DMX REFERENCE

Kodiak

Rasha Professional



Manufacturer	Rasha Professional
GDTF file	Rasha_Professional_Kodiak_92088.gdtf
GDTF revision	April 2 2025, Uploaded to GDTF Share. · 2025-04-03
Generated	2026-11-24

Contents

1 About this manual 2
2 Quick reference 3
3 Safety instructions 4
4 Product description 5
5 Installation 6
6 Connections 6
7 Operation 7
8 Functions at a glance 7
9 DMX channels 10
Mode HSI 11ch 11
Mode STD 17ch 12
Mode GUI 18ch 14
Mode EXT 58ch 16
10 Technical specifications 18
11 Maintenance and cleaning 18
12 Troubleshooting 19
13 Disposal 19

1 About this manual

This document describes the Kodiak by Rasha Professional. It was compiled from the GDTF file Rasha_Professional_Kodiak_92088.gdtf from the GDTF-Share library.

File revision: “April 2 2025, Uploaded to GDTF Share.”.

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 Rasha Professional; 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	500 W
Weight	14.9 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
HSI 11ch	11	46	1, 12, 23, 34, ...
STD 17ch	17	30	1, 18, 35, 52, ...
GUI 18ch	18	28	1, 19, 37, 55, ...
EXT 58ch	58	8	1, 59, 117, 175, ...

No light? Check these channels

- HSI 11ch: CH 6 Shutter at 104–107, 208–212 or 252–255 “Open”
- STD 17ch: CH 8 Shutter at 104–107, 208–212 or 252–255 “Open”
- GUI 18ch: CH 7 Shutter at 104–107, 208–212 or 252–255 “Open”
- EXT 58ch: CH 6 Dimmer above 0; CH 8 Shutter at 104–107, 208–212 or 252–255 “Open”


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: 110–240 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.

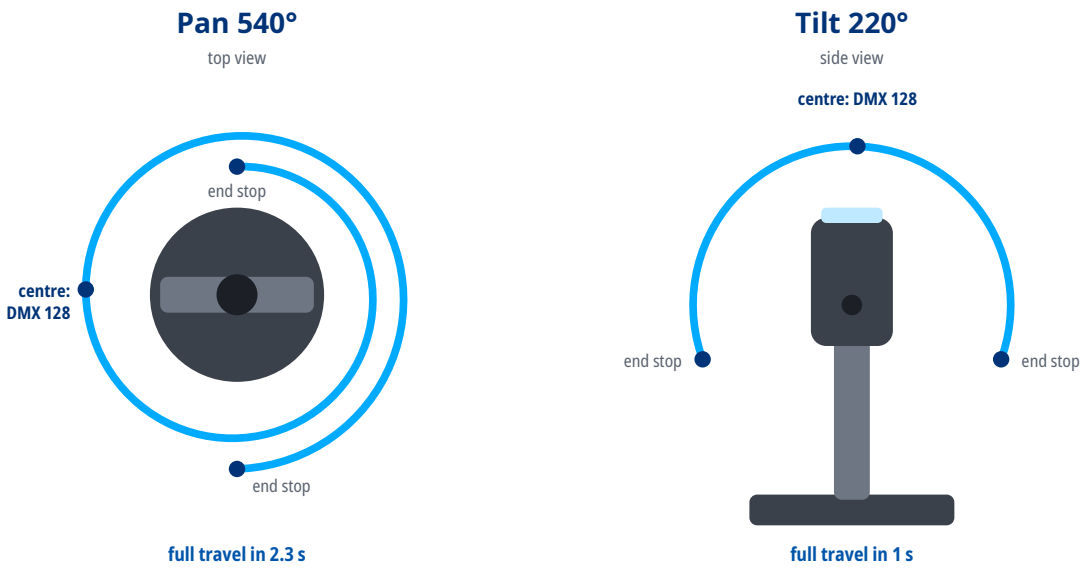
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do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

“Kodiak Light features 12x, 40W RGB and White LED chips. It has a smooth color wash with a 10:1 zoom ratio of 7-degree to 70-degree zoom range”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

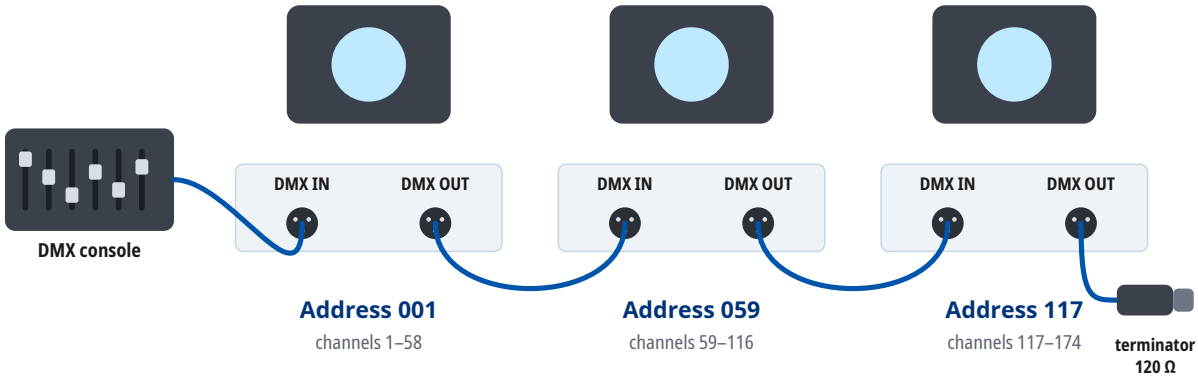
⚠ **WARNING**

- 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: 14.9 kg.
- Use suitable mounting hardware (for example truss clamps) and tighten all screw connections properly.
- Always secure the suspended device against falling with a safety cable of adequate load capacity, routed through a fixed point of the device and around the supporting structure.
- During installation and removal, keep people out of the area below the work position.
- Regularly inspect the fixings and the safety cable for damage, corrosion and loosening.

6 Connections

- Use shielded cable designed for DMX512 with an impedance of 110 Ω. Ordinary microphone cable is not suitable for DMX, especially over longer distances.
- Connect the devices in a daisy chain: connect the DMX OUT of one device to the DMX IN of the next. Do not split the line with Y-cables or wire it in a star; the line may be split only with a DMX splitter.
- Connect the shield to pin 1 only. Do not connect the shield (ground) to the metal shell of the connector; this can cause short circuits or erratic behavior.
- XLR pin assignment: pin 1 – shield (ground), pin 2 – Data- (Data Complement), pin 3 – Data+ (Data True). On 5-pin connectors, pins 4 and 5 are not connected; a 5-pin connector can be connected to a 3-pin one with a cable adapter.
- Terminate the end of the line (for impedance matching): plug an XLR connector with a 120 Ω, ¼ W resistor between pins 2 and 3 into the DMX OUT of the last device. This reduces the risk of erratic behavior.
- Connect no more than 32 devices to one DMX line. For more devices or longer runs, use a DMX splitter or booster.

DMX line



Mode EXT 58ch: every unit occupies 58 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

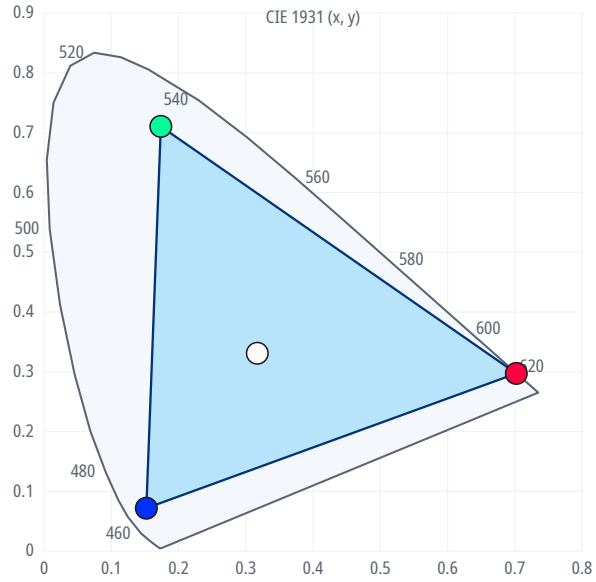
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “EXT 58ch”: 58.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “EXT 58ch”, you can use, for example, the start addresses 1, 59, 117, 175.
- 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

	HSI 11ch 11 channels	STD 17ch 17 channels	GUI 18ch 18 channels	EXT 58ch 58 channels
Pan / Tilt	1, 3	1, 3	1, 3	1, 3
Dimmer	9	6	6	6
Dimmer resolution	8 bit	16 bit	8 bit	16 bit
Shutter / strobe	6	8	7	8
Color mixing		9–12	8–11	9–56
Color temperature		13		
Zoom	10	16	17	57
Effects / macros			13, 15, 16	
Pixel control				12 cells

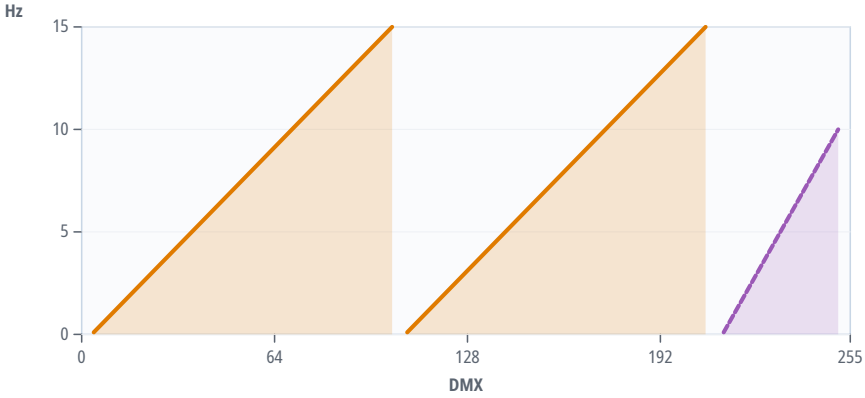
LED colors and the colors they mix



LED	x	y	nm
Red	0.702	0.297	626
Green	0.173	0.711	527
Blue	0.152	0.072	452
White	0.317	0.331	

The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

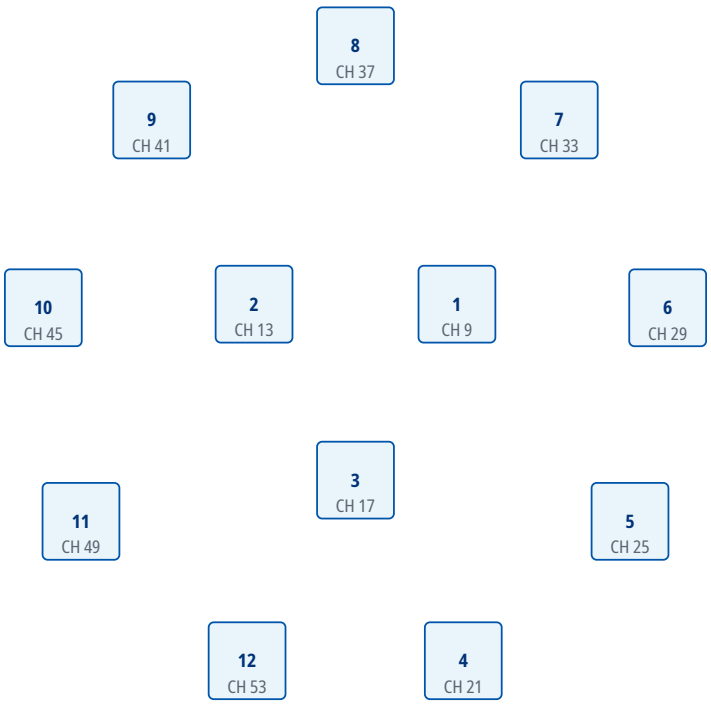
Strobe rate



CH 8 · EXT 58ch

- 4–103: 0.1–15 Hz Strobe
- 108–207: 0.1–15 Hz Pulse
- 213–251: 0.1–10 Hz Random

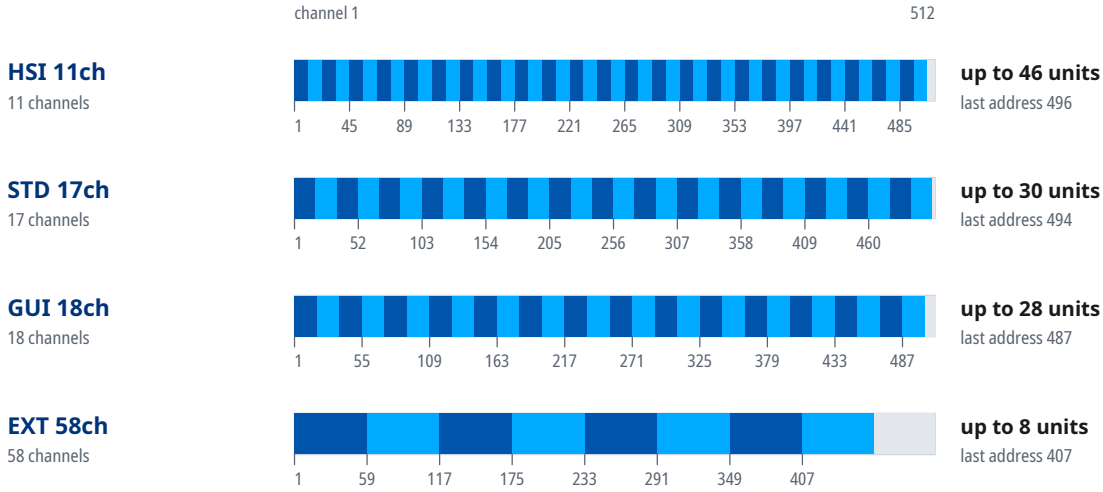
Cells (pixels)



12 cells where the GDTF file places them (seen from above), numbered by their first DMX channel (CH) in the mode “EXT 58ch”.

9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “EXT 58ch”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	291	11	U2 · 117	16	U2 · 407
2	59	7	349	12	U2 · 175	17	U3 · 1
3	117	8	407	13	U2 · 233	18	U3 · 59
4	175	9	U2 · 1	14	U2 · 291	19	U3 · 117
5	233	10	U2 · 59	15	U2 · 349	20	U3 · 175

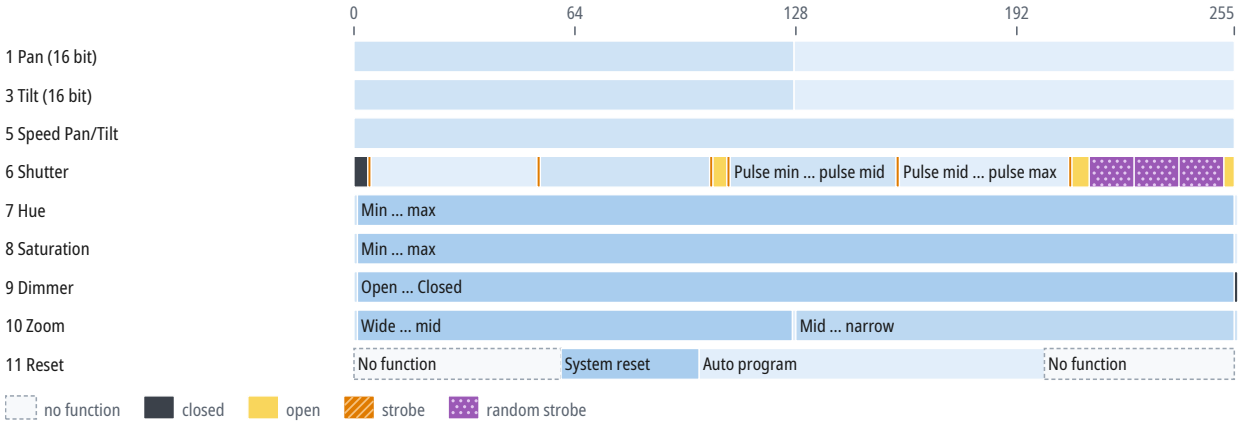
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode HSI 11ch

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 104–107, 208–212 or 252–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 6 Shutter 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan 1
		128	Home
		128–255	Pan 1
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–127	Tilt 1
		128	Home
		128–255	Tilt 1
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Shutter	0–3	Closed
		4	Strobe min
		5–52	Strobe min ... strobe mid
		53	Strobe mid
		54–102	Strobe mid ... strobe max
		103	Strobe max
		104–107	Open
		108	Pulse min
		109–156	Pulse min ... pulse mid
		157	Pulse mid
		158–206	Pulse mid ... pulse max
		207	Pulse max
		208–212	Open
		213–225	Random min
		226–238	Random med

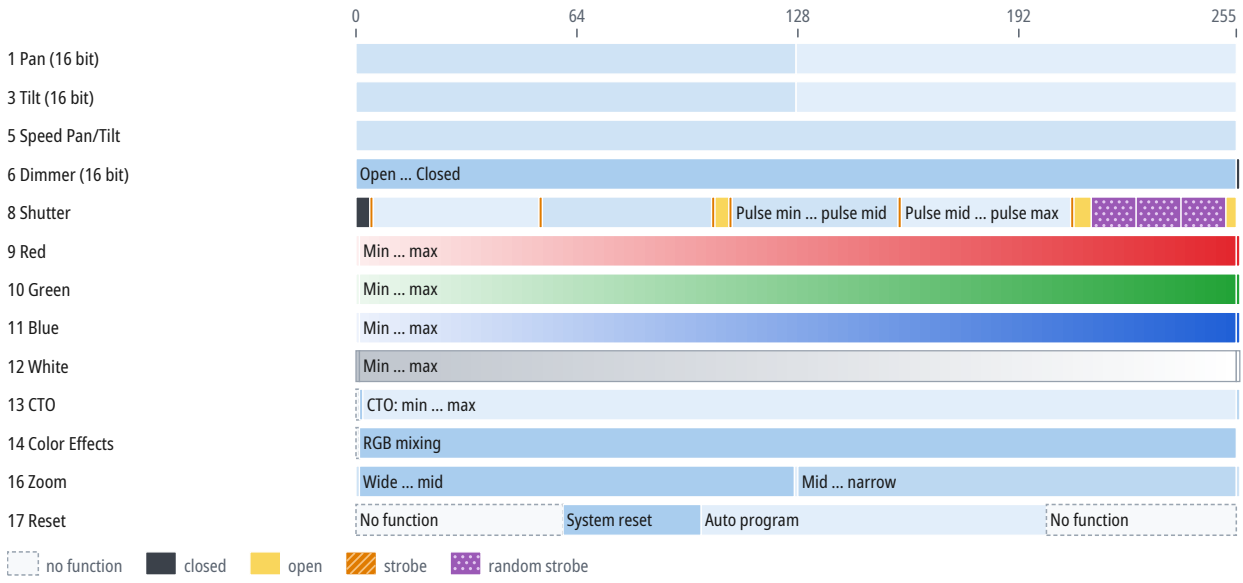
CH	Function	DMX	Description
6	Shutter (continued)	239–251	Random max
		252–255	Open
7	Hue	0	Min
		1–254	Min … max
		255	Max
8	Saturation	0	Min
		1–254	Min … max
		255	Max
9	Dimmer	0	Open
		1–254	Open … Closed
		255	Closed
10	Zoom	0	Wide
		1–126	Wide … mid
		127	Mid
		128–254	Mid … narrow
		255	Narrow
11	Reset	0–59	No function
		60–99	System reset
		100–199	Auto program
		200–255	No function

Mode STD 17ch

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 8 Shutter at 104–107, 208–212 or 252–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 8 Shutter 255, CH 9 Red 255, CH 10 Green 255, CH 11 Blue 0, CH 12 White 0.

Channel functions at a glance



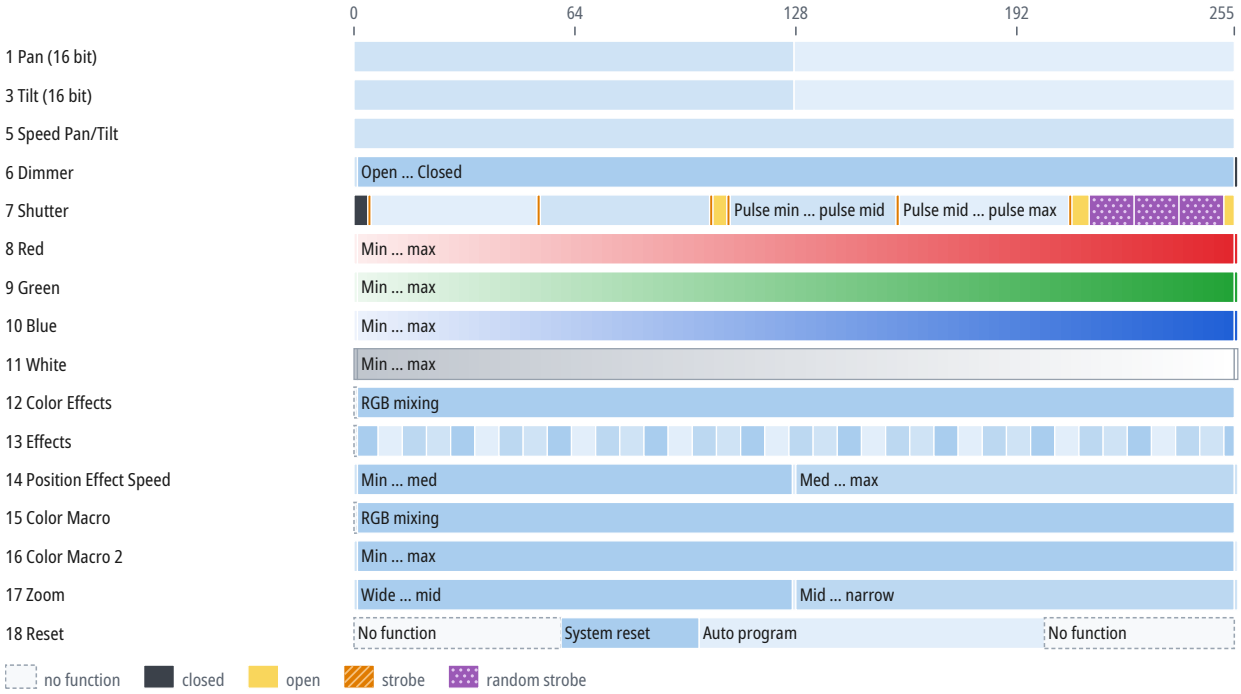
CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “HSI 11ch” (p. 11)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “HSI 11ch” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Dimmer	0–255	Open … Closed
		255	Closed
7	Dimmer Fine	0–255	Fine adjustment of CH 6
8	Shutter		Same as CH 6 in the mode “HSI 11ch” (p. 11)
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	0	Min
		1–254	Min … max
		255	Max
13	CTO	0	No function
		1	CTO: min
		2–254	CTO: min … max
		255	CTO: max
14	Color Effects	0	No function
		1–255	RGB mixing
16	Zoom		Same as CH 10 in the mode “HSI 11ch” (p. 12)
17	Reset		Same as CH 11 in the mode “HSI 11ch” (p. 12)

Mode GUI 18ch

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 7 Shutter at 104–107, 208–212 or 252–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 7 Shutter 255, CH 8 Red 255, CH 9 Green 255, CH 10 Blue 0, CH 11 White 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “HSI 11ch” (p. 11)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “HSI 11ch” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Dimmer		Same as CH 9 in the mode “HSI 11ch” (p. 12)
7	Shutter		Same as CH 6 in the mode “HSI 11ch” (p. 11)
8	Red		Same as CH 9 in the mode “STD 17ch” (p. 13)
9	Green		Same as CH 10 in the mode “STD 17ch” (p. 13)
10	Blue		Same as CH 11 in the mode “STD 17ch” (p. 13)
11	White		Same as CH 12 in the mode “STD 17ch” (p. 13)
12	Color Effects		Same as CH 14 in the mode “STD 17ch” (p. 13)
13	Effects	0	No function
		1–6	LED 1
		7–13	LED 2
		14–20	LED 3
		21–27	LED 4
		28–34	LED 5

CH	Function	DMX	Description
13	Effects (continued)	35–41	LED 6
		42–48	LED 7
		49–55	LED 8
		56–62	LED 9
		63–69	LED 10
		70–76	LED 11
		77–83	LED 12
		84–90	Shape 1
		91–97	Shape 2
		98–104	Shape 3
		105–111	Shape 4
		112–118	Shape 5
		119–125	Shape 6
		126–132	Shape 7
		133–139	Shape 8
		140–146	Shape 9
		147–153	Shape 10
		154–160	Shape 11
		161–167	Shape 12
		168–174	Shape 13
		175–181	Shape 14
		182–188	Shape 15
		189–195	Shape 16
		196–202	Shape 17
		203–209	Shape 18
		210–216	Shape 19
		217–223	Shape 20
		224–230	Shape 21
		231–237	Shape 22
		238–244	Shape 23
		245–251	Shape 24
		252–255	Shape 25
14	Position Effect Speed		Shape speed
		0	Min
		1–126	Min ... med
		127	Med
		128–254	Med ... max
		255	Max
15	Color Macro	0	No function
		1–255	RGB mixing
16	Color Macro 2		BG Dimmer

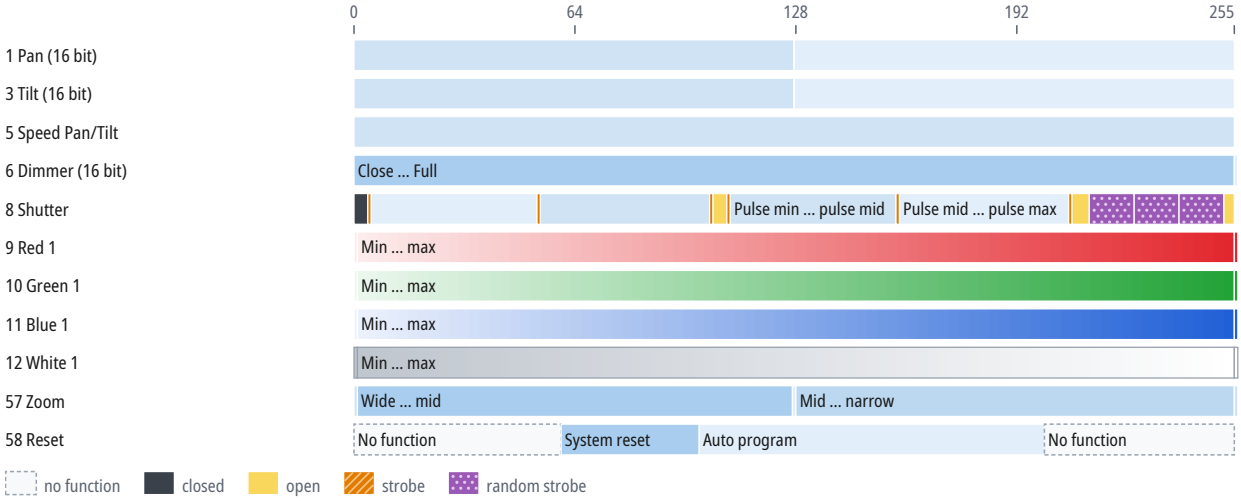
CH	Function	DMX	Description
16	Color Macro 2 (continued)	0	Min
		1–254	Min … max
		255	Max
17	Zoom		Same as CH 10 in the mode “HSI 11ch” (p. 12)
18	Reset		Same as CH 11 in the mode “HSI 11ch” (p. 12)

Mode EXT 58ch

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 Dimmer above 0; CH 8 Shutter at 104–107, 208–212 or 252–255 “Open”. The GDTF file gives these values for a console's Highlight function: CH 6 Dimmer 255, CH 9 Red 255 (the same in each of the 12 cells), CH 10 Green 255 (the same in each of the 12 cells), CH 11 Blue 0 (the same in each of the 12 cells), CH 12 White 0 (the same in each of the 12 cells).

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “HSI 11ch” (p. 11)
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt		Same as CH 3 in the mode “HSI 11ch” (p. 11)
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt	0–255	
6	Dimmer	0–255	Close … Full
		255	Full
7	Dimmer Fine	0–255	Fine adjustment of CH 6
8	Shutter		Same as CH 6 in the mode “HSI 11ch” (p. 11)
9	Red 1	0	Min
		1–254	Min … max
		255	Max
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	0	Min
		1–254	Min … max
		255	Max
57	Zoom		Same as CH 10 in the mode “HSI 11ch” (p. 12)
58	Reset		Same as CH 11 in the mode “HSI 11ch” (p. 12)

CH 9–56: 12 cells of 4 channels each. Every cell works as cell 1 in the table above (CH 9–12); the table below gives each cell's channel numbers.

Cell	Red	Green	Blue	White	Cell	Red	Green	Blue	White
1	9	10	11	12	2	13	14	15	16
3	17	18	19	20	4	21	22	23	24
5	25	26	27	28	6	29	30	31	32
7	33	34	35	36	8	37	38	39	40
9	41	42	43	44	10	45	46	47	48
11	49	50	51	52	12	53	54	55	56

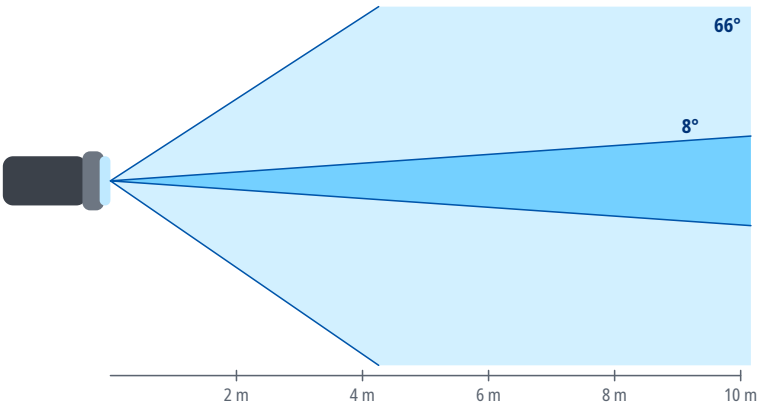
10 Technical specifications

Parameter	Value
Light	
Light source	LED
Optics	
Zoom	8–66°
Movement	
Pan	540°
Tilt	220°
Control	
DMX connection	3-pin XLR IN/OUT
Electrical	
Power supply	110–240 V, 50/60 Hz
Power consumption	500 W
Power connectors	powerCON TRUE1 IN
Dimensions and construction	
Weight	14.9 kg
Operating environment	
Operating temperature	-20 to 40 °C

Speeds and ranges

Parameter	Value
Strobe frequency	0.1–15 Hz

Spot diameter



Distance	Ø 8°	Ø 66°
2 m	0.28 m	2.6 m
4 m	0.56 m	5.2 m
6 m	0.84 m	7.8 m
8 m	1.1 m	10.4 m
10 m	1.4 m	13 m
15 m	2.1 m	19.5 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.