DMX REFERENCE

Vega 640zoom

Vega640Z

Wieser



Manufacturer	Wieser
GDTF file	Wieser_Vega_640zoom_12055.gdtf
GDTF revision	W.S 10Kanal · 2021-03-28
Generated	2026-11-24

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1 About this manual

This document describes the Vega640Z by Wieser. It was compiled from the GDTF file Wieser_Vega_640zoom_12055.gdtf from the GDTF-Share library.

File revision: “W.S 10Kanal”.

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 Wieser; 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	8.2 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Mode 1 15 DMX	10	51	1, 11, 21, 31, ...
Mode 2 13 DMX	13	39	1, 14, 27, 40, ...

No light? Check these channels

- Mode 1 15 DMX: CH 4 Strobe at 32–63 “Open” or 96–127 or 160–191
- Mode 2 13 DMX: CH 10 Strobe at 32–63 “Open” or 96–127 or 160–191 or 224–255


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

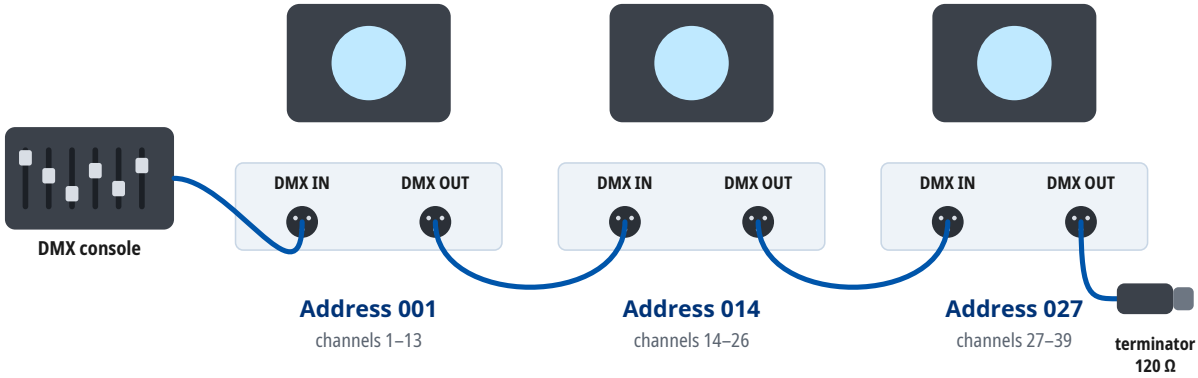
> ⚠ **WARNING**
>
> - Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
> - The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
> - Weight of the device: 8.2 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 13 DMX: every unit occupies 13 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

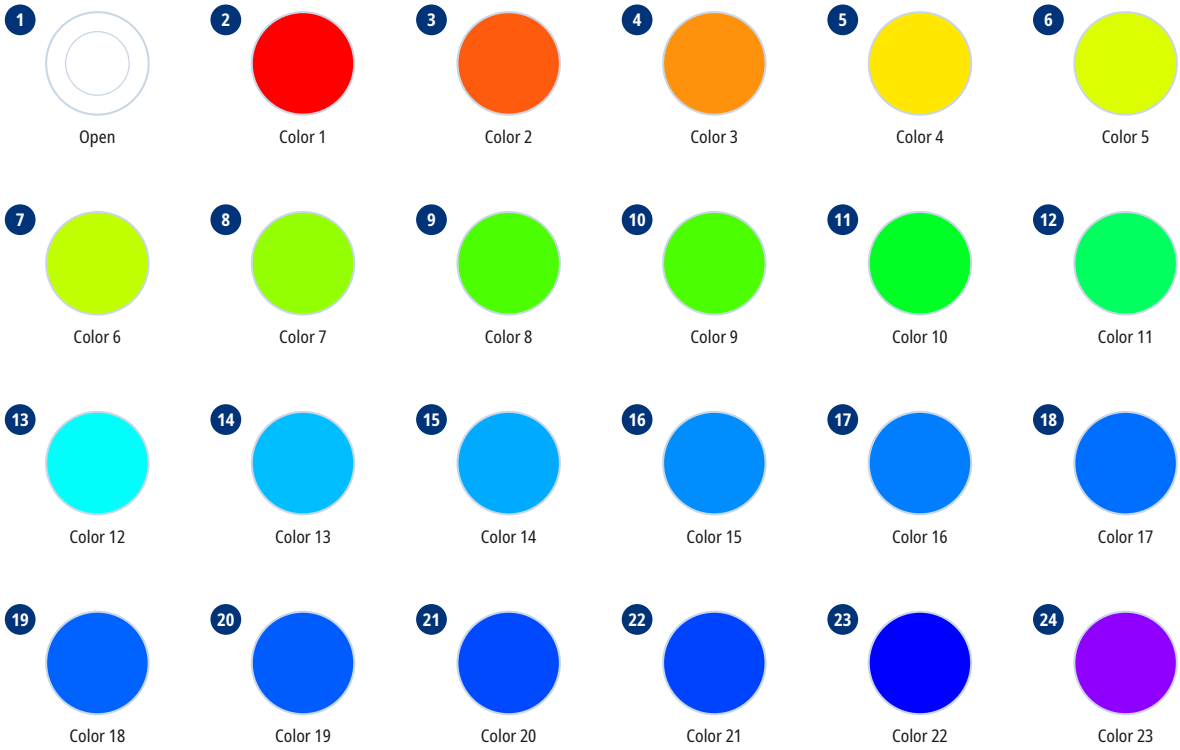
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Mode 2 13 DMX”: 13.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 13 DMX”, you can use, for example, the start addresses 1, 14, 27, 40.
- 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 15 DMX 10 channels	Mode 2 13 DMX 13 channels
Pan / Tilt	1, 2	1, 2
Dimmer	3	11
Dimmer resolution	8 bit	16 bit
Shutter / strobe	4	10
Color mixing	5–8	5–8
Color temperature		9
Zoom	9	4
Effects / macros	10	

Color wheel 1



25 Color 24

26 Color 25

27 Color 26

28 Color 27

29 Color 28

30 Color 29

31 Color 30

32 Color 31

33 Color 32

Color wheel 2

1 8000K **DMX 0–4**

2 7900K **DMX 5–9**

3 7800K **DMX 10–13**

4 7700K **DMX 14–18**

5 7600K **DMX 19–22**

6 7500K **DMX 23–27**

7 7400K **DMX 28–31**

8 7300K **DMX 32–36**

9 7200K **DMX 37–40**

10 7100K **DMX 41–45**

11 7000K **DMX 46–49**

12 6900K **DMX 50–54**

13 6800K **DMX 55–58**

14 6700K **DMX 59–63**

15 6600K **DMX 64–67**

16 6500K **DMX 68–72**

17 6400K **DMX 73–76**

18 6300K **DMX 77–81**

19 6200K **DMX 82–85**

20 6100K **DMX 86–90**

21 6000K **DMX 91–94**

22 5900K **DMX 95–99**

23 5800K **DMX 100–103**

24 5700K **DMX 104–108**

25
5600K
DMX 109–112

26
5500K
DMX 113–117

27
5400K
DMX 118–121

28
5300K
DMX 122–126

29
5200K
DMX 127–130

30
5100K
DMX 131–135

31
5000K
DMX 136–139

32
4900K
DMX 140–144

33
4800K
DMX 145–148

34
4700K
DMX 149–153

35
4600K
DMX 154–157

36
4500K
DMX 158–162

37
4400K
DMX 163–166

38
4300K
DMX 167–171

39
4200K
DMX 172–175

40
4100K
DMX 176–180

41
4000K
DMX 181–184

42
3900K
DMX 185–189

43
3800K
DMX 190–193

44
3700K
DMX 194–198

45
3600K
DMX 199–202

46
3500K
DMX 203–207

47
3400K
DMX 208–211

48
3300K
DMX 212–216

49
3200K
DMX 217–220

50
3100K
DMX 221–225

51
3000K
DMX 226–229

52
2900K
DMX 230–234

53
2800K
DMX 235–238

54
2700K
DMX 239–243

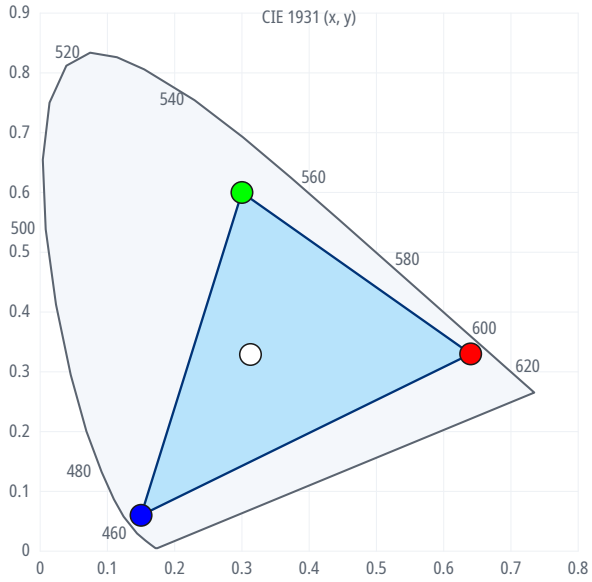
55
2600K
DMX 244–247

56
2500K
DMX 248–255

Gobo wheel

1 Open

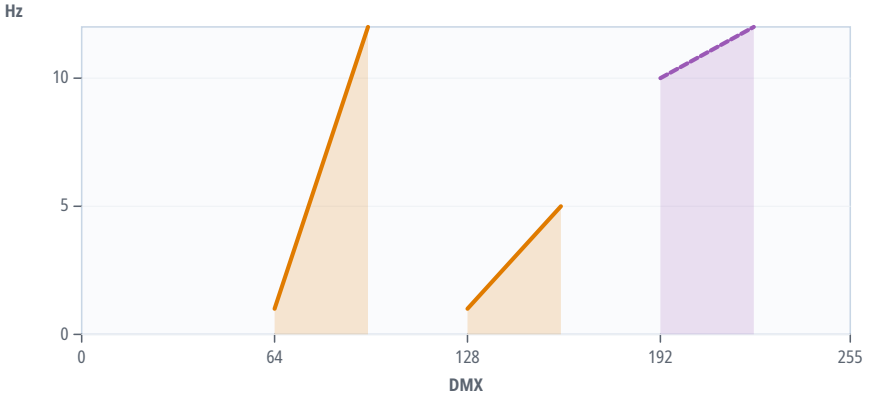
LED colors and the colors they mix



LED	x	y
Red	0.640	0.330
Green	0.300	0.600
Blue	0.150	0.060
White	0.313	0.329

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

Strobe rate

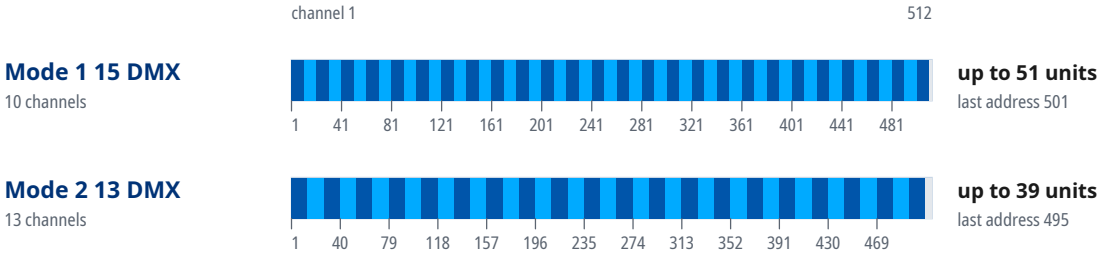


CH 10 · Mode 2 13 DMX

- 64–95: 1–12 Hz
  ShutterStrobe 1
- 128–159: 1–5 Hz
  Pulse Close
- 192–223: 10–12 Hz
  Strobe Ran

9 DMX channels

Units in one DMX universe



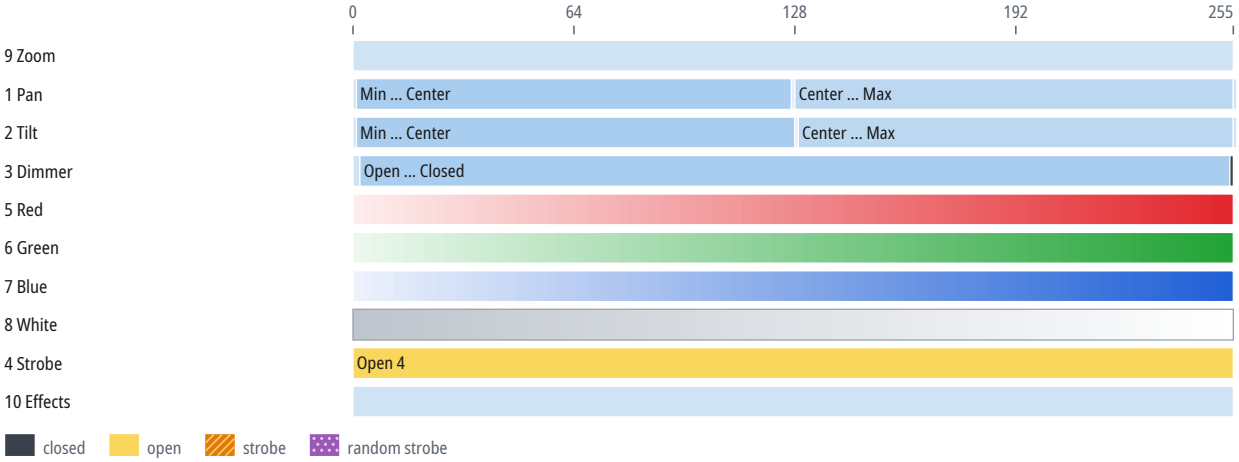
Start addresses of 20 units in the mode “Mode 2 13 DMX”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	66	11	131	16	196
2	14	7	79	12	144	17	209
3	27	8	92	13	157	18	222
4	40	9	105	14	170	19	235
5	53	10	118	15	183	20	248

Mode 1 15 DMX

If the device receives DMX in this mode but gives no light, check these channels: CH 4 Strobe at 32–63 “Open” or 96–127 or 160–191. The GDTF file gives these values for a console's Highlight function: CH 5 Red 255, CH 6 Green 255, CH 7 Blue 255, CH 8 White 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan	0	Min
		1–126	Min ... Center
		127	Center
		128–254	Center ... Max
		255	Max
2	Tilt	0	Min
		1–127	Min ... Center

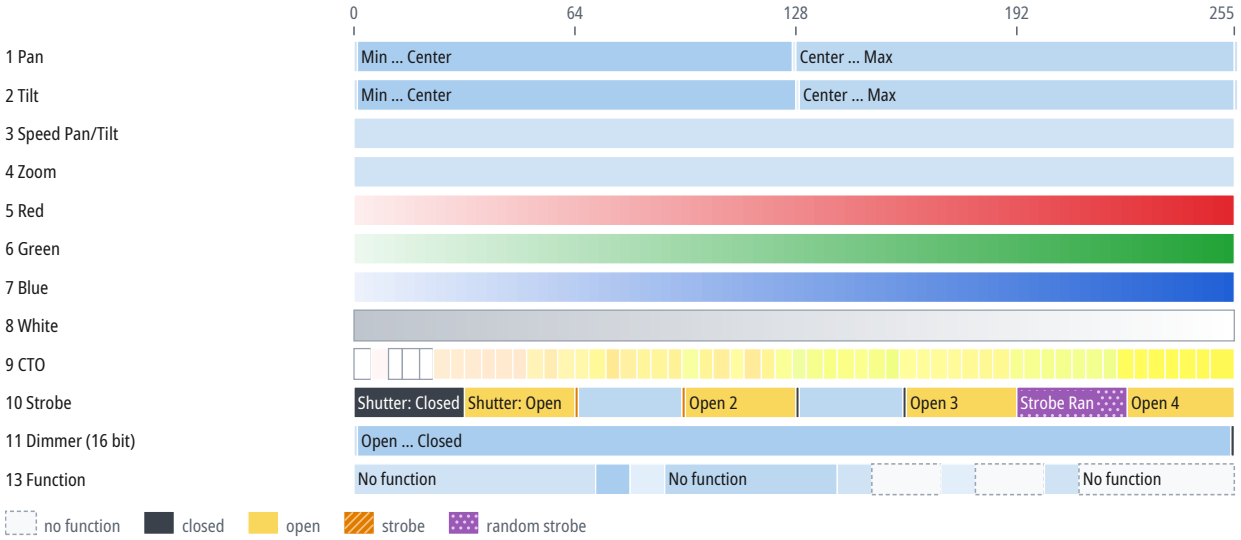
CH	Function	DMX	Description
2	Tilt (continued)	128	Center
		129–254	Center ... Max
		255	Max
3	Dimmer	0–1	Open
		2–253	Open ... Closed
		254–255	Closed
4	Strobe	0–31	Shutter: Closed
		32–63	Shutter: Open
		64	Min Strobe
		65–94	Min Strobe ... max Strobe
		95	Max Strobe
		96–127	Open 2
		128	Min Pulse Close
		129–158	Min Pulse Close ... max Pulse Close
		159	Max Pulse Close
		160–191	Open 3
		192–255	Strobe Ran
5	Red	0–255	
6	Green	0–255	
7	Blue	0–255	
8	White	0–255	
9	Zoom	0–255	30–9°
10	Effects	0–255	

Mode 2 13 DMX

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 10 Strobe at 32–63 “Open” or 96–127 or 160–191 or 224–255. The GDTF file gives these values for a console's Highlight function: CH 5 Red 255, CH 6 Green 255, CH 7 Blue 255, CH 8 White 0, CH 10 Strobe 50.

Channel functions at a glance



CH	Function	DMX	Description
1	Pan		Same as CH 1 in the mode “Mode 1 15 DMX” (p. 11)
2	Tilt		Same as CH 2 in the mode “Mode 1 15 DMX” (p. 11)
3	Speed Pan/Tilt	0–255	
4	Zoom	0–255	30–9°
5	Red	0–255	
6	Green	0–255	
7	Blue	0–255	
8	White	0–255	
9	CTO	0–4	8000K
		5–9	7900K
		10–13	7800K
		14–18	7700K
		19–22	7600K
		23–27	7500K
		28–31	7400K
		32–36	7300K
		37–40	7200K
		41–45	7100K
		46–49	7000K
		50–54	6900K
		55–58	6800K

CH	Function	DMX	Description
9	CTO (continued)	59–63	6700K
		64–67	6600K
		68–72	6500K
		73–76	6400K
		77–81	6300K
		82–85	6200K
		86–90	6100K
		91–94	6000K
		95–99	5900K
		100–103	5800K
		104–108	5700K
		109–112	5600K
		113–117	5500K
		118–121	5400K
		122–126	5300K
		127–130	5200K
		131–135	5100K
		136–139	5000K
		140–144	4900K
		145–148	4800K
		149–153	4700K
		154–157	4600K
		158–162	4500K
		163–166	4400K
		167–171	4300K
		172–175	4200K
		176–180	4100K
		181–184	4000K
		185–189	3900K
		190–193	3800K
		194–198	3700K
		199–202	3600K
		203–207	3500K
		208–211	3400K
		212–216	3300K
		217–220	3200K
		221–225	3100K
		226–229	3000K
		230–234	2900K
		235–238	2800K
		239–243	2700K
		244–247	2600K

CH	Function	DMX	Description
9	CTO (continued)	248–255	2500K
10	Strobe	0–31	Shutter: Closed
		32–63	Shutter: Open
		64	Min Strobe
		65–94	Min Strobe ... max Strobe
		95	Max Strobe
		96–127	Open 2
		128	Min Pulse Close
		129–158	Min Pulse Close ... max Pulse Close
		159	Max Pulse Close
		160–191	Open 3
		192–223	Strobe Ran (10–12 Hz)
		224–255	Open 4
11	Dimmer	0–1	Open
		1–254	Open ... Closed
		254–255	Closed
12	Dimmer Fine	0–255	Fine adjustment of CH 11
13	Function	0–69	No function
		70–79	BO PT
		80–89	NO BO PT
		90–139	No function
		140–149	PT Reset
		150–169	No function
		170–179	Zoom Reset
		180–199	No function
		200–209	All Reset
		210–255	No function

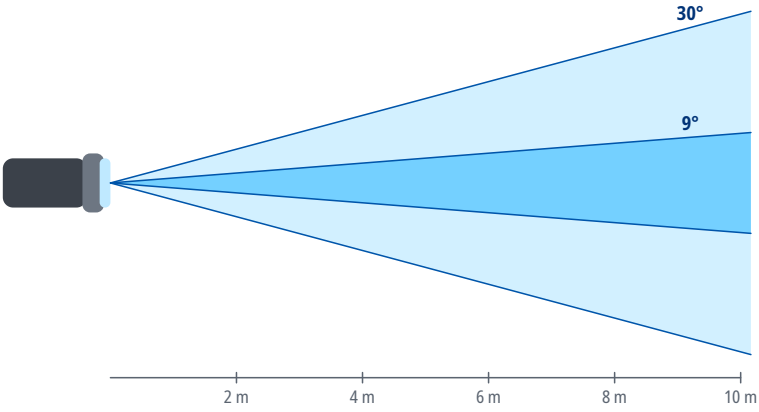
10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	200 W
Luminous flux	8,000 lm
Color temperature	6,000 K
Color rendering index (CRI)	90
Optics	
Zoom	9–30°
Movement	
Pan	540°
Tilt	200°
Dimensions and construction	
Weight	8.2 kg
Operating environment	
Operating temperature	0 to 40 °C

Speeds and ranges

Parameter	Value
Color temperature range	2500–8000 K
Strobe frequency	1–12 Hz

Spot diameter



Distance	Ø 9°	Ø 30°
2 m	0.31 m	1.1 m
4 m	0.63 m	2.1 m
6 m	0.94 m	3.2 m
8 m	1.3 m	4.3 m
10 m	1.6 m	5.4 m
15 m	2.4 m	8 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.