DMX REFERENCE

FrostBot

Megalite



Manufacturer	Megalite
GDTF file	MegaLite_FrostBot_154350.gdtf
GDTF revision	Revision 2 · 2026-08-06
Generated	2026-11-24

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1 About this manual

This document describes the FrostBot by Megalite. It was compiled from the GDTF file MegaLite_FrostBot_154350.gdtf from the GDTF-Share library.

File revision: “Revision 2”.

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 Megalite; 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
Power consumption	521 W
Weight	13.8 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
14Ch Mode	14	36	1, 15, 29, 43, ...
18Ch Mode	18	28	1, 19, 37, 55, ...
76Ch Mode	76	6	1, 77, 153, 229, ...
90Ch Mode	90	5	1, 91, 181, 271, ...

No light? Check these channels

- 14Ch Mode: CH 2 Shutter at 0–2 or 101–150
- 18Ch Mode: CH 2 Shutter at 0–2 or 101–150
- 76Ch Mode: CH 3 Shutter at 0–2 or 101–150
- 90Ch Mode: CH 2 Shutter at 0–2 or 101–150


Read the manual before use


Risk of electric shock


Do not stare into the light


Indoor use only

3 Safety instructions


Read the manual before use


Risk of electric shock


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

- Connect the device only to a properly installed mains outlet with a protective earth (ground) contact. The outlet or other means of disconnection must remain easily accessible.
- Power supply: 90–250 V, 50/60 Hz. Before connecting, make sure that the mains voltage matches this value and the value on the rating plate of the device.
- Do not connect the device to a dimmer or to a dimmed circuit.
- Use only the original power cable or a cable with identical ratings. Protect the cable from damage, do not run it over sharp edges, and never unplug it by pulling on the cable.
- When connecting several devices to one circuit, do not exceed its permitted load.
- Do not touch the device with wet hands.

⚠ 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

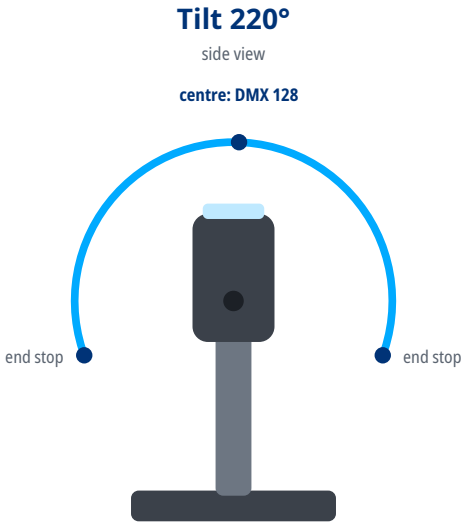
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts,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

“FrostBot is powered by 768 x 1.5W RGB LEDs and 144 x 2W White LEDs”

Range of movement



5 Installation

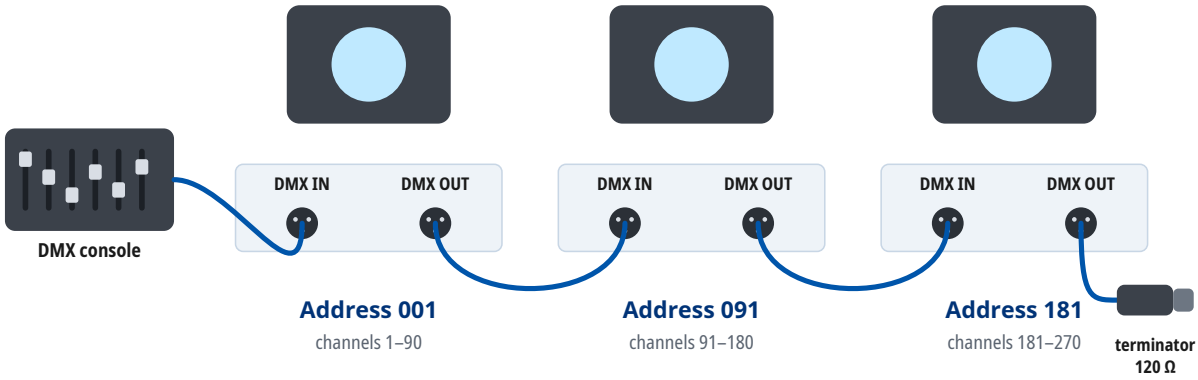
⚠ **WARNING**

- 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: 13.8 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 90Ch Mode: every unit occupies 90 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

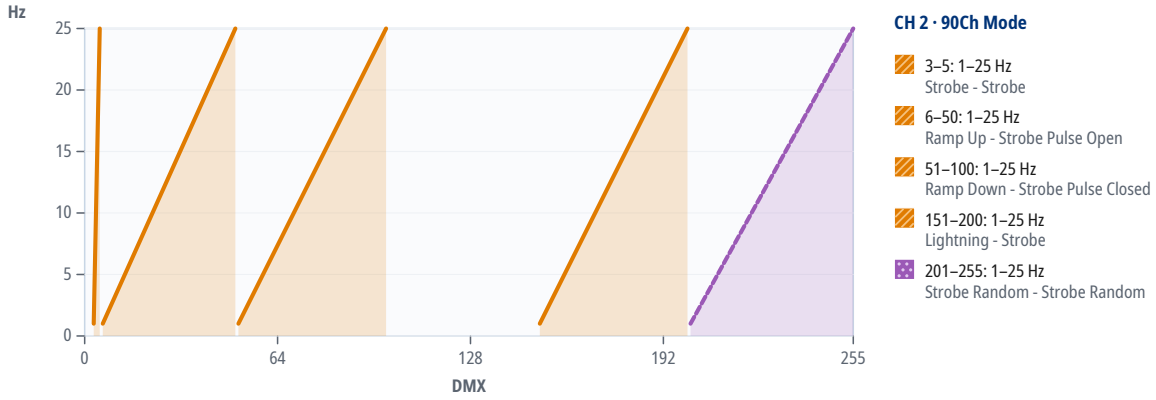
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “90Ch Mode”: 90.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “90Ch Mode”, you can use, for example, the start addresses 1, 91, 181, 271.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

8 Functions at a glance

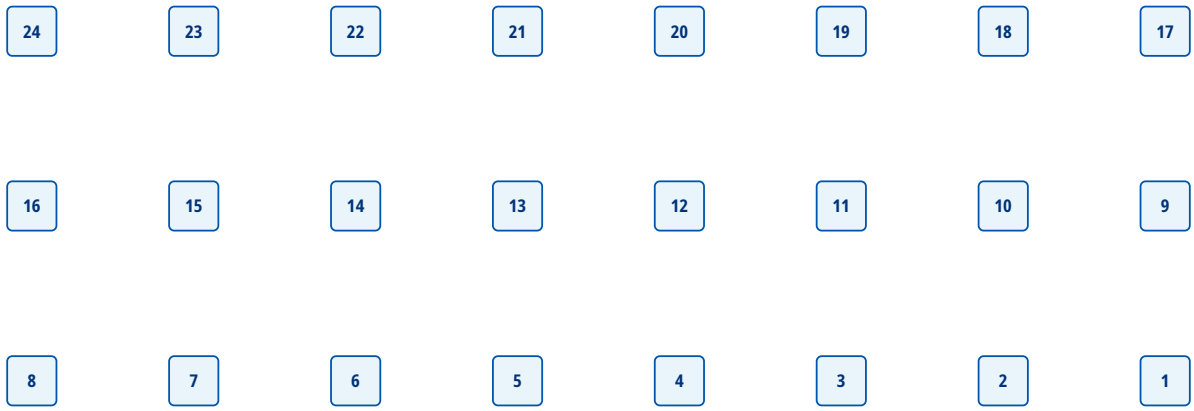
Functions in each DMX mode

	14Ch Mode 14 channels	18Ch Mode 18 channels	76Ch Mode 76 channels	90Ch Mode 90 channels
Pan / Tilt	5	5	1	5
Dimmer	1	1	✓	1
Shutter / strobe	2–4	2–4	3	2–4
Color mixing	9–14	9–14	5–76	9–14, 19–90
Color wheel		15		15
Frost	8	8	4	8
Effects / macros		16, 18		16, 18
Pixel control	✓	✓	16 + 24 cells	16 + 24 cells

Strobe rate



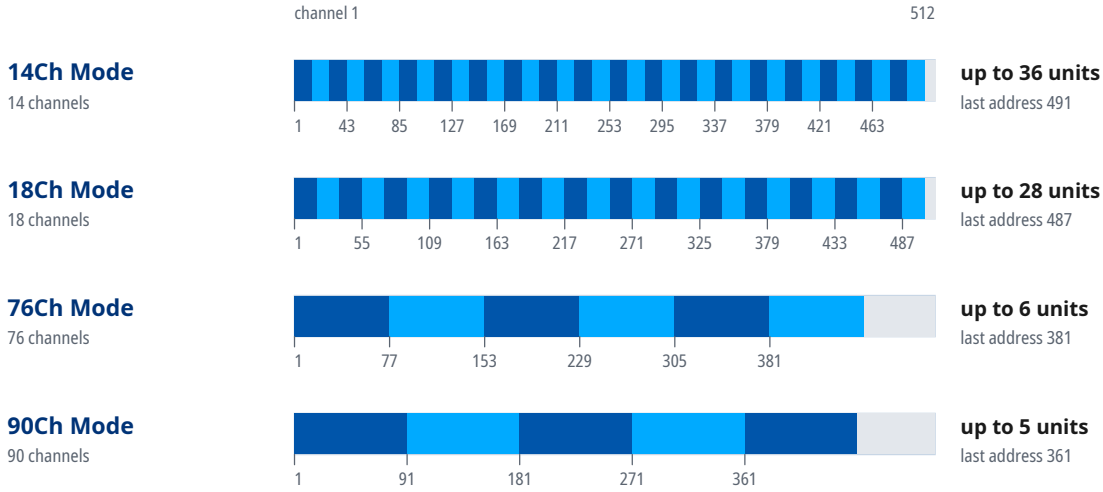
Cells (pixels)



24 cells where the GDTF file places them (seen from above), numbered in the file's order; the mode “90Ch Mode” drives them together.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “90Ch Mode”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	U2 · 1	11	U3 · 1	16	U4 · 1
2	91	7	U2 · 91	12	U3 · 91	17	U4 · 91
3	181	8	U2 · 181	13	U3 · 181	18	U4 · 181
4	271	9	U2 · 271	14	U3 · 271	19	U4 · 271
5	361	10	U2 · 361	15	U3 · 361	20	U4 · 361

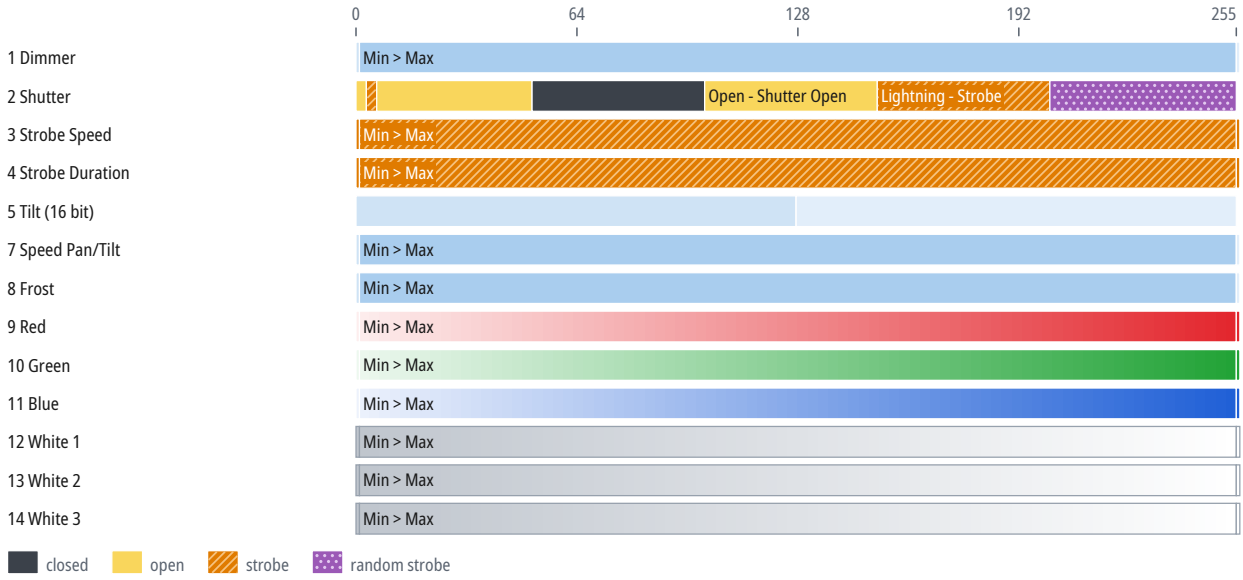
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode 14Ch Mode

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

If the device receives DMX in this mode but gives no light, check these channels: CH 2 Shutter at 0–2 or 101–150. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 2 Shutter 2, CH 9 Red 255, CH 10 Green 255, CH 11 Blue 255, CH 12 White 1 255, CH 13 White 2 255, CH 14 White 3 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer	0	Min
		1–254	Min > Max
		255	Max
2	Shutter	0–2	Open - Shutter Open
		3–5	Strobe - Strobe (1–25 Hz)
		6–50	Ramp Up - Strobe Pulse Open (1–25 Hz)
		51–100	Ramp Down - Strobe Pulse Closed (1–25 Hz)
		101–150	Open - Shutter Open
		151–200	Lightning - Strobe (1–25 Hz)
		201–255	Strobe Random - Strobe Random (1–25 Hz)
3	Strobe Speed		STROBE RATE
		0	Min
		1–254	Min > Max
		255	Max
4	Strobe Duration	0	Min
		1–254	Min > Max
		255	Max
5	Tilt	0–127	TILT
		127	Home
		128–255	TILT

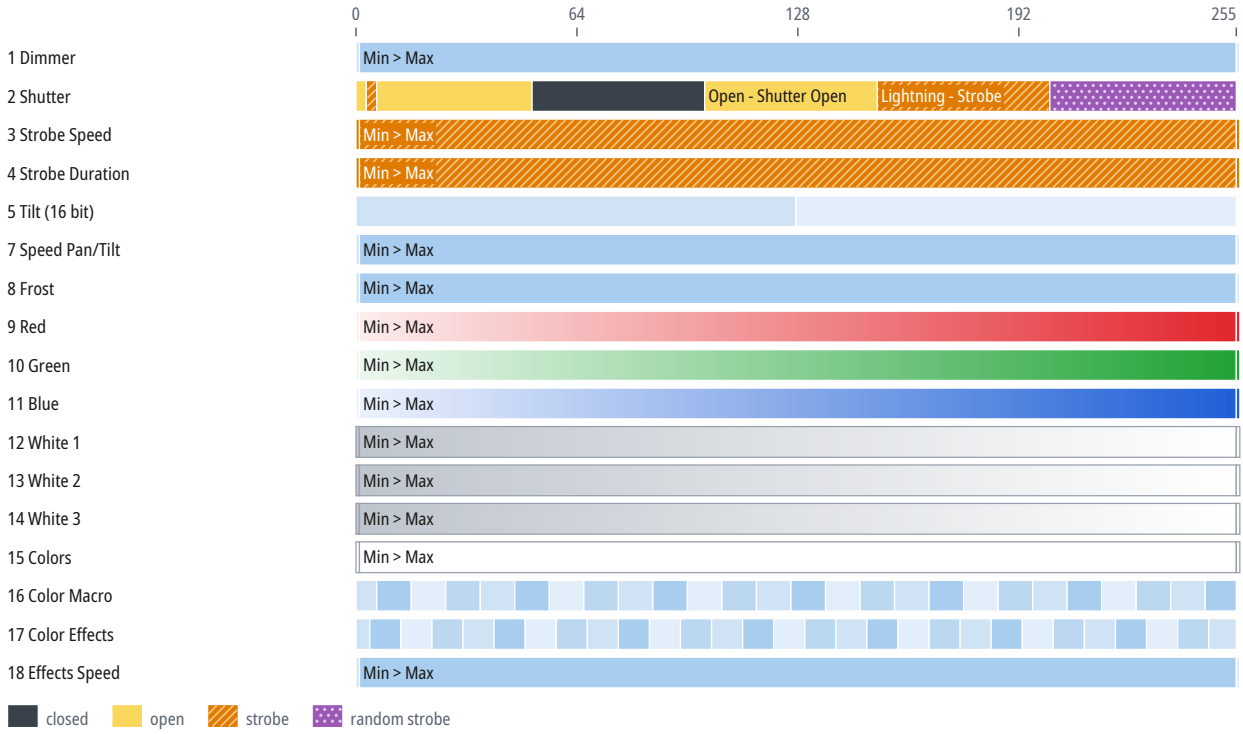
CH	Function	DMX	Description
6	Tilt Fine	0–255	Fine adjustment of CH 5
7	Speed Pan/Tilt		TILT SPEED
		0	Min
		1–254	Min > Max
		255	Max
8	Frost	0	Min
		1–254	Min > Max
		255	Max
9	Red	0	Min
		1–254	Min > Max
		255	Max
10	Green	0	Min
		1–254	Min > Max
		255	Max
11	Blue	0	Min
		1–254	Min > Max
		255	Max
12	White 1	0	Min
		1–254	Min > Max
		255	Max
13	White 2	0	Min
		1–254	Min > Max
		255	Max
14	White 3	0	Min
		1–254	Min > Max
		255	Max

Mode 18Ch Mode

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

If the device receives DMX in this mode but gives no light, check these channels: CH 2 Shutter at 0–2 or 101–150. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 2 Shutter 2, CH 9 Red 255, CH 10 Green 255, CH 11 Blue 255, CH 12 White 1 255, CH 13 White 2 255, CH 14 White 3 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “14Ch Mode” (p. 10)
2	Shutter		Same as CH 2 in the mode “14Ch Mode” (p. 10)
3	Strobe Speed		Same as CH 3 in the mode “14Ch Mode” (p. 10)
4	Strobe Duration		Same as CH 4 in the mode “14Ch Mode” (p. 10)
5	Tilt		Same as CH 5 in the mode “14Ch Mode” (p. 10)
6	Tilt Fine	0–255	Fine adjustment of CH 5
7	Speed Pan/Tilt		Same as CH 7 in the mode “14Ch Mode” (p. 11)
8	Frost		Same as CH 8 in the mode “14Ch Mode” (p. 11)
9	Red		Same as CH 9 in the mode “14Ch Mode” (p. 11)
10	Green		Same as CH 10 in the mode “14Ch Mode” (p. 11)
11	Blue		Same as CH 11 in the mode “14Ch Mode” (p. 11)
12	White 1		Same as CH 12 in the mode “14Ch Mode” (p. 11)
13	White 2		Same as CH 13 in the mode “14Ch Mode” (p. 11)
14	White 3		Same as CH 14 in the mode “14Ch Mode” (p. 11)
15	Colors		COLOR PRESET
		0	Min

CH	Function	DMX	Description
15	Colors (continued)	1–254	Min > Max
		255	Max
16	Color Macro		RGB MACRO
		0–5	No Function - Custom
		6–15	RGB Effect 1 - Macro
		16–25	RGB Effect 2 - Macro
		26–35	RGB Effect 3 - Macro
		36–45	RGB Effect 4 - Macro
		46–55	RGB Effect 5 - Macro
		56–65	RGB Effect 6 - Macro
		66–75	RGB Effect 7 - Macro
		76–85	RGB Effect 8 - Macro
		86–95	RGB Effect 9 - Macro
		96–105	RGB Effect 10 - Macro
		106–115	RGB Effect 11 - Macro
		116–125	RGB Effect 12 - Macro
		126–135	RGB Effect 13 - Macro
		136–145	RGB Effect 14 - Macro
		146–155	RGB Effect 15 - Macro
		156–165	RGB Effect 16 - Macro
		166–175	RGB Effect 17 - Macro
		176–185	RGB Effect 18 - Macro
		186–195	RGB Effect 19 - Macro
		196–205	RGB Effect 20 - Macro
		206–215	RGB Effect 21 - Macro
		216–225	RGB Effect 22 - Macro
		226–235	RGB Effect 23 - Macro
		236–245	RGB Effect 24 - Macro
		246–255	RGB Effect 25 - Macro
17	Color Effects		WHITE EFFECT
		0–3	No Function - Custom
		4–12	White Effect 1 - Macro
		13–21	White Effect 2 - Macro
		22–30	White Effect 3 - Macro
		31–39	White Effect 4 - Macro
		40–48	White Effect 5 - Macro
		49–57	White Effect 6 - Macro
		58–66	White Effect 7 - Macro
		67–75	White Effect 8 - Macro
		76–84	White Effect 9 - Macro
		85–93	White Effect 10 - Macro
		94–102	White Effect 11 - Macro

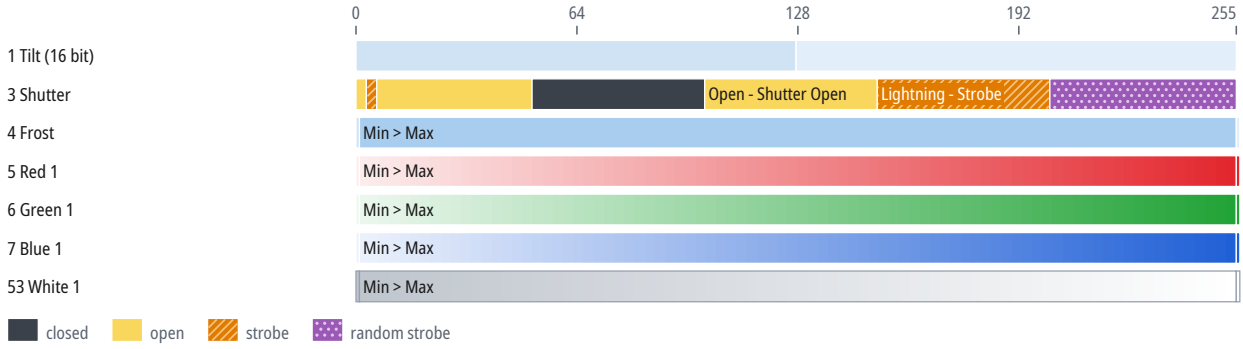
CH	Function	DMX	Description
17	Color Effects (continued)	103–111	White Effect 12 - Macro
		112–120	White Effect 13 - Macro
		121–129	White Effect 14 - Macro
		130–138	White Effect 15 - Macro
		139–147	White Effect 16 - Macro
		148–156	White Effect 17 - Macro
		157–165	White Effect 18 - Macro
		166–174	White Effect 19 - Macro
		175–183	White Effect 20 - Macro
		184–192	White Effect 21 - Macro
		193–201	White Effect 22 - Macro
		202–210	White Effect 23 - Macro
		211–219	White Effect 24 - Macro
		220–228	White Effect 25 - Macro
		229–237	White Effect 26 - Macro
		238–246	White Effect 27 - Macro
		247–255	White Effect 28 - Macro
18	Effects Speed		MACRO SPEED
		0	Min
		1–254	Min > Max
		255	Max

Mode 76Ch Mode

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

If the device receives DMX in this mode but gives no light, check these channels: CH 3 Shutter at 0–2 or 101–150. The GDTF file gives these values for a console's Highlight function: CH 3 Shutter 2, CH 5 Red 255 (the same in each of the 16 cells), CH 6 Green 255 (the same in each of the 16 cells), CH 7 Blue 255 (the same in each of the 16 cells), CH 53 White 255 (the same in each of the 24 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Tilt		Same as CH 5 in the mode “14Ch Mode” (p. 10)
2	Tilt Fine	0–255	Fine adjustment of CH 1
3	Shutter		Same as CH 2 in the mode “14Ch Mode” (p. 10)

CH	Function	DMX	Description
4	Frost		Same as CH 8 in the mode “14Ch Mode” (p. 11)
5	Red 1	0	Min
		1–254	Min > Max
		255	Max
6	Green 1	0	Min
		1–254	Min > Max
		255	Max
7	Blue 1	0	Min
		1–254	Min > Max
		255	Max
53	White 1	0	Min
		1–254	Min > Max
		255	Max

CH 5–52: 16 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 5–7); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	5	6	7	2	8	9	10	3	11	12	13
4	14	15	16	5	17	18	19	6	20	21	22
7	23	24	25	8	26	27	28	9	29	30	31
10	32	33	34	11	35	36	37	12	38	39	40
13	41	42	43	14	44	45	46	15	47	48	49
16	50	51	52								

CH 53–76: 24 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 53); the table below gives each cell's channel numbers.

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

Mode 90Ch Mode

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

If the device receives DMX in this mode but gives no light, check these channels: CH 2 Shutter at 0–2 or 101–150. The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 2 Shutter 2, CH 9 Red 1 255, CH 10 Green 1 255, CH 11 Blue 1 255, CH 12 White 1 255, CH 13 White 2 255, CH 14 White 3 255, CH 19 Red 255 (the same in each of the 16 cells), CH 20 Green 255 (the same in each of the 16 cells), CH 21 Blue 255 (the same in each of the 16 cells), CH 67 White 255 (the same in each of the 24 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 1 in the mode “14Ch Mode” (p. 10)
2	Shutter		Same as CH 2 in the mode “14Ch Mode” (p. 10)
3	Strobe Speed		Same as CH 3 in the mode “14Ch Mode” (p. 10)
4	Strobe Duration		Same as CH 4 in the mode “14Ch Mode” (p. 10)
5	Tilt		Same as CH 5 in the mode “14Ch Mode” (p. 10)
6	Tilt Fine	0–255	Fine adjustment of CH 5
7	Speed Pan/Tilt		Same as CH 7 in the mode “14Ch Mode” (p. 11)
8	Frost		Same as CH 8 in the mode “14Ch Mode” (p. 11)
9	Red 1	0	Min
		1–254	Min > Max
		255	Max

CH	Function	DMX	Description
10	Green 1	0	Min
		1–254	Min > Max
		255	Max
11	Blue 1	0	Min
		1–254	Min > Max
		255	Max
12	White 1		Same as CH 12 in the mode “14Ch Mode” (p. 11)
13	White 2		Same as CH 13 in the mode “14Ch Mode” (p. 11)
14	White 3		Same as CH 14 in the mode “14Ch Mode” (p. 11)
15	Colors		Same as CH 15 in the mode “18Ch Mode” (p. 12)
16	Color Macro		Same as CH 16 in the mode “18Ch Mode” (p. 13)
17	Color Effects		Same as CH 17 in the mode “18Ch Mode” (p. 13)
18	Effects Speed		Same as CH 18 in the mode “18Ch Mode” (p. 14)
19	Red 2	0	Min
		1–254	Min > Max
		255	Max
20	Green 2	0	Min
		1–254	Min > Max
		255	Max
21	Blue 2	0	Min
		1–254	Min > Max
		255	Max
67	White 4	0	Min
		1–254	Min > Max
		255	Max

CH 19–66: 16 cells of 3 channels each. Every cell works as cell 1 in the table above (CH 19–21); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	Cell	Red	Green	Blue	Cell	Red	Green	Blue
1	19	20	21	2	22	23	24	3	25	26	27
4	28	29	30	5	31	32	33	6	34	35	36
7	37	38	39	8	40	41	42	9	43	44	45
10	46	47	48	11	49	50	51	12	52	53	54
13	55	56	57	14	58	59	60	15	61	62	63
16	64	65	66								

CH 67–90: 24 cells of 1 channel each. Every cell works as cell 1 in the table above (CH 67); the table below gives each cell's channel numbers.

Cell	White	Cell	White	Cell	White	Cell	White	Cell	White	Cell	White
1	67	2	68	3	69	4	70	5	71	6	72
7	73	8	74	9	75	10	76	11	77	12	78
13	79	14	80	15	81	16	82	17	83	18	84
19	85	20	86	21	87	22	88	23	89	24	90

10 Technical specifications

Parameter	Value
Light	
Light source	LED
Movement	
Tilt	220°
Control	
DMX connection	3-pin XLR IN/OUT
Electrical	
Power supply	90–250 V, 50/60 Hz
Power consumption	521 W
Power connectors	powerCON TRUE1 IN/OUT
Dimensions and construction	
Weight	13.8 kg
Operating environment	
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–25 Hz

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.

Problem	Remedy
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.