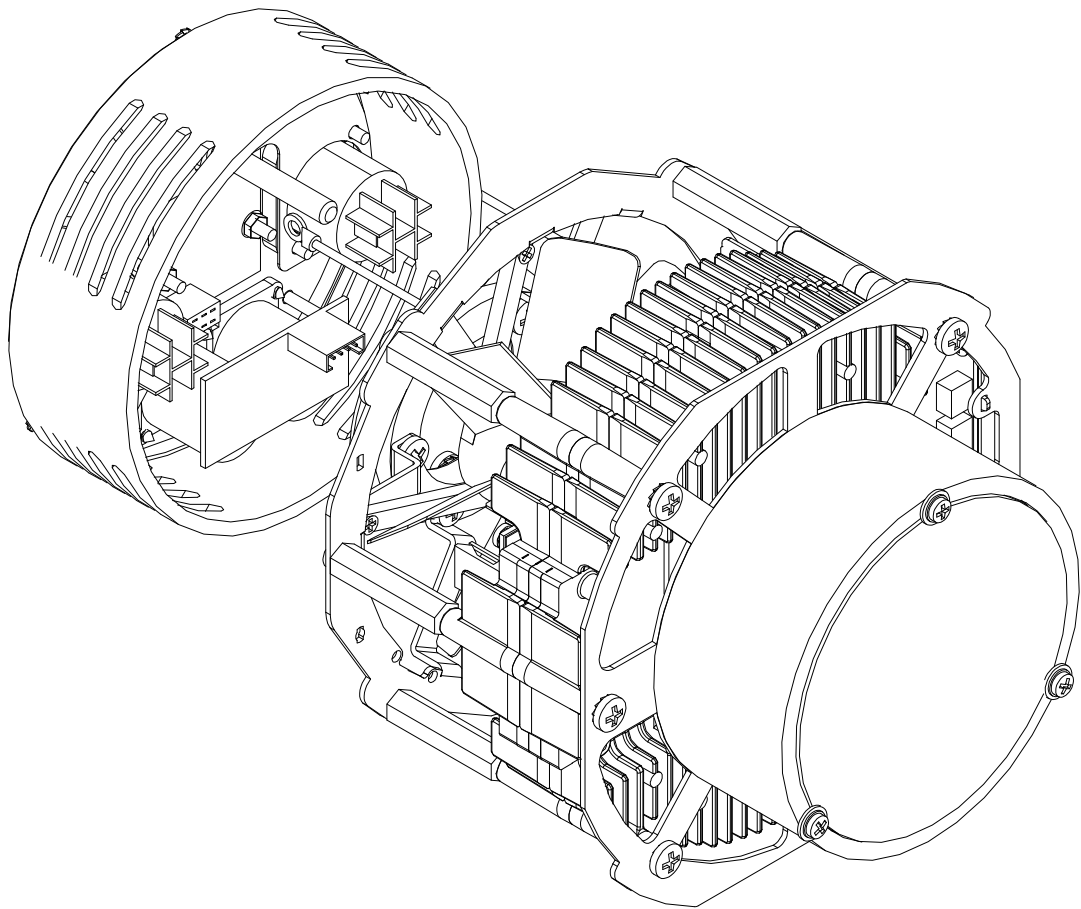# Lites

HPLED II WHITE

Owner's and service manual

Read this manual totally and carefully follow all the instructions contained. File this manual for future use
It is essential to read all the information contained to ensure installation, service and full operation of the HPLED II
All operations must be accomplished, handled and carried out by qualified personnel only
NOT COMPLYNIG WITH GIVEN NOTICE WILL VOID WARRANTY AND WILL FREE THE MANUFACTURER OF ANY SORT OF RESPONSABILITY AND LIABILITY.

www.litessrl.com

Unpacking

Unpack the carton and gently remove HPLED II from the box. Ensure HPLED II is received in all its parts. In the event the HPLED II shows any damage, do not use it and contact immediately your transporter as well as your seller

Items in the carton consist of:
HPLED II Module
Rear metal cover with input connections
Blue Neutrik PowerCon connector
This owner's manual

⚠️ Safety information for the use of the HPLED II and periodical maintenance of unit.

Users must scrupulously comply with information/indications that follows
HPLED II must be installed on original " **ETC source 4**" fixture only. Any other use will void warranty and will free the manufacturer of any sort of responsibility and liability.
Never utilise HPLED II assembly alone as it must always be housed in original ETC Source 4 barrel.
Minimum distance from any flammable source is of 0.25m.
Minimum throw distance from illuminated surface: 0.5m.
Installation of the unit(s), including external source4 body, must be secured with adequate clamps, safety cords, nuts and bolts to bear at least 4 times the weight of the whole unit(s)
Always Power HPLED II to safety circuit breakers
Install HPLED II in ventilated ambient which temperature must not exceed 35°C
HPLED II is NOT for domestic use. HPLED II can only be used for professional applications
Some outer parts of the ETC Source4 can reach temperatures of up to 60C° when HPLED II is operated
HPLED II must be fitted with protection shields (Lenses)
On no account, directly or indirectly, LED must be touched as it may impair its use.
An Essential and Periodically throughout cleaning of the HPLED II is recommended. This practice avoids that layers of dust and other impurity jeopardise and reduce the correct operation of the unit. Lenses must be cleaned to remove layers of dust that may impede and or reduce the passage of the light through the lenses. The correct and periodically maintenance keeps also fans and vents clean thus keeping the HPLED II in its best performance conditions. Never touch, directly or indirectly, the Yellow core of the LED nor use solvents that can damage the LED irremediably. Protection shields if battered/worn, must be replaced with new ones (Lenses).

⚠️ Warning from electric shocks

All operations must be accomplished, handled and carried out by qualified personnel only

Warning High voltage hazard, always disconnect Power before any handling and any servicing of HPLED II
Do not and never handle HPLED II with humid/wet hands or near to any water or any kind of moisture sources
Always connect HPLED II to mains fitted with safety device switch that cuts power off in case of danger
The HPLED II does NOT and CAN NOT be operated via Phase control dimmer nor connected/operated in NON-DiM mode
HPLED II is rated Class I
Earth connection is mandatory!
CE Approvals

The HPLED II products to which this manual refers to, complies with European directive pursuant to:
2014/35/EU safety of electrical equipment supplied at low voltage (LVD)
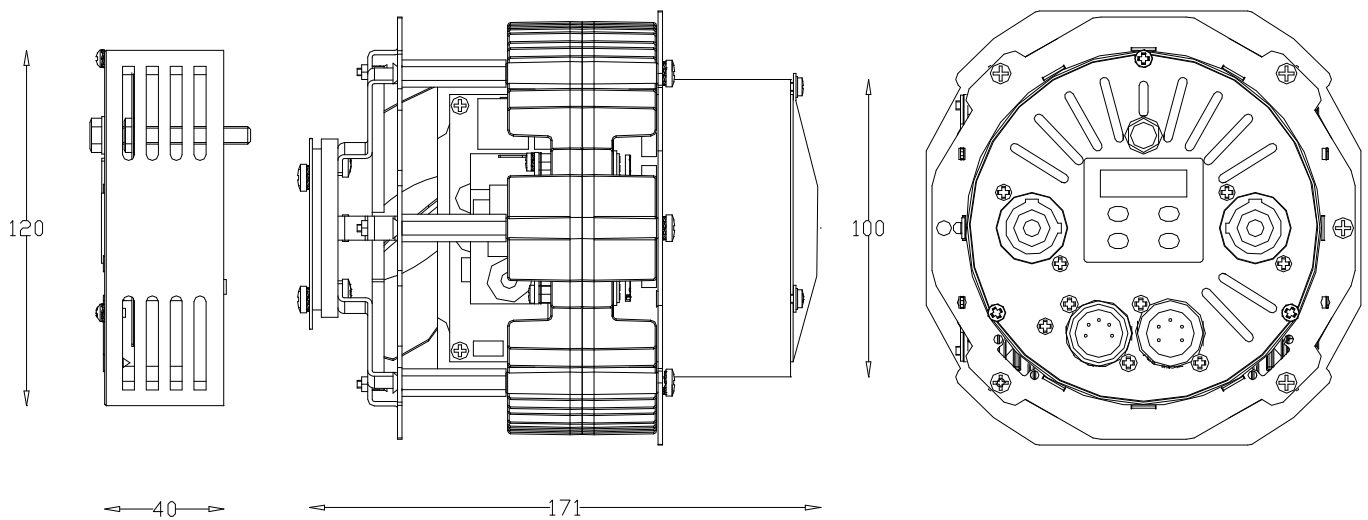2014/30/EU Electromagnetic compatibility (EMC)
2011/65/EU Restriction of the use of certain hazardous substances (RoHS)

WARRANTY!

A 12-month warranty is granted on the HPLED II from purchase's date. Warranty covers fabrication defects only. Warranty is immediately voided if the HPLED II has been handled by unqualified personnel. Any improper and unauthorised use, such modification(s) or misapplication of the HPLED II will also void the warranty of the product(s). Silver colour label showing technical data and serial number, if removed or if data are impaired to render details illegible, it will immediately void the warranty

Technical specifications

Power Supply   100-240   V~ 50/60Hz
Maximum power consumption   170W
Stand-by power consumption   5W
Minimum ambient temperature   -10°C
Maximum ambient temperature   35°C
LED Colour Temperature: 2700°k, 3000°K, 4000°K,5600°K (to specify when ordering)
LED CRI   *Minimun CRI* : 90 >   and 97 > (depending on LED model)
LED Life   (see Manufacturers ' specifications)
Weight   2,49 Kg
IP Rating   To be housed into original ETC Source four fixture only
Working position   Any
Power connectors   IN & OUT Neutrik PowerCon
Data connectors   IN & OUT XRL5
Data protocols   DMX 512; RDM ready
User interface   4-digit display and 4 buttons
Manual operation: Users must operate via buttons provided on the display
Fan control: Fan speed adjustment
Control of LED frequency: Selection of LED frequency refresh
2 Dimming curves control: Selection of two dimming curves control

CE compliant

Dimensions (see picture)

HPLED II installation

HPLED II has been designed to be installed in any "ETC source 4" fixtures to give the equivalent of traditional HPL575/750 source. Some parts of the existing "ETC source 4" fixture must be removed
Course of actions:

1. **Disconnect any kind of power/source from any item being handled, that could cause electric shock**
2. Loosen knobs that hold front lens assembly, remove it and place it aside in a safe place
3. Locate rear section of the Source 4 fixture, then start loosening knob that holds the round plate in place until it is totally separated from the main body. You may either store or scrap this part**. HOWEVER LOCK-WASHER AND THE M4 SCREW USED TO HOLD THE GROUND CORD ON THE ETC SOURCE4 BODY MUST BE SECURED ASIDE AS THEY WILL BE USED FOR THE NEW GROUND CORD PROVIDED WITH THE HPLED II FIXTURE.**
4. **As of now onwards for your own safety we recommend you must wear protection gloves and safety transparent goggles.**
5. Locate the Source 4 inner reflector and start removing it (use the optional Lever if ordered with HPLED II) from its housing as shown in the Source four assembly guide
6. Place HPLED II on working bench and start loosening the 3 M4 screws that hold the metal ring (marked by red arrow in figure 2).
7. Accommodate the HPLED II in the Source 4 body. Ensure the correct inward direction is followed as remarked by the 2 red round ring references. Make also sure to follow the red arrow direction as shown in figure 3. During such operation make sure that the 3 connecting cables (i.e. power cable, DMX cable and display cable) are not squeezed, while being lead through loop-holes, during reassembling of the unit.
8. Remount the metal ring to its former position; tighten now the 3 provided M4x6 screws to their full extent. Do not exceed nor force tightening.
9. Connect the 3 lead-cables to the rear metal cover provided, ensure that connectors are inserted in the correct side. Special attention must be paid to the **flat cable** as it must be handled with extreme care while connecting its ends. (flat cable is squeezed or impaired can cause malfunction to the product)
10. Ensure that all cable connections are neatly and clearly set to their positions avoiding any contact, interference, interconnections, interpositions with fans and other interfering components that might collide, squeeze hamper the correct operations and eventually damage the product.
11. Remount the rear metal cover to the Source 4 body using any 11mm spanner; tighten the screw to its full extent. Do not exceed nor force tightening.
12. The lock washer and the M4 screw used for holding the eyelet-cord to ground the fixture as expressed in point 3, must be now used to secure the new provided eyelet-cord to ground/earth the fixture as shown in fig.6
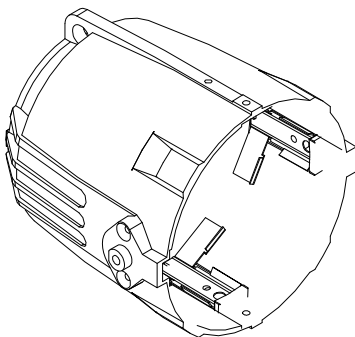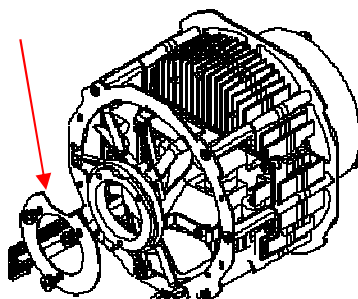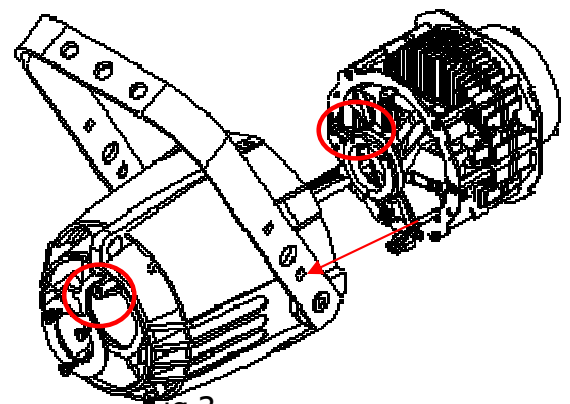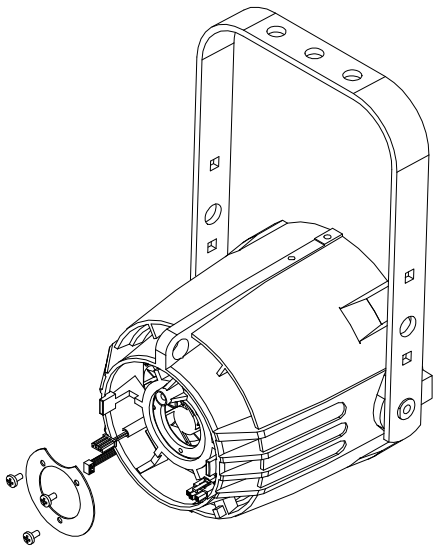

Fig.1   Fig.2   Fig.3

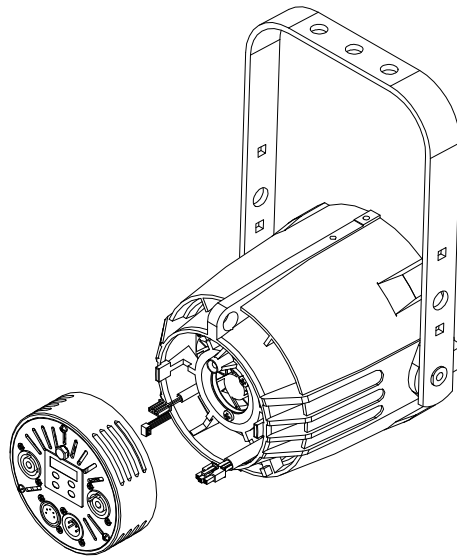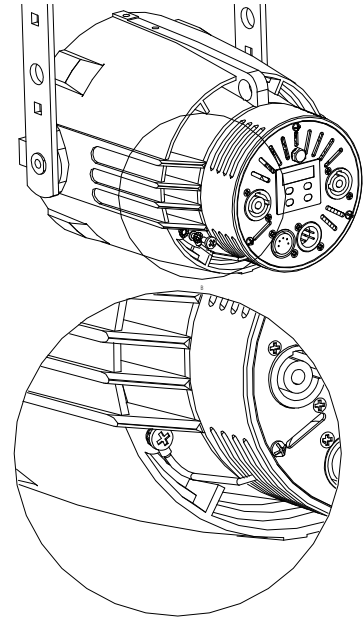Fig.4   Fig.5   Fig.6

⚠️ Connection to mains

WARNING ! Installation(s) must be accomplished, handled and carried out by qualified personnel only and must comply with all norms in force in the installation's country

HPLED II is supplied with a free Blue Neutrik PowerCon plug that must be wired using a 3x1.5mm² lead which additional specifications include:
`erating Voltage: 300/500V
Test Voltage: 2KV
Operating Temperature: -10°C / +90°C
Connect blue wire to N terminal, brown wire to L terminal and Yellow/Green wire to earth terminal. Ensure safety circuit breaker use at all times. Daisy chain of up to 10 units when connected to 230VAC. Daisy chain of up to 5 units when connected to 110VAC. Maximum daisy chain length: 20m.

⚠️ **WARNING:NEVER CONNECT HPLED II ENGINE TO ANGLE PHASE DIMMER PACK NOR TO NON-DIM MODE**

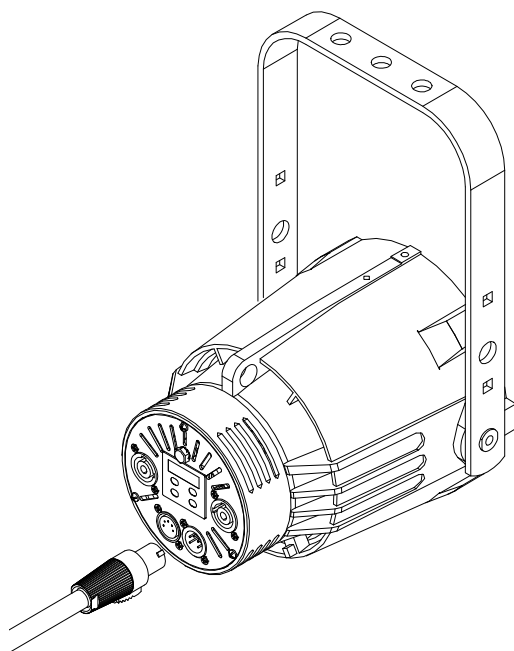
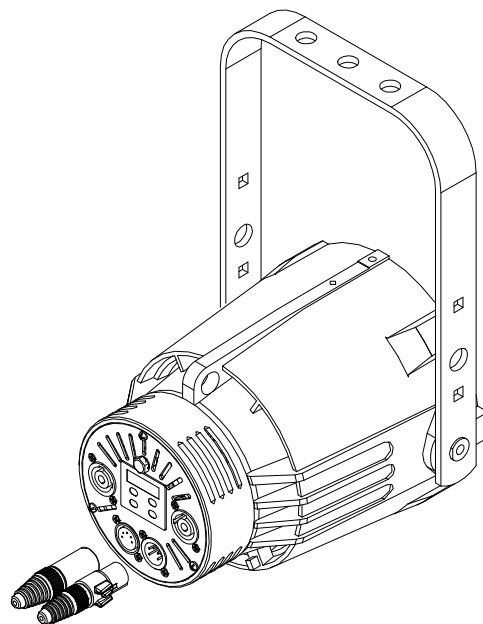Fig.7   Fig.8

Signal control connection

HPLED II can be operated via either DMX512A and or RDM ready Protocols. For Daisy chain DMX line use a-2 lead wire plus shield.
Red led blinks when DMX Input is available. DMX off line when led is off

RDM – Remote Device Management

RDM Controller allows for remote standard operations
RDM default options include:
Discovery mode: RDM is active when controller incepts this mode, the device reports itself by giving a flash of light (Controller sets the device in a listing to read: settings, DMX address, personality settings, i.e. DMX mode including all DMX supra mentioned)
ON/OFF "Identify": This mode is to identify the manufacturer's device (Lites srl) by giving a flash of light of the LED
Model information (HPLED II-BUCK)
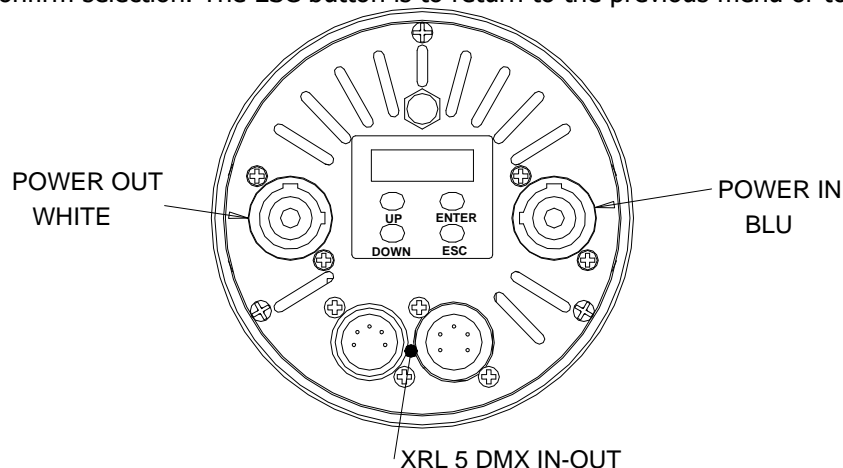Software version information (HPLED II-BUCK v.x.xx)
Mode to reveal temperatures of the LED and of the driver
Mode to reveal hour-meters of the LED and of the device

DMX XLR 5 Pin As sigment	
pin	Description
1	GND
2	DMX-
3	DMX+
4	Not connected
5	Not connected

Power HPLED II ON
WARNING ! Before powering HPLED II ensure that all installation(s) procedure(s) have(s) been properly set and accomplished.

When HPLED II is powered the setup display will show the software release version. The UP, DOWN, ENTER and ESC buttons will allow the operations of HPLED II menu. UP and DOWN buttons allow to browse through menu options, the ENTER button to confirm selection. The ESC button is to return to the previous menu or to quit previous setting(s).

POWER OUT WHITE

POWER IN BLU

XRL 5 DMX IN-OUT

Menu items

Displayed Message	Allowed or displayed values	Function
Addr	001..510	Set Up DMX Address
Mode	1 ch 2 ch 3ch 4ch 5ch	DMX Operating mode (see next page)
Man	0..255	Manual light output adjustment (this is possible even if no DMX is present). Adjusted value will be stored on the internal permanent memory
drUt	..°C	Shows driver operating temperature
LEdt	..°C	Show led operating temperature
PUM	0..100%	Shows current led power (0-100%)
SMOO	FAST MED SLOW	DMX data Speed adjustment
GAMM	LInE qUAd	Dimmer profile selection: - LinE for linear dimming regulation - qUAd for tungsten lamp emulation
booS	Off on	Boost selection: off = maximum led power at 90% on = maximum led power at 100%

FAn	Aut MEDL LOW	3 fan operating modes i.e atuomatic, medium , slow speed. Fan speed adjujstments (fan-sound) reflect on self-correct output LED brightness and other factors as room-temperature
PoS	AA VV	Display orientation selection: AA = normal VV = inverted
StbY	Off on	Standby display activity: off = display always switched on on = display switched off after few seconds of buttons inactivity (only the right side dot will be lighted to indicate DMX availability)
dEF	Off on	ON Will restore the default factory values
SoFt		Shows Software version

DMX Operating Modes (Mode)

HPLED II provides different DMX operating modes ensuring the ideal use of the DMX universe
Shutter/strobo, 8/16 bit dimmer, fan speed and LED frequence are adustable

1ch mode

Channel	Function	DMX Values	
1	dimmer	0..255	Light output: 0=Off, 255=Maximum Power

2ch mode

Channel	Function	DMX Values	
1	shutter	0-9	off
		10..255	Strobe effect from slow to fast
2	dimmer	0..255	Light output: 0=Off, 255=Maximum Power

3ch mode

Channel	Function	DMX Values	
1	shutter	0-9	off
		10..255	Strobe effect from slow to fast speed
2	dimmer	0..255	Light output: 0=Off, 255=Maximum Power
3	Fan speed	0..24	Fan at slowest speed
		24..255	Fan speed from slow to fast

4ch mode

Channel	Function	DMX Values	
1	shutter	0..9	off
		10..255	Strobe effect from slow to fast speed
2	dimmer	0..255	Light output: 0=Off, 255=Maximum Power
3	Fan speed	0..24	Fan at slowest speed
		24..255	Fan speed from slow to fast
4	Frequency Modulation	0..24	PWM Frequency 1KHz
		25..49	PWM Frequency 2KHz
		50..74	PWM Frequency 3KHz
		75..99	PWM Frequency 4KHz
		100..124	PWM Frequency 5KHz
		125..149	PWM Frequency 6KHz
		150..174	PWM Frequency 7KHz
		175..199	PWM Frequency 8KHz
		200..224	PWM Frequency 9KHz
		225..255	PWM Frequency 10KHz

5ch mode

Channel	Function	DMX Values	
1	shutter	0..9	off
		10..255	Strobe effect from slow to fast speed
2	Dimmer Coarse	0..255	Light output: 0=Off, 255=Maximum Power – Coarse
3	Dimmer Fine	0..255	Light output: 0=Off, 255=Maximum Power - Fine
4	Fan speed	0..24	Fan at slowest speed
		24..255	Fan speed from slow to fast
5	Frequency Modulation	0..24	PWM Frequency 1KHz
		25..49	PWM Frequency 2KHz
		50..74	PWM Frequency 3KHz
		75..99	PWM Frequency 4KHz
		100..124	PWM Frequency 5KHz
		125..149	PWM Frequency 6KHz
		150..174	PWM Frequency 7KHz
		175..199	PWM Frequency 8KHz
		200..224	PWM Frequency 9KHz
		225..255	PWM Frequency 10KHz

Error messages

In case of malfunction, the following messages can be shown:
HP Fan Error: means problems on fan
Temperature Error: LED sensor might be defective and or temperature has trespass threshold limit
Should any of the above given messages occur, the LED will automatically switch off. Refrain and halt the use of the HPLED II and promptly contact any authorized service centre.

Periodical maintenance

To ensure the correct HPLED II operation, we suggest the following periodical maintenance operations:
Remove dust or any kind of other dirt from the fans and loop-holes, this operation ensures the correct air flow
Remove dust from lenses using a clean cloth. This will ensure the maximum light efficiency
Replace damaged protection screen and lenses when necessary
<u>Do not touch nor clean the LED nor the yellow area around it with solvent</u>

Device disposal information

At the end of its life, HPLED II must be disposed to an appropriate electrical and electronic equipment waste collection centre. Eco-friendly disposal, helps to avoid possible negative impact on the environment and human health and promotes the reuse and/or recycling of the materials making up the product. Illegal disposal involves administrative sanctions provided by laws enacted.

Manufacture declines any sort of personal/corporate responsibility/liability for damages caused by the inadequate/misuse of the product as well as if the product has been handled by unqualified personnel. Not complying with security norms/periodical maintenance as expressed in the owner's/service manual will also totally free personal/corporate responsibility/liability.

Text, wordings, drawings, specifications, modifications and other changes of this manual may apply anytime without notice. The specifications are not binding.

HPLED II White 21/01/2019 rev.01