DMX REFERENCE

# Synergy 7 Profile

DTS Lighting




| | |
|---|---|
| **Manufacturer** | DTS Lighting |
| **GDTF file** | DTS_Lighting_Synergy_7_Profile_21946.gdtf |
| **GDTF revision** | rel1.1 · 2022-02-09 |
| **Generated** | 2026-11-23 |

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# 1 About this manual

This document describes the Synergy 7 Profile by DTS Lighting. It was compiled from the GDTF file DTS_Lighting_Synergy_7_Profile_21946.gdtf from the GDTF-Share library.

File revision: “rel1.1”.

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

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

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

# 2 Quick reference

| Parameter | Value |
|---|---|
| Power consumption | 1,400 W |
| Weight | 46.5 kg |

### DMX modes

| Mode | Channels | Units in one universe | First start addresses |
|---|---|---|---|
| 52 Channels | 52 | 9 | 1, 53, 105, 157, ... |
| 61 Channels | 61 | 8 | 1, 62, 123, 184, ... |

### No light? Check these channels

- 52 Channels: CH 9 Shutter at 10–19, 190–199, 230–231 or 253–255 “Open”
- 61 Channels: CH 9 Shutter at 10–19, 190–199, 230–231 or 253–255 “Open”


Read the manual before use


Risk of electric shock


Do not stare into the light


Indoor use only

# 3 Safety instructions


Read the manual before use


Risk of electric shock


Do not stare into the light


Indoor use only

**⚠ WARNING**

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

**⚠ WARNING**

- Connect the device only to a properly installed mains outlet with a protective earth (ground) contact. The outlet or other means of disconnection must remain easily accessible.
- Power supply: 100–240 V, 50/60 Hz. Before connecting, make sure that the mains voltage matches this value and the value on the rating plate of the device.
- Do not connect the device to a dimmer or to a dimmed circuit.
- Use only the original power cable or a cable with identical ratings. Protect the cable from damage, do not run it over sharp edges, and never unplug it by pulling on the cable.
- When connecting several devices to one circuit, do not exceed its permitted load.
- Do not touch the device with wet hands.

**⚠ WARNING**

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

**⚠ CAUTION**

- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do not aim the beam at flammable or heat-sensitive materials at close range.

**⚠ CAUTION**

- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them longer than necessary.

**⚠ WARNING**

- The moving parts of the device (for example the head or arms) can move quickly and unexpectedly at any time – after power-on, during a reset, or on a command from the controller.
- Keep yourself and any objects out of the range of movement. While the device is switched on, do not touch the moving parts, move them by hand, or obstruct their movement; this can cause injury (pinching) and damage the drive.
- Do not carry the device by its moving parts. If the device has a transport lock, engage it before transport and release it before switching on.

# 4 Product description

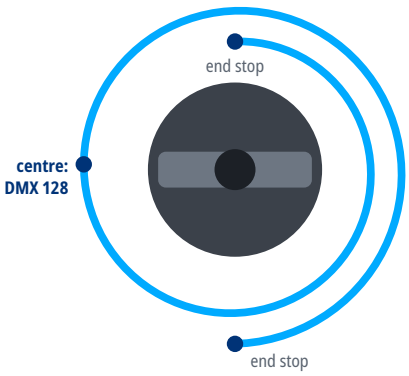
### Description in the GDTF file

“SYNERGY 7 PROFILE is a new projector that has become “the Stallion” in our team of moving heads. With an output up to 55,000 lumens, the Synergy 7 Profile offers incredible versatility and freedom of use. The unit employs a 1050W pure white LED source, coupled with a long excursion 7° - 52° motorized linear zoom with autofocus. The unit features a rotating framing system with 4 blades.”

### Range of movement

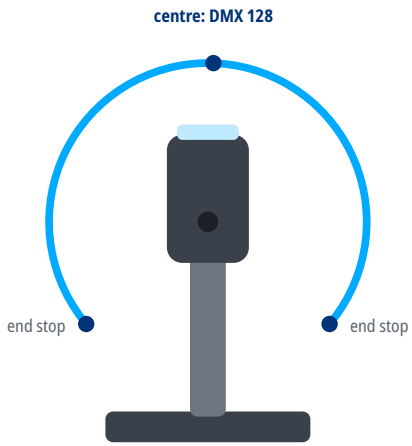
**Pan 540°**

top view




**Tilt 260°**

side view



# 5 Installation

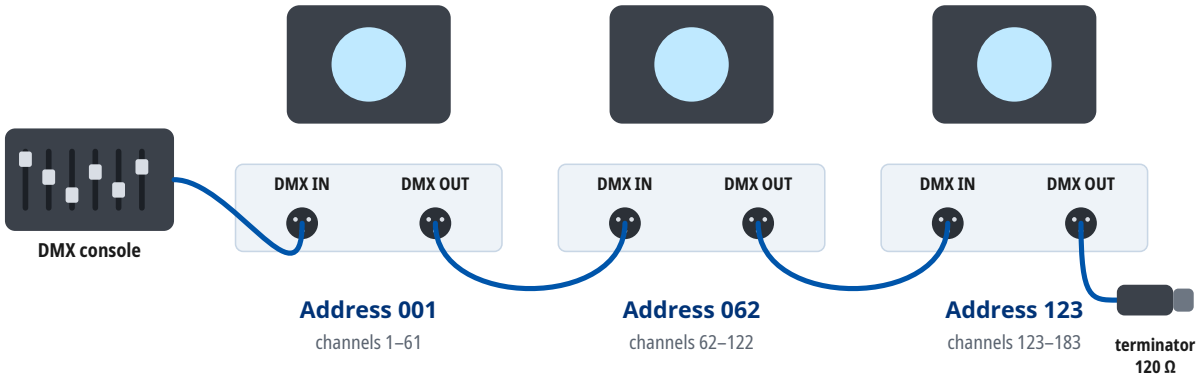
**⚠ WARNING**

- 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: 46.5 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 61 Channels: every unit occupies 61 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

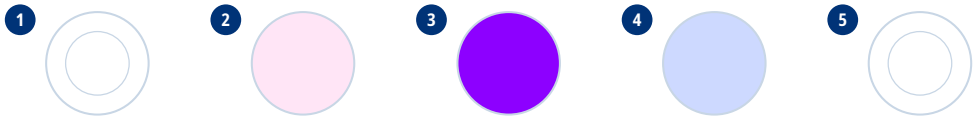
- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “61 Channels”: 61.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied 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 “61 Channels”, you can use, for example, the start addresses 1, 62, 123, 184.
- 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

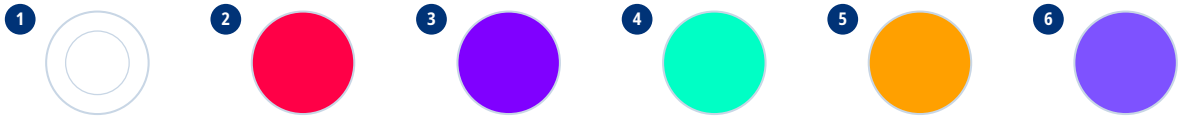
| | 52 Channels<br>52 channels | 61 Channels<br>61 channels |
|---|---|---|
| Pan / Tilt | 1, 3 | 1, 3 |
| Dimmer | 7 | 7 |
| Shutter / strobe | 9 | 9 |
| Color mixing | 13–15 | 13–15 |
| Color temperature | 16 | 16 |
| Color wheel | 10, 11 | 10, 11 |
| Gobo wheel | 18, 21, 22, 25 | 18, 21, 22, 25 |
| Gobo rotation | 19, 23 | 19, 23 |
| Prism | 40–44 | 49–53 |
| Frost | 45 | 54 |
| Zoom | 49 | 58 |
| Focus | 46, 47 | 55, 56 |
| Iris | 26, 27 | 26, 27 |
| Animation wheel | 38 | 47 |
| Effects / macros | 17, 37–39 | 17, 46–48 |

## Color wheel 1



1. Open — DMX 0–9
2. Higher CRI — DMX 10–71
3. UV — DMX 72–133
4. CTB 10 000 K — DMX 134–195
5. 1/4 Minus Green — DMX 196–255

## Color wheel 2



1. Open — DMX 0–9
2. Deep Red — DMX 10–58
3. Deep Blue — DMX 59–107
4. Deep Green — DMX 108–156
5. Amber — DMX 157–205
6. Lavender — DMX 206

## Gobo wheel 1

1 
Gobo: Open
**DMX 0–9**

2 
Gobo 1
**DMX 10–42**

3 
Gobo 2
**DMX 43–75**

4 
Gobo 3
**DMX 76–108**

5 
Gobo 4
**DMX 109–141**

6 
Gobo 5
**DMX 142–174**

7 
Gobo 6
**DMX 175–208**

## Gobo wheel 2

1 
Gobo: Open
**DMX 0–9**

2 
Gobo 1
**DMX 10–42**

3 
Gobo 2
**DMX 43–75**

4 
Gobo 3
**DMX 76–108**

5 
Gobo 4
**DMX 109–141**

6 
Gobo 5
**DMX 142–174**

7 
Gobo 6
**DMX 175–208**

## Prism

1 
Open
**DMX 0–9**

2 
6 facets
Prism 1 (after lens)
**DMX 10–49**

3 
24 facets
Prism 2 (after lens)
**DMX 50–89**

4 
Prisms 1+2 (aftern lens)
**DMX 90–129**

## Color wheel 3

1 Open
DMX 0–9

2 L019 Fire
DMX 10–20

3 L020 Medium Amber
DMX 21–25

4 L025 Sunset Red
DMX 26–30

5 L068 Sky Blue
DMX 31–35

6 L101 Yellow
DMX 36–40

7 L104 Deep Amber
DMX 41–45

8 L105 Orange
DMX 46–50

9 L106 Primary Red
DMX 51–55

10 L111 Dark Pink
DMX 56–60

11 L113 Magenta
DMX 61–65

12 L117 Steel Blue
DMX 66–70

13 L118 Light Blue
DMX 71–75

14 L122 Fern Green
DMX 76–80

15 L126 Mauve
DMX 81–85

16 L132 Medium Blue
DMX 86–90

17 L136 Pale Lavender
DMX 91–95

18 L137 Special Lavender
DMX 96–100

19 L138 Pale Green
DMX 101–105

20 L139 Primary Green
DMX 106–110

21 L147 Apricot
DMX 111–115

22 L151 Gold Tint
DMX 116–120

23 L154 Pale Rose
DMX 121–125

24 L156 Chocolate
DMX 126–130

25 L181 Congo Blue
DMX 131–135

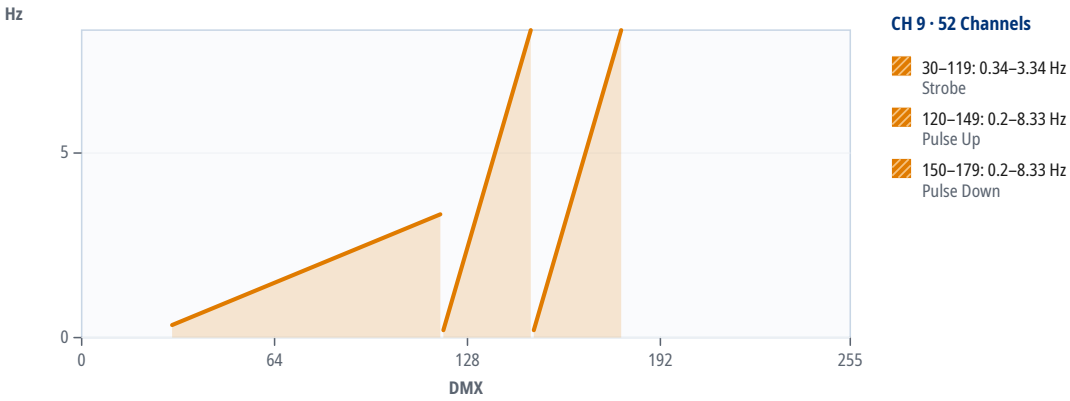
26 L200 Double CTB
DMX 136–140

27 L201 Full CTB
DMX 141–145

28 L204 Full CTO
DMX 146–150

29 L341 Plum
DMX 151–155

## Strobe rate

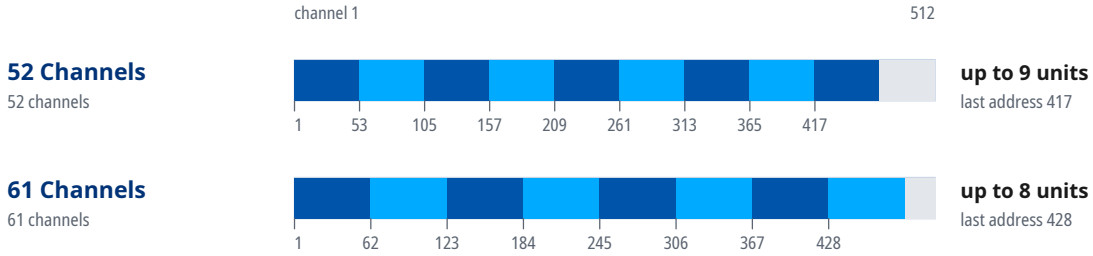



**CH 9 · 52 Channels**

- 30–119: 0.34–3.34 Hz
  Strobe
- 120–149: 0.2–8.33 Hz
  Pulse Up
- 150–179: 0.2–8.33 Hz
  Pulse Down

# 9 DMX channels

### Units in one DMX universe




### Start addresses of 20 units in the mode “61 Channels”

| Unit | Start address | Unit | Start address | Unit | Start address | Unit | Start address |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 6 | 306 | 11 | U2 · 123 | 16 | U2 · 428 |
| 2 | 62 | 7 | 367 | 12 | U2 · 184 | 17 | U3 · 1 |
| 3 | 123 | 8 | 428 | 13 | U2 · 245 | 18 | U3 · 62 |
| 4 | 184 | 9 | U2 · 1 | 14 | U2 · 306 | 19 | U3 · 123 |
| 5 | 245 | 10 | U2 · 62 | 15 | U2 · 367 | 20 | U3 · 184 |

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 |
|---|---|---|
| 52 Channels | 52 | 1 |
| 61 Channels | 61 | 2 |

## Mode 52 Channels

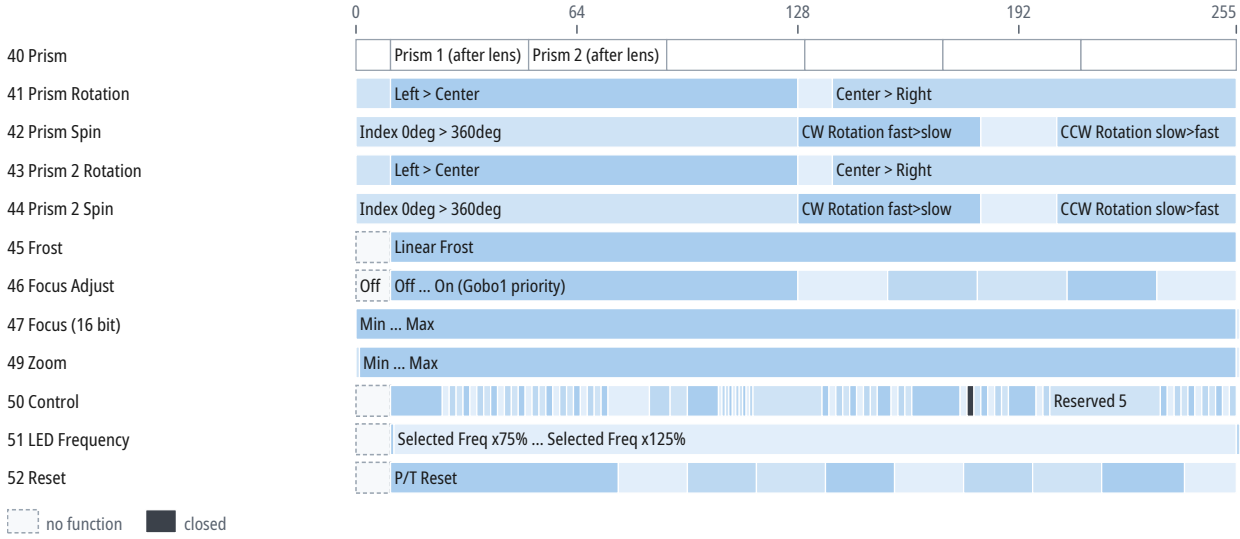
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 9 Shutter at 10–19, 190–199, 230–231 or 253–255 “Open”.

### Channel functions at a glance



## Channel functions at a glance




| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Pan | 0–255 | Min ... Max |
| | | 255 | Max |
| **2** | Pan Fine | 0–255 | Fine adjustment of CH 1 |
| **3** | Tilt | 0–255 | Min ... Max |
| | | 255 | Max |
| **4** | Tilt Fine | 0–255 | Fine adjustment of CH 3 |
| **5** | Speed Pan/Tilt | | Speed Movement |
| | | 0–9 | Fast |
| | | 10–25 | Standard |
| | | 26–127 | Vector fast>slow |
| | | 128–247 | DMX react fast>slow |
| | | 248–250 | Silent |
| | | 251–255 | Snap |
| **6** | Dummy | 0–255 | |
| **7** | Dimmer | 0–255 | Min ... Max |
| | | 255 | Max |
| **8** | Dimmer Fine | 0–255 | Fine adjustment of CH 7 |
| **9** | Shutter | 0–9 | Shutter 1_1: Closed |
| | | 10–19 | Shutter 1_1: Open |
| | | 20–29 | Shutter 1_1: Closed |
| | | 30 | Min Strobe |
| | | 31–118 | Min Strobe ... Max Strobe |
| | | 119 | Max Strobe |
| | | 120 | Min Pulse Up |
| | | 121–148 | Min Pulse Up ... Max Pulse Up |
| | | 149 | Max Pulse Up |
| | | 150 | Min Pulse Down |

| CH | Function | DMX | Description |
|---|---|---|---|
| **9** | Shutter (continued) | 151–178 | Min Pulse Down ... Max Pulse Down |
| | | 179 | Max Pulse Down |
| | | 180–189 | Random Strobe |
| | | 190–199 | Shutter 1_2: Open |
| | | 200–204 | Gobos BO on Rotation |
| | | 205–209 | Colors BO on Insertion |
| | | 210–219 | P/T BO on Movement |
| | | 220–222 | Blades BO on Insertion |
| | | 223–224 | Prisms BO on Insertion |
| | | 225–226 | Zoom BO on Movement |
| | | 227–229 | GLOBAL MIB |
| | | 230–231 | Shutter 1_3: Open |
| | | 232–252 | Shutter 1_3 |
| | | 253–255 | Shutter 1_3: Open |
| **10** | Colors 2 | | Color Correction Wheel |
| | | 0–9 | Open |
| | | 10–71 | Higher CRI |
| | | 72–133 | UV |
| | | 134–195 | CTB 10 000 K |
| | | 196–255 | 1/4 Minus Green |
| **11** | Colors | | When CH 12 is 0–63: |
| | | 0–9 | Open |
| | | 10–58 | Deep Red |
| | | 59–107 | Deep Blue |
| | | 108–156 | Deep Green |
| | | 157–205 | Amber |
| | | 206–255 | Lavender |
| | | | When CH 12 is 64–127: |
| | | 0–9 | Open |
| | | 10–50 | Color 0-1 |
| | | 51–91 | Color 1-2 |
| | | 92–132 | Color 2-3 |
| | | 133–173 | Color 3-4 |
| | | 174–214 | Color 4-5 |
| | | 215–255 | Color 5-0 |
| | | | When CH 12 is 128–191: |
| | | 0–9 | Open |
| | | 10–255 | Proportional Color |
| | | | When CH 12 is 192–255: |
| | | 0–9 | Open |
| | | 10–127 | CW Rotation max>min (483.4–0.12 °/s) |
| | | 128–137 | Stop |

| CH | Function | DMX | Description |
|---|---|---|---|
| **11** | Colors (continued) | 138–255 | CCW Rotation min>max (0.12–483.4 °/s) |
| **12** | Colors Mode | | Color Mode |
| | | 0–63 | Full Color |
| | | 64–127 | Half Color |
| | | 128–191 | Proportional Color |
| | | 192–255 | Rainbow |
| **13** | Cyan | 0 | Min |
| | | 1–254 | Min ... Max |
| | | 255 | Max |
| **14** | Magenta | 0 | Min |
| | | 1–254 | Min ... Max |
| | | 255 | Max |
| **15** | Yellow | 0 | Min |
| | | 1–254 | Min ... Max |
| | | 255 | Max |
| **16** | CTO | 0 | 7000 K |
| | | 1–254 | Linear CTO |
| | | 255 | 3000 K |
| **17** | Color Macro | | Gel Filters Emulation |
| | | 0–9 | Open |
| | | 10–20 | L019 Fire |
| | | 21–25 | L020 Medium Amber |
| | | 26–30 | L025 Sunset Red |
| | | 31–35 | L068 Sky Blue |
| | | 36–40 | L101 Yellow |
| | | 41–45 | L104 Deep Amber |
| | | 46–50 | L105 Orange |
| | | 51–55 | L106 Primary Red |
| | | 56–60 | L111 Dark Pink |
| | | 61–65 | L113 Magenta |
| | | 66–70 | L117 Steel Blue |
| | | 71–75 | L118 Light Blue |
| | | 76–80 | L122 Fern Green |
| | | 81–85 | L126 Mauve |
| | | 86–90 | L132 Medium Blue |
| | | 91–95 | L136 Pale Lavender |
| | | 96–100 | L137 Special Lavender |
| | | 101–105 | L138 Pale Green |
| | | 106–110 | L139 Primary Green |
| | | 111–115 | L147 Apricot |
| | | 116–120 | L151 Gold Tint |
| | | 121–125 | L154 Pale Rose |

| CH | Function | DMX | Description |
|---|---|---|---|
| **17** | Color Macro (continued) | 126–130 | L156 Chocolate |
| | | 131–135 | L181 Congo Blue |
| | | 136–140 | L200 Double CTB |
| | | 141–145 | L201 Full CTB |
| | | 146–150 | L204 Full CTO |
| | | 151–155 | L341 Plum |
| | | 156–255 | Gel Filters Emulation |
| **18** | Gobo | 0–9 | Gobo: Open |
| | | 10–42 | Gobo 1 |
| | | 43–75 | Gobo 2 |
| | | 76–108 | Gobo 3 |
| | | 109–141 | Gobo 4 |
| | | 142–174 | Gobo 5 |
| | | 175–207 | Gobo 6 |
| | | 208–231 | CCW scrolling (1.36–131.8 °/s) |
| | | 232–255 | CW scrolling (1.36–131.8 °/s) |
| **19** | Gobo Rotation | 0–127 | Index 0-360 (360°) |
| | | 128–180 | CCW Gobo max>min (831.6–0.6 °/s) |
| | | 181–202 | Gobo Rotation: Stop |
| | | 203–255 | CW Gobo min>max (0.6–831.6 °/s) |
| **20** | Gobo Rotation Fine | 0–255 | Fine adjustment of CH 19 |
| **21** | Gobo Shake | | Gobo 1 Shake |
| | | 0–9 | Stop |
| | | 10–19 | Shake R-L speed 1 |
| | | 20–29 | Shake R-L speed 2 |
| | | 30–39 | Shake R-L speed 3 |
| | | 40–49 | Shake R-L speed 4 |
| | | 50–59 | Shake R-L speed 5 (1.04–1.04 Hz) |
| | | 60–69 | Shake R-L speed 6 |
| | | 70–79 | Shake R-L speed 7 |
| | | 80–89 | Shake R-L speed 8 (2.27–2.27 Hz) |
| | | 90–99 | Shake R-L speed 9 |
| | | 100–109 | Shake R-L speed 10 |
| | | 110–126 | Shake R-L speed 11 |
| | | 127–138 | Stop |
| | | 139–148 | Shake L-R speed 1 |
| | | 149–158 | Shake L-R speed 2 |
| | | 159–168 | Shake L-R speed 3 |
| | | 169–178 | Shake L-R speed 4 |
| | | 179–188 | Shake L-R speed 5 |
| | | 189–198 | Shake L-R speed 6 |
| | | 199–208 | Shake L-R speed 7 |

| CH | Function | DMX | Description |
|---|---|---|---|
| **21** | Gobo Shake (continued) | 209–218 | Shake L-R speed 8 |
| | | 219–228 | Shake L-R speed 9 |
| | | 229–238 | Shake L-R speed 10 |
| | | 239–255 | Shake L-R speed 11 |
| **22** | Gobo 2 | 0–9 | Gobo: Open |
| | | 10–42 | Gobo 1 |
| | | 43–75 | Gobo 2 |
| | | 76–108 | Gobo 3 |
| | | 109–141 | Gobo 4 |
| | | 142–174 | Gobo 5 |
| | | 175–207 | Gobo 6 |
| | | 208–231 | CCW scrolling (1.36–131.8 °/s) |
| | | 232–255 | CW scrolling (1.36–131.8 °/s) |
| **23** | Gobo 2 Rotation | 0–127 | Index 0-360 (360°) |
| | | 128–180 | CCW Gobo max>min (831.6–0.6 °/s) |
| | | 181–202 | Gobo Rotation: Stop |
| | | 203–255 | CW Gobo min>max (0.6–831.6 °/s) |
| **24** | Gobo 2 Rotation Fine | 0–255 | Fine adjustment of CH 23 |
| **25** | Gobo 2 Shake | | Gobo 1 Shake |
| | | 0–9 | Stop |
| | | 10–19 | Shake R-L speed 1 |
| | | 20–29 | Shake R-L speed 2 |
| | | 30–39 | Shake R-L speed 3 |
| | | 40–49 | Shake R-L speed 4 |
| | | 50–59 | Shake R-L speed 5 (1.04–1.04 Hz) |
| | | 60–69 | Shake R-L speed 6 |
| | | 70–79 | Shake R-L speed 7 |
| | | 80–89 | Shake R-L speed 8 (2.27–2.27 Hz) |
| | | 90–99 | Shake R-L speed 9 |
| | | 100–109 | Shake R-L speed 10 |
| | | 110–126 | Shake R-L speed 11 |
| | | 127–138 | Stop |
| | | 139–148 | Shake L-R speed 1 |
| | | 149–158 | Shake L-R speed 2 |
| | | 159–168 | Shake L-R speed 3 |
| | | 169–178 | Shake L-R speed 4 |
| | | 179–188 | Shake L-R speed 5 |
| | | 189–198 | Shake L-R speed 6 |
| | | 199–208 | Shake L-R speed 7 |
| | | 209–218 | Shake L-R speed 8 |
| | | 219–228 | Shake L-R speed 9 |
| | | 229–238 | Shake L-R speed 10 |

| CH | Function | DMX | Description |
|---|---|---|---|
| **25** | Gobo 2 Shake (continued) | 239–255 | Shake L-R speed 11 |
| **26** | Iris | 0–9 | Open |
| | | 10–246 | 100% > 15% |
| | | 247–255 | Closed |
| **27** | Iris Strobe | 0–9 | No Function |
| | | 10–63 | Iris Pulse min>max (0.1–1.1 Hz) |
| | | 64 | Iris - PulseClose min |
| | | 65–116 | Iris - PulseClose min ... Iris - PulseClose max |
| | | 117 | Iris - PulseClose max |
| | | 118 | Iris - PulseOpen min |
| | | 119–170 | Iris - PulseOpen min ... Iris - PulseOpen max |
| | | 171 | Iris - PulseOpen max |
| | | 172–255 | Reserved |
| **28** | Shaper Rotation | | Blades System Rotation |
| | | 0–126 | -45deg > 0deg |
| | | 127–128 | 0deg position |
| | | 129–255 | 0deg > 45deg |
| **29** | Blade 1 A | 0 | Min |
| | | 1–254 | Min ... Max |
| | | 255 | Max |
| **30** | Blade 1 Rotation | 0–127 | -30deg > 0deg |
| | | 128 | 0deg position |
| | | 129–255 | 0deg > 30deg |
| **31** | Blade 2 A | 0 | Min |
| | | 1–254 | Min ... Max |
| | | 255 | Max |
| **32** | Blade 2 Rotation | 0–127 | -30deg > 0deg |
| | | 128 | 0deg position |
| | | 129–255 | 0deg > 30deg |
| **33** | Blade 3 A | 0 | Min |
| | | 1–254 | Min ... Max |
| | | 255 | Max |
| **34** | Blade 3 Rotation | 0–127 | -30deg > 0deg |
| | | 128 | 0deg position |
| | | 129–255 | 0deg > 30deg |
| **35** | Blade 4 A | 0 | Min |
| | | 1–254 | Min ... Max |
| | | 255 | Max |
| **36** | Blade 4 Rotation | 0–127 | -30deg > 0deg |
| | | 128 | 0deg position |
| | | 129–255 | 0deg > 30deg |
| **37** | Shaper Macros | | Framing Sys Macros |

| CH | Function | DMX | Description |
|---|---|---|---|
| **37** | Shaper Macros (continued) | 0–9 | No Function |
| | | 10–11 | Macro 1 |
| | | 12–13 | Macro 2 |
| | | 14–15 | Macro 3 |
| | | 16–17 | Macro 4 |
| | | 18–19 | Macro 5 |
| | | 20–21 | Macro 6 |
| | | 22–23 | Macro 7 |
| | | 24–25 | Macro 8 |
| | | 26–27 | Macro 9 |
| | | 28–29 | Macro 10 |
| | | 30–31 | Macro 11 |
| | | 32–33 | Macro 12 |
| | | 34–35 | Macro 13 |
| | | 36–37 | Macro 14 |
| | | 38–39 | Macro 15 |
| | | 40–41 | Macro 16 |
| | | 42–43 | Macro 17 |
| | | 44–45 | Macro 18 |
| | | 46–47 | Macro 19 |
| | | 48–49 | Macro 20 |
| | | 50–51 | Macro 21 |
| | | 52–53 | Macro 22 |
| | | 54–55 | Macro 23 |
| | | 56–57 | Macro 24 |
| | | 58–59 | Macro 25 |
| | | 60–61 | Macro 26 |
| | | 62–63 | Macro 27 |
| | | 64–65 | Macro 28 |
| | | 66–67 | Macro 29 |
| | | 68–69 | Macro 30 |
| | | 70–71 | Macro 31 |
| | | 72–73 | Macro 32 |
| | | 74–75 | Macro 33 |
| | | 76–77 | Macro 34 |
| | | 78–79 | Macro 35 |
| | | 80–81 | Macro 36 |
| | | 82–83 | Macro 37 |
| | | 84–85 | Macro 38 |
| | | 86–87 | Macro 39 |
| | | 88–89 | Macro 40 |
| | | 90–91 | Macro 41 |

| CH | Function | DMX | Description |
|---|---|---|---|
| **37** | Shaper Macros (continued) | 92–93 | Macro 42 |
| | | 94–95 | Macro 43 |
| | | 96–97 | Macro 44 |
| | | 98–99 | Macro 45 |
| | | 100–101 | Macro 46 |
| | | 102–103 | Macro 47 |
| | | 104–105 | Macro 48 |
| | | 106–107 | Macro 49 |
| | | 108–109 | Macro 50 |
| | | 110–111 | Macro 51 |
| | | 112–113 | Macro 52 |
| | | 114–115 | Macro 53 |
| | | 116–117 | Macro 54 |
| | | 118–119 | Macro 55 |
| | | 120–121 | Macro 56 |
| | | 122–123 | Macro 57 |
| | | 124–125 | Macro 58 |
| | | 126–127 | Macro 59 |
| | | 128–129 | Macro 60 |
| | | 130–131 | Macro 61 |
| | | 132–133 | Macro 62 |
| | | 134–135 | Macro 63 |
| | | 136–137 | Macro 64 |
| | | 138–139 | Macro 65 |
| | | 140–141 | Macro 66 |
| | | 142–143 | Macro 67 |
| | | 144–145 | Macro 68 |
| | | 146–147 | Macro 69 |
| | | 148–149 | Macro 70 |
| | | 150–151 | Macro 71 |
| | | 152–153 | Macro 72 |
| | | 154–155 | Macro 73 |
| | | 156–157 | Macro 74 |
| | | 158–159 | Macro 75 |
| | | 160–161 | Macro 76 |
| | | 162–163 | Macro 77 |
| | | 164–165 | Macro 78 |
| | | 166–167 | Macro 79 |
| | | 168–169 | Macro 80 |
| | | 170–171 | Macro 81 |
| | | 172–173 | Macro 82 |
| | | 174–175 | Macro 83 |

| CH | Function | DMX | Description |
|---|---|---|---|
| **37** | Shaper Macros (continued) | 176–177 | Macro 84 |
| | | 178–179 | Macro 85 |
| | | 180–181 | Macro 86 |
| | | 182–183 | Macro 87 |
| | | 184–185 | Macro 88 |
| | | 186–187 | Macro 89 |
| | | 188–255 | Framing Sys Macros |
| **38** | Animation System Macro | | Dynamove FX Engine |
| | | 0–9 | No Function |
| | | 10–15 | Dynamove 1 |
| | | 16–21 | Dynamove 2 |
| | | 22–27 | Dynamove 3 |
| | | 28–33 | Dynamove 4 |
| | | 34–39 | Dynamove 5 |
| | | 40–45 | Dynamove 6 |
| | | 46–51 | Dynamove 7 |
| | | 52–57 | Dynamove 8 |
| | | 58–63 | Dynamove 9 |
| | | 64–69 | Dynamove 10 |
| | | 70–75 | Dynamove 11 |
| | | 76–81 | Dynamove 12 |
| | | 82–87 | Dynamove 13 |
| | | 88–93 | Dynamove 14 |
| | | 94–99 | Dynamove 15 |
| | | 100–101 | Dynamove 16 |
| | | 102–103 | Dynamove 17 |
| | | 104–105 | Dynamove 18 |
| | | 106–107 | Dynamove 19 |
| | | 108–109 | Dynamove 20 |
| | | 110–111 | Dynamove 21 |
| | | 112–113 | Dynamove 22 |
| | | 114–115 | Dynamove 23 |
| | | 116–117 | Dynamove 24 |
| | | 118–119 | Dynamove 25 |
| | | 120–121 | Dynamove 26 |
| | | 122–123 | Dynamove 27 |
| | | 124–125 | Dynamove 28 |
| | | 126–127 | Dynamove 29 |
| | | 128–129 | Dynamove 30 |
| | | 130–131 | Dynamove 31 |
| | | 132–133 | Dynamove 32 |
| | | 134–135 | Dynamove 33 |

| CH | Function | DMX | Description |
|---|---|---|---|
| **38** | Animation System Macro (continued) | 136–255 | Dynamove FX Engine |
| **39** | Effects Speed | | Blades/Dynamove FX Rate |
| | | 0–10 | Default speed (1x) |
| | | 11–50 | 1x > 5x |
| | | 51–90 | 5x > 1x |
| | | 91–159 | Default speed (1x) |
| | | 160–255 | 1x > 1/10x |
| **40** | Prism | | Prism Mode |
| | | 0–9 | Open |
| | | 10–49 | Prism 1 (after lens) |
| | | 50–89 | Prism 2 (after lens) |
| | | 90–129 | Prisms 1+2 (aftern lens) |
| | | 130–169 | Prism 1 (before lens) |
| | | 170–209 | Prism 2 (before lens) |
| | | 210–255 | Prisms 1+2 (before lens) |
| **41** | Prism Rotation | | Prism 1 Position |
| | | 0–9 | Center |
| | | 10–127 | Left > Center |
| | | 128–137 | Center |
| | | 138–255 | Center > Right |
| **42** | Prism Spin | 0–127 | Index 0deg > 360deg (360°) |
| | | 128–180 | CW Rotation fast>slow (8616–0.6 °/s) |
| | | 181–202 | Prism 1 Rotation: Stop |
| | | 203–255 | CCW Rotation slow>fast (0.6–8616 °/s) |
| **43** | Prism 2 Rotation | | Prism 2 Position |
| | | 0–9 | Center |
| | | 10–127 | Left > Center |
| | | 128–137 | Center |
| | | 138–255 | Center > Right |
| **44** | Prism 2 Spin | 0–127 | Index 0deg > 360deg (360°) |
| | | 128–180 | CW Rotation fast>slow (8616–0.6 °/s) |
| | | 181–202 | Prism 2 Rotation: Stop |
| | | 203–255 | CCW Rotation slow>fast (0.6–8616 °/s) |
| **45** | Frost | 0–9 | No Function |
| | | 10–255 | Linear Frost |
| **46** | Focus Adjust | 0–9 | Off |
| | | 10–127 | Off ... On (Gobo1 priority) |
| | | 128–153 | On (Gobo1 priority) |
| | | 154–179 | On (Gobo2 priority) |
| | | 180–205 | On (Shaper priority) |
| | | 206–231 | On (Open priority) |
| | | 232–255 | On (Iris priority) |

| CH | Function | DMX | Description |
|---|---|---|---|
| **47** | Focus | 0–255 | Min ... Max |
| | | 255 | Max |
| **48** | Focus Fine | 0–255 | Fine adjustment of CH 47 |
| **49** | Zoom | 0 | Min |
| | | 1–254 | Min ... Max |
| | | 255 | Max |
| **50** | Control | 0–9 | No Function |
| | | 10–24 | Smooth OFF |
| | | 25–26 | Smooth 1 |
| | | 27–28 | Smooth 2 |
| | | 29–30 | Smooth 3 |
| | | 31–32 | Smooth 4 |
| | | 33–34 | Smooth 5 |
| | | 35–36 | Smooth 6 |
| | | 37–38 | Smooth 7 |
| | | 39–40 | Smooth 8 |
| | | 41–42 | Smooth 9 |
| | | 43–44 | Smooth 10 |
| | | 45–46 | Smooth 11 |
| | | 47–48 | Smooth 12 |
| | | 49–50 | Smooth 13 |
| | | 51–52 | Smooth 14 |
| | | 53–54 | Smooth 15 |
| | | 55–56 | Smooth 16 |
| | | 57–58 | Smooth 17 |
| | | 59–60 | Smooth 18 |
| | | 61–62 | Smooth 19 |
| | | 63–64 | Smooth 20 |
| | | 65–66 | Gamma 2_0 |
| | | 67–68 | Gamma Linear |
| | | 69–70 | Gamma S-Curve |
| | | 71–72 | Gamma 2_2 |
| | | 73–84 | Reserved |
| | | 85–90 | Hybrid Dimming OFF |
| | | 91–95 | Hybrid Dimming ON |
| | | 96–104 | 610 Hz |
| | | 105 | 800 Hz |
| | | 106 | 1000 Hz |
| | | 107 | 1500 Hz |
| | | 108 | 2000 Hz |
| | | 109 | 2500 Hz |
| | | 110 | 3000 Hz |

| CH | Function | DMX | Description |
|---|---|---|---|
| **50** | Control (continued) | 111 | 3500 Hz |
| | | 112 | 4000 Hz |
| | | 113 | 4500 Hz |
| | | 114 | 5000 Hz |
| | | 115–134 | Reserved 1 |
| | | 135–136 | CMY/CTO Speed 1 |
| | | 137–138 | CMY/CTO Speed 2 |
| | | 139–140 | CMY/CTO Speed 3 |
| | | 141–142 | CMY/CTO Speed 4 |
| | | 143–144 | Blades Speed 1 |
| | | 145–146 | Blades Speed 2 |
| | | 147–148 | Blades Speed 3 |
| | | 149–150 | Blades Speed 4 |
| | | 151–154 | Reserved 2 |
| | | 155–156 | Display Standby OFF |
| | | 157–158 | Display Standby ON |
| | | 159–160 | Display Standby FORCED ON |
| | | 161–174 | Reserved 3 |
| | | 175–176 | NoDMX - Keep Last |
| | | 177–178 | NoDMX - BlackOut |
| | | 179–180 | NoDMX - BlackOut ... NoDMX - DemoProgram |
| | | 181–182 | NoDMX - DemoProgram |
| | | 183–184 | NoDMX - SingleCUE |
| | | 185–186 | Pan Normal |
| | | 187–188 | Pan Reverse |
| | | 189–196 | Reserved 4 |
| | | 197–198 | Tilt Normal |
| | | 199–200 | Tilt Reverse |
| | | 201–232 | Reserved 5 |
| | | 233–234 | Ultra-Silent Mode |
| | | 235–236 | Silent Mode |
| | | 237–238 | Standard Mode |
| | | 239–240 | Reserved 6 |
| | | 241–242 | Fan - Constant Mode |
| | | 243–244 | Fan - Auto Mode |
| | | 245–246 | Zoom Speed 1 |
| | | 247–248 | Zoom Speed 2 |
| | | 249–250 | Zoom Speed 3 |
| | | 251–252 | Zoom Speed 4 |
| | | 253–255 | Set Functions Default |
| **51** | LED Frequency | | Frequency Fine |
| | | 0–9 | No Function |

| CH | Function | DMX | Description |
|---|---|---|---|
| **51** | LED Frequency (continued) | 10 | Selected Freq x75% |
| | | 11–254 | Selected Freq x75% ... Selected Freq x125% |
| | | 255 | Selected Freq x125% |
| **52** | Reset | 0–9 | No Function |
| | | 10–75 | P/T Reset |
| | | 76–95 | Head Motors Reset |
| | | 96–115 | Gobo Wheel Reset |
| | | 116–135 | Color Wheel Reset |
| | | 136–155 | CMY/CTO Reset |
| | | 156–175 | Blades Reset |
| | | 176–195 | Prisms Reset |
| | | 196–215 | Frost Reset |
| | | 216–239 | Focus/Zoom Reset |
| | | 240–255 | Total Unit Reset |

## Mode 61 Channels

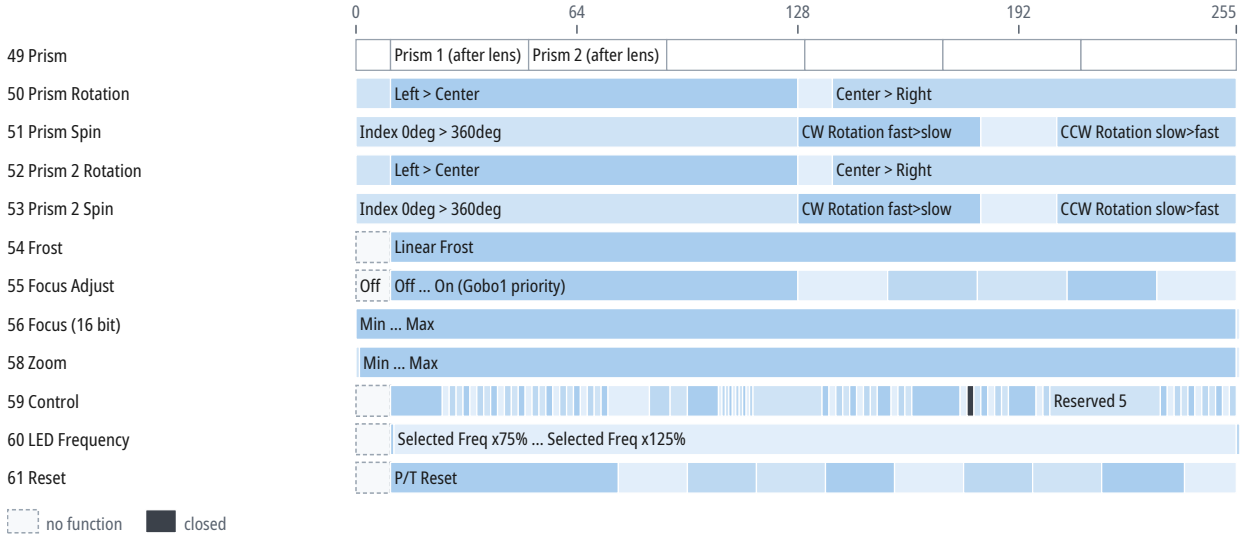
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 9 Shutter at 10–19, 190–199, 230–231 or 253–255 “Open”.

### Channel functions at a glance



## Channel functions at a glance




| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Pan | | Same as CH 1 in the mode “52 Channels” (p. 13) |
| **2** | Pan Fine | 0–255 | Fine adjustment of CH 1 |
| **3** | Tilt | | Same as CH 3 in the mode “52 Channels” (p. 13) |
| **4** | Tilt Fine | 0–255 | Fine adjustment of CH 3 |
| **5** | Speed Pan/Tilt | | Same as CH 5 in the mode “52 Channels” (p. 13) |
| **6** | Dummy | 0–255 | |
| **7** | Dimmer | | Same as CH 7 in the mode “52 Channels” (p. 13) |
| **8** | Dimmer Fine | 0–255 | Fine adjustment of CH 7 |
| **9** | Shutter | | Same as CH 9 in the mode “52 Channels” (p. 13) |
| **10** | Colors 2 | | Same as CH 10 in the mode “52 Channels” (p. 14) |
| **11** | Colors | | Same as CH 11 in the mode “52 Channels” (p. 14) |
| **12** | Colors Mode | | Same as CH 12 in the mode “52 Channels” (p. 15) |
| **13** | Cyan | | Same as CH 13 in the mode “52 Channels” (p. 15) |
| **14** | Magenta | | Same as CH 14 in the mode “52 Channels” (p. 15) |
| **15** | Yellow | | Same as CH 15 in the mode “52 Channels” (p. 15) |
| **16** | CTO | | Same as CH 16 in the mode “52 Channels” (p. 15) |
| **17** | Color Macro | | Same as CH 17 in the mode “52 Channels” (p. 15) |
| **18** | Gobo | | Same as CH 18 in the mode “52 Channels” (p. 16) |
| **19** | Gobo Rotation | | Same as CH 19 in the mode “52 Channels” (p. 16) |
| **20** | Gobo Rotation Fine | 0–255 | Fine adjustment of CH 19 |
| **21** | Gobo Shake | | Same as CH 21 in the mode “52 Channels” (p. 16) |
| **22** | Gobo 2 | | Same as CH 22 in the mode “52 Channels” (p. 17) |
| **23** | Gobo 2 Rotation | | Same as CH 23 in the mode “52 Channels” (p. 17) |
| **24** | Gobo 2 Rotation Fine | 0–255 | Fine adjustment of CH 23 |
| **25** | Gobo 2 Shake | | Same as CH 25 in the mode “52 Channels” (p. 17) |
| **26** | Iris | | Same as CH 26 in the mode “52 Channels” (p. 18) |
| **27** | Iris Strobe | | Same as CH 27 in the mode “52 Channels” (p. 18) |

| CH | Function | DMX | Description |
|---|---|---|---|
| **28** | Shaper Rotation | | Same as CH 28 in the mode “52 Channels” (p. 18) |
| **29** | Shaper Rotation Fine | 0–255 | Fine adjustment of CH 28 |
| **30** | Blade 1 A | 0–255 | Min ... Max |
| | | 255 | Max |
| **31** | Blade 1 A Fine | 0–255 | Fine adjustment of CH 30 |
| **32** | Blade 1 Rotation | | Same as CH 30 in the mode “52 Channels” (p. 18) |
| **33** | Blade 1 Rotation Fine | 0–255 | Fine adjustment of CH 32 |
| **34** | Blade 2 A | 0–255 | Min ... Max |
| | | 255 | Max |
| **35** | Blade 2 A Fine | 0–255 | Fine adjustment of CH 34 |
| **36** | Blade 2 Rotation | | Same as CH 32 in the mode “52 Channels” (p. 18) |
| **37** | Blade 2 Rotation Fine | 0–255 | Fine adjustment of CH 36 |
| **38** | Blade 3 A | 0–255 | Min ... Max |
| | | 255 | Max |
| **39** | Blade 3 A Fine | 0–255 | Fine adjustment of CH 38 |
| **40** | Blade 3 Rotation | | Same as CH 34 in the mode “52 Channels” (p. 18) |
| **41** | Blade 3 Rotation Fine | 0–255 | Fine adjustment of CH 40 |
| **42** | Blade 4 A | 0–255 | Min ... Max |
| | | 255 | Max |
| **43** | Blade 4 A Fine | 0–255 | Fine adjustment of CH 42 |
| **44** | Blade 4 Rotation | | Same as CH 36 in the mode “52 Channels” (p. 18) |
| **45** | Blade 4 Rotation Fine | 0–255 | Fine adjustment of CH 44 |
| **46** | Shaper Macros | | Same as CH 37 in the mode “52 Channels” (p. 18) |
| **47** | Animation System Macro | | Same as CH 38 in the mode “52 Channels” (p. 21) |
| **48** | Effects Speed | | Same as CH 39 in the mode “52 Channels” (p. 22) |
| **49** | Prism | | Same as CH 40 in the mode “52 Channels” (p. 22) |
| **50** | Prism Rotation | | Same as CH 41 in the mode “52 Channels” (p. 22) |
| **51** | Prism Spin | | Same as CH 42 in the mode “52 Channels” (p. 22) |
| **52** | Prism 2 Rotation | | Same as CH 43 in the mode “52 Channels” (p. 22) |
| **53** | Prism 2 Spin | | Same as CH 44 in the mode “52 Channels” (p. 22) |
| **54** | Frost | | Same as CH 45 in the mode “52 Channels” (p. 22) |
| **55** | Focus Adjust | | Same as CH 46 in the mode “52 Channels” (p. 22) |
| **56** | Focus | | Same as CH 47 in the mode “52 Channels” (p. 23) |
| **57** | Focus Fine | 0–255 | Fine adjustment of CH 56 |
| **58** | Zoom | | Same as CH 49 in the mode “52 Channels” (p. 23) |
| **59** | Control | | Same as CH 50 in the mode “52 Channels” (p. 23) |
| **60** | LED Frequency | | Same as CH 51 in the mode “52 Channels” (p. 24) |
| **61** | Reset | | Same as CH 52 in the mode “52 Channels” (p. 25) |

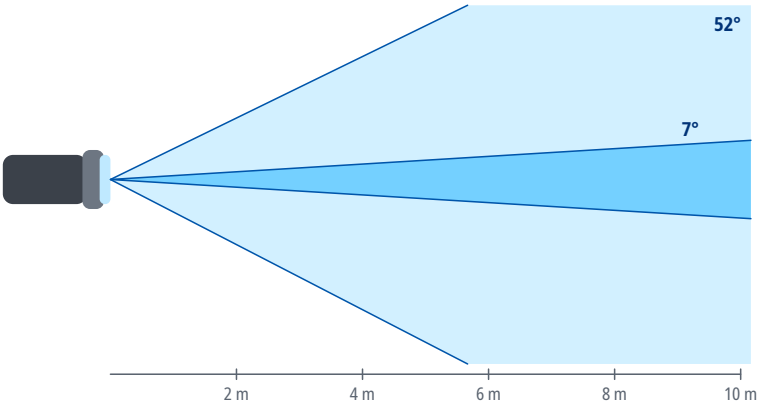
# 10 Technical specifications

| Parameter | Value |
|---|---|
| **Light** | |
| Light source | LED |
| **Optics** | |
| Zoom | 7–52° |
| **Movement** | |
| Pan | 540° |
| Tilt | 260° |
| **Control** | |
| DMX connection | 5-pin XLR IN/OUT, 3-pin XLR IN/OUT |
| RJ45 connectors | RJ45 |
| RDM | yes (manufacturer ID 0x0710, device model ID 0x0019) |
| **Electrical** | |
| Power supply | 100–240 V, 50/60 Hz |
| Power consumption | 1,400 W |
| Power connectors | powerCON TRUE1 IN/OUT |
| **Dimensions and construction** | |
| Weight | 46.5 kg |
| **Operating environment** | |
| Operating temperature | -10 to 45 °C |

### Speeds and ranges

| Parameter | Value |
|---|---|
| Color temperature range | 3000–7000 K |
| Strobe frequency | 0.34–3.34 Hz |
| LED frequency | 610–5000 Hz |
| Color wheel 2 rotation | up to 483.4 °/s (81 rpm) |
| Gobo wheel 1 rotation | up to 831.6 °/s (139 rpm) |
| Gobo wheel 2 rotation | up to 831.6 °/s (139 rpm) |
| Prism rotation | up to 8616 °/s (1436 rpm) |
| Prism rotation | up to 8616 °/s (1436 rpm) |

### Spot diameter




| Distance | Ø 7° | Ø 52° |
|---|---|---|
| 2 m | 0.24 m | 2 m |
| 4 m | 0.49 m | 3.9 m |
| 6 m | 0.73 m | 5.9 m |
| 8 m | 0.98 m | 7.8 m |
| 10 m | 1.2 m | 9.8 m |
| 15 m | 1.8 m | 14.6 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.