

# Instruction Manual

impression<sup>&</sup>  
X4



from software version: 1.18/18/12/10/n  
Rev. C



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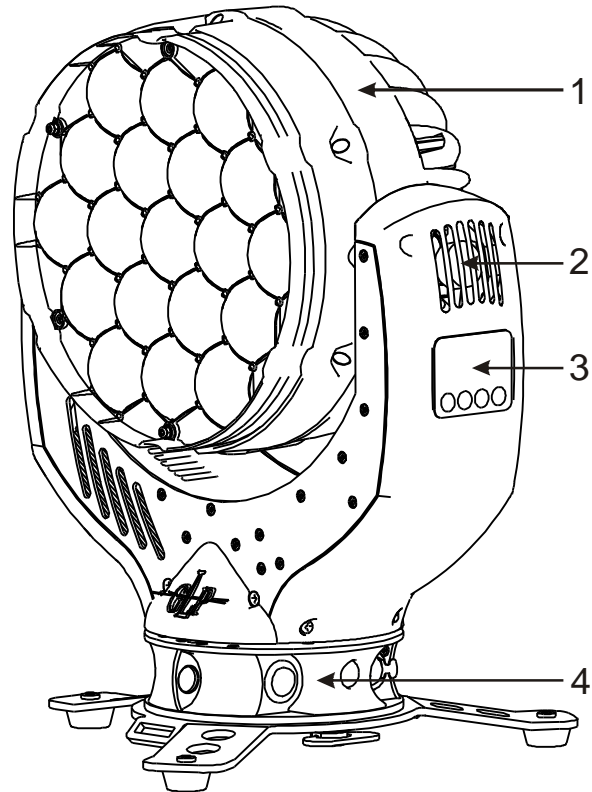


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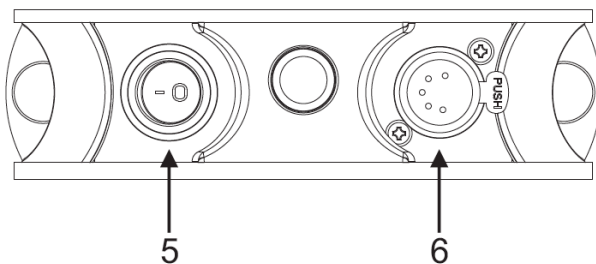
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# 1 Description of Device

- 1. Moving head (actively and passively cooled)
- 2. Arm with various cooling vents
- 3. LCD-Display/Menu (data entry)
- 4. Base with various connectors and Camlock mounting system

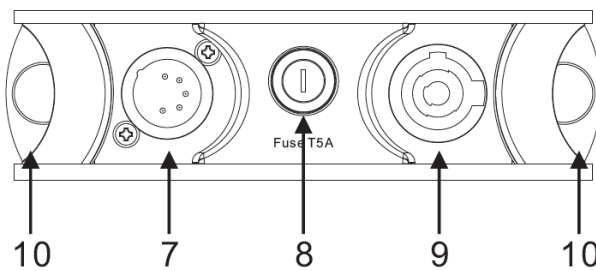


Base side 1



- 5. Power On/Off
- 6. DMX- Output (5 pin)
- 7. DMX- Input (5 pin)

Base side 2



- 8. Micro-fuse 5x20mm, T5A
- 9. Mains supply (Powercon)
- 10. 2 x Safety eyes

## 1.1 Safety Instructions



The **IMPRESSION X4** 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. **The fixture doesn't contain any user serviceable parts. Opening the fixture will void all warranties.**
5. 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 --**
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 **IMPRESSION X4** 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 Safety information

The **IMPRESSION X4** fixtures from GLP is fitted with a number of plano-convex lenses in a highly efficient collimator cluster. This type of lens can act as a strong magnifying glass.

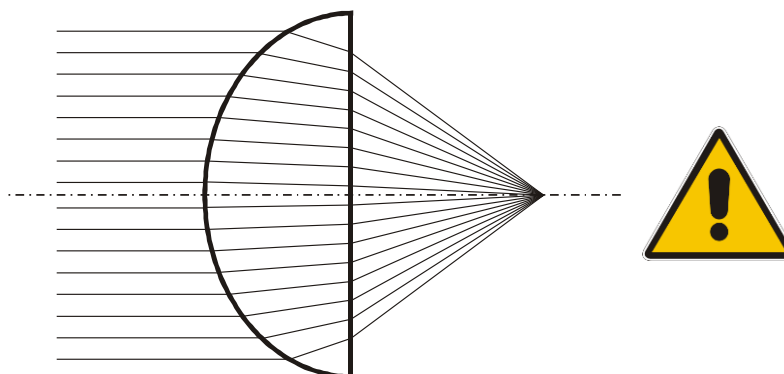
If the rays from a strong light source (such as the sun or another lighting fixture) are directed towards the front of any of these fixtures, then internal damage may occur. In a worst case scenario with a high power light source this can happen very quickly, damaging the fixture internally, potentially melting components or causing an internal fire within seconds.

In order to avoid these possible problems please adhere to the following requirements:

- Do not expose the front of a fixture to direct sunlight or any other strong light sources.
- For outdoor applications during daylight make sure that the front face of any fixture is either shielded or points away from the sun, even when fixtures are not in use.
- Do not modify the front glass or lenses of any fixture.

These requirements have to be followed regardless of whether a fixture is powered on or off as the magnifying effect is an optical effect and therefore independent from the (electrical) state of the fixture.

Especially when working with high powered **beam-lights**; extreme caution and observance of these safety instructions is mandatory.

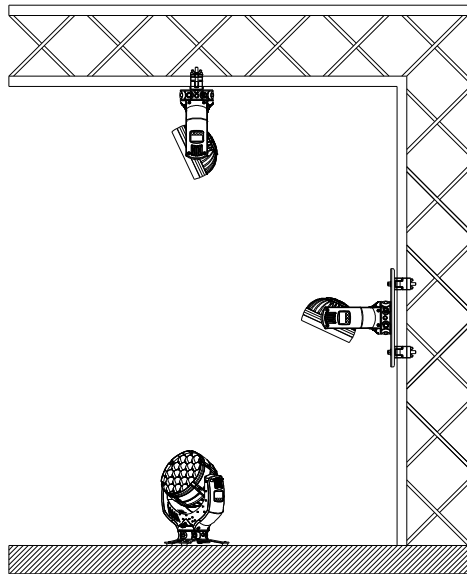


Should you have any questions about the operation of your fixture then please

contact your local GLP office, or their authorized distributor, a list of which can be found at <http://www.glp.de>.

## 2.2 Mounting

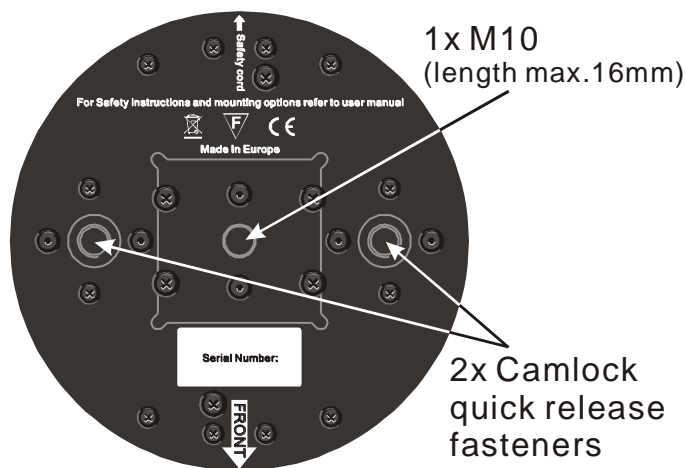
The **IMPRESSION X4** is fully operational whether it hangs or is mounted to the wall. It can also be operated while standing on the floor. Keep a safety distance of min. 0.5 m towards any easily inflammable materials (decoration etc.).



**Pay attention to the regulations of: BGV C1 (former VBG 70) and DIN VDE 0711-217.**

**The installation shall be done by qualified staff only.**

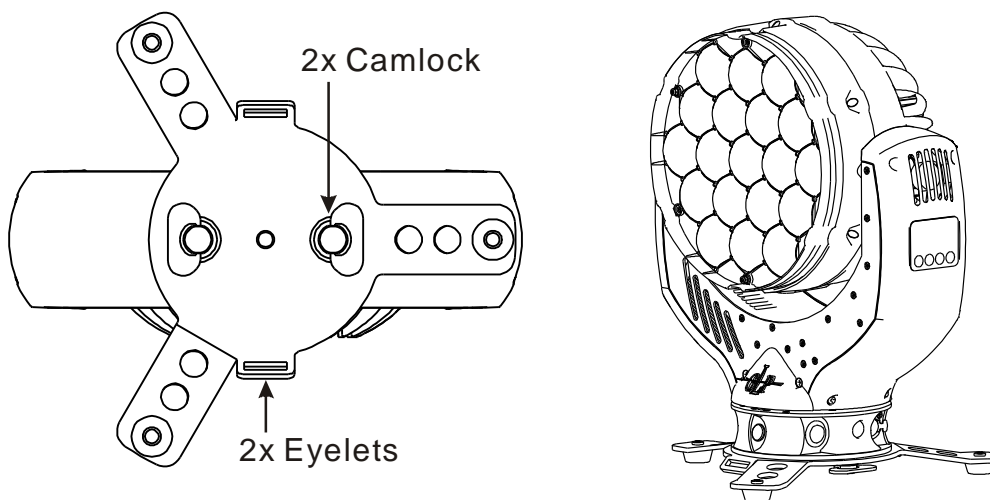
For the various mounting positions of the **IMPRESSION X4** (standing on the floor, sideways or hanging) different accessories kits are available. Through this a safe and firm installation is assured. You'll find dedicated connectors on the bottom side of the fixture which should be used. In addition the base is marked with a **FRONT** arrow allowing consistent orientation during installation.



front side of the fixture

### 2.2.1 Mounting on the Floor (Upright)

To operate the **IMPRESSION X4** in an upright position, please use the dedicated tri-legged floor stand supplied with your fixture. It is fixed to the base of the fixture with fasteners called Camlock quick-release connectors. Insert the two fasteners and turn each 90° to lock them. Do the opposite to release them again. On both sides you'll find eyelets to pull through a fixing strap. This allows for additional bracing of the fixture.

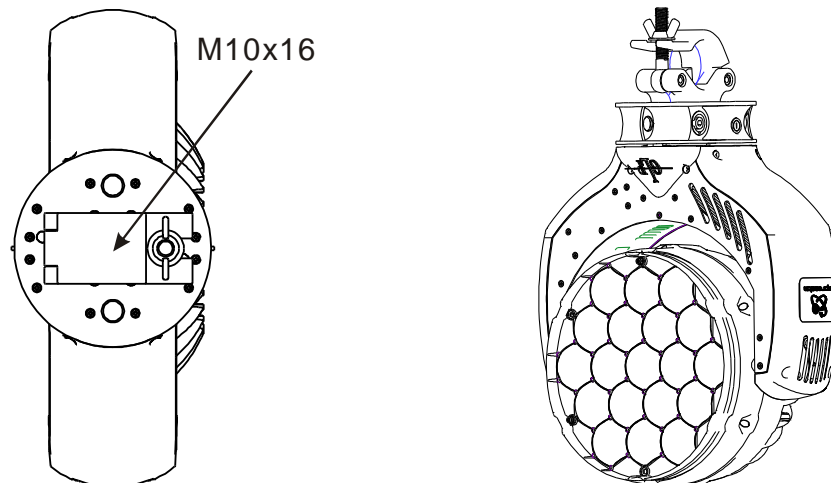


### 2.2.2 Mounting in hanging position

To operate the **IMPRESSION X4** in a hanging position please use a half-coupler (clamp). This can be mounted directly to the bottom side of the fixture. It should be attached centrally with a M10x16 mm thread bolt.

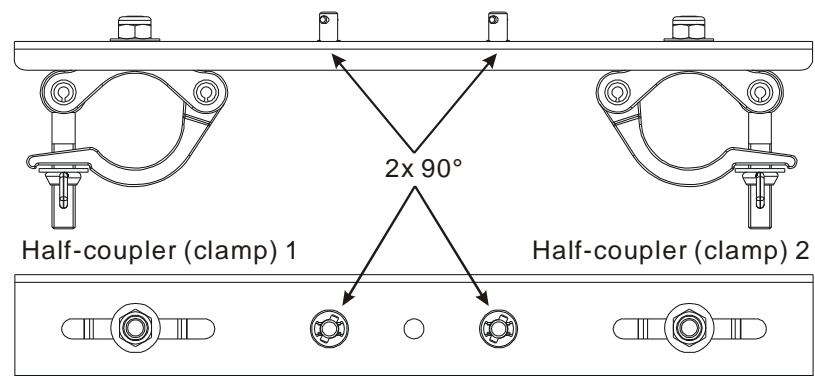
**Attention: Never use a longer bolt as this may damage the interior of the fixture.**

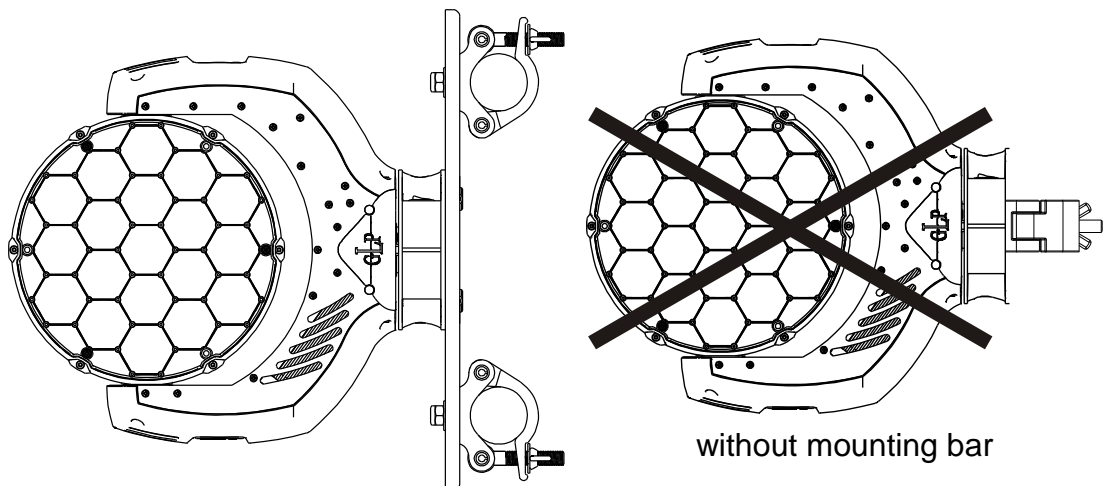




### 2.2.3 Mounting in sideways Position

To operate the **IMPRESSION X4** in a sideways position please use an additional mounting bar. This is fixed by two Camlock quick-release connectors. Two half-couplers (clamps) are used to mount the bar to a standard truss bar. This technique is necessary to cope with the torque which accrues in this mounting position. In addition it allows a re-positioning of the couplers to fit between two truss chords. Never use the "Mounting in hanging position" technique described above to fasten the fixture in the sideways position. A safe and sound installation can not be assured in this way. In addition this can damage the fixture base.





### 2.3 Securing the Fixture

Regardless of the mounting method of the **IMPRESSION X4** you'll have to use a stipulated safety wire. Attach the safety wire through one of the two holes provided on the base 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 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.

### 2.4 Connections

#### 2.4.1 Power Supply

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

Connected load 350 VA (W)  $\Leftrightarrow$  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.**

#### 2.4.2 DMX

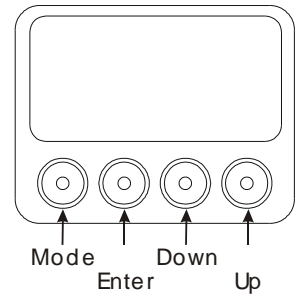
USITT DMX-512 Standard input/output in 5 pin connectors.

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 control board on the side part of the arm. It allows you to make all necessary adjustments of the **IMPRESSION X4**. With the **Mode**-key you get into 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. Make them and set functions **ON/OFF** with the **Up/Down**-keys. Confirm and save it with the **Enter**-key (the display shows **OK**). Push the **Mode**-key to cancel the entry and go back to the main menu.



To lock or unlock the keys of the menu field press Mode+Enter+Up simultaneously.

#### ← MODE - ENTER →

Level1	Level 2	Level 3	Level 4	Remark
DMX Start Address 001				Set the DMX start address
Special	Manual DMX			Manual control of all fixture functions
		Pan		Manual control for Pan (X-movement)
		Pattern Byte 3		Manual control for Pattern Byte 3 LED 17 -19
		Pattern Byte 2		Manual control for Pattern Byte 2 LED 9 - 16
		Pattern Byte 1		Manual control for Pattern Byte 1 LED 1 - 8
		Pattern		Manual control for Pattern channel / bank
		Zoom		Manual control for Zoom
		Speed Movements		Manual control for Pan/Tilt movements
		Pan/Tilt Movements		Manual control for Pan/Tilt movements
		Special		
		White Temperature		Manual control for Color temperature
		Dimmer		Manual control for Dimmer
		Shutter		Manual control for Shutter
		White		Manual control for White
		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)

← DOWN - UP →

← DOWN - UP →

	<b>Display Contrast</b>	Adjustment for the Display contrast
	<b>PWM - Frequ. Adj.</b>	Changes PMW frequency
	<b>Pan Offset</b>	Calibration for Pan-Offset
	<b>Tilt Offset</b>	Calibration for Tilt-Offset
	<b>LED adjust</b>	
	<b>White adjust red</b>	Adjust intensity for red channel
	<b>White adjust blue</b>	Adjust intensity for blue channel
	<b>White adjust green</b>	Adjust intensity for green channel
	<b>Clear EEPROM</b>	Erase EEPROM memory
	<b>Diagnose</b>	Diagnose fixture functions
<b>DMX Image</b>	<b>Set image if DMX off</b>	Activates a stored scene if DMX is off
	<b>Save image in memory</b>	Stores the scene currently sent to the unit
	<b>DMX input Monitor</b>	Indicates the presently received DMX signal per DMX channel
	<b>Pan</b>	Instantaneous value for Pan
	<b>Tilt</b>	Instantaneous value for Tilt
	<b>Pattern Byte 3</b>	Instantaneous value for Pattern Byte 3
	<b>Pattern Byte 2</b>	Instantaneous value for Pattern Byte 2
	<b>Pattern Byte 1</b>	Instantaneous value for Pattern Byte 1
	<b>Pattern</b>	Instantaneous value for Pattern channel / bank
	<b>Zoom</b>	Instantaneous value for Zoom
	<b>Speed Movements</b>	Speed adjustment for Pan/Tilt movements → see item below
	<b>Pan/Tilt Movements</b>	Instantaneous value for Pan/Tilt movements
	<b>Special</b>	Instantaneous value for Special
	<b>White Temperature</b>	Adjustment of the color temperature for WHITE
	<b>Dimmer</b>	Instantaneous value for Dimmer
	<b>Shutter</b>	Instantaneous value for Shutter
	<b>White</b>	Instantaneous value for White
	<b>Blue</b>	Instantaneous value for Blue
	<b>Green</b>	Instantaneous value for Green
	<b>Red</b>	Instantaneous value for Red

← DOWN - UP →

		Color Wheel	
<b>Set DMX Mode</b>	<b>Compressed Mode</b>		Instantaneous value for Color Mixing unit
	<b>Normal Mode</b>		Select the desired DMX Mode
	<b>High-Res. Mode</b>		Fixture works in "Compressed" mode → see also section 4 unterhalb Fixture works in "Normal" mode → see also section 4 unterhalb Fixture works in "High Resolution" mode → see also section 4 unterhalb
<b>Position feedback</b>			Switch automatic position feedback ON/OFF
<b>Reverse Pan</b>			Invert Pan movements: ON/OFF
<b>Reverse Tilt</b>			Invert Tilt movements: ON/OFF
<b>Reset</b>			RESET and new calibration for all functions

## 4 DMX Channel Selection (DMX Protocol)

### Normal-Mode 20 DMX channels

Channel	Function	Time and Value	DMX	%
<b>1) PAN-coarse</b>	0 .. 623°	3,2s	0..255	0..100
<b>2) PAN-fine</b>			0..255	0..100
<b>3) Tilt-coarse</b>	0 .. 295°	1,5s	0..255	0..100
<b>4) Tilt-fine</b>			0..255	0..100
<b>5) Color (fixed)</b>	Colors adjustable via RGB		0..7	0..2..5
	Color 01 - Red <sup>1)</sup>		8..15	3..5.5
	Color 02 - Amber <sup>1)</sup>		16..23	6..8.5
	Color 03 - Warm Yellow <sup>1)</sup>		24..31	9..12.5
	Color 04 - Yellow <sup>1)</sup>		32..39	13..15.5
	Color 05 - Green <sup>1)</sup>		40..47	16..18.5
	Color 06 - Turquoise <sup>1)</sup>		48..55	19..21.5
	Color 07 - Cyan <sup>1)</sup>		56..63	22..24.5
	Color 08 - Blue <sup>1)</sup>		64..71	25..27.5
	Color 09 - Lavender <sup>1)</sup>		72..79	28..30.5
	Color 10 - Malve <sup>1)</sup>		80..87	31..34.5
	Color 11 - Magenta <sup>1)</sup>		88..95	35..37.5
	Color 12 - Pink <sup>1)</sup>		96..103	38..40.5
	White - CTO	3200K	104..111	41..43.5
	White	5600K	112..119	44..46.5
White - CTB	7200K	120..127	47..49.5	
Rainbow Effect Stop <sup>2)</sup>		128	50	
Rainbow Effect <sup>3)</sup>	slow - fast	129..223	51..88	
Random colors	slow - fast	224..255	89..100	
<b>6) Red</b>	Color mixing system - Red	0 - 100%	0..255	0..100
<b>7) Green</b>	Color mixing system - Green	0 - 100%	0..255	0..100
<b>8) Blue</b>	Color mixing system - Blue	0 - 100%	0..255	0..100
<b>9) White</b>	Color mixing system - White	0 - 100%	0..255	0..100
<b>10) Shutter</b>	Shutter closed		0..15	0..5.5
	Shutter pulse random	slow – fast	16..47	6..18.5
	Up-dimming then Shutter closing (random patterns)	slow – fast	48..79	19..31
	Shutter open then down-dimming (random patterns)	slow – fast	80..111	32..43
	Up-dimming then down-dimming (random patterns)	slow – fast	112..143	44..56
	Strobe effect pause	5s - 0.1s	160..199	63..77
	Strobe effect slow - fast	1 Hz - 10 Hz	200..239	78..94
	Shutter open		240..255	95..100
<b>11) Dimmer</b>	Dimmer	0 - 100%	0..255	0..100
<b>12) CTO</b>	No CTO		0..7	0..2.5
	Continuous color temperature correction	Applicable for ALL colors	8..255	3..100
<b>13) Special</b>	Pattern Block 1 → channel 17		0..3	0..1
	Pattern Block 2 → channel 17		4..7	1.5..2.5
	PWM lower	~ 582 Hz .. ~ 600Hz	100..149	39..57
	PWM (Default)	600Hz	150	58
	PWM higher	~ 600 Hz .. ~ 618 Hz	151..200	59..78

Channel	Function	Time and Value	DMX	%
	<b>RESET</b>		250..255	98..100
<b>14) Movement</b>	<b>No macros</b>		0	0
<b>macros</b>	<b>Movement</b> <b>Size</b> <b>Phase</b>	Use "Speed" to adjust		
	PAN   1   0°		01..01	0.5
	1   90°		02..03	1.0
	1   180°		04..05	1.7
	1   270°		06..07	2.5
	PAN   2   0°		08..09	3.3
	2   90°		10..11	4.1
	2   180°		12..13	4.9
	2   270°		14..15	5.7
	PAN   3   0°		16..17	6.5
	3   90°		18..19	7.3
	3   180°		20..21	8.0
	3   270°		22..23	8.8
	PAN   4   0°		24..25	9.6
	4   90°		26..27	10.4
	4   180°		28..29	11.2
	4   270°		30..31	12
	TILT   size / phase see PAN		32..63	13..25
	PAN / TILT   size / phase see PAN		64..95	26..37
	PAN / TILT (inverse)   size / phase see PAN		96..127	38..50
	Circle   size / phase see PAN		128..159	51..62
	Circle (inverse)   size / phase see PAN		160..191	63..75
	Lying eight   size / phase see PAN		192..223	76..87
	Random movement   size / phase see PAN		224..255	88..100
<b>15) Speed</b>	Pan/Tilt movement speed from controller		0..1	0..0.5
<b>Pan/Tilt</b>	Pan/Tilt, slow – fast Use this channel also for the speed of the movements (channel 14).		02..255	1..100
<b>16) Zoom</b>	Wide - narrow (spot)		0...255	0...100
<b>17) Pattern</b>	No pattern		0..2	0..1
	250 pre-defined patterns (see appendix A)		03..253	2..99
	Activates direct access to LED Pattern	See channels 18-20	254..255	100
<b>18) Pattern Byte 1</b>	Direct access to Pattern of LED 1..8		0...255	0...100
<b>19) Pattern Byte 2</b>	Direct access to Pattern of LED 9..16		0...255	0...100
<b>20) Pattern Byte 3</b>	Direct access to Pattern of LED 17..19		0..07	0..2.5

**Compress-Mode 14 DMX channels**

Channel	Function	Time and Value	DMX	%
<b>1) PAN-coarse</b>	0 .. 623°	3,2s	0..255	0..100
<b>2) PAN-fine</b>			0..255	0..100
<b>3) Tilt-coarse</b>	0 .. 295°	1,5s	0..255	0..100
<b>4) Tilt-fine</b>			0..255	0..100
<b>5) Color (fixed)</b>	Colors adjustable via RGB		0..7	0..2.5
	Color 01 - Red <sup>1)</sup>		8..15	3..5.5
	Color 02 - Amber <sup>1)</sup>		16..23	6..8.5
	Color 03 - Warm Yellow <sup>1)</sup>		24..31	9..12.5
	Color 04 - Yellow <sup>1)</sup>		32..39	13..15.5
	Color 05 - Green <sup>1)</sup>		40..47	16..18.5
	Color 06 - Turquoise <sup>1)</sup>		48..55	19..21.5
	Color 07 - Cyan <sup>1)</sup>		56..63	22..24.5
	Color 08 - Blue <sup>1)</sup>		64..71	25..27.5
	Color 09 - Lavender <sup>1)</sup>		72..79	28..30.5
	Color 10 - Mauve <sup>1)</sup>		80..87	31..34.5
	Color 11 - Magenta <sup>1)</sup>		88..95	35..37.5
	Color 12 - Pink <sup>1)</sup>		96..103	38..40.5
	White - CTO	Color temperature 3200K	104..111	41..43.5
	White	Color temperature 5600K	112..119	44..46.5
White - CTB	Color temperature 7200K	120..127	47..49.5	
Rainbow Effect Stop <sup>2)</sup>		128	50	
Rainbow Effect <sup>3)</sup>	slow - fast	129..223	51..88	
Rainbow Effect, random colors	slow - fast	224..255	89..100	
<b>6) Red</b>	Color mixing system - Red	0 - 100%	0..255	0..100
<b>7) Green</b>	Color mixing system - Green	0 - 100%	0..255	0..100
<b>8) Blue</b>	Color mixing system - Blue	0 - 100%	0..255	0..100
<b>9) White</b>	Color mixing system - White	0 - 100%	0..255	0..100
<b>10) Shutter</b>	Shutter closed		0..15	0..5.5
	Random Pulse effect	slow - fast	16..47	6..18.5
	Up-dimming then Shutter closing (random patterns)	slow - fast	48..79	19..31.5
	Shutter open then down-dimming (random patterns)	slow - fast	80..111	32..43
	Up-dimming then down-dimming (random patterns)	slow - fast	112..143	44..56
	Strobe effect pause	5s .. 1s	144..199	57..77
	Strobe effect, slow - fast	1 Hz .. 10 Hz	200..239	78..94
	Shutter open		240...249	95..97.5
	Shutter open		251..255	99..100
<b>11) Dimmer</b>	Dimmer	0 - 100%	0..255	0..100
<b>12) Zoom</b>	Wide - narrow (spot)		0...255	0...100
<b>13) Special</b>	Pattern Block 1 → channel 14		0..3	0..1
	Pattern Block 2 → channel 14		4..7	1.5..2.5
	PWM lower	~ 582 Hz .. ~ 600Hz	100..149	39..57
	PWM (Default)	600Hz	150	58
	PWM higher	~ 600 Hz .. ~ 618 Hz	151..200	59..78



Channel	Function	Time and Value	DMX	%
	<b>RESET</b>		250..255	98..100
14) Pattern	No pattern		0..2	0..1
	250 pre-defined patterns (see appendix A)		03..253	2..99

### High Resolution (Extended) -Mode 21 DMX Channels

Channel	Function	Time and Value	DMX	%
1) PAN-coarse	0 .. 623°	3,2s	0..255	0..100
2) PAN-fine			0..255	0..100
3) Tilt-coarse	0 .. 295°	1,5s	0..255	0..100
4) Tilt-fine			0..255	0..100
5) Red-coarse	Color mixing system – Red	0 - 100%	0..255	0..100
6) Red-fine	Color mixing system – Red-Low		0..255	0..100
7) Green-coarse	Color mixing system – Green	0 - 100%	0..255	0..100
8) Green-fine	Color mixing system – Green-Low		0..255	0..100
9) Blue-coarse	Color mixing system – Blue	0 - 100%	0..255	0..100
10) Blue-fine	Color mixing system – Blue-Low		0..255	0..100
11) White-coarse	Color mixing system – White	0 - 100%	0..255	0..100
12) White-fine	Color mixing system – White-Low		0..255	0..100
13) Shutter	Shutter closed		0..15	0..5.5
	Random Pulse effect	slow - fast	16..47	6..18.5
	Up-dimming then Shutter closing (random patterns)	slow - fast	48..79	19..31.5
	Shutter open then down-dimming (random patterns)	slow - fast	80..111	32..43
	Up-dimming then down-dimming (random patterns)	slow - fast	112..143	44..56
	Strobe effect pause	5s - 1s	144..199	57..77
	Strobe effect, slow - fast	1 Hz - 10 Hz	200..239	78..94
	Shutter open		240...249	95..97.5
	Shutter open		251..255	99..100
14) Dimmer-coarse	Dimmer	0 - 100%	0..255	0..100
15) Dimmer-fine	Dimmer - Low		0..255	0..100
16) Zoom	Spot - Flood		0...255	0...100
17) Special	Pattern Block 1 → channel 18		0..3	0..1
	Pattern Block 2 → channel 18		4..7	1.5..2.5
	PWM lower	~ 582 Hz .. ~ 600Hz	100..149	39..57
	PWM (Default)	600Hz	150	58
	PWM higher	~ 600 Hz .. ~ 618 Hz	151..200	59..78
	<b>RESET</b>		250..255	98..100
18) Pattern	No pattern		0..2	0..1
	250 pre-defined patterns (see appendix A)		03..253	2..99
	Activates direct access to LED Pattern	See channels 18-20	254..255	100
19) Pattern Byte 1	Direct access to Pattern of LED 1..8		0...255	0...100

Channel	Function	Time and Value	DMX	%
20) Pattern Byte 2	Direct access to Pattern of LED 9..16		0...255	0...100
21) Pattern Byte 3	Direct access to Pattern of LED 17..19		0..07	0..2.5

<sup>1)</sup> The predefined colors can be used as start-colors for the Rainbow effect. Please select first a desired start-color before you activate the rainbow effect. All **IMPRESSION X4** will then start from that color and will execute the rainbow effect synchronously. Different **IMPRESSION X4** can have different start-colors but will still execute the rainbow effect synchronously. If you choose a color different from the ones marked with <sup>1)</sup> in the tables above the rainbow start-color will be red.

<sup>2)</sup> Rainbow-effect Stop will pause this function. After resuming the rainbow-effect will be continued from the current color.

<sup>3)</sup> The Rainbow-effect will run synchronously only if started from one of the predefined colors (see also <sup>1)</sup> before).

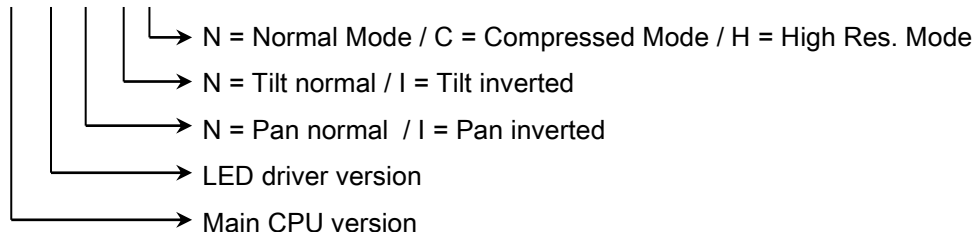
#### Locking and unlocking the Control Panel

Please lock and unlock the control panel by pressing the menu keys **MODE & ENTER & UP** at the same time.

#### 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



## 5 Maintaining and Cleaning the IMPRESSION X4

The **IMPRESSION X4** is a fixture of very low maintenance. 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. Otherwise the fixture's light-output will be significantly reduced or damages can occur. Regular cleaning will not only ensure the maximum light-output, but will also allow the fixture to operate reliably throughout its life.

**A soft lint-free cloth moistened with any good glass cleaning fluid is recommended, under no circumstances should alcohol or solvents be used!**

### 5.1 Safety regulations

- **Pull out the mains power plug!**
- Wait min. 15 minutes after disconnecting power to allow the fixture to cool down.

### 5.2 Maintenance and Interval (rule-of-thumb)

The contamination of the fixture depends on the environment details. Hence no general guidelines can be given. The intervals given below are only suggestions from our experience.

Position	Interval	In this way
LED reflector and optical system	weekly	soft brush /lint-free cloth
Fan and air channel	monthly	vacuum cleaner, airbrush, etc.

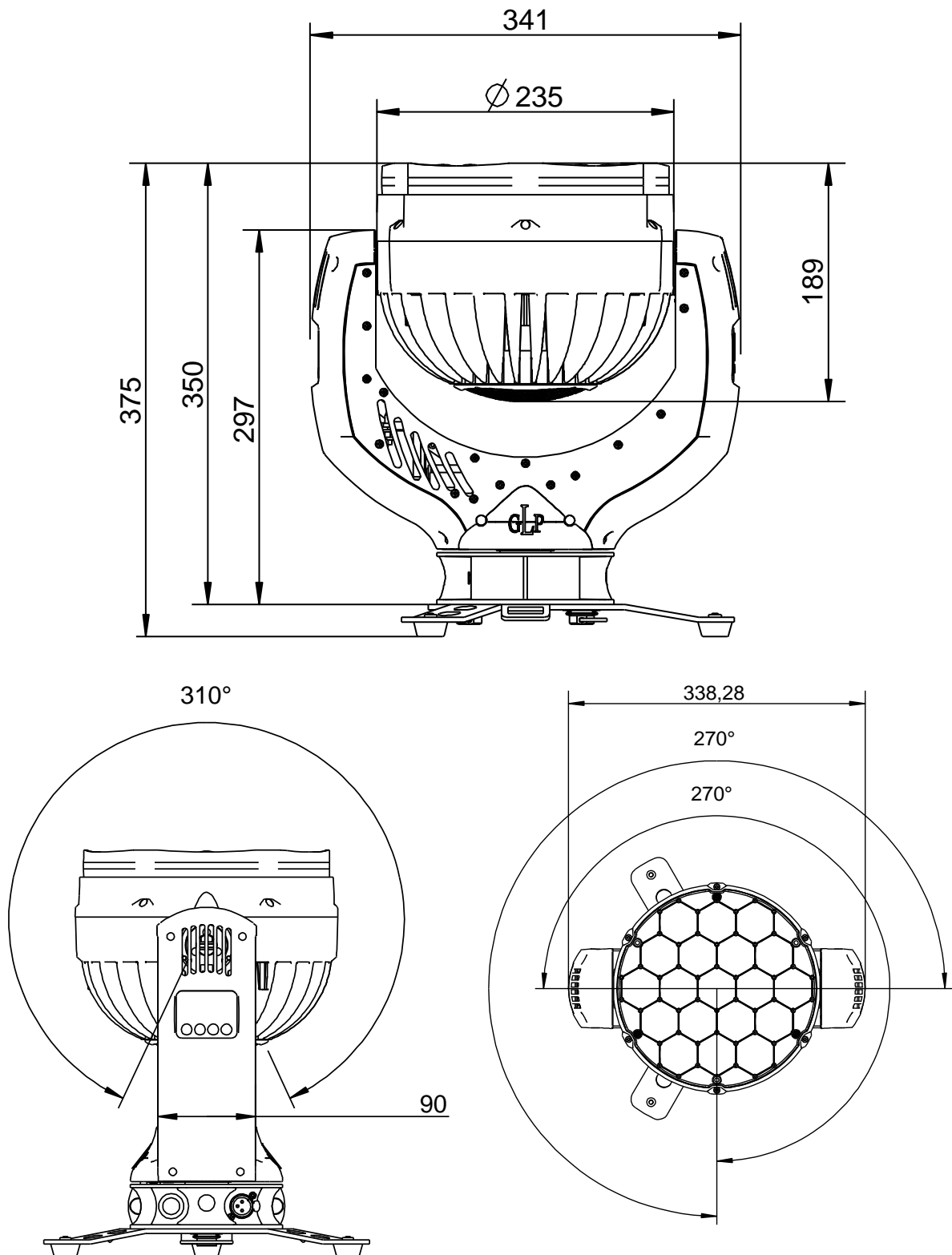
#### **Attention:**

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

## 6 Technical Specifications

<b>Power supply</b>	
<b>Power consumption</b>	350 VA (Watt)
<b>Power Input</b>	~100-240 V AC, 50-60 Hz (wide range input)
<b>Fuse protection</b>	Micro-fuse 5x20 mm, T5A
<b>Operational Parameters</b>	
<b>Max. Ambient Temperature</b>	5° - 45°C (integrated overheating switch)
<b>Mounting Position</b>	Any (see relevant chapter)
<b>Lighting System - Additive Color mixing</b>	
<b>LED Type</b>	19 x Osram Ostar RGBW multi-chip
<b>Lifetime</b>	50,000 h
Wavelength optimized for maximum presentable color space	
<b>Optical System</b>	
Full RGBW / High efficient Collimator cluster	
<b>Shutter / Dimmer (8/16 Bit)</b>	
Strobe- Effect with variable speed between 1 - 10 flashes per second, Random-Strobe, Pulse-Effects	
Continuous Dimmer 0 - 100%	
<b>Zoom</b>	
7 to 50 degree continuous zoom	
<b>Optical Patterns</b>	
Several hundred pre-defined beam patterns with direct access and manipulation	
<b>DMX Control</b>	
Standard USITT DMX-512, 5 pin XLR; [+] = Pin 3 / [-] = Pin 2 / [Ground] = Pin 1 / Pin 4&5 N.C. Die DMX- Addressing starts at the DMX channel [001].	
<b>Pan / Tilt (8/16 Bit)</b>	
<b>Pan- movement</b>	623° in min. 3,2 seconds (Position Feedback)
<b>Tilt- movement</b>	295° in min. 1,5 seconds (Position Feedback)
<b>Weights and Measures</b>	
<b>Width of the base</b>	341 mm
<b>Length of the base</b>	145 mm
<b>height (head vertical)</b>	375 mm (incl. standing foot/tripod)
<b>Weight (net)</b>	8.0 kg

## 7 Dimensions



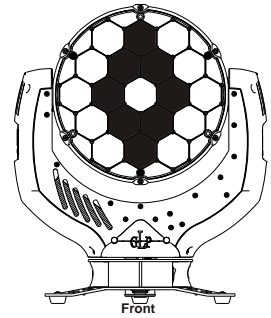
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## 9 Pattern

Patterns are grouped into two sets which can be activated and selected via the DMX channel "Special". Choose the desired pattern by its corresponding DMX value on channel "Pattern".

**Orientation:** Patterns are shown when looking at the **front** of a standing fixture; Head faced in direction of fixtures front label: DMX Pan @ 128; Tilt @ 220; Zoom @ 255 (letters are displayed homogenous).



### Patterns Set 1

DMX	Pattern	DMX	Pattern	DMX	Pattern	DMX	Pattern
000		012		024		036	
001		013		025		037	
002		014		026		038	
003		015		027		039	
004		016		028		040	
005		017		029		041	
006		018		030		042	
007		019		031		043	
008		020		032		044	
009		021		033		045	
010		022		034		046	
011		023		035		047	

DMX	Pattern
048	
049	
050	
051	
052	
053	
054	
055	
056	
057	
058	
059	
060	
061	
062	
063	
064	

DMX	Pattern
065	
066	
067	
068	
069	
070	
071	
072	
073	
074	
075	
076	
077	
078	
079	
080	
081	

DMX	Pattern
082	
083	
084	
085	
086	
087	
088	
089	
090	
091	
092	
093	
094	
095	
096	
097	
098	

DMX	Pattern
099	
100	
101	
102	
103	
104	
105	
106	
107	
108	
109	
110	
111	
112	
113	
114	
115	



DMX	Pattern
116	
117	
118	
119	
120	
121	
122	
123	
124	
125	
126	
127	
128	
129	
130	
131	
132	

DMX	Pattern
133	
134	
135	
136	
137	
138	
139	
140	
141	
142	
143	
144	
145	
146	
147	
148	
149	

DMX	Pattern
150	
151	
152	
153	
154	
155	
156	
157	
158	
159	
160	
161	
162	
163	
164	
165	
166	

DMX	Pattern
167	
168	
169	
170	
171	
172	
173	
174	
175	
176	
177	
178	
179	
180	
181	
182	
183	

DMX	Pattern
184	
185	
186	
187	
188	
189	
190	
191	
192	
193	
194	
195	
196	
197	
198	
199	
200	

DMX	Pattern
201	
202	
203	
204	
205	
206	
207	
208	
209	
210	
211	
212	
213	
214	
215	
216	
217	

DMX	Pattern
218	
219	
220	
221	
222	
223	
224	
225	
226	
227	
228	
229	
230	
231	
232	
233	
234	

DMX	Pattern
235	
236	
237	
238	
239	
240	
241	
242	
243	
244	
245	
246	
247	
248	
249	
250	
251	

DMX	Pattern
252	

DMX	Pattern
253	reserved
254	reserved

DMX	Pattern
255	reserved




**Patterns Set 2**

DMX	Pattern
000	
001	
002	
003	
004	
005	
006	
007	
008	
009	
010	
011	
012	
013	

DMX	Pattern
014	
015	
016	
017	
018	
019	
020	
021	
022	
023	
024	
025	
026	
027	

DMX	Pattern
028	
029	
030	
031	
032	
033	
034	
035	
036	
037	
038	
039	
040	
041	

DMX	Pattern
042	
043	
044	
045	
046	
047	
048	
049	
050	
051	
052	
053	
054	
055	

DMX	Pattern
056	
057	
058	
059	-

