mode” (p. 11)
5	Strobe Speed 1		Same as CH 7 in the mode “97Ch Mode” (p. 11)
6	Strobe Duration 2		Same as CH 8 in the mode “97Ch Mode” (p. 11)
7	Strobe Speed 2		Same as CH 9 in the mode “97Ch Mode” (p. 11)
8	Red		Same as CH 10 in the mode “30Ch Mode” (p. 31)
9	Green		Same as CH 11 in the mode “30Ch Mode” (p. 31)
10	Blue		Same as CH 12 in the mode “30Ch Mode” (p. 31)
11	Dimmer 2		Same as CH 4 in the mode “97Ch Mode” (p. 11)

Mode 8Ch Mode

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

If the device receives DMX in this mode but gives no light, check these channels: CH 4 Shutter at 0–9 or 220–255 “Shutter Open”. The GDTF file gives these values for a console's Highlight function: CH 3 Dimmer 1 255, CH 5 Red 255, CH 6 Green 255, CH 7 Blue 255, CH 8 Dimmer 2 255.

Channel functions at a glance



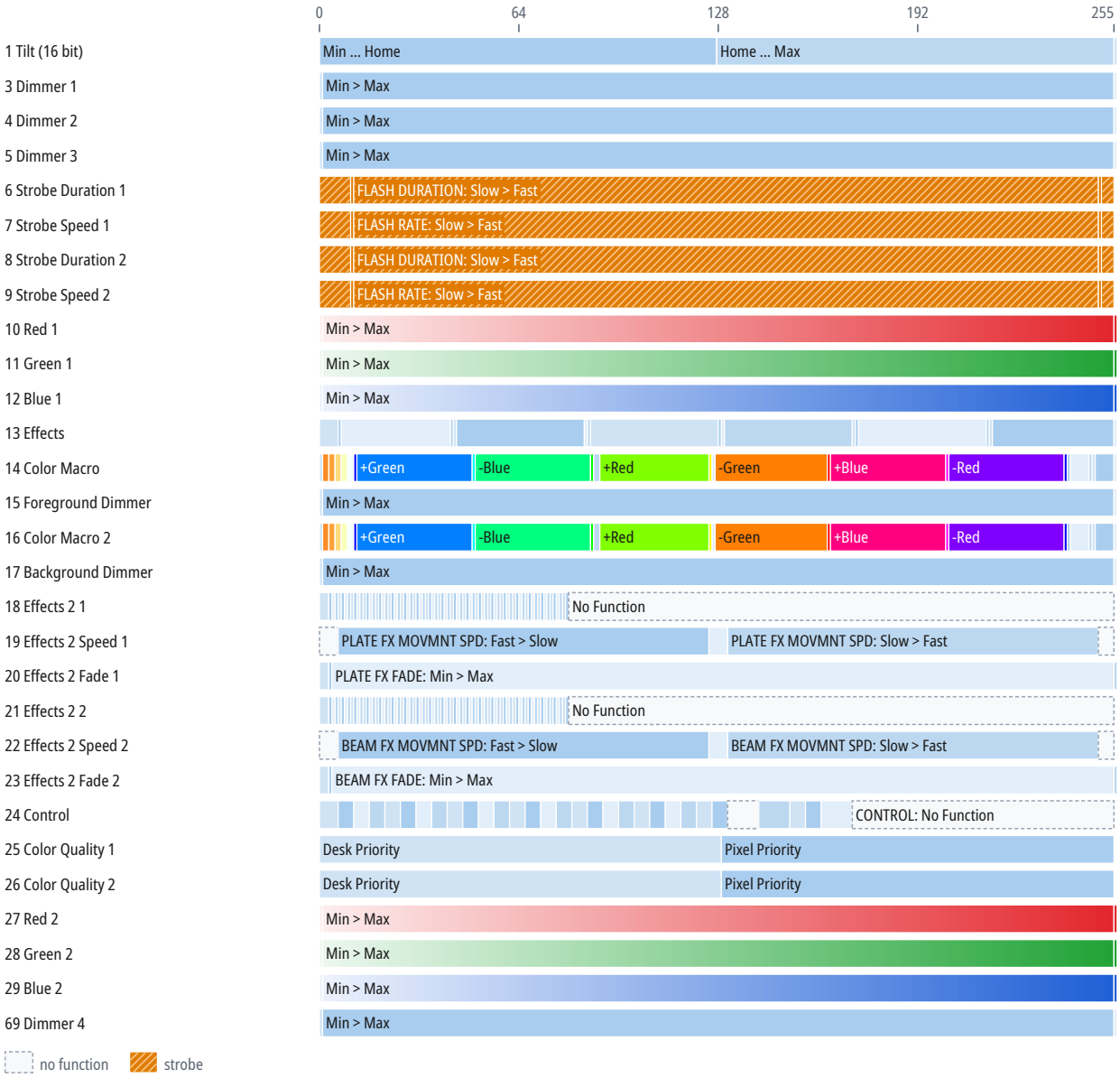
CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “97Ch Mode” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Dimmer 1		Same as CH 3 in the mode “97Ch Mode” (p. 11)
4	Shutter		Same as CH 4 in the mode “74Ch Mode” (p. 16)
5	Red		Same as CH 10 in the mode “30Ch Mode” (p. 31)
6	Green		Same as CH 11 in the mode “30Ch Mode” (p. 31)
7	Blue		Same as CH 12 in the mode “30Ch Mode” (p. 31)
8	Dimmer 2		Same as CH 4 in the mode “97Ch Mode” (p. 11)

Mode 96Ch Mode

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 7 Strobe Speed 1 at 0–9 or 251–255 “Open”; CH 9 Strobe Speed 2 at 0–9 or 251–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 3 Dimmer 1 255, CH 4 Dimmer 2 255, CH 5 Dimmer 3 255, CH 6 Strobe Duration 1 0, CH 8 Strobe Duration 2 0, CH 14 Color Macro 0, CH 16 Color Macro 2 0, CH 27 Red 255 (the same in each of the 14 cells), CH 28 Green 255 (the same in each of the 14 cells), CH 29 Blue 255 (the same in each of the 14 cells), CH 69 Dimmer 255 (the same in each of the 28 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 1 in the mode “97Ch Mode” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Dimmer 1		Same as CH 3 in the mode “97Ch Mode” (p. 11)
4	Dimmer 2		Same as CH 4 in the mode “97Ch Mode” (p. 11)

CH	Function	DMX	Description
5	Dimmer 3		Same as CH 5 in the mode “97Ch Mode” (p. 11)
6	Strobe Duration 1		Same as CH 6 in the mode “97Ch Mode” (p. 11)
7	Strobe Speed 1		Same as CH 7 in the mode “97Ch Mode” (p. 11)
8	Strobe Duration 2		Same as CH 8 in the mode “97Ch Mode” (p. 11)
9	Strobe Speed 2		Same as CH 9 in the mode “97Ch Mode” (p. 11)
10	Red 1		Same as CH 12 in the mode “68Ch Mode” (p. 23)
11	Green 1		Same as CH 13 in the mode “68Ch Mode” (p. 23)
12	Blue 1		Same as CH 14 in the mode “68Ch Mode” (p. 23)
13	Effects		Same as CH 80 in the mode “97Ch Mode” (p. 12)
14	Color Macro		Same as CH 81 in the mode “97Ch Mode” (p. 12)
15	Foreground Dimmer		Same as CH 82 in the mode “97Ch Mode” (p. 13)
16	Color Macro 2		Same as CH 83 in the mode “97Ch Mode” (p. 13)
17	Background Dimmer		Same as CH 84 in the mode “97Ch Mode” (p. 13)
18	Effects 2 1	0–2	PLATE FX SELECT: Open
		3–79	Plate Pattern 1...77 - Effect
		80–255	No Function
19	Effects 2 Speed 1	0–5	PLATE FX MOVMNT SPD: No Function
		6–124	PLATE FX MOVMNT SPD: Fast > Slow (10–0.1 Hz)
		125–130	PLATE FX MOVMNT SPD: Stop
		131–249	PLATE FX MOVMNT SPD: Slow > Fast (0.1–10 Hz)
		250–255	PLATE FX MOVMNT SPD STOP: No Function
20	Effects 2 Fade 1	0–2	Snap From Pixel > Pixel
		3	PLATE FX FADE: Min
		4–254	PLATE FX FADE: Min > Max
		255	PLATE FX FADE: Max
21	Effects 2 2	0–2	BEAM FX SELECT: Open
		3–79	Plate Pattern 1...77 - Effect
		80–255	No Function
22	Effects 2 Speed 2	0–5	BEAM FX MOVMNT SPD: No Function
		6–124	BEAM FX MOVMNT SPD: Fast > Slow (10–0.1 Hz)
		125–130	BEAM FX MOVMNT SPD: Stop
		131–249	BEAM FX MOVMNT SPD: Slow > Fast (0.1–10 Hz)
		250–255	BEAM FX MOVMNT SPD STOP: No Function
23	Effects 2 Fade 2	0–2	Snap From Pixel > Pixel
		3	BEAM FX FADE: Min
		4–254	BEAM FX FADE: Min > Max
		255	BEAM FX FADE: Max
24	Control		Same as CH 97 in the mode “97Ch Mode” (p. 15)
25	Color Quality 1		PLATE PRIORITY
		0–128	Desk Priority
		129–255	Pixel Priority
26	Color Quality 2		BEAM PRIORITY

CH	Function	DMX	Description
26	Color Quality 2 (continued)	0–128	Desk Priority
		129–255	Pixel Priority
27	Red 2		PLATE RED
		0	Min
		1–254	Min > Max
		255	Max
28	Green 2		PLATE GREEN
		0	Min
		1–254	Min > Max
		255	Max
29	Blue 2		PLATE BLUE
		0	Min
		1–254	Min > Max
		255	Max
69	Dimmer 4	0	Min
		1–254	Min > Max
		255	Max

CH 27–68: 14 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 27–29); the table below gives each cell's channel numbers.

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

CH 69–96: 28 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 69); the table below gives each cell's channel numbers.

Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer	Cell	Dimmer
1	69	2	70	3	71	4	72	5	73	6	74
7	75	8	76	9	77	10	78	11	79	12	80
13	81	14	82	15	83	16	84	17	85	18	86
19	87	20	88	21	89	22	90	23	91	24	92
25	93	26	94	27	95	28	96				

10 Technical specifications

Parameter	Value
Light source	LED
Tilt	180°
Weight	11.9 kg
Operating temperature	-20 to 45 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0.1–30 Hz
Strobe flash duration	0–650 s

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.