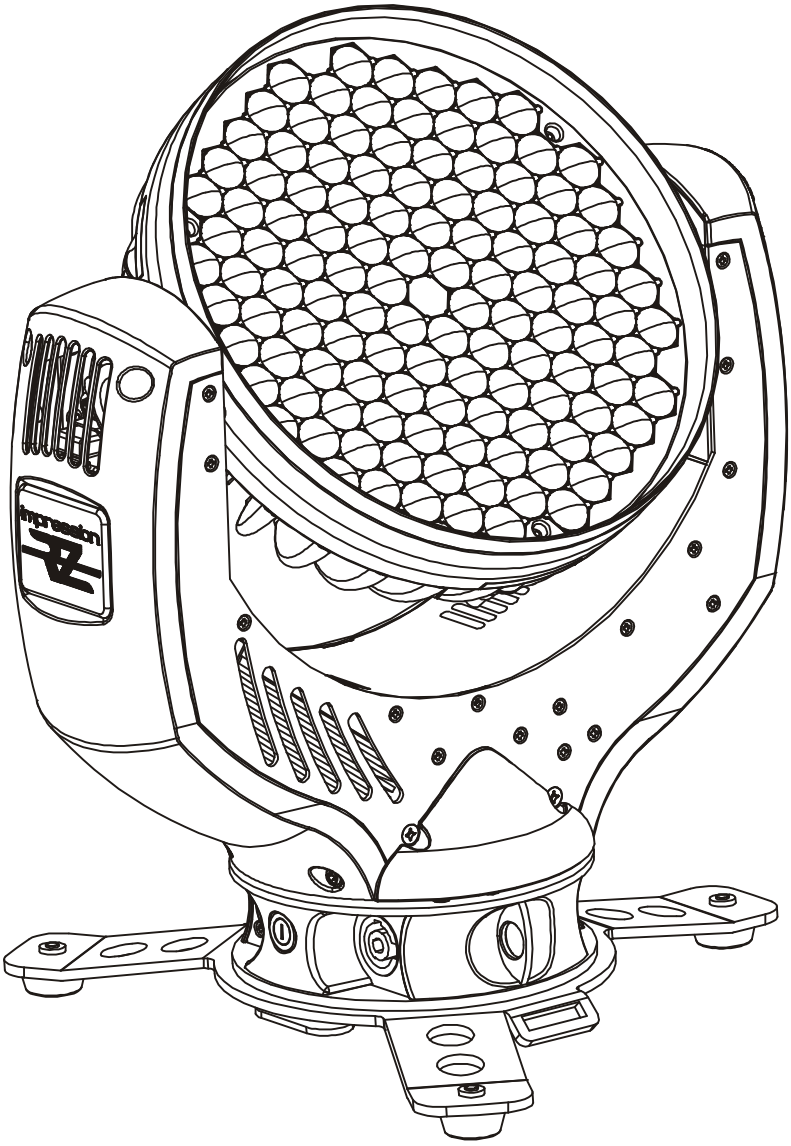
User Manual – 120RZ

impression rgb 120RZ



Software version 1.00/01
(DMX manual version 1.0)

ELATION PROFESSIONAL

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Los Angeles CA. 90040
http://www.ElationLighting.com

Table of content

1. GENERAL INFORMATION

INTRODUCTION: Congratulations, you have just purchased one of the most innovative and reliable lighting fixtures on the market today! The Impression 120RZ,™ has been designed to perform reliably for years when the guidelines in this booklet are followed. Please read and understand the instructions in this manual carefully and thoroughly before attempting to operate this unit. These instructions contain important information regarding safety during use and maintenance.

UNPACKING: Thank you for purchasing the Impression 120RZ™ by Elation Professional®. Every Impression 120RZ™ has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton appears to be damaged, carefully inspect the unit for damage and be sure all accessories necessary to operate the unit have arrived intact. In the event damage has been found or parts are missing, please contact our customer support team for further instructions. Please do not return this unit to your dealer without first contacting customer support at the number listed below.

CUSTOMER SUPPORT: Elation Professional® provides a customer support line, to provide set up help and to answer any question should you encounter problems during your set up or initial operation. You may also visit us on the web at www.elationlighting.com for any comments or suggestions. For service related issue please contact Elation Professional®. Service Hours are Monday through Friday 8:00 a.m. to 5:00 p.m. Pacific Standard Time.

Voice: (323) 582-3322

Fax: (323) 832-9142

E-mail: support@elationlighting.com

Forum: www.ElationLighting.com/forum

Warning! To prevent or reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture.

Caution! There are no user serviceable parts inside this unit. Do not attempt any repairs yourself, doing so will void your manufactures warranty.

Please do not discard the shipping carton in the trash. Please recycle whenever possible.

WARRANTY REGISTRATION*:* The Impression 120RZ™ carries a two year (730 days) limited warranty. Please fill out the enclosed warranty card to validate your purchase. All returned service items whether under warranty or not, must be freight pre-paid and accompany a return authorization (R.A.) number. The R.A. number must be clearly written on the outside of the return package. A brief description of the problem as well as the R.A. number must also be written down on a piece of paper and included in the shipping container. If the unit is under warranty, you must provide a copy of your proof of purchase invoice. Items returned without a R.A. number clearly marked on the outside of the package will be refused and returned at customer's expense. You may obtain a R.A. number by contacting customer support at (323) 582-3322.

Never open this fixture while in use!

This fixture operates with extremely high voltages. Shock may occur if this fixture is opened during use.

All electrical connections must be performed by qualified personal.

2. SAFETY INSTRUCTIONS

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. Be sure the fan and the air inlets are clean and not blocked before attempting operation.

2. It must be assured that the system-head can rotate unhindered throughout the 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 fixture 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.

6. **Never look directly into the beam of light or 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.

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.

Avoid direct radiation of your eyes!

7. To allow a secure operation, follow also the Installation guide described in chapter 0. Operating the Impression 120RZ without suitable safety aids like

Safety cables or clamps/hooks can increase the risk of an accident.

8. Qualified or certified Elation staff should perform all repair, maintenance, and installation work. 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.

10. Please keep this instruction manual for later reference.

11. Only handle the power cord by the plug. Never pull out the plug by tugging the wire portion of the cord.

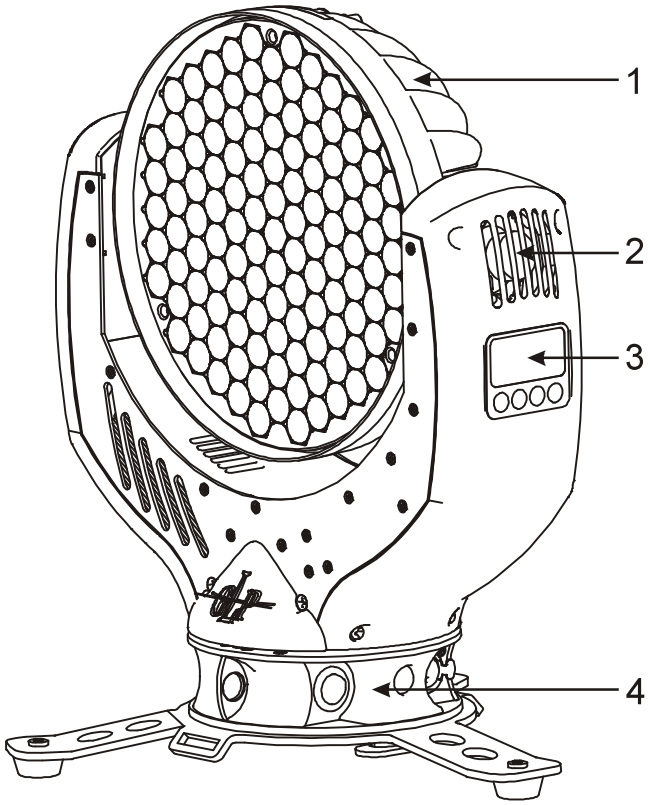
12. Please be aware that damages caused by user modifications to the device are not subject to warranty.

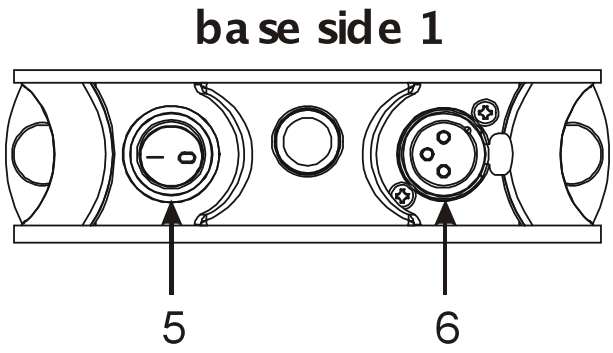
13. Be sure to always use an approved “Power Con” connector. Never attempt to modify the power inlet. Be sure the power cord is never crimped or damaged. If the power cord is damaged, replace it immediately with a new one of similar power rating.

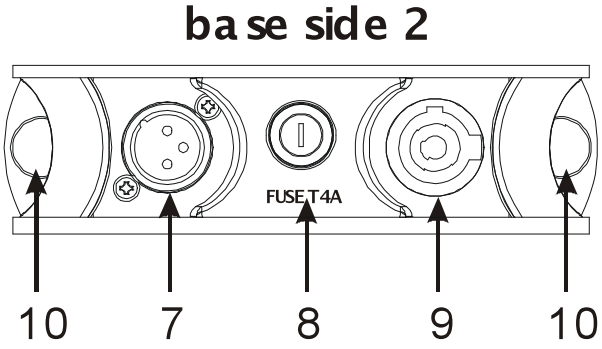
14. Always disconnect from main power before performing any type of service or any cleaning procedure.

3. FIXTURE OVERVIEW

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







5. Power On/Off
6. DMX- Output (3 pole)
7. DMX- Input (3 pole)
8. Micro-fuse 5x20mm, T5A
9. Mains supply (Powercon)
10. 2x Safety eyes

1. **Head / LED Lens Assembly –** The head assembly consist of the main output lenses, and LED cluster module. A high-velocity variable speed fan is mounted in the head to aid in the cooling process. The fan is designed to vary the velocity at different operating temperatures. When the fixture reaches a predetermined internal operating temperature the fan functions at high speeds. The higher speeds provide better cooling associated with higher operating temperatures during long use. When the fixture is operating at a lower temperature the fans operate at low speed. Be sure to keep all vents clean, blocked cooling vents can shorten LED life and reduce the fixtures reliability.

2. **Arm / Cooling Fan –** A high-velocity variable speed fan is mounted in the head to aid in the cooling process. The fan is designed to vary the velocity at different operating temperatures. When the fixture reaches a predetermined internal operating temperature the fan functions at high speeds. The higher speeds provide better cooling associated with higher operating temperatures during long use. When the fixture is operating at a lower temperature the fans operate at low speed. Be sure to keep all vents clean, blocked cooling vents can shorten LED life and reduce the fixtures reliability.

3. **4-Segment Menu Display –** This display details menu functions.

    a) **Mode Select Button –** This button is used to access the fixture's main system menu and on-board programming functions.

    b) **Enter Select Button –** This button is used to select and confirm a menu function when working in the fixture's operating system.

    c) **Down Select Button –** This button is used to scroll backwards when navigating through the system menu.

    d) **Up Select Button -** This button is used to scroll forward when navigating through the system menu.

4. **Base -** This fixture uses an integrated Camlock system for various mounting options built in to the base. The Camlock clamp system allows a quick and efficient means to secure the unit. For proper installation see "Mounting and Installation" on page 12.

5. **Power Switch –** The switch is used to control main power to fixture's

electronics.

6. **DMX Output Jack –** This 3-Pin XLR jack is used to send an outgoing DMX signal. For best results this jack should be terminated if it is the last fixture in a DMX daisy-chain (see termination on page 19).

7. **DMX Input Jack –** This 3-Pin XLR jack is used to receive an incoming DMX signal.

8. **Electronics Fuse Holder –** This housing holds a 250v/4A GMA fuse (120v operation). Never defeat this fuse, this fuse is designed to protect the electronics in the event of severer power fluctuations. In the event of fuse failure, always be sure to replace this fuse with an exact match unless otherwise instructed by an authorized Elation technician.

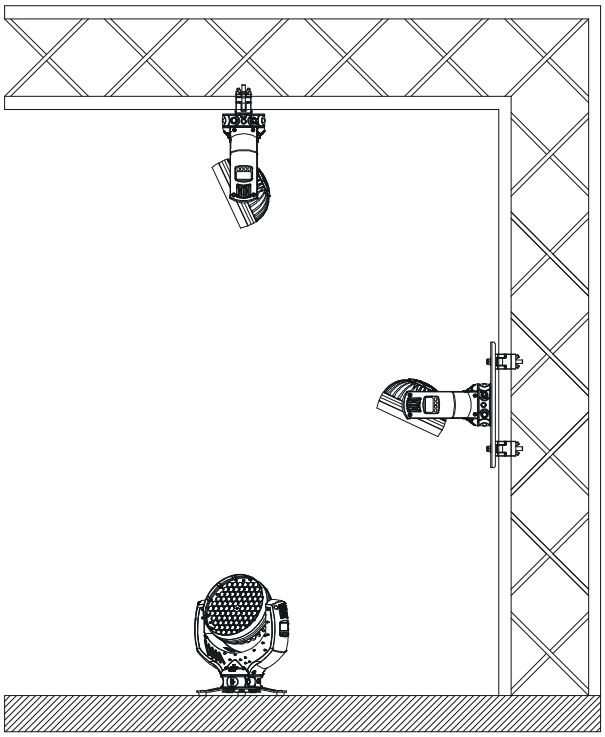
9. **Powercon Connector –** This power jack is designed to be used only with the Neutrik Powercon adapter included with your fixture. This jack provides main power to your fixture.

10. **Safety Cable Mounting Point Connection –** The fixture includes two safety cable slots intergraded into the base. Be sure to use these slots as a secondary rigging point to secure the fixture in the event a clamp fails.

4. MOUNTING AND INSTALLATION

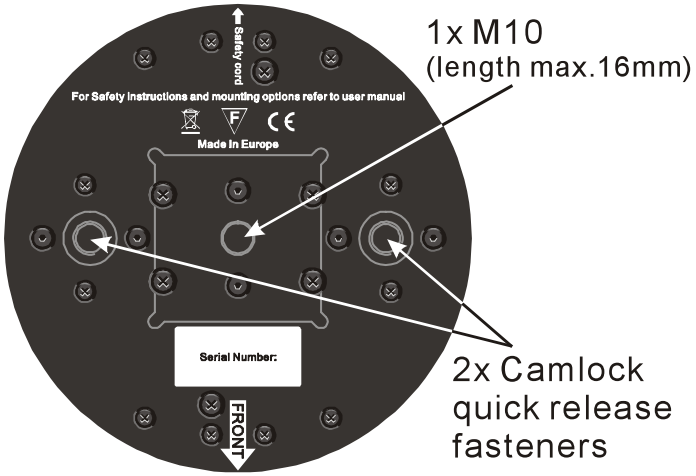
1.1 Mounting

The Impression 120RZ 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.
Only qualified staff shall perform the installation

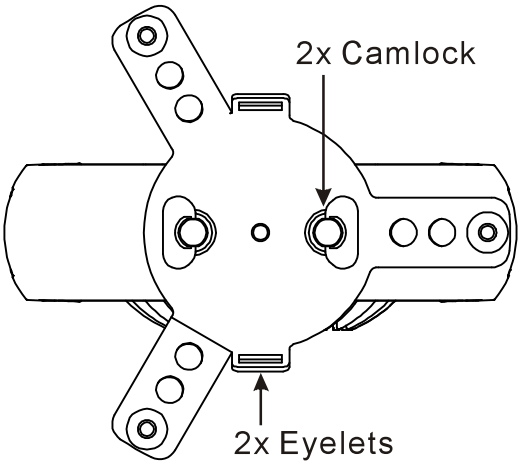
For the various mounting positions of the Impression 120RZ (standing on the floor, sideways or hanging) different accessories kits are available. Through this a safe and firm installation is assured. You'll find special connectors on the bottom side of the fixture that are designed for the floor bracket. In addition the front side of the system is marked with (FRONT) as this is important for an even orientation during installation.

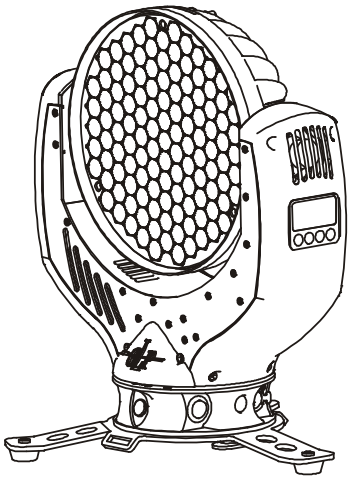


front side of the fixture

1.1.1 Mounting on the Floor (Upright)

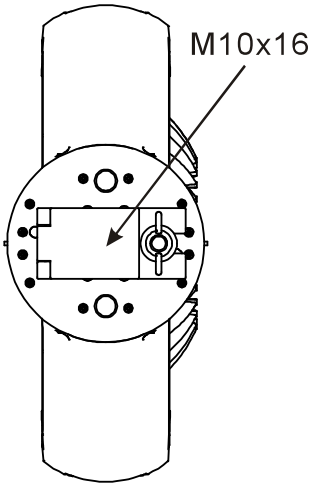
To operate the Impression 120RZ in an upright position, please use the dedicated tripod which is mounted to the bottom of the fixture. It is fixed with fasteners called Camlock quick-release connectors. Turn the two fasteners both 90° to lock them. Do the opposite to release them again. On both sides you'll find eyelets to pull though a fixing strap. This allows an additional bracing of the system during the upright operation.

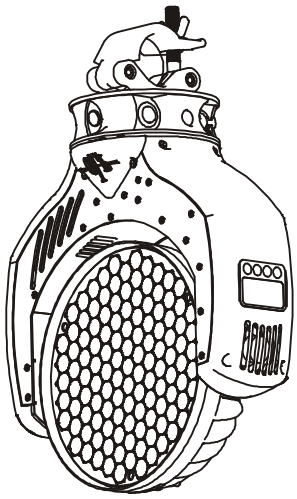




1.1.2 Mounting in hanging Position (Head first)

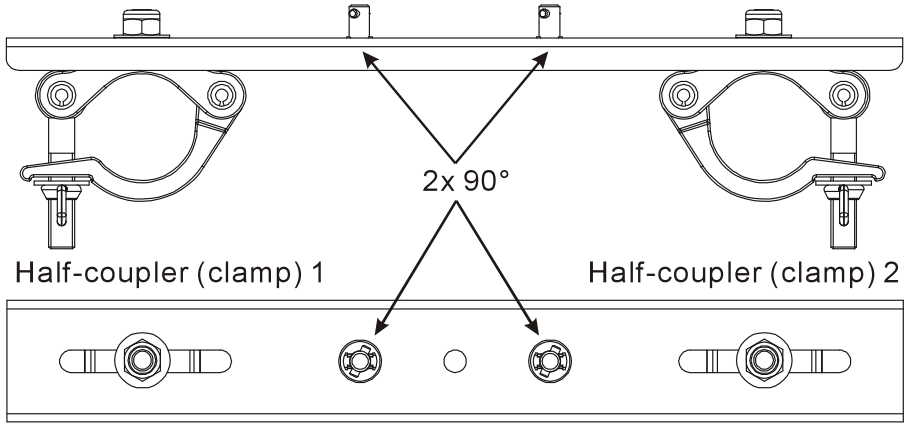
To operate the Impression 120RZ in an hanging position, please use a half-coupler (clamp) which is mounted directly to the bottom side of the system. It is fixed centrically with a M10x16 mm thread bolt.

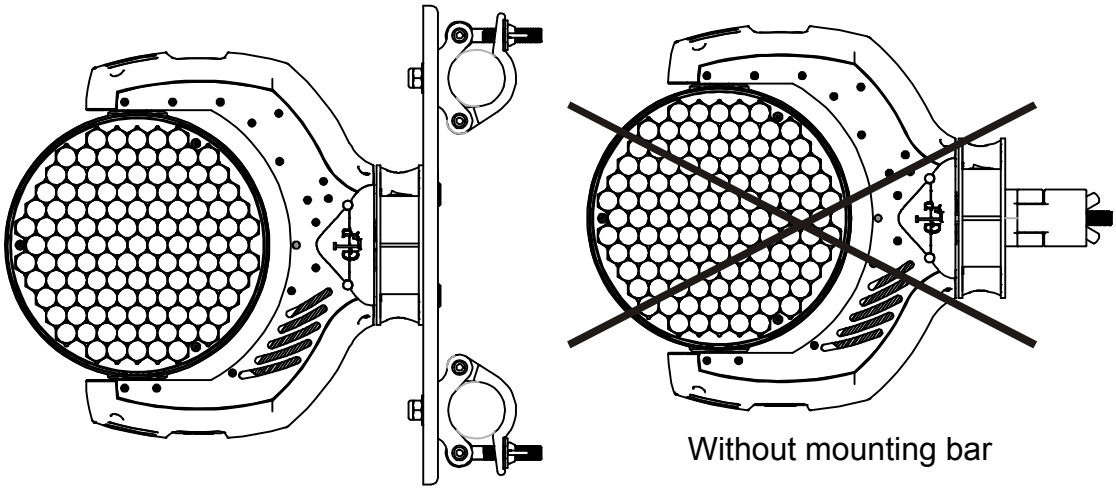




1.1.3 Mounting in sidewise Position

To operate the Impression 120RZ in a side mount position, please use the optional truss-mounting bar. The truss-mounting bar is attached 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 excessive torque levels that fixture produces in side mount position. Failure to use the truss-mount bar can result in severe damage to the fixture. In addition it allows a concentrically position between two truss belts. Never use the clamp mounting procedure detailed in the illustration above for side mounting.





Without mounting bar

1.2 Secure the Device

Regardless of the mounting method of the Impression 120RZ 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.

1.3 Connections

1.3.1 Power Supply

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

Connected load 350 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.

1.3.2 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].

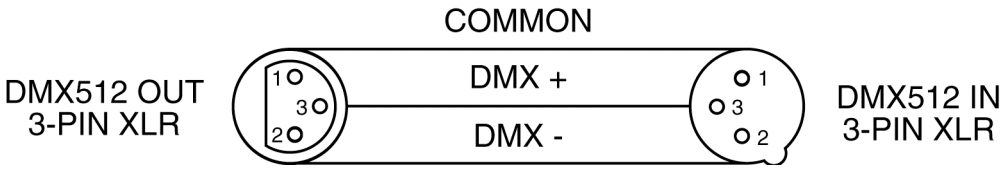
5. UNDERSTANDING DMX

DMX-512: DMX is short for Digital Multiplex. This is a universal protocol used by lighting and controller manufactures as a form of communication between intelligent fixtures and controllers. DMX allows all makes and models of different manufactures to be linked together and operate from a single controller. This is possible as long as all the fixtures and the controller are DMX compliant. A DMX controller sends the DMX data instructions to a fixture allowing the user to control the different aspects of an intelligent light. DMX data is sent out as serial data that travels from fixture to fixture via data "IN" and "OUT" XLR terminals located on the fixtures (most controllers will only have output jacks).

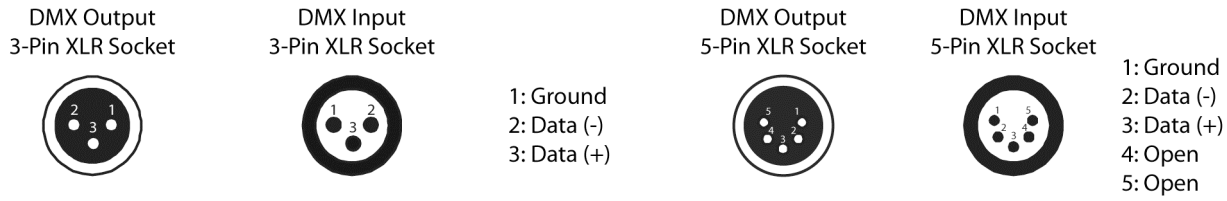
DMX Linking: To ensure proper DMX data transmission, always use proper DMX cables and a terminator, never use microphone cables. When using several DMX fixtures try to use the shortest cable path possible. Never split a DMX line with a "Y" style connector. The order in which the fixtures are connected in a DMX line does not influence the DMX addressing. For example; a fixture assigned a DMX address of 1 may be placed anywhere in the DMX chain, at the beginning, at the end, or anywhere in the middle. The DMX controller knows to send data assigned to address 1 to that fixture no matter where it is located in the DMX chain. The Impression 120RZ™ can be controlled via DMX-512 protocol. The Impression 120RZ™ is a fixture that can operate in three different DMX modes; 11, 14, or 15 channels (see page 20 for the different DMX operations). The DMX address is set electronically using the controls on the LED menu.

Data Cable (DMX Cable) Requirements (For DMX and Master/Slave Operation): Your fixture and your DMX controller require a standard 3-pin XLR connector for data input and data output. If you are making your own cables, be sure to use two conductor shielded digital DMX cable rated at 120 ohms, this cable is designed for DMX transmission and may be purchased from your Elation dealer or at most professional lighting retailers. Your cables should be made with a male and female XLR connector on either end of the cable. Also, remember that a DMX line must be daisy chained and cannot be split, unless using an approved DMX splitter such as the

Elation Opto Branch 4™ or DMX Branch/4™.



1.4 Be sure to follow the above figure when making your own cables. Do not use the ground lug on the XLR connector. Do not connect the cable's shield conductor to the ground lug or allow the shield conductor to come in contact with the XLR's outer casing. Grounding the shield could cause a short circuit and erratic behavior.



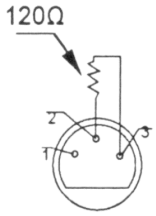
DMX-512 control connection

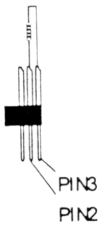
Connect an appropriate DMX XLR cable to either the female 3-pin XLR output of your controller and the other side to the male 3-pin XLR input of the fixture (Please refer to the diagram below.). You can chain multiple fixtures together through serial linking. The cable needed should be two conductor, shielded cable with either 3-pin XLR input and output connectors. Always be sure daisy chain your in and out data connections, never split or "Y" your DMX connections unless you are using an approved DMX splitter such as the Elation Opto Branch 4™ or DMX Branch/4™.

DMX-512 connection with DMX terminator

A DMX terminator should be used in all DMX lines especially in longer runs. The use of a terminator may avoid erratic behavior in your DMX line. A terminator is a 120 ohm 1/4 watt resistor that is connected between pins 2 and 3 of a male XLR

connector (DATA + and DATA -). This fixture is inserted in the female XLR connector of the last fixture in your daisy chain to terminate the line. Using a *line terminator (Elation part: DMX T PACK) will decrease the possibilities of erratic behavior.*





Termination reduces signal errors and avoids signal transmission problems and interference. It is always advisable to connect a DMX terminal, (Resistance 120 Ohm 1/4 W) between PIN 2 (DMX-) and PIN 3 (DMX +) of the last fixture.

5-Pin XLR DMX Connectors. Some manufactures use 5-pin XLR connectors for DATA transmission in place of 3-pin. 5-pin XLR fixtures may be implemented in a 3-pin XLR DMX line. When inserting standard 5-pin XLR connectors in to a 3-pin line a cable adaptor must be used, these adaptors are readily available at most electric stores. The following chart details a proper cable conversion.

3-Pin XLR to 5-Pin XLR Conversion		
Conductor	3-Pin XLR Female (Out)	5-Pin XLR Male (In)
Ground/Shield	Pin 1	Pin 1
Data Compliment (- signal)	Pin 2	Pin 2
Data True (+ signal)	Pin 3	Pin 3
Not Used		Pin 4 - Do Not Use
Not Used		Pin 5 - Do Not Use

Fixture DMX addressing;

All fixtures should be given a DMX starting address when using a DMX controller, so the correct fixture responds to the correct control signal. This digital starting address is the channel number from which the fixture starts to “listen” to the digital control information sent out from the DMX controller. The allocation of this starting DMX address is achieved by setting the correct DMX address on the digital display located

on the back of the fixture.

You can set the same starting address for all fixtures or a group of fixtures, or set different address for each individual fixture. Be advised that setting all you fixtures to the same DMX address will subsequently control all fixtures in the same fashion, in other words, changing the settings of one channel will affect all the fixtures simultaneously.

If you set each fixture to a different DMX address, each unit will start to “listen” to the channel number you have set, based on the quantity of control channels (DMX channels) of each fixture. That means changing the settings of one channel will only affect the selected fixture.

In the case of the Impression 120RZ ™, which is up to a 15 channel fixture, you should set the starting DMX address of the first unit to 1, the second unit to 16 (15 + 1), the third unit to 31 (15 + 16), and so on.

Note: During start-up the Impression 120RZ ™ will automatically detect whether a DMX data signal is being received or not. If a DMX data signal is being received, the display will show **"A.XXX" (XXX** representing the actual DMX address). If the fixture is not receiving a DMX signal the display will flash repeatedly **"A.XXX" (XXX** representing the actual DMX address).

If your fixture is connected to a DMX controller and the display is flashing (not receiving a DMX signal), please check the following:

- **The 3-pin plug (cable with DMX signal from controller) may not be connected or is not inserted completely into the DMX input jack.**
- **The DMX controller is switched off or defective.**
- **The DMX cable or connector is defective.**
- **A DMX terminator has been inserted into the last fixture in your DMX chain.**

6. FIXTURE MENU

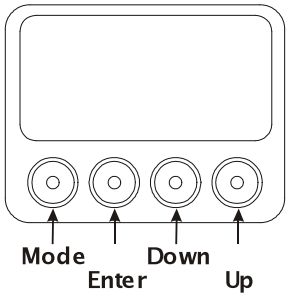
On-Board System Menu: The Impression 120RZ™ comes with an easy to navigate system menu. This next section will detail the functions of each command in the system menu.

LCD Control Panel: The control panel located on the arm of the fixture allows you to access the main menu and make all necessary adjustments to the **Impression™.** During normal operation, tapping the "**MODE**" key once will access the fixture's main menu. Once in the main menu you can navigate through the different functions and access the sub-menus with the **Up** and **Down** buttons. Once you reach a field that requires adjusting, tap the **ENTER** button to activate that field and use the **UP** and **Down** button to adjust the field. Tapping the **Enter** button once more will confirm your setting. Once a setting is saved the LED will briefly readout **PASS** to confirm a new setting has been made and locked into memory. You may exit the main menu at any time without making any adjustments by tapping the **MODE** button.

MODE Button - To access the main menu locate the MODE button on the front of the unit. Press this button to activate the system menu. Tap the UP button until you reach the function you wish to change. When you reach the function you wish to change tap the ENTER button once to select that menu function. When a function is selected the menu will begin to flash, use the UP or DOWN button to change the function. Once your changes are made tap the ENTER button yet again to lock the change in the system menu. To exit without making any changes tap the MODE button.

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 120RZ**.** 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	Level 4	Remark
DMX Start Address 001				Define the DMX start address
Special	**Manual DMX**			Manual control of all system functions
		Pan		Manual control for Pan (X-movement)
		Speed Movements		Speed adjustment for Pan/Tilt movements → see also item below
		Pan/Tilt Movements		Manual control for Pan/Tilt movement
		Special		Activate the White- or Full-Power Mode; see also DMX table
		White Temperature		Manual control for Color temperature
		Dimmer		Manual control for Dimmer
		Shutter		Manual control for Shutter
		Blue		Manual control for blue
		Green		Manual control for green
		Red		Manual control for red
		Color Wheel		Manual control for the color wheel
		Zoom		Manual control for zoom
		Tilt		Manual control for Tilt (Y-movement)
	Display Contrast			Adjustment for the Display contrast
	Default Set			Resetting all functions to original values
	Set Dimmer Frequency			Changes PMW frequency between 600Hz and 1200Hz
	LED Dimmer Version			Reads out the current LED dimmer (software) version
	Impression Version			Reads out the current CPU software version
	Adjust	**Key code xxxx**		Use the code for entering the calibration menu (for authorized persons only)
		Pan Offset		Calibration for Pan-Offset
		Tilt Offset		Calibration for Tilt-Offset
		Clear EEPROM		Erase EEPROM memory
		Diagnose		Diagnose functions
			Pos Feed Pan Delta	Internal data and function diagnose
			Anz Ti0-Int-Err	Internal data and function diagnose
			PFC Voltage	Show the present PFC voltage
			Pos Feed Tilt Delta	Internal data and function diagnose
	Temperature Arm			Indicates the arm temperature

← DOWN - UP →

← DOWN - UP →

Temperature Head		Indicates the head temperature
PAN/TILT Motor Power		Switches power for Pan/Tilt ON or OFF (disconnected from power)
PAN/TILT Silent Mode		Reduces maximum speed for Pan/Tilt
DMX Hold		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
	Green	Input for green adjustments
Set DMX Image		Stores the Scene currently sent to the unit
DMX input Monitor		Indicates the presently received DMX signal per DMX channel
	Pan	Instantaneous value for Pan
	Speed Movements	Speed adjustment for Pan/Tilt movements → see item below
	Pan/Tilt Movements	Instantaneous value for Pan/Tilt movements
	Special	Instantaneous value for Special
	White Temperature	Adjustment of the color temperature for WHITE
	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
	Zoom	Instantaneous value for Zoom
	Color Wheel	Instantaneous value for Color Mixing unit
	Tilt	Instantaneous value for Tilt movement
Self test		Performs an automatic self-test
Live time		Indicates the overall operation time of the system
Display		Adjust the display
	Blackout	ON/OFF: Display OFF
Select DMX Mode		Please select the desired DMX Mode
	Compressed	Fixture works in "Compressed" mode → see also section 0 below
	Normal	Fixture works in "Normal" mode → see also section 0 below

← DOWN - UP

	High-Resolution	
		Fixture works in "High Resolution" mode → see also section 0 below
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

7. DMX CHANNEL SELECTION (DMX PROTOCOL)

Normal-Mode 15 DMX channels

Channel	Function	Time and Value	DMX	HEX	%
1) PAN-coarse	0 .. 660°	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°	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 - 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	Color temperature 3200K	104..111	68..6F	41..43,5
	White	Color temperature 5600K	112..119	70..77	44..46,5
	White - CTB	Color temperature 7200K	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	E=..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	slow - fast	16..47	10..2F	6..18,5
	Up-dimming then Shutter closing (random patterns)	slow - fast	48..79	30..4F	19..31
	Shutter open then down-dimming (random patterns)	slow - fast	80..111	50..6F	32..43
	Up-dimming then down-dimming (random patterns)	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	95..100
10) Dimmer	Dimmer	0 - 100%	0..255	0..FF	0..100
11) Color temperature	No color temperature correction		0..6	0..06	0..2
	Continuous color temperature correction between 3200k - 7200k	Applicable only for White color [5)]	7..255	07..FF	3..100
12) Special	Max. Power-Mode [4)]	Max. light output without white balance	0..15	0..0F	0..5,5
	White-Mode [4)]	White balance used	16..31	10..1F	6..12,5
	Fan min. as long as temp. < 90°C		224..229	E0..E5	88..89,5

Channel	Function			Time and Value	DMX	HEX	%
	RESET (Normal Mode)				**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. 660° = 200s Pan Max. 660° = 3,2s Tilt Min. 300° = 110s Tilt Max. 300° = 1,5s	16..255	10..FF	7..100
15) Zoom	Spot - Flood			10° - 26°	0…255	00…FF	0…100

[4] Max. Power-Mode vs. White-Mode

The Impression 120RZ 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. If the White-Mode is 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] The continuous color temperature correction is applicable only for the White color i.e. if this function is selected (DMX ≥ 006) the Impression 120RZ will change the color to white immediately and will then be adjustable in the color temperature in a range between 3200K and 7200K. Hence a color correction for others than white is not intended.

Compress-Mode 11 DMX channels

Channel	Function	Time and Value	DMX	HEX	%
1) PAN-coarse	0 .. 660°	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°	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 - 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	Color temperature 3200K	104..111	68..6F	41..43,5
	White	Color temperature 5600K	112..119	70..77	44..46,5
	White - CTB	Color temperature 7200K	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	slow - fast	16..47	10..2F	6..18,5
	Up-dimming then Shutter closing (random patterns)	slow - fast	48..79	30..4F	19..31,5
	Shutter open then down-dimming (random patterns)	slow - fast	80..111	50..6F	32..43
	Up-dimming then down-dimming (random patterns)	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...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
11) Zoom	Spot - Flood	10° - 26°	0…255	00…FF	0…100

High Resolution (Extended) -Mode 14 DMX Channels

Channel	Function	Time and Value	DMX	HEX	%
1) PAN-coarse	0 .. 660°	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°	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) Red-coarse	Color mixing system – Red	0 - 100%	0..255	00..FF	0..100
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		0..255	00..FF	0..100
9) Blue-coarse	Color mixing system – Blue	0 - 100%	0..255	00..FF	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	slow - fast	16..47	10..2F	6..18,5
	Up-dimming then Shutter closing (random patterns)	slow - fast	48..79	30..4F	19..31,5
	Shutter open then down-dimming (random patterns)	slow - fast	80..111	50..6F	32..43
	Up-dimming then down-dimming (random patterns)	slow - fast	112..143	70..8F	44..56
	Strobe effect pause	5s to 1s	144..199	A0..C7	57..77
	Strobe effect, slow - fast	1 Hz .. 10 Hz	200..239	C8..EF	78..94
	Shutter open		240...249	F0..F9	95..97,5
	RESET	**Min. 3 Sec.**	**250**	**FA**	**98**
	Shutter open		251..255	FB..FF	99..100
12) Dimmer-coarse	Dimmer	0 - 100%	0..255	0..FF	0..100
13) Dimmer-fine	Dimmer - Low		0..255	0..FF	0..100
14) Zoom	Spot - Flood	10° - 26°	0…255	00…FF	0…100

[1)] 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 120RZ will afterwards start from that color and will execute the rainbow effect synchronously. Different Impression 120RZ can certainly have different start-colors but will still execute the rainbow effect synchronously. If you choose a color different from the once marked with [1)] in the tables above the rainbow start-color will be red.

[2)] Rainbow-effect Stop will pause this function. After resuming the rainbow-effect will be continued with the current color.

[3)] The Rainbow-effect will run synchronously only if it will be started going out from one of the predefined colors (see also [1)] 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 features during switching-ON the system

a) 1200Hz Mode (Hold down the **UP- button** during power ON)
After switching ON the system the LEDs will be operated with a Pulse Width Modulation (PWM) of 1200Hz.
In addition all standard setting will be loaded (DMX start address [001], Normal Mode).

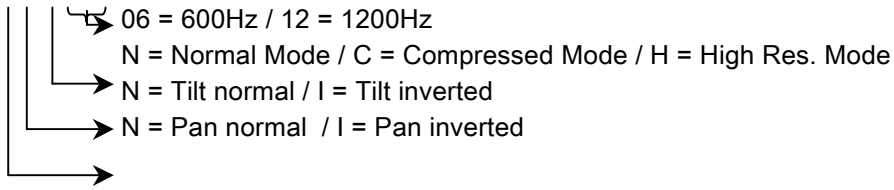
b) 600Hz Mode (Hold down the **DOWN- button** during power ON)
After switching ON the system the LEDs will be operated with a Pulse Width Modulation (PWM) of 600Hz.
In addition all standard setting will be loaded (DMX start address [001], Normal Mode).

c) Standard Mode (Hold down the **ENTER- button** during power ON)
After switching ON the system the DMX start address will be set to [001]. All other setting remain unchanged.

Additional Display Indications

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

XX/X/XX



8. MAINTAINING AND CLEANING THE IMPRESSION 120RZ

The Impression 120RZ 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!

1.5 Safety regulations

- **Pull out the main plug!**
- Wait min. 15 minutes after the last operation to cool down the fixture.

1.6 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 tough lenses with bare fingers.**

9. 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, T5A
Operational Parameters	
Max. Ambient Temperature	45°C (integrated overheating switch)
Mounting Position	Any (see chapter mounting)
Lighting System - Additive Color mixing	
LED Type	120x Rebel High-power- LEDs
Lifetime	100.000 h
42x green LEDs, 36x blue LEDs, 42x red LEDs Wavelength optimized for maximum presentable color space	
Optical System	
High efficient Collimator cluster	
Fixed optical mount with an angel of reflected beam between 10° - 26°	
Shutter / Dimmer (8/16 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)	**8.0 kg**

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NOTES:

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