

Instruction Manual



impression

from software version 0.9
(instruction version 1.01)



**GERMAN LIGHT
PRODUCTS**

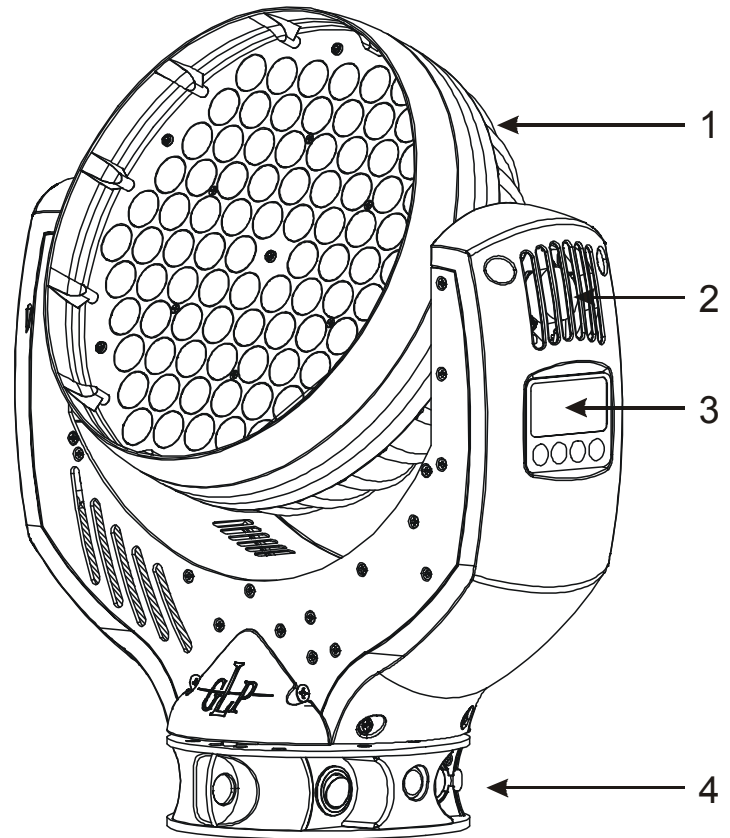
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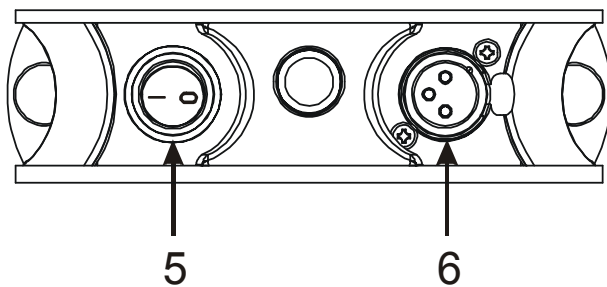
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1 Description of Device

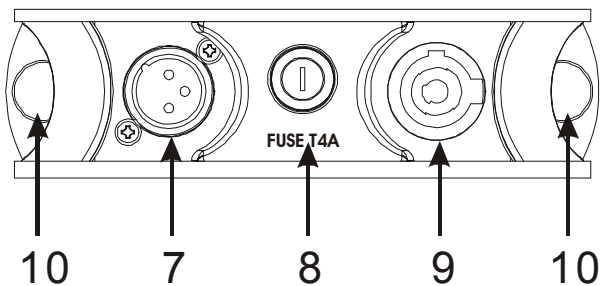
- 1. Moving head (actively and passively cooled)
- 2. Arm with various cooling vents
- 3. LCD-Display/Menu (data entry)
- 4. Base with various connectors and Camlock mounting system



base side 1



base side 2



- 5. Power On/Off
- 6. DMX- Output (3 pole)
- 7. DMX- Input (3 pole)
- 8. Micro-fuse 5x20mm, T4A
- 9. Mains supply (Powercon)
- 10. 2x Safety eyes

1.1 Safety Instructions



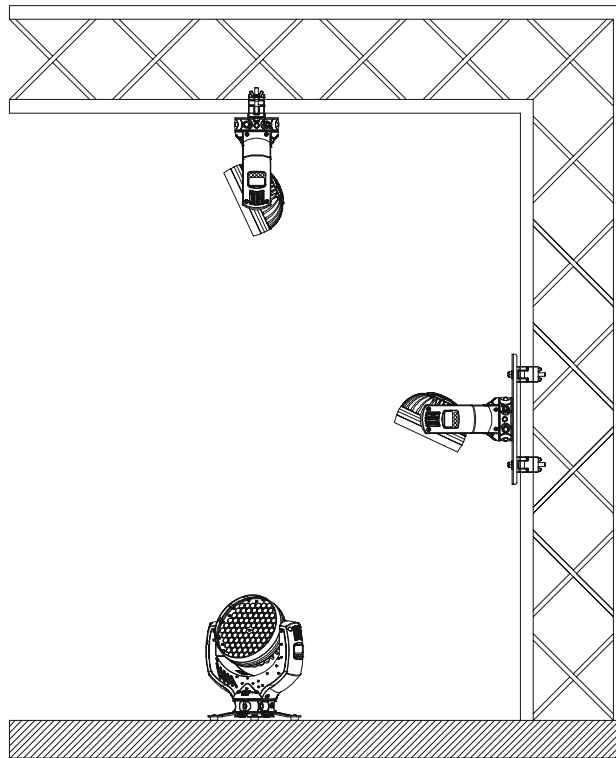
The **IMPRESSION** is a High-Tech Product. To guarantee a smooth operation, it is necessary to respect the following rules. The manufacturer of this device will not take responsibility of damages through any disregard of the information in this manual. Warranty claims also will be cancelled in case the system casing is opened.

1. Make sure before putting the system into operation, that the fan and the air inlets are clean and not blocked by anything.
2. It must be assured that the system-head can rotate unhindered throughout his complete rotating range. A safety distance of at least 0.5 m to any easily inflammable material (e.g. decoration material) must be adhered.
3. **Attention!** Don't touch the device during the operation. This can cause injuries or damages.
4. **The system doesn't contain any maintainable parts. Don't open it!**
5. It is necessary to wait at least 15 minutes after disconnecting the AC before changing the optical carrier. Pay attention to possibly hot parts of the system. **-- Danger of BURNING --**
6. **Never look directly into the beam of light or one of the LEDs.** Never use optical apertures with a distance less than 0.5 m to observe the beam of light. **LED Class 2M.** You'll risk a serious injury of your eyes and in particular of your retina.
7. To allow a secure operation, follow also the Installation guide described in chapter 2. Operating the **IMPRESSION** without suitable safety aids like Safety cables or clamps/hooks can increase the risk of an accident.
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 explicit mentioned in this manual.
9. Use only original spare parts. Any structural modification on the system will terminate all warranty claims.

2 Preparation and Installation

2.1 Mounting

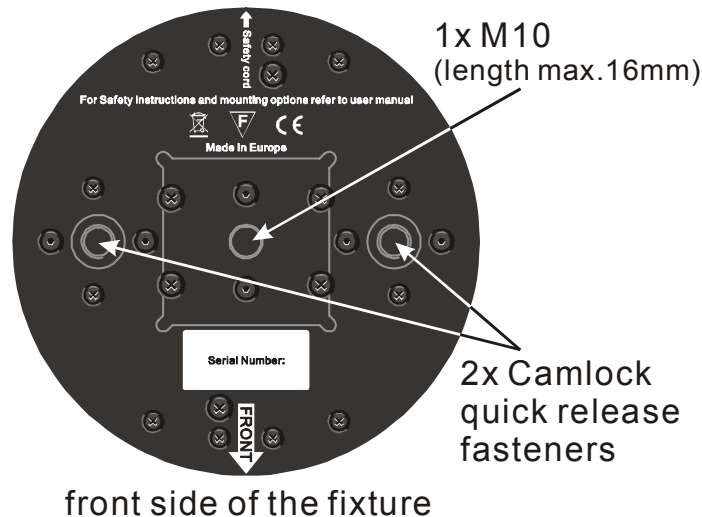
The **IMPRESSION** is fully operational whether it hangs or is mounted to the wall. It can also be operated while standing on the floor. Keep a safety distance of 0.5 m towards any easily inflammable materials (decoration etc.).



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

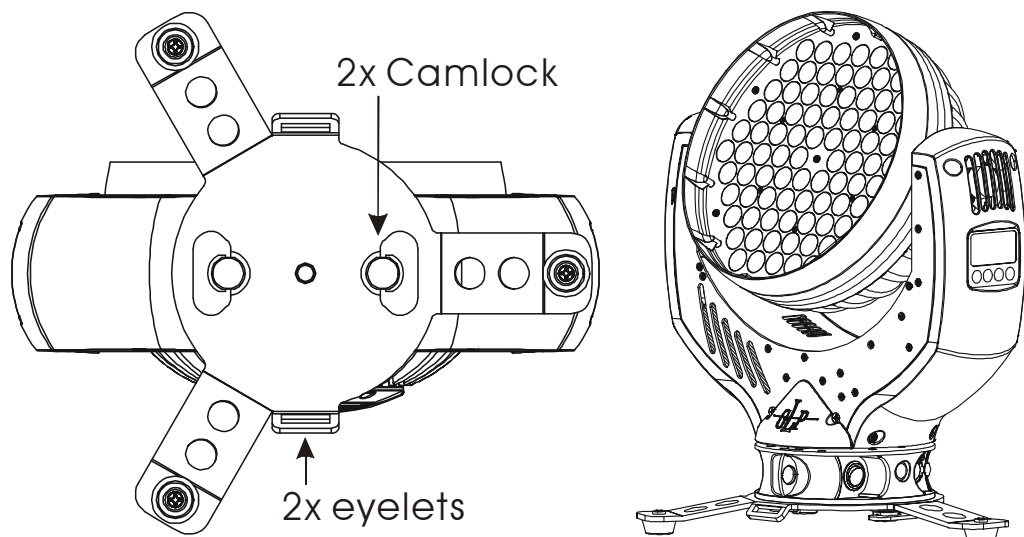
The installation shall be done by qualified staff only.

For the various mounting positions of the **IMPRESSION** (standing on the floor, sideways or hanging) different accessories kits are available. Through this a safe and firm installation is assured. You'll find special connectors on the bottom side of the system which are put to use here. In addition the front side of the system is marked with (FRONT) as this is important for a even orientation during installation.



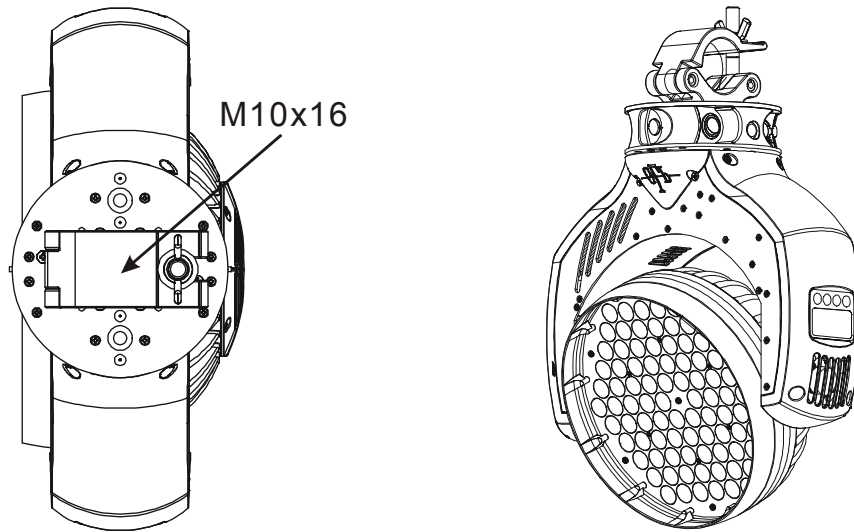
2.1.1 Mounting on the Floor (Upright)

To operate the **IMPRESSION** in an upright position, please use the dedicated tripod which is mounted to the bottom side of the system. It is fixed with fasteners called Camlock quick-release connectors. Turn the two fasteners both 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 an additional bracing of the system during the upright operation.



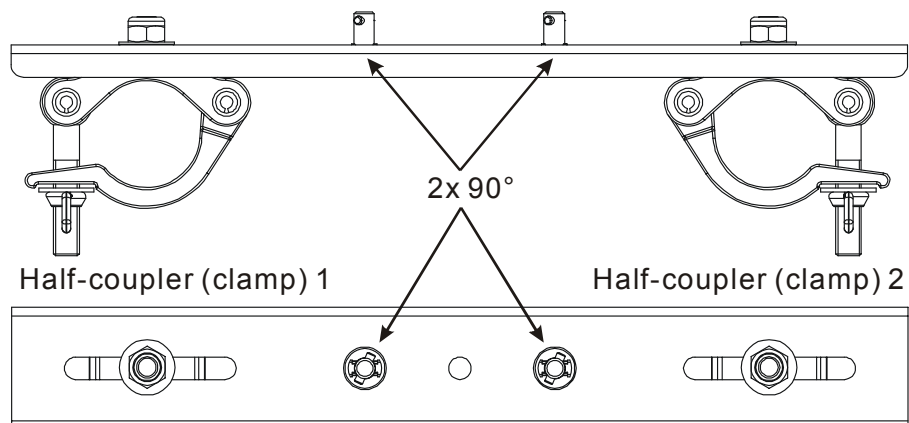
2.1.2 Mounting in hanging Position (Head first)

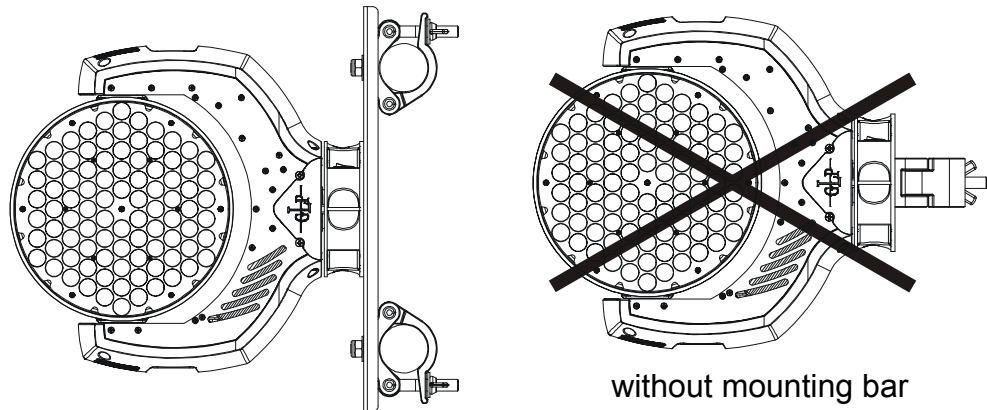
To operate the **IMPRESSION** in an hanging position, please use a half-coupler (clamp) which is mounted directly to the bottom side of the system. It is fixed centrally with a M10x16 mm thread bolt.



2.1.3 Mounting in sidewise Position

To operate the **IMPRESSION** in a sidewise position, please use an addition mounting bar. Also this is fixed by two Camlock quick-release connectors. Two half-couplers (clamps) are now used to mount the system 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 concentric position between two truss belts. Never use the "Mounting in hanging Position" technique described above to fasten the system in the sidewise position. A safe and sound installation can not be assured in this way. This can also damage the system base.





2.2 Secure the Device

Regardless of the mounting method of the **IMPRESSION** you'll have to use a stipulated safety wire. Therefore you have to pull the safety wire through to two provided holes on the bottom side of the system and connect it with the truss-support. Pay attention to a safe and proper fastening. Install a safety wire that can hold at least 10 times the weight of the fixture. Never use the carrying handles for this purpose.

2.3 Connections

2.3.1 Power Supply

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

Connected load 350 VA (W) \Leftrightarrow 4 AT (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 DMX

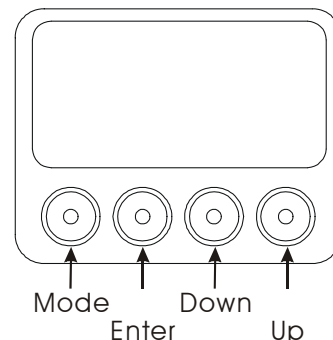
USITT DMX-512 Standard input/output in 3 pole connectors.

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

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**. 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.



← MODE - ENTER →

Level1	Level 2	Level 3	Remark		
DMX Start Address 001			Define the DMX start address		
Special	Manual DMX	Pan	Manual control of all system functions		
		Pan/Tilt Movements	Manual control for Pan (X-movement)		
		Special	Manual control for Pan/Tilt movement		
		Dimmer	Activate the White- or Full-Power Mode; see also DMX table		
		Shutter	Manual control for Dimmer		
		Blue	Manual control for Shutter		
		Green	Manual control for blue		
		Red	Manual control for green		
		Color Wheel	Manual control for red		
		Tilt	Manual control for the color wheel		
		Default Set		Manual control for Tilt (Y-movement)	
		Adjust		Key code xxxx	Resetting all functions to original values
				Pan Offset	Use the code for entering the calibration menu (for authorized persons only)
				Tilt Offset	Calibration for Pan-Offset
Adjust LED current	Calibration for Tilt-Offset				
Clear EEPROM	Calibration for LED current				
Temperature Arm			Erase EEPROM		
			Indicates the arm temperature		
			Indicates the head temperature		
Lamp Off if DMX off		Defines whether the last DMX signal is stored or the lamp is switched OFF in case of signal interruption			
Position Feedback		Automatically position feedback (correction) for Pan/Tilt movement			
White Adjust			Adjustments for a uniform white color (white balance); only in white-mode		
		Red	Input for red adjustments		
		Blue	Input for blue adjustments		
DMX input Monitor		Green	Input for green adjustments		
		Pan	Indicates the presently received DMX signal per DMX channel		
		Pan/Tilt Movements	Instantaneous value for Pan		
			Instantaneous value for Pan/Tilt movements		

← DOWN - UP →

← DOWN - UP →

Special	Instantaneous value for Special
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 movement
Live time	Indicates the overall operation time of the system
Display	Adjust the display
Blackout	ON/OFF: Display OFF
Reverse	ON/OFF: Display upside down
Compressed Mode	ON/OFF: Only 10 DMX channels are being used if this Mode is activated
White Mode	ON/OFF: Adjustments for white-balance are activated
Reverse Pan	ON/OFF: Invert Pan movements
Reverse Tilt	ON/OFF: Invert Tilt movements
Reset	RESET and new calibration for all functions

4 DMX Channel Selection (DMX Protocol)

Normal-Mode 14 DMX channels

Channel	Function	Time and Value	DMX	HEX	%
1) PAN-coarse	0 .. 660°	min. 3,2 s	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°	min. 1,5 s	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 - Cyan		8..15	08..0F	3..5,5
	Color 02 - Magenta		16..23	10..17	6..8,5
	Color 03 - Yellow		24..31	18..1F	9..12,5
	Color 04 - Lavender		32..39	20..27	13..15,5
	Color 05 - Dark Lavender		40..47	28..2F	16..18,5
	Color 06 - Amber		48..55	30..37	19..21,5
	Color 07 - Deep Golden		56..63	38..3F	22..24,5
	Color 08 - Dark Blue		64..71	40..47	25..27,5
	Color 09 - Pink		72..79	48..4F	28..30,5
	Color 10 - Lime Green		80..87	50..57	31..34,5
	Color 11 - Light Blue		88..95	58..5F	35..37,5
	Color 12 - Red		96..103	60..67	38..40,5
	Color 13 - Green		104..111	68..6F	41..43,5
Color 14 - Blue		112..119	70..77	44..46,5	
	White		120..127	78..7F	47..49,5
	Rainbow Effect	slow - fast	128..255	80..FF	50..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 Strobe (different pattern)		16..47	10..2F	6..18,5

Channel	Function	Time and Value	DMX	HEX	%	
	Strobe Pulse effect , slow - fast		48..79	30..4F	19..31,5	
	Strobe, slow - fast	1 Hz .. 10 Hz	80..239	50..EF	32..94,5	
	Shutter open		240..255	F0..FF	95..100	
10) Dimmer	Dimmer (0% - 100%)		0..255	0..FF	0..100	
11) Color temperature	Continuous color temperature correction between 7200k - 3200k	7200k - 3200k	0..255	0..FF	0..100	
12) Special	Max. Power-Mode(*)	Max. light output without white balance	0..15	0..0F	0.5,5	
	White-Mode (*)	White balance used	16..31	10..1F	6..12,5	
	Color1-Chaser C / C+1 slow – fast	0,7 BPS ... 2,3 BPS => 1,43 s ... 0,43 s	112..127	70..7F	44..49,5	
	Color1-Chaser C / C+2 slow – fast	0,7 BPS ... 2,0 BPS => 1,43 s ... 0,5 s	128..143	80..8F	50..56,5	
	Fan min. as long as temp. < 60°C RESET (Normal Mode)		224..229	E0..E5	88..89,5	
			250..255	FA..FF	98..100	
13) Move- ment	No movement		0	00	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
		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	
14) Speed Pan/Tilt	Pan/Tilt relative movement		0..15	00..0F	0.6	
	Pan/Tilt slow – fast Use this channel 14) also for the speed of the movements (channel 13).		Pan Min. 530° = 200 s Pan Max. 530° = 2,65 s Tilt Min. 285° = 110 s Tilt Max. 285° = 1,8 s	16..255	10..FF	7..100

Compress-Mode 10 DMX channels

Channel	Function	Time and Value	DMX	HEX	%	
1) PAN-coarse	0 .. 660°	min. 3,2 s	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°	min. 1,5 s	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 - Cyan		8..15	08..0F	3..5,5	
	Color 02 - Magenta		16..23	10..17	6..8,5	
	Color 03 - Yellow		24..31	18..1F	9..12,5	
	Color 04 - Lavender		32..39	20..27	13..15,5	
	Color 05 - Dark Lavender		40..47	28..2F	16..18,5	
	Color 06 - Amber		48..55	30..37	19..21,5	
	Color 07 - Deep Golden		56..63	38..3F	22..24,5	
	Color 08 - Dark Blue		64..71	40..47	25..27,5	
	Color 09 - Pink		72..79	48..4F	28..30,5	
	Color 10 - Lime Green		80..87	50..57	31..34,5	
	Color 11 - Light Blue		88..95	58..5F	35..37,5	
	Color 12 - Red		96..103	60..67	38..40,5	
	Color 13 - Green		104..111	68..6F	41..43,5	
	Color 14 - Blue		112..119	70..77	44..46,5	
White		120..127	78..7F	47..49,5		
Rainbow Effect	slow - fast		128..255	80..FF	50..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 Strobe (different pattern)		16..47	10..2F	6..18,5	
	Pulse effect , slow - fast		48..79	30..4F	19..31,5	
	Strobe, slow - fast	1 Hz .. 10 Hz		80..239	50..EF	32..94,5
	Shutter open			240...249	F0..F9	95..97,5
	RESET	Min. 3 Sec.		250	FA	98
	Shutter open			251..255	FB..FF	99..100
10) Dimmer	Dimmer (0% - 100%)		0..255	0..FF	0..100	

(* Max. Power-Mode vs. White-Mode)

The **IMPRESSION** can regard the white-balance adjustments for each individual color setting. Whether the White-Mode is used with RGB can be selected in the **Normal DMX-Mode** during operation with the Special DMX channel. If the Special channel is set to a value between DMX 0..15, the White-Mode is not used and the RGB goes for the maximum light output. If the Special channel is set to a value between DMX 16..31, the white balance is used for the RGB output.

Since there is no Special DMX channel in the **Compress DMX-Mode**, the possibility exists to likewise select these settings also in the display menu. Is the White-Mode set to "ON", the white-balance is activated. If the White-Mode is set to "OFF", the RGB goes for the maximum light output (Max. Power-Mode).

5 Maintaining and Cleaning the IMPRESSION

The **IMPRESSION** is a system of very low maintenance. It is only necessary to clean the air in- and outlets as well as the optical LED lenses from time to time. For a safe operation it is absolutely essential that the fixture is kept clean and that dust, dirt and smoke-fluid residues must not built 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 main plug!**
- Wait min. 15 minutes after the last operation to cool down the fixture.

5.2 Circumference 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 practice 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 dried up.**
- **Never touch lenses with bare fingers.**

6 Technical Specifications

Power supply	
Power consumption	350 VA (Watt)
Power Input	~100-240 V AC, 50-60 Hz (wide range input)
Fuse protection	Micro-fuse 5x20 mm, T 4A
Operational Parameters	
Max. Ambient Temperature	45°C (integrated overheating switch)
Mounting Position	Any (see chapter mounting)
Lighting System - Additive Color mixing	
LED Type	90x Luxeon K2 High-power- LEDs
Lifetime	100.000 h
RGB Model	
30 LEDs per color, wavelength optimized for maximum presentable color space	
White Model	
60x cold white LEDs, 30x Amber LEDs allow a continuously adjustable color temperature	
Optical System	
High efficient Collimator cluster	
Exchangeable optical carrier with 10° light distribution angle (25° optional)	
Scattering light aperture	
Shutter / Dimmer (8 Bit)	
Strobe- Effect with variable speed between 1 - 10 flashes per second, Random-Strobe, Pulse-Effects	
Continuous Dimmer 0 - 100%	
DMX Control	
Standard USITT DMX-512, 3 pole XLR; [+] = Pin 3 [-] = Pin 2 [Ground] = Pin 1. Die DMX- Addressing starts at the DMX channel [001].	
Pan / Tilt (8/16 Bit)	
Pan- movement	660° in min. 3,2 seconds (Position Feedback)
Tilt- movement	300° in min. 1,5 seconds (Position Feedback)
Weights and Measures	
Width of the base	340 mm
Length of the base	145 mm
height (head vertical)	370 mm
Weight (net)	7,5 kg

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