DMX REFERENCE

# MAC Quantum Profile

LPL



| | |
|---|---|
| **Manufacturer** | LPL |
| **GDTF file** | LPL_MAC_Quantum_Profile_118910.gdtf |
| **GDTF revision** | Tested - Real/MA3 · 2025-11-25 |
| **Generated** | 2026-11-24 |

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# 1 About this manual

This document describes the MAC Quantum Profile by LPL. It was compiled from the GDTF file LPL_MAC_Quantum_Profile_118910.gdtf from the GDTF-Share library.

File revision: “Tested - Real/MA3”.

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 | 575 W |
| Weight | 23.2 kg |

### DMX modes

| Mode | Channels | Units in one universe | First start addresses |
|---|---|---|---|
| Basic | 19 | 26 | 1, 20, 39, 58, ... |
| Extended | 27 | 18 | 1, 28, 55, 82, ... |

### 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**

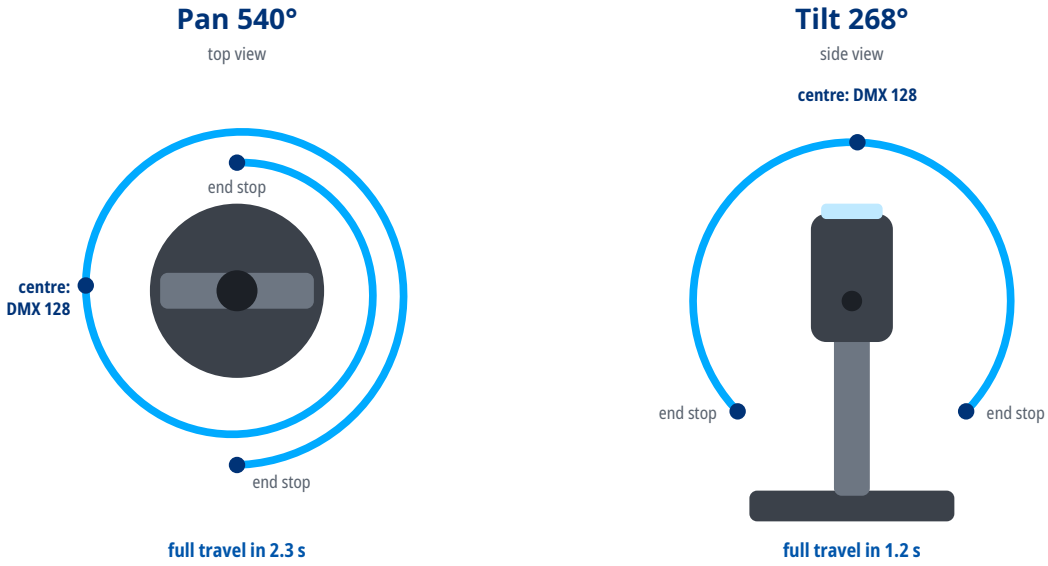
- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts,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

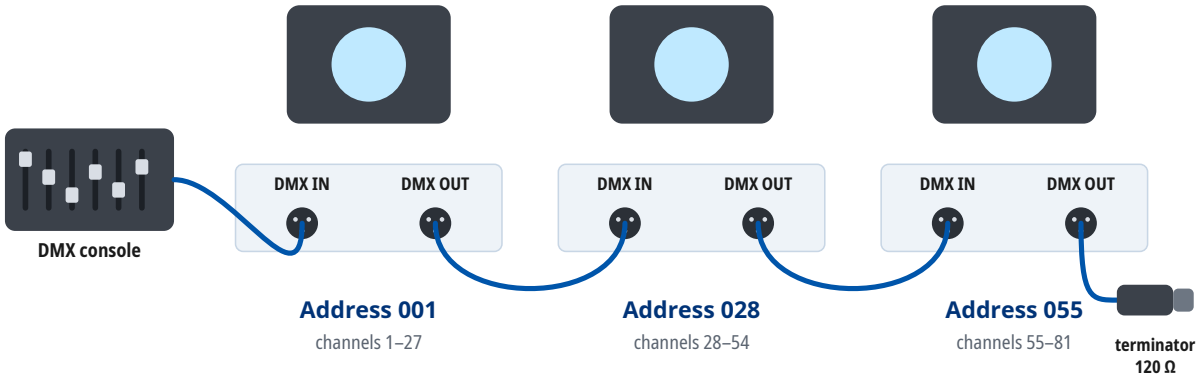
⚠ **WARNING**

- 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: 23.2 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 Extended: every unit occupies 27 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”: 27.
- 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, 28, 55, 82.
- 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.

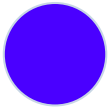
# 8 Functions at a glance

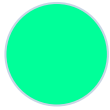
## Functions in each DMX mode

| | Basic<br>19 channels | Extended<br>27 channels |
|---|---|---|
| Pan / Tilt | 15, 17 | 18, 20 |
| Dimmer | 2 | 2 |
| Dimmer resolution | 8 bit | 16 bit |
| Shutter / strobe | 1 | 1 |
| Color mixing | 3–5 | 4–6 |
| Color wheel | 6 | 7 |
| Gobo wheel | 7, 10 | 8, 11 |
| Gobo rotation | 8 | 9 |
| Prism | 11 | 12 |
| Zoom | 13 | 14 |
| Focus | 14 | 16 |
| Iris | 12 | 13 |
| Effects / macros | | 23–27 |

## Color wheel

1 
Color Wheel Index: Open
DMX 0–7

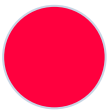
2 
Color Wheel Index: Blue
DMX 8–22

3 
Color Wheel Index: Green
DMX 23–37

4 
Color Wheel Index: CTO
DMX 38–52

5 
Color Wheel Index: Deep Magenta
DMX 53–67

6 
Color Wheel Index: Congo Blue
DMX 68–82

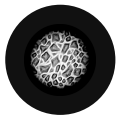
7 
Color Wheel Index: Red
DMX 83–97

## Gobo wheel 1

1 
Gobo 1 Indexing: Open
DMX 0–4

2 
Gobo 1 Indexing: Gobo 1
DMX 5–9

3 
Gobo 1 Indexing: Gobo 2
DMX 10–14

4 
Gobo 1 Indexing: Gobo 3
DMX 15–19

5 
Gobo 1 Indexing: Gobo 4
DMX 20–24

6 
Gobo 1 Indexing: Gobo 5
DMX 25–29

7 
Gobo 6
DMX 30–35

## Gobo wheel 2

1 
Gobo 2 Wheel Index: Open
**DMX 0–7**

2 
Gobo 2 Wheel Index: Gobo 1
**DMX 8–22**

3 
Gobo 2 Wheel Index: Gobo 2
**DMX 23–37**

4 
Gobo 2 Wheel Index: Gobo 3
**DMX 38–52**

5 
Gobo 2 Wheel Index: Gobo 4
**DMX 53–67**

6 
Gobo 2 Wheel Index: Gobo 5
**DMX 68–82**

7 
Gobo 2 Wheel Index: Gobo 6
**DMX 83–97**

8 
Gobo 2 Wheel Index: Gobo 7
**DMX 98–112**

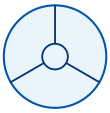
9 
Gobo 2 Wheel Index: Gobo 8
**DMX 113–127**

10 
Gobo 2 Wheel Index: Gobo 9
**DMX 128–142**

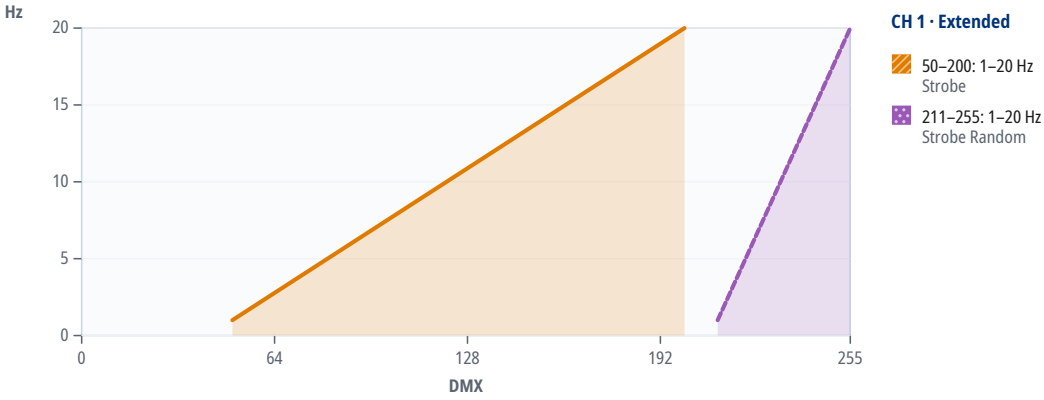
11 
Gobo 2 Wheel Index: Gobo 10
**DMX 143–157**

## Prism

1 
Open
**DMX 0–3**

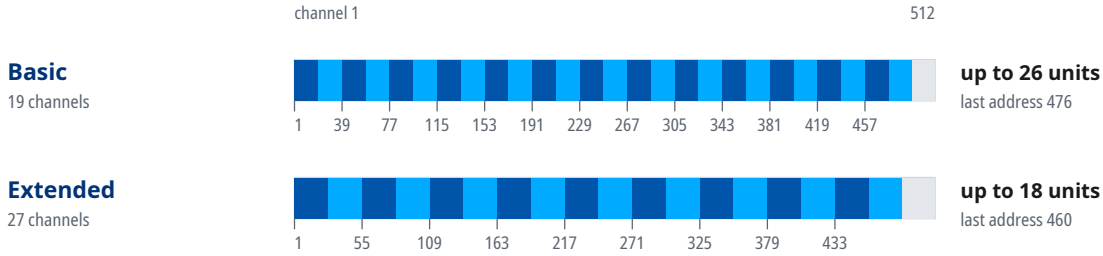
2 
3 facets
CW Max
**DMX 3**

## 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 | 136 | 11 | 271 | 16 | 406 |
| 2 | 28 | 7 | 163 | 12 | 298 | 17 | 433 |
| 3 | 55 | 8 | 190 | 13 | 325 | 18 | 460 |
| 4 | 82 | 9 | 217 | 14 | 352 | 19 | U2 · 1 |
| 5 | 109 | 10 | 244 | 15 | 379 | 20 | U2 · 28 |

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.

### RDM personalities

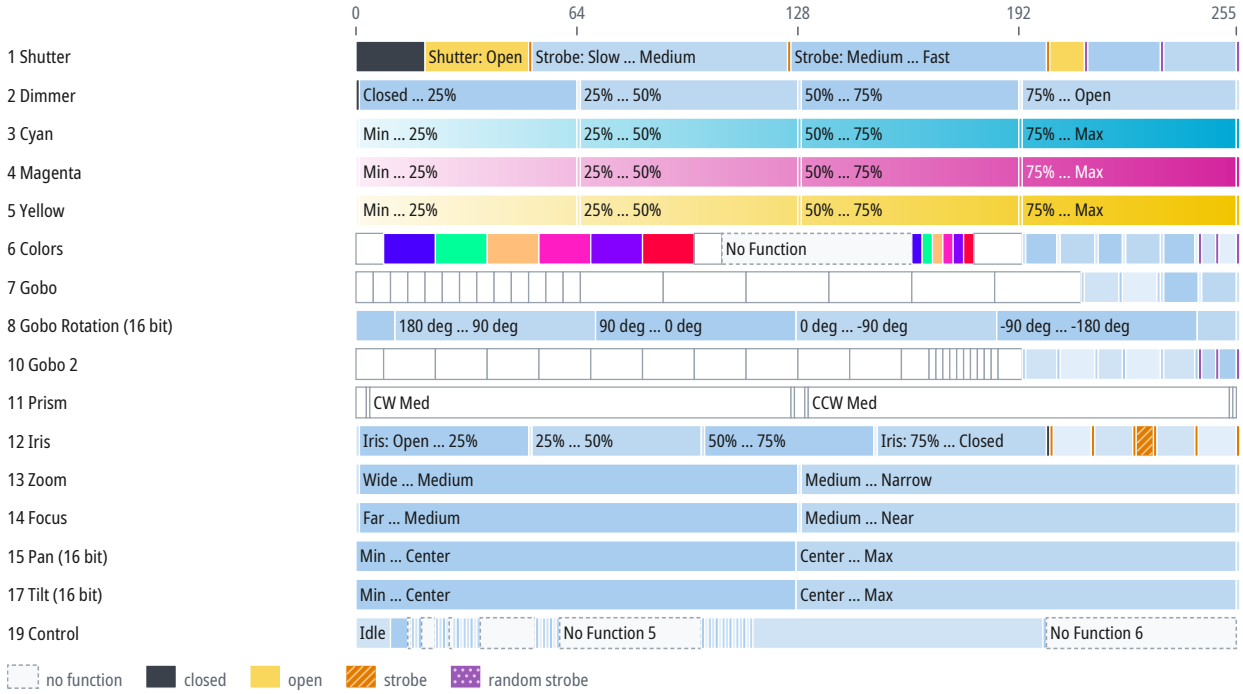
| Mode | Channels | RDM personality |
|---|---|---|
| Basic | 19 | 1 |
| Extended | 27 | 2 |

## 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 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 |
| **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** | Colors | 0–7 | Color Wheel Index: Open |
| | | 8–22 | Color Wheel Index: Blue |
| | | 23–37 | Color Wheel Index: Green |
| | | 38–52 | Color Wheel Index: CTO |
| | | 53–67 | Color Wheel Index: Deep Magenta |
| | | 68–82 | Color Wheel Index: Congo Blue |
| | | 83–97 | Color Wheel Index: Red |
| | | 98–105 | Color Wheel Index: Open |
| | | 106–160 | No Function |
| | | 161–163 | Color Selection: Blue |
| | | 164–166 | Color Selection: Green |

| CH | Function | DMX | Description |
|---|---|---|---|
| **6** | Colors (continued) | 167–169 | Color Selection: CTO |
| | | 170–172 | Color Selection: Deep Magenta |
| | | 173–175 | Color Selection: Congo Blue |
| | | 176–178 | Color Selection: 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 |
| **7** | Gobo | 0–4 | Gobo 1 Indexing: Open |
| | | 5–9 | Gobo 1 Indexing: Gobo 1 |
| | | 10–14 | Gobo 1 Indexing: Gobo 2 |
| | | 15–19 | Gobo 1 Indexing: Gobo 3 |
| | | 20–24 | Gobo 1 Indexing: Gobo 4 |
| | | 25–29 | Gobo 1 Indexing: Gobo 5 |
| | | 30–34 | Gobo 1 Indexing: Gobo 6 |
| | | 35–39 | Gobo 1 Rotation: Gobo 1 |
| | | 40–44 | Gobo 1 Rotation: Gobo 2 |
| | | 45–49 | Gobo 1 Rotation: Gobo 3 |
| | | 50–54 | Gobo 1 Rotation: Gobo 4 |
| | | 55–59 | Gobo 1 Rotation: Gobo 5 |
| | | 60–64 | Gobo 1 Rotation: Gobo 6 |
| | | 65–88 | Gobo 1 Shake: Gobo 1 (0.14–2.5 Hz) |
| | | 89–112 | Gobo 1 Shake: Gobo 2 (0.14–2.5 Hz) |
| | | 113–136 | Gobo 1 Shake: Gobo 3 (0.14–2.5 Hz) |
| | | 137–160 | Gobo 1 Shake: Gobo 4 (0.14–2.5 Hz) |
| | | 161–184 | Gobo 1 Shake: Gobo 5 (0.14–2.5 Hz) |
| | | 185–209 | Gobo 1 Shake: Gobo 6 (0.14–2.5 Hz) |
| | | 210 | CW Max |
| | | 211–220 | CW Max … CW Med |

| CH | Function | DMX | Description |
|---|---|---|---|
| **7** | Gobo (continued) | 221 | CW Med |
| | | 222–231 | CW Med ... CW Min |
| | | 232 | CW Min |
| | | 233 | CCW Min |
| | | 234–243 | CCW Min ... CCW Med |
| | | 244 | CCW Med |
| | | 245–254 | CCW Med ... CCW Max |
| | | 255 | CCW Max |
| **8** | Gobo Rotation | | When CH 7 is 0–34: |
| | | 0–11 | 197 deg ... 180 deg |
| | | 11–69 | 180 deg ... 90 deg |
| | | 69–127 | 90 deg ... 0 deg |
| | | 128–186 | 0 deg ... -90 deg |
| | | 186–244 | -90 deg ... -180 deg |
| | | 244–255 | -180 deg ... -197 deg |
| | | 255 | -197 deg |
| | | | When CH 7 is 35–64: |
| | | 0–2 | Gobo 1 Rotation Stop: Stop 0 |
| | | 2–63 | CW Max ... CW Med |
| | | 63–125 | CW Med ... CW Min |
| | | 125 | CW Min |
| | | 125–128 | Gobo 1 Rotation: Stop |
| | | 128–190 | CCW Min ... CCW Med |
| | | 190–252 | CCW Med ... CCW Max |
| | | 252 | CCW Max |
| | | 252–255 | Gobo 1 Rotation Stop: Stop 90 |
| | | | When CH 7 is 65–209: |
| | | 0–11 | 197 deg ... 180 deg |
| | | 11–69 | 180 deg ... 90 deg |
| | | 69–127 | 90 deg ... 0 deg |
| | | 128–186 | 0 deg ... -90 deg |
| | | 186–244 | -90 deg ... -180 deg |
| | | 244–255 | -180 deg ... -197 deg |
| | | 255 | -197 deg |
| | | | When CH 7 is 210–255: |
| | | 0–11 | 197 deg ... 180 deg |
| | | 11–69 | 180 deg ... 90 deg |
| | | 69–127 | 90 deg ... 0 deg |
| | | 128–186 | 0 deg ... -90 deg |
| | | 186–244 | -90 deg ... -180 deg |
| | | 244–255 | -180 deg ... -197 deg |
| | | 255 | -197 deg |

| CH | Function | DMX | Description |
|---|---|---|---|
| **9** | Gobo Rotation Fine | 0–255 | Fine adjustment of CH 8 |
| **10** | Gobo 2 | 0–7 | Gobo 2 Wheel Index: Open |
| | | 8–22 | Gobo 2 Wheel Index: Gobo 1 |
| | | 23–37 | Gobo 2 Wheel Index: Gobo 2 |
| | | 38–52 | Gobo 2 Wheel Index: Gobo 3 |
| | | 53–67 | Gobo 2 Wheel Index: Gobo 4 |
| | | 68–82 | Gobo 2 Wheel Index: Gobo 5 |
| | | 83–97 | Gobo 2 Wheel Index: Gobo 6 |
| | | 98–112 | Gobo 2 Wheel Index: Gobo 7 |
| | | 113–127 | Gobo 2 Wheel Index: Gobo 8 |
| | | 128–142 | Gobo 2 Wheel Index: Gobo 9 |
| | | 143–157 | Gobo 2 Wheel Index: Gobo 10 |
| | | 158–165 | Gobo 2 Wheel Index: Open |
| | | 166–167 | Gobo 2 Selection: Gobo 1 |
| | | 168–169 | Gobo 2 Selection: Gobo 2 |
| | | 170–171 | Gobo 2 Selection: Gobo 3 |
| | | 172–173 | Gobo 2 Selection: Gobo 4 |
| | | 174–175 | Gobo 2 Selection: Gobo 5 |
| | | 176–177 | Gobo 2 Selection: Gobo 6 |
| | | 178–179 | Gobo 2 Selection: Gobo 7 |
| | | 180–181 | Gobo 2 Selection: Gobo 8 |
| | | 182–183 | Gobo 2 Selection: Gobo 9 |
| | | 184–185 | Gobo 2 Selection: Gobo 10 |
| | | 186–192 | Gobo 2 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 | Gobo 2 Wheel Rotation: Stop |
| | | 222 | CCW Min |
| | | 223–232 | CCW Min … CCW Med |
| | | 233 | CCW Med |
| | | 234–242 | CCW Med … CCW Max |
| | | 243 | CCW Max |
| | | 244 | Gobo 2 Random: Fast |
| | | 245–248 | Fast … Medium |
| | | 249 | Medium |
| | | 250–254 | Medium … Slow |
| | | 255 | Gobo 2 Random: Slow |
| **11** | Prism | 0–2 | Open |
| | | 3 | CW Max |

| CH | Function | DMX | Description |
|---|---|---|---|
| **11** | Prism (continued) | 4–125 | CW Med (892.8–21.6 °/s) |
| | | 126 | CW Min |
| | | 127–129 | Prism Rotation: Stop (up to 7.2 °/s (1.2 rpm)) |
| | | 130 | CCW Min |
| | | 131–252 | CCW Med (21.6–892.8 °/s) |
| | | 253 | CCW Max |
| | | 254–255 | Open |
| **12** | 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 |
| | | 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 |
| **13** | Zoom | 0 | Wide |
| | | 1–127 | Wide … Medium |
| | | 128 | Medium |
| | | 129–254 | Medium … Narrow |
| | | 255 | Narrow |
| **14** | Focus | 0 | Far |
| | | 1–127 | Far … Medium |
| | | 128 | Medium |
| | | 129–254 | Medium … Near |
| | | 255 | Near |
| **15** | Pan | 0–127 | Min … Center |
| | | 128–255 | Center … Max |
| | | 255 | Max |
| **16** | Pan Fine | 0–255 | Fine adjustment of CH 15 |
| **17** | Tilt | 0–127 | Min … Center |

| CH | Function | DMX | Description |
|---|---|---|---|
| **17** | Tilt (continued) | 128–255 | Center … Max |
| | | 255 | Max |
| **18** | Tilt Fine | 0–255 | Fine adjustment of CH 17 |
| **19** | 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 | No Function 3 |
| | | 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) |
| | | 35 | Far Distance (1s) |
| | | 36–51 | No Function 4 |
| | | 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) |
| | | 59–99 | No Function 5 |
| | | 100 | Enable Calibration (5s) |
| | | 101 | Store Pan and Tilt Calibration (5s) |
| | | 102 | Store Dimmer Calibration (5s) |
| | | 103 | Store Cyan Calibration (5s) |
| | | 104 | Store Magenta Calibration (5s) |
| | | 105 | Store Yellow Calibration (5s) |
| | | 106 | Store Yellow Calibration (5s) … Store All CMY Calibration (5s) |
| | | 107 | Store All CMY Calibration (5s) |
| | | 108 | Store Roto Gobo Calibration (5s) |

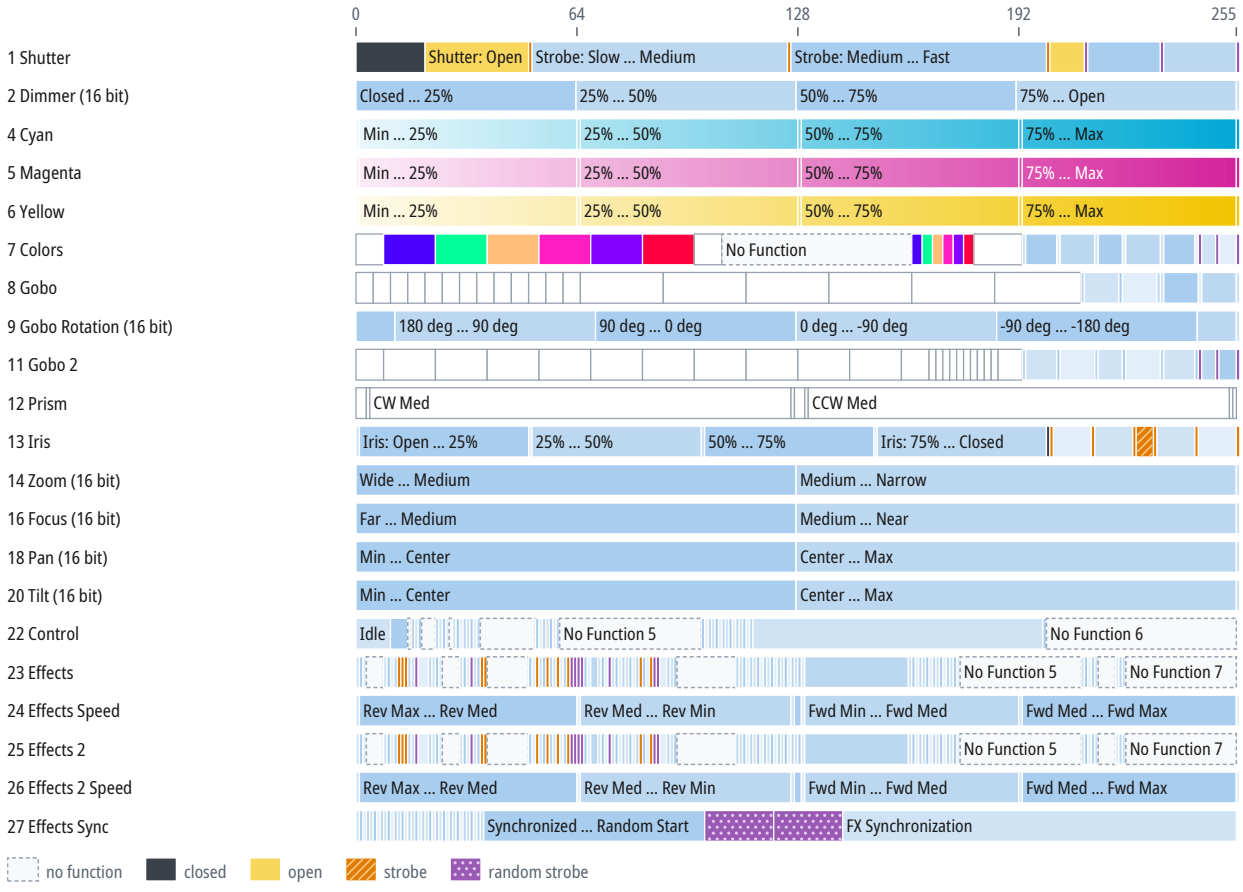
| CH | Function | DMX | Description |
|---|---|---|---|
| **19** | Control (continued) | 109 | Store Roto Gobo Calibration (5s) ... Store Stat Gobo Calibration (5s) |
| | | 110 | Store Stat Gobo Calibration (5s) |
| | | 111 | Store Stat Gobo Calibration (5s) ... Store Iris Calibration (5s) |
| | | 112 | Store Iris Calibration (5s) |
| | | 113 | Store Focus Calibration (5s) |
| | | 114 | Store Zoom Calibration (5s) |
| | | 115–198 | Store Zoom Calibration (5s) ... Reset All Calibration To Factory Default (5s) |
| | | 199 | Reset All Calibration To Factory Default (5s) |
| | | 200–255 | No Function 6 |

## 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 Colors 0.

### Channel functions at a glance



| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Shutter | | Same as CH 1 in the mode “Basic” (p. 11) |
| **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. 12) |
| **5** | Magenta | | Same as CH 4 in the mode “Basic” (p. 12) |
| **6** | Yellow | | Same as CH 5 in the mode “Basic” (p. 12) |
| **7** | Colors | | Same as CH 6 in the mode “Basic” (p. 12) |
| **8** | Gobo | | Same as CH 7 in the mode “Basic” (p. 13) |
| **9** | Gobo Rotation | | When CH 8 is 0–34: |
| | | 0–11 | 197 deg ... 180 deg |
| | | 11–69 | 180 deg ... 90 deg |
| | | 69–127 | 90 deg ... 0 deg |
| | | 128–186 | 0 deg ... -90 deg |
| | | 186–244 | -90 deg ... -180 deg |
| | | 244–255 | -180 deg ... -197 deg |
| | | 255 | -197 deg |
| | | | When CH 8 is 35–64: |
| | | 0–2 | Gobo 1 Rotation Stop: Stop 0 |
| | | 2–63 | CW Max ... CW Med |
| | | 63–125 | CW Med ... CW Min |
| | | 125 | CW Min |
| | | 125–128 | Gobo 1 Rotation: Stop |
| | | 128–190 | CCW Min ... CCW Med |
| | | 190–252 | CCW Med ... CCW Max |
| | | 252 | CCW Max |
| | | 252–255 | Gobo 1 Rotation Stop: Stop 90 |
| | | | When CH 8 is 65–209: |
| | | 0–11 | 197 deg ... 180 deg |
| | | 11–69 | 180 deg ... 90 deg |
| | | 69–127 | 90 deg ... 0 deg |
| | | 128–186 | 0 deg ... -90 deg |
| | | 186–244 | -90 deg ... -180 deg |
| | | 244–255 | -180 deg ... -197 deg |
| | | 255 | -197 deg |
| | | | When CH 8 is 210–255: |
| | | 0–11 | 197 deg ... 180 deg |

| CH | Function | DMX | Description |
|---|---|---|---|
| **9** | Gobo Rotation (continued) | 11–69 | 180 deg ... 90 deg |
| | | 69–127 | 90 deg ... 0 deg |
| | | 128–186 | 0 deg ... -90 deg |
| | | 186–244 | -90 deg ... -180 deg |
| | | 244–255 | -180 deg ... -197 deg |
| | | 255 | -197 deg |
| **10** | Gobo Rotation Fine | 0–255 | Fine adjustment of CH 9 |
| **11** | Gobo 2 | | Same as CH 10 in the mode “Basic” (p. 15) |
| **12** | Prism | | Same as CH 11 in the mode “Basic” (p. 15) |
| **13** | Iris | | Same as CH 12 in the mode “Basic” (p. 16) |
| **14** | Zoom | 0–127 | Wide ... Medium |
| | | 128–255 | Medium ... Narrow |
| | | 255 | Narrow |
| **15** | Zoom Fine | 0–255 | Fine adjustment of CH 14 |
| **16** | Focus | 0–127 | Far ... Medium |
| | | 128–255 | Medium ... Near |
| | | 255 | Near |
| **17** | Focus Fine | 0–255 | Fine adjustment of CH 16 |
| **18** | Pan | | Same as CH 15 in the mode “Basic” (p. 16) |
| **19** | Pan Fine | 0–255 | Fine adjustment of CH 18 |
| **20** | Tilt | | Same as CH 17 in the mode “Basic” (p. 16) |
| **21** | Tilt Fine | 0–255 | Fine adjustment of CH 20 |
| **22** | Control | | Same as CH 19 in the mode “Basic” (p. 17) |
| **23** | Effects | 0 | No Effect |
| | | 1 | Gobo X-Fade |
| | | 2 | Bad Stepper |
| | | 3–7 | No Function 1 |
| | | 8 | Tick Tick Tick |
| | | 9 | Tick Tock |
| | | 10 | Wave |
| | | 11 | Step |
| | | 12 | Pulse |
| | | 13 | 2x Strobe |
| | | 14 | 3x Strobe |
| | | 15 | Up Down Flash |
| | | 16 | Up Flash Down Flash |
| | | 17 | Random Levels |
| | | 18–20 | Random Levels ... Electric Arc |
| | | 21 | Electric Arc |
| | | 22 | Atomic Lighting |
| | | 23 | Thunderstorm |

| CH | Function | DMX | Description |
|---|---|---|---|
| **23** | Effects (continued) | 24 | Welding |
| | | 25–29 | No Function 2 |
| | | 30 | Stop Motion |
| | | 31 | Movie Flicker |
| | | 32 | Cross Chase |
| | | 33 | Random Dimmers |
| | | 34 | Shakey Dimmers |
| | | 35 | Center Out Chase |
| | | 36 | Negative Pulse |
| | | 37 | Positive Pulse |
| | | 38–49 | No Function 3 |
| | | 50 | Rainbow Wave |
| | | 51 | Rainbow Step |
| | | 52 | Rainbow Pulse |
| | | 53 | RGB Wave |
| | | 54 | RGB Step |
| | | 55 | RGB Pulse |
| | | 56 | CMY Wave |
| | | 57 | CMY Step |
| | | 58 | CMY Pulse |
| | | 59 | Mix to White Wave |
| | | 60 | Mix to White Step |
| | | 61 | Mix to White Pulse |
| | | 62 | Random Mix Wave |
| | | 63 | Random Mix Step |
| | | 64 | Random Mix Pulse |
| | | 65 | Random Subtle Wave |
| | | 66 | RedWhiteBlue Wave |
| | | 67 | RedWhiteBlue Step |
| | | 68–69 | RedWhiteBlue Step ... Color Wheel Full Step |
| | | 70 | Color Wheel Full Step |
| | | 71 | Color Wheel All Step |
| | | 72 | Color Wheel Split Step |
| | | 73 | Color Wheel Random Split Step |
| | | 74 | Color Wheel Shaker |
| | | 75 | Color FX: Fire |
| | | 76 | Color FX: Water |
| | | 77 | Ice |
| | | 78 | Hot and Cold |
| | | 79 | Warm and Fuzzy |
| | | 80 | Iris Wave |

| CH | Function | DMX | Description |
|---|---|---|---|
| **23** | Effects (continued) | 81 | Iris Step |
| | | 82 | Iris Pulse |
| | | 83 | Zoom Wave |
| | | 84 | Zoom Step |
| | | 85 | Zoom Pulse |
| | | 86 | Random Size Wave |
| | | 87 | Random Size Step |
| | | 88–89 | Random Size Step … Pin To Flood |
| | | 90 | Pin To Flood |
| | | 91 | Pounce |
| | | 92 | Splash |
| | | 93–109 | No Function 4 |
| | | 110 | Three Beams |
| | | 111 | Small Spidey |
| | | 112 | Circle Cuts |
| | | 113 | Mill Cuts |
| | | 114 | Dots in Motion |
| | | 115 | Lots of Dots |
| | | 116 | Moonflower |
| | | 117 | Starlight |
| | | 118 | Windows |
| | | 119 | Three Ring Circus |
| | | 120 | Flying Bananas |
| | | 121 | Beamage |
| | | 122 | Spider Twist |
| | | 123 | Milling Around |
| | | 124 | Flicker Dots |
| | | 125 | Tick Tock Cone |
| | | 126 | Flap Flap |
| | | 127 | Nervous Dots |
| | | 128 | Chasing Dots |
| | | 129 | Counter Flaps |
| | | 130–159 | Counter Flaps … Fire |
| | | 160 | Gobo FX: Fire |
| | | 161 | Fire … Water |
| | | 162 | Gobo FX: Water |
| | | 163 | Water … Vertical Scratches |
| | | 164 | Vertical Scratches |
| | | 165 | Horizontal Scratches |
| | | 166 | Box Animation |
| | | 167 | Chasing Worms |

| CH | Function | DMX | Description |
|---|---|---|---|
| **23** | Effects (continued) | 168 | Spidermotion |
| | | 169 | Curvy Field |
| | | 170 | Big Balls |
| | | 171 | Veins |
| | | 172 | Yellow Veins |
| | | 173 | Wavy Bones |
| | | 174 | Blubber |
| | | 175–209 | No Function 5 |
| | | 210 | Zoom Fade |
| | | 211 | Fade Spin Zoom |
| | | 212 | Gobo Twist |
| | | 213 | Expand Twist |
| | | 214 | Expand Twist Out |
| | | 215–219 | No Function 6 |
| | | 220 | Circle Square |
| | | 221 | Circle Open |
| | | 222 | Line By Line |
| | | 223–255 | No Function 7 |
| **24** | Effects Speed | | FX 1 Speed |
| | | 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 |
| **25** | Effects 2 | 0 | No Effect |
| | | 1 | Gobo X-Fade |
| | | 2 | Bad Stepper |
| | | 3–7 | No Function 1 |
| | | 8 | Tick Tick Tick |
| | | 9 | Tick Tock |
| | | 10 | Wave |
| | | 11 | Step |
| | | 12 | Pulse |
| | | 13 | 2x Strobe |
| | | 14 | 3x Strobe |
| | | 15 | Up Down Flash |

| CH | Function | DMX | Description |
|---|---|---|---|
| **25** | Effects 2 (continued) | 16 | Up Flash Down Flash |
| | | 17 | Random Levels |
| | | 18–20 | Random Levels … Electric Arc |
| | | 21 | Electric Arc |
| | | 22 | Atomic Lighting |
| | | 23 | Thunderstorm |
| | | 24 | Welding |
| | | 25–29 | No Function 2 |
| | | 30 | Stop Motion |
| | | 31 | Movie Flicker |
| | | 32 | Cross Chase |
| | | 33 | Random Dimmers |
| | | 34 | Shakey Dimmers |
| | | 35 | Center Out Chase |
| | | 36 | Negative Pulse |
| | | 37 | Positive Pulse |
| | | 38–49 | No Function 3 |
| | | 50 | Rainbow Wave |
| | | 51 | Rainbow Step |
| | | 52 | Rainbow Pulse |
| | | 53 | RGB Wave |
| | | 54 | RGB Step |
| | | 55 | RGB Pulse |
| | | 56 | CMY Wave |
| | | 57 | CMY Step |
| | | 58 | CMY Pulse |
| | | 59 | Mix to White Wave |
| | | 60 | Mix to White Step |
| | | 61 | Mix to White Pulse |
| | | 62 | Random Mix Wave |
| | | 63 | Random Mix Step |
| | | 64 | Random Mix Pulse |
| | | 65 | Random Subtle Wave |
| | | 66 | RedWhiteBlue Wave |
| | | 67 | RedWhiteBlue Step |
| | | 68–69 | RedWhiteBlue Step … Color Wheel Full Step |
| | | 70 | Color Wheel Full Step |
| | | 71 | Color Wheel All Step |
| | | 72 | Color Wheel Split Step |
| | | 73 | Color Wheel Random Split Step |
| | | 74 | Color Wheel Shaker |
| | | 75 | Color FX: Fire |

| CH | Function | DMX | Description |
|---|---|---|---|
| **25** | Effects 2 (continued) | 76 | Color FX: Water |
| | | 77 | Ice |
| | | 78 | Hot and Cold |
| | | 79 | Warm and Fuzzy |
| | | 80 | Iris Wave |
| | | 81 | Iris Step |
| | | 82 | Iris Pulse |
| | | 83 | Zoom Wave |
| | | 84 | Zoom Step |
| | | 85 | Zoom Pulse |
| | | 86 | Random Size Wave |
| | | 87 | Random Size Step |
| | | 88–89 | Random Size Step ... Pin To Flood |
| | | 90 | Pin To Flood |
| | | 91 | Pounce |
| | | 92 | Splash |
| | | 93–109 | No Function 4 |
| | | 110 | Three Beams |
| | | 111 | Small Spidey |
| | | 112 | Circle Cuts |
| | | 113 | Mill Cuts |
| | | 114 | Dots in Motion |
| | | 115 | Lots of Dots |
| | | 116 | Moonflower |
| | | 117 | Starlight |
| | | 118 | Windows |
| | | 119 | Three Ring Circus |
| | | 120 | Flying Bananas |
| | | 121 | Beamage |
| | | 122 | Spider Twist |
| | | 123 | Milling Around |
| | | 124 | Flicker Dots |
| | | 125 | Tick Tock Cone |
| | | 126 | Flap Flap |
| | | 127 | Nervous Dots |
| | | 128 | Chasing Dots |
| | | 129 | Counter Flaps |
| | | 130–159 | Counter Flaps ... Fire |
| | | 160 | Gobo FX: Fire |
| | | 161 | Fire ... Water |
| | | 162 | Gobo FX: Water |
| | | 163 | Water ... Vertical Scratches |

| CH | Function | DMX | Description |
|---|---|---|---|
| **25** | Effects 2 (continued) | 164 | Vertical Scratches |
| | | 165 | Horizontal Scratches |
| | | 166 | Box Animation |
| | | 167 | Chasing Worms |
| | | 168 | Spidermotion |
| | | 169 | Curvy Field |
| | | 170 | Big Balls |
| | | 171 | Veins |
| | | 172 | Yellow Veins |
| | | 173 | Wavy Bones |
| | | 174 | Blubber |
| | | 175–209 | No Function 5 |
| | | 210 | Zoom Fade |
| | | 211 | Fade Spin Zoom |
| | | 212 | Gobo Twist |
| | | 213 | Expand Twist |
| | | 214 | Expand Twist Out |
| | | 215–219 | No Function 6 |
| | | 220 | Circle Square |
| | | 221 | Circle Open |
| | | 222 | Line By Line |
| | | 223–255 | No Function 7 |
| **26** | Effects 2 Speed | | FX 2 Speed |
| | | 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 |
| **27** | Effects Sync | | FX Synchronization |
| | | 0 | No Sync |
| | | 1 | Fixture Offset 10deg |
| | | 2 | Fixture Offset 20deg |
| | | 3 | Fixture Offset 30deg |
| | | 4 | Fixture Offset 40deg |
| | | 5 | Fixture Offset 50deg |
| | | 6 | Fixture Offset 60deg |

| CH | Function | DMX | Description |
|---|---|---|---|
| **27** | Effects Sync (continued) | 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

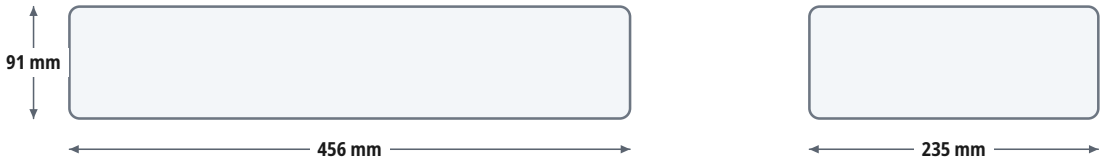
| Parameter | Value |
|---|---|
| **Light** | |
| Light source | LED |
| LED power | 475 W |
| Luminous flux | 12,800 lm |
| Color temperature | 6,000 K |
| Color rendering index (CRI) | 70 |
| **Optics** | |
| Zoom | 12–36° |
| **Movement** | |
| Pan | 540° |
| Tilt | 268° |
| **Control** | |
| DMX connection | 5-pin XLR IN/OUT |
| RDM | yes (manufacturer ID 0x4D50, device model ID 0x0052) |
| **Electrical** | |
| Power supply | 120–240 V, 50/60 Hz |
| Power consumption | 575 W |
| Power connectors | NAC3FCA IN |
| **Dimensions and construction** | |
| Weight | 23.2 kg |
| **Operating environment** | |
| Operating temperature | 5 to 40 °C |

### Speeds and ranges

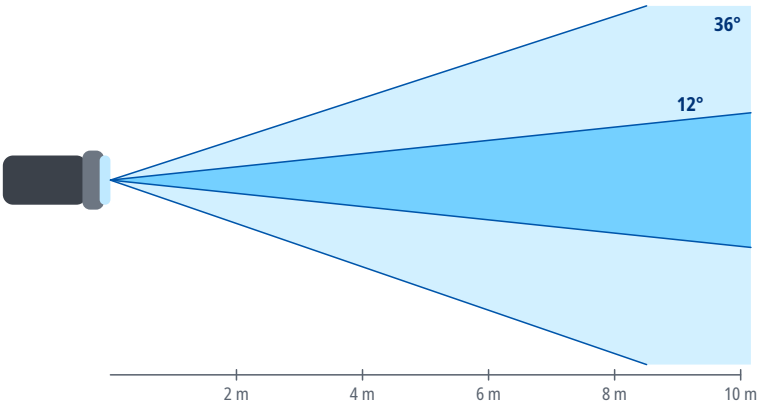
| Parameter | Value |
|---|---|
| Strobe frequency | 1–20 Hz |
| Color wheel rotation | up to 360 °/s (60 rpm) |
| Gobo wheel 1 rotation | up to 1150 °/s (192 rpm) |
| Gobo wheel 2 rotation | up to 360 °/s (60 rpm) |
| Gobo 1 rotation | up to 780 °/s (130 rpm) |
| Prism rotation | up to 900 °/s (150 rpm) |

### Dimensions

**weight 23.2 kg**




### Spot diameter




| Distance | Ø 12° | Ø 36° |
|---|---|---|
| 2 m | 0.42 m | 1.3 m |
| 4 m | 0.84 m | 2.6 m |
| 6 m | 1.3 m | 3.9 m |
| 8 m | 1.7 m | 5.2 m |
| 10 m | 2.1 m | 6.5 m |
| 15 m | 3.2 m | 9.7 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.