DMX REFERENCE

MAC Viper Wash

LPL



Manufacturer	LPL
GDTF file	LPL_MAC_Viper_Wash_110378.gdtf
GDTF revision	Rev1_0 · 2025-09-11
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1 About this manual

This document describes the MAC Viper Wash by LPL. It was compiled from the GDTF file LPL_MAC_Viper_Wash_110378.gdtf from the GDTF-Share library.

File revision: “Rev1_0”.

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 LPL; 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	1,225 W
Weight	34.1 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Basic	18	28	1, 19, 37, 55, …
Extended	24	21	1, 25, 49, 73, …

No light? Check these channels

- Basic: CH 1 Shutter at 20–49 or 201–210 “Open”; CH 2 Dimmer above 0
- Extended: CH 1 Shutter at 20–49 or 201–210 “Open”; CH 2 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: 120–240 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

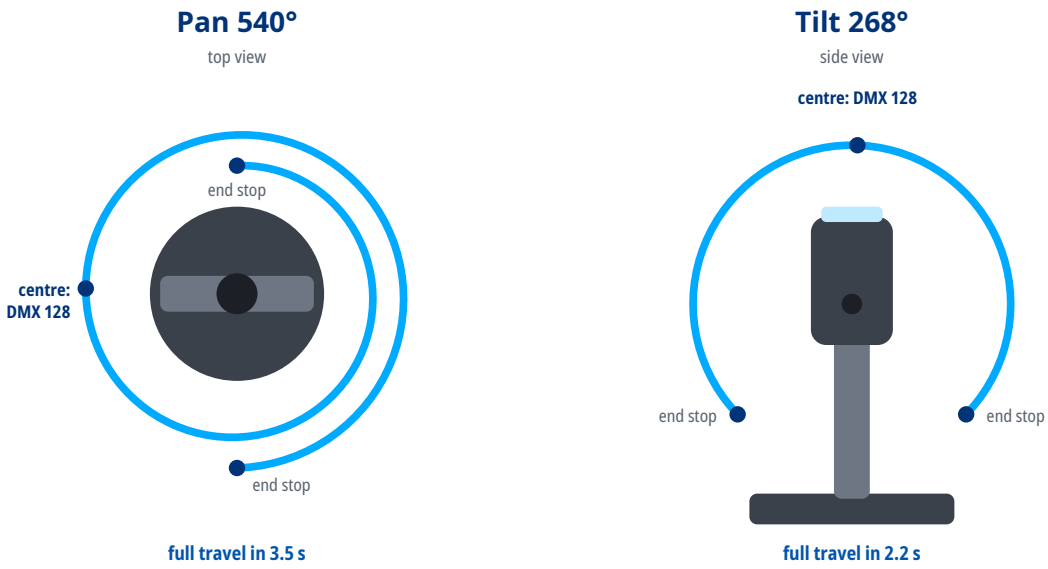
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts,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

“Official Martin Professional File (no measurements)”

Range of movement



Full-travel times as stated in the GDTF file.

5 Installation

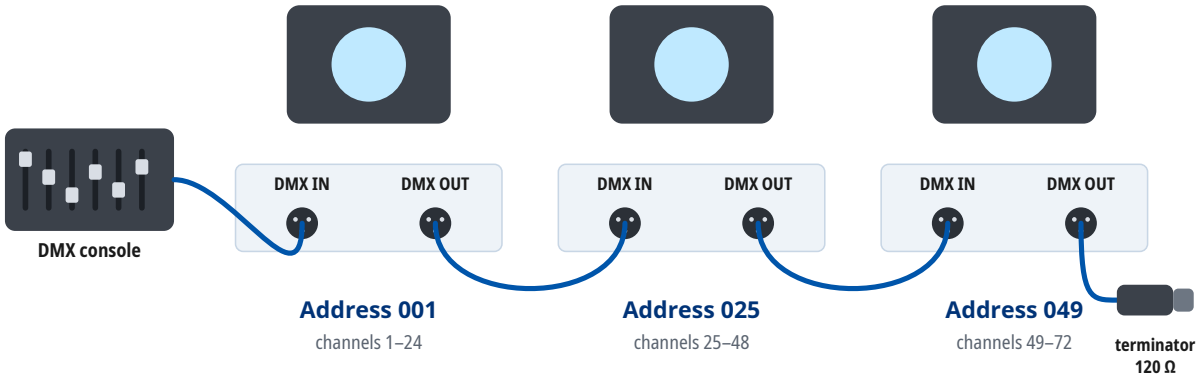
⚠ **WARNING**

- 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: 34.1 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 Extended: every unit occupies 24 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

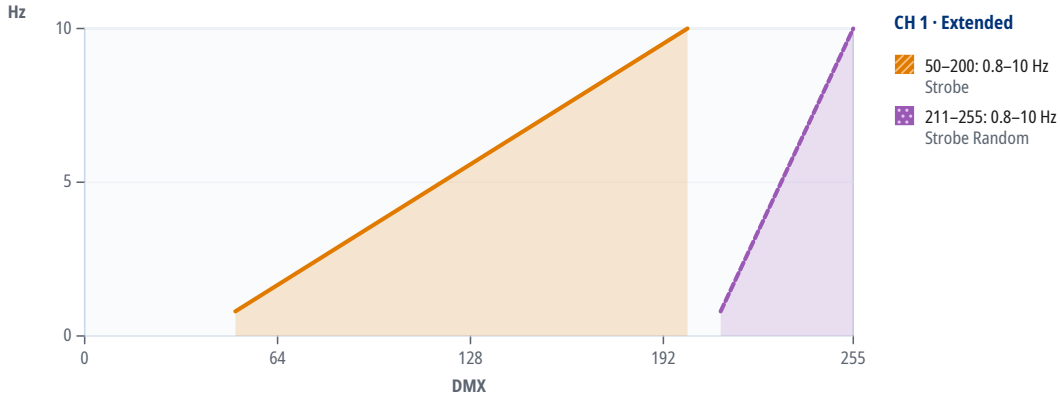
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Extended”: 24.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “Extended”, you can use, for example, the start addresses 1, 25, 49, 73.
- 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

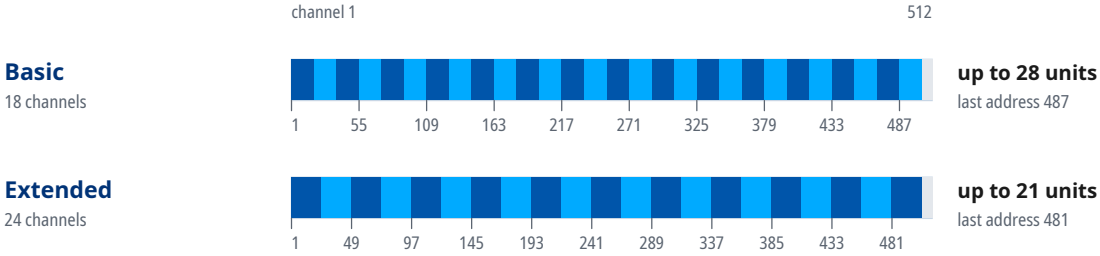
	Basic 18 channels	Extended 24 channels
Pan / Tilt	14, 16	15, 17
Dimmer	2	2
Dimmer resolution	8 bit	16 bit
Shutter / strobe	1	1
Color mixing	3–5	4–6
Color temperature	6	7
Zoom	12	13
Focus	13	14

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Extended”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	121	11	241	16	361
2	25	7	145	12	265	17	385
3	49	8	169	13	289	18	409
4	73	9	193	14	313	19	433
5	97	10	217	15	337	20	457

RDM personalities

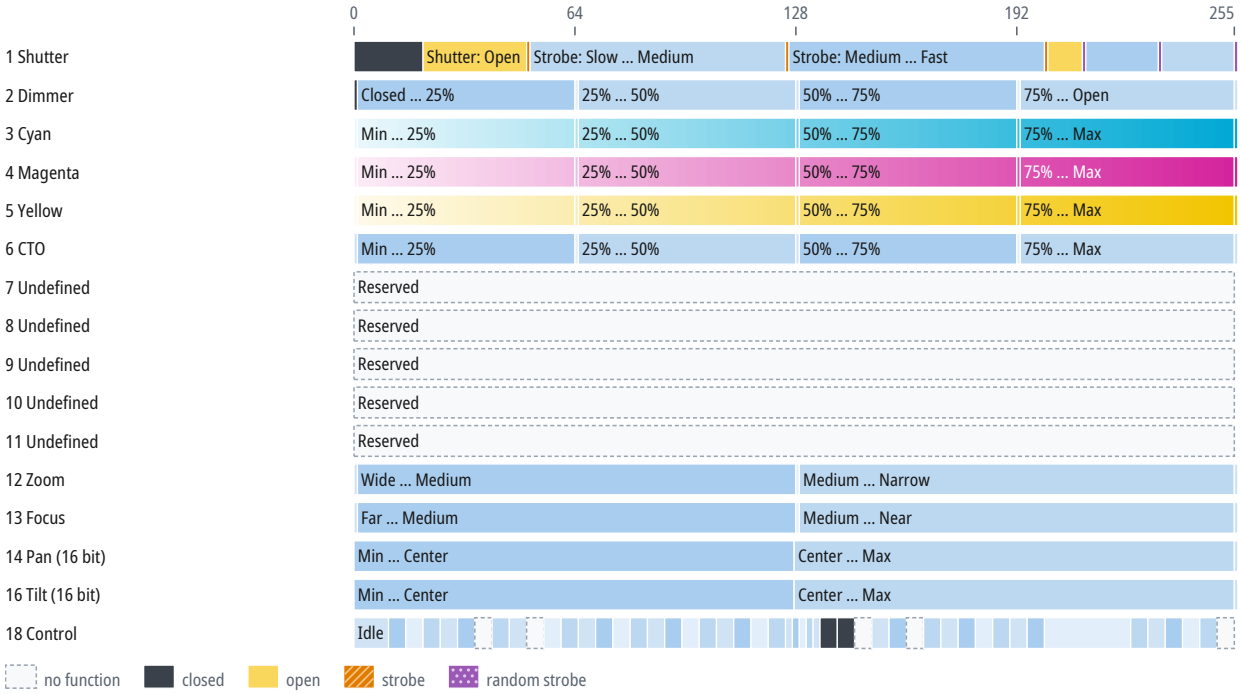
Mode	Channels	RDM personality
Basic	18	1
Extended	24	2

Mode Basic

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 1 Shutter at 20–49 or 201–210 “Open”; CH 2 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 30, CH 2 Dimmer 255, CH 3 Cyan 0, CH 4 Magenta 0, CH 5 Yellow 0, CH 6 CTO 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Shutter	0–19	Shutter: Closed
		20–49	Shutter: Open
		50	Strobe: Slow
		51–124	Strobe: Slow ... Medium
		125	Strobe: Medium
		126–199	Strobe: Medium ... Fast
		200	Strobe: Fast
		201–210	Shutter: Open
		211	Strobe Random: Slow
		212–232	Strobe Random: Slow ... Medium
		233	Strobe Random: Medium
		234–254	Strobe Random: Medium ... Fast
		255	Strobe Random: Fast
2	Dimmer	0	Closed
		1–63	Closed ... 25%
		64	25%
		65–127	25% ... 50%
		128	50%

CH	Function	DMX	Description
2	Dimmer (continued)	129–191	50% … 75%
		192	75%
		193–254	75% … Open
		255	Open
3	Cyan	0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–191	50% … 75%
		192	75%
		193–254	75% … Max
		255	Max
4	Magenta	0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–191	50% … 75%
		192	75%
		193–254	75% … Max
		255	Max
5	Yellow	0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–191	50% … 75%
		192	75%
		193–254	75% … Max
		255	Max
6	CTO	0	Min
		1–63	Min … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–191	50% … 75%
		192	75%
		193–254	75% … Max
		255	Max
7	Undefined	0–255	Reserved
8	Undefined	0–255	Reserved

CH	Function	DMX	Description
9	Undefined	0–255	Reserved
10	Undefined	0–255	Reserved
11	Undefined	0–255	Reserved
12	Zoom	0	Wide
		1–127	Wide ... Medium
		128	Medium
		129–254	Medium ... Narrow
		255	Narrow
13	Focus	0	Far
		1–127	Far ... Medium
		128	Medium
		129–254	Medium ... Near
		255	Near
14	Pan	0–127	Min ... Center
		128–255	Center ... Max
		255	Max
15	Pan Fine	0–255	Fine adjustment of CH 14
16	Tilt	0–127	Min ... Center
		128–255	Center ... Max
		255	Max
17	Tilt Fine	0–255	Fine adjustment of CH 16
18	Control	0–9	Idle
		10–14	Reset Entire Fixture (5s)
		15–19	Reset Shutter/Dimmer (5s)
		20–24	Reset Color Only (5s)
		25–29	Reset Beam Only (5s)
		30–34	Reset Pan and Tilt Only (5s)
		35–39	No Function 1
		40–44	Lamp On (5s)
		45–49	Lamp Off (5s)
		50–54	No Function 2
		55–59	Enable Calibration (5s)
		60–64	Linear (1s)
		65–69	Square (1s)
		70–74	Inverse Square (1s)
		75–79	S-Curve (1s)
		80–84	Normal (1s)
		85–89	Pan and Tilt Speed: Fast (1s)
		90–94	Smooth (1s)
		95–99	Shortcuts ON
		100–104	Shortcuts OFF
		105–109	Focus Tracking: Off (1s)

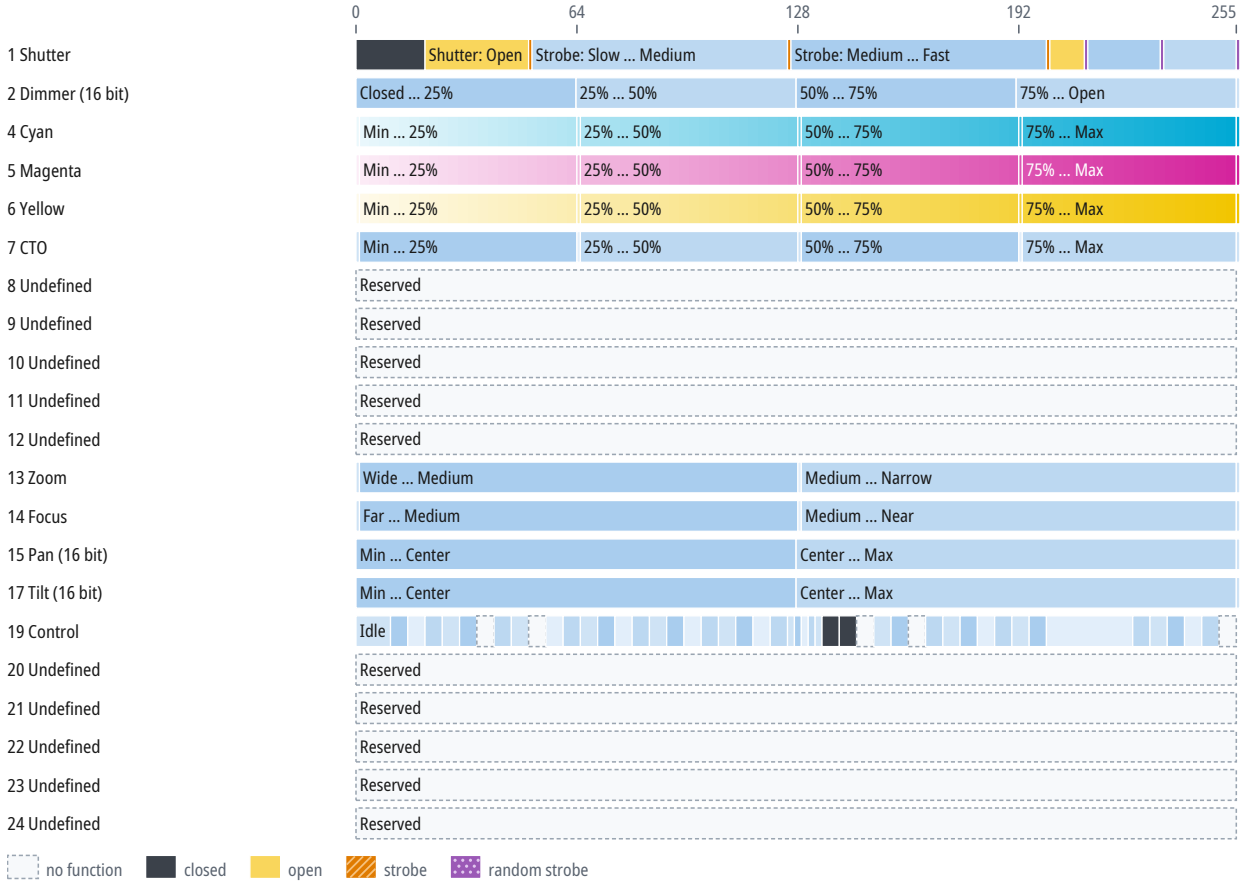
CH	Function	DMX	Description
18	Control (continued)	110–114	Near Distance (1s)
		115–119	Medium Distance (1s)
		120–124	Far Distance (1s)
		125–126	100% (1s)
		127–128	90% (1s)
		129–130	80% (1s)
		131–132	70% (1s)
		133–134	60% (1s)
		135–139	Auto Blackout ON (1s)
		140–144	Auto Blackout OFF (1s)
		145–149	No Function 3
		150–154	Control Panel Display ON (1s)
		155–159	Control Panel Display OFF (1s)
		160–164	No Function 4
		165–169	Store Pan and Tilt Calibration (5s)
		170–174	Store Dimmer Calibration (5s)
		175–179	Store Cyan Calibration (5s)
		180–184	Store Magenta Calibration (5s)
		185–189	Store Yellow Calibration (5s)
		190–194	Store CTO Calibration (5s)
		195–199	Store All CMYC Calibration (5s)
		200–224	Store All CMYC Calibration (5s) ... Store Focus Calibration (5s)
		225–229	Store Focus Calibration (5s)
		230–234	Store Zoom Calibration (5s)
		235–239	Store Pan Calibration (5s)
		240–244	Store Tilt Calibration (5s)
		245–249	Reset All Calibration To Factory Default (5s)
		250–255	No Function 5

Mode Extended

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 1 Shutter at 20–49 or 201–210 “Open”; CH 2 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 30, CH 2 Dimmer 255, CH 4 Cyan 0, CH 5 Magenta 0, CH 6 Yellow 0, CH 7 CTO 0.

Channel functions at a glance



CH	Function	DMX	Description
1	Shutter		Same as CH 1 in the mode “Basic” (p. 9)
2	Dimmer	0–63	Closed ... 25%
		64–127	25% ... 50%
		128–191	50% ... 75%
		192–255	75% ... Open
		255	Open
3	Dimmer Fine	0–255	Fine adjustment of CH 2
4	Cyan		Same as CH 3 in the mode “Basic” (p. 10)
5	Magenta		Same as CH 4 in the mode “Basic” (p. 10)
6	Yellow		Same as CH 5 in the mode “Basic” (p. 10)
7	CTO		Same as CH 6 in the mode “Basic” (p. 10)
8	Undefined	0–255	Reserved
9	Undefined	0–255	Reserved

CH	Function	DMX	Description
10	Undefined	0–255	Reserved
11	Undefined	0–255	Reserved
12	Undefined	0–255	Reserved
13	Zoom		Same as CH 12 in the mode “Basic” (p. 11)
14	Focus		Same as CH 13 in the mode “Basic” (p. 11)
15	Pan		Same as CH 14 in the mode “Basic” (p. 11)
16	Pan Fine	0–255	Fine adjustment of CH 15
17	Tilt		Same as CH 16 in the mode “Basic” (p. 11)
18	Tilt Fine	0–255	Fine adjustment of CH 17
19	Control		Same as CH 18 in the mode “Basic” (p. 11)
20	Undefined	0–255	Reserved
21	Undefined	0–255	Reserved
22	Undefined	0–255	Reserved
23	Undefined	0–255	Reserved
24	Undefined	0–255	Reserved

10 Technical specifications

Parameter	Value
Light	
Light source	discharge lamp
Lamp power	1,000 W
Luminous flux	33,000 lm
Color temperature	6,000 K
Color rendering index (CRI)	85
Optics	
Zoom	13.5–59°
Movement	
Pan	540°
Tilt	268°
Control	
DMX connection	5-pin XLR IN/OUT
RDM	yes (manufacturer ID 0x4D50, device model ID 0x002B)
Electrical	
Power supply	120–240 V, 50/60 Hz
Power consumption	1,225 W
Power connectors	NAC3FCA IN
Dimensions and construction	
Weight	34.1 kg
Operating environment	
Operating temperature	5 to 40 °C

Speeds and ranges

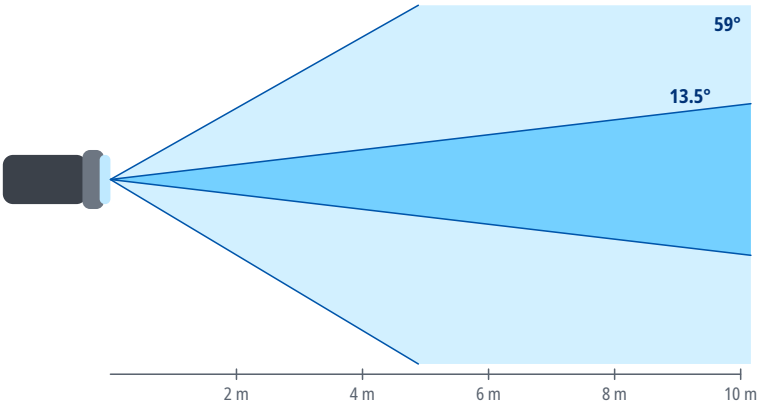
Parameter	Value
Color temperature range	3200–6000 K
Strobe frequency	0.8–10 Hz

Dimensions

weight 34.1 kg



Spot diameter



Distance	Ø 13.5°	Ø 59°
2 m	0.47 m	2.3 m
4 m	0.95 m	4.5 m
6 m	1.4 m	6.8 m
8 m	1.9 m	9.1 m
10 m	2.4 m	11.3 m
15 m	3.6 m	17 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.