DMX REFERENCE

# Lonestar Prime

High End Systems



| | |
|---|---|
| **Manufacturer** | High End Systems |
| **GDTF file** | High_End_Systems_Lonestar_Prime_167380.gdtf |
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# 1 About this manual

This document describes the Lonestar Prime by High End Systems. It was compiled from the GDTF file High_End_Systems_Lonestar_Prime_167380.gdtf from the GDTF-Share library.

File revision: “v1.2.3b, Uploaded to GDTF Share.”.

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 High End Systems; product names and trademarks belong to their owners.

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

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

# 2 Quick reference

| Parameter | Value |
|---|---|
| Weight | 23.1 kg |

### DMX modes

| Mode | Channels | Units in one universe | First start addresses |
|---|---|---|---|
| Standard | 52 | 9 | 1, 53, 105, 157, ... |
| Trifusion | 52 | 9 | 1, 53, 105, 157, ... |

### No light? Check these channels

- Standard: CH 48 Dimmer above 0
- Trifusion: CH 48 Dimmer above 0



Read the manual before use



Do not stare into the light



Indoor use only

# 3 Safety instructions



Read the manual before use



Do not stare into the light



Indoor use only

**⚠ WARNING**

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

**⚠ WARNING**

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

**⚠ CAUTION**

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

**⚠ CAUTION**

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

**⚠ WARNING**

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

# 4 Product description

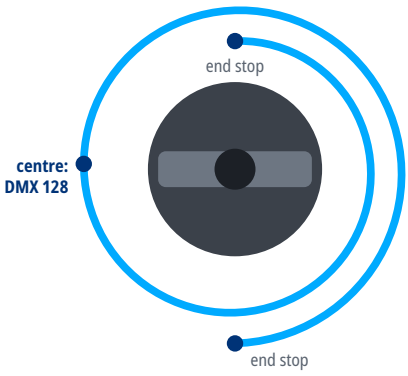
**Description in the GDTF file**

“High End Systems Lonestar Prime Official File”

**Range of movement**

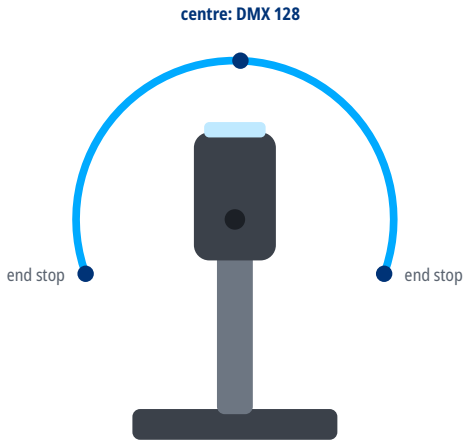
**Pan 540°**

top view




**Tilt 220°**

side view




# 5 Installation

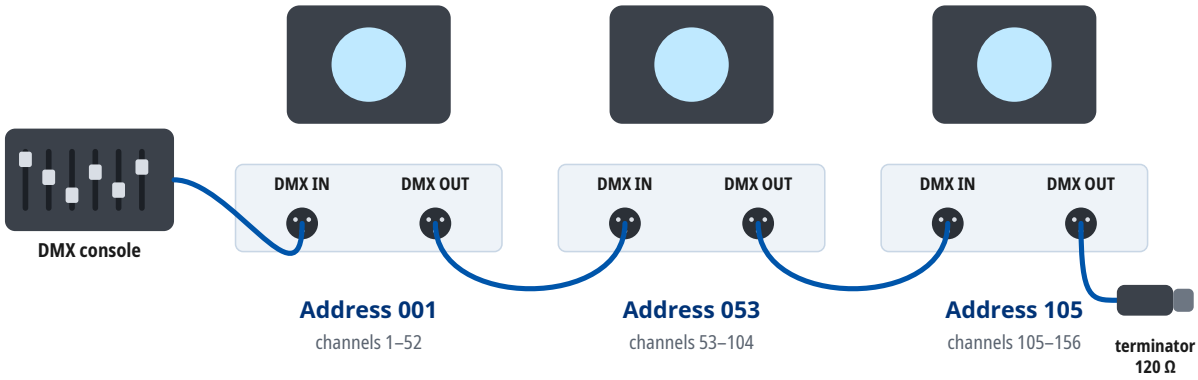
**⚠ WARNING**

- 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: 23.1 kg.
- Use suitable mounting hardware (for example truss clamps) and tighten all screw connections properly.
- Always secure the suspended device against falling with a safety cable of adequate load capacity, routed through a fixed point of the device and around the supporting structure.
- During installation and removal, keep people out of the area below the work position.
- Regularly inspect the fixings and the safety cable for damage, corrosion and loosening.

# 6 Connections

- Use shielded cable designed for DMX512 with an impedance of 110 Ω. Ordinary microphone cable is not suitable for DMX, especially over longer distances.
- Connect the devices in a daisy chain: connect the DMX OUT of one device to the DMX IN of the next. Do not split the line with Y-cables or wire it in a star; the line may be split only with a DMX splitter.
- Connect the shield to pin 1 only. Do not connect the shield (ground) to the metal shell of the connector; this can cause short circuits or erratic behavior.
- XLR pin assignment: pin 1 – shield (ground), pin 2 – Data- (Data Complement), pin 3 – Data+ (Data True). On 5-pin connectors, pins 4 and 5 are not connected; a 5-pin connector can be connected to a 3-pin one with a cable adapter.
- Terminate the end of the line (for impedance matching): plug an XLR connector with a 120 Ω, ¼ W resistor between pins 2 and 3 into the DMX OUT of the last device. This reduces the risk of erratic behavior.
- Connect no more than 32 devices to one DMX line. For more devices or longer runs, use a DMX splitter or booster.

**DMX line**




Mode Standard: every unit occupies 52 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 “Standard”: 52.
- 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 “Standard”, you can use, for example, the start addresses 1, 53, 105, 157.
- 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.

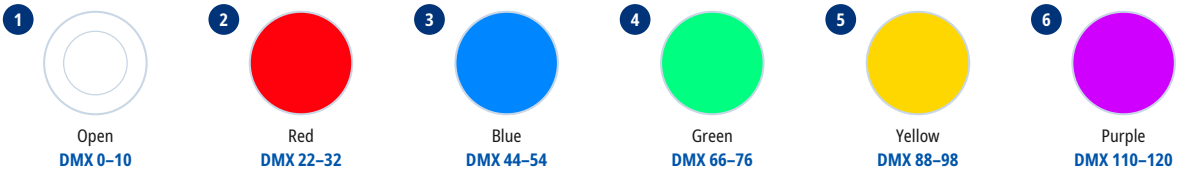
# 8 Functions at a glance

## Functions in each DMX mode

| | Standard<br>52 channels | Trifusion<br>52 channels |
|---|---|---|
| Pan / Tilt | 1, 3 | 1, 3 |
| Dimmer | 48 | 48 |
| Shutter / strobe | 47 * | 47 * |
| Color mixing | 6–8 | 6–8 |
| Color temperature | 9 | 9 |
| Color wheel | 11 * | 11 * |
| Gobo wheel | 13, 18 * | 13, 18 * |
| Gobo rotation | 15 * | 15 * |
| Prism | 32, 35 * | 32 * |
| Frost | 37, 38 | 36–38 |
| Zoom | 41 | 41 |
| Focus | 39 | 39 |
| Iris | 45 | 45 |
| Animation wheel | 29, 30 | 29, 30 |

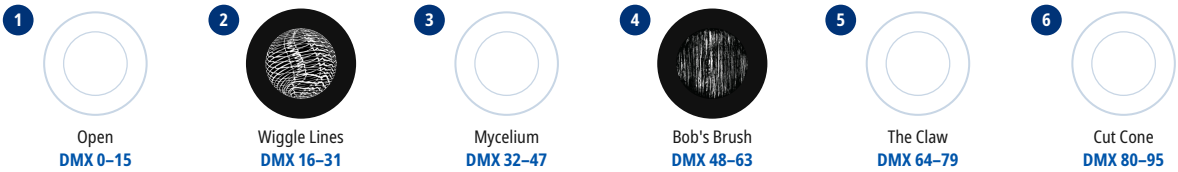
* The function works only when another channel switches it on; see the DMX table.

## Color wheel



1. Open — DMX 0–10
2. Red — DMX 22–32
3. Blue — DMX 44–54
4. Green — DMX 66–76
5. Yellow — DMX 88–98
6. Purple — DMX 110–120
7. TM-30 — DMX 132–142
8. Lavender — DMX 154–164
9. Half CTO — DMX 176–186
10. Full CTO — DMX 198–208
11. Dark Blue — DMX 220–230

## Gobo wheel 1



1. Open — DMX 0–15
2. Wiggle Lines — DMX 16–31
3. Mycelium — DMX 32–47
4. Bob's Brush — DMX 48–63
5. The Claw — DMX 64–79
6. Cut Cone — DMX 80–95
7. Split-S — DMX 96–111
8. Ice — DMX 112–127
9. Bar — DMX 128–143
10. Art Ducko — DMX 144–159

## Animation wheel

| | | | |
|---|---|---|---|
| 1 | Inserted | DMX 255 | |
| 2 | Removed | DMX 0 | |

## Prism 1

| | |
|---|---|
| 1 | Continuous<br>DMX 16–31 |
| 2 | Removed<br>DMX 0–15 |

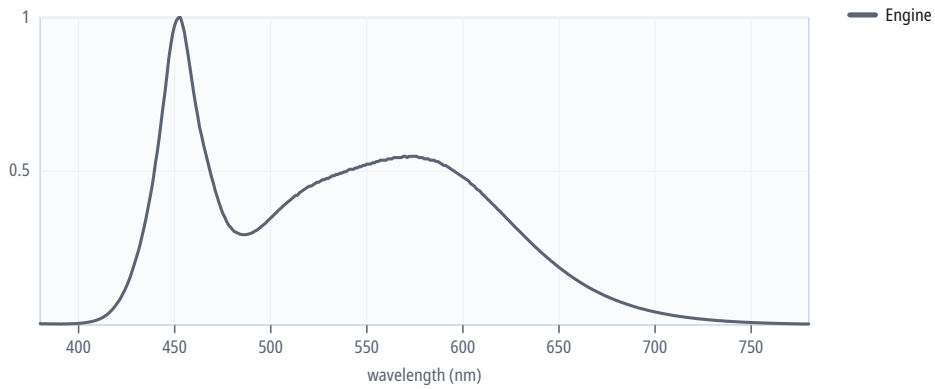
## Prism 2

| | |
|---|---|
| 1 | Continuous<br>DMX 16–31 |
| 2 | Removed<br>DMX 0–15 |

## Gobo wheel 2

| | | | | | |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Open<br>DMX 0–15 | Shattered<br>DMX 16–31 | Misc Spots<br>DMX 32–47 | Light Organic<br>DMX 48–63 | Thatch<br>DMX 64–79 | Across<br>DMX 80–95 |
| 7 | 8 | 9 | 10 | 11 | |
| Triangles<br>DMX 96–111 | Daisey<br>DMX 112–127 | Shower<br>DMX 128–143 | Fractated<br>DMX 144–159 | Needle<br>DMX 160–175 | |

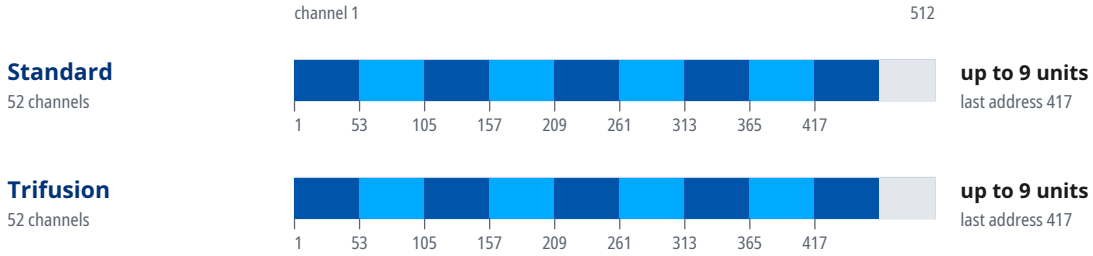
## Spectra of the light sources




Relative spectrum of each light source as the GDTF file states it; each curve is scaled to its own maximum.

# 9 DMX channels

### Units in one DMX universe




### Start addresses of 20 units in the mode “Standard”

| Unit | Start address | Unit | Start address | Unit | Start address | Unit | Start address |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 6 | 261 | 11 | U2 · 53 | 16 | U2 · 313 |
| 2 | 53 | 7 | 313 | 12 | U2 · 105 | 17 | U2 · 365 |
| 3 | 105 | 8 | 365 | 13 | U2 · 157 | 18 | U2 · 417 |
| 4 | 157 | 9 | 417 | 14 | U2 · 209 | 19 | U3 · 1 |
| 5 | 209 | 10 | U2 · 1 | 15 | U2 · 261 | 20 | U3 · 53 |

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 Standard

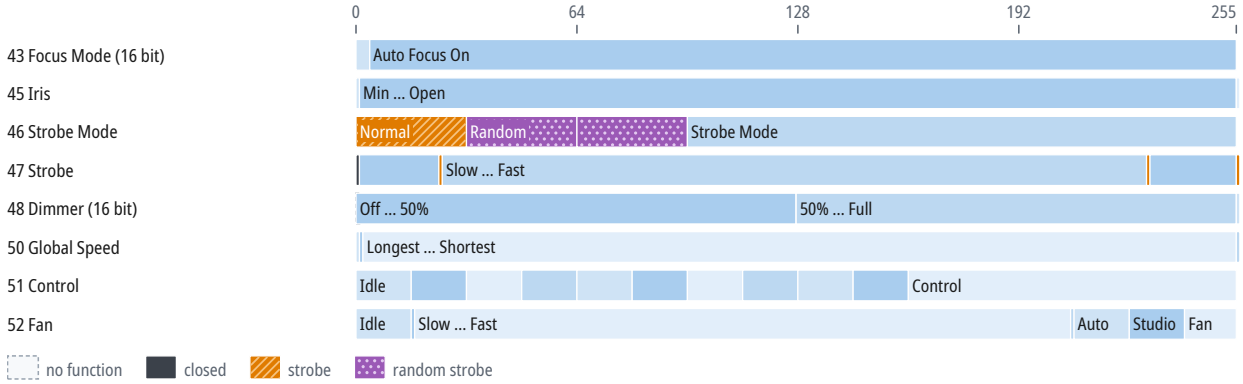
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 48 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 5 Color Mix Mode 0, CH 6 Cyan 255, CH 7 Magenta 255, CH 8 Yellow 255, CH 10 Colors Mode 0, CH 11 Colors 0, CH 46 Strobe Mode 0, CH 47 Strobe 255, CH 48 Dimmer 255.

### Channel functions at a glance



## Channel functions at a glance




| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Pan | 0–127 | Min ... Home |
| | | 127 | Home |
| | | 128–255 | Home ... Max |
| | | 255 | Max |
| **2** | Pan Fine | 0–255 | Fine adjustment of CH 1 |
| **3** | Tilt | 0–127 | Min ... Home |
| | | 127 | Home |
| | | 128–255 | Home ... Max |
| | | 255 | Max |
| **4** | Tilt Fine | 0–255 | Fine adjustment of CH 3 |
| **5** | Color Mix Mode | 0–31 | Full Speed Control: Pure Mix |
| | | 32–47 | Full Speed Control: Cycle |
| | | 48–63 | Full Speed Control: Random |
| | | 64–79 | Full Speed Control: Pure Mix Fast |
| | | 80–95 | Full Speed Control: Cycle Fast |
| | | 96–111 | Full Speed Control: Random Fast |
| | | 112–127 | Full Speed Control |
| | | 128–159 | m Speed Control: Pure Mix |
| | | 160–175 | m Speed Control: Cycle |
| | | 176–181 | m Speed Control: Random |
| | | 182–191 | Random ... Pure Mix Fast |
| | | 192–207 | m Speed Control: Pure Mix Fast |
| | | 208–223 | m Speed Control: Cycle Fast |
| | | 224–239 | m Speed Control: Random Fast |
| | | 240–255 | m Speed Control |
| **6** | Cyan | 0–255 | |
| **7** | Magenta | 0–255 | Magenta |
| **8** | Yellow | 0–255 | Yellow |
| **9** | CTO | 0 | Full Saturation |
| | | 1–254 | Full Saturation ... Open |

| CH | Function | DMX | Description |
|---|---|---|---|
| **9** | CTO (continued) | 255 | Open |
| **10** | Colors Mode | | Full Speed Control |
| | | 0–15 | Indexed |
| | | 16–31 | Forward Spin |
| | | 32–47 | Reverse Spin |
| | | 48–63 | Continuous |
| | | 64–79 | Scan |
| | | 80–95 | Random |
| | | 96–255 | Full Speed Control |
| **11** | Colors | | When CH 10 is 0–15: |
| | | 0–10 | Open |
| | | 11–21 | Open/Red |
| | | 22–32 | Red |
| | | 33–43 | Red/Blue |
| | | 44–54 | Blue |
| | | 55–65 | Blue/Green |
| | | 66–76 | Green |
| | | 77–87 | Green/Yellow |
| | | 88–98 | Yellow |
| | | 99–109 | Yellow/Purple |
| | | 110–120 | Purple |
| | | 121–131 | Purple/TM-30 |
| | | 132–142 | TM-30 |
| | | 143–153 | TM-30/Lavender |
| | | 154–164 | Lavender |
| | | 165–175 | Lavender/Half CTO |
| | | 176–186 | Half CTO |
| | | 187–197 | Half CTO/Full CTO |
| | | 198–208 | Full CTO |
| | | 209–219 | Full CTO/Dark Blue |
| | | 220–230 | Dark Blue |
| | | 231–241 | Dark Blue/Open |
| | | 242–255 | Open |
| | | | When CH 10 is 64–79: |
| | | 0–21 | Open/Red |
| | | 22–43 | Red/Blue |
| | | 44–65 | Blue/Green |
| | | 66–87 | Green/Yellow |
| | | 88–109 | Yellow/Purple |
| | | 110–131 | Purple/TM-30 |
| | | 132–153 | TM-30/Lavender |
| | | 154–175 | Lavender/Half CTO |

| CH | Function | DMX | Description |
|---|---|---|---|
| **11** | Colors (continued) | 176–197 | Half CTO/Full CTO |
| | | 198–219 | Full CTO/Dark Blue |
| | | 220–255 | Dark Blue/Open |
| | | | When CH 10 is 16–31: |
| | | 0 | Stop |
| | | 1–3 | Stop ... Slow |
| | | 4 | Slow |
| | | 5–254 | Slow ... Fast |
| | | 255 | Fast |
| | | | When CH 10 is 32–47: |
| | | 0 | Stop |
| | | 1–3 | Stop ... Slow |
| | | 4 | Slow |
| | | 5–254 | Slow ... Fast |
| | | 255 | Fast |
| | | | When CH 10 is 80–95: |
| | | 0 | Stop |
| | | 1–3 | Stop ... Slow |
| | | 4 | Slow |
| | | 5–254 | Slow ... Fast |
| | | 255 | Fast |
| | | | When CH 10 is 48–63: |
| | | 0 | Open |
| | | 1–25 | Open ... Red |
| | | 26 | Red |
| | | 27–46 | Red ... Blue |
| | | 47 | Blue |
| | | 48–69 | Blue ... Green |
| | | 70 | Green |
| | | 71–92 | Green ... Yellow |
| | | 93 | Yellow |
| | | 94–115 | Yellow ... Purple |
| | | 116 | Purple |
| | | 117–137 | Purple ... TM-30 |
| | | 138 | TM-30 |
| | | 139–160 | TM-30 ... Lavender |
| | | 161 | Lavender |
| | | 162–182 | Lavender ... Half CTO |
| | | 183 | Half CTO |
| | | 184–205 | Half CTO ... Full CTO |
| | | 206 | Full CTO |
| | | 207–228 | Full CTO ... Dark Blue |

| CH | Function | DMX | Description |
|---|---|---|---|
| **11** | Colors (continued) | 229 | Dark Blue |
| | | 230–255 | Continuous |
| **12** | Gobo Mode 1 | | Gobo Wheel Mode |
| | | 0–15 | Indexed |
| | | 16–31 | Forward Spin |
| | | 32–47 | Reverse Spin |
| | | 48–63 | Scan |
| | | 64–79 | Random |
| | | 80–255 | Gobo Wheel Mode |
| **13** | Gobo | | When CH 12 is 0: |
| | | 0–15 | Open |
| | | 16–31 | Wiggle Lines |
| | | 32–47 | Mycelium |
| | | 48–63 | Bob's Brush |
| | | 64–79 | The Claw |
| | | 80–95 | Cut Cone |
| | | 96–111 | Split-S |
| | | 112–127 | Ice |
| | | 128–143 | Bar |
| | | 144–159 | Art Ducko |
| | | 160–255 | Gobo 1 |
| **14** | Gobo Mode 2 | 0–15 | Indexed |
| | | 16–31 | Forward Spin |
| | | 32–47 | Reverse Spin |
| | | 48–63 | Forward Animate |
| | | 64–79 | Reverse Animate |
| | | 80–255 | Gobo Mode |
| **15** | Gobo Rotation | | When CH 14 is 0–15: |
| | | 0–127 | 0 ... 180 |
| | | 127 | 180 |
| | | 128–255 | 180 ... 359 |
| | | 255 | 359 |
| | | | When CH 14 is 16–31: |
| | | 0–4 | Stop ... Slow |
| | | 4–255 | Slow ... Fast |
| | | 255 | Fast |
| | | | When CH 14 is 32–47: |
| | | 0–4 | Stop ... Slow |
| | | 4–255 | Slow ... Fast |
| | | 255 | Fast |
| | | | When CH 14 is 48–63: |
| | | 0–4 | Stop ... Slow |

| CH | Function | DMX | Description |
|---|---|---|---|
| **15** | Gobo Rotation (continued) | 4–255 | Slow ... Fast |
| | | 255 | Fast |
| | | | When CH 14 is 64–79: |
| | | 0–4 | Stop ... Slow |
| | | 4–255 | Slow ... Fast |
| | | 255 | Fast |
| **16** | Gobo Rotation Fine | 0–255 | Fine adjustment of CH 15 |
| **17** | Gobo 2 Mode | | Gobo Wheel 2 Mode - Full Speed |
| | | 0–15 | Indexed |
| | | 16–31 | Forward Spin |
| | | 32–47 | Reverse Spin |
| | | 48–63 | Scan |
| | | 64–79 | Random |
| | | 80–255 | Gobo Wheel 2 Mode - Full Speed |
| **18** | Gobo 2 | | When CH 17 is 0: |
| | | 0–15 | Open |
| | | 16–31 | Shattered |
| | | 32–47 | Misc Spots |
| | | 48–63 | Light Organic |
| | | 64–79 | Thatch |
| | | 80–95 | Across |
| | | 96–111 | Triangles |
| | | 112–127 | Daisey |
| | | 128–143 | Shower |
| | | 144–159 | Fractated |
| | | 160–175 | Needle |
| | | 176–255 | Gobo 2 |
| **19** | Blade 1 A | | Blade 1 Angle A |
| | | 0 | Removed |
| | | 1–254 | Removed ... Inserted |
| | | 255 | Inserted |
| **20** | Blade 1 B | | Blade 1 Angle B |
| | | 0 | Removed |
| | | 1–254 | Removed ... Inserted |
| | | 255 | Inserted |
| **21** | Blade 2 A | | Blade 2 Angle A |
| | | 0 | Removed |
| | | 1–254 | Removed ... Inserted |
| | | 255 | Inserted |
| **22** | Blade 2 B | | Blade 2 Angle B |
| | | 0 | Removed |
| | | 1–254 | Removed ... Inserted |

| CH | Function | DMX | Description |
|---|---|---|---|
| **22** | Blade 2 B (continued) | 255 | Inserted |
| **23** | Blade 3 A | | Blade 3 Angle A |
| | | 0 | Removed |
| | | 1–254 | Removed ... Inserted |
| | | 255 | Inserted |
| **24** | Blade 3 B | | Blade 3 Angle B |
| | | 0 | Removed |
| | | 1–254 | Removed ... Inserted |
| | | 255 | Inserted |
| **25** | Blade 4 A | | Blade 4 Angle A |
| | | 0 | Removed |
| | | 1–254 | Removed ... Inserted |
| | | 255 | Inserted |
| **26** | Blade 4 B | | Blade 4 Angle B |
| | | 0 | Removed |
| | | 1–254 | Removed ... Inserted |
| | | 255 | Inserted |
| **27** | Shaper Rotation | | Frame Rotate |
| | | 0–127 | -60 ... 0 |
| | | 127 | 0 |
| | | 128–255 | 0 ... 60 |
| | | 255 | 60 |
| **28** | Shaper Rotation Fine | 0–255 | Fine adjustment of CH 27 |
| **29** | Animation Insertion | 0 | Removed |
| | | 1–254 | Removed ... Inserted |
| | | 255 | Inserted |
| **30** | Animation Wheel | 0 | Forward Spin: Stop |
| | | 1 | Forward Spin: Slow |
| | | 2–62 | Forward Spin: Slow ... Fast |
| | | 63 | Forward Spin: Fast |
| | | 64 | Reverse Spin: Stop |
| | | 65 | Reverse Spin: Slow |
| | | 66–126 | Reverse Spin: Slow ... Fast |
| | | 127 | Reverse Spin: Fast |
| | | 128 | Forward Animate: Stop |
| | | 129 | Forward Animate: Slow |
| | | 130–190 | Forward Animate: Slow ... Fast |
| | | 191 | Forward Animate: Fast |
| | | 192 | Reverse Animate: Stop |
| | | 193 | Reverse Animate: Slow |
| | | 194–254 | Reverse Animate: Slow ... Fast |
| | | 255 | Reverse Animate: Fast |

| CH | Function | DMX | Description |
|---|---|---|---|
| **31** | Prism Mode | | Prism 1 Mode |
| | | 0–15 | Removed |
| | | 16–31 | Continuous |
| | | 32–47 | Forward Spin |
| | | 48–63 | Reverse Spin |
| | | 64–79 | Forward Animate |
| | | 80–95 | Reverse Animate |
| | | 96–255 | Prism 1 Mode |
| **32** | Prism | | When CH 31 is 0–15: |
| | | 0–255 | Removed |
| | | | When CH 31 is 16–31: |
| | | 0–127 | 0 … 180 |
| | | 127 | 180 |
| | | 128–255 | 180 … 359 |
| | | 255 | 359 |
| | | | When CH 31 is 32–47: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |
| | | 255 | Fast |
| | | | When CH 31 is 48–63: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |
| | | 255 | Fast |
| | | | When CH 31 is 64–79: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |
| | | 255 | Fast |
| | | | When CH 31 is 80–95: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |
| | | 255 | Fast |
| **33** | Prism Fine | 0–255 | Fine adjustment of CH 32 |
| **34** | Prism 2 Mode | 0–15 | Removed |
| | | 16–31 | Continuous |
| | | 32–47 | Forward Spin |
| | | 48–63 | Reverse Spin |
| | | 64–79 | Forward Animate |
| | | 80–95 | Reverse Animate |
| | | 96–255 | Prism 2 Mode |
| **35** | Prism 2 | | When CH 34 is 0–15: |
| | | 0–255 | Removed |
| | | | When CH 34 is 16–31: |

| CH | Function | DMX | Description |
|---|---|---|---|
| **35** | Prism 2 (continued) | 0–127 | 0 … 180 |
| | | 127 | 180 |
| | | 128–255 | 180 … 359 |
| | | 255 | 359 |
| | | | When CH 34 is 32–47: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |
| | | 255 | Fast |
| | | | When CH 34 is 48–63: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |
| | | 255 | Fast |
| | | | When CH 34 is 64–79: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |
| | | 255 | Fast |
| | | | When CH 34 is 80–95: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |
| | | 255 | Fast |
| **36** | Prism 2 Fine | 0–255 | Fine adjustment of CH 35 |
| **37** | Frost | | Diffusion Light |
| | | 0 | Removed |
| | | 1–254 | Removed … Soft Edge |
| | | 255 | Soft Edge |
| **38** | Frost 2 | | Diffusion Medium |
| | | 0 | Removed |
| | | 1–254 | Removed … Soft Edge |
| | | 255 | Soft Edge |
| **39** | Focus | 0–127 | Min … Home |
| | | 127 | Home |
| | | 128–255 | Home … Max |
| | | 255 | Max |
| **40** | Focus Fine | 0–255 | Fine adjustment of CH 39 |
| **41** | Zoom | 0–127 | Min … Home |
| | | 127 | Home |
| | | 128–255 | Home … Max |
| | | 255 | Max |
| **42** | Zoom Fine | 0–255 | Fine adjustment of CH 41 |
| **43** | Focus Mode | 0–3 | Auto Focus Off |
| | | 4–255 | Auto Focus On |
| **44** | Focus Mode Fine | 0–255 | Fine adjustment of CH 43 |

| CH | Function | DMX | Description |
|---|---|---|---|
| **45** | Iris | 0 | Min |
| | | 1–254 | Min … Open |
| | | 255 | Open |
| **46** | Strobe Mode | 0–31 | Normal |
| | | 32–63 | Random |
| | | 64–95 | Synchronous Random |
| | | 96–255 | Strobe Mode |
| **47** | Strobe | | When CH 46 is 0–31: |
| | | 0 | Closed |
| | | 1–23 | Closed … Slow |
| | | 24 | Slow |
| | | 25–228 | Slow … Fast |
| | | 229 | Fast |
| | | 230–254 | Fast … Open |
| | | 255 | Open |
| | | | When CH 46 is 32–63: |
| | | 0 | Closed |
| | | 1–23 | Closed … Slow |
| | | 24 | Slow |
| | | 25–228 | Slow … Fast |
| | | 229 | Fast |
| | | 230–254 | Fast … Open |
| | | 255 | Open |
| | | | When CH 46 is 64–95: |
| | | 0 | Closed |
| | | 1–23 | Closed … Slow |
| | | 24 | Slow |
| | | 25–228 | Slow … Fast |
| | | 229 | Fast |
| | | 230–254 | Fast … Open |
| | | 255 | Open |
| **48** | Dimmer | 0–127 | Off … 50% |
| | | 127 | 50% |
| | | 128–255 | 50% … Full |
| | | 255 | Full |
| **49** | Dimmer Fine | 0–255 | Fine adjustment of CH 48 |
| **50** | Global Speed | | Global m Speed |
| | | 0 | Disabled |
| | | 1 | Longest |
| | | 2–254 | Longest … Shortest |
| | | 255 | Shortest |
| **51** | Control | 0–15 | Idle |

| CH | Function | DMX | Description |
|---|---|---|---|
| **51** | Control (continued) | 16–31 | Idle ... Display Off (Hold 3s) |
| | | 32–47 | Display Off (Hold 3s) |
| | | 48–63 | Display On (Hold 3s) |
| | | 64–79 | Display On (Hold 3s) ... Home All (Hold 3s) |
| | | 80–95 | Home All (Hold 3s) |
| | | 96–111 | Shutdown (Hold 9s) |
| | | 112–127 | Disable Pan Tilt Motors (Hold 9s) |
| | | 128–143 | Dimming Mode - 2:4KHz (Hold 9s) |
| | | 144–159 | Dimming Mode - 16KHz (Hold 9s) |
| | | 160–255 | Control |
| **52** | Fan | 0–15 | Idle |
| | | 16 | Slow |
| | | 17–206 | Slow ... Fast |
| | | 207 | Fast |
| | | 208–223 | Auto |
| | | 224–239 | Studio |
| | | 240–255 | Fan |

## Mode Trifusion

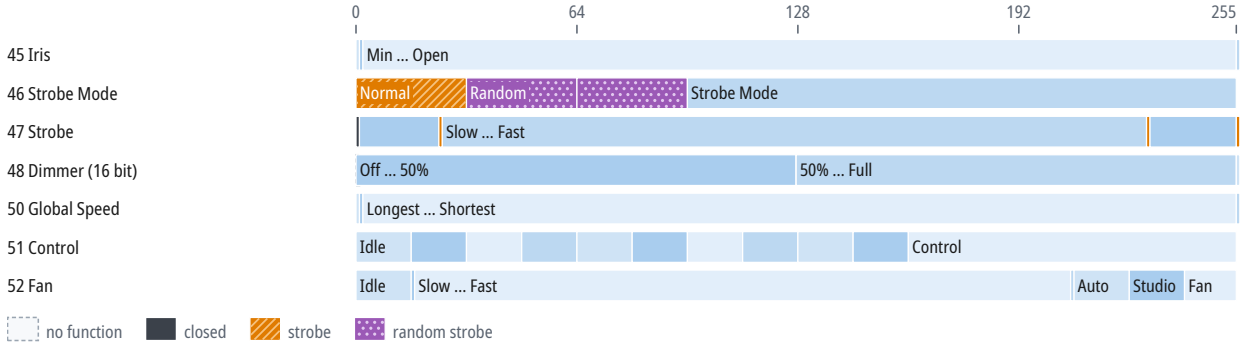
16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

If the device receives DMX in this mode but gives no light, check these channels: CH 48 Dimmer above 0. The GDTF file gives these values for a console's Highlight function: CH 5 Color Mix Mode 0, CH 6 Cyan 255, CH 7 Magenta 255, CH 8 Yellow 255, CH 10 Colors Mode 0, CH 11 Colors 0, CH 46 Strobe Mode 0, CH 47 Strobe 255, CH 48 Dimmer 255.

### Channel functions at a glance



## Channel functions at a glance




| CH | Function | DMX | Description |
|---|---|---|---|
| **1** | Pan | | Same as CH 1 in the mode “Standard” (p. 11) |
| **2** | Pan Fine | 0–255 | Fine adjustment of CH 1 |
| **3** | Tilt | | Same as CH 3 in the mode “Standard” (p. 11) |
| **4** | Tilt Fine | 0–255 | Fine adjustment of CH 3 |
| **5** | Color Mix Mode | | Same as CH 5 in the mode “Standard” (p. 11) |
| **6** | Cyan | 0–255 | |
| **7** | Magenta | 0–255 | Magenta |
| **8** | Yellow | 0–255 | Yellow |
| **9** | CTO | | Same as CH 9 in the mode “Standard” (p. 11) |
| **10** | Colors Mode | | Same as CH 10 in the mode “Standard” (p. 12) |
| **11** | Colors | | Same as CH 11 in the mode “Standard” (p. 12) |
| **12** | Gobo Wheel Mode | 0–15 | Indexed |
| | | 16–31 | Forward Spin |
| | | 32–47 | Reverse Spin |
| | | 48–63 | Scan |
| | | 64–79 | Random |
| | | 80–255 | Gobo Wheel Mode |
| **13** | Gobo | | When CH 17 is 0: |
| | | 0–15 | Open |
| | | 16–31 | Wiggle Lines |
| | | 32–47 | Mycelium |
| | | 48–63 | Bob's Brush |
| | | 64–79 | The Claw |
| | | 80–95 | Cut Cone |
| | | 96–111 | Split-S |
| | | 112–127 | Ice |
| | | 128–143 | Bar |
| | | 144–159 | Art Ducko |
| | | 160–255 | Gobo 1 |
| **14** | Gobo Mode | 0–15 | Indexed |
| | | 16–31 | Forward Spin |

| CH | Function | DMX | Description |
|---|---|---|---|
| **14** | Gobo Mode (continued) | 32–47 | Reverse Spin |
| | | 48–63 | Forward Animate |
| | | 64–79 | Reverse Animate |
| | | 80–255 | Gobo Mode |
| **15** | Gobo Rotation | | Same as CH 15 in the mode “Standard” (p. 14) |
| **16** | Gobo Rotation Fine | 0–255 | Fine adjustment of CH 15 |
| **17** | Gobo 2 Mode | | Same as CH 17 in the mode “Standard” (p. 15) |
| **18** | Gobo 2 | | Same as CH 18 in the mode “Standard” (p. 15) |
| **19** | Blade 1 A | | Same as CH 19 in the mode “Standard” (p. 15) |
| **20** | Blade 1 B | | Same as CH 20 in the mode “Standard” (p. 15) |
| **21** | Blade 2 A | | Same as CH 21 in the mode “Standard” (p. 15) |
| **22** | Blade 2 B | | Same as CH 22 in the mode “Standard” (p. 15) |
| **23** | Blade 3 A | | Same as CH 23 in the mode “Standard” (p. 16) |
| **24** | Blade 3 B | | Same as CH 24 in the mode “Standard” (p. 16) |
| **25** | Blade 4 A | | Same as CH 25 in the mode “Standard” (p. 16) |
| **26** | Blade 4 B | | Same as CH 26 in the mode “Standard” (p. 16) |
| **27** | Shaper Rotation | | Same as CH 27 in the mode “Standard” (p. 16) |
| **28** | Shaper Rotation Fine | 0–255 | Fine adjustment of CH 27 |
| **29** | Animation Insertion | | Same as CH 29 in the mode “Standard” (p. 16) |
| **30** | Animation Wheel | | Same as CH 30 in the mode “Standard” (p. 16) |
| **31** | Prism Mode | | Same as CH 31 in the mode “Standard” (p. 17) |
| **32** | Prism | | When CH 31 is 0–15: |
| | | 0–255 | Removed |
| | | | When CH 31 is 16–31: |
| | | 0–127 | 0 … 180 |
| | | 127–255 | 180 … 359 |
| | | 255 | 359 |
| | | | When CH 31 is 32–47: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |
| | | 255 | Fast |
| | | | When CH 31 is 48–63: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |
| | | 255 | Fast |
| | | | When CH 31 is 64–79: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |
| | | 255 | Fast |
| | | | When CH 31 is 80–95: |
| | | 0–4 | Stop … Slow |
| | | 4–255 | Slow … Fast |

| CH | Function | DMX | Description |
|---|---|---|---|
| **32** | Prism (continued) | 255 | Fast |
| **33** | Prism Fine | 0–255 | Fine adjustment of CH 32 |
| **36** | Frost 3 | | Diffusion Light |
| | | 0 | Removed |
| | | 1–254 | Removed ... Soft Edge |
| | | 255 | Soft Edge |
| **37** | Frost | | Same as CH 37 in the mode “Standard” (p. 18) |
| **38** | Frost 2 | | Same as CH 38 in the mode “Standard” (p. 18) |
| **39** | Focus | | Same as CH 39 in the mode “Standard” (p. 18) |
| **40** | Focus Fine | 0–255 | Fine adjustment of CH 39 |
| **41** | Zoom | | Same as CH 41 in the mode “Standard” (p. 18) |
| **42** | Zoom Fine | 0–255 | Fine adjustment of CH 41 |
| **43** | Focus Mode | | Same as CH 43 in the mode “Standard” (p. 18) |
| **44** | Focus Mode Fine | 0–255 | Fine adjustment of CH 43 |
| **45** | Iris | 0 | Iris |
| | | 1 | Min |
| | | 2–254 | Min ... Open |
| | | 255 | Open |
| **46** | Strobe Mode | | Same as CH 46 in the mode “Standard” (p. 19) |
| **47** | Strobe | | Same as CH 47 in the mode “Standard” (p. 19) |
| **48** | Dimmer | | Same as CH 48 in the mode “Standard” (p. 19) |
| **49** | Dimmer Fine | 0–255 | Fine adjustment of CH 48 |
| **50** | Global Speed | | Same as CH 50 in the mode “Standard” (p. 19) |
| **51** | Control | | Same as CH 51 in the mode “Standard” (p. 19) |
| **52** | Fan | | Same as CH 52 in the mode “Standard” (p. 20) |

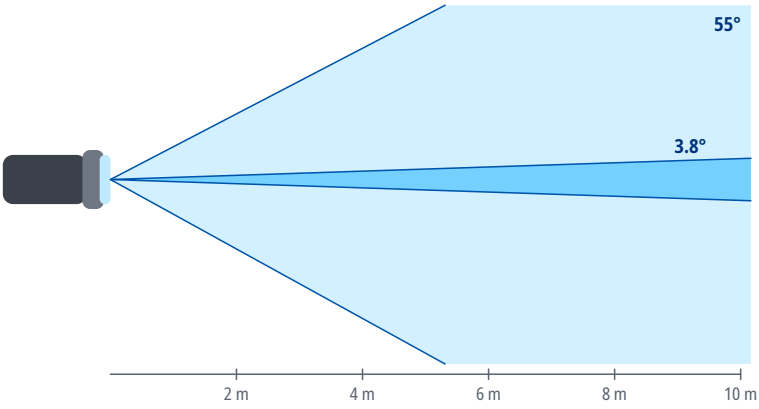
# 10 Technical specifications

| Parameter | Value |
|---|---|
| **Light** | |
| Light source | LED |
| LED power | 350 W |
| Luminous flux | 17,000 lm |
| Color temperature | 6,500 K |
| Color rendering index (CRI) | 100 |
| **Optics** | |
| Zoom | 3.8–55° |
| **Movement** | |
| Pan | 540° |
| Tilt | 220° |
| **Control** | |
| RDM | yes (manufacturer ID 0x4C52, device model ID 0x2F1A) |
| **Dimensions and construction** | |
| Weight | 23.1 kg |
| **Operating environment** | |
| Operating temperature | -10 to 35 °C |

## Speeds and ranges

| Parameter | Value |
|---|---|
| Color temperature range | 3200–5600 K |
| Color wheel rotation | up to 1800 °/s (300 rpm) |
| Gobo 1 rotation | up to 1800 °/s (300 rpm) |
| Prism 1 rotation | up to 1800 °/s (300 rpm) |
| Prism 2 rotation | up to 1800 °/s (300 rpm) |
| Animation wheel rotation | up to 1800 °/s (300 rpm) |

## Spot diameter




| Distance | Ø 3.8° | Ø 55° |
|---|---|---|
| 2 m | 0.13 m | 2.1 m |
| 4 m | 0.27 m | 4.2 m |
| 6 m | 0.4 m | 6.2 m |
| 8 m | 0.53 m | 8.3 m |
| 10 m | 0.66 m | 10.4 m |
| 15 m | 1 m | 15.6 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.