# Instruction Manual

# VOLKS|LICHT
## SPOT

from software version 1.07
(Instruction version 1.01)

## GLP
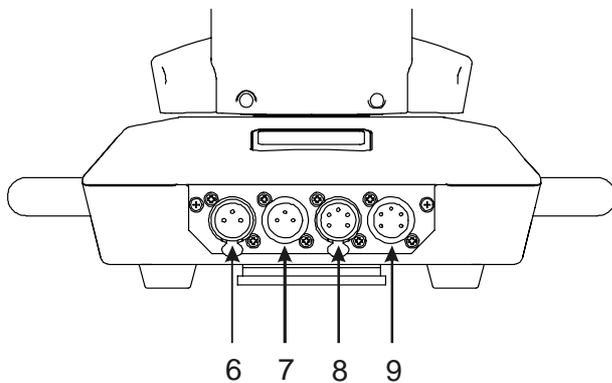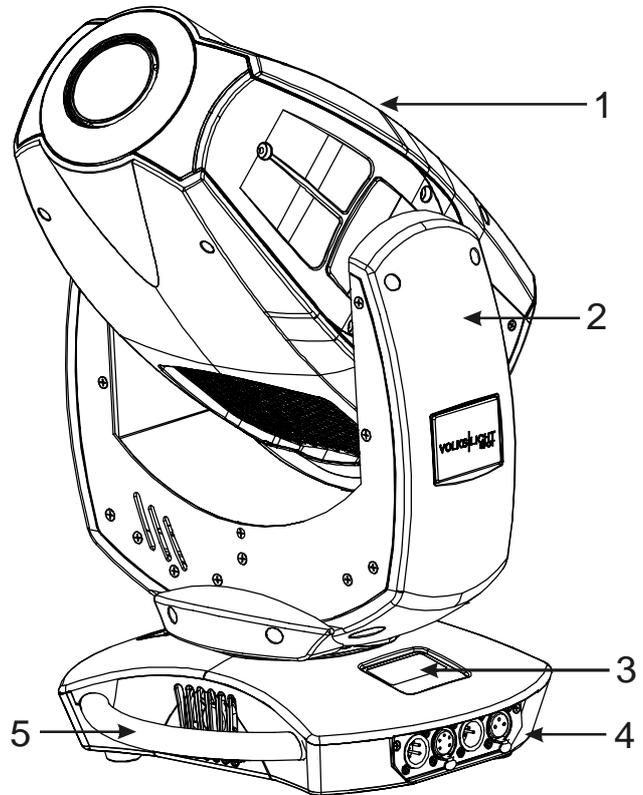**GERMAN LIGHT**
PRODUCTS
— since 1994 —

e-mail: service@glp.de
Internet: http://www.glp.de

## Notes:

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# Table of content

# 1   Description of Device

1. Moving head (actively cooled)
2. Arm with various cooling vents
3. LCD-Display/Menu (data entry)
4. Base with various connectors and Camlock mounting system
5. Carrying handle. Also used to attach the safety cable



6. DMX- Output (3 pin)
7. DMX- Input (3 pin)
8. DMX- Output (5 pin)
9. DMX- Input (5 pin)
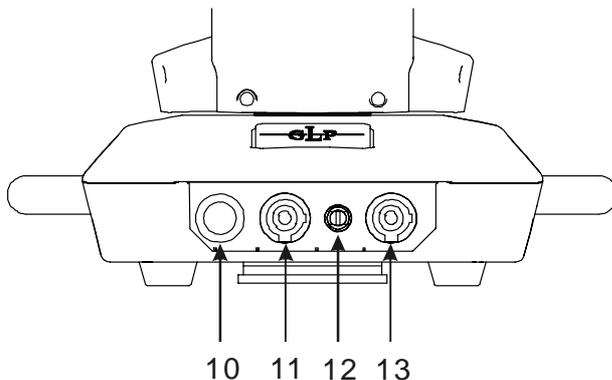
10. Power On-/Off
11. Power-In (powerCON/blue)
12. Micro-fuse 5x20mm, T5A
13. Power-Out (powerCON/grey)

## 1.1  Safety Instructions

> The **VOLKSLICHT SPOT** is a High-Tech Product. To guarantee a smooth operation, it is necessary to respect the following rules. The manufacturer of this device will not take responsibility for damages through any disregard of the information provided in this manual. Warranty claims also will be voided in the case that the fixture housing is opened.

1. Before powering on the fixture, make sure that the fixtures fans and air inlets are clean and not blocked.

2. Ensure that the fixture head can rotate unhindered throughout its complete range of pan and tilt movement. A safety distance of at least 0.5 m must be maintained between the fixture and any easily inflammable material (e.g. decoration material).

3. **Attention!** Don't touch the fixture during the operation. This can cause injuries and/or damages.

4. It is necessary to wait at least 15 minutes after disconnecting the mains power before handling the fixture.. Pay attention to possible hot parts of the fixture.                    **-- Danger of BURNING --**

5. Use only one DMX Input / Output at the same time.

6. **Never look directly into the beam of light or into one of the LEDs.** Never use optical apertures to observe the beam of light. **LED Class 2M.** You'll risk serious injury of your eyes and in particular of your retina.
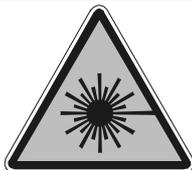
> **Attention:** LED Class 2M can cause injuries of your eyes even without optical instruments in front of them or within a distance of less than 0.5m and short exposure time.
> **Hence: Avoid direct radiation into your eyes!**

7. To ensure safe operation, follow also the Installation guide described in chapter 2. Operating the **VOLKSLICHT SPOT** without suitable safety aids like Safety cables or clamps/hooks can increase the risk of an accident and must be avoided.

8. Repair, maintenance, and installation work shall be done by qualified or GLP certified staff only. You need to pay attention to the common rules of technology that are not explicitly mentioned in this manual.

9. Use only original GLP spare parts. Any structural modification of the system will terminate all warranty claims.

10. Please keep this instruction manual for future reference.

# 2  Preparation and Installation

## 2.1  Mounting

The **VOLKSLICHT SPOT** is fully operational whether it hangs or is mounted to a wall. It can also be operated while standing on the floor. Keep a safety distance of 0.5 m from any easily inflammable materials (decoration etc.).
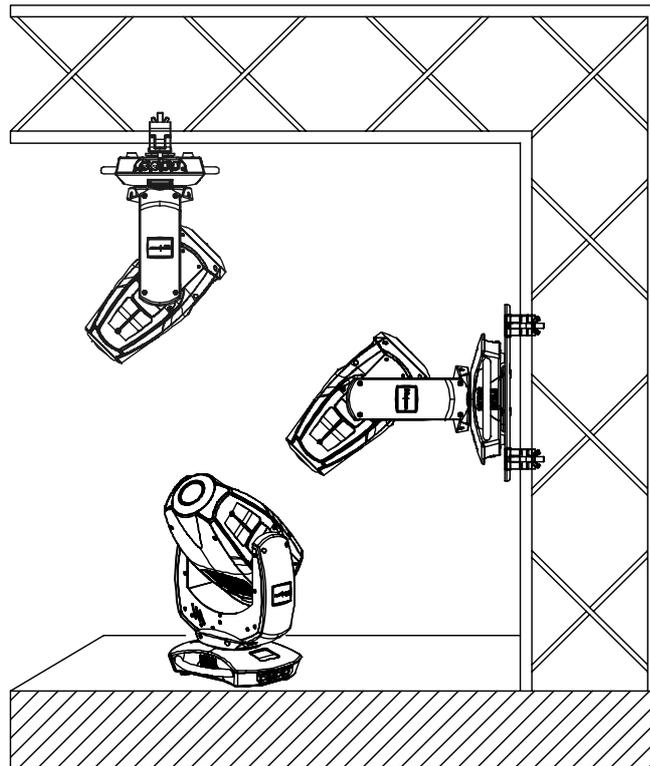


> **Pay attention to the regulations of: BGV C1 (former VBG 70), DIN VDE 0711-217 and BGI 810-3.**
> **The installation shall be done by qualified staff only.**

For the various mounting positions of the **VOLKSLICHT SPOT** (standing on the floor, sideways or hanging) different accessories kits are available. Using any required kits, along with the standard mounting connectors on the base of the fixture, will ensure a safe and firm installation.

### 2.1.1  Mounting on the floor (upright)

The **VOLKSLICHT SPOT** is equipped with four robust rubber feet. This allows a firm and safe stand on even surfaces.

### 2.1.2 Mounting in hanging position (Head down)

To operate the **VOLKSLICHT SPOT** in an hanging position, please attach one half-coupler centrically with a M10 thread bolt (max. length 11 mm). You can also use a dedicated mounting plate which is attached to the fixture through two Camlock quick connectors → see section below.
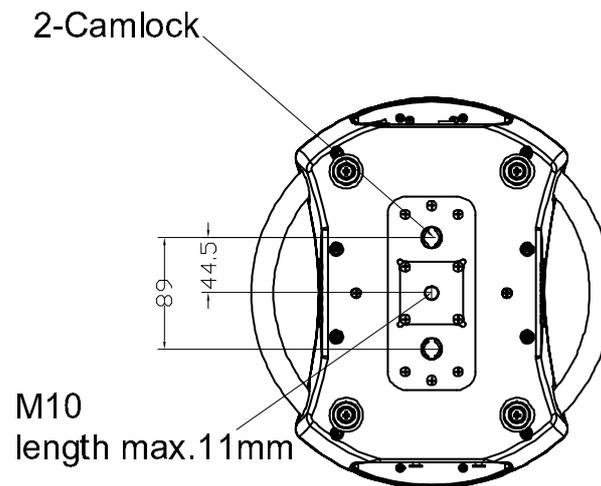


### 2.1.3 Mounting in a sideway Position

To operate the **VOLKSLICHT SPOT** in a sidewise position, please use the dedicated mounting plate which is attached to the fixture two Camlock quick connectors.

This technique is necessary to cope with the torque which accrues in this mounting position. In addition it allows a concentrically position between two truss belts. Never use the "Mounting in hanging position" technique described above to secure the fixture in a sideway position, as the fixtures base can become damaged, and a secure installation cannot be assured.
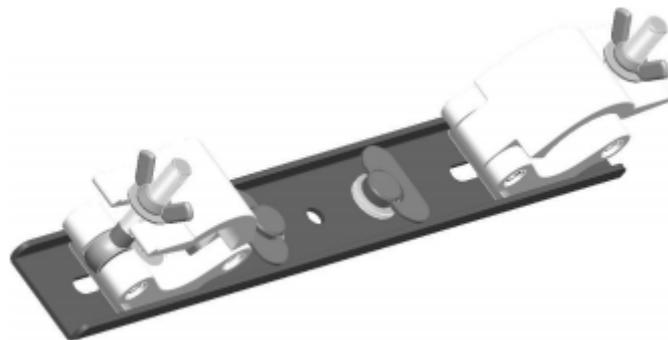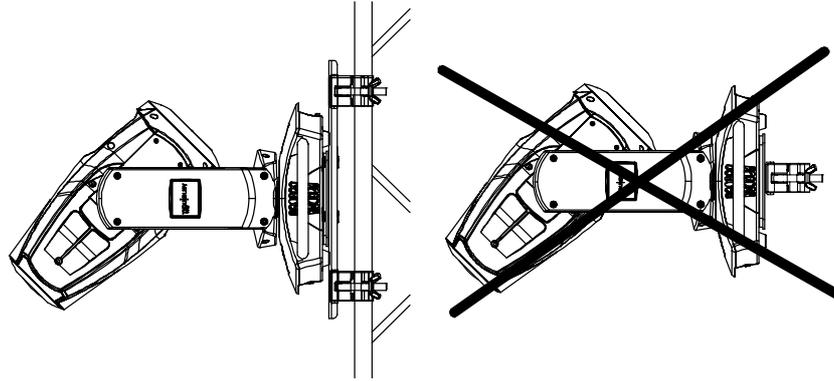
## 2.2 Securing the Device

Regardless of the mounting method of the **VOLKSLICHT SPOT** you'll have to use a stipulated safety wire. Swipe it through one of the two handles of the fixture and connect it to the primary support structure. Pay attention to a safe and proper fastening. The safety cable must comply with BGI 810-3 (EN 60598-2-17 Section 17.6.6) and be capable of bearing a static suspended load that is ten times the weight of the fixture and all installed accessories.

## 2.3 Connections

### 2.3.1 Power Supply

~100-240 Volt AC, 50-60 Hz, earth contact type plug, via Powercon

Connected load 400 VA (W) <=> T5A (micro-fuse 5x20mm)

Please see printing on the case for the right electronic supply!

**Disconnect from the mains supply for changing the fuse and use only the above described micro-fuse type.**

### 2.3.2 NEUTRIK® powerCON

The **VOLKSLICHT SPOT** is fitted with NEUTRIK® powerCON locking 3 conductor AC connectors. Up to max. 11 fixtures can be linked via the power outlets staying within the power limits of the 20A of the connectors.

**Note: Regional regulations and limits might be lower and differ from that.**
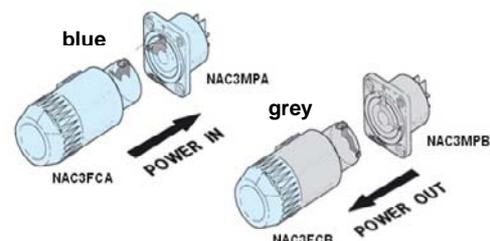


Picture: Courtesy of NEUTRIK® AG

### 2.3.3 DMX

USITT DMX-512 Standard input/output in 3 & 5 pin connectors.

3 pin: Pin 1 = [Ground] / Pin 2 = [-] / Pin 3 = [+]

5 pin: Pin 1 = [Ground] / Pin 2 = [-] / Pin 3 = [+] / Pin 4/5 n.c.

The DMX- Addressing starts at the DMX- Address [001].

## 3   The Menu Field

You'll find the illuminated control board on the upper side of the base. It allows you to make all necessary adjustments of the system.
The current DMX address will be shown on the top level of the menu. Use the **Enter**-key to adjust the DMX address or press the **Menu**-key to reach the next level of the menu where other settings can be made.

```
DMX Start Address

        1

Menu            Enter
  ◎    ◎    ◎    ◎
```
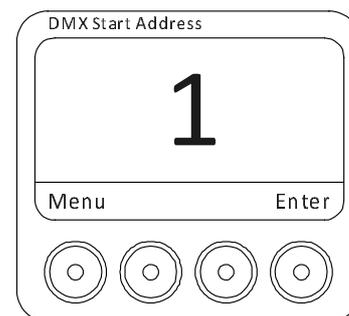
With the **Enter-**key you reach the main menu. Afterwards you can navigate through the menu with the **Up/Down-**keys. Push the **Enter-**key to get in the next menu level or to confirm your settings. Adjust them and set functions **ON/OFF** with the **Up/Down-**keys. Confirm and save it with the **Enter-**key (the display shows **OK**).
Use the **Back**-key to cancel the entry and to go back to the main menu.

```
VOLKSLICHT Menü

  Reset

  DMX Start Address

  Special

Back   UP   Down  Enter
  ◎    ◎    ◎    ◎
```

← BACK - ENTER →

↑ DOWN - UP →
↓
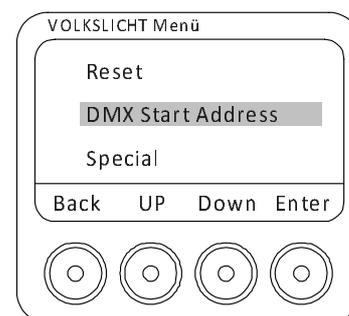
| Level1 | Level 2 | Level 3 | Level 4 | Remark |
|---|---|---|---|---|
| DMX Start Address | | | | Define the DMX start address |
| Special | Manual DMX | | | Manual control of all system functions |
| | | Pan | | Manual control for Pan (X-movement) |
| | | Iris | | Manual control for the Iris |
| | | Focus | | Manual control for the Focus |
| | | Gobo2 | | Manual control for the Gobo 2 |
| | | Rot Gobo 1 | | Manual control for the rotation of Gobo 1 |
| | | Gobo 1 | | Manual control for the Gobo 1 |
| | | P/T Speed | | Manual control for Pan/Tilt Speed |
| | | P/T Movement | | Manual control for Pan/Tilt Movement |

**← BACK - ENTER →**

**← DOWN - UP →**

| Level1 | Level 2 | Level 3 | Level 4 | Remark |
|--------|---------|---------|---------|--------|
| | | Special | | Manual control for special |
| | | White Temp | | Manual control for White Temperature |
| | | Dimmer | | Manual control for the Dimmer |
| | | Shutter | | Manual control for the Shutter |
| | | Blue | | Manual control for blue |
| | | Green | | Manual control for green |
| | | Red | | Manual control for red |
| | | Color Wheel | | Manual control for the color wheel |
| | | Tilt | | Manual control for Tilt (Y-movement) |
| | Adjust | Key code xxxx | | Use the code for entering the calibration menu (for authorized persons only) |
| | | Display Contrast | | Adjustment of the Display contrast |
| | | Pan Offset? | | Calibration of the Pan-Offset |
| | | Tilt Offset? | | Calibration of the Tilt-Offset |
| | | Gobo 2 | | Calibration of the Gobo 2-Offset |
| | | Gobo 1 | | Calibration of the Gobo 1-Offset |
| | | Prism | | Calibration of the Prism-Offset |
| | | Focus | | Calibration of the Focus-Offset |
| | | LED Adjust | | |
| | | | White Adj. Red | Calibration of Red for a uniform White (white balance) |
| | | | Offset Adj. Blue | Calibration of Blue offset |
| | | | Offset Adj. Green | Calibration of Green offset |
| | | | Offset Adj. Red | Calibration of Red offset |
| | | | White Adj. Blue | Calibration of Blue for a uniform White (white balance) |
| | | | White Adj. Green | Calibration of Green for a uniform White (white balance) |
| | | Clear EEPROM | | Erase EEPROM memory |
| | | Diagnose | | Diagnose functions (For authorized service only) |
| | Temperature Head | | | Reads out the temperature of the head |
| | Default Full Feature | | | Resets all functions to their default values |
| | Display Black out | | | Auto switch-off display illumination after 10 seconds |
| | DMX Hold | | | "Holds" last DMX signal in case of signal loss |

**← BACK - ENTER →**

| Level1 | Level 2 | Level 3 | Level 4 | Remark |
|---|---|---|---|---|
| | Set DMX Image | | | |
| | | Set Image if DMX off | | Activates a stored scene if DMX is off |
| | | Save Image in Memory | | Stores the scene currently sent to the unit |
| | DMX Monitor | | | Indicates the presently received DMX signal per DMX channel |
| | | Pan | | Instantaneous value for Pan |
| | | Iris | | Instantaneous value for Iris |
| | | Focus | | Instantaneous value for Focus |
| | | Gobo2 | | Instantaneous value for Gobo 2 |
| | | Rot Gobo 1 | | Instantaneous value for Rotating Gobo 1 |
| | | Gobo 1 | | Instantaneous value for Gobo 1 |
| | | P/T Speed | | Instantaneous value for Pan/Tilt Speed |
| | | P/T Movement | | Instantaneous value for Pan/Tilt Movement |
| | | Special | | Instantaneous value for Special |
| | | White Temp | | Instantaneous value for White Temperature |
| | | Dimmer | | Instantaneous value for Dimmer |
| | | Shutter | | Instantaneous value for Shutter |
| | | Blue | | Instantaneous value for Blue |
| | | Green | | Instantaneous value for Green |
| | | Red | | Instantaneous value for Red |
| | | Color Wheel | | Instantaneous value for Color Wheel |
| | | Tilt | | Instantaneous value for Tilt |
| Self Test Program | | | | Initiates a self-test program |
| Live Time | | | | Indicates the overall operation time of the system |
| Set DMX Mode | | | | Select the desired DMX Mode |
| | Normal | | | Fixture works in "Normal" mode |
| | High Res. | | | Fixture works in "High Resolution" mode |
| | Compressed | | | Fixture works in "Compressed" mode |
| Position Feedback | | | | On/Off |
| Reverse Pan | | | | ON/OFF: Invert Pan movements |
| Reverse Tilt | | | | ON/OFF: Invert Tilt movements |

**← BACK - ENTER →**

| Level1 | Level 2 | Level 3 | Level 4 | Remark |
|--------|---------|---------|---------|--------|
| Reset | | | | RESET and new calibration for all fixture functions |

# 4   DMX Channel Selection (DMX Protocol)

## Normal-Mode 20 DMX channels

| Channel | Function | Time and Value | DMX | HEX | % |
|---------|----------|----------------|-----|-----|---|
| 1) PAN-coarse | 0 .. 660° | | 0..255 | 00..FF | 0..100 |
| 2) PAN-fine | High- Pos ... High- Pos + 2,6° (16 Bit) | | 0..255 | 00..FF | 0..100 |
| 3) Tilt-coarse | 0 .. 300° | | 0..255 | 00..FF | 0..100 |
| 4) Tilt-fine | High- Pos … High- Pos + 1,2° (16 Bit) | | 0..255 | 00..FF | 0..100 |
| 5) Color (fixed) | Colors adjustable via RGB | | 0..7 | 00..07 | 0..2,5 |
| | Color 01 - Red [1] | | 8..15 | 08..0F | 3..5,5 |
| | Color 02 - Amber [1] | | 16..23 | 10..17 | 6..8,5 |
| | Color 03 - Warm Yellow [1] | | 24..31 | 18..1F | 9..12,5 |
| | Color 04 - Yellow [1] | | 32..39 | 20..27 | 13..15,5 |
| | Color 05 - Green [1] | | 40..47 | 28..2F | 16..18,5 |
| | Color 06 - Turquoise [1] | | 48..55 | 30..37 | 19..21,5 |
| | Color 07 - Cyan [1] | | 56..63 | 38..3F | 22..24,5 |
| | Color 08 - Blue [1] | | 64..71 | 40..47 | 25..27,5 |
| | Color 09 - Lavender [1] | | 72..79 | 48..4F | 28..30,5 |
| | Color 10 - Mauve [1] | | 80..87 | 50..57 | 31..34,5 |
| | Color 11 - Magenta [1] | | 88..95 | 58..5F | 35..37,5 |
| | Color 12 - Pink [1] | | 96..103 | 60..67 | 38..40,5 |
| | White - CTO | | 104..111 | 68..6F | 41..43,5 |
| | White | | 112..119 | 70..77 | 44..46,5 |
| | White - CTB | | 120..127 | 78..7F | 47..49,5 |
| | Rainbow Effect Stop [2] | | 128 | 80 | 50 |
| | Rainbow Effect [3] | slow - fast | 129..223 | 81..DF | 51..88 |
| | Rainbow Effect, random colors | slow - fast | 224.255 | E0..FF | 89..100 |
| 6) Red | Color mixing system - Red | 0 - 100% | 0..255 | 00..FF | 0..100 |
| 7) Green | Color mixing system - Green | 0 - 100% | 0..255 | 00..FF | 0..100 |
| 8) Blue | Color mixing system - Blue | 0 - 100% | 0..255 | 00..FF | 0..100 |
| 9) Shutter | Shutter closed | | 0..15 | 00..0F | 0..5,5 |
| | Random Pulse effect [4] | slow - fast | 16..47 | 10..2F | 6..18,5 |
| | Up-dimming then Shutter closing (random patterns) [4] | slow - fast | 48..79 | 30..4F | 19..31 |
| | Shutter open then down-dimming (random patterns) [4] | slow - fast | 80..111 | 50..6F | 32..43 |
| | Up-dimming then down-dimming (random patterns) [4] | slow - fast | 112..143 | 70..8F | 44..56 |
| | Strobe effect pause | 5s .. 1s | 144..199 | A0..C7 | 57..77 |
| | Strobe effect, slow - fast | 1 Hz .. 10 Hz | 200..239 | C8..EF | 78..94 |
| | Shutter open | | 240..255 | F0..FF | 94.4..100 |
| 10) Dimmer | Dimmer | 0 - 100% | 0..255 | 0..FF | 0..100 |
| 11) Color temp. | Continuous color temperature correction between 10000k - 2500k | Applicable for ALL colors | 0..255 | 0..FF | 0..100 |

| Channel | Function | | | Time and Value | DMX | HEX | % |
|---|---|---|---|---|---|---|---|
| **12) Gobo 1 (indexed)** | Open position | | | | 0..15 | 0..0F | 0..5.5 |
| | Gobo 1 | | | | 16..31 | 10..1F | 6..12 |
| | Gobo 2 | | | | 32..47 | 20..2F | 12.5..18 |
| | Gobo 3 | | | | 48..63 | 30..3F | 19..24.5 |
| | Gobo 4 | | | | 64..79 | 40..4F | 25..31 |
| | Gobo 5 | | | | 80..95 | 50..5F | 31.5..37 |
| | Gobo 6 | | | | 96..111 | 60..6F | 38..43.5 |
| | Gobo 7 | | | | 112.129 | 70..81 | 44..50.5 |
| | Gobo rotation CCW | | | slow → fast | 130..192 | 82..C0 | 51..75 |
| | Gobo rotation CW | | | fast → slow | 193..254 | C1..FE | 75.5..99 |
| | Gobo rotation Stop | | | | 255 | FF | 100 |
| **13) Gobo 1 Posi./Rot.** | Gobo position 0 ... 540° | | | | 0..127 | 00..7F | 0..49 |
| | Gobo rotation STOP | | | | 128..129 | 80..81 | 50 |
| | Gobo rotation CW | | | slow → fast | 130..192 | 82..C0 | 51..75 |
| | Gobo Rotation CCW | | | fast → slow | 193..254 | C1..FE | 76..99 |
| **14) Gobo 2 (fixed)** | Open position | | | | 0..7 | 00..07 | 0..2.5 |
| | Gobo 1 | | | | 8..15 | 08..0F | 3..5.5 |
| | Gobo 2 | | | | 16..23 | 10..17 | 6..9 |
| | Gobo 3 | | | | 24..31 | 17..1F | 9.5..12 |
| | Gobo 4 | | | | 32..39 | 20..27 | 12.5..15 |
| | Gobo 5 | | | | 40..47 | 28..2F | 15.5..18 |
| | Gobo 6 | | | | 48..56 | 30..38 | 18.5..22 |
| | Gobo 7 | | | | 57..63 | 39..3F | 23..24.5 |
| | Gobo 8 | | | | 64..71 | 40..47 | 25..27.5 |
| | Gobo 9 | | | | 72..79 | 48..4F | 28..31 |
| | Gobo 10 | | | | 80..87 | 50..57 | 31.5..34 |
| | Gobo 11 | | | | 88..95 | 58..5F | 34.5..37 |
| | Gobo wheel rotation CCW | | | slow → fast | 130..193 | 82..C1 | 51..75.5 |
| | Gobo wheel rotation CW | | | fast → slow | 194..254 | C2..FE | 76..99 |
| | Gobo wheel rotation Stop | | | | 255 | FF | 100 |
| **15) Focus** | Continues Focus | | | infinity – near | 0 .. 255 | 0..FF | 0..100 |
| **16) Prism** | Prism swing out | | | | 0..5 | 00..05 | 0..2 |
| | Prism position | | | | 6..127 | 06..7F | 0..50 |
| | Prism rotation stop | | | | 128..129 | 80..81 | 50,1 |
| | Prism rotation | | | | 130..253 | 82..FD | 51..99 |
| | Prism by audio | | | slow | 254 | FE | 99.5 |
| | Prism by audio | | | fast | 255 | FF | 100 |
| **17) Iris** | Iris | | | open - close | 0 .. 255 | 00..FF | 0 ..100 |
| **18) Special** | **RESET** | | | keep for 3 sec. | **250..255** | **FA..FF** | **98..100** |
| | Goboshake – Gobo 2 | | | slow → fast | 80..143 | 50..8F | 31..56 |
| | Goboshake – Gobo 1 | | | slow → fast | 16..79 | 10..4F | 6..30 |
| | Gobo – short cut off | | | | 8..15 | 08..0F | 3..5 |
| **19) Move-ment** | **No movement** | | | | 0 | 0 | 0 |
| | **Movement** | **Size** | **Phase** | | | | |
| | PAN | 1 | 0° | | 01..01 | 01..01 | 0,5 |
| | | 1 | 90° | | 02..03 | 02..03 | 1,0 |
| | | 1 | 180° | | 04..05 | 04..05 | 1,7 |
| | | 1 | 270° | | 06..07 | 06..07 | 2,5 |
| | PAN | 2 | 0° | | 08..09 | 08..09 | 3,3 |
| | | 2 | 90° | | 10..11 | 0A..0B | 4,1 |
| | | 2 | 180° | | 12..13 | 0C..0D | 4,9 |
| | | 2 | 270° | | 14..15 | 0E..0F | 5,7 |
| | PAN | 3 | 0° | | 16..17 | 11..11 | 6,5 |
| | | 3 | 90° | | 18..19 | 12..13 | 7,3 |

| Channel | Function | | | Time and Value | DMX | HEX | % |
|---|---|---|---|---|---|---|---|
| | | 3 | 180° | | 20..21 | 14..15 | 8,0 |
| | | 3 | 270° | | 22..23 | 16..17 | 8,8 |
| | PAN | 4 | 0° | | 24..25 | 18..19 | 9,6 |
| | | 4 | 90° | | 26..27 | 1A..1B | 10,4 |
| | | 4 | 180° | | 28..29 | 1C..1D | 11,2 |
| | | 4 | 270° | | 30..31 | 1E..1F | 12 |
| | TILT | | size / phase see also PAN | | 32..63 | 20..3F | 13..25 |
| | PAN / TILT | | size / phase see also PAN | | 64..95 | 40..5F | 26..37 |
| | PAN / TILT (inverse) | | size / phase see also PAN | | 96..127 | 60..7F | 38..50 |
| | Circle | | size / phase see also PAN | | 128..159 | 80..9F | 51..62 |
| | Circle (inverse) | | size / phase see also PAN | | 160..191 | A0..BF | 63..75 |
| | Lying eight | | size / phase see also PAN | | 192..223 | C0..DF | 76..87 |
| | Random movement | | size see also PAN | | 224..255 | E0..FF | 88..100 |
| **20) Speed Pan/Tilt** | Pan/Tilt  relative movement | | | | 0..01 | 00..01 | 0..1 |
| | Pan/Tilt  slow – fast Use this channel also for the SPEED of the movements | | | | 02..255 | 02..FF | 1.5..100 |

## Compressed-Mode 17 DMX channels

| Channel | Function | Time and Value | DMX | HEX | % |
|---|---|---|---|---|---|
| **1) PAN-coarse** | 0 .. 660° | | 0..255 | 00..FF | 0..100 |
| **2) PAN-fine** | High- Pos ... High- Pos + 2,6° (16 Bit) | | 0..255 | 00..FF | 0..100 |
| **3) Tilt-coarse** | 0 .. 300° | | 0..255 | 00..FF | 0..100 |
| **4) Tilt-fine** | High- Pos … High- Pos + 1,2° (16 Bit) | | 0..255 | 00..FF | 0..100 |
| **5) Color (fixed)** | Colors adjustable via RGB | | 0..7 | 00..07 | 0..2,5 |
| | Color 01 - Red [1] | | 8..15 | 08..0F | 3..5,5 |
| | Color 02 - Amber [1] | | 16..23 | 10..17 | 6..8,5 |
| | Color 03 - Warm Yellow [1] | | 24..31 | 18..1F | 9..12,5 |
| | Color 04 - Yellow [1] | | 32..39 | 20..27 | 13..15,5 |
| | Color 05 - Green [1] | | 40..47 | 28..2F | 16..18,5 |
| | Color 06 - Turquoise [1] | | 48..55 | 30..37 | 19..21,5 |
| | Color 07 - Cyan [1] | | 56..63 | 38..3F | 22..24,5 |
| | Color 08 - Blue [1] | | 64..71 | 40..47 | 25..27,5 |
| | Color 09 - Lavender [1] | | 72..79 | 48..4F | 28..30,5 |
| | Color 10 - Mauve [1] | | 80..87 | 50..57 | 31..34,5 |
| | Color 11 - Magenta [1] | | 88..95 | 58..5F | 35..37,5 |
| | Color 12 - Pink [1] | | 96..103 | 60..67 | 38..40,5 |
| | White - CTO | | 104..111 | 68..6F | 41..43,5 |
| | White | | 112..119 | 70..77 | 44..46,5 |
| | White - CTB | | 120..127 | 78..7F | 47..49,5 |
| | Rainbow Effect Stop [2] | | 128 | 80 | 50 |
| | Rainbow Effect [3] | slow - fast | 129..223 | 81..DF | 51..88 |
| | Rainbow Effect, random colors | slow - fast | 224.255 | E0..FF | 89..100 |
| **6) Red** | Color mixing system - Red | 0 - 100% | 0..255 | 00..FF | 0..100 |
| **7) Green** | Color mixing system - Green | 0 - 100% | 0..255 | 00..FF | 0..100 |
| **8) Blue** | Color mixing system - Blue | 0 - 100% | 0..255 | 00..FF | 0..100 |
| **9) Shutter** | Shutter closed | | 0..15 | 00..0F | 0..5,5 |
| | Random Pulse effect [4] | slow - fast | 16..47 | 10..2F | 6..18,5 |
| | Up-dimming then Shutter closing (random patterns) [4] | slow - fast | 48..79 | 30..4F | 19..31 |

| Channel | Function | Time and Value | DMX | HEX | % |
|---|---|---|---|---|---|
| | Shutter open then down-dimming (random patterns) [4] | slow - fast | 80..111 | 50..6F | 32..43 |
| | Up-dimming then down-dimming (random patterns) [4] | slow - fast | 112..143 | 70..8F | 44..56 |
| | Strobe effect pause | 5s .. 1s | 144..199 | A0..C7 | 57..77 |
| | Strobe effect, slow - fast | 1 Hz .. 10 Hz | 200..239 | C8..EF | 78..94 |
| | Shutter open | | 240..255 | F0..FF | 94.4..100 |
| **10) Dimmer** | Dimmer | 0 - 100% | 0..255 | 0..FF | 0..100 |
| **11) Gobo 1 (indexed)** | Open position | | 0..15 | 0..0F | 0..5.5 |
| | Gobo 1 | | 16..31 | 10..1F | 6..12 |
| | Gobo 2 | | 32..47 | 20..2F | 12.5..18 |
| | Gobo 3 | | 48..63 | 30..3F | 19..24.5 |
| | Gobo 4 | | 64..79 | 40..4F | 25..31 |
| | Gobo 5 | | 80..95 | 50..5F | 31.5..37 |
| | Gobo 6 | | 96..111 | 60..6F | 38..43.5 |
| | Gobo 7 | | 112.129 | 70..81 | 44..50.5 |
| | Gobo rotation CCW | slow → fast | 130..192 | 82..C0 | 51..75 |
| | Gobo rotation CW | fast → slow | 193..254 | C1..FE | 75.5..99 |
| | Gobo rotation Stop | | 255 | FF | 100 |
| **12) Gobo 1 Posi./Rot.** | Gobo position 0 ... 540° | | 0..127 | 00..7F | 0..49 |
| | Gobo rotation STOP | | 128..129 | 80..81 | 50 |
| | Gobo rotation CW | slow → fast | 130..192 | 82..C0 | 51..75 |
| | Gobo Rotation CCW | fast → slow | 193..254 | C1..FE | 76..99 |
| **13) Gobo 2 (fixed)** | Open position | | 0..7 | 00..07 | 0..2.5 |
| | Gobo 1 | | 8..15 | 08..0F | 3..5.5 |
| | Gobo 2 | | 16..23 | 10..17 | 6..9 |
| | Gobo 3 | | 24..31 | 17..1F | 9.5..12 |
| | Gobo 4 | | 32..39 | 20..27 | 12.5..15 |
| | Gobo 5 | | 40..47 | 28..2F | 15.5..18 |
| | Gobo 6 | | 48..56 | 30..38 | 18.5..22 |
| | Gobo 7 | | 57..63 | 39..3F | 23..24.5 |
| | Gobo 8 | | 64..71 | 40..47 | 25..27.5 |
| | Gobo 9 | | 72..79 | 48..4F | 28..31 |
| | Gobo 10 | | 80..87 | 50..57 | 31.5..34 |
| | Gobo 11 | | 88..95 | 58..5F | 34.5..37 |
| | Gobo wheel rotation CCW | slow → fast | 130..193 | 82..C1 | 51..75.5 |
| | Gobo wheel rotation CW | fast → slow | 194..254 | C2..FE | 76..99 |
| | Gobo wheel rotation Stop | | 255 | FF | 100 |
| **14) Focus** | Continues Focus | infinity – near | 0 .. 255 | 0..FF | 0..100 |
| **15) Prism** | Prism swing out | | 0..5 | 00..05 | 0..2 |
| | Prism position | | 6..127 | 06..7F | 0..50 |
| | Prism rotation stop | | 128..129 | 80..81 | 50,1 |
| | Prism rotation | | 130..253 | 82..FD | 51..99 |
| | Prism by audio | slow | 254 | FE | 99.5 |
| | Prism by audio | fast | 255 | FF | 100 |
| **16) Iris** | Iris | open - close | 0 .. 255 | 00..FF | 0 ..100 |
| **17) Special** | **RESET** | keep for 3 sec. | **250..255** | **FA..FF** | **98..100** |
| | Goboshake – Gobo 2 | slow → fast | 80..143 | 50..8F | 31..56 |
| | Goboshake – Gobo 1 | slow → fast | 16..79 | 10..4F | 6..30 |
| | Gobo – short cut off | | 8..15 | 08..0F | 3..5 |

## Extended-Mode 20 DMX channels

| Channel | Function | Time and Value | DMX | HEX | % |
|---|---|---|---|---|---|
| 1) PAN-coarse | 0 .. 660° | | 0..255 | 00..FF | 0..100 |
| 2) PAN-fine | High- Pos ... High- Pos + 2,6° (16 Bit) | | 0..255 | 00..FF | 0..100 |
| 3) Tilt-coarse | 0 .. 300° | | 0..255 | 00..FF | 0..100 |
| 4) Tilt-fine | High- Pos … High- Pos + 1,2° (16 Bit) | | 0..255 | 00..FF | 0..100 |
| 5) Red-coarse | Color mixing system - Red | 0 - 100% | 0..7 | 00..07 | 0..2,5 |
| 6) Red-fine | Color mixing system – Red low | | 0..255 | 00..FF | 0..100 |
| 7) Green-coarse | Color mixing system - Green | 0 - 100% | 0..255 | 00..FF | 0..100 |
| 8) Green-fine | Color mixing system – Green low | | | | |
| 9) Blue coarse | Color mixing system - Blue | 0 - 100% | | | |
| 10) Blue-fine | Color mixing system – Blue low | | 0..255 | 00..FF | 0..100 |
| 11) Shutter | Shutter closed | | 0..15 | 00..0F | 0..5,5 |
| | Random Pulse effect [4] | slow - fast | 16..47 | 10..2F | 6..18,5 |
| | Up-dimming then Shutter closing (random patterns) [4] | slow - fast | 48..79 | 30..4F | 19..31 |
| | Shutter open then down-dimming (random patterns) [4] | slow - fast | 80..111 | 50..6F | 32..43 |
| | Up-dimming then down-dimming (random patterns) [4] | slow - fast | 112..143 | 70..8F | 44..56 |
| | Strobe effect pause | 5s .. 1s | 144..199 | A0..C7 | 57..77 |
| | Strobe effect, slow - fast | 1 Hz .. 10 Hz | 200..239 | C8..EF | 78..94 |
| | Shutter open | | 240..255 | F0..FF | 94.4..100 |
| 12) Dimmer-coarse | Dimmer | 0 - 100% | 0..255 | 0..FF | 0..100 |
| 13) Dimmer-fine | Dimmer low | | | | |
| 14) Gobo 1 (indexed) | Open position | | 0..15 | 0..0F | 0..5.5 |
| | Gobo 1 | | 16..31 | 10..1F | 6..12 |
| | Gobo 2 | | 32..47 | 20..2F | 12.5..18 |
| | Gobo 3 | | 48..63 | 30..3F | 19..24.5 |
| | Gobo 4 | | 64..79 | 40..4F | 25..31 |
| | Gobo 5 | | 80..95 | 50..5F | 31.5..37 |
| | Gobo 6 | | 96..111 | 60..6F | 38..43.5 |
| | Gobo 7 | | 112..129 | 70..81 | 44..50.5 |
| | Gobo rotation CCW | slow → fast | 130..192 | 82..C0 | 51..75 |
| | Gobo rotation CW | fast → slow | 193..254 | C1..FE | 75.5..99 |
| | Gobo rotation Stop | | 255 | FF | 100 |
| 15) Gobo 1 Posi./Rot. | Gobo position 0 ... 540° | | 0..127 | 00..7F | 0..49 |
| | Gobo rotation STOP | | 128..129 | 80..81 | 50 |
| | Gobo rotation CW | slow → fast | 130..192 | 82..C0 | 51..75 |
| | Gobo Rotation CCW | fast → slow | 193..254 | C1..FE | 76..99 |
| 16) Gobo 2 (fixed) | Open position | | 0..7 | 00..07 | 0..2.5 |
| | Gobo 1 | | 8..15 | 08..0F | 3..5.5 |
| | Gobo 2 | | 16..23 | 10..17 | 6..9 |
| | Gobo 3 | | 24..31 | 17..1F | 9.5..12 |
| | Gobo 4 | | 32..39 | 20..27 | 12.5..15 |
| | Gobo 5 | | 40..47 | 28..2F | 15.5..18 |
| | Gobo 6 | | 48..56 | 30..38 | 18.5..22 |

| Channel | Function | Time and Value | DMX | HEX | % |
|---|---|---|---|---|---|
| | Gobo 7 | | 57..63 | 39..3F | 23..24.5 |
| | Gobo 8 | | 64..71 | 40..47 | 25..27.5 |
| | Gobo 9 | | 72..79 | 48..4F | 28..31 |
| | Gobo 10 | | 80..87 | 50..57 | 31.5..34 |
| | Gobo 11 | | 88..95 | 58..5F | 34.5..37 |
| | Gobo wheel rotation CCW | slow → fast | 130..193 | 82..C1 | 51..75.5 |
| | Gobo wheel rotation CW | fast → slow | 194..254 | C2..FE | 76..99 |
| | Gobo wheel rotation Stop | | 255 | FF | 100 |
| 17) Focus | Continues Focus | infinity – near | 0 .. 255 | 0..FF | 0..100 |
| 18) Prism | Prism swing out | | 0..5 | 00..05 | 0..2 |
| | Prism position | | 6..127 | 06..7F | 0..50 |
| | Prism rotation stop | | 128..129 | 80..81 | 50,1 |
| | Prism rotation | | 130..253 | 82..FD | 51..99 |
| | Prism by audio | slow | 254 | FE | 99.5 |
| | Prism by audio | fast | 255 | FF | 100 |
| 19) Iris | Iris | open - close | 0 .. 255 | 00..FF | 0 ..100 |
| 20) Special | **RESET** | keep for 3 sec. | **250..255** | **FA..FF** | **98..100** |
| | Goboshake – Gobo 2 | slow → fast | 80..143 | 50..8F | 31..56 |
| | Goboshake – Gobo 1 | slow → fast | 16..79 | 10..4F | 6..30 |
| | Gobo – short cut off | | 8..15 | 08..0F | 3..5 |

[1] **Color**

The predefined colors can be used as start colors for the Rainbow effect.  First select a desired start color, then activate the rainbow effect. All **VOLKSLICHT SPOT** will then begin from that color and execute the rainbow effect synchronously. Different **VOLKSLICHT SPOT** can have different start colors but will still execute the rainbow effect synchronously. If you choose a color different from the ones marked with [1] in the tables above the rainbow start-color will be red.

[2] **Rainbow-effect Stop**

This will pause this function. After resuming the rainbow-effect will be continued with the current color.

[3] **The Rainbow-effect**

This will run synchronously only if it is started from one of the predefined colors (see also [1] before).

[4] **ATTENTION Shutter:**

Please note that shutter frequencies over 10 Hz are prohibited in some countries. Especially frequencies in the range of 5 - 12 Hz can possibly cause epileptic seizures → continuous blink irritation with a latency period of min. 70 ms. Please also refer to the relevant legislation of each country (For Germany for example: BGI 810-4 (Anhang 2) "Sicherheit bei Produktionen und Veranstaltungen - Scheinwerfer").
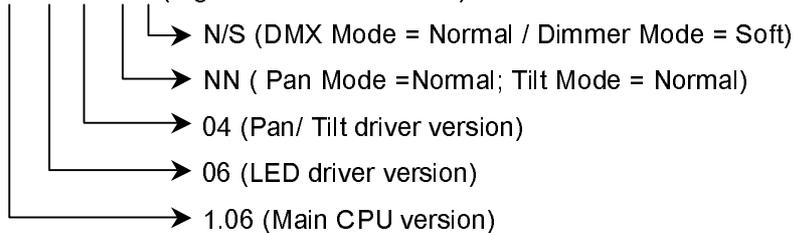
**Random Shutter Timing:**

| Function | DMX value XX to YY | timing |
|---|---|---|
| Random Pulse Effect | 16..46 | 60 sec..30 sec |
| | 47 | 0.3 sec..0.1 sec |
| Dimming in then shutter close (random) | 48..78 | 60 sec..30 sec |
| | 79 | 0.3 sec..0.1 sec |

| Shutter open then dimming out (random) | 80..110 | 60 sec..30 sec |
|---|---|---|
| | 111 | 0.3 sec..0.1 sec |
| Dimming in then dimming out (random) | 112..142 | 60 sec..30 sec |
| | 143 | 0.3 sec..0.1 sec |

### Additional Display Indications

As a default you'll find the following additional information in the first row of the LCD display:

Vxx/xx/xx/xx/x (e.g. V1.06/06/04/NN/NS)

→ N/S (DMX Mode = Normal / Dimmer Mode = Soft)

→ NN ( Pan Mode =Normal; Tilt Mode = Normal)

→ 04 (Pan/ Tilt driver version)

→ 06 (LED driver version)

→ 1.06 (Main CPU version)

## 5  Changing Gobos

The **VOLKSLICHT SPOT** is equipped both with Aluminum- and Glass gobos (outside diameter 23 mm, image size max. 19 mm). When using customized Gobos like company logos, the recommended image size is 17 mm. You can use either Aluminum (thickness = 0.5 mm) or glass gobos (thickness = 1.1 - 3.0 mm).

Only gobos on wheel 1 are rotating and interchangeable. Gobos on wheel 2 are fixed.

### 5.1  General remarks for changing gobos

All gobos or other optical effects have a dedicated mounting direction. To prevent undesired damages and to optimize the optical performance of your gobos, all gobos should be mounted with their reflecting side towards the LED light source.

a. Aluminum gobos must be mounted with their unpainted side towards the LED light source, and the black painted side towards the front lens.

b. Glass gobos must be mounted with their reflecting, or coated side, towards the LED light source.

c. To find out which is the coated side of a glass gobo, take a pencil and place the point gently on the gobo. If you have touched the coated side, there will be no distance between the pencil tip and its reflection in the gobo. If you have touched the uncoated side, there will be a small distance between the

pencil tip and its reflection

**Attention:** Customized gobos like company logos, or those with writing also need to be placed in the holder with the correct orientation to ensure that the projected image reads correctly. Place the side of the gobo which reads correctly towards the LED light engine to ensure that it projects properly. Remember that the reflective side of the gobo should also be towards the LED light source, so please instruct the gobo manufacturer accordingly when having customized gobos made.

Glass Gobos with a structured surface must be mounted with the structured surface towards the LED light source and the flat side towards the front lens.

### 5.2 Changing rotating gobos (wheel 1)

1. **Attention: The fixture must be disconnected from the mains supply!**

2. Open the fixture, using the quarter turn screws on the top cover.

3. Gobos are held in their respective holder by a metal spring alongside the outer diameter. Remove this spring carefully using for example a small screwdriver.

4. Take the gobo out of its holder. Pay attention not to drop it into the fixture.

5. Fit the new gobo into the holder securing it with the metal spring tightly.

6. Close the cover of the fixture again.

## 6   Maintaining and Cleaning the VOLKSLICHT SPOT

The **VOLKSLICHT SPOT** is a low maintenance fixture. It is only necessary to clean the air inlets and outlets as well as the optical LED lenses from time to time. For safe operation it is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not build up on, or within, the fixture. If they do, the fixture's light output will be significantly reduced, and damages to the fixture may occur. Regular cleaning will not only ensure the maximum light output, but will also allow the fixture to operate reliably throughout its entire life.

**A soft lint-free cloth moistened with any good glass cleaning fluid is recommended. Under no circumstances should alcohol or solvents be used to clean the fixture or its lenses!**

### 6.1 Safety regulations

- **Disconnect the fixture from the mains power before commencing any maintenance work!**

- Wait minimum 15 minutes after removing the power to allow the fixture to cool down.

### 6.2 Circumference and Interval (rule-of-thumb)

The maintenance schedule of any given fixture depends on the installation environment. Hence no specific guidelines can be given. The cleaning intervals given below are suggestions, based on practical experience. We suggest that you start with these and develop your own maintenance schedule as you see the fixtures performance in your specific environment.

| Maintenance Task | Interval | How |
|---|---|---|
| **Outside optic** | weekly | soft cloth and glass cleaning fluid |
| **Gobos** | yearly | vacuum cleaner, airbrush, etc. |
| **Glass gobos** | yearly | soft cloth and glass cleaning fluid |
| **Prism** | yearly | soft cloth and glass cleaning fluid |
| **Iris** | yearly | vacuum cleaner, airbrush, etc. |
| **Inside lens** | yearly | soft cloth <u>no</u> glass cleaning fluid |
| **Fan and air channel** | monthly | vacuum cleaner, airbrush, etc. |
| **Moveable parts** | yearly | suitable fatty oil |

<u>**Attention:**</u>

- **Never let optical parts come into contact with oil or fat.**
- **Before running the fixture wait until all parts are touch dry.**
- **Never touch lenses with bare fingers.**

## 7   Technical Specifications

| Power supply | |
|---|---|
| **Power consumption** | 400 VA (Watt) |
| **Power Input/Output** | ~100-240 V AC, 50-60 Hz (auto sensing input) |
| **Power connectors** | NEUTRIK® powerCON<br>Power-in: NAC3FCA / NAC3MPA (blue)<br>Power-out: NAC3FCB / NAC3MPB (grey) |
| **Fuse protection** | Micro-fuse 5x20 mm, T5A |
| **Operational Parameters** | |
| **Max. Ambient Temperature** | 45°C / 113°F (integrated overheating switch) |
| **Mounting Position** | Any (see chapter mounting) |
| **Lighting System - Additive Color mixing** | |
| **LED Type** | 300 Watt RGB LED Light Engine |
| **Lifetime** | Average service life: 20,000h |
| Wavelength optimized for maximum presentable color space | |
| **Optical System** | |
| Fixed beam angle 13° | |
| Variable CTO control from 2500k - 10.000k | |
| **Focus** | |
| Motorized Focus, 2m - infinity | |
| **Shutter / Dimmer, electrical** | |
| Strobe- Effect with variable speed between 1 - 10 flashes per second, Random-Strobe, Pulse-Effects | |
| Continuous Dimmer 0 - 100% | |
| **Prism** | |
| Rotating 3-facet prism, bi-directional and variable in speed | |
| **Gobos** | |
| Gobo wheel 1: 7 interchangeable rotating and indexed gobos plus open, variable speed and bi-directional<br>Gobo wheel 2: 11 fixed gobos plus open | |
| Gobo dimensions: Glass gobo thickness: 1.1 - 3.0mm<br>Aluminum gobo thickness: 0.5mm / Outside diameter: 23 mm  /  Image size: max. 19 mm.<br>For customized gobos like company logos and text the recommended image size is 16 mm. | |
| **DMX Control** | |
| Standard USITT DMX-512, 3&5 pin XLR; [+] = Pin 3    [-] = Pin 2    [Ground] = Pin 1  [4/5 n.c.]<br>The DMX- start address is [001] on DMX channel 1. | |
| **Pan/Tilt (8/16 Bit)** | |
| **Pan- movement** | **660° in min. 2 seconds, with position feedback** |
| **Tilt- movement** | **300° in min. 1 seconds, with position feedback** |
| **Weights and Measures** | |
| **Width of the base** | **320** |
| **Length of the base** | **288 mm (incl. handles)** |
| **Height (head vertical)** | **540 mm** |
| **Weight (net)** | **15 kg** |

# 8 System dimensions (in mm)
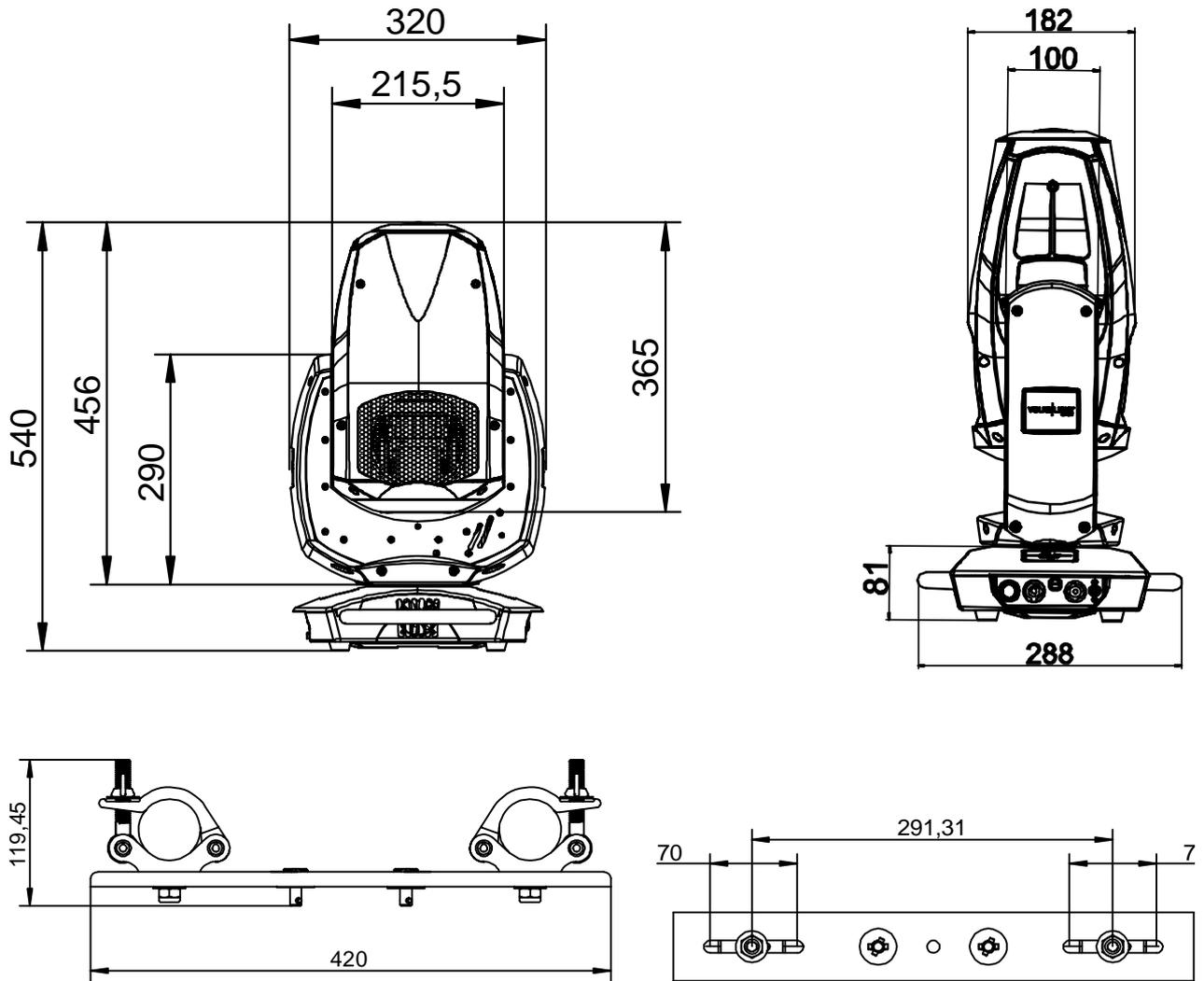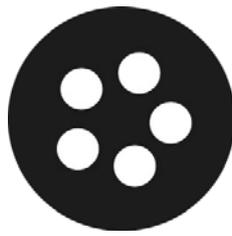
Rotating Gobo wheel



Gobo 1



Gobo 2



Gobo 3



Gobo 4



Gobo 5
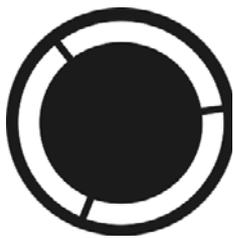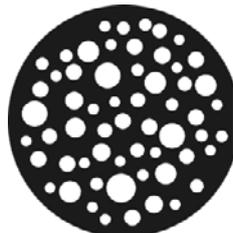


Gobo 6



Gobo 7

Fixed Gobo wheel



Gobo 1



Gobo 2



Gobo 3



Gobo 4



Gobo 5



Gobo 6



Gobo 7



Gobo 8



Gobo 9



Gobo 10



Gobo 11

# 9 Index