DMX REFERENCE

P18 MK2 Profile MA HP

JB-Lighting



Manufacturer	JB-Lighting
GDTF file	JB-Lighting_P18_MK2_Profile_MA_HP_44916.gdtf
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1 About this manual

This document describes the P18 MK2 Profile MA HP by JB-Lighting. It was compiled from the GDTF file JB-Lighting_P18_MK2_Profile_MA_HP_44916.gdtf from the GDTF-Share library.

File revision: “V_1.02”.

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 JB-Lighting; 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	32 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Mode 1 (42 ch)	42	12	1, 43, 85, 127, ...
Mode 2 (62 ch)	62	8	1, 63, 125, 187, ...

No light? Check these channels

- Mode 1 (42 ch): CH 6 Shutter at 16–95 “open” or 111 or 126 or 143 or 175 or 207 or 239 or 255; CH 7 Dimmer above 0
- Mode 2 (62 ch): CH 6 Shutter at 16–95 “open” or 111 or 126 or 143 or 175 or 207 or 239 or 255; CH 7 Dimmer above 0


Read the manual before use


Do not stare into the light


Indoor use only

3 Safety instructions



Read the manual before use



Do not stare into the light



Indoor use only

⚠ WARNING

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

⚠ WARNING

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

⚠ CAUTION

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

⚠ CAUTION

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

⚠ WARNING

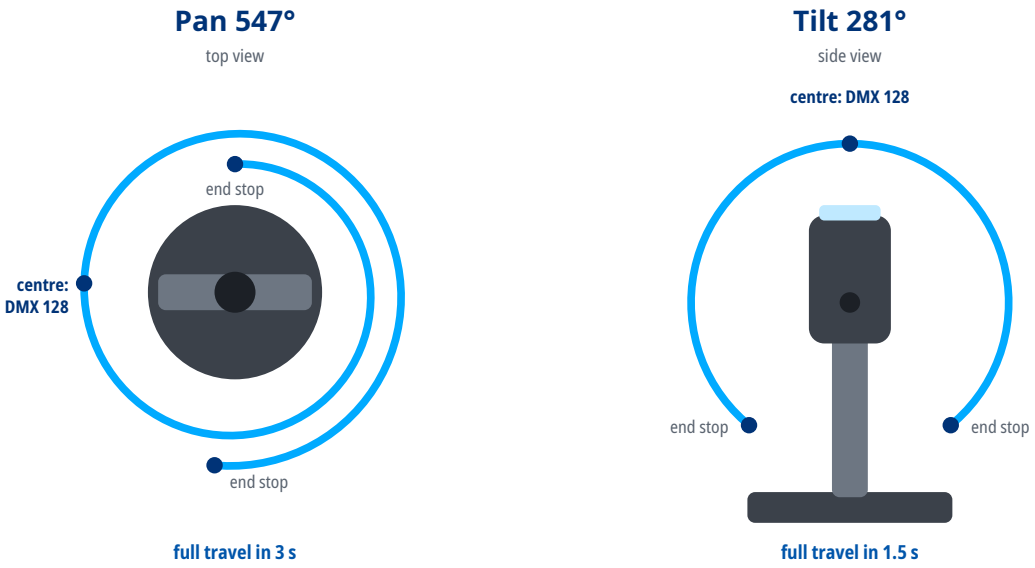
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts,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

4 Product description

Description in the GDTF file

“P18 MK2 Profile HP (High Power) 1100W, blade mode move/angle”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

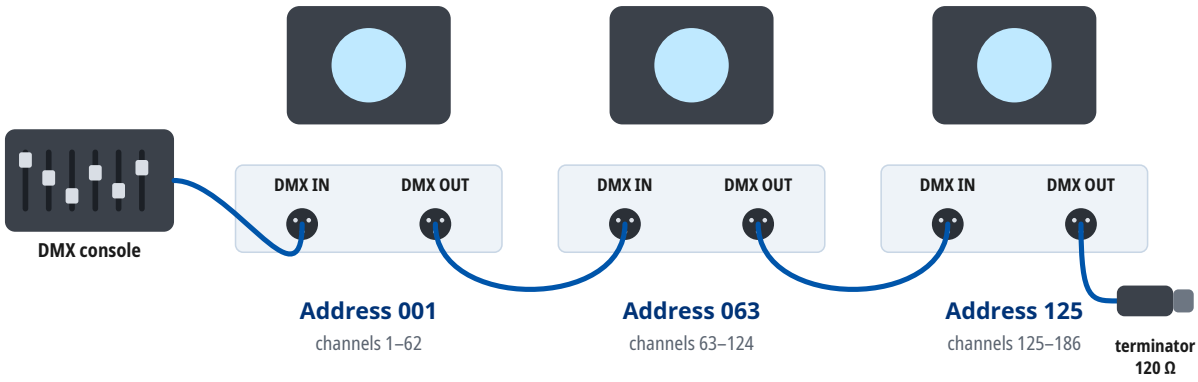
⚠ WARNING

- 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: 32 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 2 (62 ch): every unit occupies 62 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

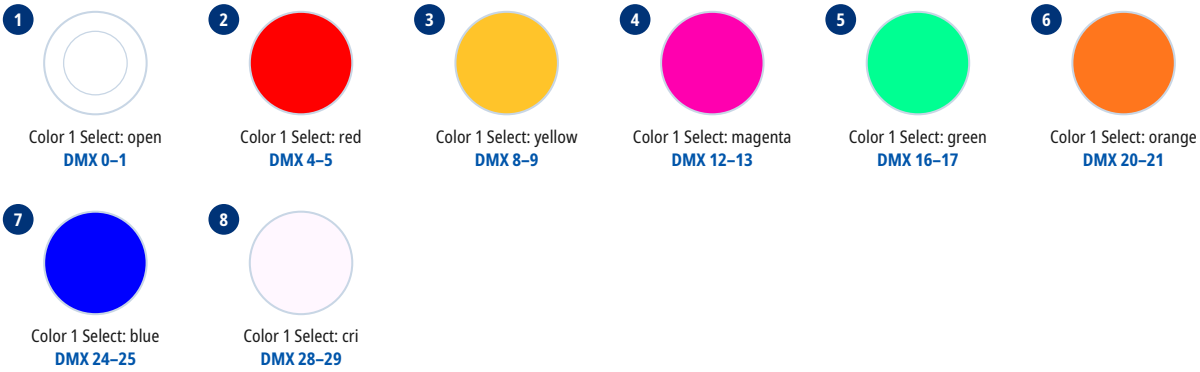
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Mode 2 (62 ch)”: 62.
- Choose start addresses so that the channels of individual devices do not overlap and the last 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 “Mode 2 (62 ch)”, you can use, for example, the start addresses 1, 63, 125, 187.
- 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

	Mode 1 (42 ch) 42 channels	Mode 2 (62 ch) 62 channels
Pan / Tilt	1, 3	1, 3
Dimmer	7	7
Dimmer resolution	8 bit	16 bit
Shutter / strobe	6	6
Color mixing	27–29	41, 43, 45
Color temperature	30	47
Color wheel	26	40
Gobo wheel	13, 14	17, 18
Gobo rotation	15	19
Prism	33–36	51, 52, 54, 55
Frost	37, 38	57, 58
Zoom	9	11
Focus	8, 10, 11	9, 13, 14
Iris	12	15
Animation wheel	16	21
Effects / macros	39	59

Color wheel



Gobo wheel 1

1
Gobo 1 Select: open
DMX 0–7

2 
Gobo 1_1
DMX 8–15

3 
Gobo 1_2
DMX 16–23

4 
Gobo 1_3
DMX 24–31

5 
Gobo 1_4
DMX 32–39

6 
Gobo 1_5
DMX 40–47

7 
Gobo 1_6
DMX 48–55

8 
Gobo 1_7
DMX 56–63

9 
Wheel Slot 8
DMX 64–192

Gobo wheel 2

1
Gobo 2 Select: open
DMX 0–7

2 
Gobo 2_1
DMX 8–15

3 
Gobo 2_2
DMX 16–23

4 
Gobo 2_3
DMX 24–31

5 
Gobo 2_4
DMX 32–39

6 
Gobo 2_5
DMX 40–47

7 
Wheel Slot 6
DMX 48–128

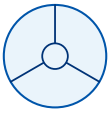
Prism 1

1
Open
DMX 0–7

2 
5 facets
5 facet linear
DMX 8–255

Prism 2

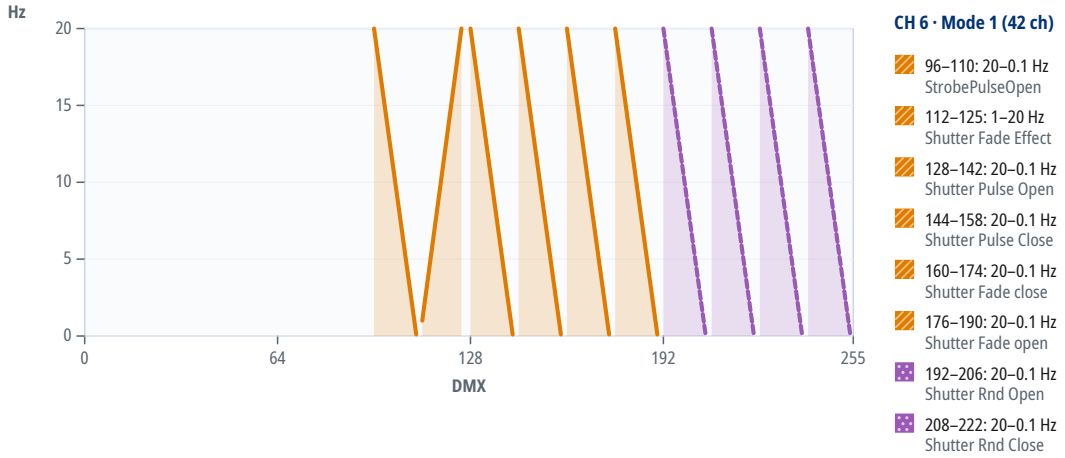
1
Open
DMX 0–7

2 
3 facets
3 facet circular
DMX 8–255

Animation wheel

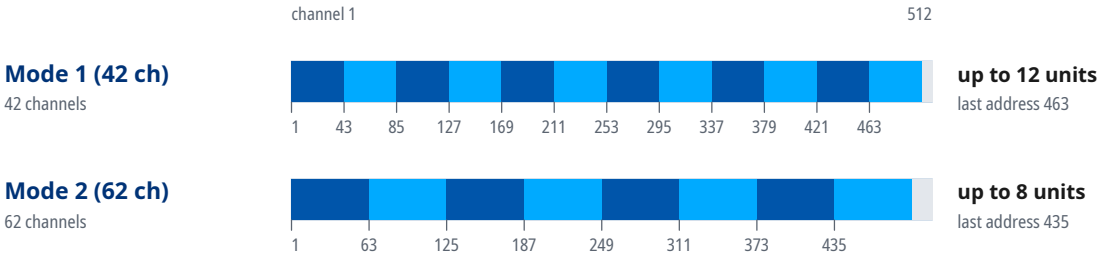
1 open	2 water	3 fire

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Mode 2 (62 ch)”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	311	11	U2 · 125	16	U2 · 435
2	63	7	373	12	U2 · 187	17	U3 · 1
3	125	8	435	13	U2 · 249	18	U3 · 63
4	187	9	U2 · 1	14	U2 · 311	19	U3 · 125
5	249	10	U2 · 63	15	U2 · 373	20	U3 · 187

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 1 (42 ch)

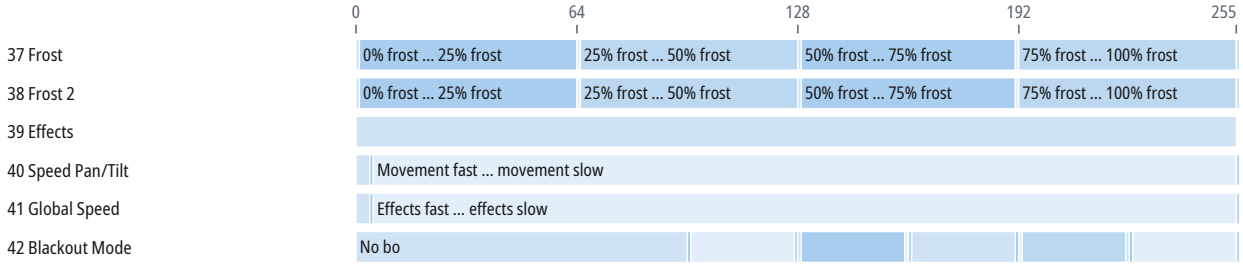
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 6 Shutter at 16–95 “open” or 111 or 126 or 143 or 175 or 207 or 239 or 255; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 16, CH 7 Dimmer 255, CH 27 Cyan 0, CH 28 Magenta 0, CH 29 Yellow 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Min ... center
		128–255	Center ... max
		255	Max
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Min ... center
		128–255	Center ... max
		255	Max
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Control	0	Fade out fast
		1–6	Fade out 1...6
		7	Fade out slow
		8–31	Not used (1_0)
		32	(2) fade out fast
		33	(2) fade out 1
		34	(2) fade out 2
		35	(2) fade out 3
		36	(2) fade out 4
		37	(2) fade out 5
		38	(2) fade out 6
		39	(2) fade out slow
		40–63	Not used (2_0)
		64	(3) fade out fast
		65	(3) fade out 1
		66	(3) fade out 2
		67	(3) fade out 3
		68	(3) fade out 4
		69	(3) fade out 5
		70	(3) fade out 6
		71	(3) fade out slow
		72–95	Not used (3_0)
		96	(4) fade out fast
		97	(4) fade out 1
		98	(4) fade out 2

CH	Function	DMX	Description
5	Control (continued)	99	(4) fade out 3
		100	(4) fade out 4
		101	(4) fade out 5
		102	(4) fade out 6
		103	(4) fade out slow
		104	Backlight off
		105	Backlight on
		106	Backlight auto
		107	Display standard
		108	Display flip
		109	Not used (6_0)
		110	Main screen standard
		111	Main screen user id
		112	Not used (6_1)
		113	User id set
		114	Not used (6_2)
		115–127	Display mode
		128	(5) fade out fast
		129	(5) fade out 1
		130	(5) fade out 2
		131	(5) fade out 3
		132	(5) fade out 4
		133	(5) fade out 5
		134	(5) fade out 6
		135	(5) fade out slow
		136	Dimmer linear
		137	Dimmer square
		138	Dimmer square inv
		139	Not used (8_0)
		140	rgb/cmy linear
		141	rgb/cmy square inv
		142	rgb/cmy linear mk1
		143	Frost linear
		144	Frost square inv
		145	Not used (8_1)
		146	p/t speed whisper
		147	p/t speed silent
		148	p/t speed medium
		149	p/t speed fast
		150	Effect speed whisper
		151	Effect speed silent
		152	Effect speed medium

CH	Function	DMX	Description
5	Control (continued)	153	Effect speed fast
		154	Led fade out standard
		155	Led fade out soft
		156	Blmode raw
		157	Blmode move/angle
		158–159	Not used (8_2)
		160	Theatre whisper
		161	Theatre silent
		162	Standard
		163	Boost
		164	Longterm 24/7
		165–207	Not used (9_0)
		208–215	50Hz (100Hz)
		216–223	60Hz (120Hz)
		224–227	Flex (600Hz)
		228–231	High flex (3000Hz)
		232–239	Not used (13_0)
		240–247	Reset
		248–255	Not used (14_0)
6	Shutter	0–15	Shutter (1): closed
		16–95	Shutter (1): open
		96	20Hz
		97	20Hz ... 15Hz
		98	15Hz
		99	15Hz ... 10Hz
		100	10Hz
		101	10Hz ... 5Hz
		102	5Hz
		103–104	5Hz ... 1Hz
		105	1Hz
		106–109	1Hz ... 1/10Hz
		110	1/10Hz
		111	Shutter (2): open (2)
		112	Fade effect slow
		113–124	Fade effect slow ... fade effect fast
		125	Fade effect fast
		126	Shutter (3): open (3)
		127	Shutter (3): closed (2)
		128	Pulse open fast
		129–141	Pulse open fast ... pulse open slow
		142	Pulse open slow
		143	Shutter (4): open (4)

CH	Function	DMX	Description
6	Shutter (continued)	144	Pulse close fast
		145–157	Pulse close fast ... pulse close slow
		158	Pulse close slow
		159	Shutter (5): closed (3)
		160	Fade close fast
		161–173	Fade close fast ... fade close slow
		174	Fade close slow
		175	Shutter (6): open (5)
		176	Fade open fast
		177–189	Fade open fast ... fade open slow
		190	Fade open slow
		191	Shutter (7): closed (4)
		192	Rnd open fast
		193–205	Rnd open fast ... rnd open slow
		206	Rnd open slow
		207	Shutter (8): open (6)
		208	Rnd close fast
		209–221	Rnd close fast ... rnd close slow
		222	Rnd close slow
		223	Shutter (9): closed (5)
		224	Rnd pulse close fast
		225–237	Shutter Rnd Pulse Close
		238	Rnd pulse close fast
		239	Shutter (10): open (7)
		240	Rnd pulse open fast
		241–253	Shutter Rnd Pulse open
		254	Rnd pulse open fast
		255	Shutter (11): open (8)
7	Dimmer	0	Closed
		1–24	Closed ... 10%
		25	10%
		26–50	10% ... 20%
		51	20%
		52–63	20% ... 25%
		64	25%
		65–75	25% ... 30%
		76	30%
		77–101	30% ... 40%
		102	40%
		103–127	40% ... 50%
		128	50%
		129–152	50% ... 60%

CH	Function	DMX	Description
7	Dimmer (continued)	153	60%
		154–178	60% … 70%
		179	70%
		180–190	70% … 75%
		191	75%
		192–203	75% … 80%
		204	80%
		205–229	80% … 90%
		230	90%
		231–254	90% … open
		255	Open
8	Focus	0	Min
		1–254	Min … max
		255	Max
9	Zoom	0	Narrow
		1–127	Narrow … medium
		128	Medium
		129–254	Medium … wide
		255	Wide
10	Focus Distance	0–1	Off
		2–9	Off … 1m
		10	1m
		11–19	1m … 2m
		20	2m
		21–29	2m … 3m
		30	3m
		31–39	3m … 4m
		40	4m
		41–49	4m … 5m
		50	5m
		51–59	5m … 6m
		60	6m
		61–69	6m … 7m
		70	7m
		71–79	7m … 8m
		80	8m
		81–89	8m … 9m
		90	9m
		91–99	9m … 10m
		100	10m
		101–109	10m … 11m
		110	11m

CH	Function	DMX	Description
10	Focus Distance (continued)	111–119	11m ... 12m
		120	12m
		121–129	12m ... 13m
		130	13m
		131–139	13m ... 14m
		140	14m
		141–149	14m ... 15m
		150	15m
		151–159	15m ... 16m
		160	16m
		161–169	16m ... 17m
		170	17m
		171–179	17m ... 18m
		180	18m
		181–189	18m ... 19m
		190	19m
		191–199	19m ... 20m
		200	20m
		201–209	20m ... 21m
		210	21m
		211–219	21m ... 22m
		220	22m
		221–229	22m ... 23m
		230	23m
		231–239	23m ... 24m
		240	24m
		241–249	24m ... 25m
		250	25m
		251–254	25m ... far
		255	Far
11	Focus Adjust	0–255	Not used
12	Iris	0	Open
		1–254	Open ... closed
		255	Closed
13	Gobo	0–7	Gobo 1 Select: open
		8–15	Gobo 1_1
		16–23	Gobo 1_2
		24–31	Gobo 1_3
		32–39	Gobo 1_4
		40–47	Gobo 1_5
		48–55	Gobo 1_6
		56–63	Gobo 1_7

CH	Function	DMX	Description
13	Gobo (continued)	64–191	Gobo 1_8
		192	Spin >>> fast
		193–222	Spin >>> fast ... spin >>> slow
		223	Spin >>> slow
		224	Spin <<< slow
		225–254	Spin <<< slow ... spin <<< fast
		255	Spin <<< fast
14	Gobo 2	0–7	Gobo 2 Select: open
		8–15	Gobo 2_1
		16–23	Gobo 2_2
		24–31	Gobo 2_3
		32–39	Gobo 2_4
		40–47	Gobo 2_5
		48–127	Gobo 2_6
		128–135	Gobo 2 Shake: open (2) (1–4 Hz)
		136	Gobo 2_1 fast (1–4 Hz)
		137–142	Gobo 2_1 fast ... gobo 2_1 slow
		143	Gobo 2_1 slow (1–4 Hz)
		144	Gobo 2_2 fast (1–4 Hz)
		145–150	Gobo 2_2 fast ... gobo 2_2 slow
		151	Gobo 2_2 slow (1–4 Hz)
		152	Gobo 2_3 fast (1–4 Hz)
		153–158	Gobo 2_3 fast ... gobo 2_3 slow
		159	Gobo 2_3 slow (1–4 Hz)
		160	Gobo 2_4 fast (1–4 Hz)
		161–166	Gobo 2_4 fast ... gobo 2_4 slow
		167	Gobo 2_4 slow (1–4 Hz)
		168	Gobo 2_5 fast (1–4 Hz)
		169–174	Gobo 2_5 fast ... gobo 2_5 slow
		175	Gobo 2_5 slow (1–4 Hz)
		176	Gobo 2_6 fast (1–4 Hz)
		177–190	Gobo 2_6 fast ... gobo 2_6 slow
		191	Gobo 2_6 slow (1–4 Hz)
		192	Spin >>> fast
		193–222	Spin >>> fast ... spin >>> slow
		223	Spin >>> slow
		224	Spin <<< slow
		225–254	Spin <<< slow ... spin <<< fast
		255	Spin <<< fast
15	Gobo 2 Rotation	0	0
		1–31	0 ... 90
		32	90

CH	Function	DMX	Description
15	Gobo 2 Rotation (continued)	33–63	90 ... 180
		64	180
		65–95	180 ... 270
		96	270
		97–127	270 ... 360
		128	360
		129–159	360 ... 450
		160	450
		161–190	450 ... 540
		191	540
		192	>>>
		193–222	Rotate 100__1% (1080–1 °/s)
		223–224	Gobo 2 Pos Rotate: stop
		225–254	Rotate -1__-100% (1–1080 °/s)
		255	<<<
16	Animation Wheel	0	Open
		1	Water faded center
		2	Water faded stop
		3–63	Water faded slow to fast
		64	Open (2)
		65	Water switched center
		66	Water switched stop
		67–127	Water switched slow to fast
		128	Open (3)
		129	Fire faded center
		130	Fire faded stop
		131–191	Fire faded slow to fast
		192	Open (4)
		193	Fire switched center
		194	Fire switched stop
		195–255	Fire switched slow to fast
17	Blade 1 A	0	Min
		1–24	Min ... 10%
		25	10%
		26–50	10% ... 20%
		51	20%
		52–75	20% ... 30%
		76	30%
		77–101	30% ... 40%
		102	40%
		103–127	40% ... 50%
		128	50%

CH	Function	DMX	Description
17	Blade 1 A (continued)	129–152	50% … 60%
		153	60%
		154–178	60% … 70%
		179	70%
		180–203	70% … 80%
		204	80%
		205–229	80% … 90%
		230	90%
		231–254	90% … max
		255	Max
18	Blade 1 Rotation	0	Max ccw
		1–42	Max ccw … -20
		43	-20
		44–84	-20 … -10
		85	-10
		86–127	-10 … zero
		128	Zero
		129–169	Zero … 10
		170	10
		171–212	10 … 20
		213	20
		214–254	20 … max cw
		255	Max cw
19	Blade 3 A	0	Min
		1–24	Min … 10%
		25	10%
		26–50	10% … 20%
		51	20%
		52–75	20% … 30%
		76	30%
		77–101	30% … 40%
		102	40%
		103–127	40% … 50%
		128	50%
		129–152	50% … 60%
		153	60%
		154–178	60% … 70%
		179	70%
		180–203	70% … 80%
		204	80%
		205–229	80% … 90%
		230	90%

CH	Function	DMX	Description
19	Blade 3 A (continued)	231–254	90% … max
		255	Max
20	Blade 3 Rotation	0	Max ccw
		1–42	Max ccw … -20
		43	-20
		44–84	-20 … -10
		85	-10
		86–127	-10 … zero
		128	Zero
		129–169	Zero … 10
		170	10
		171–212	10 … 20
		213	20
		214–254	20 … max cw
		255	Max cw
21	Blade 2 A	0	Min
		1–24	Min … 10%
		25	10%
		26–50	10% … 20%
		51	20%
		52–75	20% … 30%
		76	30%
		77–101	30% … 40%
		102	40%
		103–127	40% … 50%
		128	50%
		129–152	50% … 60%
		153	60%
		154–178	60% … 70%
		179	70%
		180–203	70% … 80%
		204	80%
		205–229	80% … 90%
		230	90%
		231–254	90% … max
		255	Max
22	Blade 2 Rotation	0	Max ccw
		1–42	Max ccw … -20
		43	-20
		44–84	-20 … -10
		85	-10
		86–127	-10 … zero

CH	Function	DMX	Description
22	Blade 2 Rotation (continued)	128	Zero
		129–169	Zero ... 10
		170	10
		171–212	10 ... 20
		213	20
		214–254	20 ... max cw
		255	Max cw
23	Blade 4 A	0	Min
		1–24	Min ... 10%
		25	10%
		26–50	10% ... 20%
		51	20%
		52–75	20% ... 30%
		76	30%
		77–101	30% ... 40%
		102	40%
		103–127	40% ... 50%
		128	50%
		129–152	50% ... 60%
		153	60%
		154–178	60% ... 70%
		179	70%
		180–203	70% ... 80%
		204	80%
		205–229	80% ... 90%
		230	90%
		231–254	90% ... max
		255	Max
24	Blade 4 Rotation	0	Max ccw
		1–42	Max ccw ... -20
		43	-20
		44–84	-20 ... -10
		85	-10
		86–127	-10 ... zero
		128	Zero
		129–169	Zero ... 10
		170	10
		171–212	10 ... 20
		213	20
		214–254	20 ... max cw
		255	Max cw
25	Shaper Rotation		Shaper Rot Index

CH	Function	DMX	Description
25	Shaper Rotation (continued)	0	65
		1–9	65 … 60
		10	60
		11–19	60 … 55
		20	55
		21–28	55 … 50
		29	50
		30–38	50 … 45
		39	45
		40–48	45 … 40
		49	40
		50–58	40 … 35
		59	35
		60–68	35 … 30
		69	30
		70–77	30 … 25
		78	25
		79–87	25 … 20
		88	20
		89–97	20 … 15
		98	15
		99–107	15 … 10
		108	10
		109–117	10 … 5
		118	5
		119–127	5 … 0
		128	0
		129–136	0 … -5
		137	-5
		138–146	-5 … -10
		147	-10
		148–156	-10 … -15
		157	-15
		158–166	-15 … -20
		167	-20
		168–176	-20 … -25
		177	-25
		178–185	-25 … -30
		186	-30
		187–195	-30 … -35
		196	-35
		197–205	-35 … -40

CH	Function	DMX	Description
25	Shaper Rotation (continued)	206	-40
		207–215	-40 ... -45
		216	-45
		217–225	-45 ... -50
		226	-50
		227–234	-50 ... -55
		235	-55
		236–244	-55 ... -60
		245	-60
		246–254	-60 ... -65
		255	-65
26	Colors	0–1	Color 1 Select: open
		2–3	White / red
		4–5	Color 1 Select: red
		6–7	Red / yellow
		8–9	Color 1 Select: yellow
		10–11	Yellow / magenta
		12–13	Color 1 Select: magenta
		14–15	Magenta / green
		16–17	Color 1 Select: green
		18–19	Green / orange
		20–21	Color 1 Select: orange
		22–23	Orange / blue
		24–25	Color 1 Select: blue
		26–27	Blue / cri
		28–29	Color 1 Select: cri
		30–63	Cri / white
		64–79	Color 1 Continuous: open (2)
		80–95	Color 1 Continuous: red
		96–111	Color 1 Continuous: yellow
		112–127	Color 1 Continuous: magenta
		128–143	Color 1 Continuous: green
		144–159	Color 1 Continuous: orange
		160–175	Color 1 Continuous: blue
		176–190	Color 1 Continuous: cri
		191	Color 1 Continuous: open (3)
		192	Spin >>> fast
		193–222	Spin >>> fast ... spin >>> slow
		223	Spin >>> slow
		224	Spin <<< slow
		225–254	Spin <<< slow ... spin <<< fast
		255	Spin <<< fast

CH	Function	DMX	Description
27	Cyan		Color C
		0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–190	50% … 75%
		191	75%
		192–254	75% … max
		255	Max
28	Magenta		Color M
		0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–190	50% … 75%
		191	75%
		192–254	75% … max
		255	Max
29	Yellow		Color Y
		0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–190	50% … 75%
		191	75%
		192–254	75% … max
		255	Max
30	CTO	0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–190	50% … 75%
		191	75%
		192–254	75% … max
		255	Max
31	Sparkle	0	0% sparkle
		1–63	0% sparkle … 25% sparkle
		64	25% sparkle

CH	Function	DMX	Description
31	Sparkle (continued)	65–127	25% sparkle ... 50% sparkle
		128	50% sparkle
		129–190	50% sparkle ... 75% sparkle
		191	75% sparkle
		192–254	75% sparkle ... 100% sparkle
		255	100% sparkle
32	Sparkle Speed	0	Sparkle Speed: sparkle faded slow
		1–30	Sparkle Speed: sparkle faded 1__99%
		31	Sparkle Speed: sparkle faded fast
		32	Sparkle Speed: sparkle switched slow
		33–62	Sparkle Speed: sparkle switched 1__99%
		63	Sparkle Speed: sparkle switched fast
		64	Sparkle Speed: sparkle faded slow
		65–94	Sparkle Speed: sparkle faded 1__99%
		95	Sparkle Speed: sparkle faded fast
		96	Sparkle Speed: sparkle switched slow
		97–126	Sparkle Speed: sparkle switched 1__99%
		127	Sparkle Speed: sparkle switched fast
		128	Sparkle Speed: sparkle faded slow
		129–158	Sparkle Speed: sparkle faded 1__99%
		159	Sparkle Speed: sparkle faded fast
		160	Sparkle Speed: sparkle switched slow
		161–190	Sparkle Speed: sparkle switched 1__99%
		191	Sparkle Speed: sparkle switched fast
		192	Sparkle Speed: sparkle faded slow
		193–222	Sparkle Speed: sparkle faded 1__99%
		223	Sparkle Speed: sparkle faded fast
		224	Sparkle Speed: sparkle switched slow
		225–254	Sparkle Speed: sparkle switched 1__99%
		255	Sparkle Speed: sparkle switched fast
33	Prism		Prism (1)
		0–7	Open
		8–255	5 facet linear
34	Prism Rotation	0	0
		1–31	0 ... 90
		32	90
		33–63	90 ... 180
		64	180
		65–95	180 ... 270
		96	270
		97–127	270 ... 360
		128	360

CH	Function	DMX	Description
34	Prism Rotation (continued)	129–158	360 … 450
		159	450
		160–190	450 … 540
		191	540
		192	>>>
		193–222	Rotate 100__1% (1080–1 °/s)
		223–224	Prism 1 Pos Rotate: stop
		225–254	Rotate -1__-100% (1–1080 °/s)
		255	<<<
35	Prism 2		Prism (2)
		0–7	Open
		8–255	3 facet circular
36	Prism 2 Rotation	0	0
		1–31	0 … 90
		32	90
		33–63	90 … 180
		64	180
		65–95	180 … 270
		96	270
		97–127	270 … 360
		128	360
		129–158	360 … 450
		159	450
		160–190	450 … 540
		191	540
		192	>>>
		193–222	Rotate 100__1% (1080–1 °/s)
		223–224	Prism 2 Pos Rotate: stop
		225–254	Rotate -1__-100% (1–1080 °/s)
		255	<<<
37	Frost	0	0% frost
		1–63	0% frost … 25% frost
		64	25% frost
		65–127	25% frost … 50% frost
		128	50% frost
		129–190	50% frost … 75% frost
		191	75% frost
		192–254	75% frost … 100% frost
		255	100% frost
38	Frost 2	0	0% frost
		1–63	0% frost … 25% frost
		64	25% frost

CH	Function	DMX	Description
38	Frost 2 (continued)	65–127	25% frost ... 50% frost
		128	50% frost
		129–190	50% frost ... 75% frost
		191	75% frost
		192–254	75% frost ... 100% frost
		255	100% frost
39	Effects	0–255	
40	Speed Pan/Tilt	0–3	Real time movement
		4	Movement fast
		5–254	Movement fast ... movement slow
		255	Movement slow
41	Global Speed	0–3	Realtime effects
		4	Effects fast
		5–254	Effects fast ... effects slow
		255	Effects slow
42	Blackout Mode	0–95	No bo
		96	Bo at p/t slow
		97–126	Bo at p/t slow ... bo at p/t fast
		127	Bo at p/t fast
		128	Bo at go co pr cmy ir fr slow
		129–158	Bo at go co pr cmy ir fr slow ... bo at go co pr cmy ir fr fast
		159	Bo at go co pr cmy ir fr fast
		160	Bo at go co pr cmy ir fr fo zo slow
		161–190	Bo at go co pr cmy ir fr fo zo slow ... bo at go co pr cmy ir fr fo zo fast
		191	Bo at go co pr cmy ir fr fo zo fast
		192	Bo at go co pr cmy ir fr p/t slow
		193–222	Bo at go co pr cmy ir fr p/t slow ... bo at go co pr cmy ir fr p/t fast
		223	Bo at go co pr cmy ir fr p/t fast
		224	Bo at go co pr cmy ir fr fo zo p/t slow
		225–254	Bo at go co pr cmy ir fr fo zo p/t slow ... bo at go co pr cmy ir fr fo zo p/t fast
		255	Bo at go co pr cmy ir fr fo zo p/t fast

Mode 2 (62 ch)

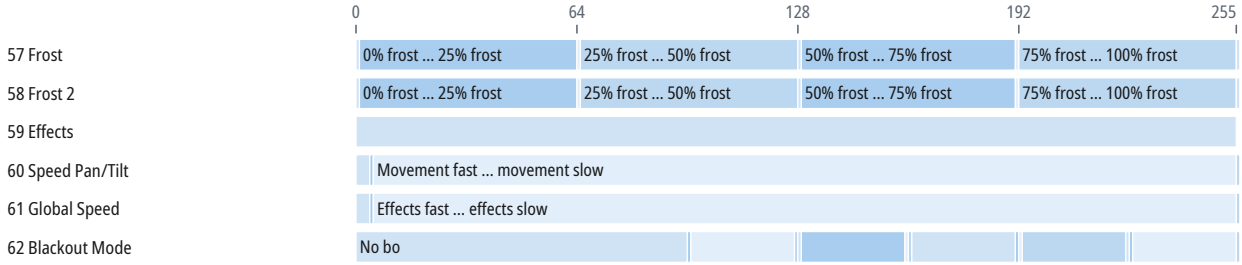
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 6 Shutter at 16–95 “open” or 111 or 126 or 143 or 175 or 207 or 239 or 255; CH 7 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 16, CH 7 Dimmer 255, CH 41 Cyan 0, CH 43 Magenta 0, CH 45 Yellow 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Mode 1 (42 ch)” (p. 11)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Mode 1 (42 ch)” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Control		Same as CH 5 in the mode “Mode 1 (42 ch)” (p. 11)
6	Shutter		Same as CH 6 in the mode “Mode 1 (42 ch)” (p. 13)
7	Dimmer	0–25	Closed ... 10%
		25–51	10% ... 20%
		51–63	20% ... 25%
		64–76	25% ... 30%
		76–102	30% ... 40%
		102–127	40% ... 50%
		128–153	50% ... 60%
		153–179	60% ... 70%
		179–191	70% ... 75%
		191	75%
		192–204	75% ... 80%
		204–230	80% ... 90%
		230–255	90% ... open
		255	Open
8	Dimmer Fine	0–255	Fine adjustment of CH 7
9	Focus	0–255	Min ... max
		255	Max
10	Focus Fine	0–255	Fine adjustment of CH 9
11	Zoom	0–127	Narrow ... medium
		128–255	Medium ... wide
		255	Wide
12	Zoom Fine	0–255	Fine adjustment of CH 11
13	Focus Distance		Same as CH 10 in the mode “Mode 1 (42 ch)” (p. 15)
14	Focus Adjust	0–255	Not used
15	Iris	0–255	Open ... closed
		255	Closed
16	Iris Fine	0–255	Fine adjustment of CH 15

CH	Function	DMX	Description
17	Gobo		Same as CH 13 in the mode “Mode 1 (42 ch)” (p. 16)
18	Gobo 2		Same as CH 14 in the mode “Mode 1 (42 ch)” (p. 17)
19	Gobo 2 Rotation	0–31	0 ... 90
		32–63	90 ... 180
		64–95	180 ... 270
		96–127	270 ... 360
		128–159	360 ... 450
		160–191	450 ... 540
		191	540
		192	>>>
		192–222	Rotate 100__1% (1080–1 °/s)
		223–224	Gobo 2 Pos Rotate: stop
		225–255	Rotate -1__-100% (1–1080 °/s)
		255	<<<
20	Gobo 2 Rotation Fine	0–255	Fine adjustment of CH 19
21	Animation Wheel		Same as CH 16 in the mode “Mode 1 (42 ch)” (p. 18)
22	Blade 1 A	0–25	Min ... 10%
		25–51	10% ... 20%
		51–76	20% ... 30%
		76–102	30% ... 40%
		102–127	40% ... 50%
		128–153	50% ... 60%
		153–179	60% ... 70%
		179–204	70% ... 80%
		204–230	80% ... 90%
		230–255	90% ... max
		255	Max
23	Blade 1 A Fine	0–255	Fine adjustment of CH 22
24	Blade 1 Rotation	0–42	Max ccw ... -20
		42–85	-20 ... -10
		85–127	-10 ... zero
		128–170	Zero ... 10
		170–213	10 ... 20
		213–255	20 ... max cw
		255	Max cw
25	Blade 1 Rotation Fine	0–255	Fine adjustment of CH 24
26	Blade 3 A	0–25	Min ... 10%
		25–51	10% ... 20%
		51–76	20% ... 30%
		76–102	30% ... 40%
		102–127	40% ... 50%
		128–153	50% ... 60%

CH	Function	DMX	Description
26	Blade 3 A (continued)	153–179	60% … 70%
		179–204	70% … 80%
		204–230	80% … 90%
		230–255	90% … max
		255	Max
27	Blade 3 A Fine	0–255	Fine adjustment of CH 26
28	Blade 3 Rotation	0–42	Max ccw … -20
		42–85	-20 … -10
		85–127	-10 … zero
		128–170	Zero … 10
		170–213	10 … 20
		213–255	20 … max cw
		255	Max cw
29	Blade 3 Rotation Fine	0–255	Fine adjustment of CH 28
30	Blade 2 A	0–25	Min … 10%
		25–51	10% … 20%
		51–76	20% … 30%
		76–102	30% … 40%
		102–127	40% … 50%
		128–153	50% … 60%
		153–179	60% … 70%
		179–204	70% … 80%
		204–230	80% … 90%
		230–255	90% … max
		255	Max
31	Blade 2 A Fine	0–255	Fine adjustment of CH 30
32	Blade 2 Rotation	0–42	Max ccw … -20
		42–85	-20 … -10
		85–127	-10 … zero
		128–170	Zero … 10
		170–213	10 … 20
		213–255	20 … max cw
		255	Max cw
33	Blade 2 Rotation Fine	0–255	Fine adjustment of CH 32
34	Blade 4 A	0–25	Min … 10%
		25–51	10% … 20%
		51–76	20% … 30%
		76–102	30% … 40%
		102–127	40% … 50%
		128–153	50% … 60%
		153–179	60% … 70%
		179–204	70% … 80%

CH	Function	DMX	Description
34	Blade 4 A (continued)	204–230	80% … 90%
		230–255	90% … max
		255	Max
35	Blade 4 A Fine	0–255	Fine adjustment of CH 34
36	Blade 4 Rotation	0–42	Max ccw … -20
		42–85	-20 … -10
		85–127	-10 … zero
		128–170	Zero … 10
		170–213	10 … 20
		213–255	20 … max cw
		255	Max cw
37	Blade 4 Rotation Fine	0–255	Fine adjustment of CH 36
38	Shaper Rotation		Shaper Rot Index
		0–9	65 … 60
		9–19	60 … 55
		19–29	55 … 50
		29–39	50 … 45
		39–49	45 … 40
		49–59	40 … 35
		59–68	35 … 30
		68–78	30 … 25
		78–88	25 … 20
		88–98	20 … 15
		98–108	15 … 10
		108–118	10 … 5
		118–127	5 … 0
		128–137	0 … -5
		137–147	-5 … -10
		147–157	-10 … -15
		157–167	-15 … -20
		167–177	-20 … -25
		177–187	-25 … -30
		187–196	-30 … -35
		196–206	-35 … -40
		206–216	-40 … -45
		216–226	-45 … -50
		226–236	-50 … -55
		236–246	-55 … -60
		246–255	-60 … -65
		255	-65
39	Shaper Rotation Fine	0–255	Fine adjustment of CH 38
40	Colors	0–1	Color 1 Select: open

CH	Function	DMX	Description
40	Colors (continued)	2–3	White / red
		4–5	Color 1 Select: red
		6–7	Red / yellow
		8–9	Color 1 Select: yellow
		10–11	Yellow / magenta
		12–13	Color 1 Select: magenta
		14–15	Magenta / green
		16–17	Color 1 Select: green
		18–19	Green / orange
		20–21	Color 1 Select: orange
		22–23	Orange / blue
		24–25	Color 1 Select: blue
		26–27	Blue / pink
		28–29	Color 1 Select: cri
		30–63	Cri / white
		64–79	Color 1 Continuous: open (2)
		80–95	Color 1 Continuous: red
		96–111	Color 1 Continuous: yellow
		112–127	Color 1 Continuous: magenta
		128–143	Color 1 Continuous: green
		144–159	Color 1 Continuous: orange
		160–175	Color 1 Continuous: blue
		176–190	Color 1 Continuous: cri
		191	Color 1 Continuous: open (3)
		192	Spin >>> fast
		193–222	Spin >>> fast ... spin >>> slow
		223	Spin >>> slow
		224	Spin <<< slow
		225–254	Spin <<< slow ... spin <<< fast
		255	Spin <<< fast
41	Cyan		Color C
		0–63	Min ... 25%
		64–127	25% ... 50%
		128–191	50% ... 75%
		191	75%
		192–255	75% ... max
		255	Max
42	Cyan Fine	0–255	Fine adjustment of CH 41
43	Magenta		Color M
		0–63	Min ... 25%
		64–127	25% ... 50%
		128–191	50% ... 75%

CH	Function	DMX	Description
43	Magenta (continued)	191	75%
		192–255	75% … max
		255	Max
44	Magenta Fine	0–255	Fine adjustment of CH 43
45	Yellow		Color Y
		0–63	Min … 25%
		64–127	25% … 50%
		128–191	50% … 75%
		191	75%
		192–255	75% … max
		255	Max
46	Yellow Fine	0–255	Fine adjustment of CH 45
47	CTO	0–63	Min … 25%
		64–127	25% … 50%
		128–191	50% … 75%
		191	75%
		192–255	75% … max
		255	Max
48	CTO Fine	0–255	Fine adjustment of CH 47
49	Sparkle		Same as CH 31 in the mode “Mode 1 (42 ch)” (p. 24)
50	Sparkle Speed		Same as CH 32 in the mode “Mode 1 (42 ch)” (p. 25)
51	Prism		Same as CH 33 in the mode “Mode 1 (42 ch)” (p. 25)
52	Prism Rotation	0–31	0 … 90
		32–63	90 … 180
		64–95	180 … 270
		96–127	270 … 360
		128–159	360 … 450
		159	450
		160–191	450 … 540
		191	540
		192	>>>
		192–222	Rotate 100__1% (1080–1 °/s)
		223–224	Prism 1 Pos Rotate: stop
		225–255	Rotate -1__-100% (1–1080 °/s)
		255	<<<
53	Prism Rotation Fine	0–255	Fine adjustment of CH 52
54	Prism 2		Same as CH 35 in the mode “Mode 1 (42 ch)” (p. 26)
55	Prism 2 Rotation	0–31	0 … 90
		32–63	90 … 180
		64–95	180 … 270
		96–127	270 … 360
		128–159	360 … 450

CH	Function	DMX	Description
55	Prism 2 Rotation (continued)	159	450
		160–191	450 ... 540
		191	540
		192	>>>
		192–222	Rotate 100__1% (1080–1 °/s)
		223–224	Prism 2 Pos Rotate: stop
		225–255	Rotate -1__-100% (1–1080 °/s)
		255	<<<
56	Prism 2 Rotation Fine	0–255	Fine adjustment of CH 55
57	Frost		Same as CH 37 in the mode “Mode 1 (42 ch)” (p. 26)
58	Frost 2		Same as CH 38 in the mode “Mode 1 (42 ch)” (p. 26)
59	Effects	0–255	
60	Speed Pan/Tilt		Same as CH 40 in the mode “Mode 1 (42 ch)” (p. 27)
61	Global Speed		Same as CH 41 in the mode “Mode 1 (42 ch)” (p. 27)
62	Blackout Mode		Same as CH 42 in the mode “Mode 1 (42 ch)” (p. 27)

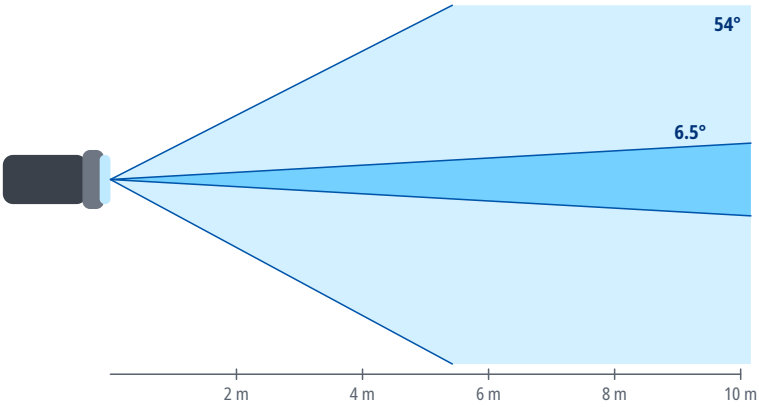
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	1,100 W
Luminous flux	72,000 lm
Color temperature	6,800 K
Color rendering index (CRI)	72
Optics	
Zoom	6.5–54°
Movement	
Pan	546.7°
Tilt	281.2°
Control	
DMX connection	5-pin XLR IN/OUT
RJ45 connectors	RJ45
RDM	yes (manufacturer ID 0x4A42, device model ID 0x0007)
Electrical	
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	32 kg
Operating environment	
Operating temperature	0 to 45 °C

Speeds and ranges

Parameter	Value
Color temperature range	2700–6800 K
Strobe frequency	0.1–20 Hz
Color wheel rotation	up to 360 °/s (60 rpm)
Gobo wheel 1 rotation	up to 360 °/s (60 rpm)
Gobo wheel 2 rotation	up to 360 °/s (60 rpm)
Gobo 2 rotation	up to 1080 °/s (180 rpm)
Prism 1 rotation	up to 1080 °/s (180 rpm)
Prism 2 rotation	up to 1080 °/s (180 rpm)

Spot diameter



Distance	Ø 6.5°	Ø 54°
2 m	0.23 m	2 m
4 m	0.45 m	4.1 m
6 m	0.68 m	6.1 m
8 m	0.91 m	8.2 m
10 m	1.1 m	10.2 m
15 m	1.7 m	15.3 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.