DMX REFERENCE

Hydro Profile

ADJ



Manufacturer	ADJ
GDTF file	ADJ_Hydro_Profile_34811.gdtf
GDTF revision	2023-14-02 Second Release · 2023-02-14
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1 About this manual

This document describes the Hydro Profile by ADJ. It was compiled from the GDTF file ADJ_Hydro_Profile_34811.gdtf from the GDTF-Share library.

File revision: “2023-14-02 Second Release”.

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 ADJ; 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	84.9 kg
Ingress protection	IP65

DMX modes

Mode	Channels	Units in one universe	First start addresses
Extended Mode 57ch	57	8	1, 58, 115, 172, ...
Standard Mode 50ch	50	10	1, 51, 101, 151, ...
Basic Mode 36ch	36	14	1, 37, 73, 109, ...

No light? Check these channels

- Extended Mode 57ch: CH 20 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254
- Standard Mode 50ch: CH 15 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254
- Basic Mode 36ch: CH 12 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254



Read the manual before use



Do not stare into the light

3 Safety instructions



Read the manual before use



Do not stare into the light

⚠ 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.

⚠ CAUTION

- The device is rated IP65 and may be used outdoors within the limits of this rating.
- This protection is effective only when all connectors are mated or closed with their protective caps and all seals are intact. Use cables and connectors with the same or a higher protection rating.
- Do not open the housing; opening it breaks the seals and the protection rating can no longer be guaranteed.
- Install the device so that water cannot collect around connectors and cable glands, and inspect seals and cables regularly.

⚠ 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.

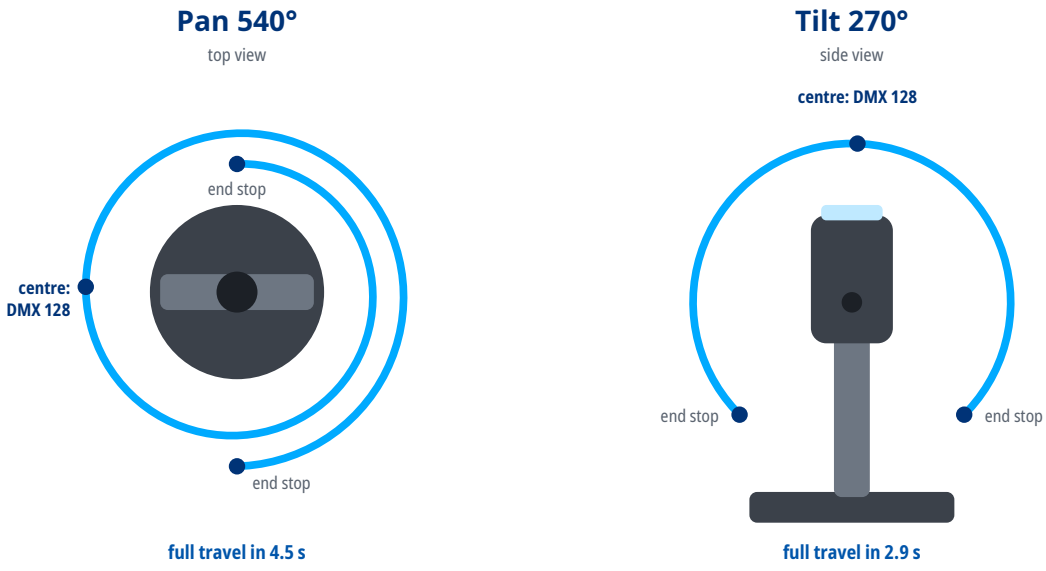
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do 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

Description in the GDTF file

“The Hydro Profile is ADJ’s first weatherproof moving head profile fixture, which combines a potent 660-Watt cool white LED light engine with an impressive 25,000+ Lumens, and an expansive feature set to deliver a truly powerful and versatile luminaire. It is part of ADJ’s Hydro Series of robust IP65-rated moving heads, which are all designed for a demanding life on the road. They can be used outdoors in any weather as well as for indoor productions where they are protected against everything from dust and smoke residue to spilt drinks and humidity.”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

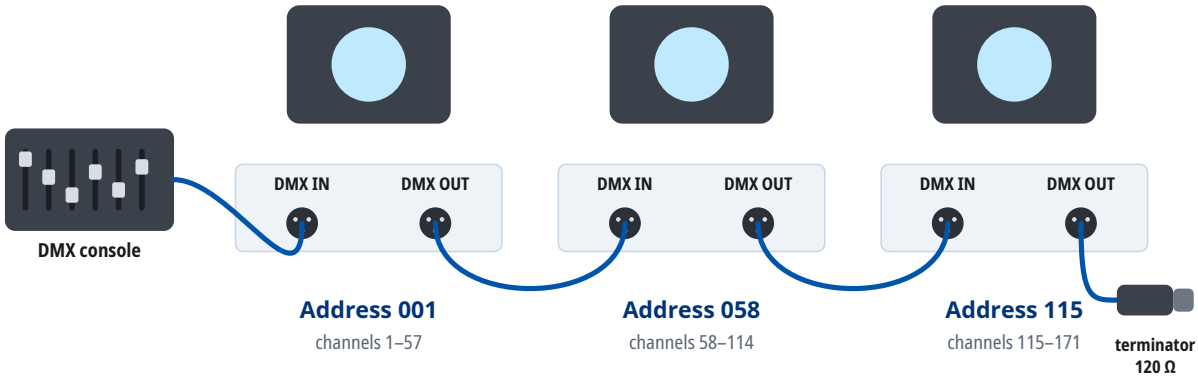
⚠ **WARNING**

- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 84.9 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 Extended Mode 57ch: every unit occupies 57 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 Mode 57ch”: 57.
- 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 Mode 57ch”, you can use, for example, the start addresses 1, 58, 115, 172.
- 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 Mode 57ch 57 channels	Standard Mode 50ch 50 channels	Basic Mode 36ch 36 channels
Pan / Tilt	1, 3	1, 3	1, 2
Pan / Tilt resolution	16 bit	16 bit	8 bit
Dimmer	21	16	13
Dimmer resolution	16 bit	16 bit	8 bit
Shutter / strobe	20	15	12
Color mixing	5, 7, 9	5–7	3–5
Color temperature	11, 13	8, 9	6, 7
Color wheel	14	10	8
Gobo wheel	16, 19	12, 14	9, 11
Gobo rotation	17	13	10
Prism	23, 24	18, 19	14, 15
Frost	30, 31	23, 24	19, 20
Zoom	27	21	17
Focus	25	20	16
Iris	29	22	18
Animation wheel	32	25	21
Effects / macros	4 channels (15–55)	4 channels (11–48)	14, 32, 34

Color wheel

1 Open(Snap)(default): Red
DMX 5–17

2 Blue
DMX 44–56

3 Open(Snap)(default): Green
DMX 70

4 Open(Snap)(default): Amber
DMX 96

5 Open(Snap)(default): Orange
DMX 122

6 Open(Snap)(default): High CRI Filter
DMX 148

7 Open(Snap)(default): CTB
DMX 174

8 Open(Snap)(default): Open
DMX 0

Animation wheel

1 
Animation Wheel

Gobo wheel 1

1
Gobo 1 - 7 Index: Open
DMX 0

2 
Gobo 1
DMX 10

3 
Gobo 2
DMX 20

4 
Gobo 3
DMX 30

5 
Gobo 4
DMX 40

6 
Gobo 5
DMX 50

7 
Gobo 6
DMX 60

8 
Gobo 7
DMX 70

Gobo wheel 2

1
Gobo 1 - 7 Index: Open
DMX 0

2 
Gobo 1
DMX 6–14

3 
Gobo 2
DMX 15–23

4 
Gobo 3
DMX 24–32

5 
Gobo 4
DMX 33–41

6 
Gobo 5
DMX 42–50

7 
Gobo 6
DMX 51–59

8 
Gobo 7
DMX 60–68

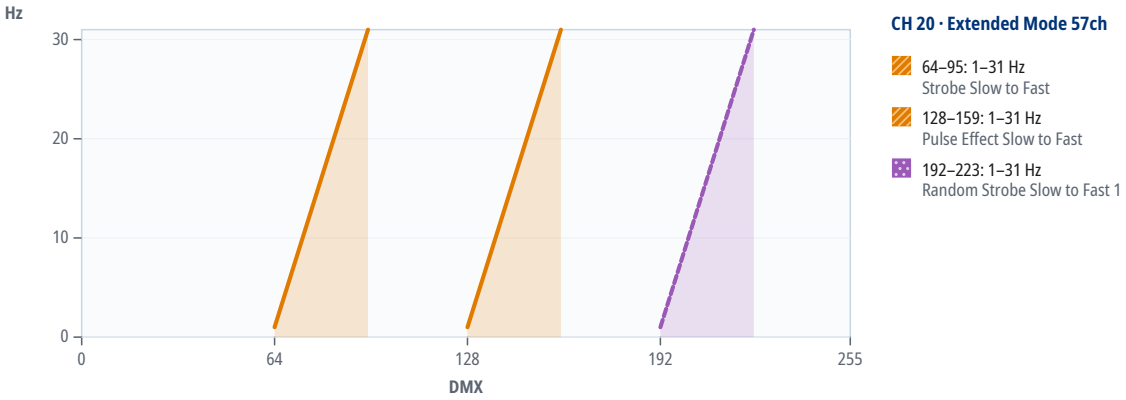
9 
Gobo 8
DMX 69–78

Prism

1 
6 facets
6 Linear Prism
DMX 6–67

2 
4 facets
4 Facet Prism
DMX 67–128

Strobe rate

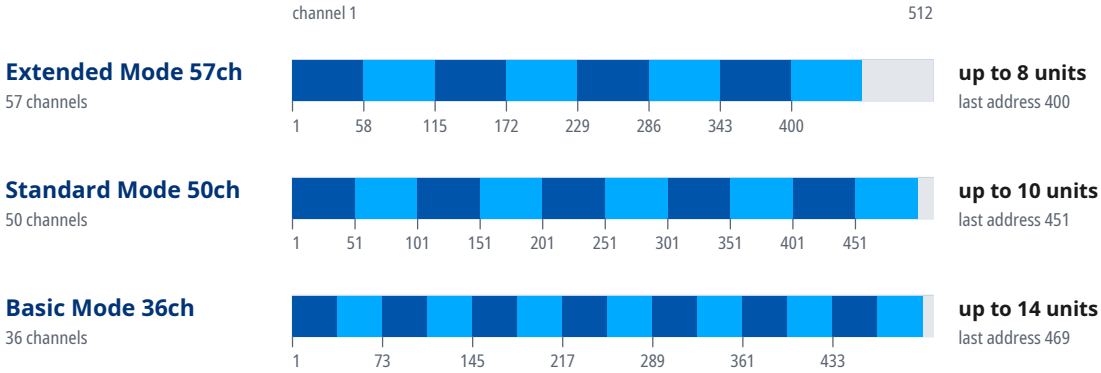


CH 20 · Extended Mode 57ch

- 64–95: 1–31 Hz
  Strobe Slow to Fast
- 128–159: 1–31 Hz
  Pulse Effect Slow to Fast
- 192–223: 1–31 Hz
  Random Strobe Slow to Fast 1

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Extended Mode 57ch”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	286	11	U2 · 115	16	U2 · 400
2	58	7	343	12	U2 · 172	17	U3 · 1
3	115	8	400	13	U2 · 229	18	U3 · 58
4	172	9	U2 · 1	14	U2 · 286	19	U3 · 115
5	229	10	U2 · 58	15	U2 · 343	20	U3 · 172

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

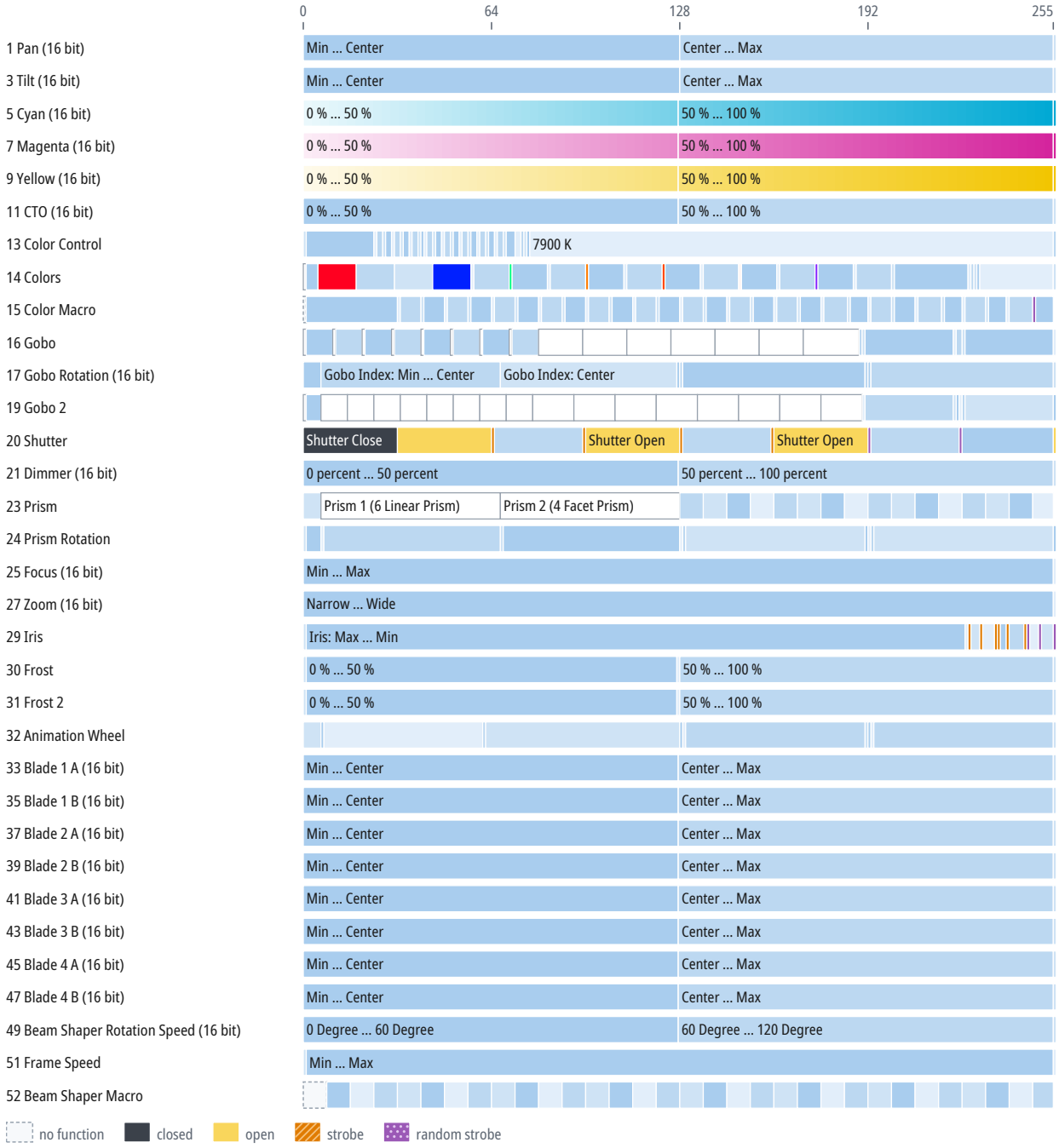
Mode	Channels	RDM personality
Extended Mode 57ch	57	3
Standard Mode 50ch	50	1
Basic Mode 36ch	36	2

Mode Extended Mode 57ch

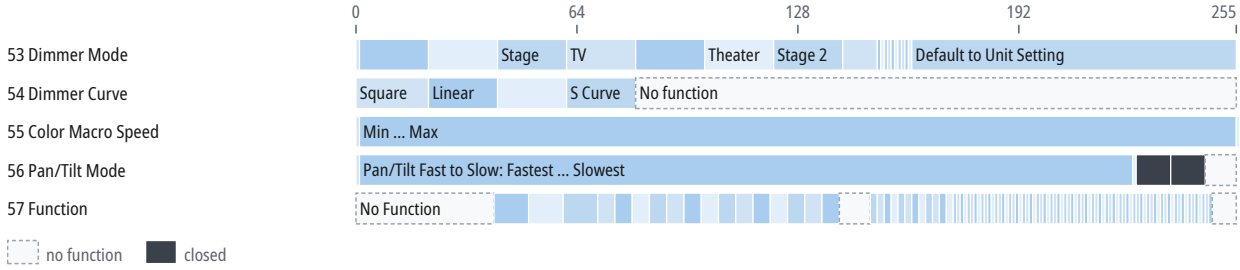
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 20 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254. The GDTF file gives these values for a console's Highlight function: CH 5 Cyan 255, CH 7 Magenta 255, CH 9 Yellow 255, CH 20 Shutter 32, CH 21 Dimmer 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–128	Min ... Center
		128–255	Center ... Max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–128	Min ... Center
		128–255	Center ... Max
		255	Max
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Cyan	0–127	0 % ... 50 %
		127	50 %
		128–255	50 % ... 100 %
		255	100 %
6	Cyan Fine	0–255	Fine adjustment of CH 5
7	Magenta	0–127	0 % ... 50 %
		127	50 %
		128–255	50 % ... 100 %
		255	100 %
8	Magenta Fine	0–255	Fine adjustment of CH 7
9	Yellow	0–127	0 % ... 50 %
		127	50 %
		128–255	50 % ... 100 %
		255	100 %
10	Yellow Fine	0–255	Fine adjustment of CH 9
11	CTO	0–127	0 % ... 50 %
		127	50 %
		128–255	50 % ... 100 %
		255	100 %
12	CTO Fine	0–255	Fine adjustment of CH 11
13	Color Control	0–23	Open
		24	2700K
		25–26	2700K ... 3000K
		27	3000K
		28–29	3000K ... 3300K

CH	Function	DMX	Description
13	Color Control (continued)	30	3300K
		31–32	3300K ... 3600K
		33	3600K
		34–35	3600K ... 3900K
		36	3900K
		37–38	3900K ... 4200K
		39	4200K
		40	4200K ... 4500K
		41	4500K
		42–43	4500K ... 4800K
		44	4800K
		45–46	4800K ... 5100K
		47	5100K
		48–49	5100K ... 5300K
		50	5300K
		51–52	5300K ... 5600K
		53	5600K
		54–55	5600K ... 5900K
		56	5900K
		57–58	5900K ... 6100K
		59	6100K
		60–61	6100K ... 6300K
		62	6300K
		63–64	6300K ... 6600K
		65	6600K
		66–67	6600K ... 6900K
		68	6900K
		69–71	7200K
		72–73	7500K
		74	7500K ... 7800K
		75	7800K
		76	2700 K-7800 K
		77–255	7900 K
14	Colors	0	Open(Snap)(default): Open
		1–4	Open ... Red
		5–17	Open(Snap)(default): Red
		18–29	Red ... Red/Medium Blue
		30	Open (Index)(Requires function activation): Red
		31–43	Red/Medium Blue
		44–55	Open(Snap)(default): Medium Blue
		56	Open (Index)(Requires function activation): Medium Blue
		57	Medium Blue / Green

CH	Function	DMX	Description
14	Colors (continued)	58–69	Medium Blue / Green ... Green
		70	Open(Snap)(default): Green
		71–78	Green ... Green / Amber
		79	Open (Index)(Requires function activation): Green
		80	Green > Amber
		81–82	Green > Amber ... Amber
		83	Green / Amber
		84–95	Green / Amber ... Amber
		96	Open(Snap)(default): Amber
		97–105	Amber ... Amber / Orange
		106	Open (Index)(Requires function activation): Amber
		107–108	Amber> Orange
		109	Amber / Orange
		110–121	Amber / Orange ... Orange
		122	Open(Snap)(default): Orange
		123–127	Orange ... Orange / High CRI Filter
		128	Open (Index)(Requires function activation): Orange
		129–134	Oranger > High CRI Filter
		135	Orange / High CRI Filter
		136–147	Orange / High CRI Filter ... High CRI Filter
		148	Open(Snap)(default): High CRI Filter
		149–152	High CRI Filter ... High CRI Filter / CTB
		153	Open (Index)(Requires function activation): High CRI Filter
		154–160	High CRI Filter > CTB
		161	High CRI Filter / CTB
		162–173	High CRI Filter / CTB ... CTB
		174	Open(Snap)(default): CTB
		175–186	CTB ... CTB / Open
		187	CTB / Open
		188–198	Open(Snap)(default)
		199	Open
		200	Clock Wise Color Wheel Rotation: Fastest
		201–225	Clock Wise Color Wheel Rotation: Fastest ... Slowest
		226	Clock Wise Color Wheel Rotation: Slowest
		227–228	No Rotation
		229	Counter Clockwise Rotation: Slowest
		230–254	Counter Clockwise Rotation: Slowest ... Fastest
		255	Counter Clockwise Rotation: Fastest
15	Color Macro	0–31	OFF
		32	Color Macro 1
		33–39	Color Macro 1 ... Color Macro 2
		40	Color Macro 2

CH	Function	DMX	Description
15	Color Macro (continued)	41–47	Color Macro 2 ... Color Macro 3
		48	Color Macro 3
		49–55	Color Macro 3 ... Color Macro 4
		56	Color Macro 4
		57–63	Color Macro 4 ... Color Macro 5
		64	Color Macro 5
		65–71	Color Macro 5 ... Color Macro 6
		72	Color Macro 6
		73–79	Color Macro 6 ... Color Macro 7
		80	Color Macro 7
		81–87	Color Macro 7 ... Color Macro 8
		88	Color Macro 8
		89–95	Color Macro 8 ... Color Macro 9
		96	Color Macro 9
		97–103	Color Macro 9 ... Color Macro 10
		104	Color Macro 10
		105–111	Color Macro 10 ... Color Macro 11
		112	Color Macro 11
		113–119	Color Macro 11 ... Color Macro 12
		120	Color Macro 12
		121–127	Color Macro 12 ... Color Macro 13
		128	Color Macro 13
		129–135	Color Macro 13 ... Color Macro 14
		136	Color Macro 14
		137–143	Color Macro 14 ... Color Macro 15
		144	Color Macro 15
		145–151	Color Macro 15 ... Color Macro 16
		152	Color Macro 16
		153–159	Color Macro 16 ... Color Macro 17
		160	Color Macro 17
		161–167	Color Macro 17 ... Color Macro 18
		168	Color Macro 18
		169–175	Color Macro 18 ... Color Macro 19
		176	Color Macro 19
		177–184	Color Macro 19 ... Color Macro 20
		185	Color Macro 20
		186–191	Color Macro 20 ... Color Macro 21
		192	Color Macro 21
		193–199	Color Macro 21 ... Color Macro 22
		200	Color Macro 22
		201–207	Color Macro 22 ... Color Macro 23
		208	Color Macro 23

CH	Function	DMX	Description
15	Color Macro (continued)	209–216	Color Macro 23 ... Color Macro 24
		217	Color Macro 24
		218–223	Color Macro 24 ... Color Macro 25
		224	Color Macro 25
		225–231	Color Macro 25 ... Color Macro 26
		232	Color Macro 26
		233–238	Color Macro 26 ... Color Macro 27
		239	Color Macro 27
		240–247	Color Macro 1-27
		248–255	Random CMY
16	Gobo	0	Gobo 1 - 7 Index: Open
		1–9	Open ... Gobo 1
		10	Gobo 1
		11–19	Gobo 1 ... Gobo 2
		20	Gobo 2
		21–29	Gobo 2 ... Gobo 3
		30	Gobo 3
		31–39	Gobo 3 ... Gobo 4
		40	Gobo 4
		41–49	Gobo 4 ... Gobo 5
		50	Gobo 5
		51–59	Gobo 5 ... Gobo 6
		60	Gobo 6
		61–69	Gobo 6 ... Gobo 7
		70	Gobo 7
		71–79	Gobo 1 - 7 Index
		80–94	Gobo Shake 1
		95–109	Gobo Shake 2
		110–124	Gobo Shake 3
		125–139	Gobo Shake 4
		140–154	Gobo Shake 5
		155–169	Gobo Shake 6
		170–188	Gobo Shake 7
		189	Clockwise Gobo Wheel Rotation fast to slow
		190	Clockwise Gobo Wheel Rotation fast to slow: Fastest
		191–220	Clockwise Gobo Wheel Rotation fast to slow: Fastest ... Slowest
		221	Clockwise Gobo Wheel Rotation fast to slow: Slowest
		222–223	No Rotation
		224	Counter-Clockwise Gobo Wheel Rotation Slow to Fast: Slowest
		225–254	Counter-Clockwise Gobo Wheel Rotation Slow to Fast: Slowest ... Fastest
		255	Counter-Clockwise Gobo Wheel Rotation Slow to Fast: Fastest

CH	Function	DMX	Description
17	Gobo Rotation	0–6	Gobo 1 Rotation OFF
		6–67	Gobo Index: Min ... Center
		67–127	Gobo Index: Center
		127–128	Gobo Index: Center ... Max
		128	Gobo Index: Max
		128–129	Gobo Index
		129–191	Clockwise Gobo Rotation fast to slow: Fastest ... Slowest
		191	Clockwise Gobo Rotation fast to slow: Slowest
		191–192	Clockwise Gobo Rotation fast to slow
		192–193	No Rotation
		193–255	Counter-Clockwise Gobo Rotation slow to fast: Slowest ... Fastest
		255	Counter-Clockwise Gobo Rotation slow to fast: Fastest
18	Gobo Rotation Fine	0–255	Fine adjustment of CH 17
19	Gobo 2	0	Gobo 1 - 7 Index: Open
		1–5	Open ... Gobo 1
		6–14	Gobo 1
		15–23	Gobo 2
		24–32	Gobo 3
		33–41	Gobo 4
		42–50	Gobo 5
		51–59	Gobo 6
		60–68	Gobo 7
		69–77	Gobo 8
		78–91	Gobo Shake 1
		92–105	Gobo Shake 2
		106–119	Gobo Shake 3
		120–133	Gobo Shake 4
		134–147	Gobo Shake 5
		148–161	Gobo Shake 6
		162–175	Gobo Shake 7
		176–189	Gobo Shake 8
		190	Clockwise Gobo Wheel Rotation fast to slow: Fastest
		191–220	Clockwise Gobo Wheel Rotation fast to slow: Fastest ... Slowest
		221	Clockwise Gobo Wheel Rotation fast to slow: Slowest
		222	No rotation
		223	No Rotation
		224	Counter-Clockwise Gobo Wheel Rotation: Slowest
		225–254	Counter-Clockwise Gobo Wheel Rotation: Slowest ... Fastest
		255	Counter-Clockwise Gobo Wheel Rotation: Fastest
20	Shutter	0–31	Shutter Close
		32–63	Shutter Open/Close: Shutter Open

CH	Function	DMX	Description
20	Shutter (continued)	64	Strobe Slow to Fast: Slowest Strobe
		65–94	Strobe Slow to Fast: Slowest Strobe ... Fastest Strobe
		95	Strobe Slow to Fast: Fastest Strobe
		96–127	Shutter Open
		128	Slowest Pulse
		129–158	Slowest Pulse ... Fastest Pulse
		159	Fastest Pulse
		160–191	Shutter Open
		192	Random Strobe Slow to Fast: Slowest Strobe
		193–222	Random Strobe Slow to Fast: Slowest Strobe ... Fastest Strobe
		223	Random Strobe Slow to Fast: Fastest Strobe
		224–254	Shutter Open 2
		255	Shutter Open
21	Dimmer	0–127	0 percent ... 50 percent
		127	50 percent
		128–255	50 percent ... 100 percent
		255	100 percent
22	Dimmer Fine	0–255	Fine adjustment of CH 21
23	Prism	0–5	No Prism(Open)
		6–66	Prism 1 (6 Linear Prism)
		67–127	Prism 2 (4 Facet Prism)
		128–135	Macro 1
		136–143	Macro 2
		144–151	Macro 3
		152–159	Macro 4
		160–167	Macro 5
		168–175	Macro 6
		176–183	Macro 7
		184–191	Macro 8
		192–199	Macro 9
		200–207	Macro 10
		208–215	Macro 11
		216–223	Macro 12
		224–231	Macro 13
		232–239	Macro 14
		240–247	Macro 15
		248–255	Macro 16
24	Prism Rotation	0–5	Prism Rotation OFF
		6	Prism Indexing: Min
		7–66	Prism Indexing: Min ... Center
		67	Prism Indexing: Center
		68–127	Prism Indexing: Center ... Max

CH	Function	DMX	Description
24	Prism Rotation (continued)	128	Prism Indexing: Max
		129	Clockwise Prism Rotation fast to slow: Fastest
		130–190	Clockwise Prism Rotation fast to slow: Fastest ... Slowest
		191	Clockwise Prism Rotation fast to slow: Slowest
		192	No Rotation
		193	Prism 1 Pos Rotate: Slowest
		194–254	Prism 1 Pos Rotate: Slowest ... Fastest
		255	Prism 1 Pos Rotate: Fastest
25	Focus	0–255	Min ... Max
		255	Max
26	Focus Fine	0–255	Fine adjustment of CH 25
27	Zoom	0–255	Narrow ... Wide
		255	Wide
28	Zoom Fine	0–255	Fine adjustment of CH 27
29	Iris	0	Iris: Max
		1–224	Iris: Max ... Min
		225	Iris: Min
		226	Pulse Up Slow
		227–229	Pulse Up Slow ... Pulse Up Med
		230	Pulse Up Med
		231–234	Pulse Up Med ... Pulse Up Fast
		235	Pulse Up Fast
		236	Pulse Down Slow
		237–238	Pulse Down Slow ... Pulse Down Med
		239	Pulse Down Med
		240–244	Pulse Down Med ... Pulse Down Fast
		245	Pulse Down Fast
		246	Slow Random
		247–249	Slow Random ... Med Random
		250	Med Random
		251–254	Med Random ... Fast Random
		255	Fast Random
30	Frost	0	0 %
		1–126	0 % ... 50 %
		127	50 %
		128–254	50 % ... 100 %
		255	100 %
31	Frost 2	0	0 %
		1–126	0 % ... 50 %
		127	50 %
		128–254	50 % ... 100 %
		255	100 %

CH	Function	DMX	Description
32	Animation Wheel	0–5	Animation Rotation OFF
		6	Animation Wheel Indexing: Min
		7–60	Animation Wheel Indexing: Min ... Center
		61	Animation Wheel Indexing: Center
		62–127	Animation Wheel Indexing: Center ... Max
		128	Animation Wheel Indexing: Max
		129	Clockwise Animation Rotation Fast-Slow: Fast
		130–190	Clockwise Animation Rotation Fast-Slow: Fast ... Slow
		191	Clockwise Animation Rotation Fast-Slow: Slow
		192	No Rotation
		193	Counter Clockwise Animation Rotation Slow-Fast: Slow
		194–254	Counter Clockwise Animation Rotation Slow-Fast: Slow ... Fast
		255	Counter Clockwise Animation Rotation Slow-Fast: Fast
33	Blade 1 A	0–127	Min ... Center
		127	Center
		128–255	Center ... Max
		255	Max
34	Blade 1 A Fine	0–255	Fine adjustment of CH 33
35	Blade 1 B	0–127	Min ... Center
		127	Center
		128–255	Center ... Max
		255	Max
36	Blade 1 B Fine	0–255	Fine adjustment of CH 35
37	Blade 2 A	0–127	Min ... Center
		127	Center
		128–255	Center ... Max
		255	Max
38	Blade 2 A Fine	0–255	Fine adjustment of CH 37
39	Blade 2 B	0–127	Min ... Center
		127	Center
		128–255	Center ... Max
		255	Max
40	Blade 2 B Fine	0–255	Fine adjustment of CH 39
41	Blade 3 A	0–127	Min ... Center
		127	Center
		128–255	Center ... Max
		255	Max
42	Blade 3 A Fine	0–255	Fine adjustment of CH 41
43	Blade 3 B	0–127	Min ... Center
		127	Center
		128–255	Center ... Max
		255	Max

CH	Function	DMX	Description
44	Blade 3 B Fine	0–255	Fine adjustment of CH 43
45	Blade 4 A	0–127	Min ... Center
		127	Center
		128–255	Center ... Max
		255	Max
46	Blade 4 A Fine	0–255	Fine adjustment of CH 45
47	Blade 4 B	0–127	Min ... Center
		127	Center
		128–255	Center ... Max
		255	Max
48	Blade 4 B Fine	0–255	Fine adjustment of CH 47
49	Beam Shaper Rotation Speed		Frame Rotation
		0–127	0 Degree ... 60 Degree
		127	60 Degree
		128–255	60 Degree ... 120 Degree
		255	120 Degree
50	Beam Shaper Rotation Speed Fine	0–255	Fine adjustment of CH 49
51	Frame Speed	0	Min
		1–254	Min ... Max
		255	Max
52	Beam Shaper Macro		Frame Macros
		0–7	OFF
		8–15	Macro 1
		16–23	Macro 2
		24–31	Macro 3
		32–39	Macro 4
		40–47	Macro 5
		48–55	Macro 6
		56–63	Macro 7
		64–71	Macro 8
		72–79	Macro 9
		80–87	Macro 10
		88–95	Macro 11
		96–103	Macro 12
		104–111	Macro 13
		112–119	Macro 14
		120–127	Macro 15
		128–135	Macro 16
		136–143	Macro 17
		144–151	Macro 18
		152–159	Macro 19
		160–167	Macro 20

CH	Function	DMX	Description
52	Beam Shaper Macro (continued)	168–175	Macro 21
		176–183	Macro 22
		184–191	Macro 23
		192–199	Macro 24
		200–207	Macro 25
		208–215	Macro 26
		216–223	Macro 27
		224–231	Macro 28
		232–239	Macro 29
		240–247	Macro 30
		248–255	Macro 31
53	Dimmer Mode	0	Default to Unit Setting
		1–20	Default to Unit Setting ... Standard
		21–40	Standard
		41–60	Stage
		61–80	TV
		81–100	Architectural
		101–120	Theater
		121–140	Stage 2
		141–150	Stage 2 ... 1 second
		151	1 second
		152–160	2...10 seconds
		161–255	Default to Unit Setting
54	Dimmer Curve		Dimmer Curves
		0–20	Square
		21–40	Linear
		41–60	Inverted Square
		61–80	S Curve
		81–255	No function
55	Color Macro Speed		CMY / Color Macro Speed
		0	Min
		1–254	Min ... Max
		255	Max
56	Pan/Tilt Mode	0	Pan/Tilt Fast to Slow: Fastest
		1–224	Pan/Tilt Fast to Slow: Fastest ... Slowest
		225	Pan/Tilt Fast to Slow: Slowest
		226–235	Blackout by movement
		236–245	Blackout by all wheel changing
		246–255	No Function
57	Function	0–39	No Function
		40–49	Fan Control - Low (Hold 3s)
		50–59	Fan Control - High (Hold 3s)

CH	Function	DMX	Description
57	Function (continued)	60–69	Fan Control - Auto (Default) (Hold 3s)
		70–74	All motor Reset (Hold 3s)
		75–79	Pan / Tilt Reset (Hold 3s)
		80–84	Color Reset (Hold 3s)
		85–89	Gobo Reset (Hold 3s)
		90–94	Focus and Zoom Reset (Hold 3s)
		95–99	Shutter Reset (Hold 3s)
		100–104	Framing Reset (Hold 3s)
		105–109	Other motors Reset (Hold 3s)
		110–114	Enable Zoom Speed Fast (Hold 3s)
		115–119	Disable Zoom Speed Fast (Hold 5s)
		120–124	Pump ON
		125–129	Pump OFF
		130–134	Enable Color Wheel Index to any position (Hold 3s)
		135–139	Disable Color Wheel Index to any position (Hold 5s)
		140–148	No Function
		149–150	Wifly ON (Default) (Hold 3s)
		151–152	Wifly OFF (Hold 5s)
		153–154	Hibernation Enable (Hold 3s)
		155–156	Hibernation OFF (Hold 5s)
		157–158	Display Backlight ON (Hold 3s)
		159–160	Display Backlight OFF (Hold 5s)
		161–162	Pan/Tilt Speed 1 (Default) (Hold 5s)
		163–164	Pan/Tilt Speed 2 (Hold 5s)
		165–166	Invert Pan ON (Hold 3s)
		167–168	Invert Pan OFF (Hold 5s)
		169–170	Invert Tilt ON (Hold 3s)
		171–172	Invert Tilt OFF (Hold 5s)
		173	900 Hz
		174	910 Hz
		175	920 Hz
		176	930 Hz
		177	940 Hz
		178	950 Hz
		179	960 Hz
		180	970 Hz
		181	980 Hz
		182	990 Hz
		183	1000 Hz
		184	1010 Hz
		185	1020 Hz
		186	1030 Hz

CH	Function	DMX	Description
57	Function (continued)	187	1040 Hz
		188	1050 Hz
		189	1060 Hz
		190	1070 Hz
		191	1080 Hz
		192	1090 Hz
		193	1100 Hz
		194	1110 Hz
		195	1120 Hz
		196	1130 Hz
		197	1140 Hz
		198	1150 Hz
		199	1160 Hz
		200	1170 Hz
		201	1180 Hz
		202	1190 Hz
		203	1210 Hz
		204	1220 Hz
		205	1230 Hz
		206	1240 Hz
		207	1250 Hz
		208	1260 Hz
		209	1270 Hz
		210	1280 Hz
		211	1290 Hz
		212	1300 Hz
		213	1310 Hz
		214	1320 Hz
		215	1330 Hz
		216	1340 Hz
		217	1350 Hz
		218	1360 Hz
		219	1370 Hz
		220	1380 Hz
		221	1390 Hz
		222	1400 Hz
		223	1410 Hz
		224	1420 Hz
		225	1430 Hz
		226	1440 Hz
		227	1450 Hz
		228	1460 Hz

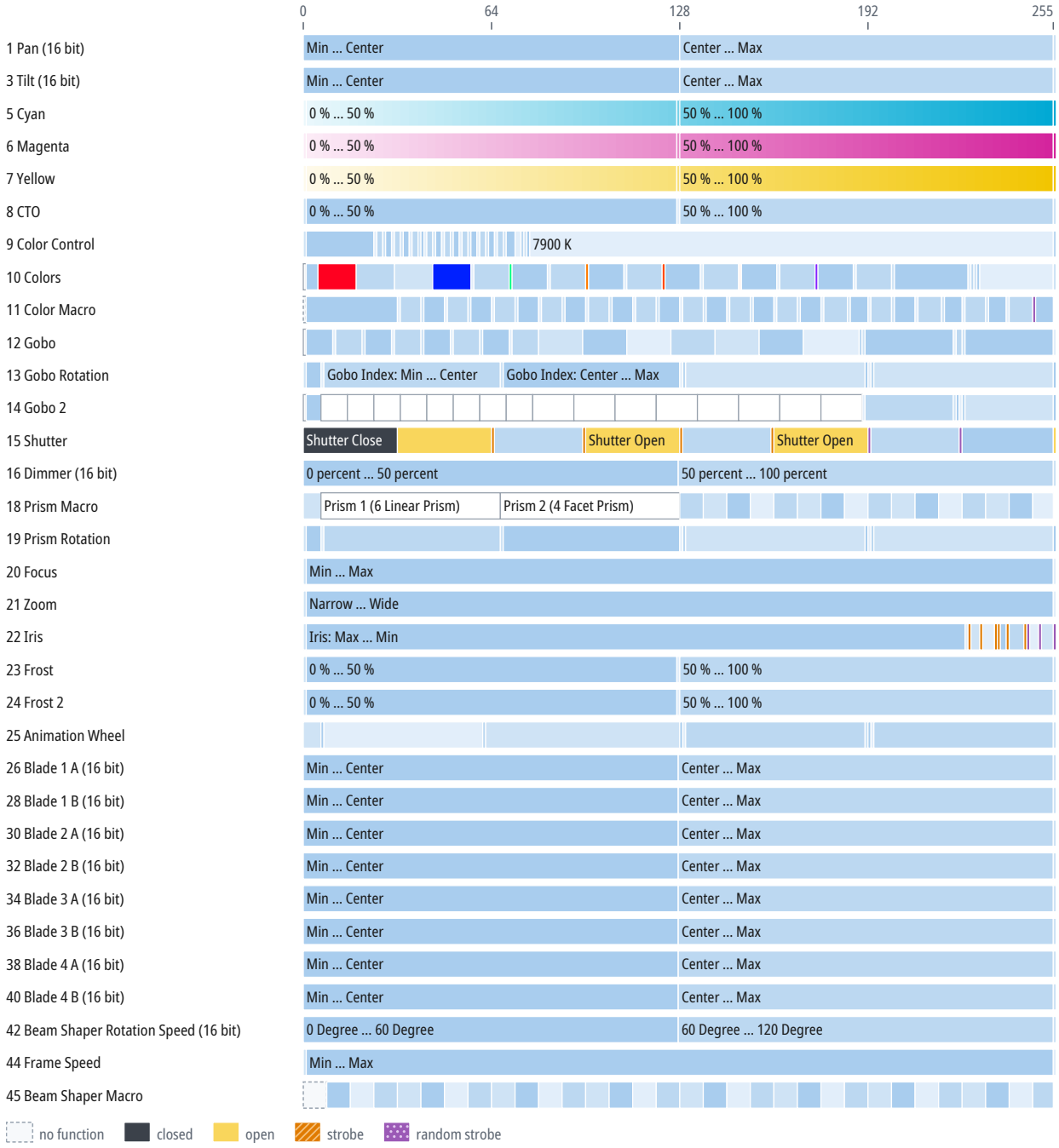
CH	Function	DMX	Description
57	Function (continued)	229	1470 Hz
		230	1480 Hz
		231	1490 Hz
		232	1500 Hz
		233	2500 Hz
		234	4000 Hz
		235	5000 Hz
		236	6000 Hz
		237	10000 Hz
		238	15000 Hz
		239	20000 Hz
		240	25000 Hz
		241–247	Internal program 1...7
		248–255	Internal Programs: No Function

Mode Standard Mode 50ch

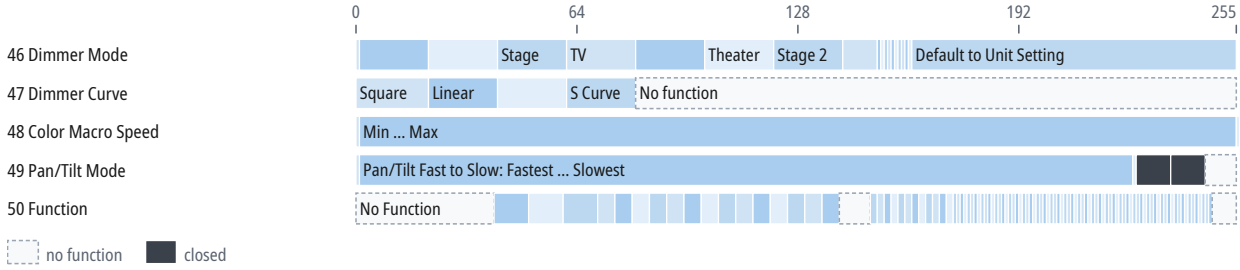
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 15 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254. The GDTF file gives these values for a console's Highlight function: CH 5 Cyan 255, CH 6 Magenta 255, CH 7 Yellow 255, CH 15 Shutter 32, CH 16 Dimmer 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Extended Mode 57ch” (p. 12)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended Mode 57ch” (p. 12)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Cyan	0	0 %
		1–126	0 % ... 50 %
		127	50 %
		128–254	50 % ... 100 %
		255	100 %
6	Magenta	0	0 %
		1–126	0 % ... 50 %
		127	50 %
		128–254	50 % ... 100 %
		255	100 %
7	Yellow	0	0 %
		1–126	0 % ... 50 %
		127	50 %
		128–254	50 % ... 100 %
		255	100 %
8	CTO	0	0 %
		1–126	0 % ... 50 %
		127	50 %
		128–254	50 % ... 100 %
		255	100 %
9	Color Control		Same as CH 13 in the mode “Extended Mode 57ch” (p. 12)
10	Colors		Same as CH 14 in the mode “Extended Mode 57ch” (p. 13)
11	Color Macro		Same as CH 15 in the mode “Extended Mode 57ch” (p. 14)
12	Gobo		Same as CH 16 in the mode “Extended Mode 57ch” (p. 16)
13	Gobo Rotation	0–5	Gobo 1 Rotation OFF
		6	Gobo Index: Min
		7–66	Gobo Index: Min ... Center
		67	Gobo Index: Center
		68–127	Gobo Index: Center ... Max

CH	Function	DMX	Description
13	Gobo Rotation (continued)	128	Gobo Index: Max
		129	Clockwise Gobo Rotation fast to slow: Fastest
		130–190	Clockwise Gobo Rotation fast to slow: Fastest ... Slowest
		191	Clockwise Gobo Rotation fast to slow: Slowest
		192	No Rotation
		193	Counter-Clockwise Gobo Rotation slow to fast: Slowest
		194–254	Counter-Clockwise Gobo Rotation slow to fast: Slowest ... Fastest
		255	Counter-Clockwise Gobo Rotation slow to fast: Fastest
14	Gobo 2		Same as CH 19 in the mode “Extended Mode 57ch” (p. 17)
15	Shutter		Same as CH 20 in the mode “Extended Mode 57ch” (p. 17)
16	Dimmer		Same as CH 21 in the mode “Extended Mode 57ch” (p. 18)
17	Dimmer Fine	0–255	Fine adjustment of CH 16
18	Prism Macro	0–5	No Prism(Open)
		6–66	Prism 1 (6 Linear Prism)
		67–127	Prism 2 (4 Facet Prism)
		128–135	Macro 1
		136–143	Macro 2
		144–151	Macro 3
		152–159	Macro 4
		160–167	Macro 5
		168–175	Macro 6
		176–183	Macro 7
		184–191	Macro 8
		192–199	Macro 9
		200–207	Macro 10
		208–215	Macro 11
		216–223	Macro 12
		224–231	Macro 13
		232–239	Macro 14
		240–247	Macro 15
		248–255	Macro 16
19	Prism Rotation		Same as CH 24 in the mode “Extended Mode 57ch” (p. 18)
20	Focus	0	Min
		1–254	Min ... Max
		255	Max
21	Zoom	0	Narrow
		1–254	Narrow ... Wide
		255	Wide
22	Iris		Same as CH 29 in the mode “Extended Mode 57ch” (p. 19)
23	Frost		Same as CH 30 in the mode “Extended Mode 57ch” (p. 19)
24	Frost 2		Same as CH 31 in the mode “Extended Mode 57ch” (p. 19)

CH	Function	DMX	Description
25	Animation Wheel		Same as CH 32 in the mode “Extended Mode 57ch” (p. 20)
26	Blade 1 A		Same as CH 33 in the mode “Extended Mode 57ch” (p. 20)
27	Blade 1 A Fine	0–255	Fine adjustment of CH 26
28	Blade 1 B		Same as CH 35 in the mode “Extended Mode 57ch” (p. 20)
29	Blade 1 B Fine	0–255	Fine adjustment of CH 28
30	Blade 2 A		Same as CH 37 in the mode “Extended Mode 57ch” (p. 20)
31	Blade 2 A Fine	0–255	Fine adjustment of CH 30
32	Blade 2 B		Same as CH 39 in the mode “Extended Mode 57ch” (p. 20)
33	Blade 2 B Fine	0–255	Fine adjustment of CH 32
34	Blade 3 A		Same as CH 41 in the mode “Extended Mode 57ch” (p. 20)
35	Blade 3 A Fine	0–255	Fine adjustment of CH 34
36	Blade 3 B		Same as CH 43 in the mode “Extended Mode 57ch” (p. 20)
37	Blade 3 B Fine	0–255	Fine adjustment of CH 36
38	Blade 4 A		Same as CH 45 in the mode “Extended Mode 57ch” (p. 21)
39	Blade 4 A Fine	0–255	Fine adjustment of CH 38
40	Blade 4 B		Same as CH 47 in the mode “Extended Mode 57ch” (p. 21)
41	Blade 4 B Fine	0–255	Fine adjustment of CH 40
42	Beam Shaper Rotation Speed		Same as CH 49 in the mode “Extended Mode 57ch” (p. 21)
43	Beam Shaper Rotation Speed Fine	0–255	Fine adjustment of CH 42
44	Frame Speed		Same as CH 51 in the mode “Extended Mode 57ch” (p. 21)
45	Beam Shaper Macro		Same as CH 52 in the mode “Extended Mode 57ch” (p. 21)
46	Dimmer Mode		Same as CH 53 in the mode “Extended Mode 57ch” (p. 22)
47	Dimmer Curve		Same as CH 54 in the mode “Extended Mode 57ch” (p. 22)
48	Color Macro Speed		Same as CH 55 in the mode “Extended Mode 57ch” (p. 22)
49	Pan/Tilt Mode		Same as CH 56 in the mode “Extended Mode 57ch” (p. 22)
50	Function		Same as CH 57 in the mode “Extended Mode 57ch” (p. 22)

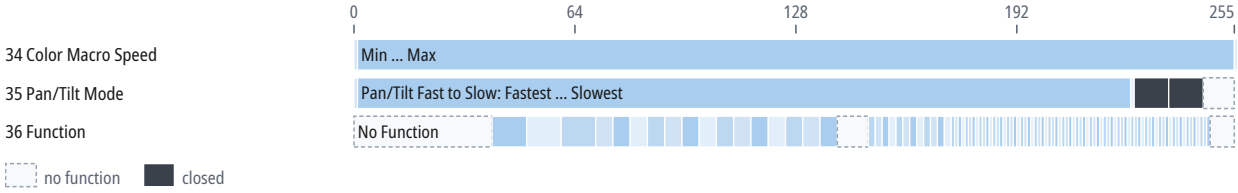
Mode Basic Mode 36ch

If the device receives DMX in this mode but gives no light, check these channels: CH 12 Shutter at 32–63, 96–127, 160–191, 255 “Shutter Open” or 224–254. The GDTF file gives these values for a console's Highlight function: CH 3 Cyan 255, CH 4 Magenta 255, CH 5 Yellow 255, CH 12 Shutter 32, CH 13 Dimmer 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0	Min
		1–127	Min ... Center
		128	Center
		129–254	Center ... Max
		255	Max
2	Tilt	0	Min
		1–127	Min ... Center
		128	Center
		129–254	Center ... Max
		255	Max
3	Cyan		Same as CH 5 in the mode “Standard Mode 50ch” (p. 27)
4	Magenta		Same as CH 6 in the mode “Standard Mode 50ch” (p. 27)
5	Yellow		Same as CH 7 in the mode “Standard Mode 50ch” (p. 27)
6	CTO		Same as CH 8 in the mode “Standard Mode 50ch” (p. 27)
7	Color Control		Same as CH 13 in the mode “Extended Mode 57ch” (p. 12)
8	Colors		Same as CH 14 in the mode “Extended Mode 57ch” (p. 13)
9	Gobo		Same as CH 16 in the mode “Extended Mode 57ch” (p. 16)
10	Gobo Rotation		Same as CH 13 in the mode “Standard Mode 50ch” (p. 27)
11	Gobo 2		Same as CH 19 in the mode “Extended Mode 57ch” (p. 17)
12	Shutter		Same as CH 20 in the mode “Extended Mode 57ch” (p. 17)
13	Dimmer	0	0 percent
		1–126	0 percent ... 50 percent
		127	50 percent
		128–254	50 percent ... 100 percent
		255	100 percent
14	Prism		Same as CH 23 in the mode “Extended Mode 57ch” (p. 18)
15	Prism Rotation		Same as CH 24 in the mode “Extended Mode 57ch” (p. 18)
16	Focus		Same as CH 20 in the mode “Standard Mode 50ch” (p. 28)
17	Zoom		Same as CH 21 in the mode “Standard Mode 50ch” (p. 28)
18	Iris		Same as CH 29 in the mode “Extended Mode 57ch” (p. 19)
19	Frost		Same as CH 30 in the mode “Extended Mode 57ch” (p. 19)
20	Frost 2		Same as CH 31 in the mode “Extended Mode 57ch” (p. 19)
21	Animation Wheel		Same as CH 32 in the mode “Extended Mode 57ch” (p. 20)
22	Blade 1 A	0	Min
		1–126	Min ... Center

CH	Function	DMX	Description
22	Blade 1 A (continued)	127	Center
		128–254	Center … Max
		255	Max
23	Blade 1 B	0	Min
		1–126	Min … Center
		127	Center
		128–254	Center … Max
		255	Max
24	Blade 2 A	0	Min
		1–126	Min … Center
		127	Center
		128–254	Center … Max
		255	Max
25	Blade 2 B	0	Min
		1–126	Min … Center
		127	Center
		128–254	Center … Max
		255	Max
26	Blade 3 A	0	Min
		1–126	Min … Center
		127	Center
		128–254	Center … Max
		255	Max
27	Blade 3 B	0	Min
		1–126	Min … Center
		127	Center
		128–254	Center … Max
		255	Max
28	Blade 4 A	0	Min
		1–126	Min … Center
		127	Center
		128–254	Center … Max
		255	Max
29	Blade 4 B	0	Min
		1–126	Min … Center
		127	Center
		128–254	Center … Max
		255	Max
30	Beam Shaper Rotation Speed		Frame Rotation
		0	0 Degree
		1–126	0 Degree … 60 Degree
		127	60 Degree

CH	Function	DMX	Description
30	Beam Shaper Rotation Speed (continued)	128–254	60 Degree ... 120 Degree
		255	120 Degree
31	Frame Speed		Same as CH 51 in the mode “Extended Mode 57ch” (p. 21)
32	Beam Shaper Macro		Same as CH 52 in the mode “Extended Mode 57ch” (p. 21)
33	Dimmer Mode		Same as CH 53 in the mode “Extended Mode 57ch” (p. 22)
34	Color Macro Speed		Same as CH 55 in the mode “Extended Mode 57ch” (p. 22)
35	Pan/Tilt Mode		Same as CH 56 in the mode “Extended Mode 57ch” (p. 22)
36	Function		Same as CH 57 in the mode “Extended Mode 57ch” (p. 22)

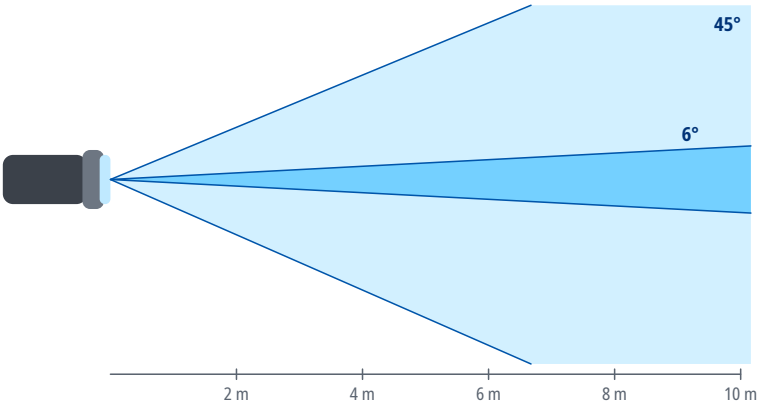
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	1,000 W
Luminous flux	10,000 lm
Color temperature	6,000 K
Color rendering index (CRI)	80
Optics	
Zoom	6–45°
Movement	
Pan	540°
Tilt	270°
Control	
RDM	yes (manufacturer ID 0x1900, device model ID 0x0024)
Dimensions and construction	
Weight	84.9 kg
Operating environment	
Ingress protection	IP65
Meaning of the IP code (IEC 60529)	Dust-tight; protected against water jets
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–31 Hz
Beam shaper rotation	up to 120 °/s (20 rpm)

Spot diameter



Distance	Ø 6°	Ø 45°
2 m	0.21 m	1.7 m
4 m	0.42 m	3.3 m
6 m	0.63 m	5 m
8 m	0.84 m	6.6 m
10 m	1 m	8.3 m
15 m	1.6 m	12.4 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.