DMX REFERENCE

Eclypse FX

Vulcan Lighting



Manufacturer	Vulcan Lighting
GDTF file	Vulcan_Lighting_Eclypse_FX_147976.gdtf
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1 About this manual

This document describes the Eclypse FX by Vulcan Lighting. It was compiled from the GDTF file Vulcan_Lighting_Eclypse_FX_147976.gdtf from the GDTF-Share library.

File revision: “WIP-V0-2”.

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 Vulcan Lighting; product names and trademarks belong to their owners.

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

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

2 Quick reference

Parameter	Value
Power consumption	220 W
Weight	5.7 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Mode 1 (11CH)	11	46	1, 12, 23, 34, …
Mode 2 (17CH)	17	30	1, 18, 35, 52, …

No light? Check these channels

- Mode 1 (11CH): CH 4 Shutter at 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255 “Open”; CH 5 Dimmer above 0
- Mode 2 (17CH): CH 9 Shutter at 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255 “Open”; CH 10 Dimmer above 0


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: 100–240 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.

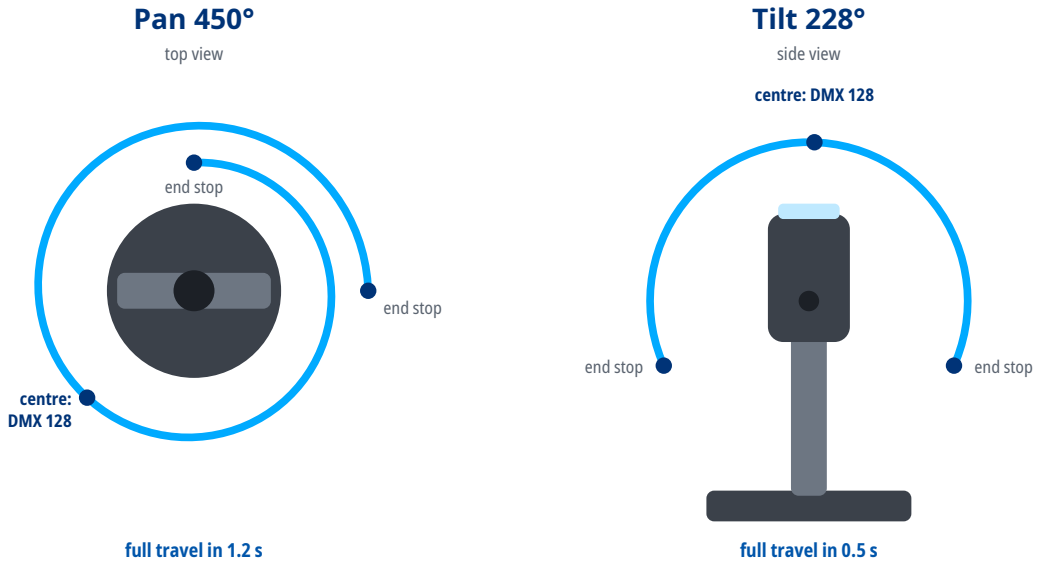
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do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

“Fast sweeping beams and a wide far-reaching quality wash in compact housing.”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

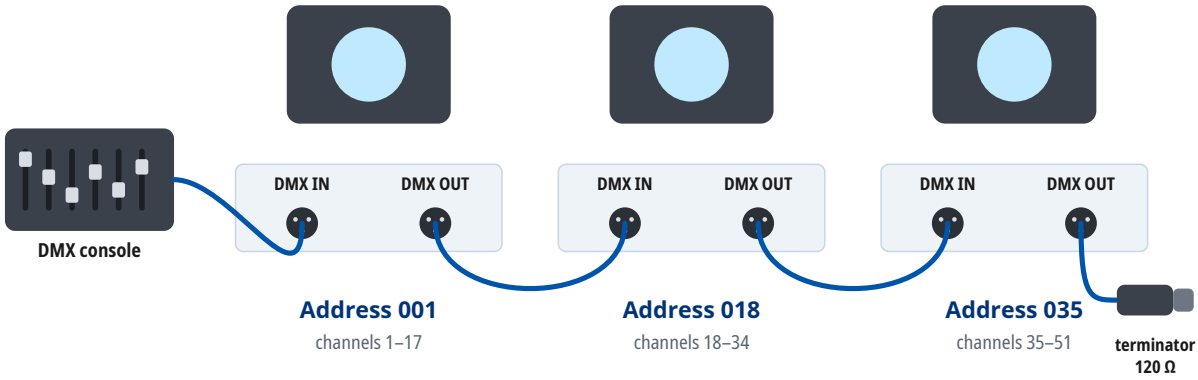
⚠ **WARNING**

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

6 Connections

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

DMX line



Mode 2 (17CH): every unit occupies 17 channels from its address. At most 32 units on one line; for more units or longer runs use a DMX splitter. A 120 Ω terminator closes the last DMX OUT.

7 Operation

Setting the DMX address

- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Mode 2 (17CH)”: 17.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied channel does not exceed 512. Devices with the same start address and mode respond identically.
- For several devices in a row in the DMX mode “Mode 2 (17CH)”, you can use, for example, the start addresses 1, 18, 35, 52.
- 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

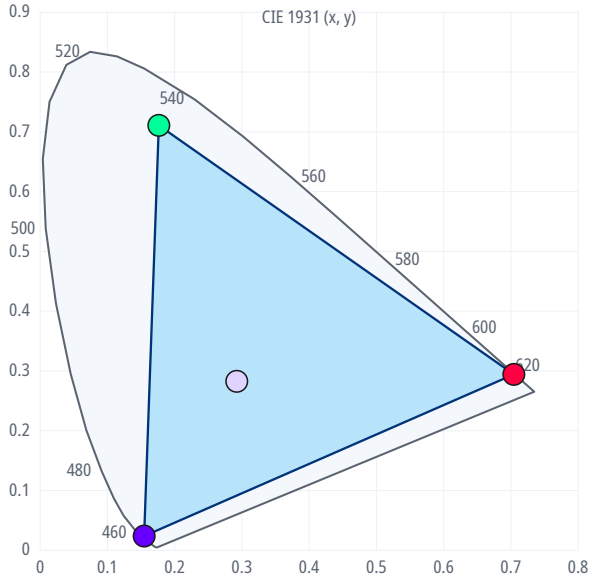
	Mode 1 (11CH) 11 channels	Mode 2 (17CH) 17 channels
Pan / Tilt	1, 2	1, 3
Pan / Tilt resolution	8 bit	16 bit
Dimmer	5	10
Dimmer resolution	8 bit	16 bit
Color mixing	6–9	12–15
Color temperature		16
Zoom	10	7
Effects / macros		17

Color wheel


1
Open
2
Medium Bastard Amber
3
Sunset Red
4
Fire
5
Bright Red
6
Lavender
7
Sky Blue
8
Medium Pink
9
Moss Green
10
Lime Green
11
Dark Yellow Green
12
Medium Purple
13
Light Lavender
14
Light Amber
15
Straw
16
Summer Blue
17
Dark Green
18
Primary Red
19
Dark Pink
20
Peacock Blue
21
Mauve
22
Steel Blue
23
Light Blue
24
Fern Green
25
Light Red
26
Filter Green
27
Bright Pink
28
Marine Blue
29
Medium Blue
30
Golden Amber
31
Deep Golden Amber
32
Pale Lavender
33
Special Lavender
34
Pale Green
35
Chrysalis Pink
36
Bright Blue
37
Apricot
38
Bright Rose
39
Pale Gold
40
Pale Rose
41
Pink
42
Pale Navy Blue
43
Bastard Amber
44
Flame Red
45
Daylight Blue
46
Lilac Tint
47
Deep Lavender
48
Lagoon Blue

49 Surprise Pink
50 Dark Lavender
51 Congo Blue
52 Alice Blue
53 Full CT Blue
54 Half CT Blue
55 Quarter CT Blue
56 Full CT Orange
57 Fluorescent Green
58 Quarter CT Orange
59 Filter Minus Green
60 Half Minus Green
61 Three Quarter CT Blue
62 Three Quarter CT Orange
63 Glacier Blue
64 Lighter Blue
65 Madge
66 Millenium Gold
67 Vanity Fair

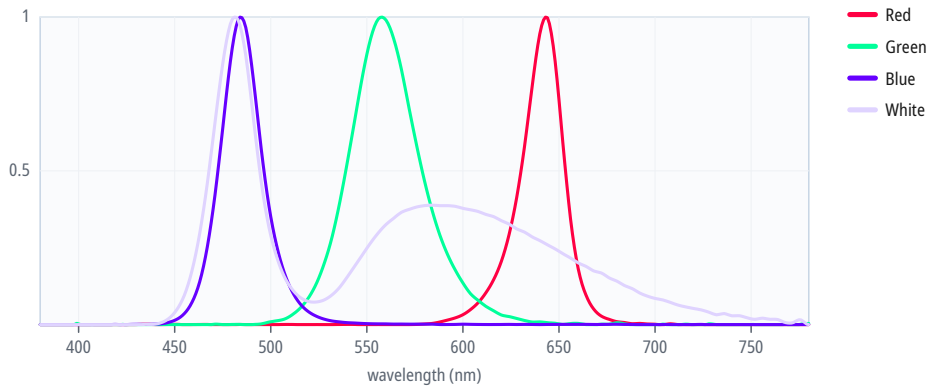
LED colors and the colors they mix



LED	x	y	nm
Red	0.704	0.294	629
Green	0.176	0.711	527
Blue	0.155	0.024	453
White	0.292	0.283	

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

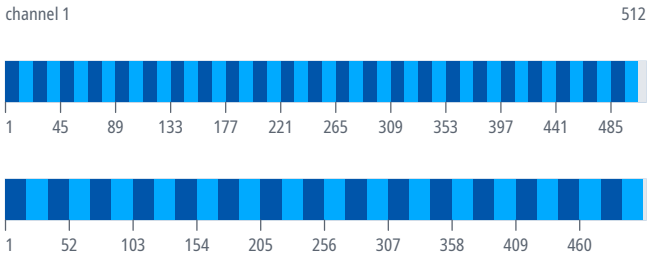
Spectra of the light sources



Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

9 DMX channels

Units in one DMX universe



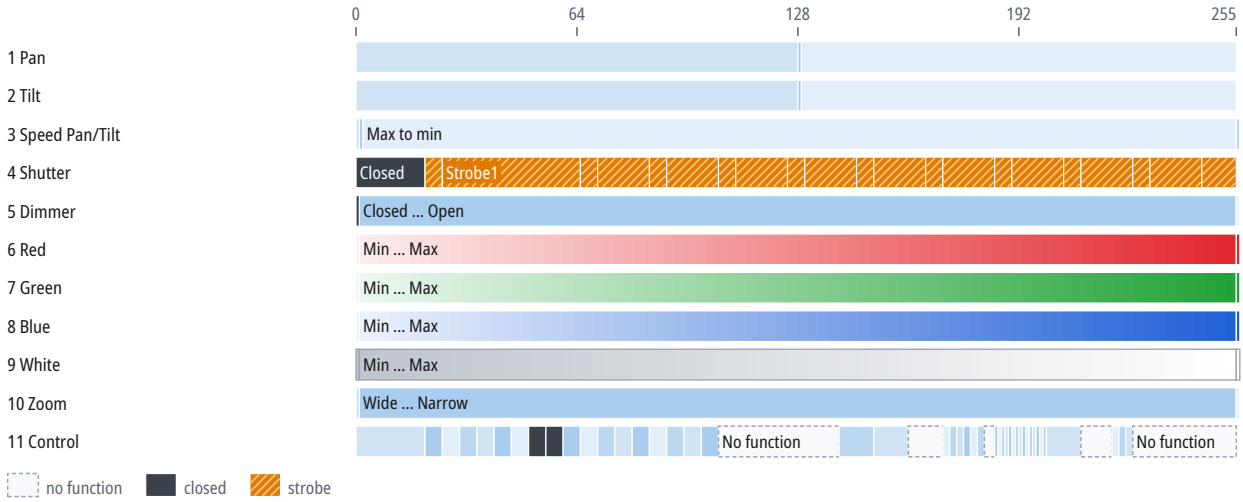
Start addresses of 20 units in the mode “Mode 2 (17CH)”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	86	11	171	16	256
2	18	7	103	12	188	17	273
3	35	8	120	13	205	18	290
4	52	9	137	14	222	19	307
5	69	10	154	15	239	20	324

Mode 1 (11CH)

If the device receives DMX in this mode but gives no light, check these channels: CH 4 Shutter at 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255 “Open”; CH 5 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 5 Dimmer 255, CH 6 Red 255, CH 7 Green 255, CH 8 Blue 255, CH 9 White 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0–127	Pan
		128	Center
		129–255	Pan
2	Tilt	0–127	Tilt
		128	Center
		129–255	Tilt
3	Speed Pan/Tilt		Pan/Tilt speed + time
		0	Standard mode
		1	Max
		2–254	Max to min
		255	Min
4	Shutter	0–19	Closed
		20–24	Open
		25–64	Strobe1
		65–69	Open
		70–84	Strobe2
		85–89	Open
		90–104	Strobe3
		105–109	Open
		110–124	Strobe4
		125–129	Open
		130–144	Strobe5
		145–149	Open

CH	Function	DMX	Description
4	Shutter (continued)	150–164	Strobe6
		165–169	Open
		170–184	Strobe7
		185–189	Open
		190–204	Strobe8
		205–209	Open
		210–224	Strobe9
		225–229	Open
		230–244	Strobe10
		245–255	Open
5	Dimmer	0	Closed
		1–254	Closed ... Open
		255	Open
6	Red	0	Min
		1–254	Min ... Max
		255	Max
7	Green	0	Min
		1–254	Min ... Max
		255	Max
8	Blue	0	Min
		1–254	Min ... Max
		255	Max
9	White	0	Min
		1–254	Min ... Max
		255	Max
10	Zoom	0	Wide
		1–254	Wide ... Narrow
		255	Narrow
11	Control	0–19	No function
		20–24	Display ON
		25–29	Display OFF
		30–34	RGBW colour mixing mode
		35–39	CMY colour mixing mode
		40–44	Pan/Tilt speed mode
		45–49	Pan/Tilt time mode
		50–54	Blackout while pan/tilt moving
		55–59	Disabled blackout while pan/tilt moving
		60–64	Dimmer curve - square law
		65–69	Dimmer curve - linear
		70–74	Fans mode Auto
		75–79	Fans mode High
		80–84	White point 8000K ON

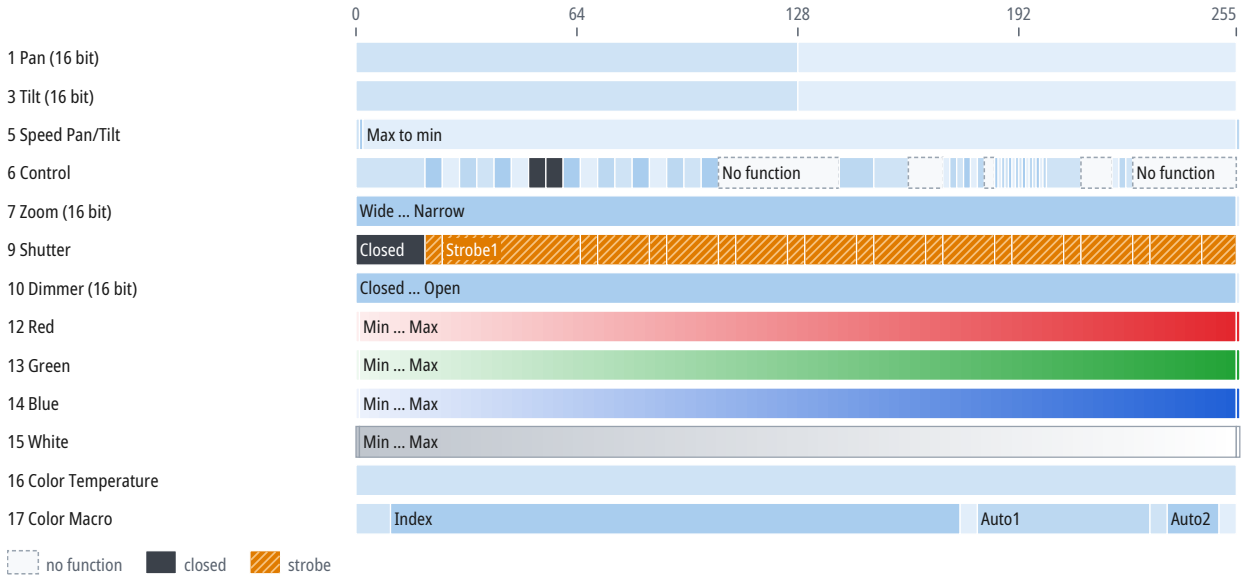
CH	Function	DMX	Description
11	Control (continued)	85–89	White point 8000K OFF
		90–94	Fans mode: Quiet
		95–99	Max speed P/T
		100–104	Reduced speed P/T
		105–139	No function
		140–149	Pan/Tilt reset
		150–159	Zoom reset
		160–169	No function
		170–171	Tungsten effect simulation (750W) On
		172–173	Tungsten effect simulation (1000W) On
		174–175	Tungsten effect simulation (1200W) On
		176–177	Tungsten effect simulation (2000W) On
		178–179	Tungsten effect simulation (2500W) On
		180–181	Tungsten effect simulation Off
		182–184	No function
		185	300Hz (Standard)
		186	600Hz (High)
		187–192	LED Freqency step -6...-1
		193	LED frequency (standard or high)
		194–199	LED Freqency step +1...6
		200–209	Total fixture reset
		210–218	No function
		219–220	RoboSpot enabled
		221–222	RoboSpot disabled except handle faders and PT
		223–224	RoboSpot fully disabled
		225–255	No function

Mode 2 (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 9 Shutter at 20–24, 65–69, 85–89, 105–109, 125–129, 145–149, 165–169, 185–189, 205–209, 225–229 or 245–255 “Open”; CH 10 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 10 Dimmer 255, CH 12 Red 255, CH 13 Green 255, CH 14 Blue 255, CH 15 White 255.

Channel functions at a glance



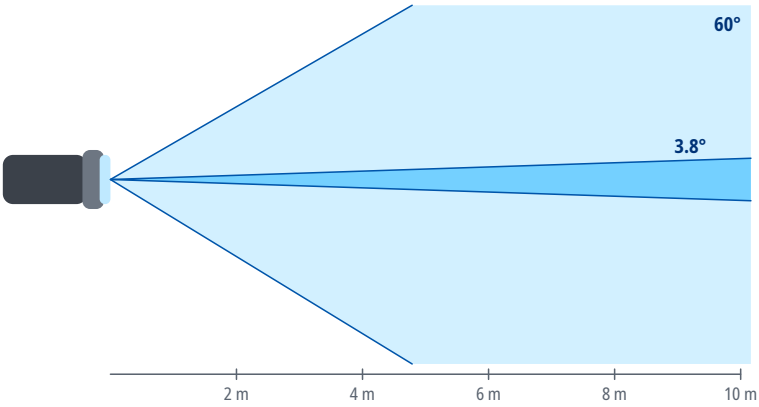
CH	Function	DMX	Description
1	Pan	0–128	Pan
		128	Center
		128–255	Pan
2	Pan Fine	0–255	Fine adjustment of CH 1
3	Tilt	0–128	Tilt
		128	Center
		128–255	Tilt
4	Tilt Fine	0–255	Fine adjustment of CH 3
5	Speed Pan/Tilt		Same as CH 3 in the mode “Mode 1 (11CH)” (p. 11)
6	Control		Same as CH 11 in the mode “Mode 1 (11CH)” (p. 12)
7	Zoom	0–255	Wide ... Narrow
		255	Narrow
8	Zoom Fine	0–255	Fine adjustment of CH 7
9	Shutter		Same as CH 4 in the mode “Mode 1 (11CH)” (p. 11)
10	Dimmer	0–255	Closed ... Open
		255	Open
11	Dimmer Fine	0–255	Fine adjustment of CH 10
12	Red		Same as CH 6 in the mode “Mode 1 (11CH)” (p. 12)
13	Green		Same as CH 7 in the mode “Mode 1 (11CH)” (p. 12)
14	Blue		Same as CH 8 in the mode “Mode 1 (11CH)” (p. 12)

CH	Function	DMX	Description
15	White		Same as CH 9 in the mode “Mode 1 (11CH)” (p. 12)
16	Color Temperature	0–255	
17	Color Macro	0–9	Open
		10–174	Index
		175–179	Open
		180–229	Auto1
		230–234	Open
		235–249	Auto2
		250–255	Open

10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	220 W
Luminous flux	2,842 lm
Color temperature	8,000 K
Color rendering index (CRI)	75
Optics	
Zoom	3.8–60°
Movement	
Pan	450°
Tilt	228°
Control	
DMX connection	5-pin XLR IN/OUT
RJ45 connectors	RJ45
Electrical	
Power supply	100–240 V, 50/60 Hz
Power consumption	220 W
Power connectors	PowerConBlue IN
Dimensions and construction	
Weight	5.7 kg
Operating environment	
Operating temperature	0 to 45 °C

Spot diameter



Distance	Ø 3.8°	Ø 60°
2 m	0.13 m	2.3 m
4 m	0.27 m	4.6 m
6 m	0.4 m	6.9 m
8 m	0.53 m	9.2 m
10 m	0.66 m	11.5 m
15 m	1 m	17.3 m

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

11 Maintenance and cleaning

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

12 Troubleshooting

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

13 Disposal

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

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

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

Recycle the packaging materials according to their type.