DMX REFERENCE

MAC Ultra Wash

COH



Manufacturer	COH
GDTF file	COH_MAC_Ultra_Wash_115461.gdtf
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1 About this manual

This document describes the MAC Ultra Wash by COH. It was compiled from the GDTF file COH_MAC_Ultra_Wash_115461.gdtf from the GDTF-Share library.

File revision: “V 1_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 COH; 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	1,350 W
Weight	39 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Basic	29	17	1, 30, 59, 88, …

No light? Check these channels

- Basic: 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: 200–240 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.

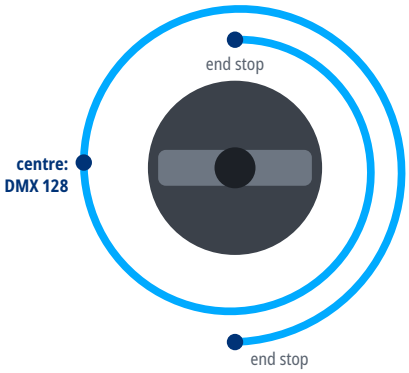
> ⚠ **WARNING**
>
> - The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
> - Keep yourself and any objects out of the range of movement. While the device is switched on, do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

Range of movement

Pan 540°

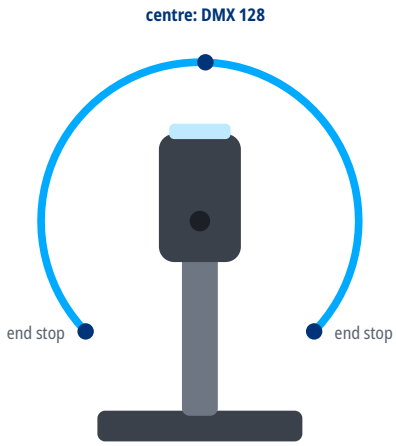
top view



full travel in 3.7 s

Tilt 268°

side view



full travel in 2.4 s

Full-travel times as stated in the GDTF file.

5 Installation

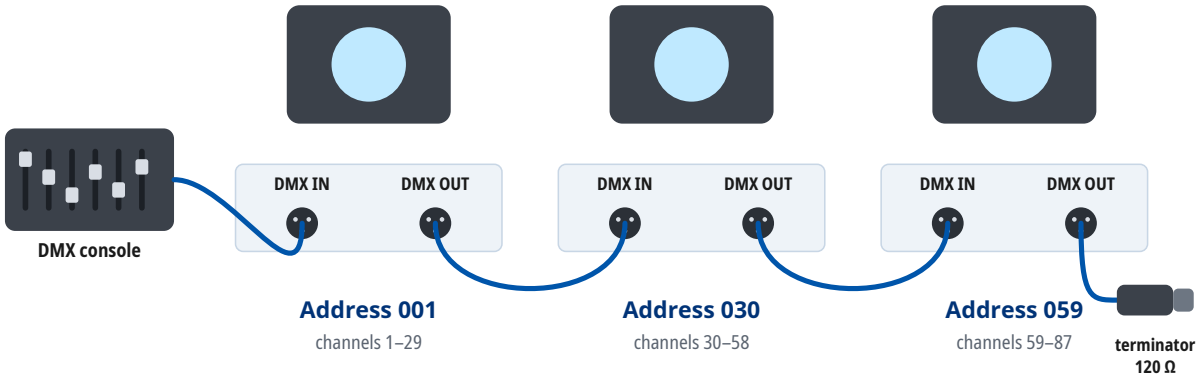
⚠ **WARNING**

- 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: 39 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 Basic: every unit occupies 29 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 “Basic”: 29.
- 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 “Basic”, you can use, for example, the start addresses 1, 30, 59, 88.
- 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

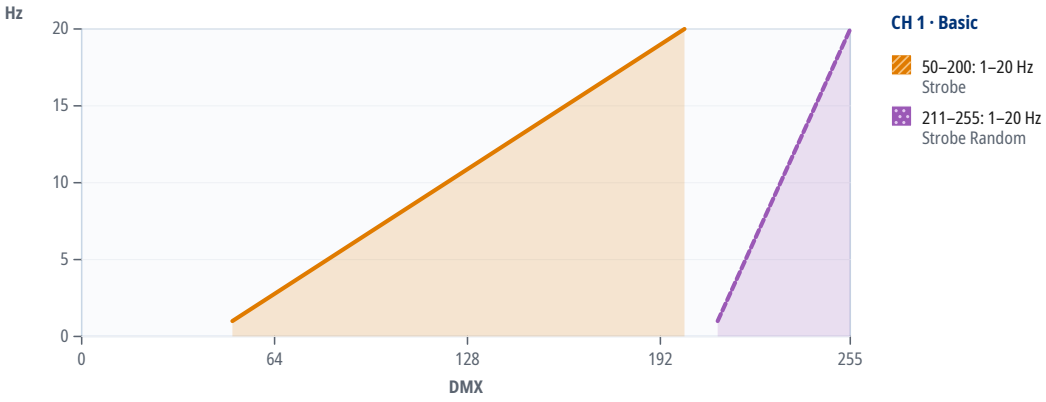
Functions in each DMX mode

	Basic 29 channels
Pan / Tilt	19, 21
Dimmer	2
Shutter / strobe	1
Color mixing	4, 6, 8
Color temperature	10
Color wheel	12
Frost	13
Zoom	15
Focus	17
Iris	14
Effects / macros	25–29

Color wheel

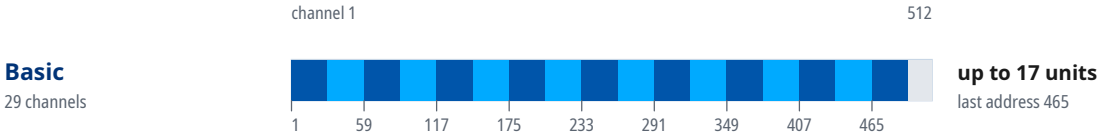
1. Color Wheel Index: Open
   DMX 0–7
2. Color Wheel Index: Spectral Enhancement
   DMX 8–22
3. Color Wheel Index: Blue
   DMX 23–37
4. Color Wheel Index: Deep Green
   DMX 38–52
5. Color Wheel Index: Orange
   DMX 53–67
6. Color Wheel Index: Navy Blue
   DMX 68–82
7. Color Wheel Index: Deep Red
   DMX 83–97

Strobe rate



9 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Basic”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	146	11	291	16	436
2	30	7	175	12	320	17	465
3	59	8	204	13	349	18	U2 · 1
4	88	9	233	14	378	19	U2 · 30
5	117	10	262	15	407	20	U2 · 59

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 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 4 Cyan 0, CH 6 Magenta 0, CH 8 Yellow 0, CH 10 CTO 0, CH 12 Colors 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

CH	Function	DMX	Description
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	0–63	Min … 25%
		64–127	25% … 50%
		128–191	50% … 75%
		192–255	75% … Max
		255	Max
5	Cyan Fine	0–255	Fine adjustment of CH 4
6	Magenta	0–63	Min … 25%
		64–127	25% … 50%
		128–191	50% … 75%
		192–255	75% … Max
		255	Max
7	Magenta Fine	0–255	Fine adjustment of CH 6
8	Yellow	0–63	Min … 25%
		64–127	25% … 50%
		128–191	50% … 75%
		192–255	75% … Max
		255	Max
9	Yellow Fine	0–255	Fine adjustment of CH 8
10	CTO	0–63	Min … 25%
		64–127	25% … 50%
		128–191	50% … 75%
		192–255	75% … Max
		255	Max
11	CTO Fine	0–255	Fine adjustment of CH 10
12	Colors	0–7	Color Wheel Index: Open
		8–22	Color Wheel Index: Spectral Enhancement
		23–37	Color Wheel Index: Blue
		38–52	Color Wheel Index: Deep Green
		53–67	Color Wheel Index: Orange
		68–82	Color Wheel Index: Navy Blue
		83–97	Color Wheel Index: Deep Red
		98–104	Color Wheel Index: Open
		105–160	No Function
		161–163	Color Selection: Spectral Enhancement
		164–166	Color Selection: Blue
		167–169	Color Selection: Deep Green

CH	Function	DMX	Description
12	Colors (continued)	170–172	Color Selection: Orange
		173–175	Color Selection: Navy Blue
		176–178	Color Selection: Deep Red
		179–192	Color Selection: Open
		193	CW Max
		194–202	CW Max … CW Med
		203	CW Med
		204–213	CW Med … CW Min
		214	CW Min
		215–221	Color Wheel Spin: Stop
		222	CCW Min
		223–232	CCW Min … CCW Med
		233	CCW Med
		234–242	CCW Med … CCW Max
		243	CCW Max
		244	Color Wheel Random: Fast
		245–248	Fast … Medium
		249	Medium
		250–254	Medium … Slow
		255	Color Wheel Random: Slow
13	Frost	0	Open
		1–63	Open … 25%
		64	25%
		65–127	25% … 50%
		128	50%
		129–191	50% … 75%
		192	75%
		193–254	75% … Full
		255	Full
14	Iris	0	Iris: Open
		1–49	Iris: Open … 25%
		50	25%
		51–99	25% … 50%
		100	50%
		101–149	50% … 75%
		150	75%
		151–199	Iris: 75% … Closed
		200	Iris: Closed
		201	Iris Pulse Open: Fast
		202–212	Fast … Medium
		213	Iris Pulse Open: Medium
		214–224	Medium … Slow

CH	Function	DMX	Description
14	Iris (continued)	225	Iris Pulse Open: Slow
		226–230	Pulse Stop
		231	Iris Pulse Close: Slow
		232–242	Slow ... Medium
		243	Iris Pulse Close: Medium
		244–254	Medium ... Fast
		255	Iris Pulse Close: Fast
15	Zoom	0–127	Wide ... Medium
		128–255	Medium ... Narrow
		255	Narrow
16	Zoom Fine	0–255	Fine adjustment of CH 15
17	Focus	0–127	Far ... Medium
		128–255	Medium ... Near
		255	Near
18	Focus Fine	0–255	Fine adjustment of CH 17
19	Pan	0–127	Min ... Center
		128–255	Center ... Max
		255	Max
20	Pan Fine	0–255	Fine adjustment of CH 19
21	Tilt	0–127	Min ... Center
		128–255	Center ... Max
		255	Max
22	Tilt Fine	0–255	Fine adjustment of CH 21
23	Control	0–9	Idle
		10–14	Reset Entire Fixture (5s)
		15	No Function 1
		16	Reset Color Only (5s)
		17	Reset Beam Only (5s)
		18	Reset Pan and Tilt Only (5s)
		19–22	No Function 2
		23	Linear (1s)
		24	Square (1s)
		25	Inverse Square (1s)
		26	S-Curve (1s)
		27	Standard (1s)
		28	Pan and Tilt Speed: Fast (1s)
		29	Smooth (1s)
		30	Shortcuts ON
		31	Shortcuts OFF
		32	Focus Tracking: Off (1s)
		33	Near Distance (1s)
		34	Medium Distance (1s)

CH	Function	DMX	Description
23	Control (continued)	35	Far Distance (1s)
		36	Video Tracking ON (1s)
		37	Video Tracking OFF (1s)
		38	Extended Color Mode (1s)
		39	Calibrated Color Mode (1s)
		40	Raw Color Mode (1s)
		41–51	No Function 3
		52	Control Panel Display ON (1s)
		53	Control Panel Display OFF (1s)
		54	Regulated Fan Speed (1s)
		55	Full Fan Speed (1s)
		56	Medium Fan Speed (1s)
		57	Low Fan Speed (1s)
		58	Ultra Low Fan Speed (1s)
		59–60	No Function 4
		61	Hibernation ON (5s)
		62	Hibernation OFF (5s)
		63	Followspot ON (5s)
		64	Followspot OFF (5s)
		65	Pan and Tilt Limits ON (5s)
		66	Pan and Tilt Limits OFF (5s)
		67	Store Lower Pan Limit (5s)
		68	Store Upper Pan Limit (5s)
		69	Store Lower Tilt Limit (5s)
		70	Store Upper Tilt Limit (5s)
		71	Reset Pan and Tilt Limits (5s)
		72	Tungsten Emulation ON (1s)
		73	Tungsten Emulation OFF (1s)
		74	Scenecatch Record (5s)
		75	Scenecatch ON (5s)
		76	Scenecatch OFF (5s)
		77–80	No Function 5
		81	HyperZoom ON (1s)
		82	HyperZoom OFF (1s)
		83–86	No Function 6
		87	KeyLight Calibration Disabled (1s)
		88	KeyLight Calibration Manual (1s)
		89	KeyLight Calibration Automatic (1s)
		90–99	No Function 7
		100	Enable Calibration (5s)
		101	Store Pan and Tilt Calibration (5s)
		102	Store Dimmer Calibration (5s)

CH	Function	DMX	Description
23	Control (continued)	103	Store Cyan Calibration (5s)
		104	Store Magenta Calibration (5s)
		105	Store Yellow Calibration (5s)
		106	Store CTC Calibration (5s)
		107	Store All CMY Calibration (5s)
		108–111	Store All CMY Calibration (5s) ... Store Iris Calibration (5s)
		112	Store Iris Calibration (5s)
		113	Store Focus Calibration (5s)
		114	Store Zoom Calibration (5s)
		115	Store ColorWheel Calibration (5s)
		116–193	Store ColorWheel Calibration (5s) ... Start CTO KeyLight Calibration (5s)
		194	Start CTO KeyLight Calibration (5s)
		195	Start Spectral Enhancement KeyLight Calibration (5s)
		196	Store CTO KeyLight Calibration (5s)
		197	Store Spectral Enhancement KeyLight Calibration (5s)
		198	Store All Calibration (5s)
		199	Reset All Calibration To Factory Default (5s)
		200–255	No Function 8
24	P 3 Mix	0–26	DMX Mode
		27	DMX
		28–126	DMX ... Mix
		127–128	Mix
		129–227	Mix ... Video
		228	Video
		229–255	Video Mode
25	Effects	0	No Effect
		1	Strobe Pulse Width
		2	Wave
		3	Step
		4	Pulse
		5	Blackout Strobe
		6	2x Strobe
		7	3x Strobe
		8	4x Strobe
		9	Up Down Flash
		10	Up Flash Down Flash
		11	Random Levels
		12	Electric Arc
		13	Atomic Lighting
		14	Thunderstorm
		15	Welding

CH	Function	DMX	Description
25	Effects (continued)	16–31	No Function
		32	Stop Motion
		33	Movie Flicker
		34	Random Dimmers
		35	Shakey Dimmers
		36	Negative Pulse
		37	Positive Pulse
		38	Radar Wave
		39	Radar Step
		40	Radar Pulse
		41	OddEven Wave
		42	OddEven Step
		43	OddEven Pulse
		44	5 Step Wave
		45	5 Step Step
		46	5 Step Pulse
		47–63	No Function 1
		64	Rainbow Wave
		65	Rainbow Step
		66	Rainbow Pulse
		67	RGB Wave
		68	RGB Step
		69	RGB Pulse
		70	CMY Wave
		71	CMY Step
		72	CMY Pulse
		73	Mix to White Wave
		74	Mix to White Step
		75	Mix to White Pulse
		76	Random Mix Wave
		77	Random Mix Step
		78	Random Mix Pulse
		79	Random Subtle Wave
		80	RedWhiteBlue Fade
		81	RedWhiteBlue Snap
		82	Full Bumps
		83	All Bumps
		84	Split Bumps
		85	Random Split Bumps
		86	Color Shaker
		87	Fire
		88	Water

CH	Function	DMX	Description
25	Effects (continued)	89	Ice
		90	Hot and Cold
		91	Warm and Fuzzy
		92–95	No Function 2
		96	Iris Wave
		97	Iris Step
		98	Iris Pulse
		99	Zoom Wave
		100	Zoom Step
		101	Zoom Pulse
		102	Random Size Wave
		103	Random Size Step
		104	Random Size Pulse
		105–107	No function
		108	Beam Splash
		109	Beam Splash Invert
		110	Pin to Flood
		111–223	No Function 3
		224	Pan and Tilt Circle Small
		225	Pan and Tilt Circle Medium
		226	Pan and Tilt Circle Large
		227	Pan and Tilt Figure 8 Small
		228	Pan and Tilt Figure 8 Medium
		229	Pan and Tilt Figure 8 Large
		230	Pan and Tilt Diagonal Line Small
		231	Pan and Tilt Diagonal Line Medium
		232	Pan and Tilt Diagonal Line Large
		233	Pan and Tilt Square Small
		234	Pan and Tilt Square Medium
		235	Pan and Tilt Square Large
		236–254	No Function 4
		255	LED Frequency
26	Effects Speed		When CH 25 is 0–254:
		0	Rev Max
		1–63	Rev Max ... Rev Med
		64	Rev Med
		65–125	Rev Med ... Rev Min
		126	Rev Min
		127–128	Stop
		129	Fwd Min
		130–191	Fwd Min ... Fwd Med
		192	Fwd Med

CH	Function	DMX	Description
26	Effects Speed (continued)	193–254	Fwd Med ... Fwd Max
		255	Fwd Max
			When CH 25 is 255:
		0	2400 Hz
		1–63	2400 Hz ... 2700 Hz
		64	2700 Hz
		65–127	2700 Hz ... 3000 Hz
		128	3000 Hz
		129–254	No Function
		255	24 000 Hz
27	Effects 2	0	No Effect
		1	Strobe Pulse Width
		2	Wave
		3	Step
		4	Pulse
		5	Blackout Strobe
		6	2x Strobe
		7	3x Strobe
		8	4x Strobe
		9	Up Down Flash
		10	Up Flash Down Flash
		11	Random Levels
		12	Electric Arc
		13	Atomic Lighting
		14	Thunderstorm
		15	Welding
		16–31	No Function
		32	Stop Motion
		33	Movie Flicker
		34	Random Dimmers
		35	Shakey Dimmers
		36	Negative Pulse
		37	Positive Pulse
		38	Radar Wave
		39	Radar Step
		40	Radar Pulse
		41	OddEven Wave
		42	OddEven Step
		43	OddEven Pulse
		44	5 Step Wave
		45	5 Step Step
		46	5 Step Pulse

CH	Function	DMX	Description
27	Effects 2 (continued)	47–63	No Function 1
		64	Rainbow Wave
		65	Rainbow Step
		66	Rainbow Pulse
		67	RGB Wave
		68	RGB Step
		69	RGB Pulse
		70	CMY Wave
		71	CMY Step
		72	CMY Pulse
		73	Mix to White Wave
		74	Mix to White Step
		75	Mix to White Pulse
		76	Random Mix Wave
		77	Random Mix Step
		78	Random Mix Pulse
		79	Random Subtle Wave
		80	RedWhiteBlue Fade
		81	RedWhiteBlue Snap
		82	Full Bumps
		83	All Bumps
		84	Split Bumps
		85	Random Split Bumps
		86	Color Shaker
		87	Fire
		88	Water
		89	Ice
		90	Hot and Cold
		91	Warm and Fuzzy
		92–95	No Function 2
		96	Iris Wave
		97	Iris Step
		98	Iris Pulse
		99	Zoom Wave
		100	Zoom Step
		101	Zoom Pulse
		102	Random Size Wave
		103	Random Size Step
		104	Random Size Pulse
		105–107	No function
		108	Beam Splash
		109	Beam Splash Invert

CH	Function	DMX	Description
27	Effects 2 (continued)	110	Pin to Flood
		111–223	No Function 3
		224	Pan and Tilt Circle Small
		225	Pan and Tilt Circle Medium
		226	Pan and Tilt Circle Large
		227	Pan and Tilt Figure 8 Small
		228	Pan and Tilt Figure 8 Medium
		229	Pan and Tilt Figure 8 Large
		230	Pan and Tilt Diagonal Line Small
		231	Pan and Tilt Diagonal Line Medium
		232	Pan and Tilt Diagonal Line Large
		233	Pan and Tilt Square Small
		234	Pan and Tilt Square Medium
		235	Pan and Tilt Square Large
		236–254	No Function 4
		255	LED Frequency
28	Effects 2 Speed		When CH 27 is 0–254:
		0	Rev Max
		1–63	Rev Max ... Rev Med
		64	Rev Med
		65–125	Rev Med ... Rev Min
		126	Rev Min
		127–128	Stop
		129	Fwd Min
		130–191	Fwd Min ... Fwd Med
		192	Fwd Med
		193–254	Fwd Med ... Fwd Max
		255	Fwd Max
			When CH 27 is 255:
		0	2400 Hz
		1–63	2400 Hz ... 2700 Hz
		64	2700 Hz
		65–127	2700 Hz ... 3000 Hz
		128	3000 Hz
		129–254	No Function
		255	24 000 Hz
29	Effects Sync		FX Synchronization
		0	No Sync
		1	Fixture Offset 10deg
		2	Fixture Offset 20deg
		3	Fixture Offset 30deg
		4	Fixture Offset 40deg

CH	Function	DMX	Description
29	Effects Sync (continued)	5	Fixture Offset 50deg
		6	Fixture Offset 60deg
		7	Fixture Offset 70deg
		8	Fixture Offset 80deg
		9	Fixture Offset 90deg
		10	Fixture Offset 100deg
		11	Fixture Offset 110deg
		12	Fixture Offset 120deg
		13	Fixture Offset 130deg
		14	Fixture Offset 140deg
		15	Fixture Offset 150deg
		16	Fixture Offset 160deg
		17	Fixture Offset 170deg
		18	Fixture Offset 180deg
		19	Fixture Offset 190deg
		20	Fixture Offset 200deg
		21	Fixture Offset 210deg
		22	Fixture Offset 220deg
		23	Fixture Offset 230deg
		24	Fixtrue Offset 240deg
		25	Fixture Offset 250deg
		26	Fixture Offset 260deg
		27	Fixture Offset 270deg
		28	Fixture Offset 280deg
		29	Fixture Offset 290deg
		30	Fixture Offset 300deg
		31	Fixture Offset 310deg
		32	Fixture Offset 320deg
		33	Fixture Offset 330deg
		34	Fixture Offset 340deg
		35	Fixture Offset 350deg
		36	Synchronized
		37–100	Synchronized ... Random Start
		101–120	Random Start
		121–140	Random Duration
		141–255	FX Synchronization

10 Technical specifications

Parameter	Value
Light	
Light source	LED
LED power	1,150 W
Luminous flux	63,500 lm
Color temperature	6,000 K
Color rendering index (CRI)	66
Optics	
Zoom	6.8–47.5°
Movement	
Pan	540°
Tilt	268°
Control	
DMX connection	5-pin XLR IN/OUT
RJ45 connectors	etherCON IN/OUT
RDM	yes (manufacturer ID 0x4D50, device model ID 0x0094)
Electrical	
Power supply	200–240 V, 50/60 Hz
Power consumption	1,350 W
Power connectors	powerCONTRUE1TOP IN
Dimensions and construction	
Weight	39 kg
Operating environment	
Operating temperature	5 to 40 °C

Speeds and ranges

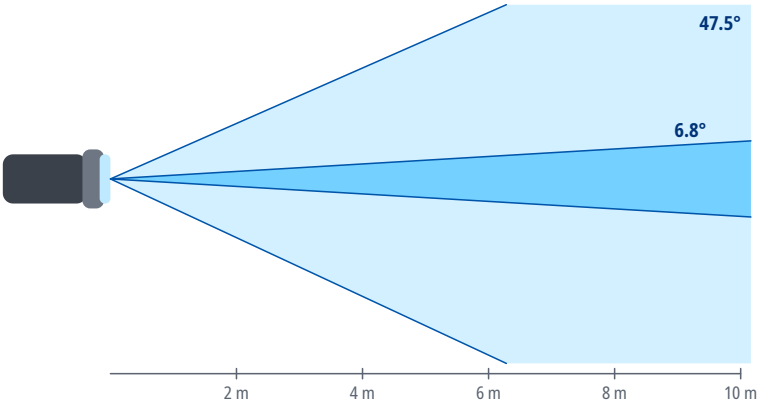
Parameter	Value
Color temperature range	2850–6000 K
Strobe frequency	1–20 Hz
LED frequency	2400–3000 Hz
Color wheel rotation	up to 360 °/s (60 rpm)

Dimensions

weight 39 kg



Spot diameter



Distance	Ø 6.8°	Ø 47.5°
2 m	0.24 m	1.8 m
4 m	0.48 m	3.5 m
6 m	0.71 m	5.3 m
8 m	0.95 m	7 m
10 m	1.2 m	8.8 m
15 m	1.8 m	13.2 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.

Problem	Remedy
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.