DMX REFERENCE

LUNAR MAX

LIGHT SKY



Manufacturer	LIGHT SKY
GDTF file	LIGHT_SKY_LUNAR_MAX_95099.gdtf
GDTF revision	V2.8 · 2025-04-30
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1 About this manual

This document describes the LUNAR MAX by LIGHT SKY. It was compiled from the GDTF file LIGHT_SKY_LUNAR_MAX_95099.gdtf from the GDTF-Share library.

File revision: “V2.8”.

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 LIGHT SKY; product names and trademarks belong to their owners.

Safety notices are marked with signal words according to the severity of the hazard: DANGER – an imminent hazard that will result in death or serious injury; WARNING – a potential hazard that could result in death or serious injury; CAUTION – a potential hazard that could result in minor injury or property damage; NOTE – additional information for correct and safe use.

> **NOTE** This product is designed for stage and effect lighting. It is not suitable for household room illumination.

2 Quick reference

Parameter	Value
Weight	22.5 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Mode 16CH Plus	16	32	1, 17, 33, 49, ...
Mode 16CH	16	32	1, 17, 33, 49, ...
Mode 14CH	14	36	1, 15, 29, 43, ...

No light? Check these channels

- Mode 16CH Plus: CH 2 Strobe at 104–107 “Open” or 208–212 or 252–255; CH 3 Dimmer above 0
- Mode 16CH: CH 2 Strobe at 104–107 “Open” or 208–212 or 252–255; CH 3 Dimmer above 0
- Mode 14CH: CH 2 Strobe at 104–107 “Open” or 208–212 or 252–255; CH 3 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

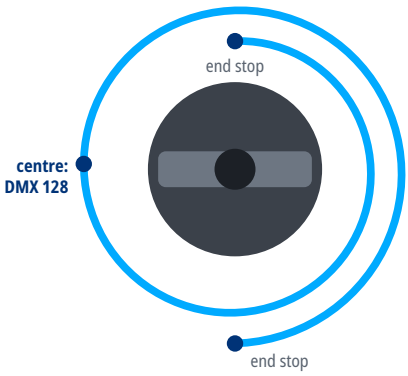
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts,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

Range of movement

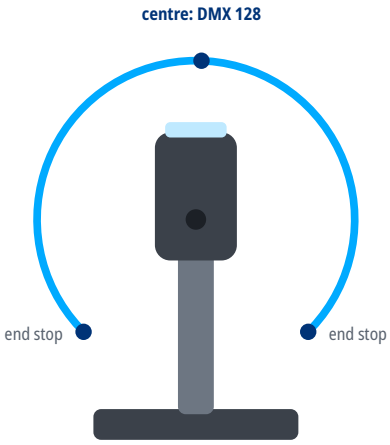
Pan 540°

top view



Tilt 270°

side view



5 Installation

⚠ WARNING

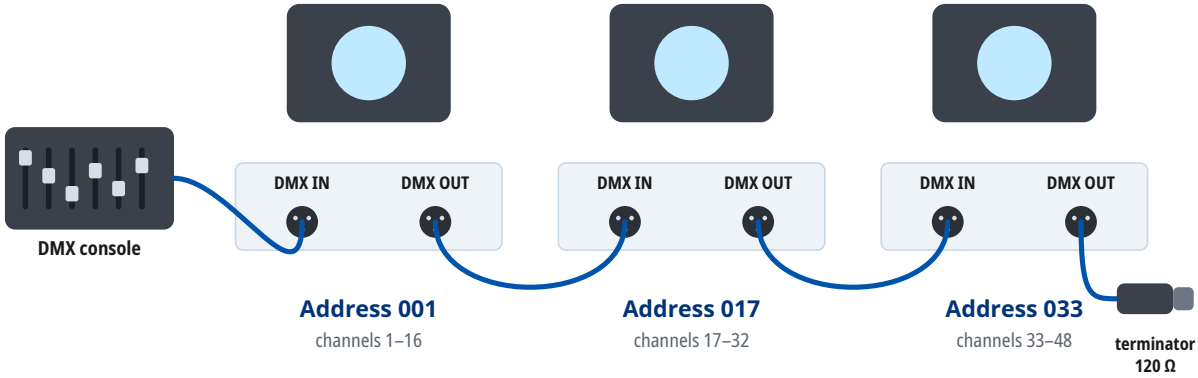
- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 22.5 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 16CH Plus: every unit occupies 16 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

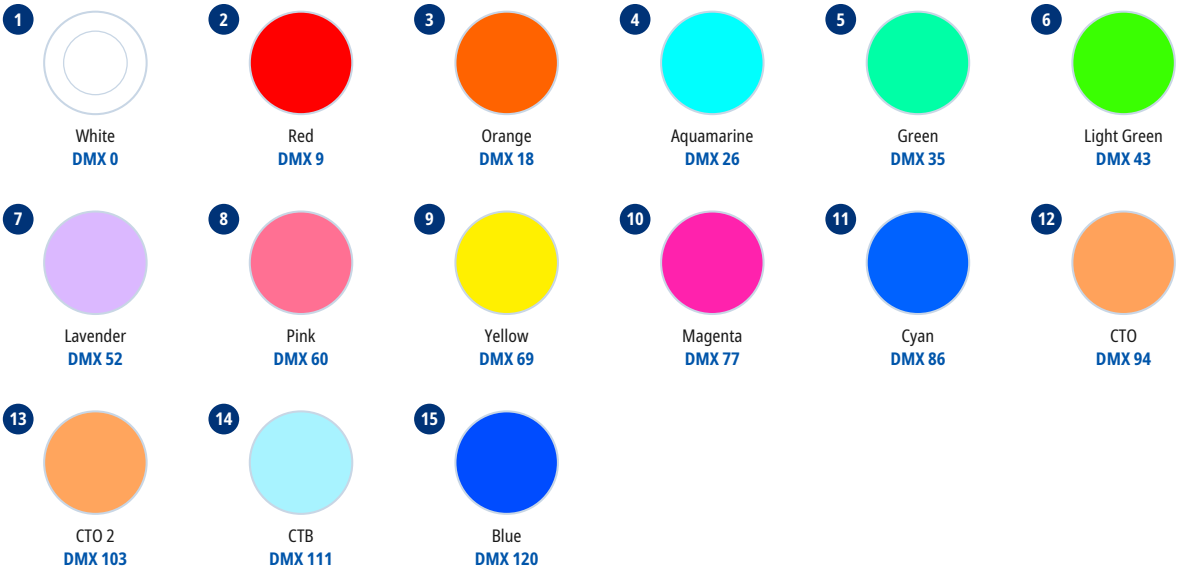
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Mode 16CH Plus”: 16.
- Choose start addresses so that the channels of individual devices do not overlap and the last 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 16CH Plus”, you can use, for example, the start addresses 1, 17, 33, 49.
- 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

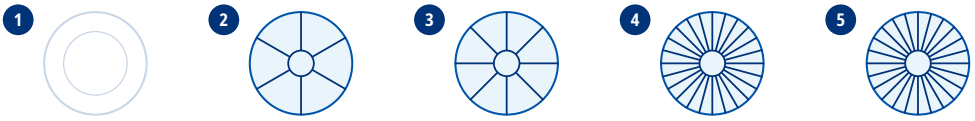
Functions in each DMX mode

	Mode 16CH Plus 16 channels	Mode 16CH 16 channels	Mode 14CH 14 channels
Pan / Tilt	10, 12	10, 12	10, 12
Dimmer	3	3	3
Shutter / strobe	2	2	2
Color wheel	1	1	1
Gobo wheel	4	4	4
Prism	5–7	5–7	5–7
Frost	8	8	8
Focus	9	9	9
Effects / macros	7	7	7

Color wheel



Prism

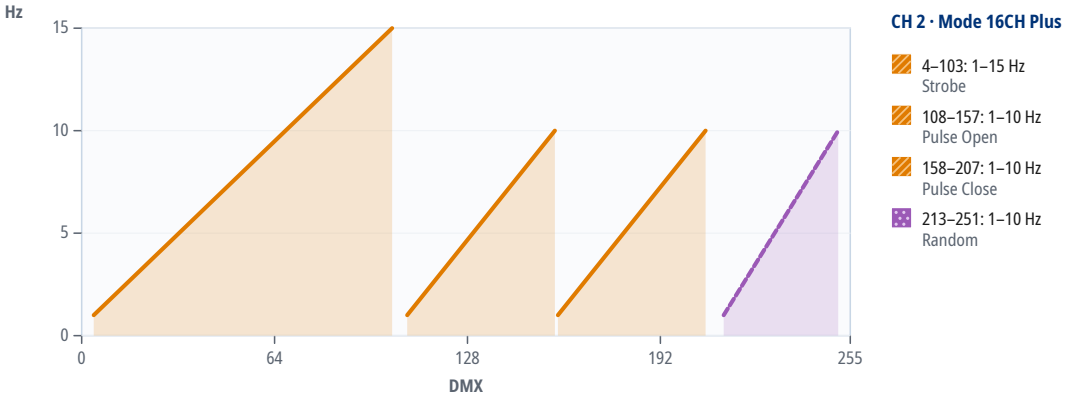


Gobo wheel



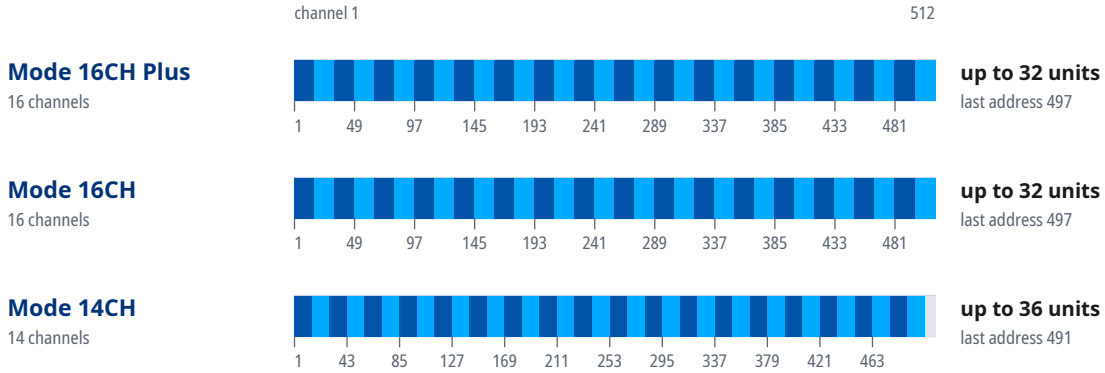
1 Gobo: Open DMX 0
2 Gobo 1 DMX 4
3 Gobo 2 DMX 8
4 Gobo 3 DMX 12
5 Gobo 4 DMX 16
6 Gobo 5 DMX 20
7 Gobo 6 DMX 24
8 Gobo 7 DMX 28
9 Gobo 8 DMX 32
10 Gobo 9 DMX 36
11 Gobo 10 DMX 40
12 Gobo 11 DMX 44
13 Gobo 12 DMX 48
14 Gobo 13 DMX 52
15 Gobo 14 DMX 56
16 Gobo 15 DMX 60
17 Gobo 16 DMX 64
18 Gobo 17 DMX 68

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Mode 16CH Plus”

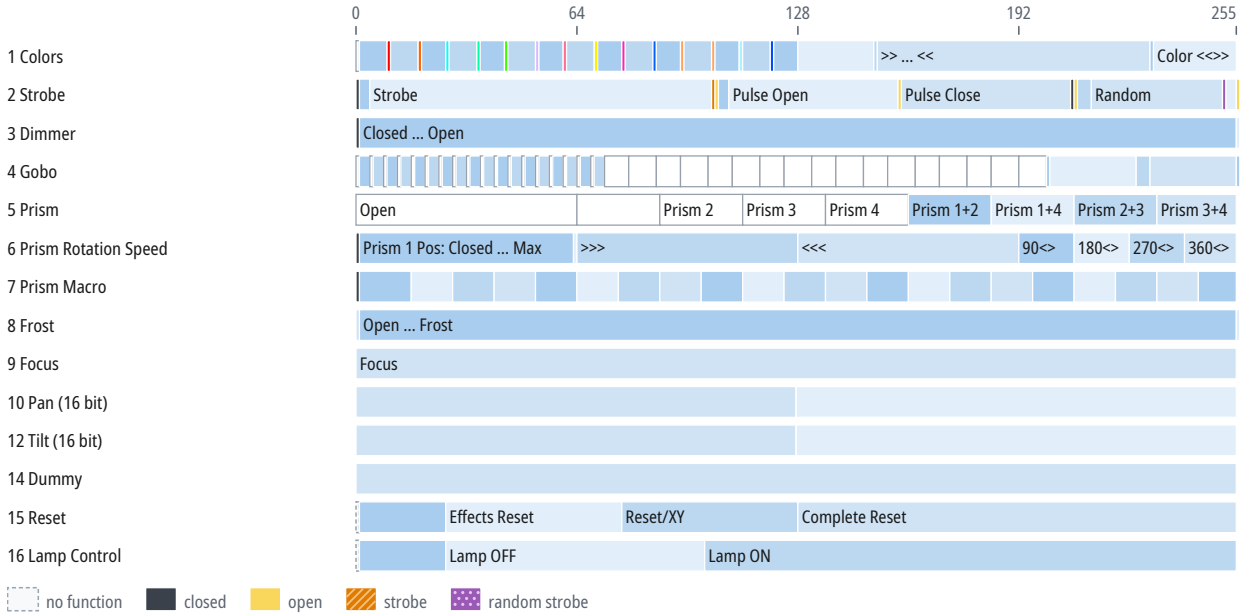
Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	81	11	161	16	241
2	17	7	97	12	177	17	257
3	33	8	113	13	193	18	273
4	49	9	129	14	209	19	289
5	65	10	145	15	225	20	305

Mode 16CH Plus

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 2 Strobe at 104–107 “Open” or 208–212 or 252–255; CH 3 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 2 Strobe 255, CH 3 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Colors	0	White
		1–8	White ... Red
		9	Red
		10–17	Red ... Orange
		18	Orange
		19–25	Orange ... Aquamarine
		26	Aquamarine
		27–34	Aquamarine ... Green
		35	Green
		36–42	Green ... Light Green
		43	Light Green
		44–51	Light Green ... Lavender
		52	Lavender
		53–59	Lavender ... Pink
		60	Pink
		61–68	Pink ... Yellow
		69	Yellow
		70–76	Yellow ... Magenta
		77	Magenta
		78–85	Magenta ... Cyan
		86	Cyan
		87–93	Cyan ... CTO
		94	CTO
		95–102	CTO ... CTO 2
		103	CTO 2
		104–110	CTO 2 ... CTB
		111	CTB
		112–119	CTB ... Blue
		120	Blue
		121–127	Color
		128–149	Color <<>>
		150	>>
		151–229	>> ... <<
		230	<<
		231–255	Color <<>>
2	Strobe	0–3	Closed
		4–102	Strobe
		103	>>>
		104–107	Open
		108–157	Pulse Open (1–10 Hz)
		158–207	Pulse Close (1–10 Hz)

CH	Function	DMX	Description
2	Strobe (continued)	208–212	Open 2
		213–250	Random
		251	Random<<>>
		252–255	Open 3
3	Dimmer	0	Closed
		1–254	Closed ... Open
		255	Open
4	Gobo	0	Gobo: Open
		1–3	Open ... Gobo 1
		4	Gobo 1
		5–7	Gobo 1 ... Gobo 2
		8	Gobo 2
		9–11	Gobo 2 ... Gobo 3
		12	Gobo 3
		13–15	Gobo 3 ... Gobo 4
		16	Gobo 4
		17–19	Gobo 4 ... Gobo 5
		20	Gobo 5
		21–23	Gobo 5 ... Gobo 6
		24	Gobo 6
		25–27	Gobo 6 ... Gobo 7
		28	Gobo 7
		29–31	Gobo 7 ... Gobo 8
		32	Gobo 8
		33–35	Gobo 8 ... Gobo 9
		36	Gobo 9
		37–39	Gobo 9 ... Gobo 10
		40	Gobo 10
		41–43	Gobo 10 ... Gobo 11
		44	Gobo 11
		45–47	Gobo 11 ... Gobo 12
		48	Gobo 12
		49–51	Gobo 12 ... Gobo 13
		52	Gobo 13
		53–55	Gobo 13 ... Gobo 14
		56	Gobo 14
		57–59	Gobo 14 ... Gobo 15
		60	Gobo 15
		61–63	Gobo 15 ... Gobo 16
		64	Gobo 16
		65–67	Gobo 16 ... Gobo 17
		68	Gobo 17

CH	Function	DMX	Description
4	Gobo (continued)	69–71	Gobo
		72–78	Gobo 1 Shake (1–10 Hz)
		79–86	Gobo 2 Shake (1–10 Hz)
		87–93	Gobo 3 Shake (1–10 Hz)
		94–101	Gobo 4 Shake (1–10 Hz)
		102–108	Gobo 5 Shake (1–10 Hz)
		109–116	Gobo 6 Shake (1–10 Hz)
		117–123	Gobo 7 Shake (1–10 Hz)
		124–131	Gobo 8 Shake (1–10 Hz)
		132–138	Gobo 9 Shake (1–10 Hz)
		139–146	Gobo 10 Shake (1–10 Hz)
		147–153	Gobo 11 Shake (1–10 Hz)
		154–161	Gobo 12 Shake (1–10 Hz)
		162–168	Gobo 13 Shake (1–10 Hz)
		169–176	Gobo 14 Shake (1–10 Hz)
		177–183	Gobo 15 Shake (1–10 Hz)
		184–191	Gobo 16 Shake (1–10 Hz)
		192–199	Gobo 17 Shake (1–10 Hz)
		200	>>>
		201–225	Gobo <<>>: >>> ... Stop
		226–229	Gobo <<>>: Stop
		230–254	Gobo <<>>: Stop ... <<<
		255	<<<
5	Prism	0–63	Open
		64–87	Prism 1
		88–111	Prism 2
		112–135	Prism 3
		136–159	Prism 4
		160–183	Prism 1+2
		184–207	Prism 1+4
		208–231	Prism 2+3
		232–255	Prism 3+4
6	Prism Rotation Speed	0	Prism 1 Pos: Closed
		1–62	Prism 1 Pos: Closed ... Max
		63	Prism 1 Pos: Max
		64–127	>>> (360–10 °/s)
		128–191	<<< (up to 360 °/s (60 rpm))
		192–207	90<> (up to 45 °/s (7.5 rpm))
		208–223	180<> (up to 90 °/s (15 rpm))
		224–239	270<> (up to 135 °/s (22 rpm))
		240–255	360<> (up to 180 °/s (30 rpm))
7	Prism Macro	0	Closed

CH	Function	DMX	Description
7	Prism Macro (continued)	1–15	Closed ... Prism 1
		16–27	Prism 1
		28–39	Prism 2
		40–51	Prism 3
		52–63	Prism 4
		64–75	Prism 1>2
		76–87	Prism 1>4
		88–99	Prism 2>3
		100–111	Prism 3>4
		112–123	Prism 1+2
		124–135	Prism 1+4
		136–147	Prism 2+1
		148–159	Prism 2+3
		160–171	Prism 3+2
		172–183	Prism 3+4
		184–195	Prism 4+1
		196–207	Prism 4+3
		208–219	Prism 1<>2
		220–231	Prism 1<>4
		232–243	Prism 3<>2
		244–255	Prism 3<>4
8	Frost	0	Open
		1–254	Open ... Frost
		255	Frost
9	Focus	0–255	Focus
10	Pan	0–127	Pan
		128	Center
		128–255	Pan
11	Pan Fine	0–255	Fine adjustment of CH 10
12	Tilt	0–127	Tilt
		128	Center
		128–255	Tilt
13	Tilt Fine	0–255	Fine adjustment of CH 12
14	Dummy	0–255	
15	Reset	0	No Function
		1–25	No Function ... Effects Reset
		26–76	Effects Reset
		77–127	Reset/XY
		128–255	Complete Reset

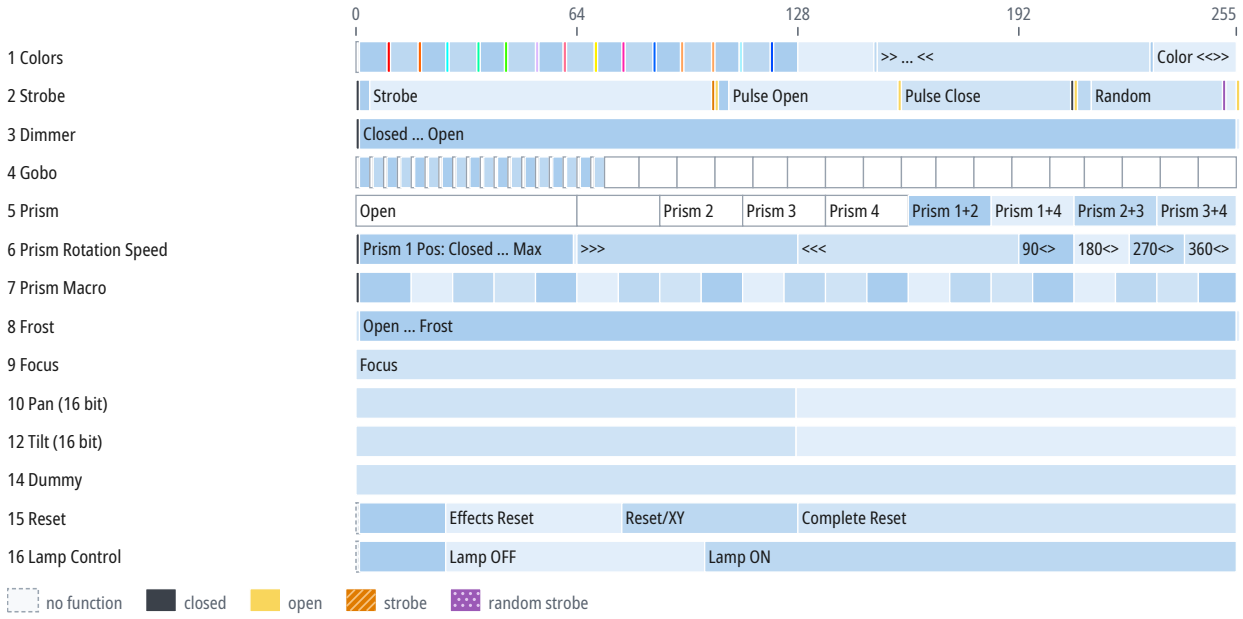
CH	Function	DMX	Description
16	Lamp Control	0	No Function
		1–25	No Function ... Lamp OFF
		26–100	Lamp OFF
		101–255	Lamp ON

Mode 16CH

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 2 Strobe at 104–107 “Open” or 208–212 or 252–255; CH 3 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 2 Strobe 255, CH 3 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Colors		Same as CH 1 in the mode “Mode 16CH Plus” (p. 10)
2	Strobe		Same as CH 2 in the mode “Mode 16CH Plus” (p. 10)
3	Dimmer		Same as CH 3 in the mode “Mode 16CH Plus” (p. 11)
4	Gobo	0	Gobo: Open
		1–3	Open ... Gobo 1
		4	Gobo 1
		5–7	Gobo 1 ... Gobo 2
		8	Gobo 2
		9–11	Gobo 2 ... Gobo 3
		12	Gobo 3
		13–15	Gobo 3 ... Gobo 4
		16	Gobo 4
		17–19	Gobo 4 ... Gobo 1

CH	Function	DMX	Description
4	Gobo (continued)	20	Gobo 1
		21–23	Gobo
		24	Gobo 1
		25–27	Gobo
		28	Gobo 1
		29–31	Gobo 1 … Gobo 8
		32	Gobo 8
		33–35	Gobo 8 … Gobo 9
		36	Gobo 9
		37–39	Gobo 9 … Gobo 10
		40	Gobo 10
		41–43	Gobo 10 … Gobo 11
		44	Gobo 11
		45–47	Gobo 11 … Gobo 12
		48	Gobo 12
		49–51	Gobo 12 … Gobo 13
		52	Gobo 13
		53–55	Gobo 13 … Gobo 14
		56	Gobo 14
		57–59	Gobo 14 … Gobo 15
		60	Gobo 15
		61–63	Gobo 15 … Gobo 16
		64	Gobo 16
		65–67	Gobo 16 … Gobo 17
		68	Gobo 17
		69–71	Gobo
		72–81	Gobo 1 Shake (1–10 Hz)
		82–92	Gobo 2 Shake (1–10 Hz)
		93–103	Gobo 3 Shake (1–10 Hz)
		104–114	Gobo 4 Shake (1–10 Hz)
		115–124	Gobo 5 Shake (1–10 Hz)
		125–135	Gobo 6 Shake (1–10 Hz)
		136–146	Gobo 7 Shake (1–10 Hz)
		147–157	Gobo 8 Shake (1–10 Hz)
		158–167	Gobo 9 Shake (1–10 Hz)
		168–178	Gobo 10 Shake (1–10 Hz)
		179–189	Gobo 11 Shake (1–10 Hz)
		190–200	Gobo 12 Shake (1–10 Hz)
		201–210	Gobo 13 Shake (1–10 Hz)
		211–221	Gobo 14 Shake (1–10 Hz)
		222–232	Gobo 15 Shake (1–10 Hz)

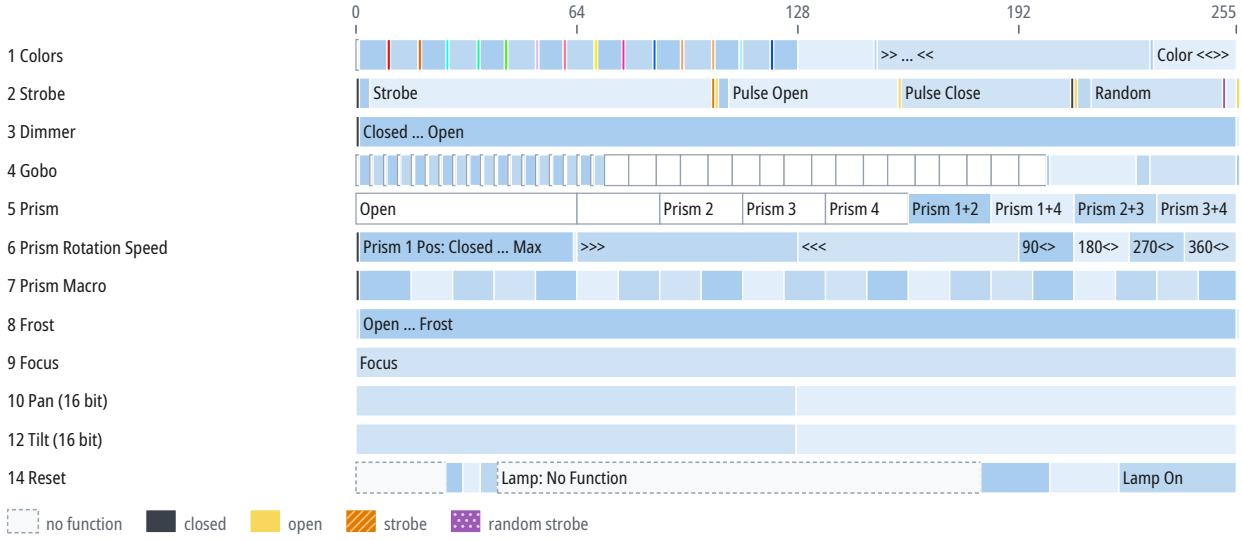
CH	Function	DMX	Description
4	Gobo (continued)	233–243	Gobo 16 Shake (1–10 Hz)
		244–255	Gobo 17 Shake (1–10 Hz)
5	Prism		Same as CH 5 in the mode “Mode 16CH Plus” (p. 12)
6	Prism Rotation Speed		Same as CH 6 in the mode “Mode 16CH Plus” (p. 12)
7	Prism Macro		Same as CH 7 in the mode “Mode 16CH Plus” (p. 12)
8	Frost		Same as CH 8 in the mode “Mode 16CH Plus” (p. 13)
9	Focus	0–255	Focus
10	Pan		Same as CH 10 in the mode “Mode 16CH Plus” (p. 13)
11	Pan Fine	0–255	Fine adjustment of CH 10
12	Tilt		Same as CH 12 in the mode “Mode 16CH Plus” (p. 13)
13	Tilt Fine	0–255	Fine adjustment of CH 12
14	Dummy	0–255	
15	Reset		Same as CH 15 in the mode “Mode 16CH Plus” (p. 13)
16	Lamp Control		Same as CH 16 in the mode “Mode 16CH Plus” (p. 14)

Mode 14CH

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 2 Strobe at 104–107 “Open” or 208–212 or 252–255; CH 3 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 2 Strobe 255, CH 3 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Colors		Same as CH 1 in the mode “Mode 16CH Plus” (p. 10)
2	Strobe		Same as CH 2 in the mode “Mode 16CH Plus” (p. 10)
3	Dimmer		Same as CH 3 in the mode “Mode 16CH Plus” (p. 11)
4	Gobo		Same as CH 4 in the mode “Mode 16CH Plus” (p. 11)
5	Prism		Same as CH 5 in the mode “Mode 16CH Plus” (p. 12)

CH	Function	DMX	Description
6	Prism Rotation Speed		Same as CH 6 in the mode “Mode 16CH Plus” (p. 12)
7	Prism Macro		Same as CH 7 in the mode “Mode 16CH Plus” (p. 12)
8	Frost		Same as CH 8 in the mode “Mode 16CH Plus” (p. 13)
9	Focus	0–255	Focus
10	Pan		Same as CH 10 in the mode “Mode 16CH Plus” (p. 13)
11	Pan Fine	0–255	Fine adjustment of CH 10
12	Tilt		Same as CH 12 in the mode “Mode 16CH Plus” (p. 13)
13	Tilt Fine	0–255	Fine adjustment of CH 12
14	Reset	0–25	Reset: No Function
		26–30	Effects Reset
		31–35	Reset/XY
		36–40	Complete Reset
		41–180	Lamp: No Function
		181–200	Lamp Off
		201–220	Lamp Off ... Lamp On
		221–255	Lamp On

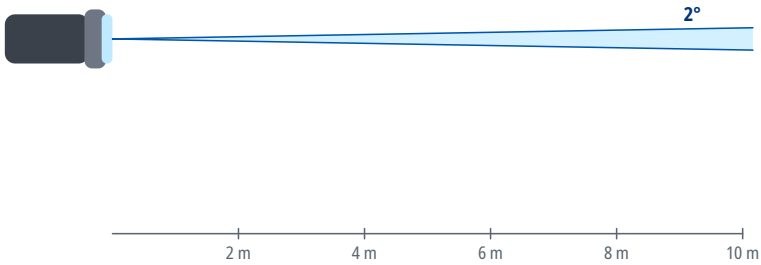
10 Technical specifications

Parameter	Value
Light	
Light source	discharge lamp
Lamp power	421 W
Luminous flux	916,000 lm
Color temperature	6,900 K
Color rendering index (CRI)	80
Optics	
Beam angle	2°
Movement	
Pan	540°
Tilt	270°
Control	
RDM	yes (manufacturer ID 0x3888, device model ID 0x0017)
Dimensions and construction	
Weight	22.5 kg
Operating environment	
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–15 Hz
Color wheel rotation	up to 360 °/s (60 rpm)
Gobo wheel rotation	up to 30 °/s (5 rpm)
Prism rotation	up to 360 °/s (60 rpm)

Spot diameter



Distance	Ø 2°
2 m	0.07 m
4 m	0.14 m
6 m	0.21 m
8 m	0.28 m
10 m	0.35 m
15 m	0.52 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.