Astra Hybrid420IP

IP65 Hybrid moving beam-spot, with a 420W USHIO NSL421 lamp

USER MANUAL

REV.01-09/22

English version

Thank you for choosing PROLIGHTS

Please note that every PROLIGHTS product has been designed in Italy to meet quality and performance requirements for professionals and designed and manufactured for the use and application as shown in this document.

Any other use, if not expressly indicated, could compromise the good condition/operation of the product and/or be a source of danger.
This product is meant for professional use. Therefore, commercial use of this equipment is subject to the respectively applicable national accident prevention rules and regulations.

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Product user manual can be downloaded from the website www.prolights.it , or can be inquired to the official PROLIGHTS distributors of your territory (***https://www.prolights.it/sales_network.html***).

Scanning the below **QR Code**, you will access the download area of the product page, where you can find a broad set of always updated technical documentation: specifications, user manual, technical drawings, photometrics, personalities, fixture firmware updates.

Visit the download area of the product page

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SAFETY INFORMATION

WARNING!

- Please read carefully the instruction reported in this section before installing, powering, operating or servicing the product and observe the indications also for its future handling.

This unit is not for household and residential use, only professional applications.

Connection to mains supply

- The Connection to the mains supply must be carried out by a qualified electrical installer.
- Use only AC supplies 100-240V 50-60 Hz, the fixture must be electrically connected to ground (earth).
- Select the cable cross section in according with the maximum current draw of the product and the possible number of products connected at the same power line.
- The AC mains power distribution circuit must be equipped with magnetic+residual current circuit breaker protection.
- Do not connect it to a dimmer system; doing so may damage the product.

Protection and Warning against electrical shock

- Do not remove any cover from the product, always disconnect the product from AC power before servicing.
- Ensure that the fixture is electrically connected to ground (earth). And use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault (earth-fault) protection.
- Before using the fixture, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.
- Isolate the fixture from power immediately if the power plug or any seal, cover, cable, or other components are damaged, defective, deformed or showing signs of overheating.
- Do not reapply power until repairs have been completed.
- Refer any service operation not described in this manual to PROLIGHTS Service team or an authorized PROLIGHTS service center.

Installation

- Make sure that all visible parts of the product are in good visible condition before its use or installation.
- Make sure the point of anchorage is stable before positioning the projector.
- When suspending the fixture above ground level, secure it against failure of primary attachments by attaching a safety cable that is approved as a safety attachment for the weight of the fixture to the attachment point on the main frame of the product. In case the safety cable, enter in action, it needs to be replaced with a new one.
- Install the product only in well ventilated places.
- For non temporary installations, ensure that the fixture is securely fastened to a load-bearing surface with suitable corrosionresistant hardware.
- For a temporary installation with clamps, ensure that the quarter-turn fastener and/or screws are turned fully, and secured with a suitable safety cable.

Minimum distance of illuminated objects

- The projector needs to be positioned so that the objects hit by the beam of light are at least 12 meters (39,37 ft) from the lens of the projector.

Max operating ambient temperature (Ta)

- Do not operate the fixture if the ambient temperature (Ta) exceeds 45 °C (113 °F).

T_a-15°C

Minimum operating ambient temperature (Ta)

- Do not operate the fixture if the ambient temperature (Ta) is below -15 °C (5 °F).

Protection from burns and fire

- The exterior of the fixture becomes hot during use. Avoid contact by persons and materials.
- Ensure that there is free and unobstructed airflow around the fixture.
- Keep flammable materials well away from the fixture.
- Do not expose the front glass to sunlight or any other strong light source from any angle. Lenses can focus the sun's rays inside the fixture, creating a potential fire hazard.
- Do not attempt to bypass thermostatic switches or fuses.

IP65

Outdoor (temporary) use

- This product is rated with an IP (Ingress protection) for temporary outdoor use when used and serviced according to the instruction contained in this document.
- Never use the fixture in places subject to vibrations or bumps.
- Make certain that no inflammable liquids, water or metal objects enter the fixture.
- Excessive dust, smoke fluid, and particle build up degrades performance, causes overheating and will damage the fixture.
- Damages caused by inadequate cleaning or maintenance are not covered by the product warranty.

Light collimation optical system

- This product contains internal light collimation opticsl system. Avoid to expose the optical system to any intense source of light (including sunlight) from any angle.

T_c69°C

Temperature of the external surface

- The surface of the fixture can reach up to 85 °C (185 °F) during operation. Avoid contact with people and materials.

Lamp

The fitting mounts a high-pressure lamp that needs an external ignitor. This ignitor is fitted onto the apparatus.

1. Carefully read the "operating instructions" provided by the lamp and ignitor manufacturer.
2. Immediately replace the lamp if damaged or deformed by heat.

Radio receiver

- This product contains a radio receiver and/or transmitter:
- Maximum output power: 17 dBm.
- Frequency band: 2.4 GHz.

Maintenance

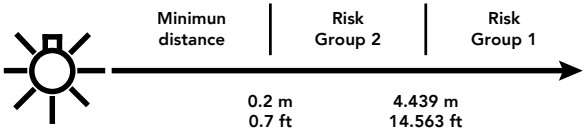
- Warning! Disconnect the fixture from AC mains power and allow to cool for at least 10 minutes before handling.
- Only technicians who are authorized by PROLIGHTS or Authorised service partners are permitted to open the fixture.
- Users may carry out external cleaning, following the warnings and instructions provided, but any service operation not described in this manual must be referred to a qualified service technician.
- Important! Excessive dust, smoke fluid, and particle build up degrades performance, causes overheating and will damage the fixture. Damages caused by inadequate cleaning or maintenance is not covered by the product warranty.

Photobiological safety

- This device emits potentially dangerous optical radiation and is identified in the category of Risk Group 2 according to EN 62471.

Do not stare at the operating light source

- Do not look directly at the LED source during operation. It can be harmful to the eyes and skin.
- During Installation, operation and maintenance, be prepared for the fixture to light and move suddenly when connected to power.
- The device should be positioned so that prolonged staring into the luminaire at a distance closer than 4.439 m (14.563 ft) is not expected.



Disposal

- This product is supplied in compliance with European Directive 2012/19/EU – Waste Electrical and Electronic Equipment. (WEEE). To preserve the environment please dispose/ recycle this product at the end of its life according to the local regulation.

The product contains a lithium ion battery

- Don't throw the unit into the garbage at the end of its lifetime.
- Make sure to dispose according to your local ordinances and/or regulations, to avoid polluting the environment!
- The packaging is recyclable and can be disposed.

The products to which this manual refers comply with:

- 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);
- 2014/53/EU - Radio Equipment Directive (RED).

The products to which this manual refers comply with:

- UL 1573 + CSA C22.2 No. 166 - Stage and Studio Luminaires and Connector Strips.
- UL 1012 + CSA C22.2 No. 107.1 - Standard for power units other than class 2.

FCC Compliance:

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

3. This device may not cause harmful interference, and
4. This device must accept any interference received, including interference that may cause undesired operation.

Other approvals

- The product meets the safety requirements of the certification procedures of the market in which it is placed and sold.

1 - PACKAGING

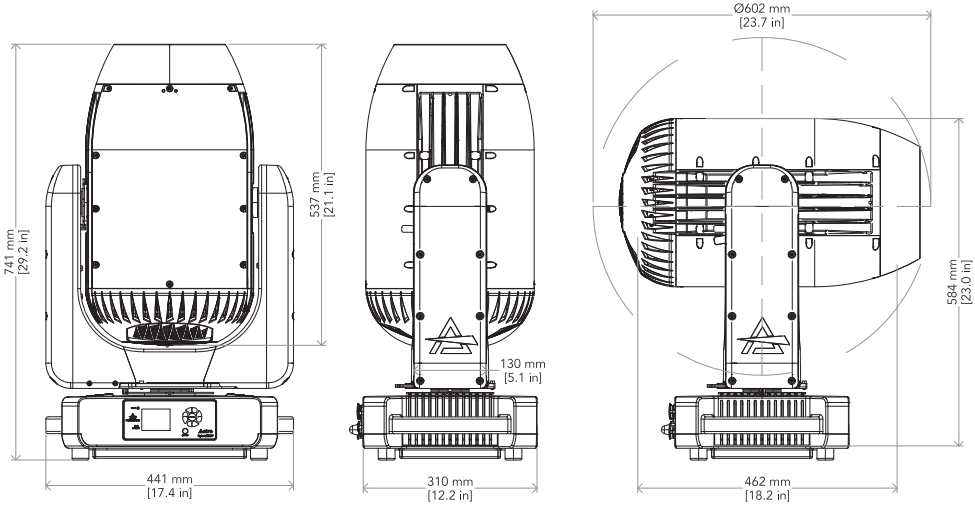
PACKAGE CONTENT

- 1x ASTRAHYB420IP.
- 1x 1,5 meters power cable (BARE END - NEUTRIK POWERCON TRUE1 IP65).
- 2x OSIP: IP65 quick-lock omega bracket compatible with IP65 moving heads.
- 1x Antenna.
- User Manual.

OPTIONAL ACCESSORIES

- WSBBR512G6: blackBox R-512 G6 receiver 512Ch, 2.45GHz,DMX&RDM,Bluetooth,G3,G4,G4S,G5,CRMX.
- WSBBR512G5: blackBox R-512 G5 receiver 512Ch, 2.45GHz & 5.8GHz, DMX/RDM optional.
- WSBBF1G6: blackBox F-1 G6 transrec, 512ch, 2.45GHz, DMX&RDM,Bluetooth,G3,G4,G4S, G5, CRMX.
- WSBBF1G5: blackBox F-1 G5 transmitter, 2,45GHz & 5.2/5,8 GHz, DMX/RDM, 512Ch.
- 958225L03: 3x2.5mm TH07 Cable, 16A 3p PwCon MXW, 16A 3p PwCon FXW, L. 3m.
- 9513FXWL03: ass. 3x2.5mm TH07 cable, 16A 3p 230V CEE plug, MENAC3FXW socket, L.3 m.
- 9533FXWL03: ass. 3x2.5mm TH07 cable, SHUKO plug, MENAC3FXW socket, L.3m.
- RSR0670A/B: steel security cable for hanging bodies, inox steel shackle, L=60 cm, silver/black.
- C6002: Slim aluminium clamp, 200 kg loading, 48-51 mm tubes, M10 bolt.
- FCLASTRAH420IP: flight case for 2 pcs of ASTRAHYB420IP.
- OSIP: IP65 quick-lock omega bracket compatible with IP65 moving heads.
- IPTESTBOX: portable vacuum and pressure tester for ProLights IP fixtures.
- UPBOX2P5: firmware uploader kit, USB IN, 5-pin XLR DMX OUT

2 - TECHNICAL DRAWING

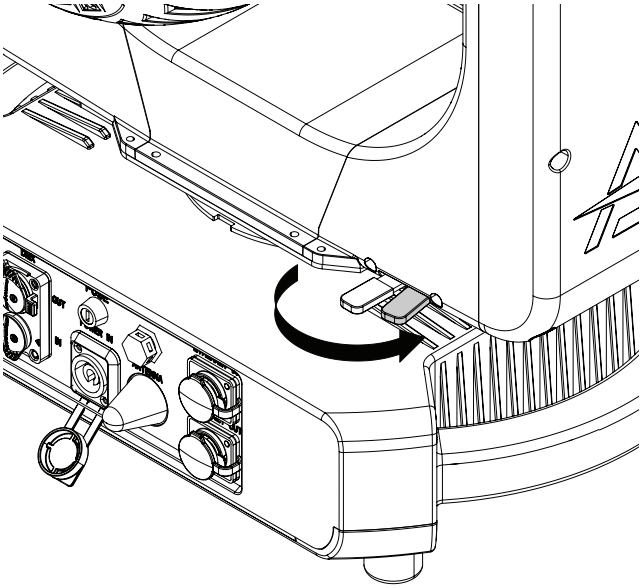


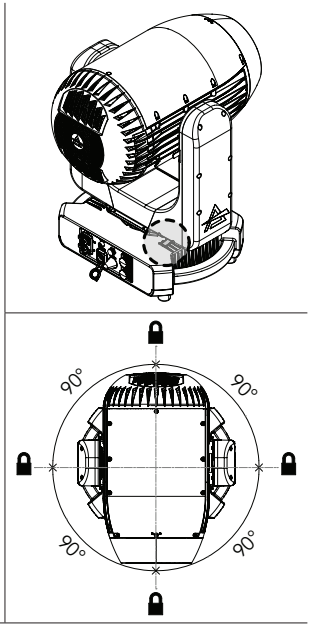
Weight: 42,1 kg - 92,817 lbs

Fig. 01

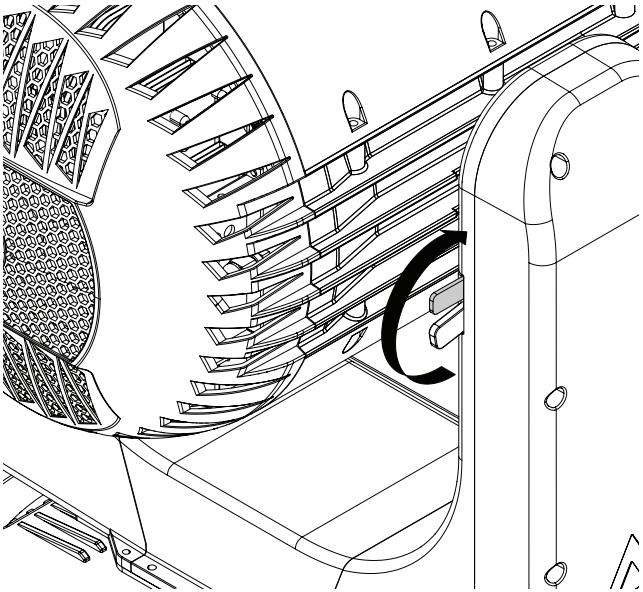
3 - PAN AND TILT LOCK

PAN Mechanism lock and release





TILT Mechanism lock and release



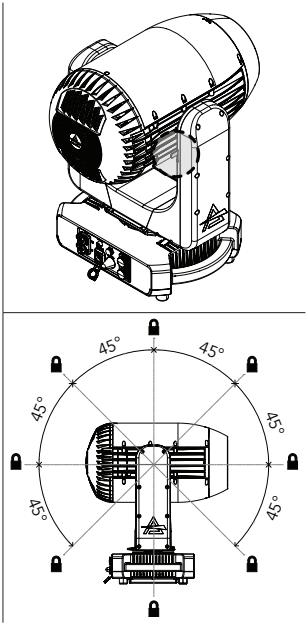


Fig. 02

4 - INSTALLATION

MOUNTING

Check that the supporting structure can safely bear the weight of all installed fixtures, clamps, cables, auxiliary equipment, etc. and complies with locally applicable regulations.

When suspending the fixture above ground level, secure it against failure of primary attachments by attaching a safety wire that is approved as a safety attachment for the weight of the fixture to an anchor point on the product main frame.

Do not use removable parts or weak anchors for secondary attachment.

Warning! When clamping the fixture to a truss or other structure at any angle, use clamps of half-coupler type. Do not use any type of clamp that does not completely encircle the structure when fastened.

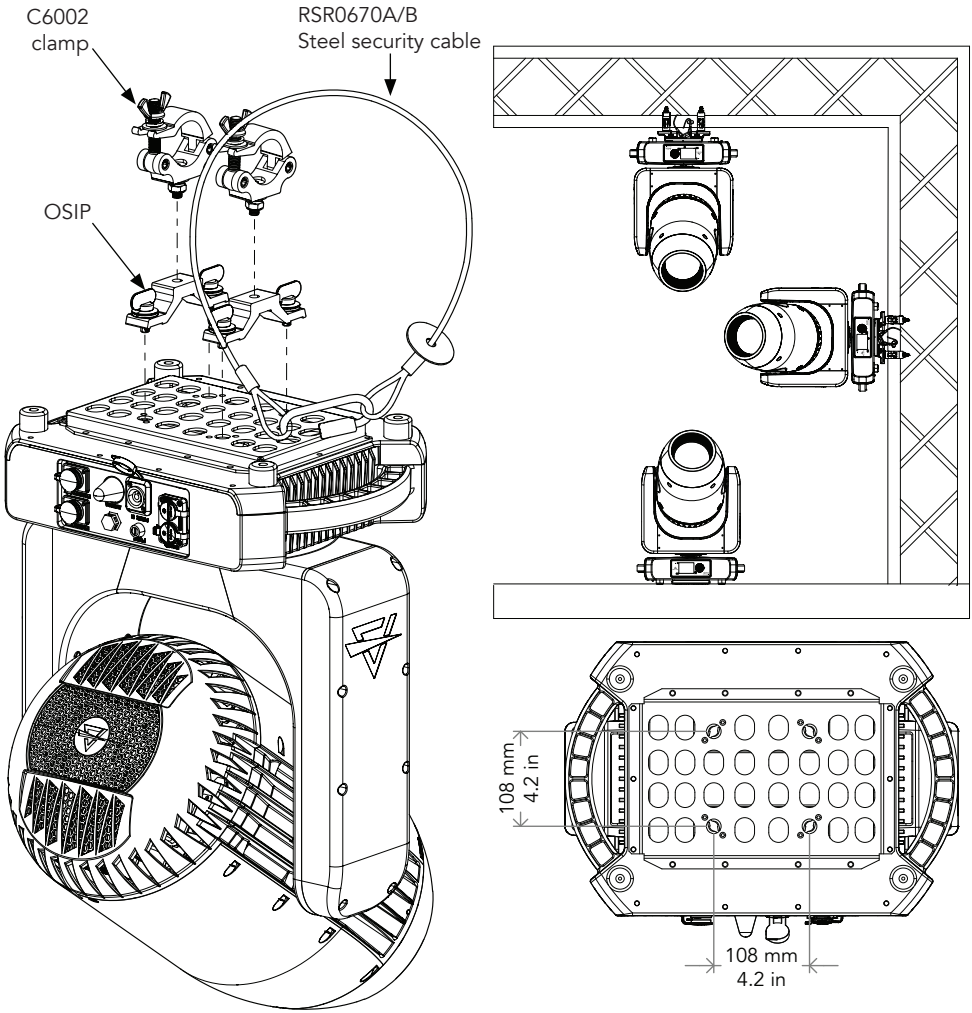


Fig. 03

5 - CONNECTION TO THE MAINS SUPPLY

WARNING: For protection from electric shock, the fixture must be earthed!
The product is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-240 Volts.
If you need to install a power plug on the power cable to allow connection to power outlets, install a grounding-type (earthed) plug, following the plug manufacturer's instructions. If you have any doubts about proper installation, consult a qualified electrician.
The max power consumption is 590W.

Core (EU)	Core (US)	Connection	Plug terminal marking
Brown	Black	Live	L
Blue	White	Neutral	N
Yellow+green	Green	Earth	⏚

6 - START UP

CONNECT AND DISCONNECT POWER FROM THE PRODUCT
To apply and disconnect power to the product:
- Check that the product is installed and secured as indicated in the Safety Informations, and that personal safety will not be put at risk when the fixture lights up.
- Connect the power connector into the Mains input socket (100-240 VAC-50/60 Hz).
- The product is then ready for its operations and can be controlled through the available input signals on board.
- To disconnect power from the product, disconnect the Mains from the socket.

7 - PRODUCT OVERVIEW

1. SAFETY EYE to attach safety cable.
2. USER INTERFACE with display and buttons for access to the control panel functions.
3. DMX OUT (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C.
4. DMX IN (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C.
5. MAIN FUSE HOLDER: replace a burnt-out fuse by one of the same type only (250VAC, T8A).
6. GORE VALVE.
7. POWER IN: for connection to the Mains 100-240V~/50-60Hz.
8. ANTENNA of Wireless DMX Receiver internal module.
9. POWER IN: for connection to the Mains 100-240V~/50-60Hz.
10. PAN Mechanism lock and release.
11. TILT Mechanism lock and release.

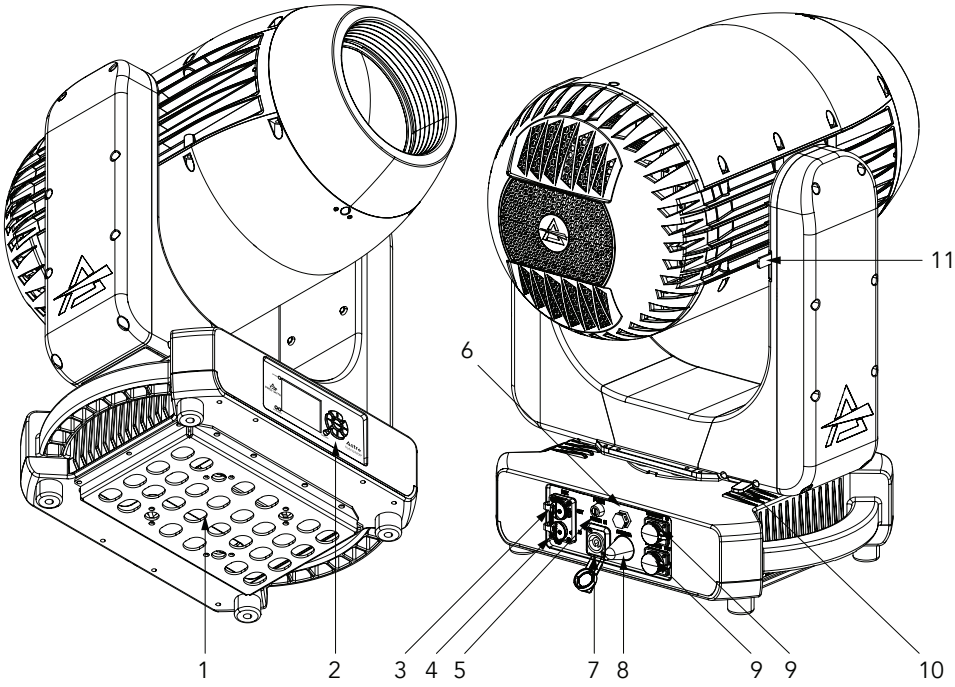


Fig. 04

8 - DMX CONNECTION

CONNECTION OF THE CONTROL SIGNAL: DMX LINE
The product has XLR sockets for DMX input and output.
The default pin-out on both socket is as the following diagram:

DMX - INPUT
XLR plug

Pin1 : GND - Shield
Pin2 : - Signal
Pin3 : + Signal
Pin4 : N/C
Pin5 : N/C

DMX - OUTPUT
XLR socket

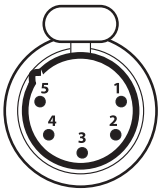


Fig. 05

INSTRUCTIONS FOR A RELIABLE DMX CONNECTION
Use shielded twisted-pair cable designed for RS-485 devices: standard microphone cable cannot transmit control data reliably over long runs. 24 AWG cable is suitable for runs up to 300 meters (1000 ft). Heavier gauge cable and/or an amplifier is recommended for longer runs.
To split the data link into branches, use splitter-amplifiers in the connection line.
Do not overload the link. Up to 32 devices may be connected on a serial link.

CONNECTION DAISY CHAIN
Connect the DMX data output from the DMX source to the product DMX input (male connector XLR) socket.
Run the data link from the product XLR output (female connector XLR) socket to the DMX input of the next fixture.
Terminate the data link by connecting a 120 Ohm signal termination. If a splitter is used, terminate each branch of the link.
Install a DMX termination plug on the last fixture on the link.

CONNECTION OF THE DMX LINE
DMX connection employs standard XLR connectors. Use shielded pair-twisted cables with 120Ω impedance and low capacity.
The following diagram shows the connection mode:

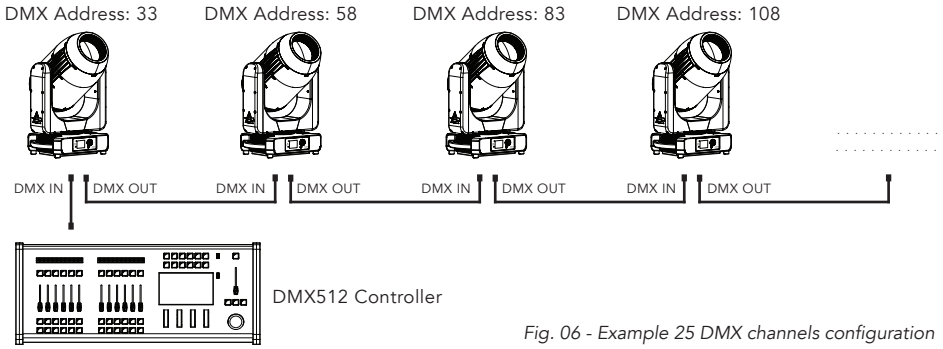
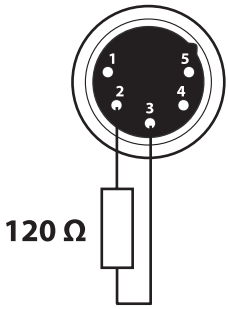
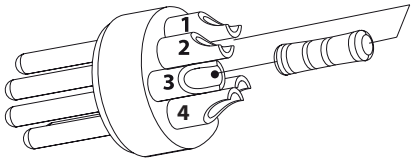


Fig. 06 - Example 25 DMX channels configuration

CONSTRUCTION OF THE DMX TERMINATION

The termination is prepared by soldering a 120Ω 1/4 W resistor between pins 2 and 3 of the male XLR connector, as shown in figure.





Example:
5 pin XLR connector

Fig. 07

DMX ADDRESSING

In order to start controlling the product via DMX, the first step is to select a DMX address, also known as the start channel, this is the first channel used to receive instructions from a DMX controller. If you wish to control the product individually, it is necessary to assign a different starting address channel to each fixture.

The number of channels occupied from the product depends on the DMX mode selected, so always verify the DMX Mode in the MENU before start addressing.

If you assign two fixtures the same address, they will be executing the same behaviour. Selecting the same address to multiple fixtures can be useful for diagnostic purposes and symmetrical control.

DMX addressing is limited to make it impossible to set the DMX address so high that you are left without enough control channels for the product.

To set the fixture's DMX address:

1. Press ENTER to open the main menu.
2. Reach the addressing menu, then select the DMX ADDRESS settings.
3. Select the address from 1 to 512 using the navigation arrows/buttons and confirm by pressing ENTER.
4. Press Menu to exit and return to the Home screen.

ETHERNET CONNECTION

The products is provided with two 8-pin RJ-45 sockets for Ethernet input/output for a simple daisy chain connection to the network.

The product can be controlled with ArtNet (or others available) communication protocol.

Use a network cable category 5 (with four "twisted" wire pairs) and standard RJ-45 plugs.

ETHERNET OPERATION

Please refer to the section MENU STRUCTURE contained in this document for detailed informations about the parameters of setting on the fixture (Protocol, Net, Subnet, Universe, Start Channel and IP Address, Ethernet to DMX No/Yes).

- About the IP addresses is recommended to set 002.xxx.xxx.xxx or 010.xxx.xxx.xxx.
- The submask net is fixed at 255.0.0.0.

ETHERNET TO DMX OPERATIONS

Please refer to the section MENU STRUCTURE contained in this document for detailed informations
This function allow a product receiving an ethernet signal protocol to re-transmit the incoming signal onto a wired DMX line through its onboard XLR-out connector.

- An Ethernet protocol (Artnet, sACN or others available) has to be enabled from Ethernet menu at first fixture. **Please make sure that wireless receiver is switched to OFF if you use Ethernet comunication.**
- Enable the option Ethernet To DMX from the Ethernet menu at the first product (connected to the Ethernet) in the signal chain, next products have standard DMX setting.
- Connect the Ethernet input of the first product in the data chain with the network. Connect the DMX output of this product with the input of the next product until all products are connected to the DMX chain.
- Caution: At the last product, the DMX chain has to be terminated with a terminator. Solder a 120 Ω resistor between Signal (–) and Signal (+) into a XLR-plug and connect it in the DMX-output of the last product.

OPERATION AS A WIRELESS TRANSMITTER

ASTRAHYB420IP can be used as wireless transmitter to transmit DMX signal to different wireless receivers. To use ASTRAHYB420IP as wireless transmitter, please follow the procedure below:

1. Push ENTER button untill you show CONNECT on display, then press ENTER button to confirm.
2. Use UP/DOWN buttons for select WIRELESS, then press ENTER to confirm.
3. Push ENTER button on WDMX ON/OFF function and enable it to ON.
4. Select WDMX mode and set it on Transmitter (please note that WDMX mode will be available only if WDMX ON/OFF is set to ON).
5. Ensure that the receiver units are not connected to any other transmitter. Please refer to "Reset the receiver" paragraph.
6. Enable TX LINK to ON to link transmitter to receivers (please note that TX LINK will be available only if WDMX mode is set to Transmitter).

- The transmitter scans for all unlinked receivers for a period of about 5 seconds.
- If the connection fails, check the position of the receiver.
- The wireless icon on the receiver display indicates the received signal strength.

Unlinking the transmitter

Follow the procedure below to unlink the transmitter from all receivers connected with the unit.

1. Push ENTER button untill you show CONNECT on display, then press ENTER button to confirm.
2. Use UP/DOWN buttons for select Wireless, then press ENTER to confirm.
3. Enable TX UNLINK to ON 8 (please note that TX UNLINK will be available only if WDMX mode is set to Transmitter).

- All connected receivers will be unlinked.

IN TO WDMX

This function enable or disable the transmission throught wireless of the DMX signal from the transmitter side to the receiver.
Any incoming signal (ArtNet, sACN or DMX) is retransmitted throught wireless.
If the ASTRAHYB420IP protocol selected is ArtNet / sACN, the WDMX module will retransmit the DMX values contained in the ArtNet / sACN signal received from the ASTRAHYB420IP.

NOTE: Artnet and sACN have higher priority on DMX if they are connected to transmitter.

OPERATION AS A WIRELESS RECEIVER

ASTRAHYB420IP can be used as wireless receiver connected to a wireless transmitter.
To use ASTRAHYB420IP as wireless receiver, please follow the procedure below:

1. Push ENTER button untill you show CONNECT on display, then press ENTER button to confirm.
2. Use UP/DOWN buttons for select Wireless, then press ENTER to confirm.
3. Push ENTER button on WDMX ON/OFF function and enable it to ON.
4. Select WDMX mode and set it on Receiver (please note that WDMX mode will be available only if WDMX ON/OFF is set to ON).
5. Enable RX RESET to ON to reset the receiver (please note that RX RESET will be available only if WDMX mode is set to Receiver).
6. On the transmitter, enable TX LINK to ON to link transmitter to the receivers.
7. If the connection is successful and DMX input is available the display the display on the receiver unit will shows the DMX address. If DMX signal is not available, the display will shows "No signal" but keeps the transmitter linked.
8. If the connection fails, check the position of the receiver.
9. The wireless icon on the receiver display indicates the received signal strength.

Reset the receiver

Follow the procedure below to reset the receiver.

1. Push MENU button untill you show CONNECT on display, then press ENTER button to confirm.
2. Use UP/DOWN buttons for select Wireless, then press ENTER to confirm.
3. Enable RX RESET to ON.

- The wireless icon on the receiver display indicates the received signal strength.

WDMX TO DMX (RX)

This function enable or disable the retransmission of the wireless DMX signal received throught the DMX port on the receiver side.

9 - CONTROL PANEL

The product has a display and buttons for access to the control panel functions.

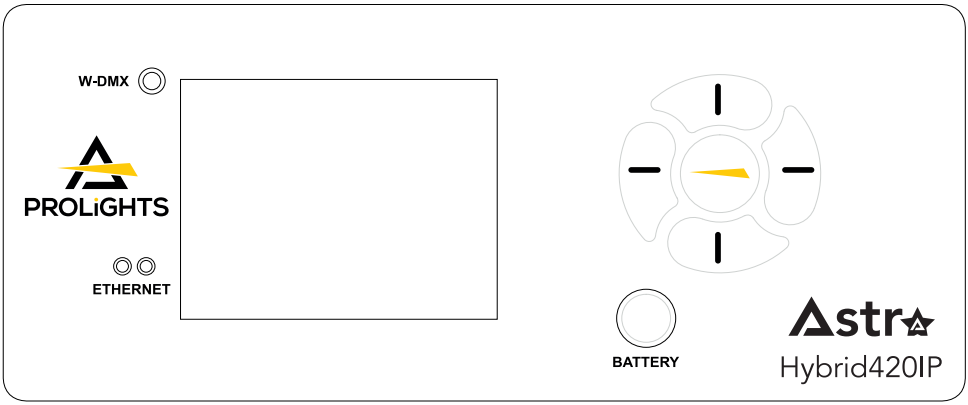
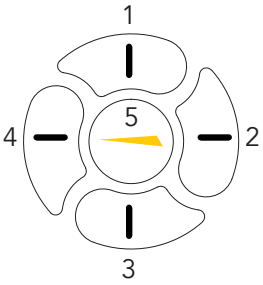


Fig. 08

DISPLAY AND BUTTONS LAYOUT

The product has a display and buttons for access to the control panel functions:



1		• Browse upwards through the menu list and increases the numeric value displayed.
2		• Return to the top level.
3		• Browse downwards through the menu list and decreases the numeric value displayed.
4		• Commute from units, tens, hundred in the menu.
5		• Used to access the menu tree or to return a previous menu window.
 BATTERY		• To switch on the display throught the battery.
W-DMX 		• LED indicator for Wireless dmx (color red and green).
 ETHERNET		• LED indicator for Ethernet network.(color orange).

10 - MENU STRUCTURE

The following chart describes the MENU tree of the product, the terms shown in **BOLD** indicates the default settings.

	MENU					
1	**CONNECT**	**ADDRESS**	DMX / WDMX	**001**-512		
			sACN	**001**-512		
			ARTNET	**001**-512		
		DMX MODE	**STANDARD**			*Set DMX chart for Main Fixture.*
		WIRELESS	WDMX ON/OFF	ON/**OFF**		*Enable/Disable the wireless card.*
			WDMX MODE	TRANSMITTER/ **RECEIVER**		*Allows to choose whether to set the wireless on the Transmitter or Receiver. WDMX mode is unlocked only if WDMX ON / OFF is ON.*
			TX LINK	ON/**OFF**		*TX link unlock when the unit is set as a transmitter..*
			TX UNLINK	ON/**OFF**		*Disconnect the transmitter from all receivers. TX unlink unlocks only if WDMX mode is on transmitter.*
			RX RESET	ON/**OFF**		*Total reset of the receiver. RX reset unlocks only if WDMX mode is receiver.*
			IN TO WDMX (TX)	ON/**OFF**		*Enable/Disable the transmission of the DMX values via wdmx.*
			WDMX TO DMX (RX)	**ON**/OFF		*Enable/Disable the retransmission of the DMX from the receiver to the other units connected by cable to the receiver itself.*
		ETHERNET SETTING	ARTNET SETTINGS	IP ADDRESS		*Set IP address of the fixture.*
				NET		*Set Net for ArtNet protocol.*
				SUBNET		*Set Subnet for ArtNet protocol.*
				UNIVERSE		*Set Universe for ArtNet protocol.*
			sACN SETTINGS	IP ADDRESS		*Set IP address of the fixture.*
				UNIVERSE		*Set Universe for sACN protocol.*
				MERGE MODE	**OFF**/HTP/ LTP	*Set Merge Mode for sACN protocol.*
			ETHERNET TO DMX	**ON**		*Enable / Disable DMX retrasmission from sACN/ArtNet signal to DMX out port.*
				OFF		

2	SETUP	SCREEN	BACKLIGHT	ON		*Allows you to select the timing after that display will switch automatically off when unactive.*
				10 s		
				20 s		
				30 s		
			FLIP DISPLAY	ON		*Allows you to rotate the display by 180°.*
				OFF		
				AUTO		
			KEY LOCK	ON		*Allows you lock the buttons on the control panel by a password. Press following combinations (password) in order to access to the user menu : UP, DOWN, UP, DOWN.*
				OFF		
		MOVEMENT	PAN REVERSE	ON		*Allows you to reverse Pan movement.*
				OFF		
			TILT REVERSE	ON		*Allows you to reverse Tilt movement.*
				OFF		
			PAN/TILT FEEDBACK	**ON**		*To activate / deactivate the reading of the feedbacks given by the encoders.*
				OFF		
			PAN/TILT MODE	SLOW		*To choose the horizontal/ vertical movement speed.*
				MEDIUM		
				FAST		
			MOVEMENT BLACKOUT	**ON**		*Make fixture goes blackout while moving*
				OFF		
			HOME POSITION	**STANDARD**		*To choose the home position.*
				CUSTOM		
			CUSTOM P DEGREE	**0°**		*To choose pan values in case of Custom position.*
				...		
				315°		
			CUSTOM T DEGREE	**0%**		*To choose tilt values in case of Custom position.*
				...		
				100%		
		FIXTURE SETTINGS	LAMP	TURN ON/**OFF**		*To turn the lamp on or off.*
				AUTOMATIC ON/**OFF**		*To set Auto-on of the lamp after initial reset.*
			COLOR WHEEL BLACKOUT	ON/**OFF**		*To set Color Wheel Movement in blackout mode.*
			COLOR WHEEL MODE	**STEP**		*To set Color Wheel Movement scrolling mode.*
				COUNTINUOUS		
			GOBO WHEEL BLACKOUT	ON/**OFF**		*To set Gobo Wheel Movement in blackout mode.*
			GOBO WHEEL MODE	**STEP**		*To set Gobo Wheel Movement scrolling mode.*
				COUNTINUOUS		
			DMX FAULT	**HOLD**		*To choose the behaviour of fixture in case of dmx signal lost.*
				BLACKOUT		
			STATUS LED	**ON**		*To turn the status LEDs on the front panel on or off.*
				OFF		
			INVERT ZOOM	ON		*Invert zoom values.*
				OFF		
			TRANSFER CONFIGURATION	WITHOUT DMX ADDRESS		*To transfer the same menu settings of one fixtures to all the other in the daisy chain, including or not the dmx address.*
				WITH DMX ADDRESS		

3	ADVANCED	RESET	ALL			*To reset these functions.*
			PAN & TILT			
			ZOOM			
		CALIBRATION	PASSWORD			*For the calibration of these functions.* *050 password for user reset*
			PAN			
			TILT			
			...			
		MANUAL CONTROL	PAN			*For manual control of the unit.*
			...			
		RELOAD DEFAULT	BASIC RELOAD	ON		*050 password for user reset.*
				OFF		
			FACTORY RELOAD	ON		
				OFF		
4	INFORMATION	FIXTURE TIME	FIXTURE HOURS	TOTAL	(ONLY READ)	*To check the total working hours of the unit.*
				PARTIAL	(READ AND RESET)	
			CURRENT HOURS	TOTAL	(ONLY READ)	*To check the current working hours of the unit.*
				PARTIAL	(READ AND RESET)	
			SOURCE HOURS	TOTAL	(ONLY READ)	*To see the total operating hours of the LED source.*
				PARTIAL	(READ AND RESET)	
			POWER ON CYCLE	TOTAL	(ONLY READ)	*To see the power cycles of the machine.*
				PARTIAL	(READ AND RESET)	
			LAMP HOURS	TOTAL	(READ AND RESET)	*To see the total operating hours of the LAMP.*
				PARTIAL	(READ AND RESET)	
			LAMP STRIKE	TOTAL	(READ AND RESET)	*To see the total amount of LAMP strike.*
				PARTIAL	(READ AND RESET)	
			MAINTENANCE TIME	ELAPSED TIME		*To choose and reset unit maintenance warning hours.*
				ALERT PERIOD	10 - 300	
		LAMP PARAMETERS	VOLTAGE CURRENT POWER			
		TEMPERATURE	NEAR SOURCE TEMP, DRIVER PCB TEMP, LED PCB TEMP,...			*To see the unit temperature.*
		FANS SPEED	NEAR SOURCE FAN, BASE FAN,...			*To see the speed of the fans.*
		WIRELESS QUALITY				*To check the wireless quality.*
		CHANNEL VALUE	PAN...			*To see the dmx value of those channels.*
		ERROR MESSAGE	PAN, TILT...			*To see any error messages.*
		FIXTURE MODEL	XXXXXXXXXX			*View informations about fixture model.*
		RDM UID	(READ ONLY)			*View ID for the RDM control.*
		SOFTWARE VERSION	1U01 V1.0.00...			*View informations about software version.*

11 - SHORTCUT

KEYS	MODE	DESCRIPTION
UP + DOWN after power on	Flip Display	Directly flip display without enter inside menu.
DOWN then power on	Reset without pan/tilt movements	Fixture will be powered on without reset on pan/tilt movements.
ENTER + UP then power on	Bootloader	Force firmware upgrade.

12 - RDM FUNCTIONS

The product can communicate using RDM (Remote Device Management) protocol over a DMX512 Networks.
RDM is a bi-directional communications protocol for use in DMX512 control systems, it is the open standard for DMX512 device configuration and status monitoring.
The RDM protocol allows data packets to be inserted into a DMX512 data stream without affecting existing non-RDM equipment. It allows a console or dedicated RDM controller to send commands to and receive messages from specific fixtures.
The PIDs in the following tables are supported in the product.
RDM is also available on Wireless and Tiny's Downstead must be enabled in its custom PIDs to work.

Category	Parameter	PID	GET	SET
Product Information	DEVICE_INFO	0x0060	x	
	PRODUCT_DETAIL_ID_LIST	0x0070	x	
	DEVICE_MODEL_DESCRIPTION	0x0080	x	
	MANUFACTURER_LABEL	0x0081	x	
	DEVICE_LABEL	0x0082	x	x
	FACTORY_DEFAULTS	0x0090	x	x
	SOFTWARE_VERSION_LABEL	0x00C0	x	
	BOOT_SOFTWARE_VERSION_ID	0x00C1	x	
	BOOT_SOFTWARE_VERSION_LABEL	0x00C2	x	
DMX512 Setup	DMX_PERSONALITY	0x00E0	x	x
	DMX_PERSONALITY_DESCRIPTION	0x00E1	x	
	DMX_START_ADDRESS	0x00F0	x	x
	SLOT_INFO	0x0120	x	
	SLOT_DESCRIPTION	0x0121	x	
	DEFAULT_SLOT_VALUE	0x0122	x	
	DMX_BLOCK_ADDRESS	0x0140	x	x
	DMX_FAIL_MODE	0x0141	x	x
	DMX_STARTUP_MODE	0x0142	x	x
Dimmer Settings	DIMMER_INFO	0x0340	x	
	MINIMUM_LEVEL	0x0341	x	x
	MAXIMUM_LEVEL	0x0342	x	x
	CURVE	0x0343	x	x
	CURVE_DESCRIPTION	0x0344	x	x
	OUTPUT_RESPONSE_TIME	0x0345	x	x
	OUTPUT_RESPONSE_TIME_ DESCRIPTION	0x0346	x	
	MODULATION_FREQUENCY	0x0347	x	x
	MODULATION_FREQUENCY_ DESCRIPTION	0x0348	x	
Sensors	SENSOR_DEFINITION	0x0200	x	
	SENSOR_VALUE	0x0201	x	x
	RECORD_SENSORS	0x0202		x
	BURN_IN	0x0440	x	x

Category	Parameter	PID	GET	SET
Power/Lamp Settings	DEVICE_HOURS	0x0400	x	x
	LAMP_HOURS	0x0401	x	x
	LAMP_STRIKES	0x0402	x	x
	LAMP_STATE	0x0403	x	x
	LAMP_ON_MODE	0x0404	x	x
	DEVICE_POWER_CYCLES	0x0405	x	x
Display Settings	DISPLAY_INVERT	0x0500	x	x
	DISPLAY_LEVEL	0x0501	x	x
Configuration	PAN_INVERT	0x0600	x	x
	TILT_INVERT	0x0601	x	x
	PAN_TILT_SWAP	0x0602	x	x
	REAL_TIME_CLOCK	0x0603	x	x
	LOCK_PIN	0x0640	x	x
	LOCK_STATE	0x0641	x	x
	LOCK_STATE_DESCRIPTION	0x0642	x	
Control	IDENTIFY_DEVICE	0x1000	x	x
	RESET_DEVICE	0x1001		x
	POWER_STATE	0x1010	x	x
	PERFORM_SELFTEST	0x1020	x	x
	SELF_TEST_DESCRIPTION	0x1021	x	
	CAPTURE_PRESET	0x1030	x	x
	PRESET_PLAYBACK	0x1031	x	x
	IDENTIFY_MODE	0x1040	x	x
	PRESET_INFO	0x1041	x	
	PRESET_STATUS	0x1042	x	x
	PRESET_MERGEMODE	0x1043	x	x
	POWER_ON_SELF_TEST	0x1044	x	x
IP & DNS Configuration	IPV4_CURRENT_ADDRESS	0x0705	x	
	IPV4_STATIC_ADDRESS	0x0706	x	x

13 - DMX CHARTS

RDM Personality ID List

ID	Mode	RDM Model ID
1	Standard	0xA003

DMX Chart Summary

Channel	Standard
1	Pan
2	Pan Fine
3	Tilt
4	Tilt Fine
5	Dimmer
6	Dimmer Fine
7	Shutter
8	Cyan
9	Magenta
10	Yellow
11	Color Wheel 1
12	Color Wheel 2
13	Color Wheel 3
14	Rot Gobo
15	Rot Gobo Rotation
16	Rot Gobo Rotation Fine
17	Fixed Gogo
18	4f Circular Prism
19	4f Circular Prism Insertion
20	8f Circular Prism
21	8f Circular Prism Insertion
22	Frost
23	Zoom
24	Zoom Fine
25	Focus
26	Focus Fine
27	Animation Insertion
28	Animation Rotation
29	Beam / Spot Filter
30	Control

STD	Function	DMX Value	Default
1	**PAN** Lineary from 0% to 100%	000 ÷ 255	128
2	**PAN FINE** Lineary from 0% to 100%	000 ÷ 255	128
3	**TILT** Lineary from 0% to 100%	000 ÷ 255	128
4	**TILT FINE** Lineary from 0% to 100%	000 ÷ 255	128
5	**DIMMER** Lineary from close to open	000 ÷ 255	000
6	**DIMMER FINE** Lineary from close to open	000 ÷ 255	000
7	**SHUTTER** Close Strobe from slow to fast Open Pulse in from slow to fast Open Pulse out from slow to fast Open Random from slow to fast Open	 000 ÷ 001 002 ÷ 062 063 ÷ 064 065 ÷ 125 126 ÷ 127 128 ÷ 188 189 ÷ 190 191 ÷ 251 252 ÷ 255	255
8	**CYAN** Linear insertion from 0% to 100% *** Color Wheel 1 must be @ 0**	000 ÷ 255	255
9	**MAGENTA** Linear insertion from 0% to 100% *** Color Wheel 2 must be @ 0**	000 ÷ 255	255
10	**YELLOW** Linear insertion from 0% to 100% *** Color Wheel 3 must be @ 0**	000 ÷ 255	255
11	**COLOR WHEEL 1** **Indexed** Open Open + UV UV UV + Lavander Lavander Lavander + CTO 3200K CTO 3200K CTO 3200K + CTO 2500K CTO 2500K CTO 2500K + Blue Wood Blue Wood Blue Wood + Open **Forward Spin** From fast to slow **Stop** Stop **Reverse Spin** From slow to fast	 000 ÷ 013 014 ÷ 027 028 ÷ 041 042 ÷ 055 056 ÷ 069 070 ÷ 083 084 ÷ 097 098 ÷ 111 112 ÷ 125 126 ÷ 139 140 ÷ 153 154 ÷ 167 168 ÷ 210 211 ÷ 212 213 ÷ 255	0
12	**COLOR WHEEL 2** **Indexed** Open Open + Dark Green Dark Green Dark Green + CTB CTB CTB + Dark Blue Dark Blue Dark Blue + H.M. Green H.M. Green H.M. Green + Dark Red Dark Red Dark Red + Open **Forward Spin** From fast to slow **Stop** Stop **Reverse Spin** From slow to fast	 000 ÷ 013 014 ÷ 027 028 ÷ 041 042 ÷ 055 056 ÷ 069 070 ÷ 083 084 ÷ 097 098 ÷ 111 112 ÷ 125 126 ÷ 139 140 ÷ 153 154 ÷ 167 168 ÷ 210 211 ÷ 212 213 ÷ 255	0

STD	Function	DMX Value	Default
12	**COLOR WHEEL 3**		0
	Indexed		
	Open	000 ÷ 013	
	Open + Light Green	014 ÷ 027	
	Light Green	028 ÷ 041	
	Light Green + Pink	042 ÷ 055	
	Pink	056 ÷ 069	
	Pink + Acquamarine	070 ÷ 083	
	Acquamarine	084 ÷ 097	
	Acquamarine + Dark Orange	098 ÷ 111	
	Dark Orange	112 ÷ 125	
	Dark Orange + Light Orange	126 ÷ 139	
	Light Orange	140 ÷ 153	
	Light Orange + Open	154 ÷ 167	
	Forward Spin		
	From fast to slow	168 ÷ 210	
	Stop		
	Stop	211 ÷ 212	
	Reverse Spin		
	From slow to fast	213 ÷ 255	
14	**ROT GOBO (not available in Beam Mode)**		000
	Indexed		
	Open	000 ÷ 008	
	Gobo 1	009 ÷ 017	
	Gobo 2	018 ÷ 026	
	Gobo 3	027 ÷ 035	
	Gobo 4	036 ÷ 044	
	Gobo 5	045 ÷ 053	
	Gobo 6	054 ÷ 062	
	Gobo 7	063 ÷ 071	
	Gobo 8	072 ÷ 080	
	Gobo 9	081 ÷ 089	
	Forward Spin		
	From fast to slow	090 ÷ 131	
	Stop		
	Stop	132 ÷ 132	
	Reverse Spin		
	From slow to fast	133 ÷ 174	
	Shake		
	Gobo 1 from slow to fast	175 ÷ 183	
	Gobo 2 from slow to fast	184 ÷ 192	
	Gobo 3 from slow to fast	193 ÷ 201	
	Gobo 4 from slow to fast	202 ÷ 210	
	Gobo 5 from slow to fast	211 ÷ 219	
	Gobo 6 from slow to fast	220 ÷ 228	
	Gobo 7 from slow to fast	229 ÷ 237	
	Gobo 8 from slow to fast	238 ÷ 246	
	Gobo 9 from slow to fast	247 ÷ 255	
15	**R. GOBO ROTATION**		000
	Indexed		
	Lineary from 0° to 360°	000 ÷ 127	
	Forward Spin		
	From fast to slow	128 ÷ 190	
	Stop		
	Stop	191 ÷ 192	
	Reverse Spin		
	From slow to fast	193 ÷ 255	
16	**R. GOBO ROTATION FINE**	000 ÷ 255	000

STD	Function	DMX Value	Default
	FIXED GOBO		
	Indexed		
	Open	0 ÷ 3	
	Gobo 1	4 ÷ 7	
	Gobo 2	8 ÷ 11	
	Gobo 3	12 ÷ 15	
	Gobo 4	16 ÷ 19	
	Gobo 5	20 ÷ 23	
	Gobo 6	24 ÷ 27	
	Gobo 7	28 ÷ 31	
	Gobo 8	32 ÷ 35	
	Gobo 9	36 ÷ 39	
	Gobo 10	40 ÷ 43	
	Gobo 11	44 ÷ 47	
	Gobo 12	48 ÷ 51	
	Gobo 13	52 ÷ 55	
	Gobo 14	56 ÷ 59	
	Gobo 15	60 ÷ 63	
	Gobo 16	64 ÷ 67	
	Gobo 17	68 ÷ 71	
	Gobo 18	72 ÷ 75	
	Forward Spin		
17	From fast to slow	76 ÷ 127	000
	Stop		
	Stop	128 ÷ 129	
	Reverse Spin		
	From slow to fast	130 ÷ 181	
	Shake		
	Gobo 1 from slow to fast	182 ÷ 187	
	Gobo 2 from slow to fast	188 ÷ 191	
	Gobo 3 from slow to fast	192 ÷ 195	
	Gobo 4 from slow to fast	196 ÷ 199	
	Gobo 5 from slow to fast	200 ÷ 203	
	Gobo 6 from slow to fast	204 ÷ 207	
	Gobo 7 from slow to fast	208 ÷ 211	
	Gobo 8 from slow to fast	212 ÷ 215	
	Gobo 9 from slow to fast	216 ÷ 219	
	Gobo 10 from slow to fast	220 ÷ 223	
	Gobo 11 from slow to fast	224 ÷ 227	
	Gobo 12 from slow to fast	228 ÷ 231	
	Gobo 13 from slow to fast	232 ÷ 235	
	Gobo 14 from slow to fast	236 ÷ 239	
	Gobo 15 from slow to fast	240 ÷ 243	
	Gobo 16 from slow to fast	244 ÷ 247	
	Gobo 17 from slow to fast	248 ÷ 251	
	Gobo 18 from slow to fast	252 ÷ 255	
	4F CIRCULAR PRISM		
18	Open	000 ÷ 127	000
	Prism insert	128 ÷ 255	
	4F CIRCULAR PRISM ROTATION		
	Indexed		
	Lineary from 0° to 360°	000 ÷ 127	
	Forward Spin		
19	From fast to slow	128 ÷ 190	000
	Stop		
	Stop	191 ÷ 192	
	Reverse Spin		
	From slow to fast	193 ÷ 255	
	8F CIRCULAR PRISM		
20	Open	000 ÷ 127	000
	Prism insert	128 ÷ 255	
	8F CIRCULAR PRISM ROTATION		
	Indexed		
	Lineary from 0° to 360°	000 ÷ 127	
	Forward Spin		
21	From fast to slow	128 ÷ 190	000
	Stop		
	Stop	191 ÷ 192	
	Reverse Spin		
	From slow to fast	193 ÷ 255	

STD	Function	DMX Value	Default
30	RESET PAN/TILT	096 ÷ 097	000
	RESET COLOR 1	098 ÷ 099	
	RESET COLOR 2	100 ÷ 101	
	RESET COLOR 3	102 ÷ 103	
	RESET CYAN	104 ÷ 105	
	RESET MAGENTA	106 ÷ 107	
	RESET YELLOW	108 ÷ 109	
	RESET ROTATING GOBO	110 ÷ 111	
	RESET GOBO ROTATION	112 ÷ 113	
	RESET FIXED GOBO	114 ÷ 115	
	RESET ZOOM	116 ÷ 117	
	RESET FOCUS	118 ÷ 119	
	RESET ANIMATION	120 ÷ 121	
	RESET 4F PRISM	122 ÷ 123	
	RESET 8F PRISM	124 ÷ 125	
	RESET FROST	126 ÷ 127	
	RESET SHUTTER	128 ÷ 129	
	RESET OTHER	130 ÷ 131	
	LAMP OFF	132 ÷ 133	
	LAMP ON	134 ÷ 135	
	Reserved	136 ÷ 253	
	FACTORY DEFAULT OF CONTROL FUNCTIONS	254 ÷ 255	

STD	Function	DMX Value	Default
30	RESET PAN/TILT	096 ÷ 097	000
	RESET COLOR 1	098 ÷ 099	
	RESET COLOR 2	100 ÷ 101	
	RESET COLOR 3	102 ÷ 103	
	RESET CYAN	104 ÷ 105	
	RESET MAGENTA	106 ÷ 107	
	RESET YELLOW	108 ÷ 109	
	RESET ROTATING GOBO	110 ÷ 111	
	RESET GOBO ROTATION	112 ÷ 113	
	RESET FIXED GOBO	114 ÷ 115	
	RESET ZOOM	116 ÷ 117	
	RESET FOCUS	118 ÷ 119	
	RESET ANIMATION	120 ÷ 121	
	RESET 4F PRISM	122 ÷ 123	
	RESET 8F PRISM	124 ÷ 125	
	RESET FROST	126 ÷ 127	
	RESET SHUTTER	128 ÷ 129	
	RESET OTHER	130 ÷ 131	
	LAMP OFF	132 ÷ 133	
	LAMP ON	134 ÷ 135	
	Reserved	136 ÷ 253	
	FACTORY DEFAULT OF CONTROL FUNCTIONS	254 ÷ 255	

14 - FIXED GOBOS WHEEL

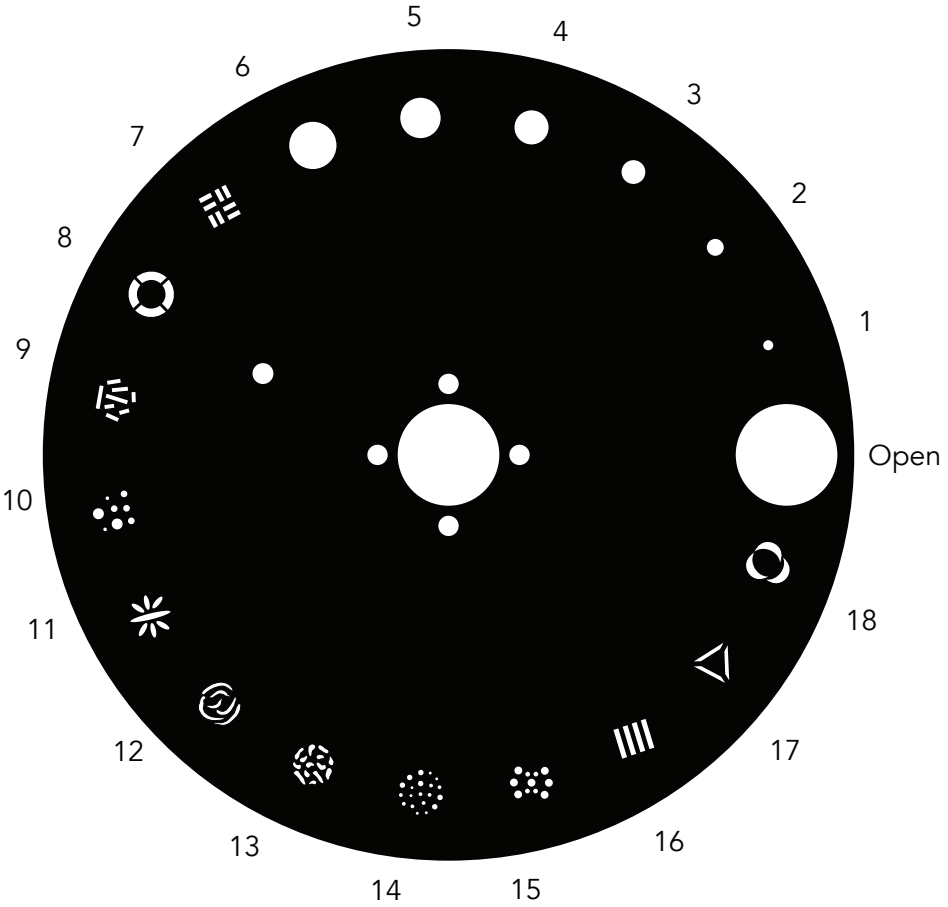
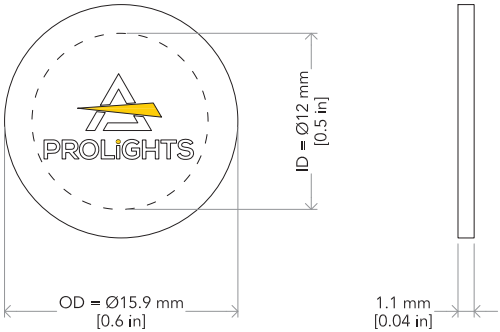
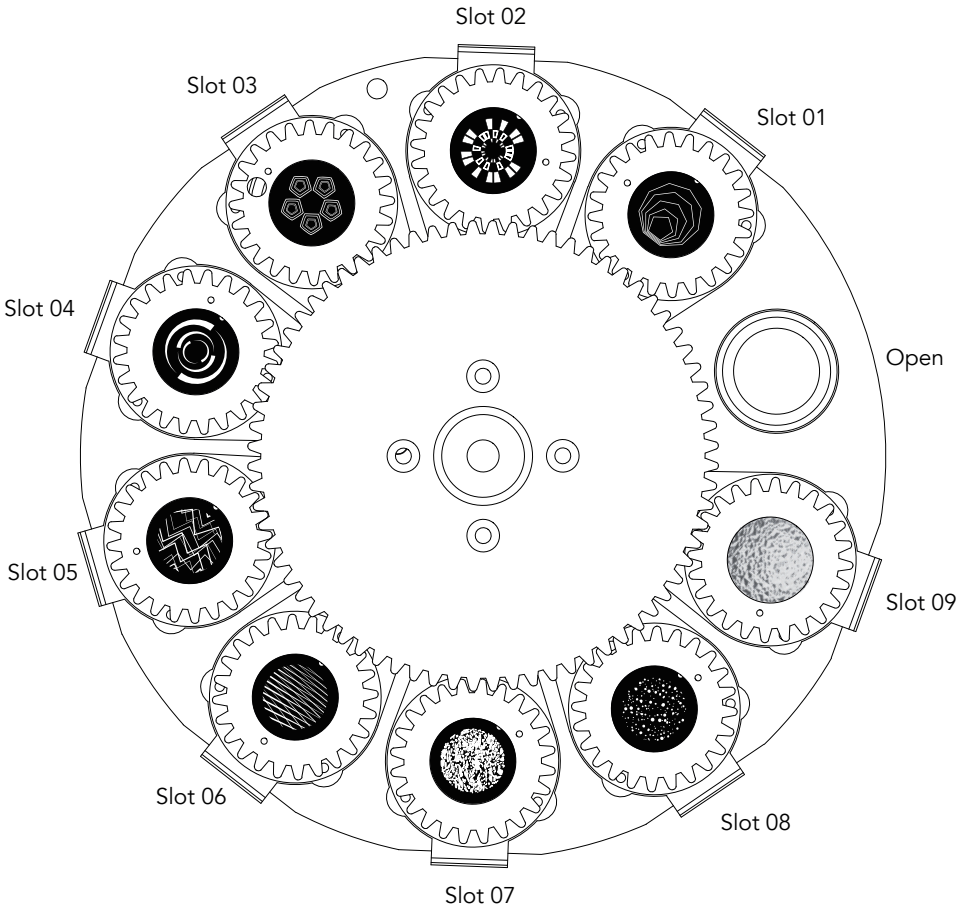


Fig. 09

15 - ROTATING GOBOS WHEEL

Gobo dimensions:
- Type B
- Ø external (OD)= 15.9 mm
- Ø of image (ID)= 12 mm
- Thinckness= 1.1 mm



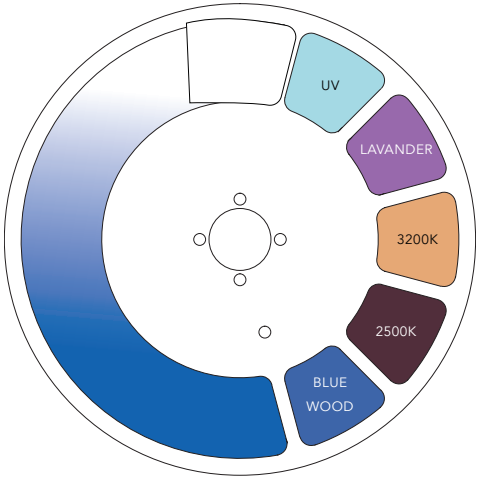


ATTENTION! Load with mirror surface toward the light source.

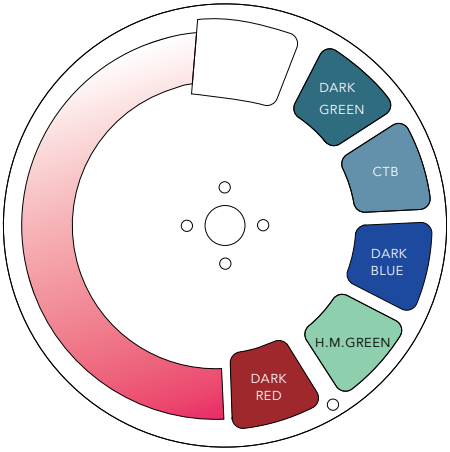
Fig. 10

16 - COLOR WHEEL

CYAN - COLOR WHEEL 1



MAGENTA - COLOR WHEEL 2



YELLOW - COLOR WHEEL 3

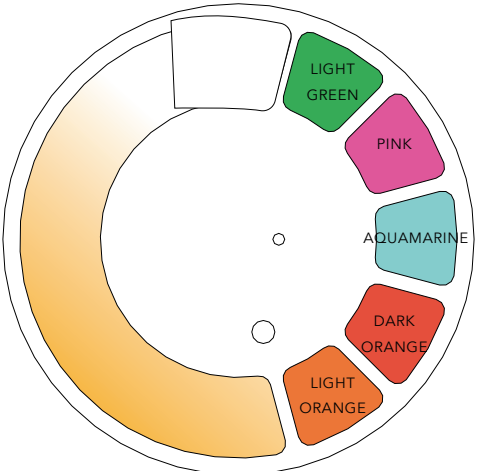
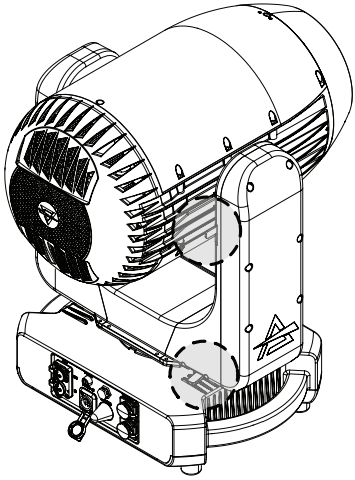


Fig. 11

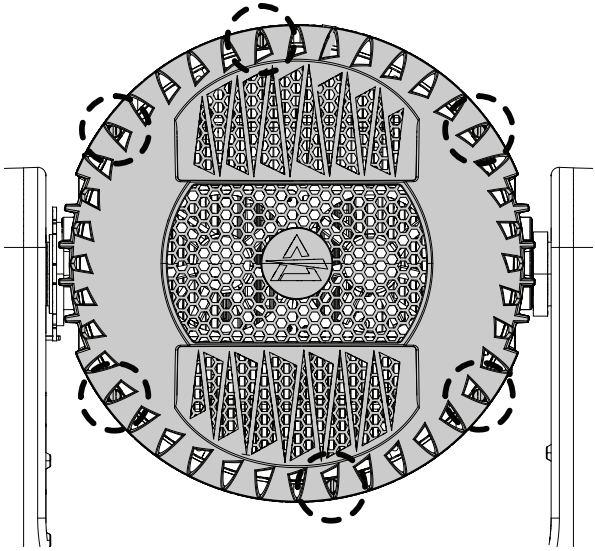
17 - LAMP REPLACEMENT

WARNING! Turn OFF power and allow approximately 20 minutes for the fixture to cool down.

1

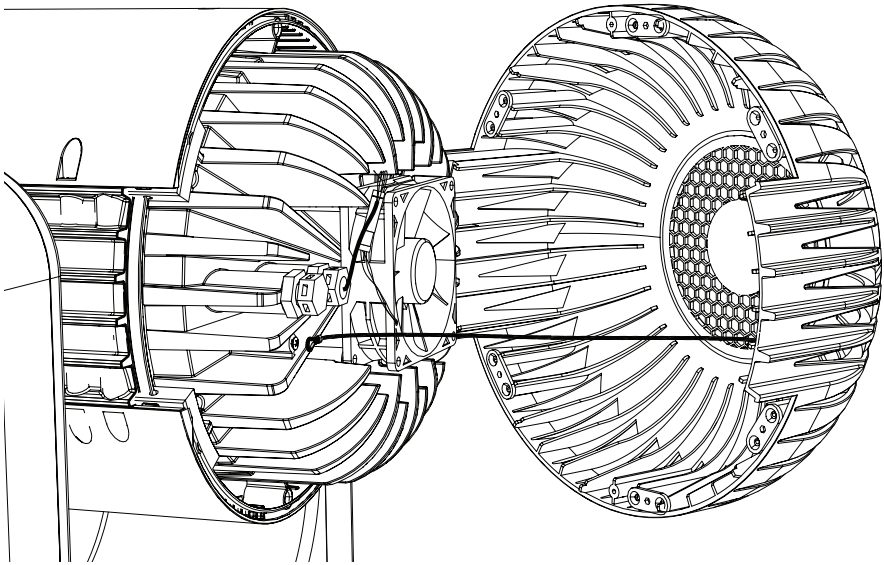


2



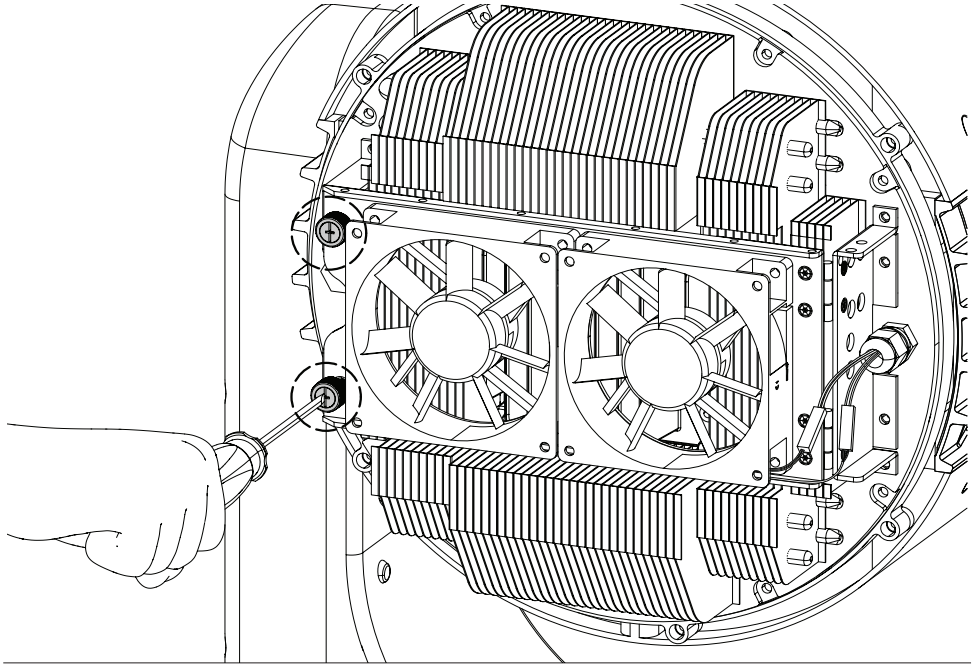
Before removing rear cover, place the head in a right-angle horizontal position and engage both the PAN and TILT locks for added stability while replacing the lamp (1). See the "PAN AND TILT LOCK" paragrap. Then remove the six market screws to remove rear cover (2).

3

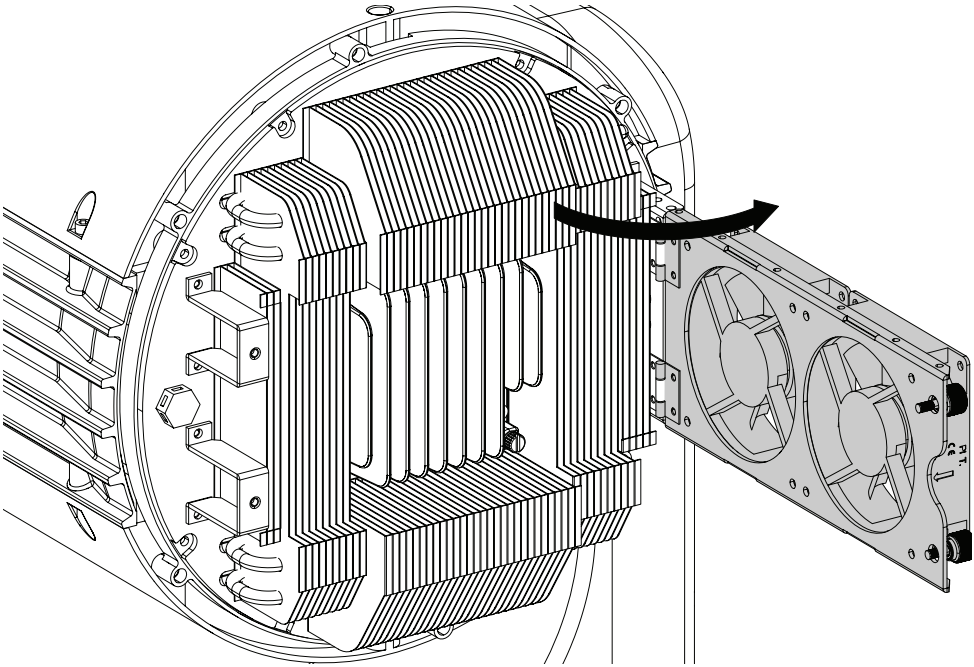


Unclip the rear cover safety cable.

4

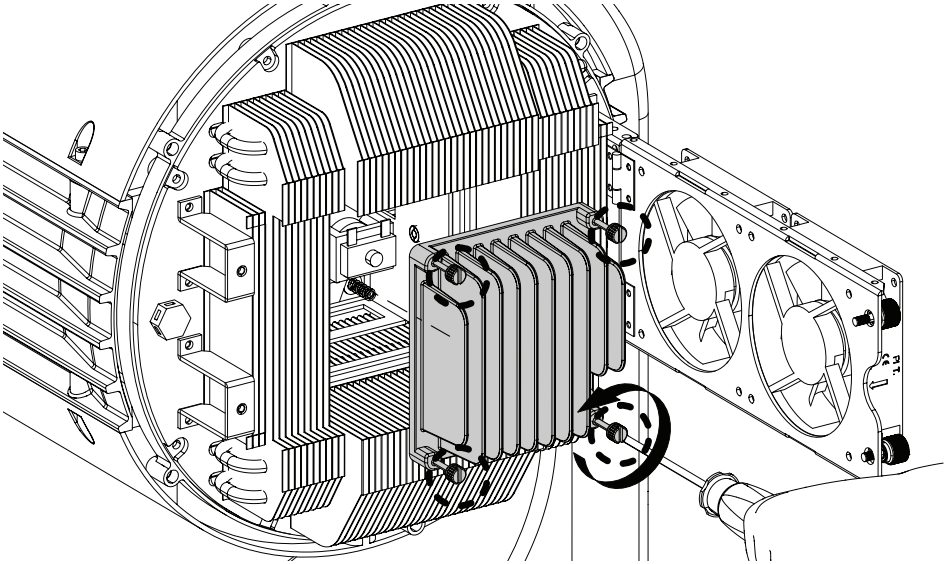


5



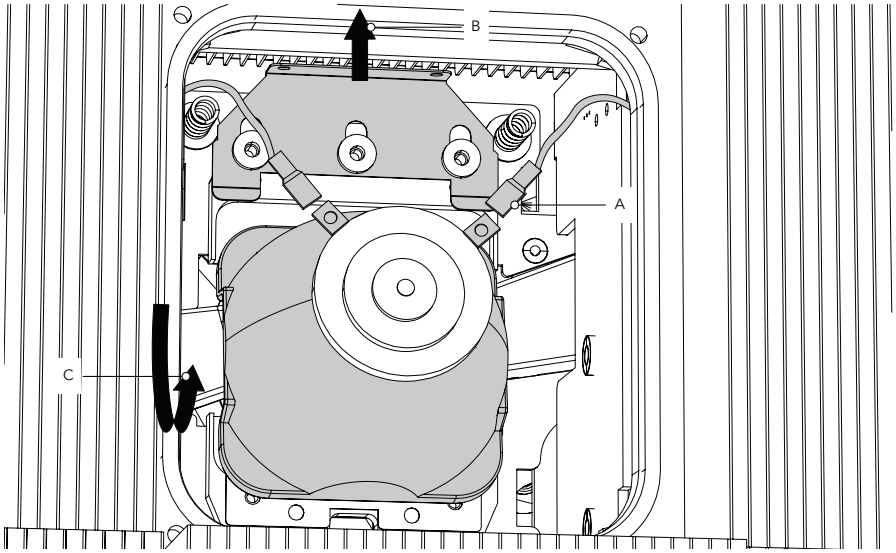
Loosen the two marked screws (5) and open the module with the two fan. (6)

6



Loosen the four screws of the module and remove it.

7



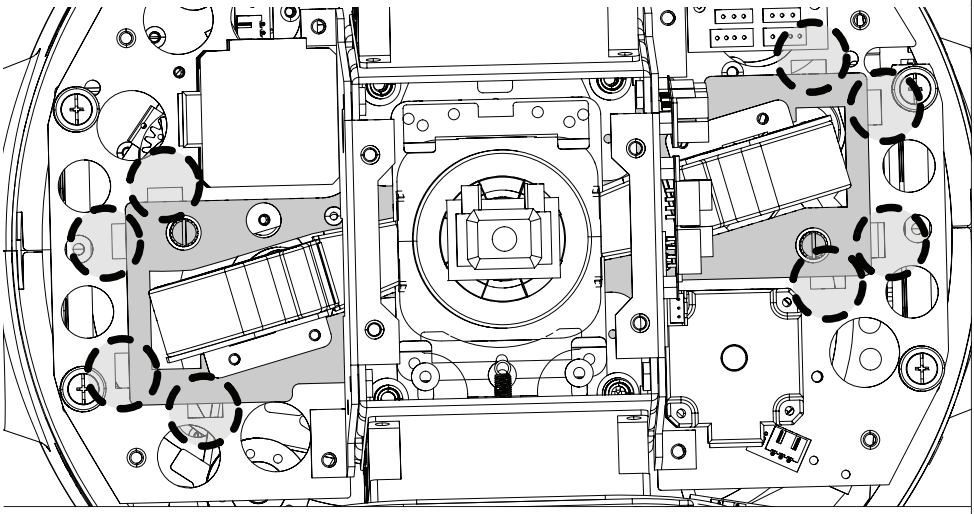
Slow remove the spade receptacle-terminals connected to the lamp.
Push the metal locking plate above and remove the lamp.
Carefully remove any debris found on gasket and screw holes of the heatsink module using a nonabrasive brush before installing! Carefully inspect gaskets for signs of wear such as cracking or hardening, deformities, or alignment issues before replacing the lamp.
Then insert the new lamp using the reverse procedure.

Fig. 12

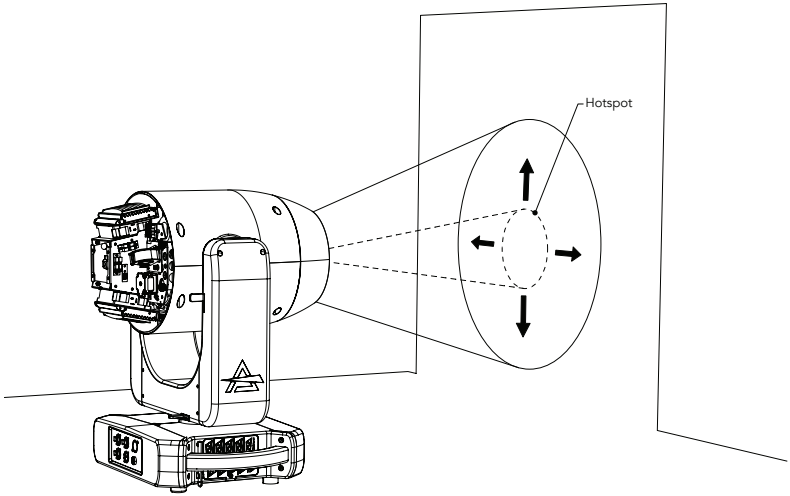
CENTERING SYSTEM OF THE LAMP

NOTE: Before starting calibration process please hold for 5s "DOWN" button, fixture will enter calibration mode and display "LAMP FAN ERROR DISABLED", this function can also be activated via Calibration Menu. Once calibration mode is on you can start calibration process. As soon as you finished calibration please hold for 5s "DOWN" button again to leave calibration mode, "LAMP FAN ERROR DISABLED" will disappear.

1



2



WARNING! Never touch the lens and use the goggles.
Move the screwdriver upwards, downwards, right or left into a marked slot (1) to center the hotspot of the lamp on the center of the projection (2).

Fig. 13

18 - ERROR MESSAGES

The error is shown on the unit display. In the table below, the "ERROR SHOWED ON SCREEN" column lists the possible errors, accompanied by a possible cause ("POSSIBLE" CAUSES "column).
The color of the error messages (listed in the "COLOR MESSAGES" column) is different for each board it refers to ("PCB" column).
On page 32 you can see the location of the various pcb boards.

ERROR SHOWED ON SCREEN	POSSIBLE CAUSES	COLOUR MESSAGES	PCB
[DISPLAY BATTERY ERROR]	Battery not present or not detected from the display PCB.	Green	1U
[BASE FAN ERROR]	Blower for cooling base failed.	Green	1U
[DMX ACTIVE]	If transfer configuration is used with dmx signal connected.	Green	1U
[MAINTENANCE TIME]	Need to be done standard maintenance and also reset of elapsed time.	Green	1U
[PAN/TILT PCB ERROR]	Pan tilt pcb not detected.	Blue	2U
[PAN MOTOR ERROR]	This message will appear after the reset of the product if: • the PAN magnetic-indexing circuit detect a failure (sensor failed or magnet is missing); • or the stepping motor is defective; • or its driving IC on the PCB is defective; • or the product is not located in the default position after the reset of the fixture.	Blue	2U
[TILT MOTOR ERROR]	This message will appear after the reset of the product if: • the TILT magnetic-indexing circuit detect a failure (sensor failed or magnet is missing); • or the stepping motor is defective; • or its driving IC on the PCB is defective; • or the product is not located in the default position after the reset of the fixture.	Blue	2U
[PAN SENSOR ERROR]	Pan sensor not detected.	Blue	2U
[TILT SENSOR ERROR]	Tilt sensor not detected.	Blue	2U
[PAN ENCODER ERROR]	Pan encoder not detected.	Blue	2U
[TILT ENCODER ERROR]	Tilt encoder not detected.	Blue	2U
[LED FAN ERROR]	One of the blowers for cooling the source failed, the source has been switched OFF.	Blue	2U
[DRIVER/LED PCB ERROR]	Led driver pcb not detecteld	Yellow	3U
[ZOOM ERROR]	Failure detected during the reset of the ZOOM system, if the zoom lens is not located in its default position.	Yellow	3U
[LED DRIVER TEMPERATURE ERROR]	This error message indicates that an overheating in the head has occurred and the lamp has been switched OFF by the product protection system.	Yellow	3U
[LED PCB ERROR]	LED PCB 1 not detected during reset	Yellow	3U

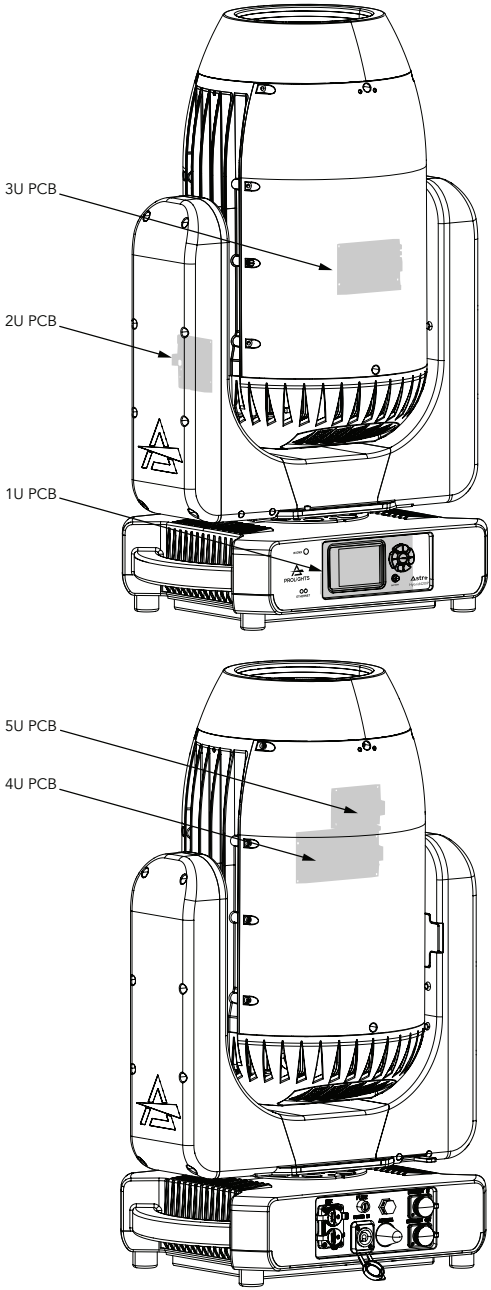
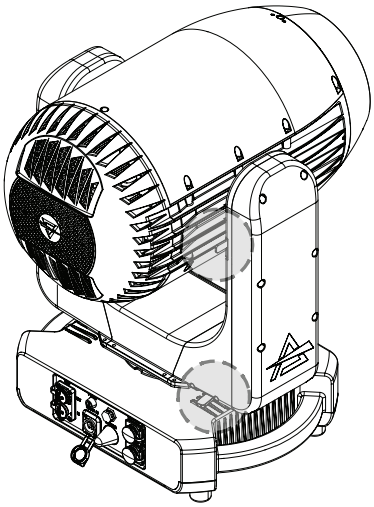


Fig. 14

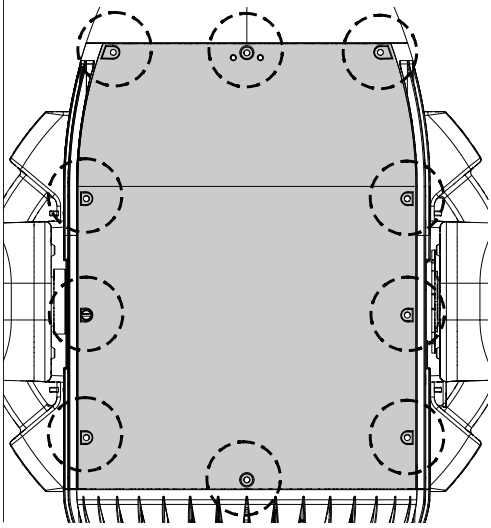
19 - PERIODICAL CLEANING

WARNING! Turn OFF power and allow approximately 20 minutes for the fixture to cool down.

1

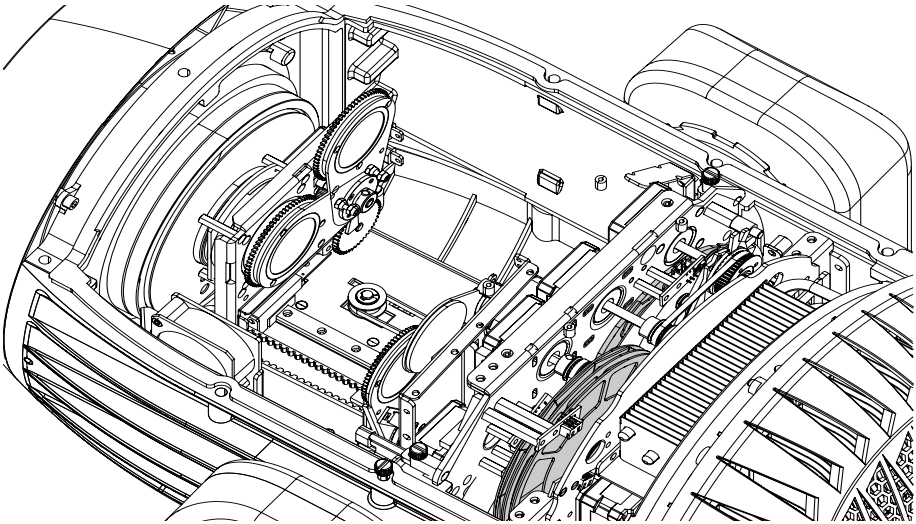


2



Before removing rear cover, place the head in a horizontal position and engage both the PAN and TILT locks for added stability. See the "PAN AND TILT LOCK" paragraph.
Loosen the marked screws and opening the head covers (2) from both sides.

3

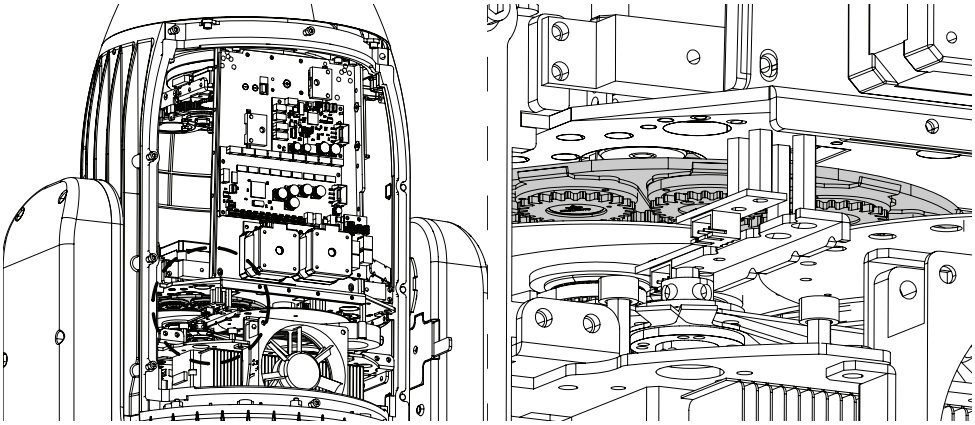


Use a soft cloth dampened with any detergent liquid for cleaning glass to remove the dirt from the reflectors, the lenses and filters.

Fig. 15

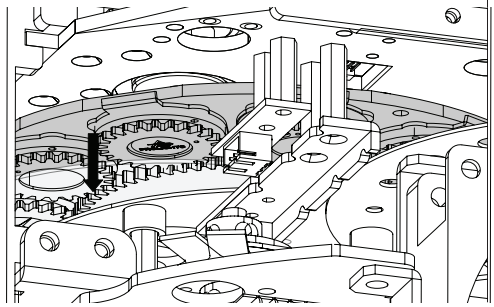
20 - GOBOS REPLACEMENT

1

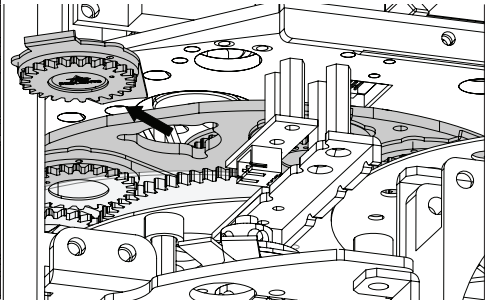


Loosen the marked screws and opening the head cover (see the "PERIODICAL CLEANING" paragraph, point 2).

2

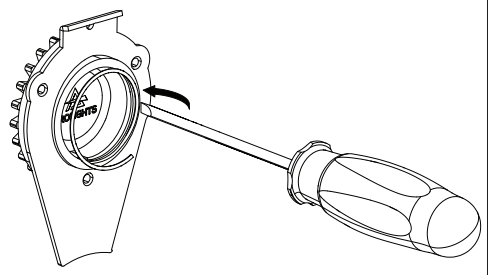


3

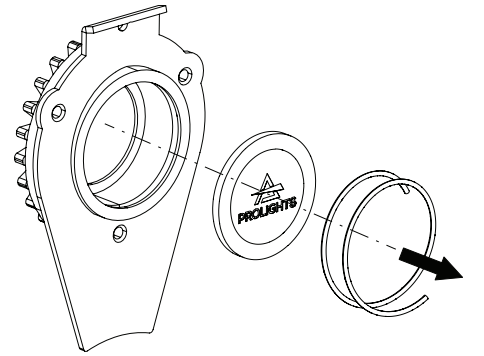


Detach the gobo holder flap from the gobo wheel (2). Then remove the gobo holder (3).

4



5



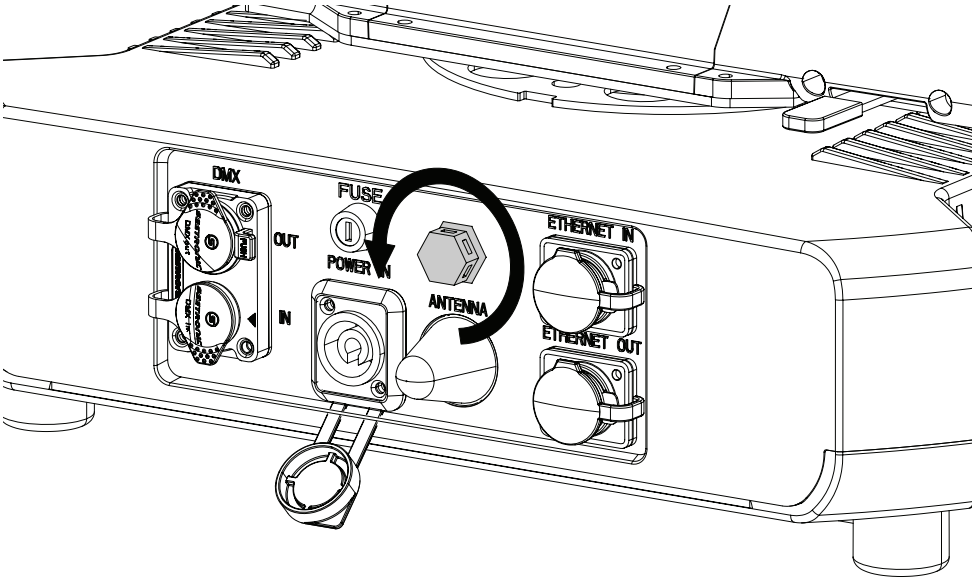
Remove the spring (4) and the gobo (5).

Fig. 1

21 - TEST OF IP65 RATING

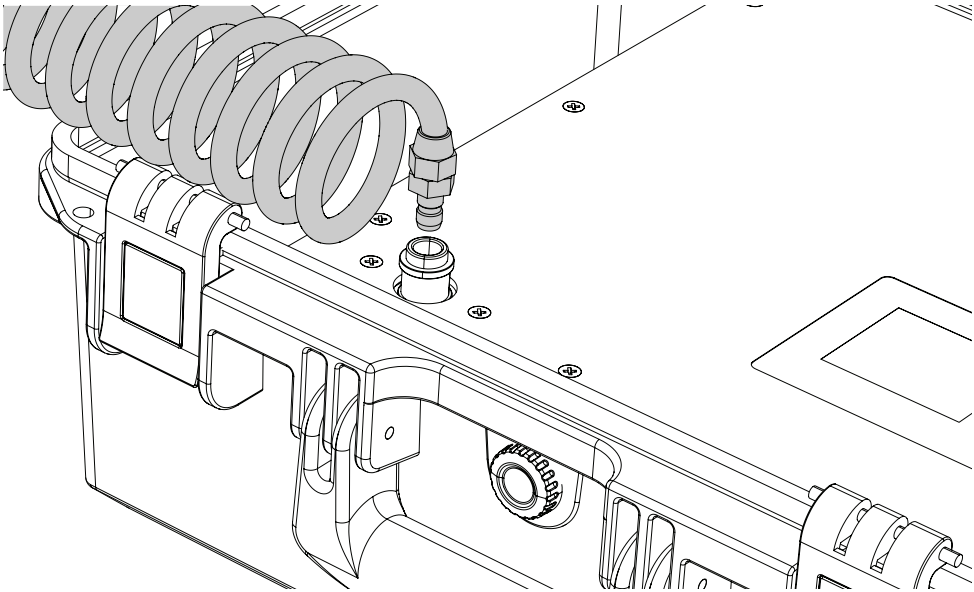
To check sealing after servicing use the IPTESTBOX.

1



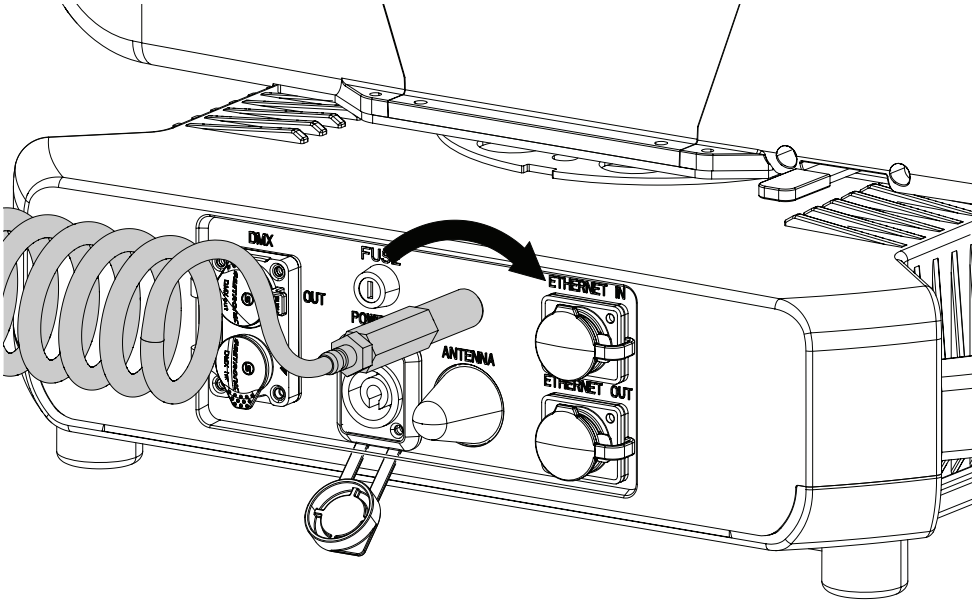
Remove the gore valve from the connections panel.

2



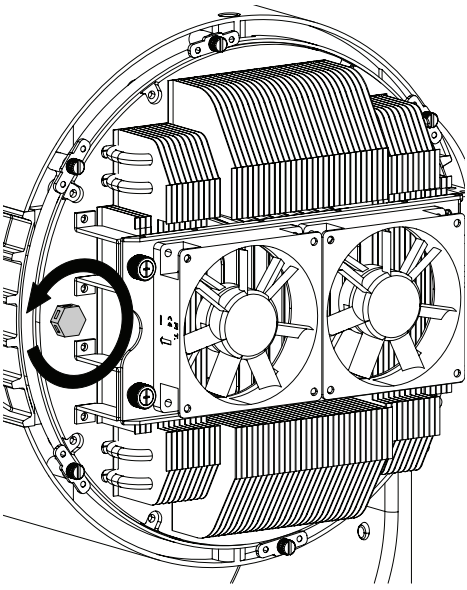
Connect the air hose to the IPTESTBOX by inserting the quick-connect fitting into the coupler.

3

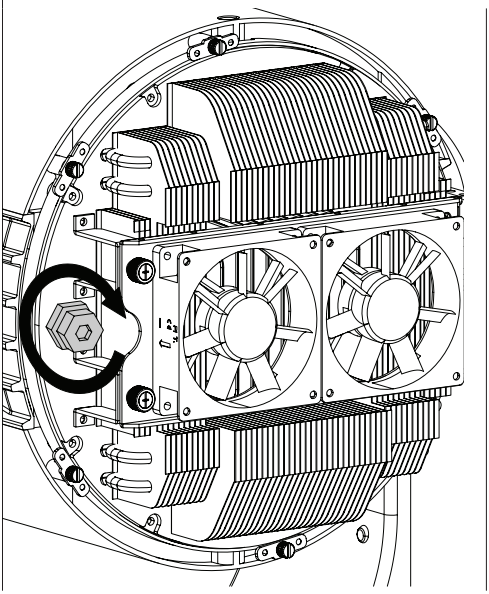


Insert the threaded end into the threaded valve hole socket.

4



5



Remove the gore valve on the rear connection heatsilk module (4) and insert the hex socket cap head included in the IPTESTBOX box (5).
For the operating procedure using the instrument, refer to the IPTESTBOX user manual.

Fig. 15

22 - MAINTENANCE

MAINTENANCE AND CLEANING THE PRODUCT

WARNING: Disconnect from the mains before starting any maintenance work

It is recommended to clean the front at regular intervals, from impurities caused by dust, smoke, or other particles to ensure that the light is radiated at maximum brightness.

- For cleaning, disconnect the main plug from the socket. Use a soft, clean cloth moistened with a mild detergent. Then carefully wipe the part dry. For cleaning other housing parts use only a soft, clean cloth. Never use a liquid, it might penetrate the unit and cause damage to it.
- The user must clean the product periodically to maintain optimum performance and cooling. The user may also upload firmware (product software) to the fixture via the DMX signal input port or USB port using firmware and instructions from PROLIGHTS.
- The frequency of such maintenance operations is to be performed according to various factors, such as the amount of the use and the condition of the installation environment (air humidity, presence of dust, salinity, etc.). It is recommended that the product is subject to annual service by a qualified technician for special maintenance involving at least the following procedures:
- General cleaning of internal parts.
- For all the parts subject to friction, using lubricants specifically supplied by PROLIGHTS.
- General visual check of the internal components, cabling, mechanical parts, etc.
- Electrical, photometric and functional checks; eventual repairs.
- Cleaning the lenses. Only use neutral soap and water to clean the lenses, then dry it carefully with a soft, non-abrasive cloth.

WARNING: the use of alcohol or any other detergent could damage the lenses.

- All other service operations on the product must be carried out by PROLIGHTS, its approved service agents or trained and qualified personnel.
- It is PROLIGHTS policy to apply the strictest possible calibration procedures and use the best quality materials available to ensure optimum performance and the longest possible component lifetimes. However, optical components are subject to wear and tear over the life of the product, resulting in gradual changes in colours over many thousands of hours of use. The extent of wear and tear depends heavily on operating conditions and environment, so it is impossible to specify precisely whether and to what extent performance will be affected. However, you may eventually need to replace optical components if their characteristics are affected by wear and tear after an extended period of use and if you require fixtures to perform within very precise optical and colour parameters.
- Do not apply filters, lenses or other materials on lenses or other optical components. Use only accessories approved by PROLIGHTS.

REPLACING THE FUSE

WARNING: Before replacing the fuse, unplug the product from the mains.

- Remove the old fuse from the housing with a suitable screwdriver (anticlockwise) and replace it with one of the same type and of the same classification (250VAC, T8A).

VISUAL CHECK OF PRODUCT HOUSING

- The parts of the product cover/housing should be checked for eventual damages and breaking start at least every two months. In addition, especially the parts of the front lens holder have to be checked mechanically (by means of movement by the part) if it is firmly fastened to the fixture. If hint of a crack is found on some plastic part, do not use the product until the damaged part will be replaced.
- Cracks or another damages of the cover/housing parts can be caused by the product transportation or manipulation and also ageing process may influence materials.
- This checking is necessary for both fixed installations and preparing product for renting. Any free moving parts inside of the product, cracked cover/housing or any part of front lens not sitting properly in place need to be immediately replaced.

TROUBLESHOOTING

Problems	Possible causes	Checks and remedies
Product doesn't power ON.	• No power to the product.	• Check that power is switched ON and cables are plugged in.
	• Fuse blown or internal fault.	• Check if the Fuse is intact and eventually replace it if necessary. • Contact the PROLIGHTS Service or authorized service partner. Do not remove parts and/or covers, or carry out any repairs or service that are not described in this Safety and User Manual unless you have both authorization from PROLIGHTS and the service documentation.
Product reset correctly but does not respond correctly to the contoller.	• Bad signal connection.	• Inspect connections and cables. Fix eventual bad connections. Repair or replace damaged cables.
	• Signal connection not terminated.	• Insert DMX termination plug in signal output socket of the last product on the signal line.
	• Incorrect addressing of the product.	• Check the product address and control settings.
	• One of the product is defective and is corrupting the signal transmission on the signal line.	• Unplug the XLR in and out connectors and connect them directly together to bypass one product at a time until normal operation is regained. Once found the error, have that fixture serviced by a qualified technician.
Timeout error after fixture reset.	• One or more hardware components requires mechanical adjustments.	• Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.
Mechanical effect loses position.	• Mechanical hardware require cleaning, adjustment or lubrification.	• Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.
Light output turn OFF Intermittently.	• Fixture is too hot.	• Check product stored error messages. • Allow product to cool. • Clean the product and airflow filters. • Reduce ambient temperature.
	• Hardware failure (temperature sensor, fans, Light source...).	• Check product stored error messages for more information. Contact. PROLIGHTS Service or an authorized service partner.
General low light intensity.	• Dirty lens assembly. • Dirty or damaged filters.	• Clean the fixture regularly. • Install lens assembly properly.

Contact an authorized service center in case of technical problems or not reported in the table can not be resolved by the procedure given in the table.

Note

Note

Note

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