DMX REFERENCE

SS9193SC SC HC SC PRO-T16

Silver Star



Manufacturer	Silver Star
GDTF file	Silver_Star_SS9193SC_SC_HC_SC_PRO-T16_81088.gdtf
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1 About this manual

This document describes the SS9193SC SC HC SC PRO-T16 by Silver Star. It was compiled from the GDTF file Silver_Star_SS9193SC_SC_HC_SC_PRO-T16_81088.gdtf from the GDTF-Share library.

File revision: “SS9193SC”.

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 Silver Star; 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	45.5 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Extended	45	11	1, 46, 91, 136, ...
STANDARD	42	12	1, 43, 85, 127, ...
BASIC	36	14	1, 37, 73, 109, ...

No light? Check these channels

- Extended: CH 42 Dimmer above 0; CH 44 Shutter at 0–9, 100–109 or 180–189 “Open”
- STANDARD: CH 39 Dimmer above 0; CH 41 Shutter at 0–9, 100–109 or 180–189 “Open”
- BASIC: CH 34 Dimmer above 0; CH 35 Shutter at 0–9, 100–109 or 180–189 “Open”


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

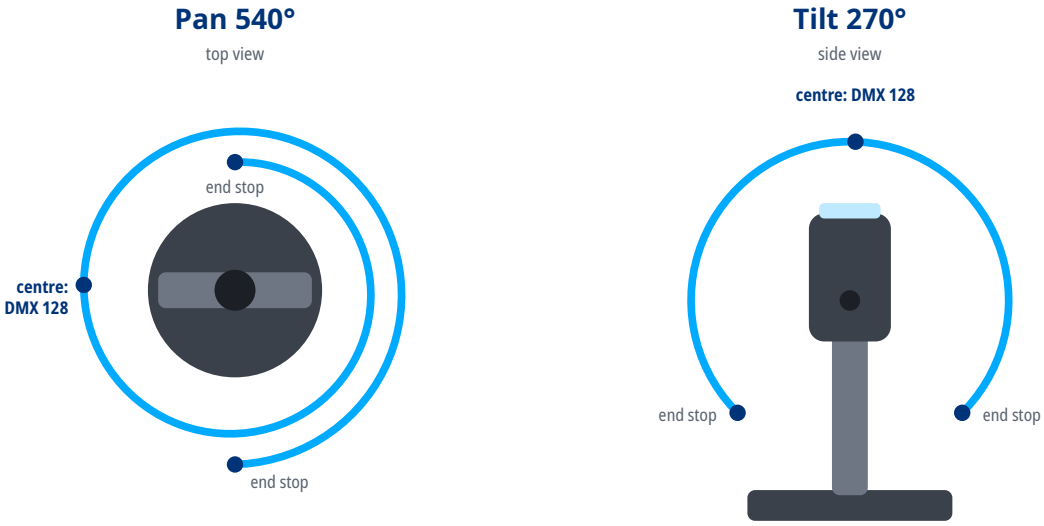
- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them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

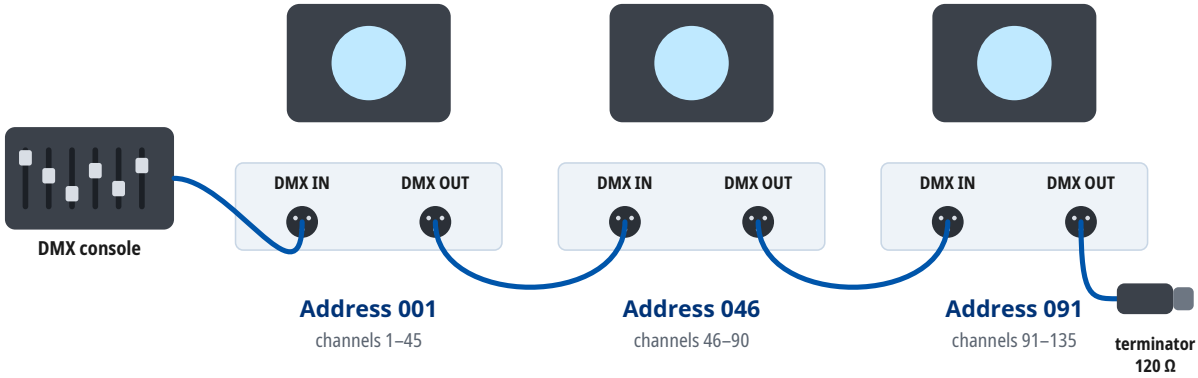
- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 45.5 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: every unit occupies 45 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

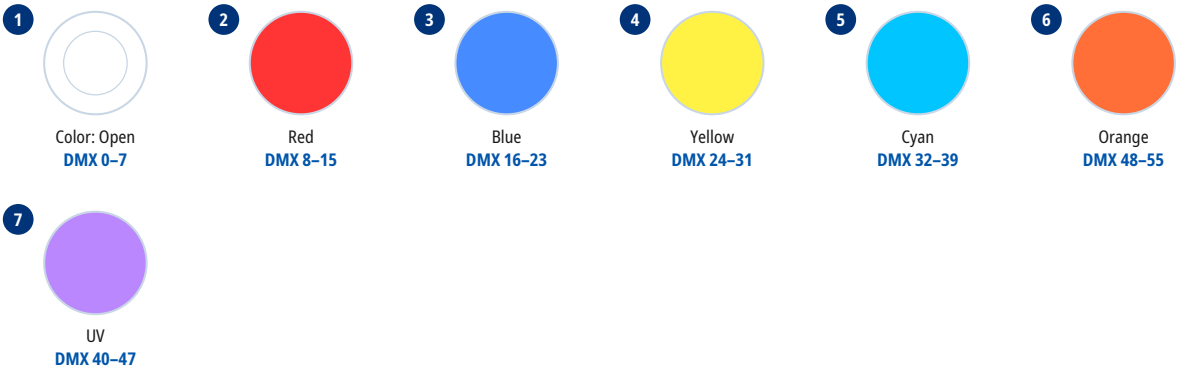
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Extended”: 45.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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”, you can use, for example, the start addresses 1, 46, 91, 136.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

8 Functions at a glance

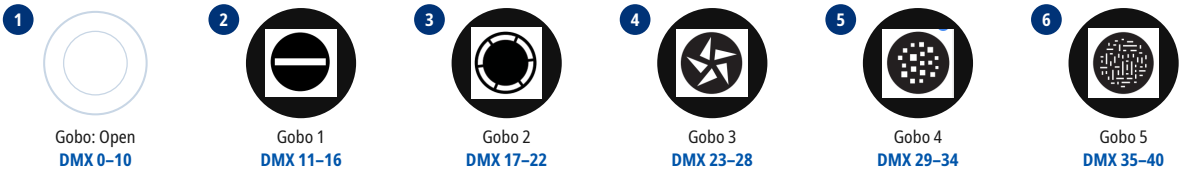
Functions in each DMX mode

	Extended 45 channels	STANDARD 42 channels	BASIC 36 channels
Pan / Tilt	1, 3	1, 3	1, 2
Pan / Tilt resolution	16 bit	16 bit	8 bit
Dimmer	42	39	34
Dimmer resolution	16 bit	16 bit	8 bit
Shutter / strobe	44	41	35
Color mixing	6–8	6–8	4–6
Color temperature	9	9	7
Color wheel	12	12	10
Gobo wheel	14, 17, 18	13, 16, 17	11, 13, 14
Gobo rotation	15, 19	14, 18	12, 15
Prism	20, 21	19, 20	16, 17
Frost	22, 23	21, 22	18, 19
Zoom	26	24	21
Focus	28, 30	26, 28	22, 23
Iris	24	23	20
Effects / macros	10	10	8

Color wheel



Gobo wheel 1



1. Gobo: Open — DMX 0–10
2. Gobo 1 — DMX 11–16
3. Gobo 2 — DMX 17–22
4. Gobo 3 — DMX 23–28
5. Gobo 4 — DMX 29–34
6. Gobo 5 — DMX 35–40
7. Gobo 6 — DMX 41–46
8. Gobo 7 — DMX 47–52
9. Gobo 8 — DMX 53–59

Gobo wheel 2

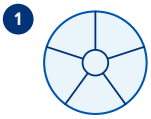
1	Gobo: Open — DMX 0–10	4	Gobo 3 — DMX 27–34	7	Gobo 6 — DMX 51–58
2	Gobo 1 — DMX 11–18	5	Gobo 4 — DMX 35–42	8	Gobo 7 — DMX 59–67
3	Gobo 2 — DMX 19–26	6	Gobo 5 — DMX 43–50		

Prism 1



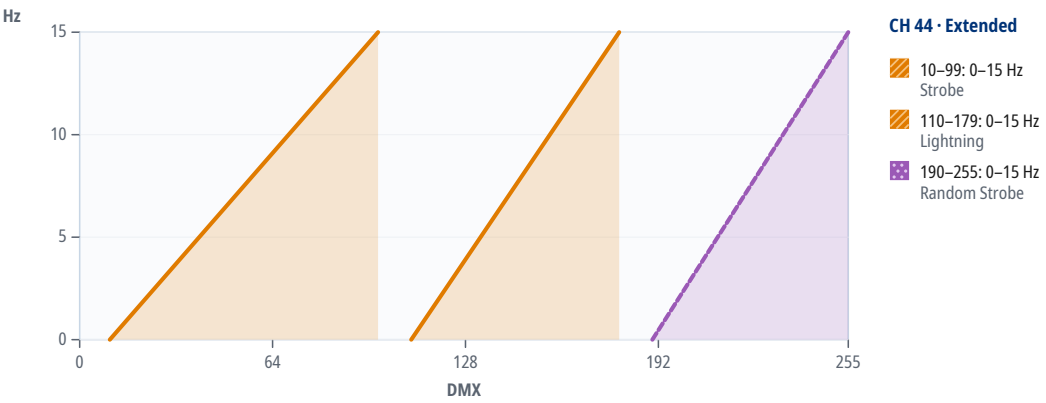
1. Prism 1: Open — DMX 0–10
2. 4 facets — 4 Facet Prism — DMX 11–12

Prism 2



1. 5 facets — Prism: Open — DMX 0–10

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Extended”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	226	11	451	16	U2 · 181
2	46	7	271	12	U2 · 1	17	U2 · 226
3	91	8	316	13	U2 · 46	18	U2 · 271
4	136	9	361	14	U2 · 91	19	U2 · 316
5	181	10	406	15	U2 · 136	20	U2 · 361

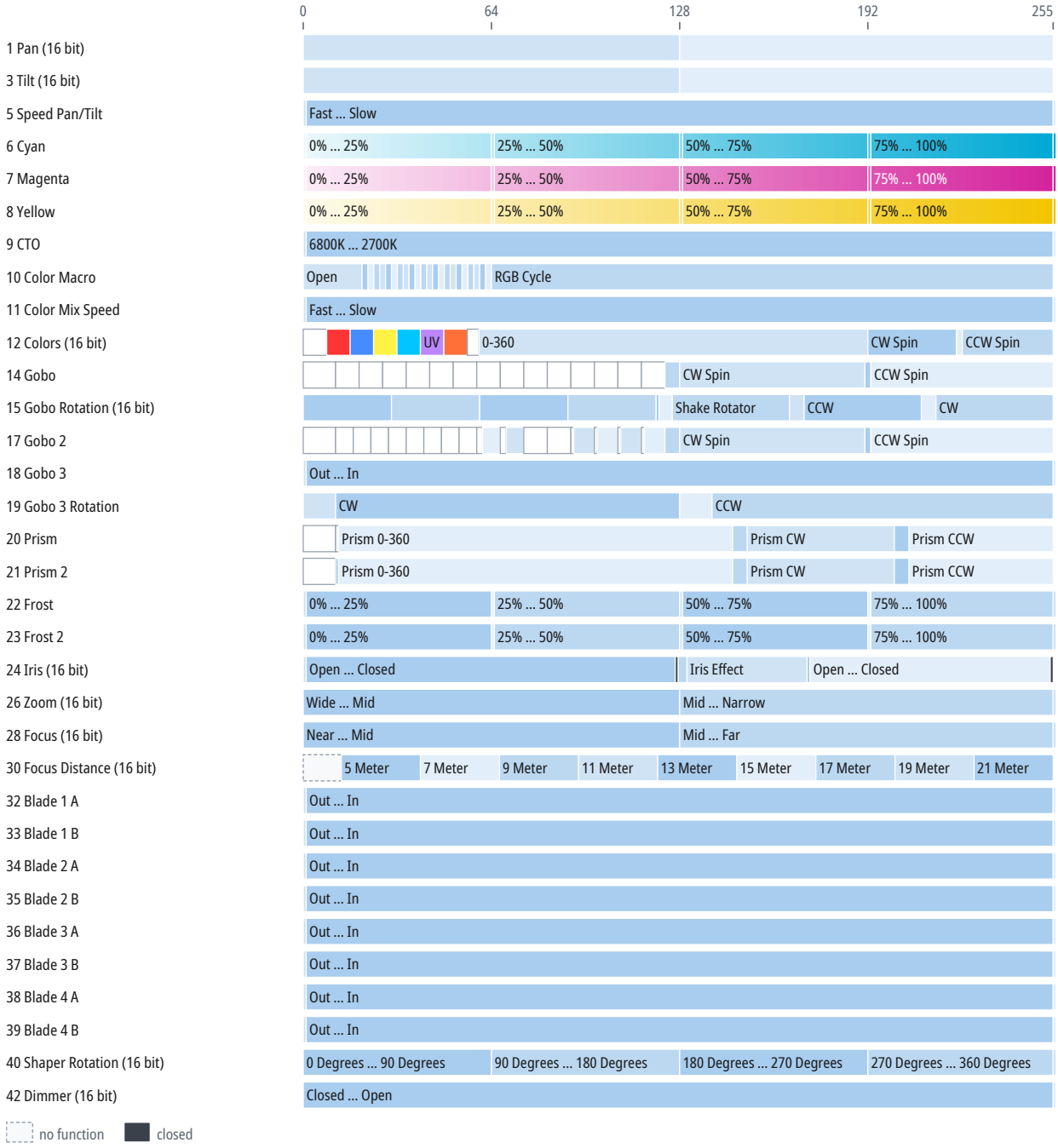
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode Extended

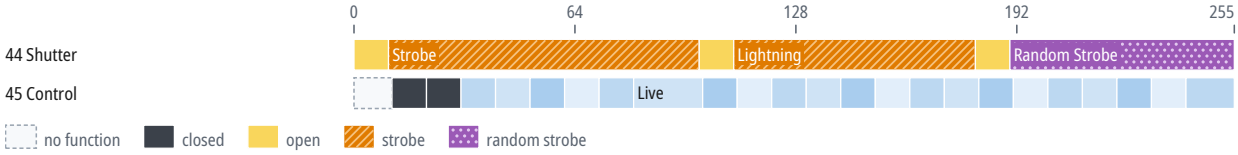
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 42 Dimmer above 0; CH 44 Shutter at 0–9, 100–109 or 180–189 “Open”. The GDTF file gives these values for a console's Highlight function: CH 6 Cyan 0, CH 7 Magenta 0, CH 8 Yellow 0, CH 9 CTO 0, CH 10 Color Macro 0, CH 12 Colors 0, CH 42 Dimmer 255, CH 44 Shutter 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–128	Pan 1
		128	Home
		128–255	Pan 1
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–128	Tilt 1
		128	Home
		128–255	Tilt 1
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0	Fast
		1–254	Fast ... Slow
		255	Slow
6	Cyan	0	0%
		1–63	0% ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... 100%
		255	100%
7	Magenta	0	0%
		1–63	0% ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%
		192	75%
		193–254	75% ... 100%
		255	100%
8	Yellow	0	0%
		1–63	0% ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%
		129–191	50% ... 75%

CH	Function	DMX	Description
8	Yellow (continued)	192	75%
		193–254	75% … 100%
		255	100%
9	CTO	0	6800K
		1–254	6800K … 2700K
		255	2700K
10	Color Macro	0–19	Open
		20–21	3000K
		22–23	3200K
		24–25	3500K
		26–27	4000K
		28–29	4500K
		30–31	5000K
		32–33	5400K
		34–35	5600K
		36–37	6000K
		38–39	6500K
		40–41	6800K
		42–43	L106
		44–45	L194
		46–47	L019
		48–49	R08
		50–51	L213
		52–53	R80
		54–55	L202
		56–57	L328
		58–59	R3314
		60–61	L101
		62–63	L768
		64–255	RGB Cycle
11	Color Mix Speed	0	Fast
		1–254	Fast … Slow
		255	Slow
12	Colors	0–7	Color: Open
		8–15	Red
		16–23	Blue
		24–31	Yellow
		32–39	Cyan
		40–47	UV
		48–55	Orange
		56–59	Color: Open
		60–192	0-360

CH	Function	DMX	Description
12	Colors (continued)	192–222	CW Spin
		223–224	Color 1 Wheel Spin: Stop
		225–255	CCW Spin
13	Colors Fine	0–255	Fine adjustment of CH 12
14	Gobo	0–10	Gobo: Open
		11–18	Gobo 1
		19–26	Gobo 2
		27–34	Gobo 3
		35–42	Gobo 4
		43–50	Gobo 5
		51–58	Gobo 6
		59–66	Gobo 7
		67–74	Gobo 1 Wheel Shake: Gobo 1
		75–82	Gobo 1 Wheel Shake: Gobo 2
		83–90	Gobo 1 Wheel Shake: Gobo 3
		91–98	Gobo 1 Wheel Shake: Gobo 4
		99–106	Gobo 1 Wheel Shake: Gobo 5
		107–114	Gobo 1 Wheel Shake: Gobo 6
		115–122	Gobo 1 Wheel Shake: Gobo 7
		123–127	Gobo 1 Wheel Spin: Open
		128–190	CW Spin
		191–192	Gobo 1 Wheel Spin: Stop
		193–255	CCW Spin
15	Gobo Rotation	0–30	0 Degrees ... 90 Degrees
		30–60	90 Degrees ... 180 Degrees
		60–90	180 Degrees ... 270 Degrees
		90–120	270 Degrees ... 360 Degrees
		120	360 Degrees
		120–121	Gobo 1 Pos
		121–125	Gobo 1 Pos Rotate: Stop
		126–165	Shake Rotator
		166–170	Gobo 1 Pos Rotate: Stop
		171–210	CCW
		211–215	Gobo 1 Pos Rotate: Stop
		216–255	CW
16	Gobo Rotation Fine	0–255	Fine adjustment of CH 15
17	Gobo 2	0–10	Gobo: Open
		11–16	Gobo 1
		17–22	Gobo 2
		23–28	Gobo 3
		29–34	Gobo 4
		35–40	Gobo 5

CH	Function	DMX	Description
17	Gobo 2 (continued)	41–46	Gobo 6
		47–52	Gobo 7
		53–58	Gobo 8
		59–60	Gobo 2 Wheel Shake: Gobo 1
		61–66	Gobo 1 ... Gobo 2
		67–68	Gobo 2 Wheel Shake: Gobo 2
		69–74	Gobo 2 ... Gobo 3
		75–82	Gobo 2 Wheel Shake: Gobo 3
		83–90	Gobo 2 Wheel Shake: Gobo 4
		91	Gobo 2 Wheel Shake: Gobo 5
		92–98	Gobo 5 ... Gobo 6
		99	Gobo 2 Wheel Shake: Gobo 6
		100–106	Gobo 6 ... Gobo 7
		107	Gobo 2 Wheel Shake: Gobo 7
		108–114	Gobo 7 ... Gobo 8
		115	Gobo 2 Wheel Shake: Gobo 8
		116–122	Gobo 2 Wheel Shake
		123–127	Gobo 2 Wheel Spin: Open
		128–190	CW Spin
		191–192	Gobo 2 Wheel Spin: Stop
		193–255	CCW Spin
18	Gobo 3	0	Out
		1–254	Out ... In
		255	In
19	Gobo 3 Rotation	0–10	Open
		11–127	CW
		128–138	Stop
		139–255	CCW
20	Prism	0–10	Prism 1: Open
		11	4 Facet Prism
		12–145	Prism 0-360 (360°)
		146–150	Prism 1 Pos Rotate: Stop
		151–200	Prism CW
		201–205	Prism 1 Pos Rotate: Stop
		206–255	Prism CCW
21	Prism 2	0–10	Prism: Open
		11	4 Facet Prism
		12–145	Prism 0-360 (360°)
		146–150	Prism 2 Pos Rotate: Stop
		151–200	Prism CW
		201–205	Prism 2 Pos Rotate: Stop
		206–255	Prism CCW

CH	Function	DMX	Description
22	Frost	0	0%
		1–63	0% … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–191	50% … 75%
		192	75%
		193–254	75% … 100%
		255	100%
23	Frost 2	0	0%
		1–63	0% … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–191	50% … 75%
		192	75%
		193–254	75% … 100%
		255	100%
24	Iris	0	Open
		1–126	Open … Closed
		127	Closed
		128–130	Open
		131–171	Iris Effect
		172	Open
		173–254	Open … Closed
		255	Closed
25	Iris Fine	0–255	Fine adjustment of CH 24
26	Zoom	0–128	Wide … Mid
		128–255	Mid … Narrow
		255	Narrow
27	Zoom Fine	0–255	Fine adjustment of CH 26
28	Focus	0–128	Near … Mid
		128–255	Mid … Far
		255	Far
29	Focus Fine	0–255	Fine adjustment of CH 28
30	Focus Distance	0–12	No Function
		13–39	5 Meter
		40–66	7 Meter
		67–93	9 Meter
		94–120	11 Meter
		121–147	13 Meter
		148–174	15 Meter

CH	Function	DMX	Description
30	Focus Distance (continued)	175–201	17 Meter
		202–228	19 Meter
		229–255	21 Meter
31	Focus Distance Fine	0–255	Fine adjustment of CH 30
32	Blade 1 A	0	Out
		1–254	Out ... In
		255	In
33	Blade 1 B	0	Out
		1–254	Out ... In
		255	In
34	Blade 2 A	0	Out
		1–254	Out ... In
		255	In
35	Blade 2 B	0	Out
		1–254	Out ... In
		255	In
36	Blade 3 A	0	Out
		1–254	Out ... In
		255	In
37	Blade 3 B	0	Out
		1–254	Out ... In
		255	In
38	Blade 4 A	0	Out
		1–254	Out ... In
		255	In
39	Blade 4 B	0	Out
		1–254	Out ... In
		255	In
40	Shaper Rotation	0–64	0 Degrees ... 90 Degrees
		64–128	90 Degrees ... 180 Degrees
		128–192	180 Degrees ... 270 Degrees
		192–255	270 Degrees ... 360 Degrees
		255	360 Degrees
41	Shaper Rotation Fine	0–255	Fine adjustment of CH 40
42	Dimmer	0–255	Closed ... Open
		255	Open
43	Dimmer Fine	0–255	Fine adjustment of CH 42
44	Shutter	0–9	Shutter 1: Open
		10–99	Strobe (0–15 Hz)
		100–109	Open
		110–179	Lightning (0–15 Hz)
		180–189	Open

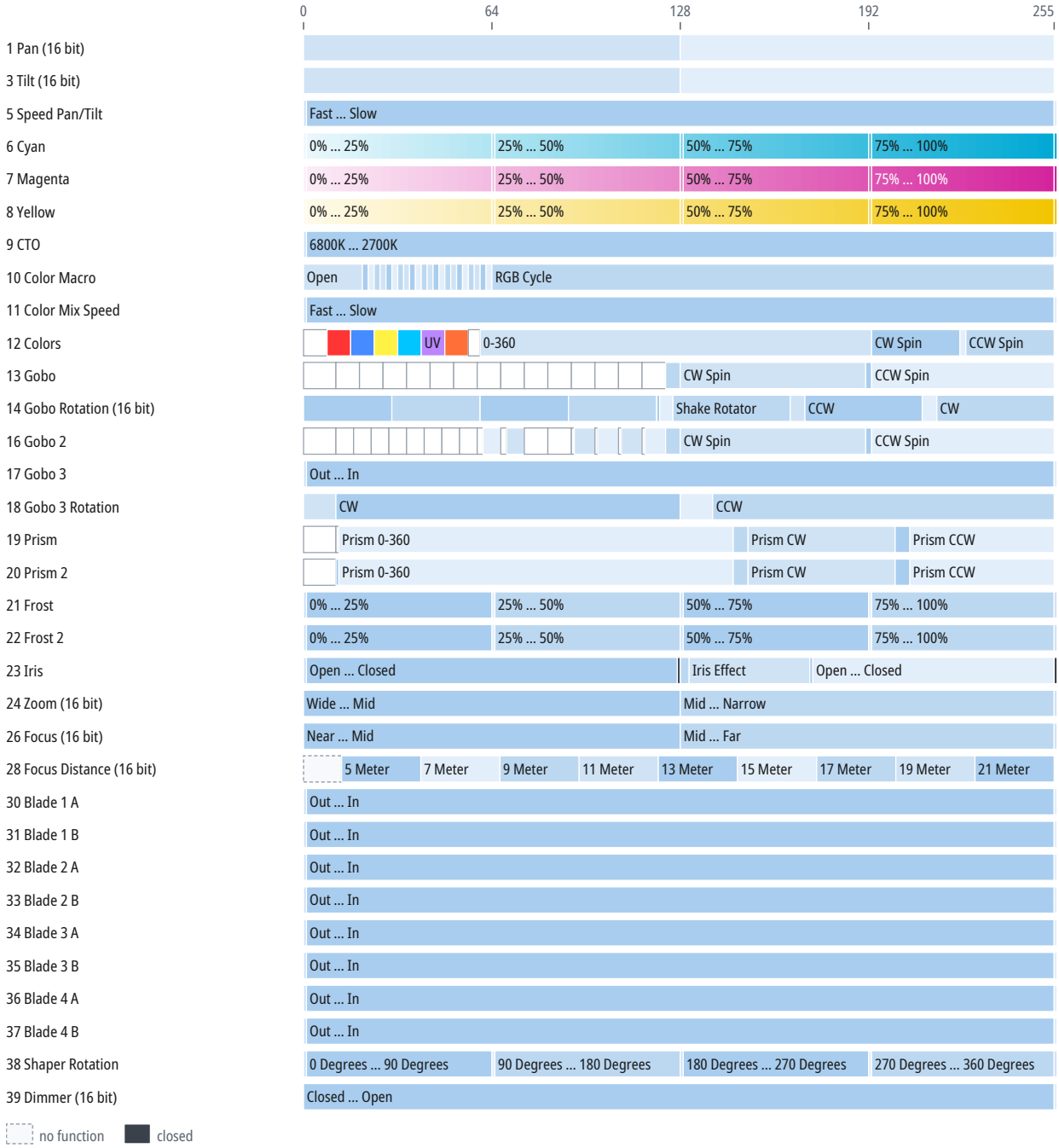
CH	Function	DMX	Description
44	Shutter (continued)	190–255	Random Strobe (0–15 Hz)
45	Control	0–10	No Function
		11–20	P/T Blackout On
		21–30	P/T Blackout Off
		31–40	Pan Invert
		41–50	Tilt Invert
		51–60	P/T Invert Off
		61–70	Studio
		71–80	Power
		81–100	Live
		101–110	Dim 4
		111–120	Dim 3
		121–130	Dim 2
		131–140	Dim 1
		141–150	Dim 0
		151–160	1200Hz
		161–170	2400Hz
		171–180	4000Hz
		181–190	6000Hz
		191–200	25000Hz
		201–210	All Reset
		211–220	P/T Reset
		221–230	Color Reset
		231–240	Focus/Zoom Reset
		241–255	Frame Reset

Mode STANDARD

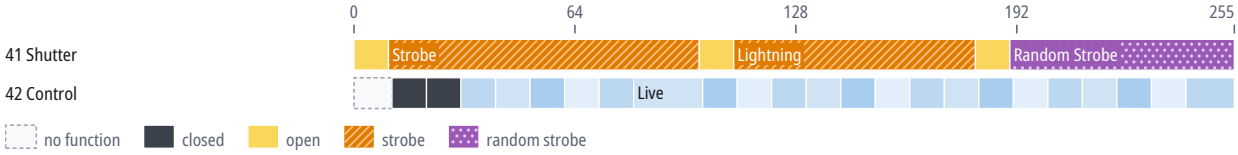
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 39 Dimmer above 0; CH 41 Shutter at 0–9, 100–109 or 180–189 “Open”. The GDTF file gives these values for a console's Highlight function: CH 6 Cyan 0, CH 7 Magenta 0, CH 8 Yellow 0, CH 9 CTO 0, CH 10 Color Macro 0, CH 12 Colors 0, CH 39 Dimmer 255, CH 41 Shutter 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” (p. 11)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “Extended” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 5 in the mode “Extended” (p. 11)
6	Cyan		Same as CH 6 in the mode “Extended” (p. 11)
7	Magenta		Same as CH 7 in the mode “Extended” (p. 11)
8	Yellow		Same as CH 8 in the mode “Extended” (p. 11)
9	CTO		Same as CH 9 in the mode “Extended” (p. 12)
10	Color Macro		Same as CH 10 in the mode “Extended” (p. 12)
11	Color Mix Speed		Same as CH 11 in the mode “Extended” (p. 12)
12	Colors	0–7	Color: Open
		8–15	Red
		16–23	Blue
		24–31	Yellow
		32–39	Cyan
		40–47	UV
		48–55	Orange
		56–59	Color: Open
		60–192	0-360
		193–222	CW Spin
		223–224	Color 1 Wheel Spin: Stop
		225–255	CCW Spin
13	Gobo		Same as CH 14 in the mode “Extended” (p. 13)
14	Gobo Rotation		Same as CH 15 in the mode “Extended” (p. 13)
15	Gobo Rotation Fine	0–255	Fine adjustment of CH 14
16	Gobo 2		Same as CH 17 in the mode “Extended” (p. 13)
17	Gobo 3		Same as CH 18 in the mode “Extended” (p. 14)
18	Gobo 3 Rotation		Same as CH 19 in the mode “Extended” (p. 14)
19	Prism		Same as CH 20 in the mode “Extended” (p. 14)
20	Prism 2		Same as CH 21 in the mode “Extended” (p. 14)
21	Frost		Same as CH 22 in the mode “Extended” (p. 15)
22	Frost 2		Same as CH 23 in the mode “Extended” (p. 15)
23	Iris		Same as CH 24 in the mode “Extended” (p. 15)
24	Zoom		Same as CH 26 in the mode “Extended” (p. 15)

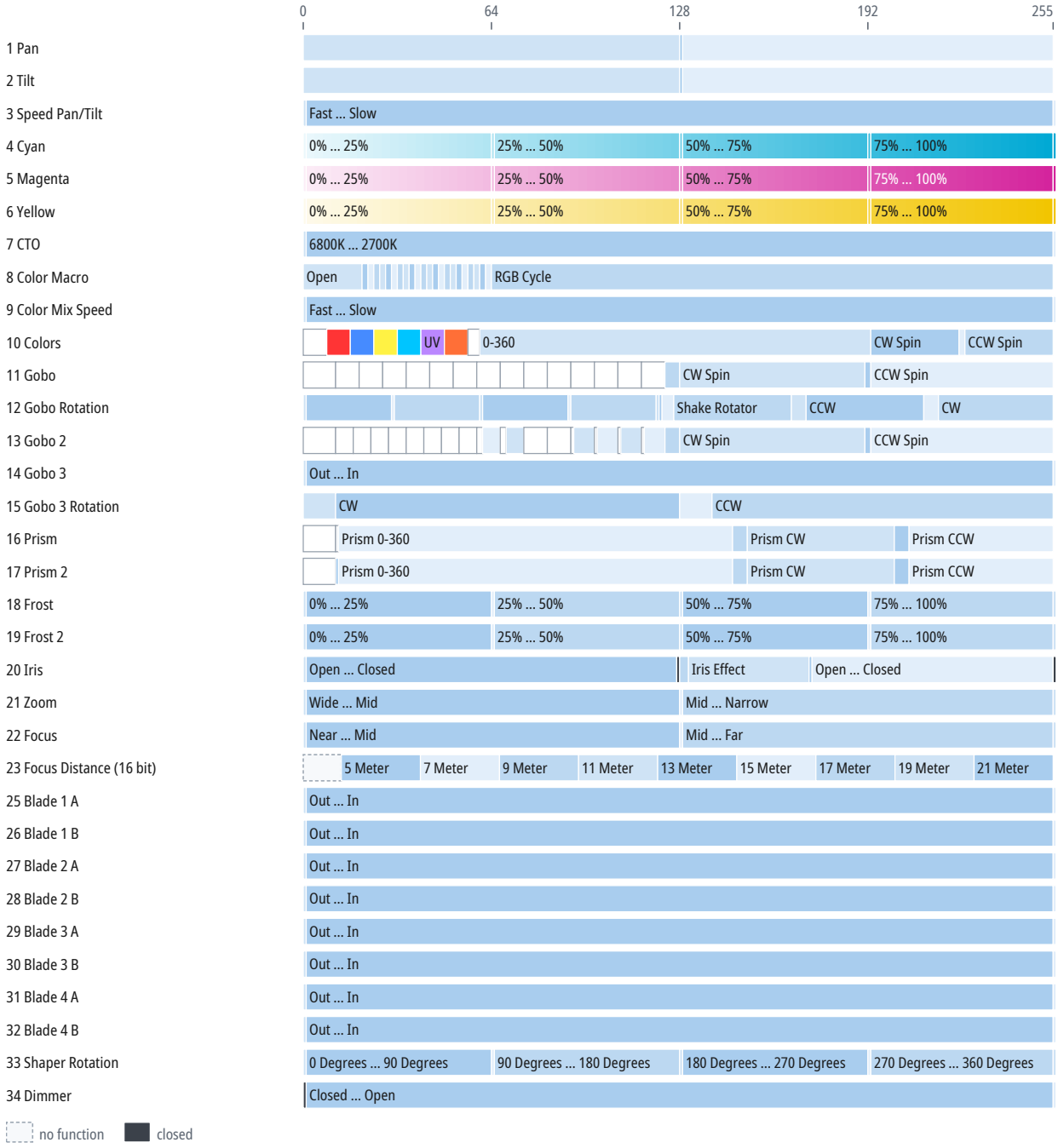
CH	Function	DMX	Description
25	Zoom Fine	0–255	Fine adjustment of CH 24
26	Focus		Same as CH 28 in the mode “Extended” (p. 15)
27	Focus Fine	0–255	Fine adjustment of CH 26
28	Focus Distance		Same as CH 30 in the mode “Extended” (p. 15)
29	Focus Distance Fine	0–255	Fine adjustment of CH 28
30	Blade 1 A		Same as CH 32 in the mode “Extended” (p. 16)
31	Blade 1 B		Same as CH 33 in the mode “Extended” (p. 16)
32	Blade 2 A		Same as CH 34 in the mode “Extended” (p. 16)
33	Blade 2 B		Same as CH 35 in the mode “Extended” (p. 16)
34	Blade 3 A		Same as CH 36 in the mode “Extended” (p. 16)
35	Blade 3 B		Same as CH 37 in the mode “Extended” (p. 16)
36	Blade 4 A		Same as CH 38 in the mode “Extended” (p. 16)
37	Blade 4 B		Same as CH 39 in the mode “Extended” (p. 16)
38	Shaper Rotation	0	0 Degrees
		1–63	0 Degrees ... 90 Degrees
		64	90 Degrees
		65–127	90 Degrees ... 180 Degrees
		128	180 Degrees
		129–191	180 Degrees ... 270 Degrees
		192	270 Degrees
		193–254	270 Degrees ... 360 Degrees
		255	360 Degrees
39	Dimmer		Same as CH 42 in the mode “Extended” (p. 16)
40	Dimmer Fine	0–255	Fine adjustment of CH 39
41	Shutter		Same as CH 44 in the mode “Extended” (p. 16)
42	Control		Same as CH 45 in the mode “Extended” (p. 17)

Mode BASIC

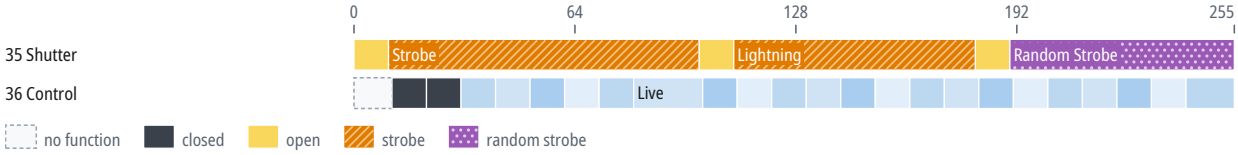
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 34 Dimmer above 0; CH 35 Shutter at 0–9, 100–109 or 180–189 “Open”. The GDTF file gives these values for a console's Highlight function: CH 4 Cyan 0, CH 5 Magenta 0, CH 6 Yellow 0, CH 7 CTO 0, CH 8 Color Macro 0, CH 10 Colors 0, CH 34 Dimmer 255, CH 35 Shutter 0.

Channel functions at a glance



Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan 1
		128	Home
		129–255	Pan 1
2	Tilt	0–127	Tilt 1
		128	Home
		129–255	Tilt 1
3	Speed Pan/Tilt		Same as CH 5 in the mode “Extended” (p. 11)
4	Cyan		Same as CH 6 in the mode “Extended” (p. 11)
5	Magenta		Same as CH 7 in the mode “Extended” (p. 11)
6	Yellow		Same as CH 8 in the mode “Extended” (p. 11)
7	CTO		Same as CH 9 in the mode “Extended” (p. 12)
8	Color Macro		Same as CH 10 in the mode “Extended” (p. 12)
9	Color Mix Speed		Same as CH 11 in the mode “Extended” (p. 12)
10	Colors		Same as CH 12 in the mode “STANDARD” (p. 19)
11	Gobo		Same as CH 14 in the mode “Extended” (p. 13)
12	Gobo Rotation	0	0 Degrees
		1–29	0 Degrees ... 90 Degrees
		30	90 Degrees
		31–59	90 Degrees ... 180 Degrees
		60	180 Degrees
		61–89	180 Degrees ... 270 Degrees
		90	270 Degrees
		91–119	270 Degrees ... 360 Degrees
		120	360 Degrees
		121	Gobo 1 Pos
		122–125	Gobo 1 Pos Rotate: Stop
		126–165	Shake Rotator
		166–170	Gobo 1 Pos Rotate: Stop
		171–210	CCW
		211–215	Gobo 1 Pos Rotate: Stop
		216–255	CW
13	Gobo 2		Same as CH 17 in the mode “Extended” (p. 13)
14	Gobo 3		Same as CH 18 in the mode “Extended” (p. 14)
15	Gobo 3 Rotation		Same as CH 19 in the mode “Extended” (p. 14)
16	Prism		Same as CH 20 in the mode “Extended” (p. 14)

CH	Function	DMX	Description
17	Prism 2		Same as CH 21 in the mode “Extended” (p. 14)
18	Frost		Same as CH 22 in the mode “Extended” (p. 15)
19	Frost 2		Same as CH 23 in the mode “Extended” (p. 15)
20	Iris		Same as CH 24 in the mode “Extended” (p. 15)
21	Zoom	0	Wide
		1–127	Wide ... Mid
		128	Mid
		129–254	Mid ... Narrow
		255	Narrow
22	Focus	0	Near
		1–127	Near ... Mid
		128	Mid
		129–254	Mid ... Far
		255	Far
23	Focus Distance		Same as CH 30 in the mode “Extended” (p. 15)
24	Focus Distance Fine	0–255	Fine adjustment of CH 23
25	Blade 1 A		Same as CH 32 in the mode “Extended” (p. 16)
26	Blade 1 B		Same as CH 33 in the mode “Extended” (p. 16)
27	Blade 2 A		Same as CH 34 in the mode “Extended” (p. 16)
28	Blade 2 B		Same as CH 35 in the mode “Extended” (p. 16)
29	Blade 3 A		Same as CH 36 in the mode “Extended” (p. 16)
30	Blade 3 B		Same as CH 37 in the mode “Extended” (p. 16)
31	Blade 4 A		Same as CH 38 in the mode “Extended” (p. 16)
32	Blade 4 B		Same as CH 39 in the mode “Extended” (p. 16)
33	Shaper Rotation		Same as CH 38 in the mode “STANDARD” (p. 20)
34	Dimmer	0	Closed
		1–254	Closed ... Open
		255	Open
35	Shutter		Same as CH 44 in the mode “Extended” (p. 16)
36	Control		Same as CH 45 in the mode “Extended” (p. 17)

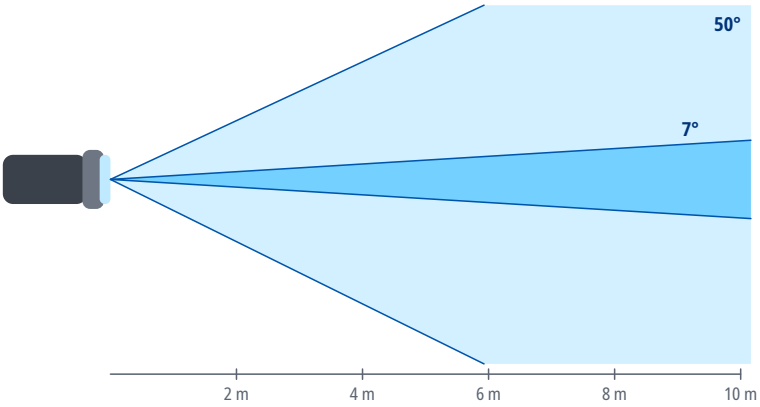
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	1,600 W
Luminous flux	34,000 lm
Color temperature	6,800 K
Color rendering index (CRI)	95
Optics	
Zoom	7–50°
Movement	
Pan	540°
Tilt	270°
Dimensions and construction	
Weight	45.5 kg
Operating environment	
Operating temperature	0 to 45 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0–15 Hz
Color wheel rotation	up to 180 °/s (30 rpm)
Gobo wheel 1 rotation	up to 180 °/s (30 rpm)
Gobo wheel 2 rotation	up to 180 °/s (30 rpm)
Gobo 2 rotation	up to 180 °/s (30 rpm)
Prism 1 rotation	up to 180 °/s (30 rpm)
Prism 2 rotation	up to 180 °/s (30 rpm)

Spot diameter



Distance	Ø 7°	Ø 50°
2 m	0.24 m	1.9 m
4 m	0.49 m	3.7 m
6 m	0.73 m	5.6 m
8 m	0.98 m	7.5 m
10 m	1.2 m	9.3 m
15 m	1.8 m	14 m

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

11 Maintenance and cleaning

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

12 Troubleshooting

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

13 Disposal

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

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

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

Recycle the packaging materials according to their type.