



Astra Hybrid260IP

IP65 hybrid moving head, with 260W white phosphor Laser source and zoom 0.6° - 52°



USER MANUAL

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!

- See <https://www.prolights.it/product/ASTRAHYB260IP#download> for installation instructions.
- 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.
- The product has XLR sockets for DMX input and output.
- Connection of the control signal: DMX LINE.
- Notice: this control circuit is not isolated.
- Cumulative leakage current of less than 3.5mA on the control circuit.



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.

T_a45°C

Max operating ambient temperature (T_a)

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

T_a-20°C

Minimum operating ambient temperature (T_a)

- Do not operate the fixture if the ambient temperature (T_a) is below -20 °C (-4 °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

Permanent Outdoor use

- This product is rated with an IP (Ingress protection) for permanent 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.

T_c 57°C

Temperature of the external surface

- The surface of the fixture can reach up to 57 °C (134.6 °F) during operation. Avoid contact with people and materials.



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 3 according to EN 62471.
- Do not look into the beam. No direct eye exposure to the beam is permitted RG3.
- This device is identified in the category of Class 1 laser product IEC 60825-1:2014.
- Internal embedded laser parameters:
The laser wavelength of this product is 450-460nm.
Laser power max is 40w (Laser optic power).
The divergence is 10.5 mrad.



WARNING! DO NOT LOOK INTO THE BEAM
NO DIRECT EYE EXPOSURE TO THE BEAM
IS PERMITTED
RG3 HAZARD DISTANCE
REFER TO THE MANUAL



Do not look at the operating light source

- 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 216.0 m (708,6 ft) (0.25 second expose) is not expected.
- No direct eye exposure to the beam shall be permitted, RG3EC 62471-5:2015.
- Operators shall control access to the beam within the hazard distance or install the product at the height that will prevent spectators eyes from being in the hazard distance.



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.

Other general guidelines:

- This device is a lighting effect for professional use on stages, in discotheques, theatres, etc. The device was designed for outdoor use.
- Scanning, projection, or reflection of laser and collateral radiation into audience or other accessible uncontrolled areas shall not be permitted except for diffuse reflections produced by the atmosphere, added atmospheric scattering media, and target screens.
- Laser radiation levels in excess of the limits of Class I shall not be permitted at any point less than 3.0 meters above any surface upon which persons other than operators, performers, or employees are permitted to stand or 2.5 meters below or in lateral separation from any place where such persons are permitted to be. Operators, performers, and employees shall not be required or allowed to view radiation above the limits of Class I or be exposed to radiation above Class IIIa.
- All laser light shows shall be under the direct and personal control of trained, competent operator(s). The operator(s) shall:
 - Be an employee of the variance holder who will be responsible for the training and the conduct of the operator;
 - Be located where all beam paths can be directly observed at all times;
 - Immediately terminate the emission of light show radiation in the event of any unsafe condition; or for outdoor shows, upon request by any air traffic control officials.
- The projection system shall be securely mounted or immobilized to prevent unintended movement or misalignment. Beam masking will be provided as an inherent part of the system design to prevent overfilling of screens, beam stops, targets, etc.
- Mount the projector high enough to provide clearance for people who may walk beneath the beam path or establishing a restricted access area that extends beyond the beam hazard distance.
- While fixed installation at locations other than cinema theaters should be installed at a height not lower than 3 m vertically. The lowest tip of the Hazard Zone should be no lower than 3 m measured vertically above the floor. Horizontal clearance to the Hazard Zone should be 2.5 m measured horizontally. Any human access to the Hazard Zone, if applicable, is to be restricted by barriers. The fixed installation should be performed by authorized installers, who are trained to perform installations in accordance with the manufacturer's instructions.
- This product is in conformity with performance standards for laser products under 21 CFR 1040, except with respect to those characteristics authorized by Variance Number FDA - XXXX - V - XXXX effective <may, 8, 2019>



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).



The products to which this manual refers comply with:

- UL 1573 + CSA C22.2 No. 166 - Stage and Studio Luminaires and Connector Strips.



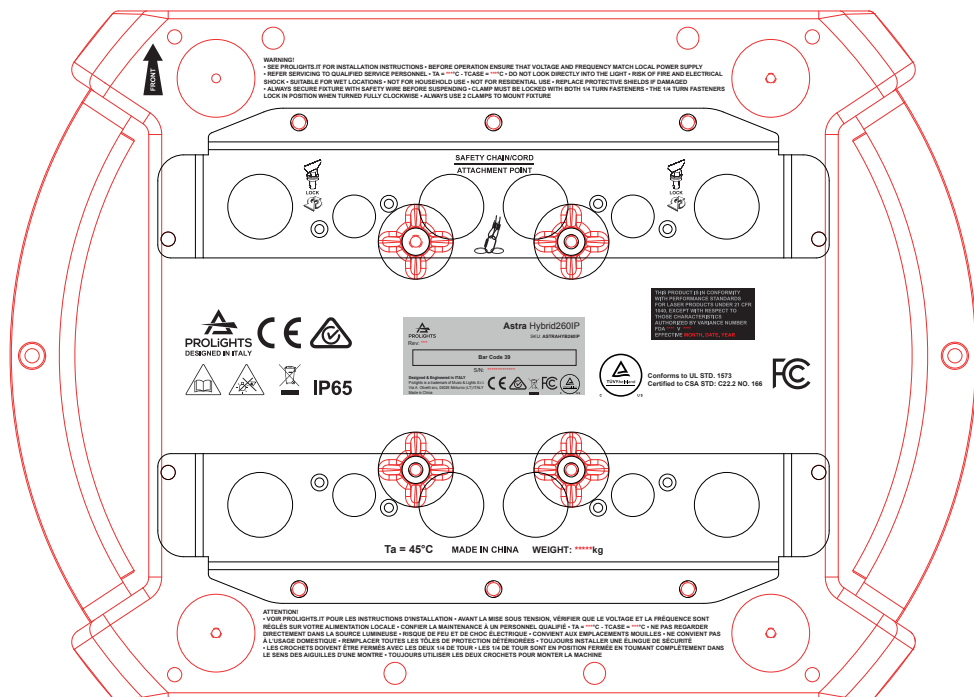
FCC Compliance:

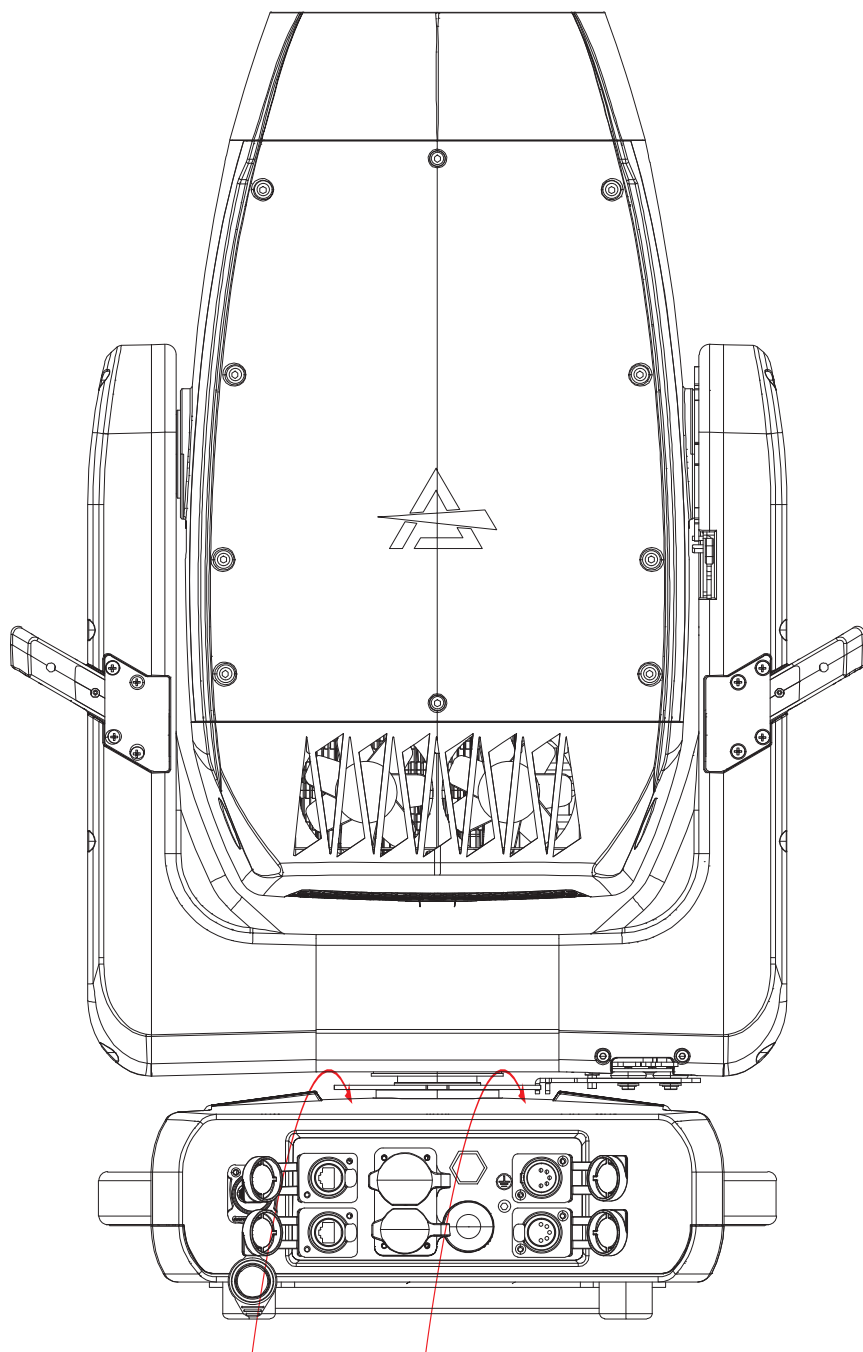
- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 1. This device may not cause harmful interference, and
 2. This device must accept any interference received, including interference that may cause undesired operation.



Other approvals

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





		
22x20mm	80x20mm	80x20mm
Please apply the WARNING label in this position		

1 - PACKAGING

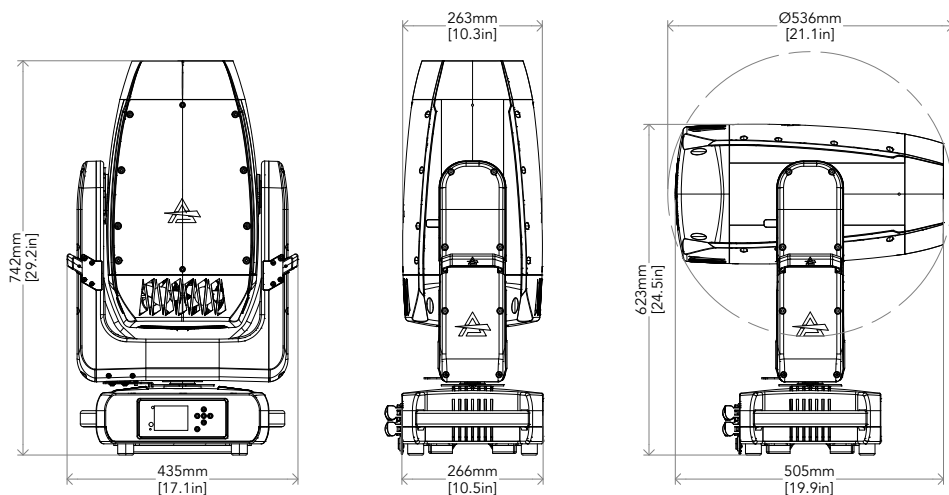
PACKAGE CONTENT

- 1x ASTRAHYB260IP.
- 1x 1,5 meters 3G1,5mmq power cable (BARE END - SEETRONIC POWERCON TRUE1 IP65).
- 2x OSIPPLUS.
- 1x Antenna.
- User Manual.

OPTIONAL ACCESSORIES

Check the updated accessories list, description and informations of the product at the following link:
<https://www.prolights.it/product/ASTRAHYB260IP#accessories>

2 - TECHNICAL DRAWING

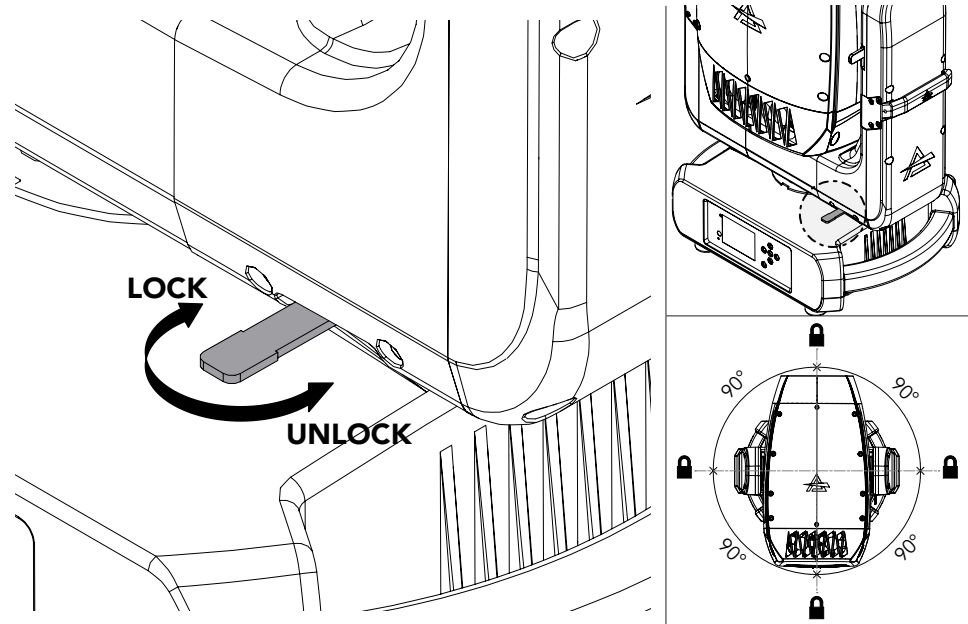


Weight: 34,5 kg - 76,06 lbs

Fig. 01

3 - PAN AND TILT LOCK

PAN Mechanism lock and release



TILT Mechanism lock and release

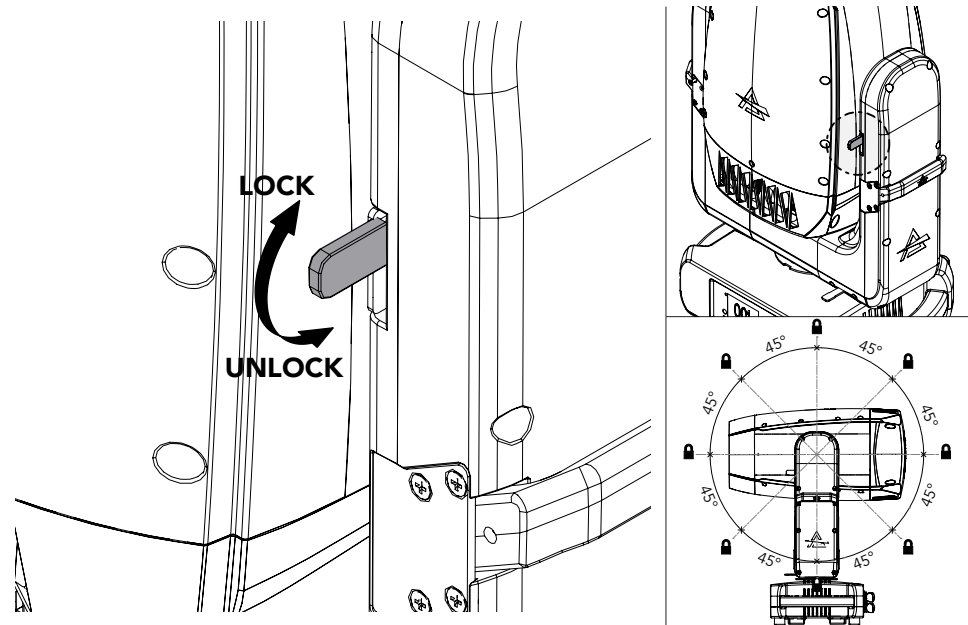


Fig. 02

4 - INSTALLATION

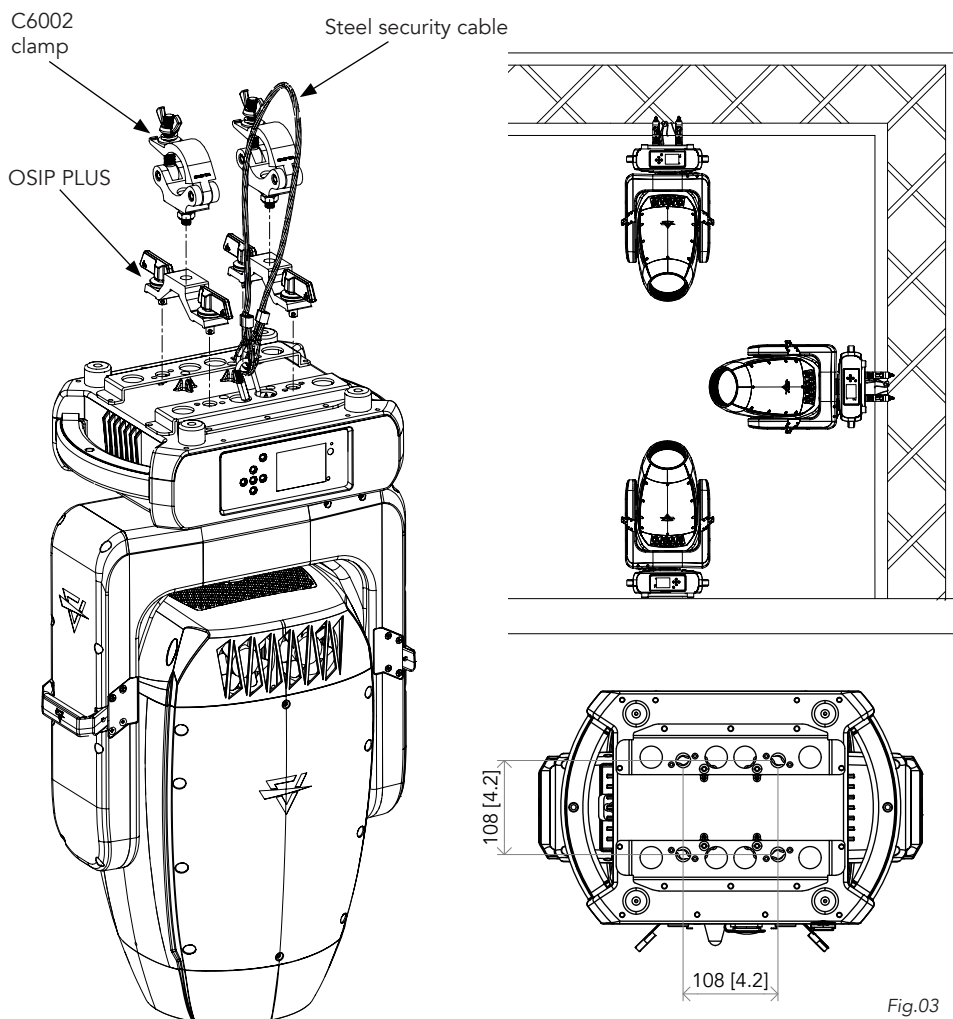
MOUNTING

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.



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 (max absolutes range : 90- 264V).
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 430W.

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. USB PORT for quick firmware upgrade.
2. USER INTERFACE with display and buttons for access to the control panel functions.
3. RETRACTABLE HANDLE to move and install the fixture.
4. ETHERCON CONNECTORS IN / OUT signal.
5. POWER IN/OUT: for connection to the Mains 100-240V~/50-60Hz.
6. GORE VALVE.
7. ANTENNA
8. DMX IN/OUT (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C.
9. SAFETY EYES: to attach safety cable.

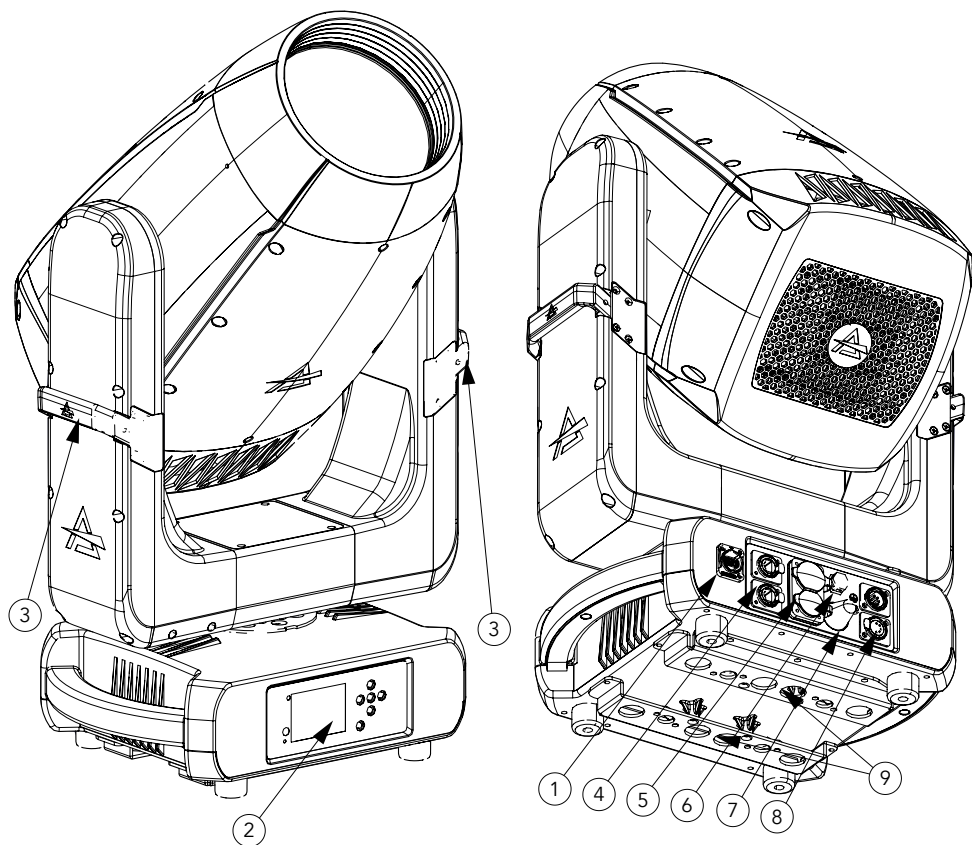


Fig 04

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

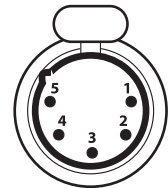


Fig. 05

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:

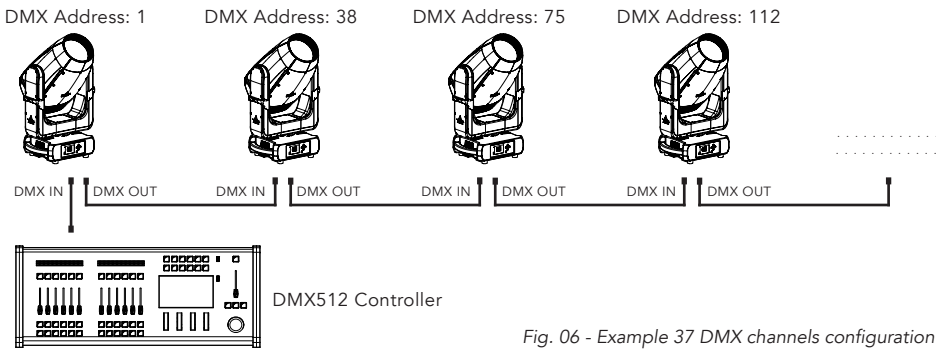


Fig. 06 - Example 37 DMX channels configuration

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.

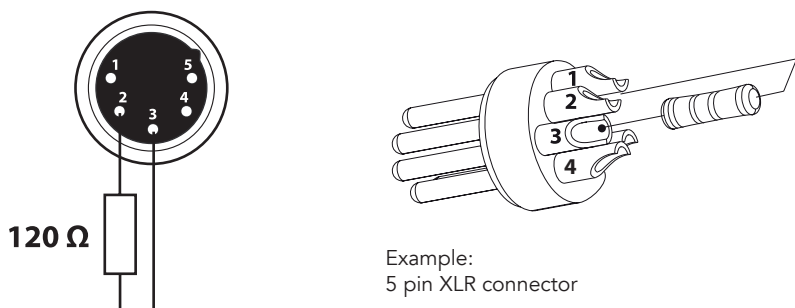


Fig. 07

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.

9 - CONTROL PANEL

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

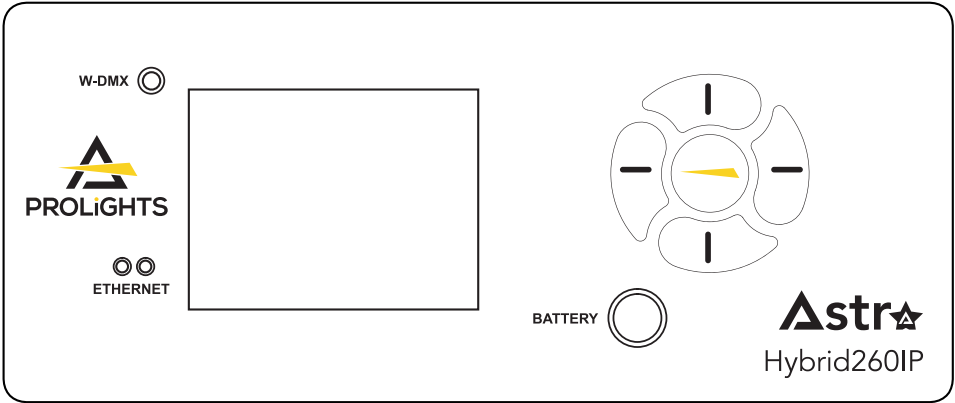


Fig. 08

DISPLAY AND BUTTONS LAYOUT

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

A diagram of the control panel buttons, numbered 1 to 5. 1 is the top button with an upward arrow. 2 is the right button with a rightward arrow. 3 is the bottom button with a downward arrow. 4 is the left button with a leftward arrow. 5 is the central button with a yellow rightward arrow.	1		Browse upwards through the menu list and increases the numeric value displayed.
	2		Scroll from left to right when entering numerical values, switching between hundreds, tens and units
	3		Browse downwards through the menu list and decreases the numeric value displayed.
	4		Return to the top level, or scroll from right to left when entering numerical values, switching between units, tens and hundreds
	5		Used to confirm the displayed value, or activate the displayed function or to access the menu tree or to return a previous menu window.
The 'BATTERY' label and a circle icon representing the battery.			- Switch on the display using backup battery. Hold for 5s. - Switch off display by pressing button 4 for 5s while on being on Home screen.

10 - 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
CONTROL CHANNEL set to 220 + PAN FINE CHANNEL SET TO 255, within 3s PAN FINE need to be set to 0	Basic Reload	This Reload also reset DMX address and mode. This combination need to be performed while fixture is resetting

11 - MENU STRUCTURE

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

MENU: CONNECT					
LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
DMX ADDRESS	DMX / CRMX	1-512			Set DMX Address for Main fixture
	sACN				
	ARTNET				
DMX MODE	STANDARD				
	EXTENDED				
WIRELESS	CRMX ON/OFF	ON			Enable the wireless card.
		OFF			
	CRMX MODE	TX CRMX			Allows configuration of the wireless card as either a Transmitter or Receiver. G4s and G3 are supported protocols for connection with Wireless Solution products.
		TX G4S			
		TX G3			
		RX			
	TX LINK	ON			Enables the transmission link when the unit is set as a Transmitter.
		OFF			
	TX UNLINK	ON			Disconnects the transmitter from all connected receivers. TX Unlink can only be used when the unit is in Transmitter mode in CRMX settings.
		OFF			
	RX RESET	ON			Disconnects the CRMX card, set as a Receiver, from any connected transmitters.
		OFF			
	IN TO CRMX (TX)	ON			Enable/Disable the transmission of the DMX from the transmitter to the receiver via CRMX
		OFF			
	CRMX TO DMX (RX)	ON			Enable/Disable the retransmission of the DMX from the receiver to the other units connected by cable to the receiver itself
		OFF			
	LINKING KEY	ON	SET LINKING KEY	8 digit code	RX MODE: Linking key section available only in RX mode. TX MODE: When in TX mode, message on screen: "Linking Key available only in RX Mode"
OFF					
UNIVERSE METADATA	UNIVERSE NAME	xxx		RX Mode: received from TX; TX CRMX Mode: default first 16 characters of Model Name: (DEVICELABEL-Last 4 digit of RDM UID)	
	UNIVERSE COLOR	RED	Universe Color can be set only if CRMX Mode@TX; If CRMX Mode@RX, Universe Color shows the one set on the TX		
		FIRE			
		YELLOW			
		GREEN			
		EMERALD			
		OCEAN			
		BLUE			
		DEEP PURPLE			
		COOL WHITE			
	LINK STRENGTH	** %			Show Wireless quality by percentage
CRMX MODULE VERSION	TimoFX: Driver Version Vx.x.xx			Show firmware version of TimoFX module	

MENU: CONNECT

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
ETHERNET SETTINGS	ARTNET SETTINGS	IP ADDRESS	xxx.xxx.xxx.x		Set IP Address for ArtNet usage.
		NET	255.xxx.xxx.x		Set SubNet Mask for ArtNet usage.
		SUBNET	0-127		Set Net used for ArtNet, value from 0 to 127
		UNIVERSE	0-15		Set SubNet used for ArtNet, value from 0 to 15
		ABSOLUTE UNIVERSE			
	sACN SETTINGS	IP ADDRESS	xxx.xxx.xxx.x		Set IP Address for ArtNet usage.
		UNIVERSE	1-16		
		MERGE MODE	OFF		Toggle and Set Merge mode for sACN.
			HTP		
			LTP		
	ETHERNET TO DMX	ON			Enables retransmission of the Ethernet signal over a standard DMX cable. A slight time delay may occur on the DMX line.
		OFF			

MENU: SETUP

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
SCREEN	BACKLIGHT	ALWAYS ON			Sets the time after which the display will automatically turn off when inactive.
		10S			
		20S			
		30S			
	FLIP DISPLAY	ON			Enables the display to be rotated by 180°.
		OFF			
		AUTO			
	KEY LOCK	ON			Lock the buttons on the control panel with a password. To access the user menu, enter the following button sequence (password): UP, DOWN, UP, DOWN, ENTER.
		OFF			
	TEMP. UNIT	°C			
		°F			
MOVEMENT	PAN REVERSE	ON			Allows you to reverse Pan movement.
		OFF			
	TILT REVERSE	ON			Allows you to reverse Tilt movement.
		OFF			
	PAN DEGREE	630			Allows you to set the PAN range.
		540			
	TILT DEGREE	270			Allows you to set the TILT range.
		360			
	PAN/TILT FEEDBACK	ON			To activate / deactivate the reading of the feedbacks given by the encoders.
		OFF			
	MOVEMENT BLACKOUT	ON			Make fixture goes blackout OFF while moving.
		OFF			

MENU: SETUP

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
MOVEMENT	PAN/TILT MODE	FAST			To choose the horizontal/ vertical movement speed. SYNC mode will sync movement speed with the whole ASTRAWASH family fixtures.
		MEDIUM			
		SLOW			
	HOME POSITION	STANDARD			
DIMMER	DIMMER CURVE	CUSTOM			Check pag.20 for further details
		LINEAR			
		S-CURVE			
		SQUARE LAW			
	DIMMER SPEED	INVERSE SQUARE LAW			Check pag.21 for further details
		AUTO			
		FAST			
		MEDIUM			
FIXTURE	FAN MODE	SLOW			Select Fan behaviour.
		HIGH			
		SILENT			
	DMX FAULT	HOLD			Defines fixture behavior on DMX signal loss: HOLD (keep last state), BLACKOUT (turn off), STAND ALONE (run internal program), or EMERGENCY (activate emergency mode with white output).
		BLACKOUT			
	STATUS LED	ON			
		OFF			
	INVERT ZOOM	ON			
		OFF			
WHEELS	COLOR WHEEL BLACKOUT	ON			
		OFF			
	CTO WHEEL BLACKOUT	ON			
		OFF			
	R GOBO WHEEL BLACKOUT	ON			
		OFF			
	F GOBO WHEEL BLACKOUT	ON			
		OFF			
TRANSFER SETTINGS	WITHOUT DMX ADDRESS				Transfer settings from the current fixture to another fixture of the same model using the DMX protocol. If a signal from another source is present, the Transfer Configuration function will not be available.
	WITH DMX ADDRESS				

MENU: ADVANCED

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
LASER FREQUENCY	600 Hz				Select PWM frequency. NOTE: Using higher LED Frequency color accuracy may be slightly compro- mised at low level of dimmer.
	1200Hz				
	2000 Hz				
	4000 Hz				
	6000 Hz				
	25 kHz				
	50 kHz				
RESET	ALL				<i>To reset these functions.</i>
	PAN & TILT				
	PAN				
	TILT				
	CYAN				
	MAGENTA				
	YELLOW				
	CTO + COLORS				
	COLOR WHEEL				
	ROT GOBO				
	FIXED GOBO				
	ZOOM				
	FOCUS				
	FX WHEEL 1 WHEEL				
	FX WHEEL 2 WHEEL				
	OTHERS				
CALIBRATION	PASSWORD				<i>To calibrate these functions. (Password: 050)</i>
	PAN				
	TILT				
	DIMMER				
	CYAN				
	MAGENTA				
	YELLOW				
	CTO + COLORS				
	COLOR WHEEL				
	ROT GOBO				
	FIXED GOBO				
	PRISM				
	PRISM ROT				
	PRISM 2				
	PRISM 2 ROT				
	ZOOM				
	FOCUS				
	GOBO 1 FOCUS				
	GOBO 2 FOCUS				
	...				
	GOBO 12 FOCUS				

MENU: ADVANCED

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
CALIBRATION	GOBO 1 INDEX				To calibrate these functions. (Password: 050)
	GOBO 2 INDEX				
	...				
	GOBO 12 INDEX				
	GOBO F 1 FOCUS				
	...				
	GOBO F 29 FOCUS				
MANUAL CONTROL	CONTROL				Manual Control of each functionality via display. If this function is accessed with a valid DMX signal present, values are taken from last DMX frame received. Signal is ignored while fixture stays in this menu. Timeout for screen is inhibited. No Auto-leave function.
	PAN				
	PAN FINE				
	TILT				
	TILT FINE				
	PAN CONTINUOUS				
	TILT CONTINUOUS				
	DIMMER				
	DIMMER FINE				
	SHUTTER				
	CYAN				
	MAGENTA				
	YELLOW				
	CTO				
	CTO COLOR				
	CTO ADD COLOR				
	CTO COLOR FINE				
	COLOR WHEEL				
	COLOR WHEEL FINE				
	ROTO GOBO				
	GOBO ROT				
	GOBO ROT FINE				
	FIXED GOBO				
	FX WHEEL A				
	FX WHEEL A ROT				
	FX WHEEL B				
	FX WHEEL B ROT				
	ZOOM				
	ZOOM FINE				
	FOCUS				
	FOCUS FINE				
	ZOOM MODE				
	PSZ				
	PSZ FINE				
	PAN ZONE SIZE				
	TSZ				

MENU: ADVANCED

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
MANUAL CONTROL	TSZ FINE				
	TILT ZONE SIZE				
GOBO REPLACE	GOBO 1				<i>Wheel moves to bring the selected gobo in a easy position to be replaced. (See pag.43 for further informations)</i>
	...				
	GOBO 12				
RELOAD DEFAULT	BASIC RELOAD	YES			Default of all parameters excepted Calibration
		NO			
	FACTORY RELOAD	YES			Delete all USER PRESETS stored (Password: 050)
		NO			

MENU: INFORMATIONS

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	DESCRIPTION
FIXTURE TIME	FIXTURE HOURS	TOTAL	<65535H>		View informations about product operating lifetime. Fixture Hours is countered based on general operation time. Hours are countered since Power is plugged in. Source Hours is countered based on LED Activity time
		PARTIAL	<65535H>		
	CURRENT HOURS	TOTAL	<65535H>		
		PARTIAL	<65535H>		
	SOURCE HOURS	TOTAL	<65535H>		
		PARTIAL	<65535H>		
	AC POWER ON CYCLE	TOTAL	<65535H>		
		PARTIAL	<65535H>		
	MAINTENANCE TIME	ELAPSED TIME			
		ALERT PERIOD	10 - 1000		
POWER CONS.	** W				Show estimated power consumption
TEMP.	NEAR SOURCE TEMP, DRIVER PCB TEMP, LED PCB TEMP,...				
FAN SPEED	NEAR SOURCE FAN, BASE FAN,...				Show all FAN speeds.
CHANNEL VALUE					Show all Channel values as a list, value shown depends on DMX Mode
ERROR MESSAGE					Show error message
DEVICE LABEL	ASTRAHYB260IP				Show RDM Label.
DEVICE MODEL	ASTRAHYB260IP				Show RDM fixture model
RDM UID					Show RDM UID of the fixture.
SOFTWARE VERSION	1U01 V1.0.00...				Show firmware version of the fixture

DIMMER CURVES

Five dimming modes are available:

- 1. **LINEAR** - Light intensity increases proportionally to the DMX value, creating a linear perception.
- 2. **S-CURVE** - Light intensity is finer at low and high levels, with coarser control at mid-levels.
- 3. **SQUARE LAW** - Light intensity is finer at low levels and becomes coarser at higher levels.
- 4. **INVERSE SQUARE LAW** - Light intensity is coarser at low levels and finer at higher levels.

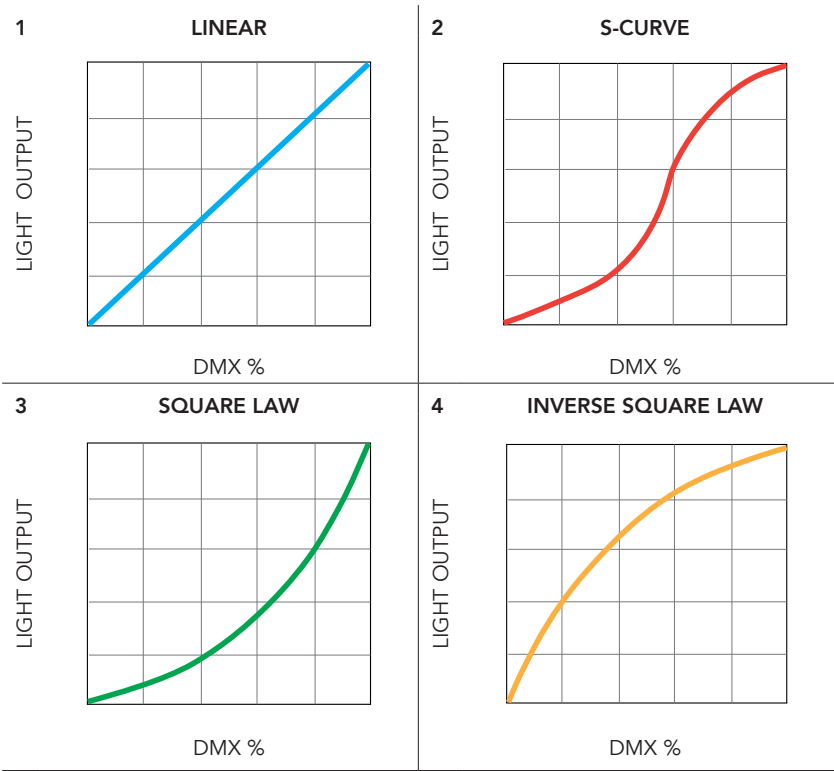


Fig 09

ZOOM MODES

The table below shows the minimum and maximum angles available for each zoom mode:

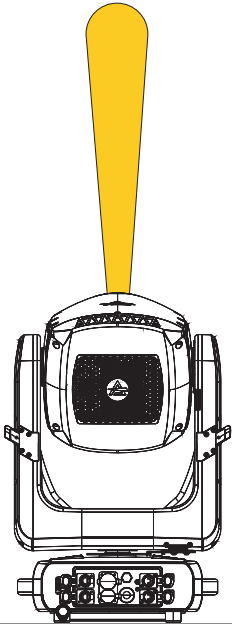
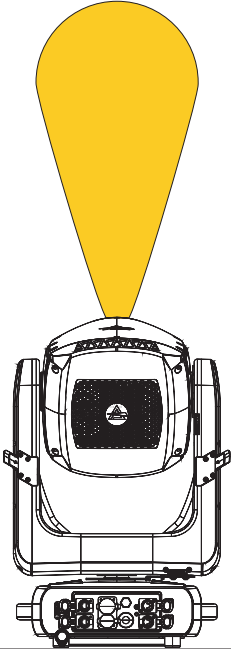
	MIN. ZOOM	MAX. ZOOM
		
BEAM MODE	0,6°	5,1°
SPOT MODE	0,6°	52,7°
FAR MODE	0,6°	1,5°
RAW MODE	0,6°	52,7°

Fig. 10

DIMMER SPEEDS

Four dimming speeds are available:

- 1. **AUTO** - When the DMX value changes by more than 50 DMX values, the intensity will instantly adjust to the new value. For changes less than 50 DMX values, the fast dimming curve will be applied.
- 2. **FAST** - Indicates the fast speed dimming curve. Refer to the diagram for reference.
- 3. **MEDIUM** - Indicates the medium speed dimming curve. Refer to the diagram for reference.
- 4. **SLOW** - Indicates the slow dimming curve. Refer to the diagram for reference.

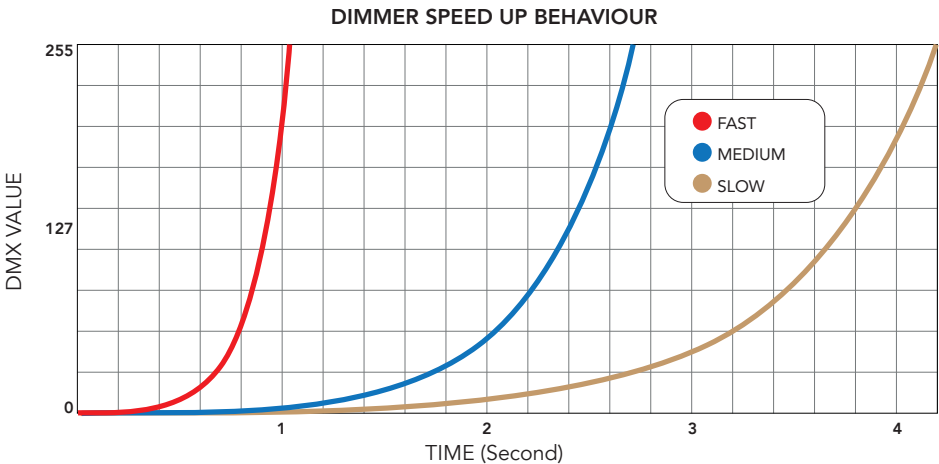
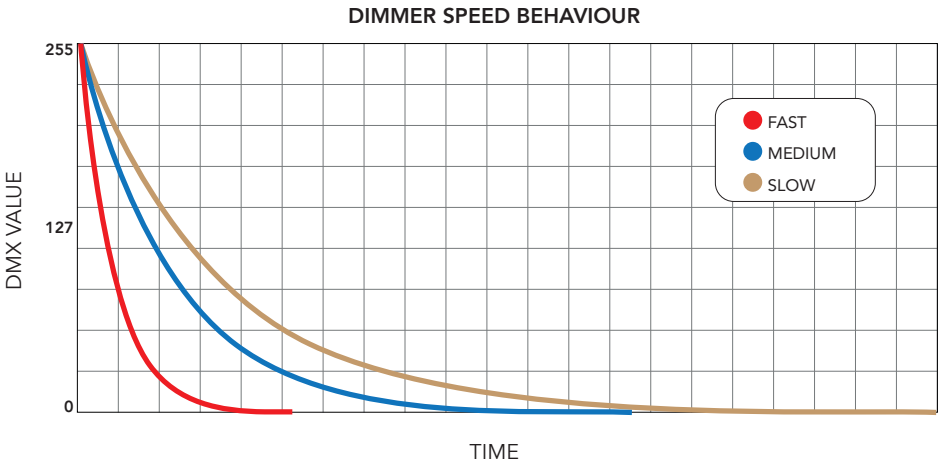


Fig 11

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.

Category	Parameter	Value	GET	SET
Product Information	SUPPORTED_PARAMETERS	0x0050	x	
	PARAMETER_DESCRIPTION	0x0051	x	
	DEVICE_MODEL_DESCRIPTION	0x0080	x	
	MANUFACTURER_LABEL	0x0081	x	
	DEVICE_LABEL	0x0082	x	x
	FACTORY_DEFAULTS	0x0090	x	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_FAIL_MODE	0x0141	x	x
	DMX_STARTUP_MODE	0x0142	x	x
Sensors	SENSOR_DEFINITION	0x0200	x	
	SENSOR_VALUE	0x0201	x	x
	RECORD_SENSORS	0x0202		x
Dimmer Settings	DIMMER_INFO	0x0340	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	
Power/Lamp Settings	DEVICE_HOURS	0x0400	x	x
	LAMP_HOURS	0x0401	x	x
	LAMP_STRIKES	0x0402	x	x
	LAMP_STATE	0x0403	x	x
	LAMP_MODE	0x0404	x	x
	DEVICE_POWER_CYCLES	0x0405	x	x
	BURN_IN	0x0440	x	x

Category	Parameter	Value	GET	SET
<i>Display Settings</i>	DISPLAY_INVERT	0x0500	x	x
	DISPLAY_LEVEL	0x0501	x	x
<i>Configuration</i>	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	
<i>IP & DNS Configuration</i>	IPV4_CURRENT_ADDRESS	0x0705	x	
	IPV4_STATIC_ADDRESS	0x0706	x	x
<i>Control</i>	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
	POWER_ON_SELF_TEST	0x1044	x	x

Manufacturer Specific PIDs

Parameter	PID	GET	SET	Value	Description
HOME_POSITION	0x8160	x	x	0-1	0: Standard 1: Custom
CURRENT_HOURS	0x82C5	x		0-65535	* h
CLEAN_ALL_DATA	0x82C8	x	x	0-1	0: No 1: Yes
DMX_FAULT	0x82DD	x	x	0-1	0: Hold 1: Blackout
MAINTENANCE_T_ALERT_PERIOD	0x82DF	x	x		
MAINTENANCE_T_ELAPSED_TIME	0x82E0	x	x		* h
ERROR_MESSAGE	0x82EA	x			
POWER_CONSUMPTION	0x82EF	x			**W
WIRELESS_QUALITY	0x82F4	x			**%

13 - DMX CHARTS

RDM Personality ID List		
ID	DMX Mode	Footprint
1	STANDARD	33
2	EXTENDED	37

RDM Model ID
0xA031

PAN/TILT POSITION RELATED TO DMX VALUES
Home position set to CUSTOM (Default)

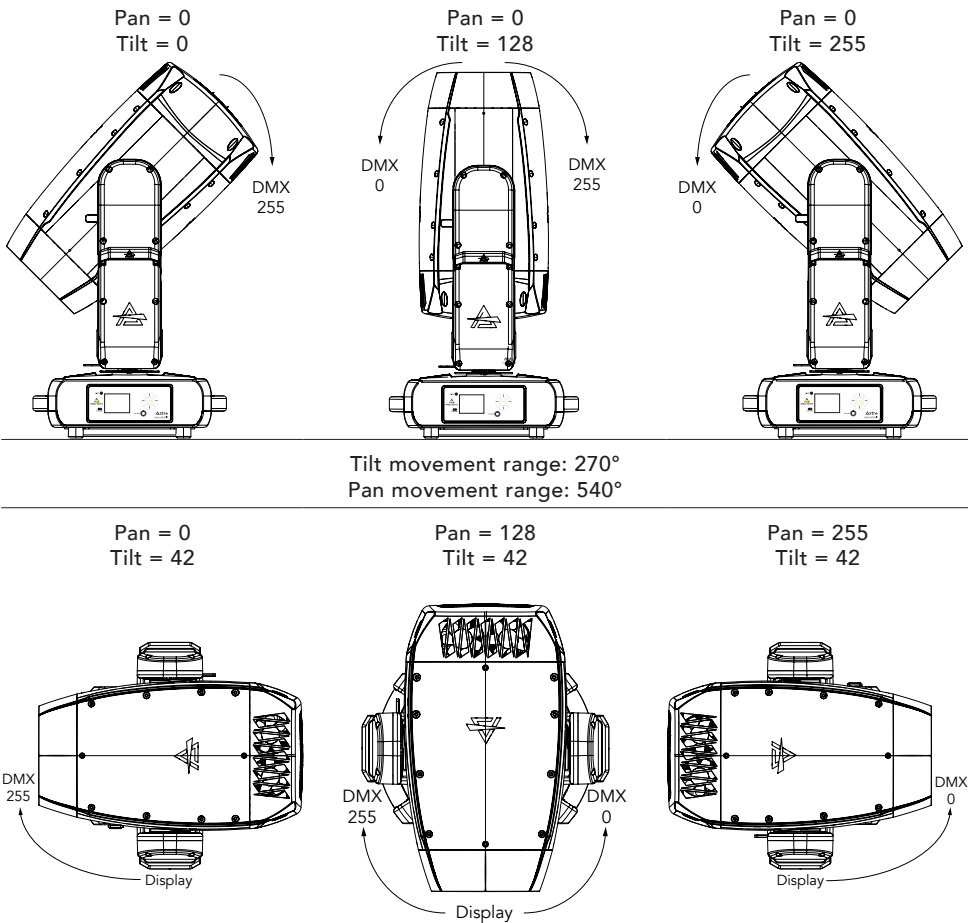


Fig. 12

PAN/TILT POSITION RELATED TO DMX VALUES

Home position set to STANDARD (User selectable)

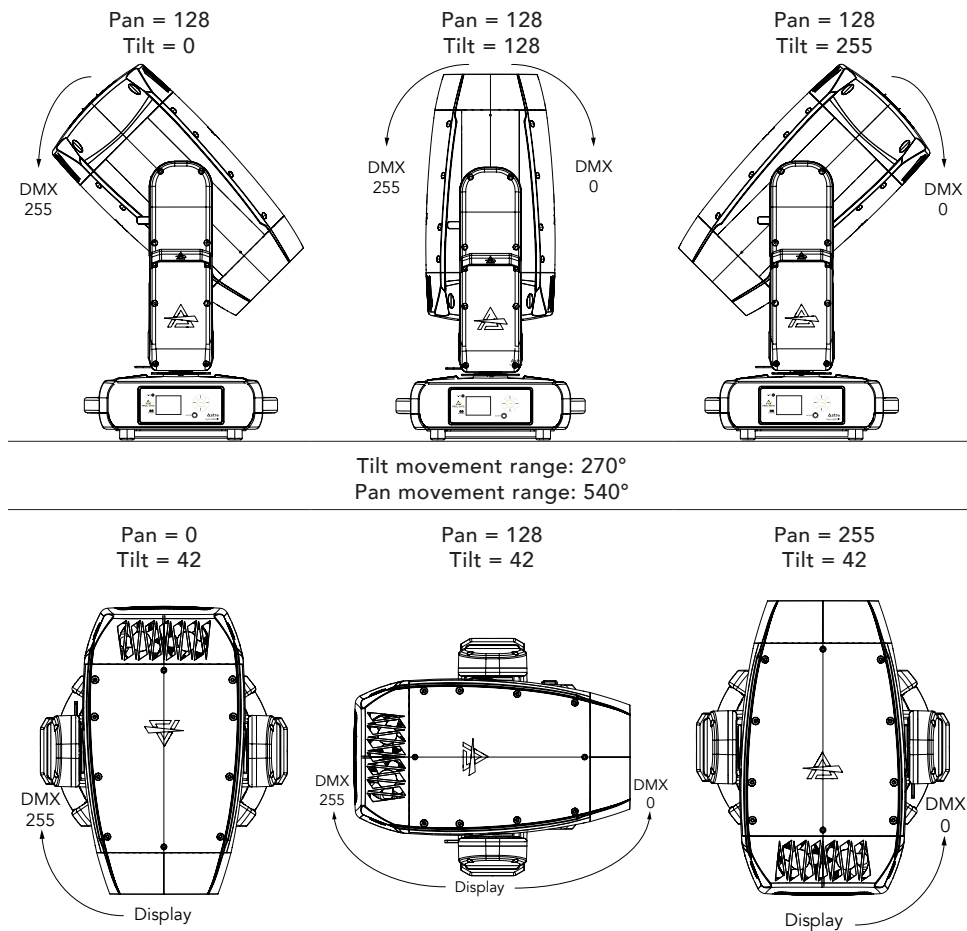


Fig. 13

DMX Chart Summary

DMX MODE		Function	DMX MODE		Function
STANDARD 33 ch	EXTENDED 37 ch		STANDARD 33 ch	EXTENDED 37 ch	
1	1	Pan	25	29	Focus Fine
2	2	Pan fine	26	30	Zoom Mode
3	3	Tilt	27	31	PSZ (Pan safety zone)
4	4	Tilt fine	28	32	PSZ fine
5	5	Pan rotation	29	33	PSZ size
6	6	Tilt rotation	30	34	TSZ (Tilt safety zone)
7	7	Dimmer	31	35	TSZ fine
8	8	Dimmer Fine	32	36	TSZ size
9	9	Shutter	33	37	Control
10	10	Cyan			
11	11	Magenta			
12	12	Yellow			
-	13	CTO			
-	14	Color Wheel 1			
-	15	Color Wheel 1 Fine			
13	-	CTO + Filters			
14	16	Color Wheel 2			
-	17	Color Wheel 2 Fine			
15	18	Rot Gobo Wheel			
16	19	Gobo Rot			
-	20	Gobo Rot Fine			
17	21	Fixed Gobo			
18	22	FX Wheel A			
19	23	Prism Wheel A Rotation			
20	24	FX Wheel B			
21	25	Prism Wheel B Rotation			
22	26	Zoom			
23	27	Zoom Fine			
24	28	Focus			

DMX MODE		Name	Function	DMX		Default	
STANDARD 33 ch	EXTENDED 37 ch			FROM	TO		
1	1	Pan	Pan movement	0	255	128	
2	2	Pan fine	Fine pan movement	0	255	128	
3	3	Tilt	Tilt movement	0	255	128	
4	4	Tilt fine	Fine tilt movement	0	255	128	
5	5	Pan rotation	Spinout stop	0	20	0	
			Shortcut stop	21	41		
			Forwards Pan rotation from fast to slow	42	142		
			No rotation	143	154		
			Backwards Pan rotation from slow to fast	155	255		
6	6	Tilt rotation	Spinout stop	0	20	0	
			Shortcut stop	21	41		
			Forwards Pan rotation from fast to slow	42	142		
			No rotation	143	154		
			Backwards Pan rotation from slow to fast	155	255		
7	7	Dimmer	Dimmer intensity 0 – 100%	0	255	0	
8	8	Dimmer Fine	Fine dimming	0	255	0	
9	9	Shutter	Open	0	1	255	
			Strobe from slow to fast	2	62		
			Open	63	64		
			Pulse in from slow to fast	65	125		
			Close	126	127		
			Pulse out from slow to fast	128	188		
			Open	189	190		
			Random from slow to fast	191	251		
			Open	252	255		
10	10	Cyan	Linear saturation 0 – 100%	0	255	0	
11	11	Magenta	Linear saturation 0 – 100%	0	255	0	
12	12	Yellow	Linear saturation 0 – 100%	0	255	0	
	13	CTO	Linear saturation 7000K to 2700K	0	255	0	
-	14	Color Wheel 1	Color Positioning				0
			Open	0			
			Open + UV	1	17		
			UV	18			
			UV + Congo Blue	19	35		
			Congo Blue	36			
			Congo Blue + Minus Green 1/4	37	53		
			Minus Green 1/4	54			
			Minus Green 1/4 + Minus Green 1/2	55	71		
			Minus Green 1/2	72			
			Minus Green 1/2 + CTB 1/2	73	89		
			CTB 1/2	90			
			CTB 1/2 + CTB 1/4	91	107		
			CTB 1/4	108			
			CTB 1/4 + CTB	109	125		
			CTB	126			

DMX MODE		Name	Function	DMX		Default
STANDARD 33 ch	EXTENDED 37 ch			FROM	TO	
-	14	Color Wheel 1	CTB + Light Amber	127	143	0
			Light Amber	144	159	
			Color Slot			
			Open	160	163	
			UV	164	167	
			Congo Blue	168	171	
			Minus Green 1/4	172	175	
			Minus Green 1/2	176	179	
			CTB 1/2	180	183	
			CTB 1/4	184	187	
			CTB	188	191	
			Light Amber	192	195	
			CTO	196	199	
			Color Wheel Rotation			
			Forward rainbow - Fast to slow	200	224	
			No rotation	225	230	
			Backwards rainbow - Slow to fast	231	255	
-	15	Color Wheel 1 Fine	Fine positioning	0	255	0
13	-	CTO + Filters	Lineary CTO from 0% to 100%	0	221	0
			Light Amber	222		
			Light Amber + CTB	223	225	
			CTB	226		
			CTB + CTB 1/4	227	229	
			CTB 1/4	230		
			CTB 1/4 + CTB 1/2	231	233	
			CTB 1/2	234		
			CTB 1/2 + Minus Green 1/2	235	237	
			Minus Green 1/2	238		
			Minus Green 1/2 + Minus Green 1/4	239	241	
			Minus Green 1/4	242		
			Minus Green 1/4 + Congo Blue	243	245	
			Congo Blue	246		
			Congo Blue + UV	247	249	
			UV	250		
			UV + Open	251	253	
Open	254	255				

DMX MODE		Name	Function	DMX		Default
STANDARD 33 ch	EXTENDED 37 ch			FROM	TO	
14	16	Color Wheel 2	Color Positioning		0	
			Open	0		
			Open + Red	1 6		
			Red	7		
			Red + Deep Purple	8 13		
			Deep Purple	14		
			Deep Purple + Yellow	15 20		
			Yellow	21		
			Yellow + Velvet Green	22 27		
			Velvet Green	28		
			Velvet Green + Magenta	29 34		
			Magenta	35		
			Magenta + Blue	36 41		
			Blue	42		
			Blue + Orange	43 48		
			Orange	49		
			Orange + Green	50 55		
			Green	56		
			Green + Amber	57 62		
			Amber	63		
			Amber + Light Blue	64 69		
			Light Blue	70		
			Light Blue + Light Red	71 76		
			Light Red	77		
			Light Red + Arctic Lime	78 83		
			Arctic Lime	84		
			Arctic Lime + Pink	85 90		
			Pink	91		
			Pink + Dark Green	92 97		
			Dark Green	98		
			Dark Green + Medium BLue	99 104		
			Medium BLue	105		
			Medium BLue + Dark Amber	106 111		
			Dark Amber	112		
			Dark Amber + Aquamarine	113 118		
			Aquamarine	119		
			Aquamarine + Tropical Violet	120 125		
			Tropical Violet	126		
			Tropical Violet + Slate Blue	127 132		
			Slate Blue	133		
			Slate Blue + Open	134 139		
			Open	140 159		
			Color Slot			
			Open	160 161		
			Red	162 163		

DMX MODE		Name	Function	DMX		Default		
STANDARD 33 ch	EXTENDED 37 ch			FROM	TO			
14	16	Color Wheel 2	Deep Purple	164	165	0		
			Yellow	166	167			
			Velvet Green	168	169			
			Magenta	170	171			
			Blue	172	173			
			Orange	174	175			
			Green	176	177			
			Amber	178	179			
			Light Blue	180	181			
			Light Red	182	183			
			Arctic Lime	184	185			
			Pink	186	187			
			Dark Green	188	189			
			Medium BLue	190	191			
			Dark Amber	192	193			
			Aquamarine	194	195			
			Tropical Violet	196	197			
			Slate Blue	198	199			
			Color Wheel Rotation					
			Forward rainbow - Fast to slow				200	224
			No rotation				225	230
			Backwards rainbow - Slow to fast				231	255
-	17	Color Wheel 2 Fine	Fine positioning	0	255	0		
15	18	Rot Gobo Wheel	Open	0	9	0		
			Gobo Indexing (set next ch)					
			GOBO 1	10	11			
			GOBO 2	12	13			
			GOBO 3	14	15			
			GOBO 4	16	17			
			GOBO 5	18	19			
			GOBO 6	20	21			
			GOBO 7	22	23			
			GOBO 8	24	25			
			GOBO 9	26	27			
			GOBO 10	28	29			
			GOBO 11	30	31			
			GOBO 12	32	33			

DMX MODE		Name	Function	DMX		Default
STANDARD 33 ch	EXTENDED 37 ch			FROM	TO	
15	18	Rot Gobo Wheel	Gobo Rotation (set next ch)		0	
			GOBO 1	34		35
			GOBO 2	36		37
			GOBO 3	38		39
			GOBO 4	40		41
			GOBO 5	42		43
			GOBO 6	44		45
			GOBO 7	46		47
			GOBO 8	48		49
			GOBO 9	50		51
			GOBO 10	52		53
			GOBO 11	54		55
			GOBO 12	56		57
			Gobo shaking - Slow to fast (Index on next channel)			
			GOBO 1	58		68
			GOBO 2	69		79
			GOBO 3	80		90
			GOBO 4	91		101
			GOBO 5	102		112
			GOBO 6	113		123
			GOBO 7	124		134
			GOBO 8	135		145
			GOBO 9	146		156
			GOBO 10	157		167
			GOBO 11	168		178
			GOBO 12	179		193
			Gobo Wheel Rotation			
			Forward wheel rotation - Fast to slow	194		223
			No rotation	224		225
			Backwards wheel rotation - Slow to fast	226		255
16	19	Gobo Rot	Gobo Indexing		0	
			Gobo index 0° - 360°	0		255
			Gobo Rotation		0	
			No rotation	0		0
			Forward gobo rotation - Fast to slow	1		127
			No rotation	128		128
			Backwards gobo rotation - Slow to fast	129	255	
-	20	Gobo Rot Fine 1	Fine indexing/rotation	0	255	0

DMX MODE		Name	Function	DMX		Default	
STANDARD 33 ch	EXTENDED 37 ch			FROM	TO		
17	21	Fixed Gobo	Open	0	19	0	
			GOBO 1	20	20		
			GOBO 2	21	21		
			GOBO 3	22	22		
			GOBO 4	23	23		
			GOBO 5	24	24		
			GOBO 6	25	25		
			GOBO 7	26	26		
			GOBO 8	27	27		
			GOBO 9	28	28		
			GOBO 10	29	29		
			GOBO 11	30	30		
			GOBO 12	31	31		
			GOBO 13	32	32		
			GOBO 14	33	33		
			GOBO 15	34	34		
			GOBO 16	35	35		
			GOBO 17	36	36		
			GOBO 18	37	37		
			GOBO 19	38	38		
			GOBO 20	39	39		
			GOBO 21	40	40		
			GOBO 22	41	41		
			GOBO 23	42	42		
			GOBO 24	43	43		
			GOBO 25	44	44		
			GOBO 26	45	45		
			GOBO 27	46	46		
			GOBO 28	47	47		
			Wide Open (Zoom Mode@Beam-Raw) Reserved (Zoom Mode@Spot)		48		48
			Gobo shaking - Slow to fast				
			GOBO 1	49	53		
			GOBO 2	54	58		
			GOBO 3	59	63		
			GOBO 4	64	68		
			GOBO 5	69	73		
			GOBO 6	74	78		
			GOBO 7	79	83		
			GOBO 8	84	88		
			GOBO 9	89	93		
			GOBO 10	94	98		
			GOBO 11	99	103		
			GOBO 12	104	108		
			GOBO 13	109	113		

DMX MODE		Name	Function	DMX		Default
STANDARD 33 ch	EXTENDED 37 ch			FROM	TO	
17	21	Fixed Gobo	GOBO 14	114	118	0
			GOBO 15	119	123	
			GOBO 16	124	128	
			GOBO 17	129	133	
			GOBO 18	134	138	
			GOBO 19	139	143	
			GOBO 20	144	148	
			GOBO 21	149	153	
			GOBO 22	154	158	
			GOBO 23	159	163	
			GOBO 24	164	168	
			GOBO 25	169	173	
			GOBO 26	174	178	
			GOBO 27	179	183	
			GOBO 28	184	188	
			Wide Open (Modes: Beam, Raw) Reserved (Modes: Spot)	189	193	
			Gobo Wheel Rotation			
			Forward wheel rotation - Fast to slow	194	223	
			No rotation	224	225	
			Backwards wheel rotation - Slow to fast	226	255	
18	22	FX Wheel A	Open	0	29	0
			Prism Indexing (set next ch)			
			Prism A.1	30	49	
			Prism A.2	50	69	
			Prism A.3	70	89	
			Prism A.4	90	109	
			Prism Rotation (set next ch)			
			Prism A.1	110	129	
			Prism A.2	130	149	
			Prism A.3	150	169	
			Prism A.4	170	189	
			Frost			
			Frost A.1	190	255	
			19	23	Prism Wheel A Index/ Rotation	
Prism Indexing	0	255				
Prism Rotation						
Prism No Rotation	0	0				
Prism forward rotation fast to slow	1	127				
Prism No Rotation	128	128				
Prism backwards rotation slow to fast	129	255				

DMX MODE		Name	Function	DMX		Default
STANDARD 33 ch	EXTENDED 37 ch			FROM	TO	
20	24	FX Wheel B	Open	0	29	0
			Prism Indexing (set next ch)			
			Prism B.1	30	49	
			Prism B.2	50	69	
			Prism B.3	70	89	
			Prism B.4	90	109	
			Prism Rotation (set next ch)			
			Prism B.1	110	129	
			Prism B.2	130	149	
			Prism B.3	150	169	
			Prism B.4	170	189	
			Frost			
			Frost A.1	190	255	
21	25	Prism Wheel B Index/ Rotation	Prism Indexing			0
			Prism Indexing	0	255	
			Prism Rotation			
			Prism No Rotation	0	0	
			Prism forward rotation fast to slow	1	127	
			Prism No Rotation	128	128	
22	26	Zoom	Zoom from min to max beam angle	0	255	128
23	27	Zoom Fine	Fine zooming	0	255	0
24	28	Focus	Focus adjustment	0	255	128
25	29	Focus Fine	Fine focusing	0	255	0
26	30	Zoom Mode	Beam Mode	0	49	0
			Spot Mode	50	99	
			Far mode	100	149	
			Raw mode	150	199	
			Reserved	200	255	
27	31	PSZ	Pan safety zone start value	0	255	0
28	32	PSZ fine		0	255	0
29	33	PSZ size	Off	0	0	0
			Safety zone size 0% to 100%	1	255	0
30	34	TSZ	Tilt safety zone start value	0	255	0
31	35	TSZ fine		0	255	0
32	36	TSZ size	Off	0	0	0
			Safety zone size 0% to 100%	1	255	0
33	37	Control	No Function/Safe	0	1	0
			PAN REVERSE ON	2	3	
			PAN REVERSE OFF	4	5	
			TILT REVERSE ON	6	7	
			TILT REVERSE OFF	8	9	
			PAN/TILT MODE FAST	10	11	
			PAN/TILT MODE MEDIUM	12	13	
			PAN/TILT MODE SLOW	14	15	

DMX MODE		Name	Function	DMX		Default
STANDARD 33 ch	EXTENDED 37 ch			FROM	TO	
33	37	Control	MOVEMENT IN BLACKOUT ON	16	17	0
			MOVEMENT IN BLACKOUT OFF	18	19	
			COLOR WHEEL BLACKOUT ON (index)	20	21	
			COLOR WHEEL BLACKOUT OFF (index)	22	23	
			CTO WHEEL BLACKOUT ON (index)	24	25	
			CTO WHEEL BLACKOUT OFF (index)	26	27	
			ROTATING GOBO WHEEL BLACKOUT ON (index)	28	29	
			ROTATING GOBO WHEEL BLACKOUT OFF (index)	30	31	
			FIXED GOBO WHEEL BLACKOUT ON (index)	32	33	
			FIXED GOBO WHEEL BLACKOUT OFF (index)	34	35	
			HOME MODE STANDARD	36	37	
			HOME MODE CUSTOM	38	39	
			DISPLAY ON	40	41	
			DISPLAY 10S	42	43	
			DISPLAY 20S	44	45	
			DISPLAY 30S	46	47	
			FLIP DISPLAY ON	48	49	
			FLIP DISPLAY OFF	50	51	
			FLIP DISPLAY AUTO	52	53	
			KEY LOCK ON	54	55	
			KEY LOCK OFF	56	57	
			FAN MODE AUTO	58	59	
			FAN MODE SILENT	60	61	
			FAN MODE HIGH	62	63	
			NO SIGNAL HOLD	64	65	
			NO SIGNAL BLACKOUT	66	67	
			STATUS LED ON	68	69	
			STATUS LED OFF	70	71	
			DIMMER CURVE LINEAR	72	73	
			DIMMER CURVE S-CURVE	74	75	
			DIMMER CURVE SQUARE LAW	76	77	
			DIMMER CURVE INVERSE SQUARE LAW	78	79	
			DIMMER SPEED AUTO	80	81	
			DIMMER SPEED FAST	82	83	
			DIMMER SPEED MEDIUM	84	85	
			DIMMER SPEED SLOW	86	87	
			SOURCE FREQUENCY 600HZ	88	89	
			SOURCE FREQUENCY 1200HZ	90	91	
			SOURCE FREQUENCY 2000HZ	92	93	
			SOURCE FREQUENCY 4000HZ	94	95	
			SOURCE FREQUENCY 6000HZ	96	97	
			SOURCE FREQUENCY 25KHZ	98	99	

DMX MODE		Name	Function	DMX		Default
STANDARD 33 ch	EXTENDED 37 ch			FROM	TO	
33	37	Control	SOURCE FREQUENCY 50KHZ	100	101	0
			INVERT ZOOM OFF	102	103	
			INVERT ZOOM ON	104	105	
			RESET ALL	106	107	
			RESET PAN/TILT	108	109	
			RESET PAN	110	111	
			RESET TILT	112	113	
			RESET CYAN	114	115	
			RESET MAGENTA	116	117	
			RESET YELLOW	118	119	
			RESET CTO + COLORS	120	121	
			RESET COLOR WHEEL	122	123	
			RESET ROTATING GOBO	124	125	
			RESET GOBO ROTATION	126	127	
			RESET FIXED GOBO	128	129	
			RESET ZOOM	130	131	
			RESET FOCUS	132	133	
			RESET FX WHEEL 1	134	135	
			RESET FX WHEEL 2	136	137	
			RESET OTHER	138	139	
			Reserved	140	251	
			FACTORY DEFAULT OF CONTROL FUNCTIONS	252	253	
			Reserved	254	255	

SPINOUT STOP

Definition	Behavior	When to use it
The "Spinout" mode allows the fixture to reach the target position by continuing in the current rotation direction, even if this requires completing more than a full rotation.	"The goal is to never reverse the rotation direction, even at the cost of a longer travel path." "	Ideal when smoothness and elegance of movement are a priority. No sudden jumps, no visible "snapping" or reversals of motion that could interrupt the beam flow.

SHORTCUT STOP

Definition	Behavior	When to use it
The "Shortcut" mode enables the motor to take the shortest path to the new position, even if that involves an abrupt change in direction.	If the shortest route to the target requires reversing direction, the fixture will immediately change rotation direction.	Perfect when fast positioning is key. Designed for efficiency and responsiveness, even if the motion change is visible.

14 - FIXED GOBOS WHEEL

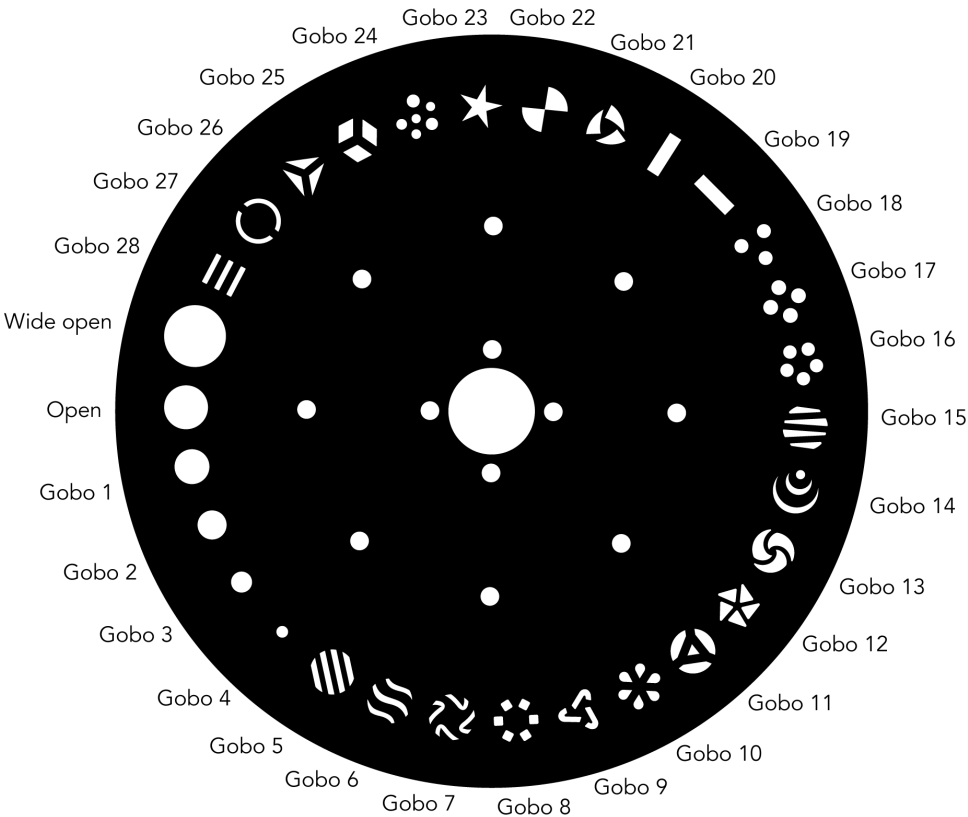
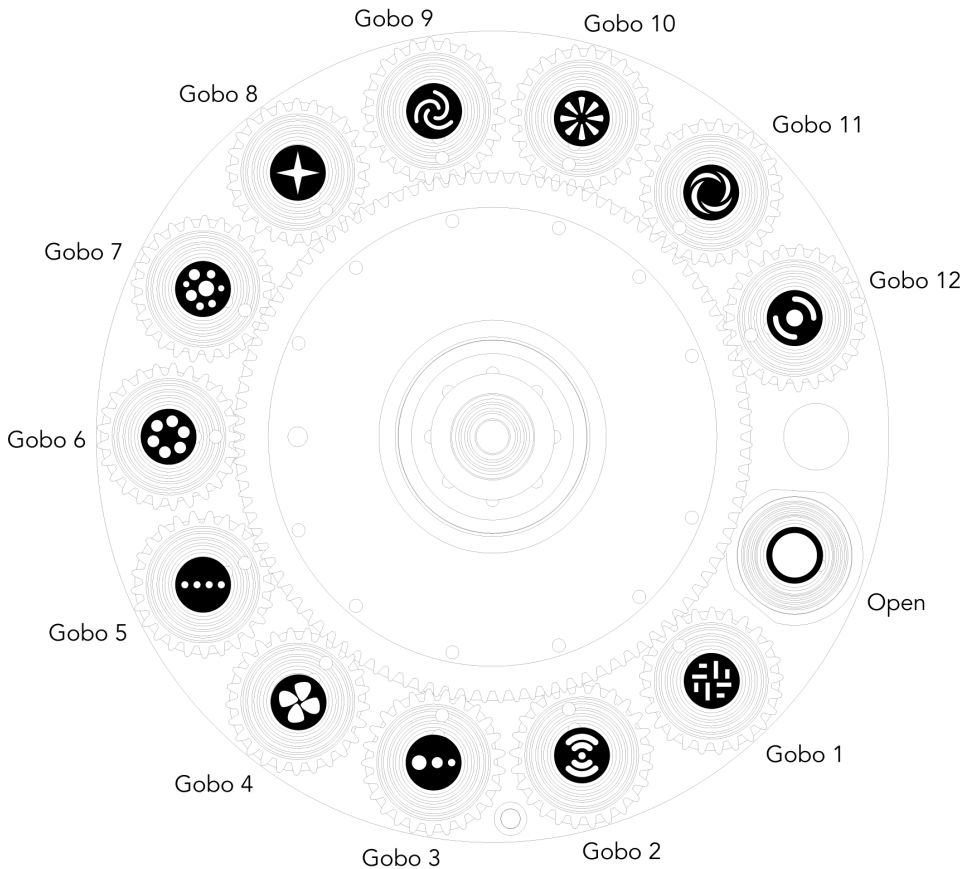
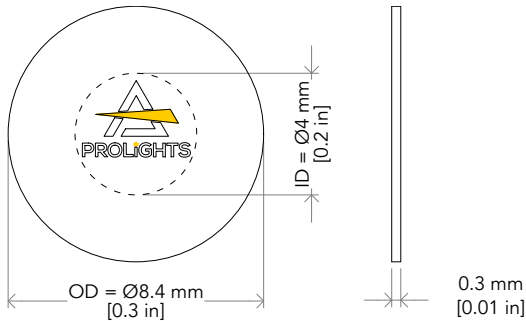


Fig. 14

15 - ROTATING GOBOS WHEEL

Gobo dimensions:

- Ø external (OD)= 8,4 mm
- Ø of image (ID)= 4,0 mm
- Thinckness= 0,3 mm
- Aluminum material



ATTENTION! Load with mirror surface toward the light source.

Fig. 15

16 - COLOR WHEELS

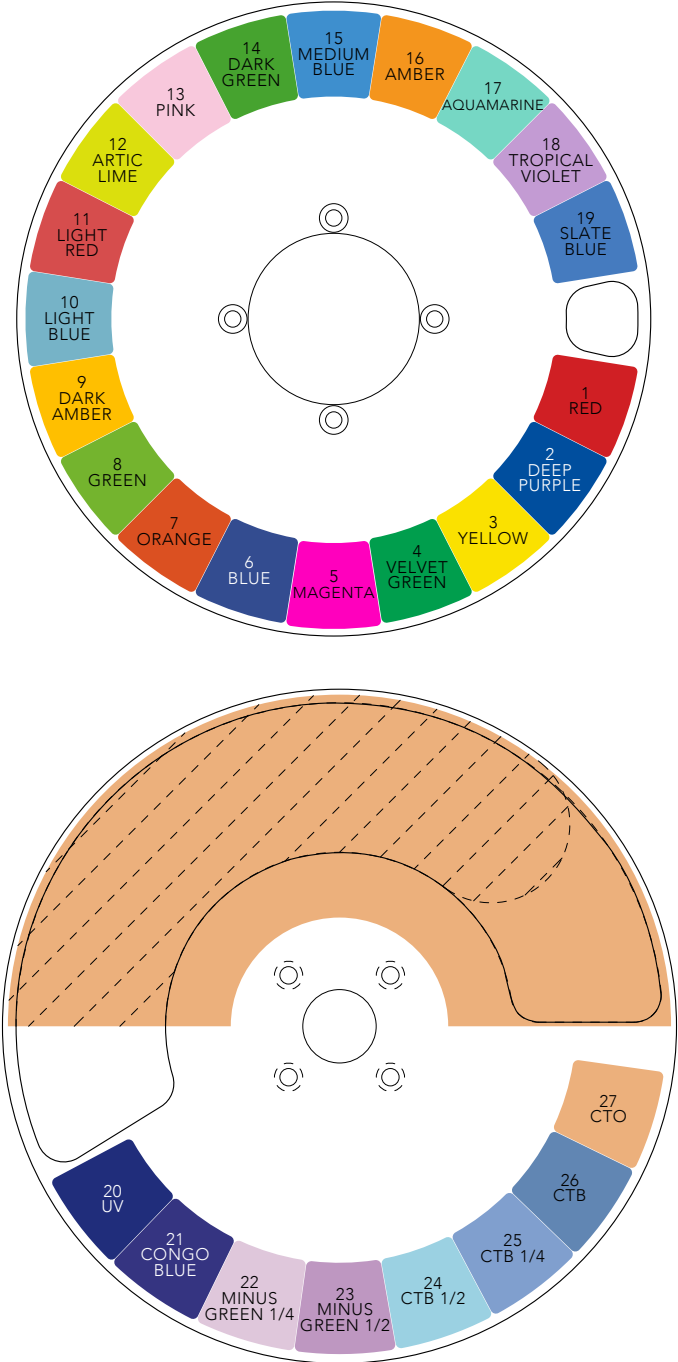


Fig. 16

17 - 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 41 you can see the location of the various pcb boards with their respective error colors.

ERROR SHOWED ON SCREEN	POSSIBLE CAUSES	POSSIBLE PCB WITH ANOMALY
[LAMP ERROR]	This error message is displayed when the lamp is switched OFF without a command from the product control system.	1U
[DMX ACTIVE]	This error message is displayed when a DMX signal conflict occurs.	1U
[ERROR MT TIME]	This error message is displayed when a maintenance is needed.	1U
[DISPLAY BATTERY ERROR]	Recharge The battery on the display board, keeping the product ON for some hours.	1U
	If the error still occurs, the battery is faulty . Replace the battery on the display board.	1U
[BASE FAN 1 ERROR]	First of the blowers for cooling the base failed	1U
[PAN/TILT PCB ERROR]	Pan sensor not detecteld.	2U
[PAN MOTOR ERROR]	This message will appear after the reset of the product if:	2U
	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.	
[PAN LOCKED]	or the product is not located in the default position after the reset of the fixture.	2U
	Pan is locked	
[TILT MOTOR ERROR]	This message will appear after the reset of the product if:	2U
	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.	
[TILT LOCKED]	or the product is not located in the default position after the reset of the fixture.	2U
	Tilt is locked	
[PAN ERROR]	Pan sensor not detecteld	2U
[TILT ERROR]	Tilt sensor not detecteld	2U
[PAN ENCODER ERROR]	Pan encoder not detecteld	2U
[TILT ENCODER ERROR]	Tilt encoder not detecteld	2U

ERROR SHOWED ON SCREEN	POSSIBLE CAUSES	POSSIBLE PCB WITH ANOMALY
[FAN PCB ERROR]	Fan PCB not detected	3U
[DRI TEMP. SENSOR ERROR]	DRIVER sensor damaged (open or in short circuit)	3U
[LAMP TEMP. SENSOR ERROR]	LAMP sensor damaged (open or in short circuit)	3U
[LAMP LEFT IN FAN ERROR]	Left air in blower for cooling the lamp failed, the lamp has been switched OFF.	3U
[LAMP RIGHT IN FAN ERROR]	Right air in blower for cooling the lamp failed, the lamp has been switched OFF.	3U
[LAMP LEFT OUT FAN ERROR]	Left air out blower for cooling the lamp failed, the lamp has been switched OFF.	3U
[LAMP RIGHT OUT FAN ERROR]	Right air out blower for cooling the lamp failed, the lamp has been switched OFF.	3U
[MOTOR PCB 2 ERROR]	Motor pcb 3U not detected	4U
[CYAN ERROR]	Failure detected during the reset of the Cyan flag, if the Cyan flag of the CMY module is not located in its default position	4U
[MAGENTA ERROR]	Failure detected during the reset of the Magenta flag, if the Magenta flag of the CMY module is not located in its default position	4U
[YELLOW ERROR]	Failure detected during the reset of the Yellow flag, if the Yellow flag of the CMY module is not located in its default position	4U
[CTO AND COLOR ERROR]	Failure detected during the reset of the CTO/CMY wheel, if the CTO/CMY wheel is not located in its default position	4U
[CMY FAN ERROR]	Blower for cooling the CMY module failed	4U
[MOTOR PCB 3 ERROR]	Motor pcb 4U not detected	5U
[COLOR ERROR]	Failure detected during the reset of the color wheel, if this wheel is not located in the default position	5U
[ROTATING GOBO WHEEL ERROR]	Failure detected during the reset of the rotating gobo wheel, if this wheel is not located in the default position	5U
[GOBO ROTATION ERROR]	Failure detected during the reset of the rotation of the rotating gobo, if the rotating gobos are not located in the default positions	5U
[STATIC GOBO WHEEL ERROR]	Failure detected during the reset of the static gobo wheel, if this wheel is not located in the default position	5U
[GOBO FAN ERROR]	Blower for cooling the gobo wheel failed	5U
[MOTOR PCB 4 ERROR]	Motor pcb 5U not detected	6U
[PRISM WHEEL 1 ERROR]	Failure detected during the reset of the prism wheel 1, if the focus lens is not located in its default position.	6U
[PRISM WHEEL 1 ROTATION ERROR]	Failure detected during the reset of the prism wheel 1 rotation, if the focus lens is not located in its default position.	6U

ERROR SHOWN ON SCREEN	POSSIBLE CAUSES	POSSIBLE PCB WITH ANOMALY
[PRISM WHEEL 2 ERROR]	Failure detected during the reset of the prism wheel 2, if the focus lens is not located in its default position.	6U
[PRISM WHEEL 2 ROTATION ERROR]	Failure detected during the reset of the prism wheel 2 rotation, if the focus lens is not located in its default position.	6U
[FOCUS ERROR]	Failure detected during the reset of the FOCUS, if the focus lens is not located in its default position.	6U
[ZOOM ERROR]	Failure detected during the reset of the ZOOM system, if the focus lens is not located in its default position.	6U
[DEFOG FAN 1 ERROR]	Blower for defog failed	6U

IDENTIFICATION OF ELECTRONIC BOARDS

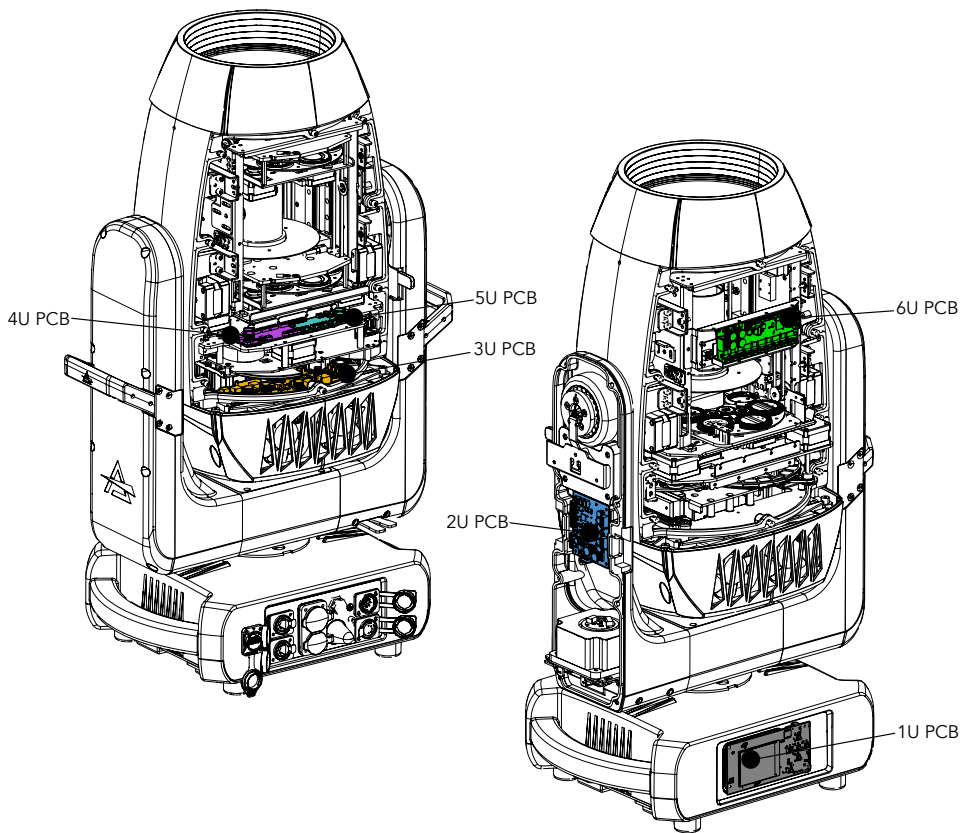
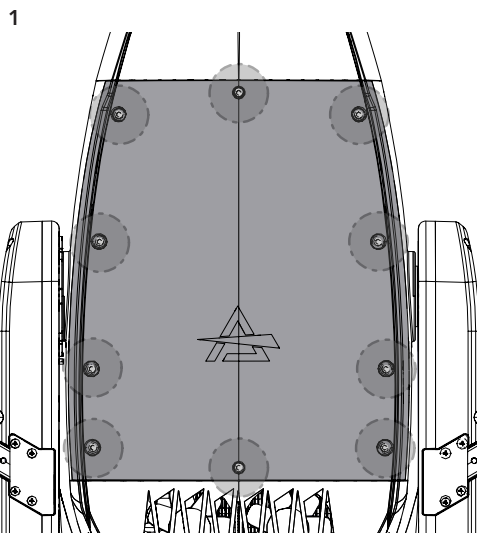


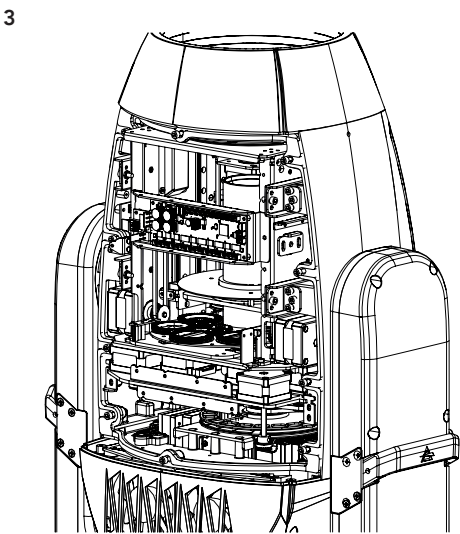
Fig. 17

18 - PERIODICAL CLEANING

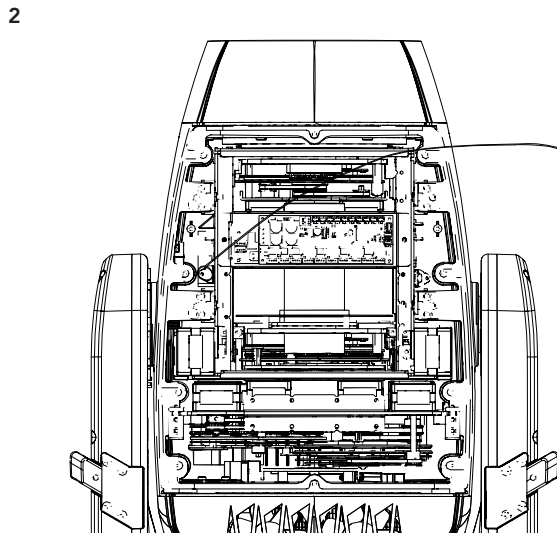
WARNING! Turn OFF power and allow approximately 20 minutes for the fixture to cool down.



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 (pag. 6). Loosen and remove the marked screws and opening the head covers (1) from both sides.



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



Unclip the safety cable on both sides (2).

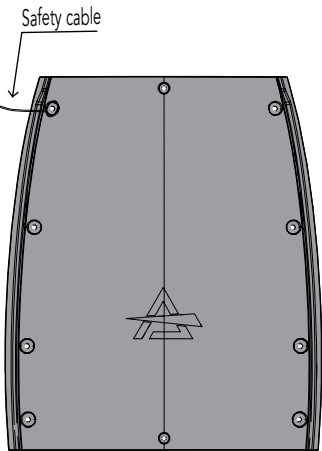
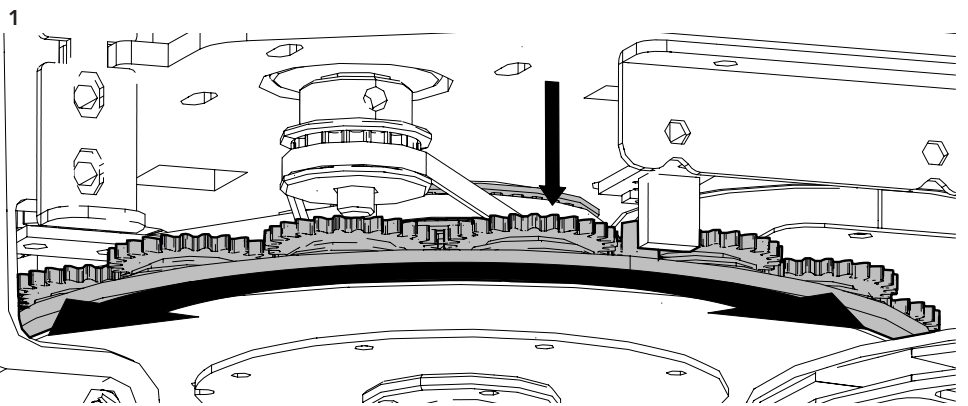
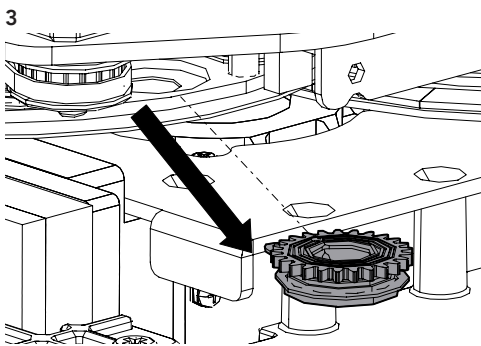
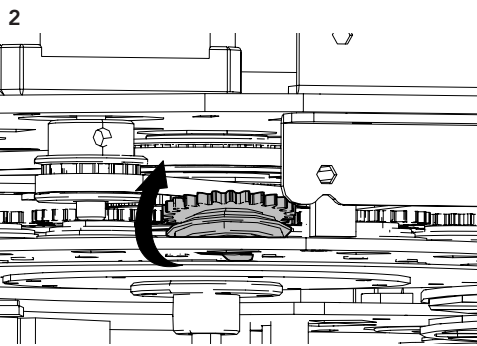


Fig. 18

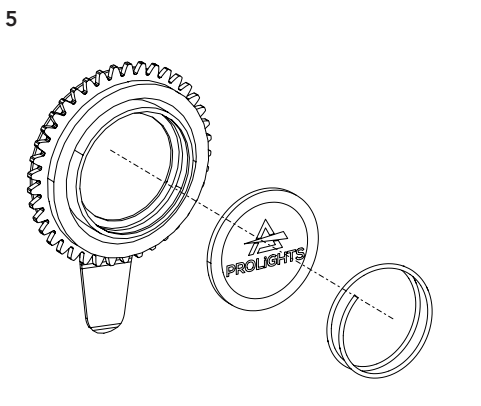
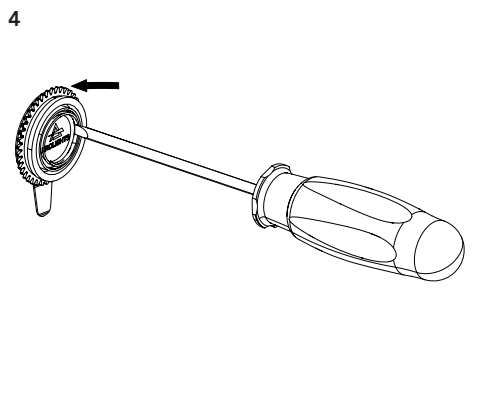
19 - GOBOS REPLACEMENT



Open the head covers (see the "PERIODICAL CLEANING" paragraph, point 1).
Use the "GOBO REPLACEMENT" menu to choose the gobo to be replaced, the wheel will rotate as shown in the image (1). The selected gobo is indicated by the arrow.



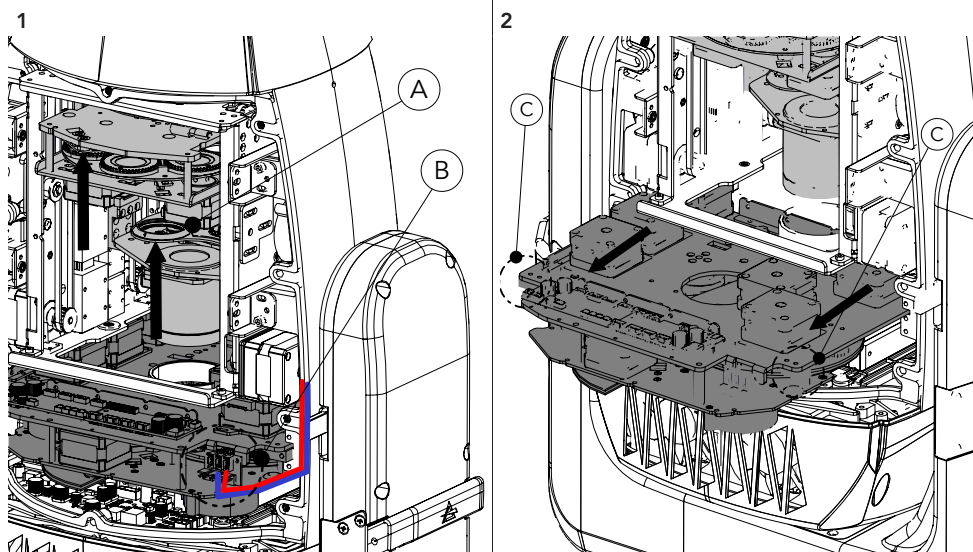
Gently remove the gobo holder from the gobo wheel (2, 3).



Remove the spring and the gobo (4, 5).
NOTE: the mirrored part of the gobo must be placed in the direction of the LED Source

Fig. 19

20 - GOBOS, CMY, COLOR MODULE REMOVAL



To remove the module, open the head covers (see section "PERIODICAL CLEANING") and proceed as follows:

- Raise the zoom and focus plates (marked A in drawing 1);
- Disconnect the two connectors, power and serial bus plugs (marked B in drawing 1);
- Unscrew the two screws marked in the front view (marked C in drawing 2);
- Pull out the plate with Profile module (drawing 2);

Fig. 20

21 - USB UPDATE MODE

NOTE: It is necessary to prepare a FAT32-formatted flash drive for the update and copy the prl files onto it. It is advisable to use a flash drive that is empty and free of other files to facilitate the update.

Several machines can be upgraded simultaneously on the same DMX line. Necessarily there must be a master machine to which you connect the drive and all other machines must be connected to its output DMX line.

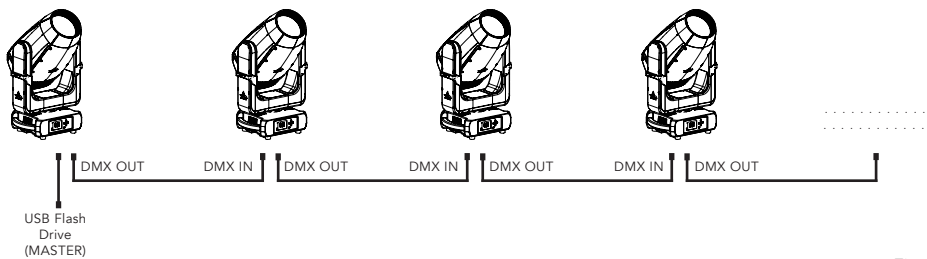


Fig 21

To update the device, proceed as follows:

1

SELECT UPDATE FILE

Path:

\FOLDER 1
\FOLDER 2
\FOLDER 3

BACK

NEXT

2

SELECT UPDATE FILE

Path: FOLDER 2

1U1.PRL	
2U1.PRL	
3U1.PRL	
4U1.PRL	
5U1.PRL	
6U1.PRL	

BACK

NEXT

- With the machine turned on, insert the USB drive;
- A screen will appear showing the files and folders on the USB stick, so use the UP and DOWN buttons to go to the directory with the update files and press ENTER (figure 1). To return to the previous path press the LEFT button;
- Select the files to be updated. To select the desired files, move with the UP and DOWN buttons and select the file by pressing ENTER (Figure 2);
- The selected files will be shown with a yellow square, select "NEXT" pressing RIGHT button, then press ENTER to confirm. (Figure 2)

1

SELECT UPDATE

THIS FIXTURE	■
LINKED FIXTURES	■
ALL FIXTURES	■

BACK

START

2

SOFTWARE UPDATE SYSTEM

not turn off the power! usb ok

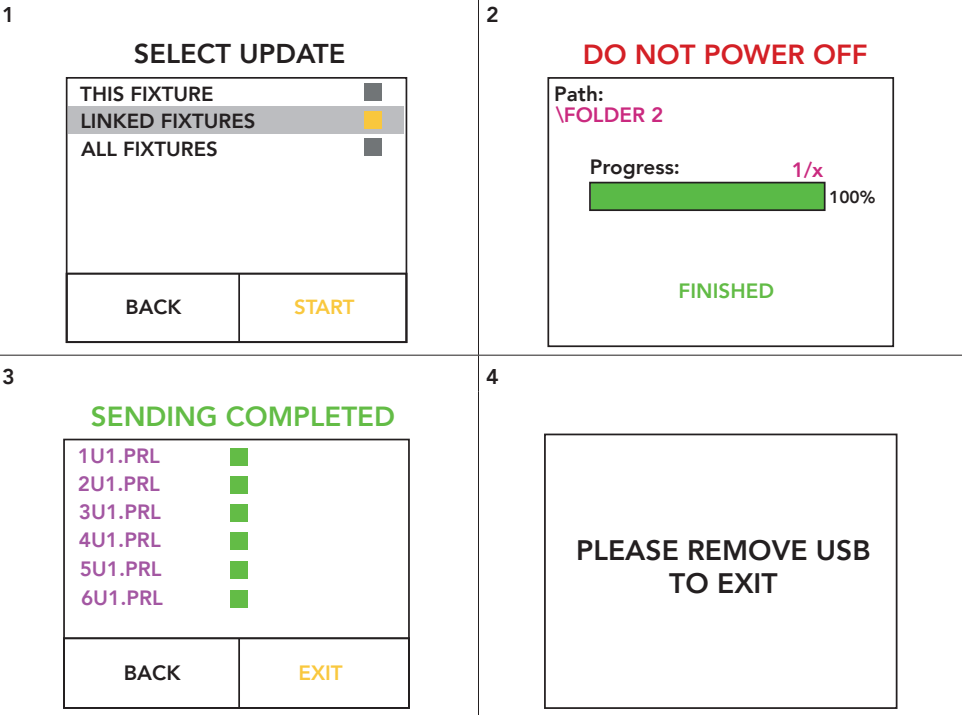
IC:01U01 V.x.x.xx.x 59%

- To update only the Master Fixture, press ENTER on "THIS FIXTURE", a yellow square will be shown, select "START" pressing RIGHT button, then press ENTER to confirm. (Figure 1);
- A screen with the progress of the update will appear (Figure 2), once update is completed the fixture will restart automatically and the update will be completed.

Fig 22

UPDATE LINKED FIXTURES - ALL FIXTURES

It is possible to update several Prolights fixtures from the Astra and Jet series at the same time.



- To update only the Linked Fixtures, press ENTER on "LINKED FIXTURES", a yellow square will be shown, select "START" pressing RIGHT button, then press ENTER to confirm. (Figure 1);
- A screen will appear showing the progress of the update (Figure 2), once update is completed press ENTER;
- A screen with the summary of the updates will appear (Figure 3), select "EXIT" pressing RIGHT button to exit from the update menu; Select "BACK" pressing LEFT button to return to the update menu; then press ENTER to confirm your choice;
- Once you have selected EXIT (Figure 3), remove the USB drive as shown in the last screen (Figure 4) and the update menu will close automatically.

NOTE: To update *all fixtures* (Master and Linked) the procedure is the same of updating linked fixtures, once the progress of the update is completed, press ENTER (Figure 2) and the update of the master fixture will start.

Fig 23

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.

- **Only for IP65/IP66 projectors:** It is recommended to verify IP grade using IPTESTBOX every time the bodies are removed for maintenance, this tool helps to double check the correct assembling of the covers with a check of the IP grade of the fixture.
- 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 (T15A 250V).

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.

RESETTING THE MAINTENANCE TIME MESSAGE

When the machine shows the message "MAINTENANCE TIME" it means that the fixture needs an overall check. once you have checked and cleaned the whole machine to reset the message follow the steps below:

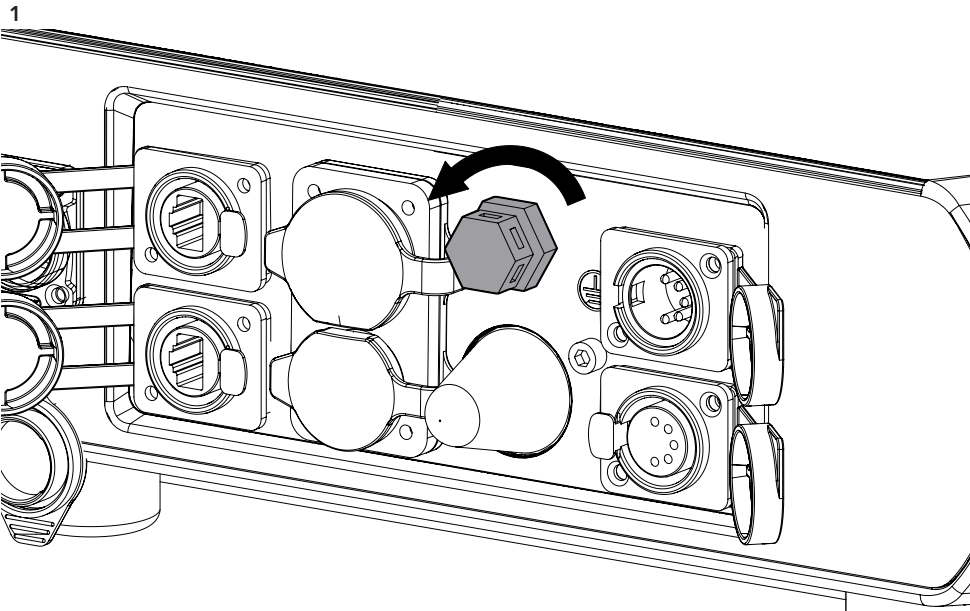
- enter the menu, go to INFORMATIONS and press Enter
- go to FIXTURE TIME and press Enter
- finally go to MAINTENANCE TIME and press Enter
- Press enter again and enter the password 050 to reset the message.

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 controller.	• 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 lubrication	• 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	• Clean the fixture regularly.
	• Dirty or damaged filters	• Install lens assembly properly.

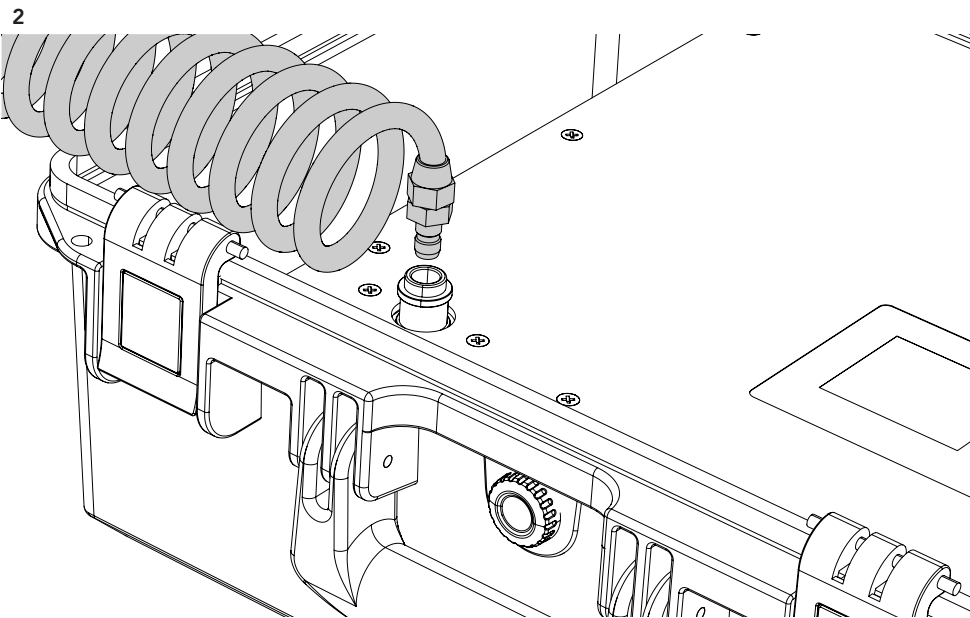
Contact an authorized service center in case of technical problems or not reported in the table can not be resolved by the procedure given in the table.

23 - TEST OF IP65 RATING

It is recommended to verify IP grade using IPTESTBOX every time the bodies are removed for maintenance.

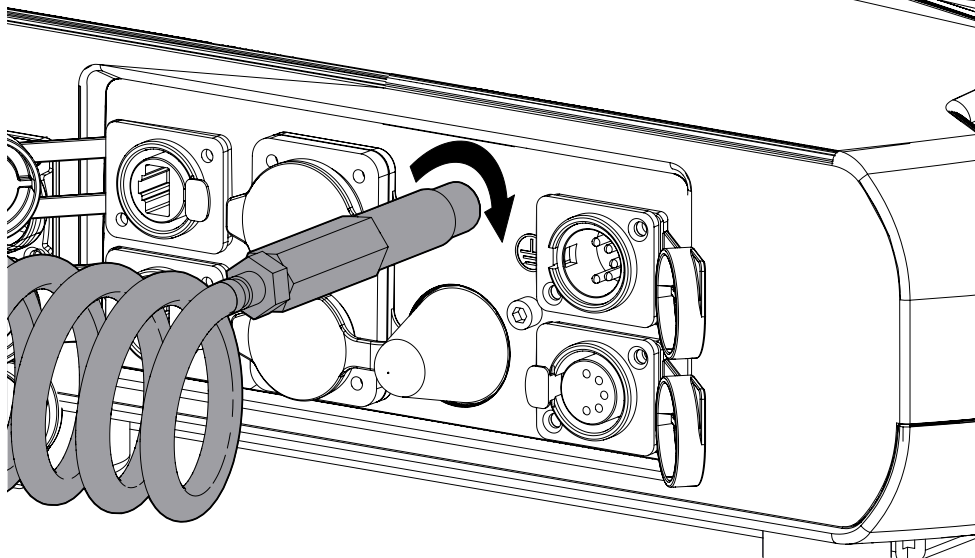


Remove the gore valve from the connections panel.



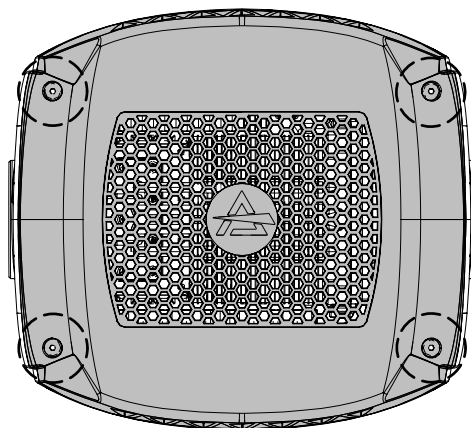
Connect the air hose to the IPTESTBOX by inserting the quick-connect fitting into the coupler.

3

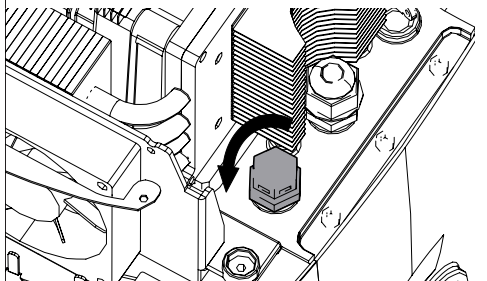


Insert the threaded end into the threaded valve hole socket and start the IP TEST.

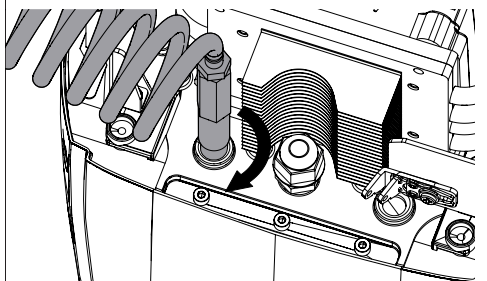
4



5



6



Repeat the procedure for the head: loosen the four screws (4) and remove the rear cover. Remove the gore valve on the rear connection heatsilk module (5) and insert the threaded end into the threaded valve hole socket (6).

For the operating procedure using the instrument, refer to the IPTESTBOX user manual.

Fig. 24

[illegible]

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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