PROLIGHTS

Astra Beam120IP

IP65 beam moving head with a 120W white Laser source and CMY

USER MANUAL

Rev. 25/Nov/25

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.

Features, specifications and appearance are subject to change without notice. Music & Lights S.r.l. and all affiliated companies disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document.

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

INDEX

SAFETY INFORMATION

WARNING!

- See https://www.prolights.it/product/ASTRABEAM120IP#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_a 45°C **Max operating ambient temperature (Ta)**

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

T_a-20°C

Minimum operating ambient temperature (Ta)

- Do not operate the fixture if the ambient temperature (Ta) 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_c59,1°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.
- The laser wavelenght of this product is 450-460nm.

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 25 m (82,0 ft) is not expected.
- No direct eye exposure to the beam shall be permitted, RG3, IEC 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.

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).

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.

1 - PACKAGING

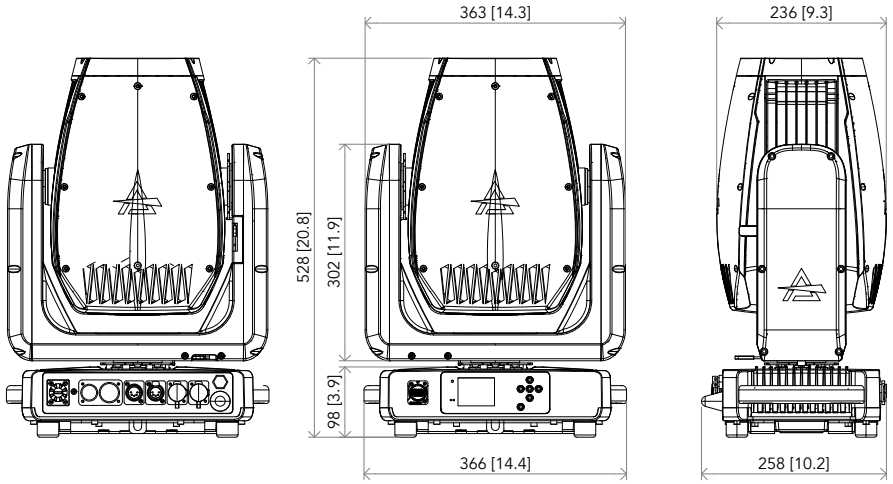
PACKAGE CONTENT

- 1x ASTRABEAM120IP.
- 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/ASTRABEAM120IP#accessories

2 - TECHNICAL DRAWING

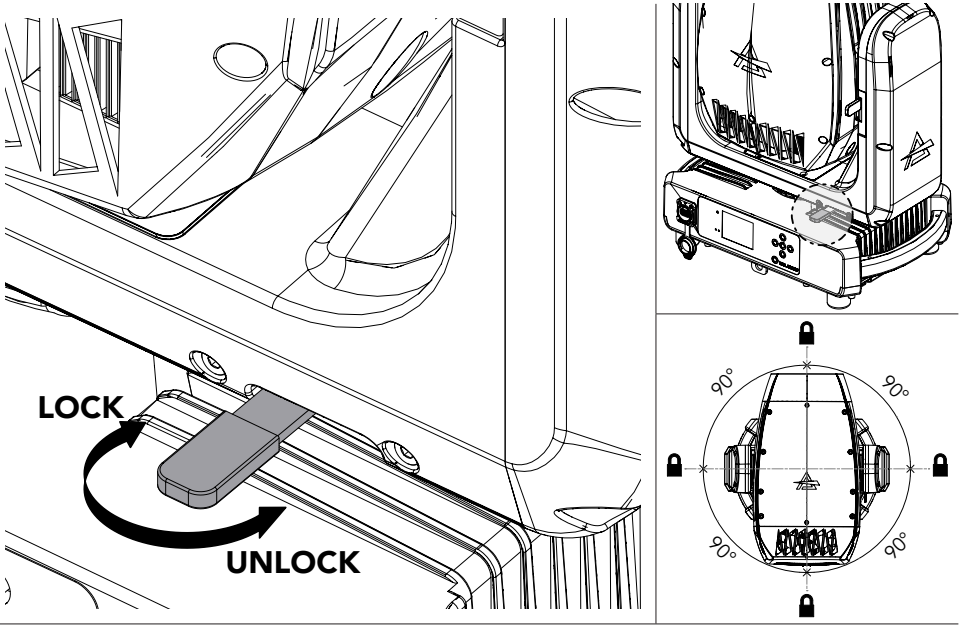


Weight: 24 kg - 52,91 lbs

Fig. 01

3 - PAN AND TILT LOCK

PAN Mechanism lock and release



TILT Mechanism lock and release

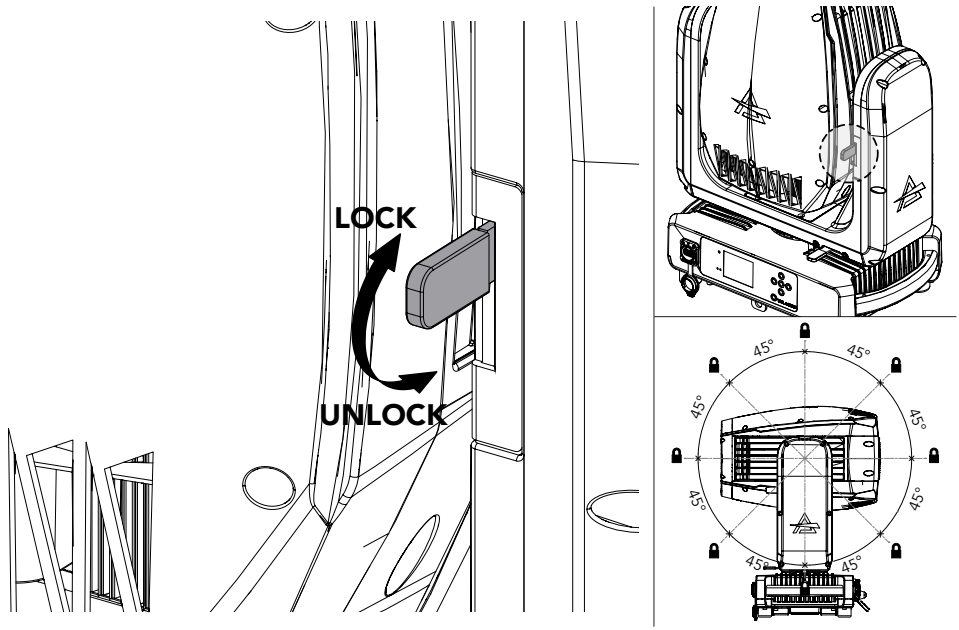


Fig. 02

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.

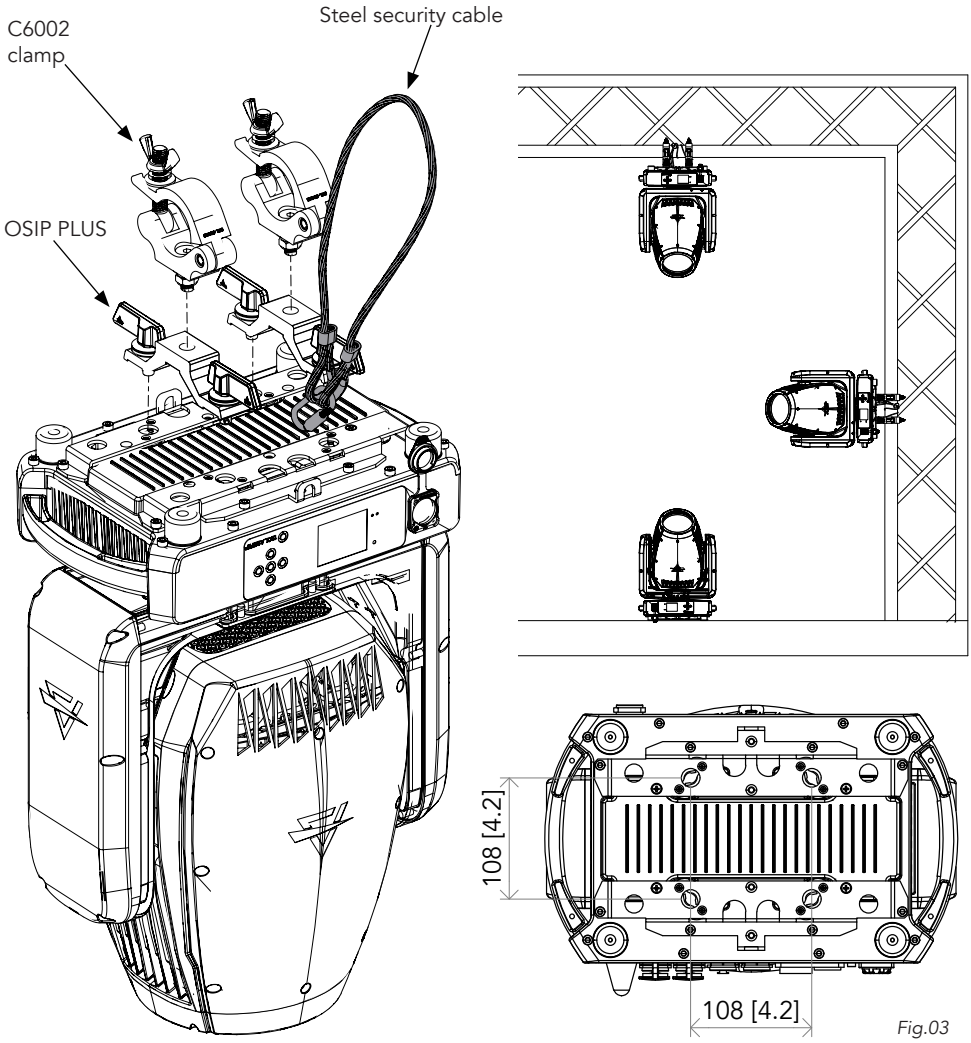


Fig.03

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 (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. IP FUSE HOLDER to replace fuse.
4. POWER IN/OUT: for connection to the Mains 100-240V~/50-60Hz.
5. DMX IN/OUT (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C.
6. ETHERCON CONNECTORS IN / OUT signal.
7. GORE VALVE.
8. ANTENNA
9. SAFETY EYES: to attach safety cable.

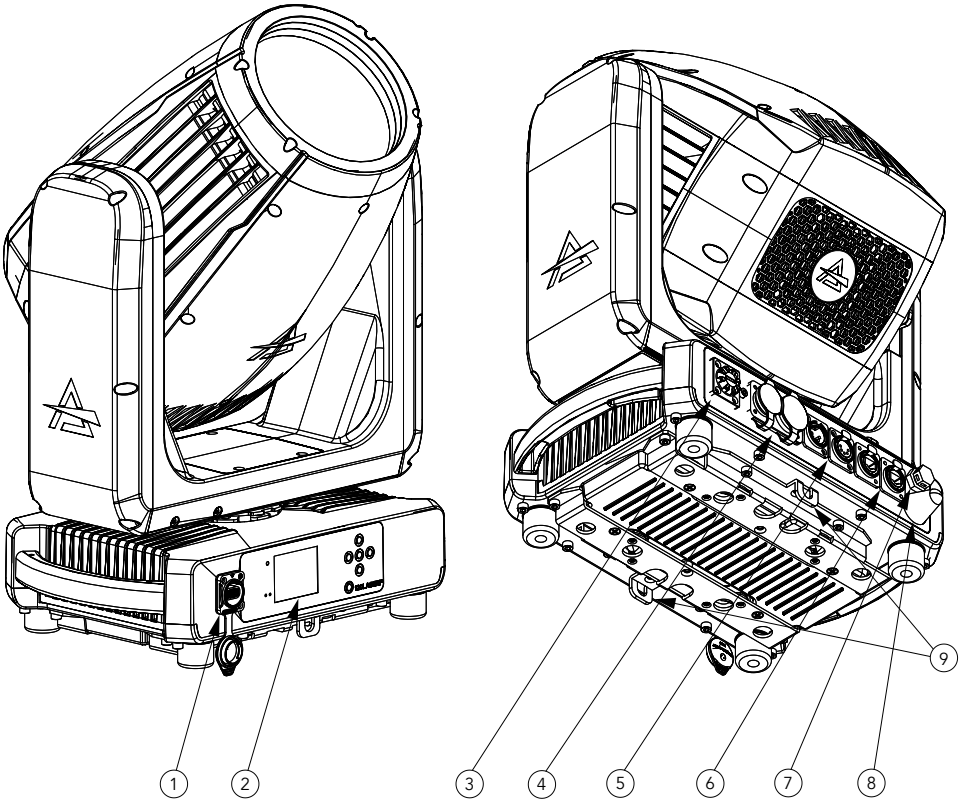


Fig 04

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

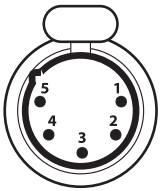


Fig. 05

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:

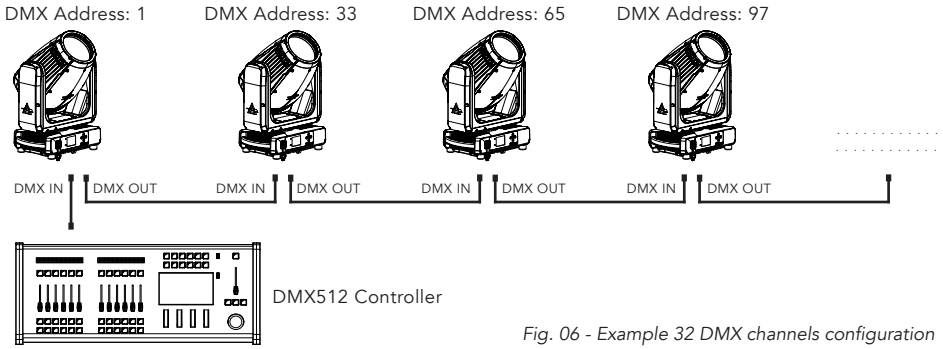
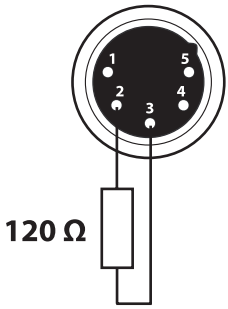
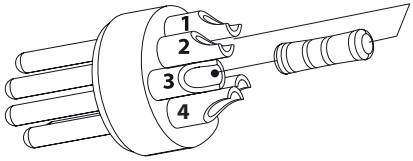


Fig. 06 - Example 32 DMX channels configuration

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.

9 - CONTROL PANEL

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

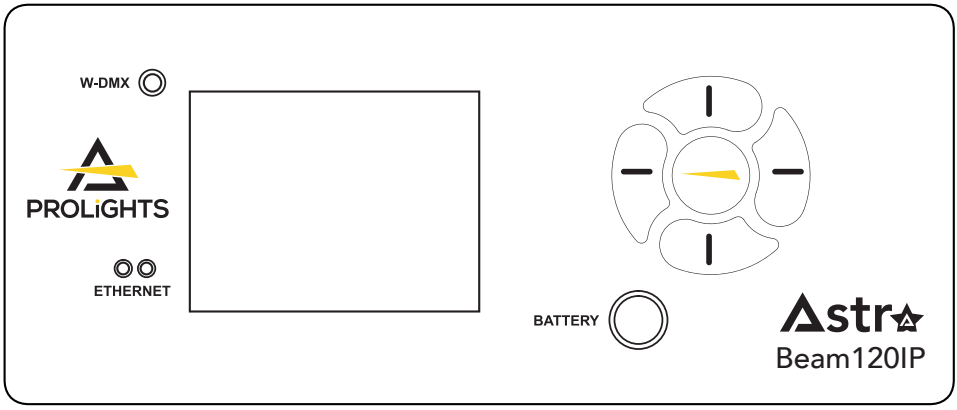
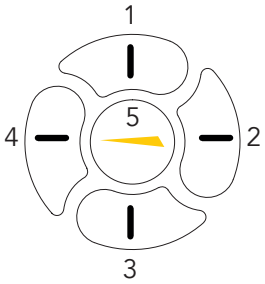


Fig. 08

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	• 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.
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**	**1**-512			Set DMX Address for Main fixture
	sACN				
	ARTNET				
DMX MODE	**STANDARD**				
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"
			LINKING MODE	CRMX	
				CRMX2	
			LINKING UNIVERSE	A	
				B (Only in CRMX2)	
				C	
				D (Only in CRMX2)	
				E	
				F (Only in CRMX2)	
				G	
				H (Only in CRMX2)	
		OFF			
	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	IP ADDRESS	xxx.xxx.xxx.x			Set IP Address
	NET	255.xxx.xxx.x			Set SubNet Mask
	ARTNET SETTINGS	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
	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	YES			Enables the display to be rotated by 180°.
		NO			
		AUTO			
	KEY LOCK	YES			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.
		NO			
MOVEMENT	PAN REVERSE	YES			*Allows you to reverse Pan movement.*
		NO			
	TILT REVERSE	YES			*Allows you to reverse Tilt movement.*
		NO			
	PAN/TILT MODE	**FAST**			*To choose the horizontal/ vertical movement speed.*
		MEDIUM			
		SLOW			
DIMMER	DIMMER CURVE	LINEAR			Check pag.19 for further details
		S-CURVE			
		SQUARE LAW			
		INVERSE SQUARE LAW			
	DIMMER SPEED	**AUTO**			Check pag.20 for further details
		FAST			
		MEDIUM			
		SLOW			
FIXTURE	FAN MODE	**AUTO**			*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			
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
SOURCE FREQUENCY	**600 Hz**				Select PWM frequency. NOTE: Using higher LED Frequency color accuracy may be slightly compromised at low level of dimmer.
	1200Hz				
	2000 Hz				
	4000 Hz				
	6000 Hz				
	25 kHz				
	50 kHz				
RESET	ALL				*To reset these functions.*
	PAN & TILT				
	ZOOM / FOCUS				
	COLORS				
	GOBOS / ANIMATION				
	EFFECTS				
CALIBRATION	PASSWORD				*To calibrate Password: 050*
MANUAL CONTROL	PAN				*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 FINE				
	TILT				
	TILT FINE				
	DIMMER				
	DIMMER FINE				
	SHUTTER				
	CYAN				
	MAGENTA				
	YELLOW				
	COLOR WHEEL				
	ROT GOBO				
	GOBO ROT				
	GOBO ROT FINE				
	FIXED GOBO				
	FX WHEEL 1				
	FX WHEEL 1 ROT				
	FX WHEEL 2				
	FX WHEEL 2 ROT				
	FOCUS				
	FOCUS FINE				
	CONTROL				
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 CONSUMPTION	** W				Show estimated power consumption
POWER LED					
TEMPERATURE	NEAR SOURCE TEMP, DRIVER PCB TEMP, LED PCB TEMP,…				Show all TEMPERATURE sensors values.
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	ASTRABEAM120IP				Show RDM Label.
DEVICE MODEL	ASTRABEAM120IP				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.

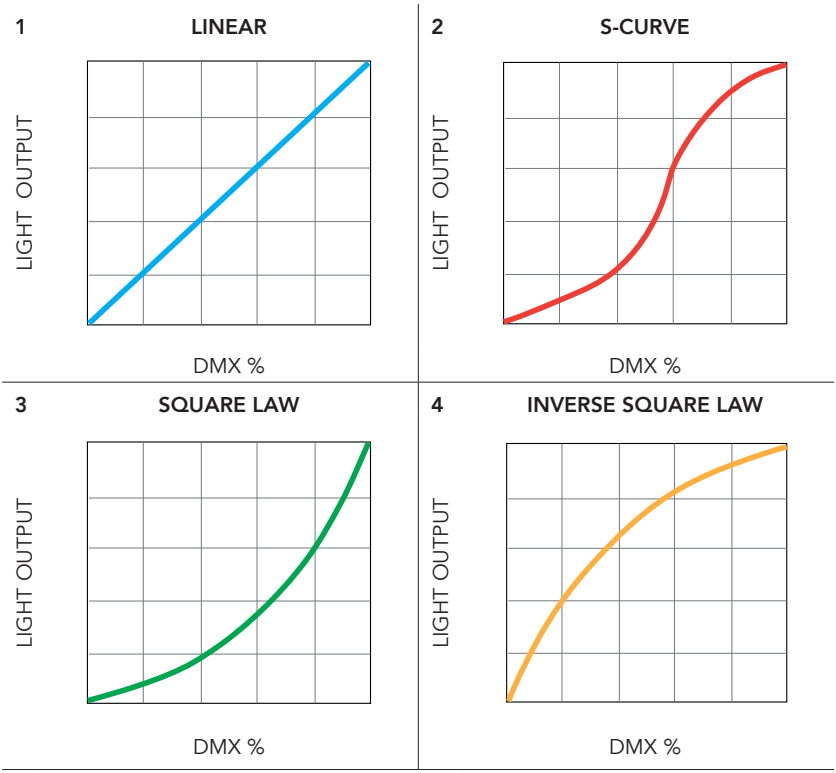


Fig 09

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.

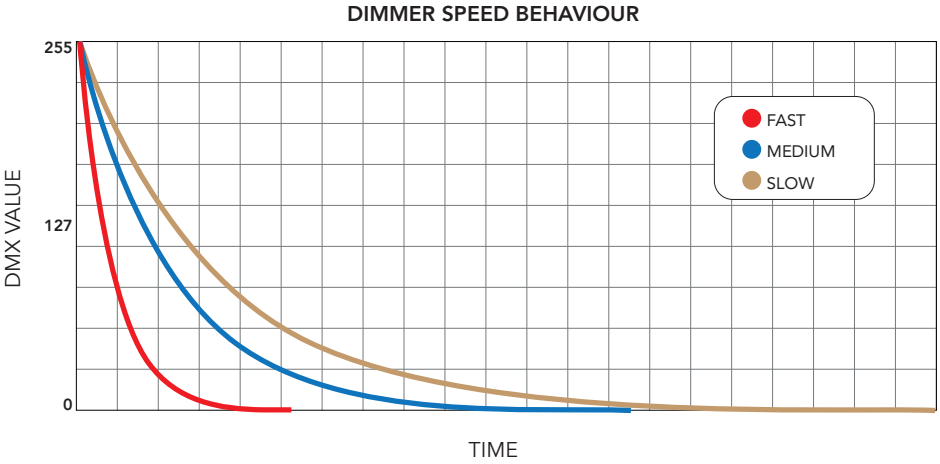


Fig 10

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	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_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	
	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	

Category	Parameter	Value	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_MODE	0x0404	x	x
	DEVICE_POWER_CYCLES	0x0405	x	x
	BURN_IN	0x0440	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	
IP & DNS Configuration	IPV4_CURRENT_ADDRESS	0x0705	x	
	IPV4_STATIC_ADDRESS	0x0706	x	x
Control	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

Manufacturer Specific PIDs

Parameter	PID	GET	SET	Value	Description
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	32

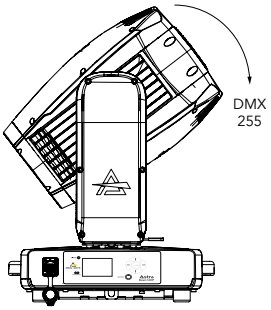
RDM Model ID

0xA038

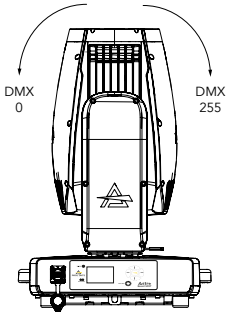
PAN/TILT POSITION RELATED TO DMX VALUES

*Home position set to CUSTOM (**Default**)*

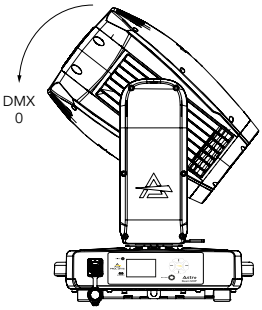
Pan = 0
Tilt = 0



Pan = 0
Tilt = 128

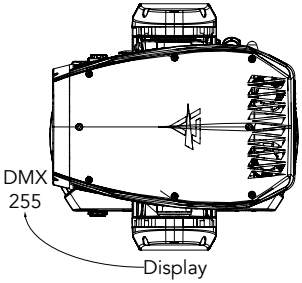


Pan = 0
Tilt = 255

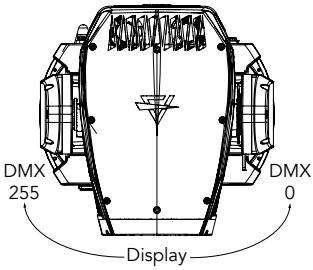


Tilt movement range: 270°
Pan movement range: 540°

Pan = 0
Tilt = 42



Pan = 128
Tilt = 42



Pan = 255
Tilt = 42

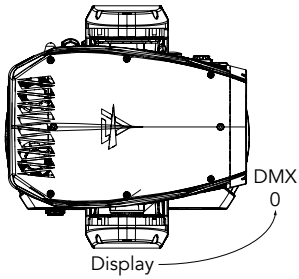
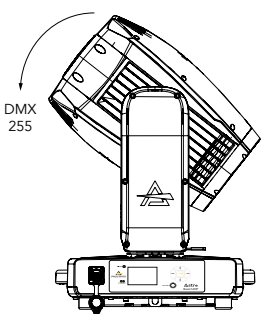


Fig. 11

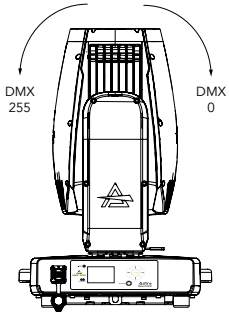
PAN/TILT POSITION RELATED TO DMX VALUES

Home position set to STANDARD (User selectable)

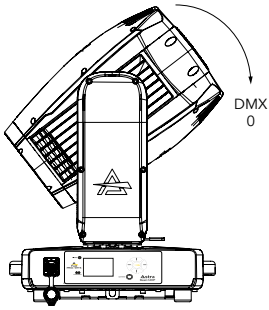
Pan = 128
Tilt = 0



Pan = 128
Tilt = 128

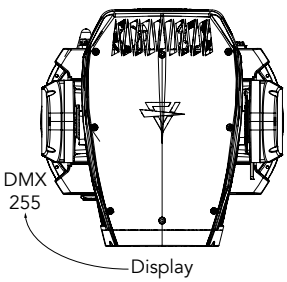


Pan = 128
Tilt = 255

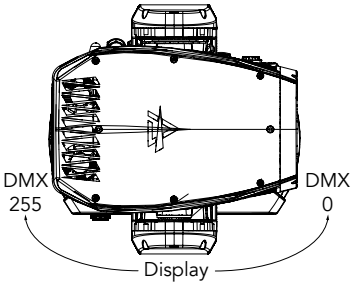


Tilt movement range: 270°
Pan movement range: 540°

Pan = 0
Tilt = 42



Pan = 128
Tilt = 42



Pan = 255
Tilt = 42

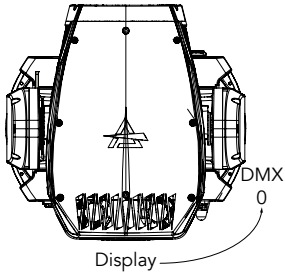


Fig. 12

DMX Chart Summary

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

DMX MODE **STANDARD 32 ch**	**Name**	**Function**	**DMX**		**Default**
			FROM	**TO**	
1	Pan	Pan movement	0	255	128
2	Pan fine	Fine pan movement	0	255	128
3	Tilt	Tilt movement	0	255	128
4	Tilt fine	Fine tilt movement	0	255	128
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	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	Dimmer	Dimmer intensity 0 – 100%	0	255	0
8	Dimmer Fine	Fine dimming	0	255	0
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	Cyan	Linear saturation 0 – 100%	0	255	0
11	Magenta	Linear saturation 0 – 100%	0	255	0
12	Yellow	Linear saturation 0 – 100%	0	255	0
13	Color Wheel	Color Positioning			0
		Open	0		
		Open + Red	1	5	
		Red	6		
		Red + Deep purple	7	11	
		Deep purple	12		
		Deep purple + Yellow	13	17	
		Yellow	18		
		Yellow + Velvet green	19	23	
		Velvet green	24		
		Velvet green + Magenta	25	29	
		Magenta	30		
		Magenta + Blue	31	35	
		Blue	36		
		Blue + Orange	37	41	
		Orange	42		
		Orange + Green	43	47	

DMX MODE STANDARD 32 ch	Name	Function	DMX FROM	DMX TO	Default
		Green	48		
		Green + Dark amber	49	53	
		Dark amber	54		
		Dark amber + Pink	55	59	
		Pink	60		
		Pink + Arctic lime	61	65	
		Arctic lime	66		
		Arctic lime + Light blue	67	71	
		Light blue	72		
		Light blue + Light red	73	77	
		Light red	78		
		Light red + Aquamarine	79	83	
		Aquamarine	84		
		Aquamarine + Tropical violet	85	89	
		Tropical violet	90		
		Tropical violet + Dark green	91	95	
		Dark green	96		
		Dark green + Slate blue	97	101	
		Slate blue	102		
		Slate blue + Amber	103	107	
		Amber	108		
		Amber + Minus green 1/2	109	113	
13	Color Wheel	Minus green 1/2	114		0
		Minus green 1/2 + CTB 1/2	115	119	
		CTB 1/2	120		
		CTB 1/2 + CTB 1/4	121	125	
		CTB 1/4	126		
		CTB 1/4 + CTB	127	131	
		CTB	132		
		CTB + CTO	133	137	
		CTO	138		
		CTO + Congo blue	139	143	
		Congo blue	144		
		Congo blue + Open	145	149	
		Open	150	159	
		Color Slot			
		Open	160	160	
		Red	161	161	
		Deep purple	162	162	
		Yellow	163	163	
		Velvet green	164	164	
		Magenta	165	165	
		Blue	166	166	
		Orange	167	167	
		Green	168	168	

DMX MODE STANDARD 32 ch	Name	Function	DMX FROM	DMX TO	Default
13	Color Wheel	Dark amber	169	169	0
		Pink	170	170	
		Arctic lime	171	171	
		Light blue	172	172	
		Light red	173	173	
		Aquamarine	174	174	
		Tropical violet	175	175	
		Dark green	176	176	
		Slate blue	177	177	
		Amber	178	178	
		Minus green 1/2	179	179	
		CTB 1/2	180	180	
		CTB 1/4	181	181	
		CTB	182	182	
		CTO	183	183	
		Congo blue	184	199	
		Color Wheel Rotation			
		Forward rainbow - Fast to slow	200	224	
		No rotation	225	230	
		Backwards rainbow - Slow to fast	231	255	
14	Color Wheel Fine	Fine positioning	0	255	
15	Rot Gobo Wheel	Open	0	11	0
		Gobo Indexing (set next ch)			
		Gobo 1	12	14	
		Gobo 2	15	17	
		Gobo 3	18	20	
		Gobo 4	21	23	
		Gobo 5	24	26	
		Gobo 6	27	29	
		Gobo 7	30	32	
		Gobo 8	33	35	
		Gobo 9	36	38	
		Gobo 10	39	41	
		Gobo 11	42	44	
		Gobo 12	45	47	
		Gobo 13	48	50	
		Gobo Rotation (set next ch)			
		Gobo 1	51	53	
		Gobo 2	54	56	
		Gobo 3	57	59	
		Gobo 4	60	62	
		Gobo 5	63	65	
		Gobo 6	66	68	
		Gobo 7	69	71	
		Gobo 8	72	74	

DMX MODE STANDARD 32 ch	Name	Function	DMX FROM	DMX TO	Default
		Gobo 9	75	77	
		Gobo 10	78	80	
		Gobo 11	81	83	
		Gobo 12	84	86	
		Gobo 13	87	89	
		Gobo shaking - Slow to fast			
		Gobo Shake 1	90	97	
		Gobo Shake 2	98	105	
		Gobo Shake 3	106	113	
		Gobo Shake 4	114	121	
		Gobo Shake 5	122	129	
15	Rot Gobo Wheel	Gobo Shake 6	130	137	0
		Gobo Shake 7	138	145	
		Gobo Shake 8	146	153	
		Gobo Shake 9	154	161	
		Gobo Shake 10	162	169	
		Gobo Shake 11	170	177	
		Gobo Shake 12	178	185	
		Gobo Shake 13	186	193	
		Gobo Wheel Rotation			
		Forward wheel rotation - Fast to slow	194	223	
		No rotation	224	225	
		Backwards wheel rotation - Slow to fast	226	255	
		Gobo Indexing			
		Gobo index 0° - 360°	0	255	
		Gobo Rotation			
16	Gobo Rot	No rotation	0	0	0
		Forward gobo rotation - Fast to slow	1	127	
		No rotation	128	128	
		Backwards gobo rotation - Slow to fast	129	255	
17	Gobo Rot Fine	Fine indexing/rotation	0	255	0
		Open	0	2	
		Animation insertion	3	16	
		Gobo selection			
		Open	17	19	
		GOBO 1	20	20	
		GOBO 2	21	21	
		GOBO 3	22	22	
18	Fixed Gobo	GOBO 4	23	23	0
		GOBO 5	24	24	
		GOBO 6	25	25	
		GOBO 7	26	26	
		GOBO 8	27	27	
		GOBO 9	28	28	
		GOBO 10	29	29	

DMX MODE STANDARD 32 ch	Name	Function	DMX FROM	DMX TO	Default
		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	
		GOBO 29	48	48	
		Gobo shaking - Slow to fast			
		GOBO 1	49	53	
		GOBO 2	54	58	
18	Fixed Gobo	GOBO 3	59	63	0
		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	
		GOBO 14	114	118	
		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	

DMX MODE STANDARD 32 ch	Name	Function	DMX FROM	DMX TO	Default
18	Fixed Gobo	GOBO 26	174	178	0
		GOBO 27	179	183	
		GOBO 28	184	188	
		GOBO 29	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	
19	Animation Rotation	This channel works only with animation inserted			0
		Indexing	0	127	
		Forward rotation - Fast to slow	128	190	
		Stop	191	192	
		Backwards rotation - Slow to fast	193	255	
20	FX Wheel A	Open	0	29	0
		Prism Indexing (set next ch)			
		16F Circular Prism	30	49	
		6F Circular Prism	50	69	
		6F Linear Prism	70	89	
		Prism Rotation (set next ch)			
		16F Circular Prism	90	109	
		6F Circular Prism	110	129	
		6F Linear Prism	130	149	
		Frost			
		Light Frost	150	255	
21	Prism Wheel A 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	
		Prism backwards rotation slow to fast	129	255	
22	FX Wheel B	Open	0	29	0
		Prism Indexing (set next ch)			
		8F Circular Prism	30	49	
		4F Linear Prism	50	69	
		6F Linear Prism	70	89	
		Prism Rotation (set next ch)			
		8F Circular Prism	90	109	
		4F Linear Prism	110	129	
		6F Linear Prism	130	149	
		Frost			
		Heavy Frost	150	255	

DMX MODE **STANDARD 32 ch**	Name	Function	DMX FROM	DMX TO	Default
23	Prism Wheel B 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	
		Prism backwards rotation slow to fast	129	255	
24	Focus	Focus adjustment	0	255	128
25	Focus Fine	Fine focusing	0	255	0
26	PSZ (Pan safety zone)	Pan safety zone start value	0	255	0
27	PSZ fine		0	255	0
28	PSZ size	Off	0	0	0
		Safety zone size 0% to 100%	1	255	
29	TSZ (Tilt safety zone)	Tilt safety zone start value	0	255	0
30	TSZ fine		0	255	0
31	TSZ size	Off	0	0	0
		Safety zone size 0% to 100%	1	255	
32	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	
		reserved	16	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	

DMX MODE **STANDARD 32 ch**	Name	Function	DMX FROM	DMX TO	Default
32	Control	DIMMER CURVE INVERSE SQUARE LAW	78	79	0
		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	
		SOURCE FREQUENCY 50KHZ	100	101	
		reserved	102	105	
		RESET ALL	106	107	
		RESET PAN/TILT	108	113	
		RESET COLORS	114	123	
		RESET GOBOS / ANIMATION	124	129	
		RESET FOCUS	130	133	
		RESET EFFECTS	134	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

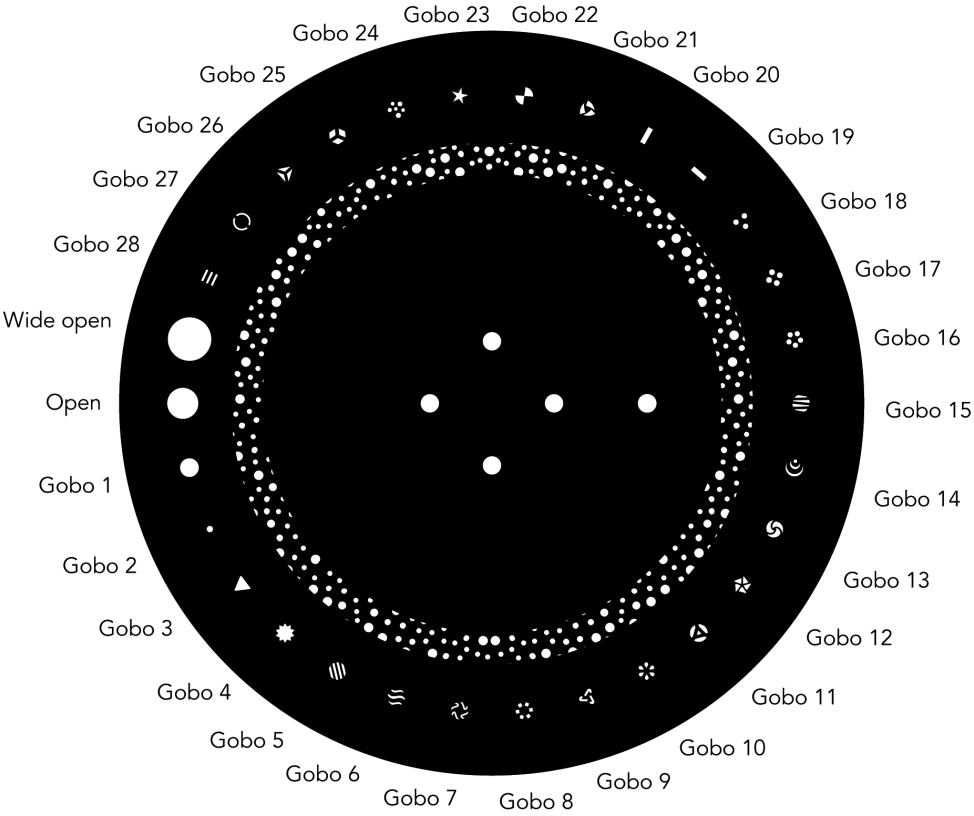
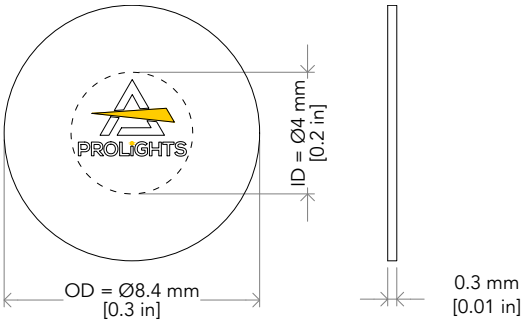


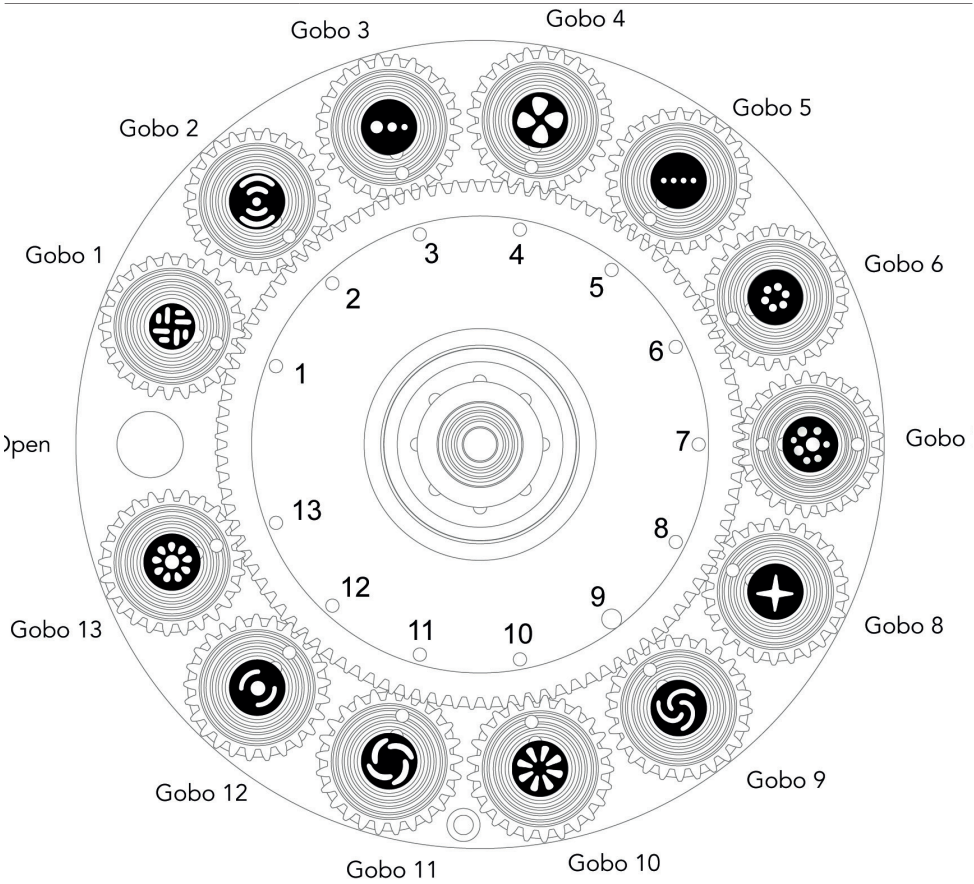
Fig. 13

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. 14

16 - COLOR WHEELS

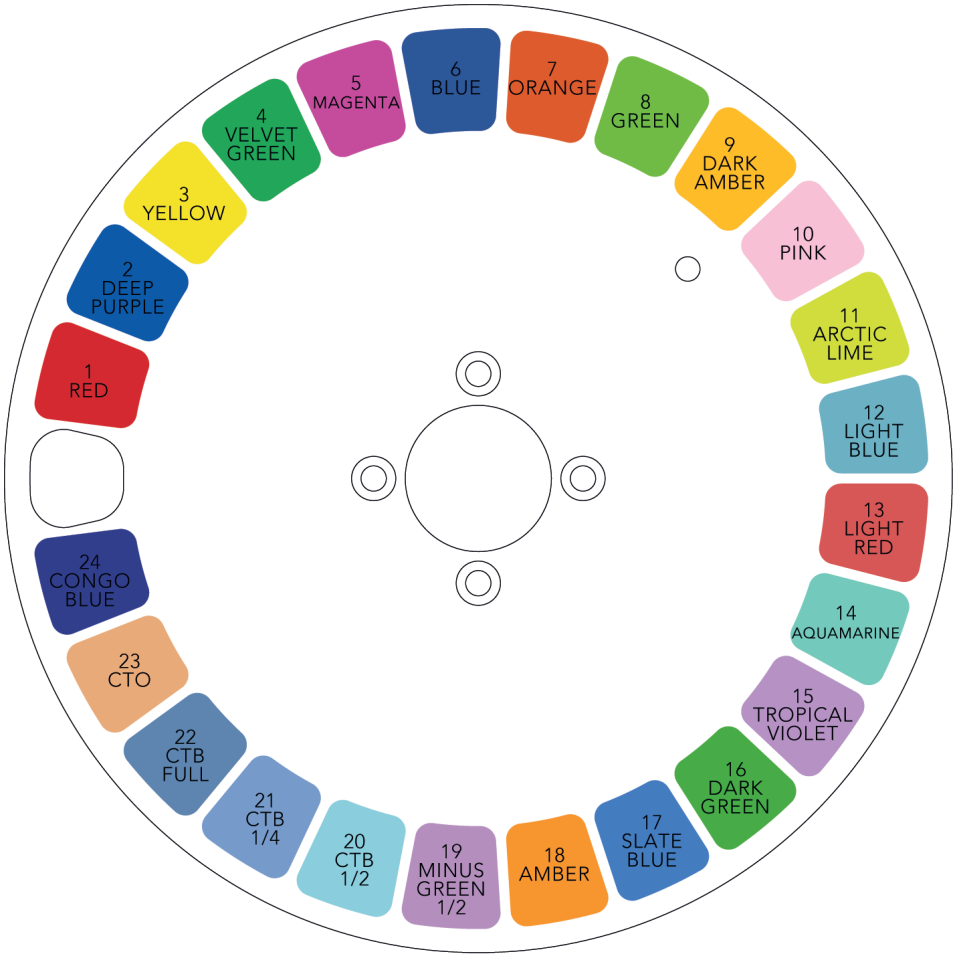


Fig. 15

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
BUS 1U DISPLAY TX FAIL	Total CAN-bus isolation of the display board from all the others	1U
WIRELESS MODULE	Wireless module is not installed or is not working	1U
1U FAN1 BASE	speed < 1000 rpm	1U
BUS 2U PAN	2U card not responding	2U
2U DIP-SWITCH	Incorrect dip-switch setting	2U
2U PAN SENSOR	pan sensor/motor failure	2U
	pan driver failure	
2U PAN BLOCKED	pan lock inserted	2U
BUS 3U TILT	3U card not responding	3U
3U DIP-SWITCH	Incorrect dip-switch setting	3U
3U TILT SENSOR	tilt sensor/motor failure	3U
	tilt driver failure	
3U TILT BLOCKED	tilt lock inserted	3U
BUS 4U FAN + LED	4U card not responding	4U
4U NTC LED MODULE	ntc led module fault	4U
4U NTC LED DRIVER	ntc fault on led driver board	4U
4U FAN1 LED	speed < 1000 rpm	4U
4U FAN2 LED	speed < 1000 rpm	4U
4U FAN3 LED	speed < 1000 rpm	4U
BUS 5U COLOR	5U card not responding	5U
5U DIP-SWITCH	Incorrect dip-switch setting	5U
5U CYAN	Cyan wheel sensor/motor/driver fault	5U
5U MAGENTA	Magenta wheel sensor/motor/driver fault	5U
5U YELLOW	Yellow wheel sensor/motor/driver fault	5U
5U COLOR WHEEL	Color wheel sensor/motor/driver failure	5U
5U PRISM 2 WHEEL	Prism wheel 2 sensor/motor/driver failure	5U
5U PRISM 2 INDEX	Prism index 2 sensor/motor/driver failure	5U
5U FAN1 COLORS	speed < 1000 rpm	5U

ERROR SHOWED ON SCREEN	POSSIBLE CAUSES	POSSIBLE PCB WITH ANOMALY
BUS 6U GOBO	6U card not responding	6U
6U DIP-SWITCH	Incorrect dip-switch setting	6U
6U PRISM 1 WHEEL	Prism wheel 1 sensor/motor/driver failure	6U
6U PRISM 1 INDEX	Prism index 1 sensor/motor/driver failure	6U
6U FIX.GOBO	Fixed Gobo sensor/motor/driver failure	6U
6U ANIMATION	Animation sensor/motor/driver failure	6U
6U GOBO WHEEL	Rot Gobo wheel sensor/motor/driver failure	6U
6U GOBO INDEX	Rot Gobo index sensor/motor/driver failure	6U
6U FAN1 GOBO	speed < 1000 rpm	6U
BUS 7U FOCUS	7U card not responding	7U
7U DIP-SWITCH	Incorrect dip-switch setting	7U
7U FOCUS	Focus sensor/motor/driver failure	7U
7U FAN DEFOG	speed < 1000 rpm	7U
FIRMWARE MISMATCH	at least one card has a different fw than the display card	-

IDENTIFICATION OF ELECTRONIC BOARDS

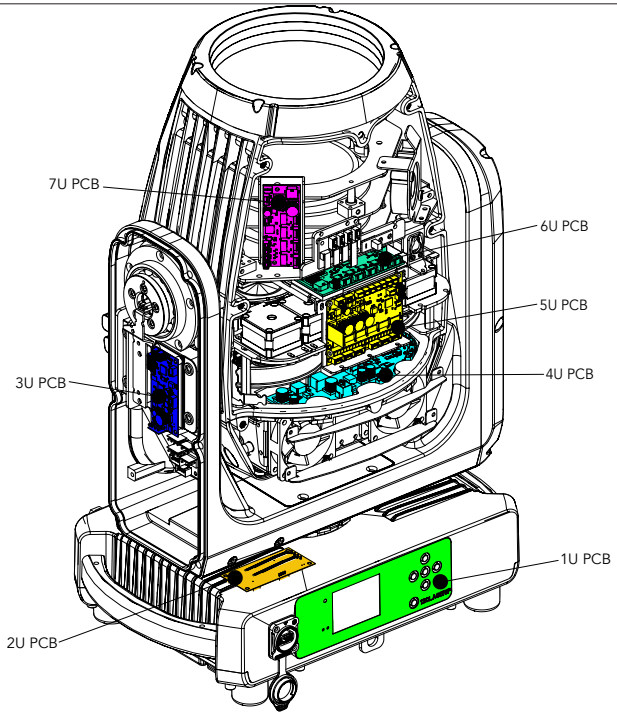
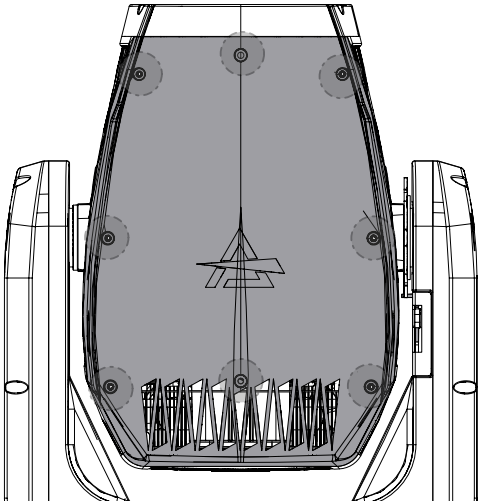


Fig. 16

18 - PERIODICAL CLEANING

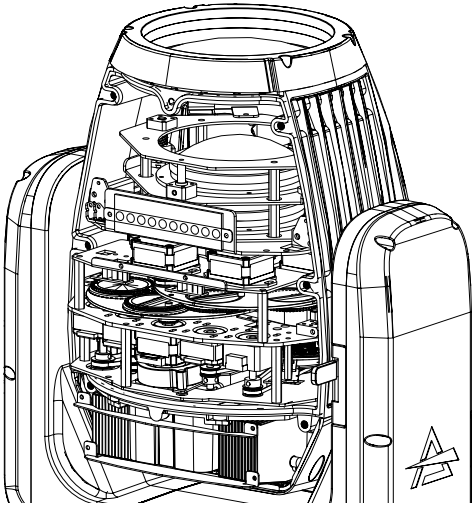
WARNING! Turn OFF power and allow approximately 20 minutes for the fixture to cool down.

1



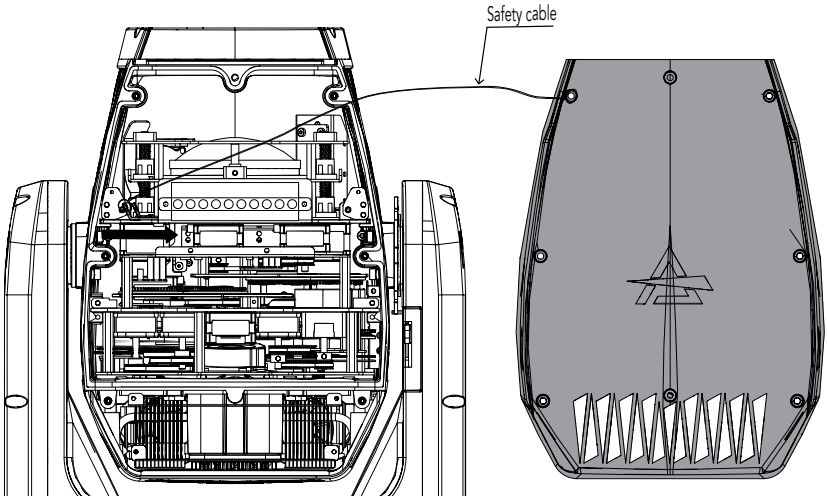
Before removing rear cover, place the head in a horizontal position and engage both the PAN and TILT locks for added stability. See the "PAN AND TILT LOCK" paragraph (pag. 6). Loosen and remove the marked screws and opening the head covers (1) from both sides.

3



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

2

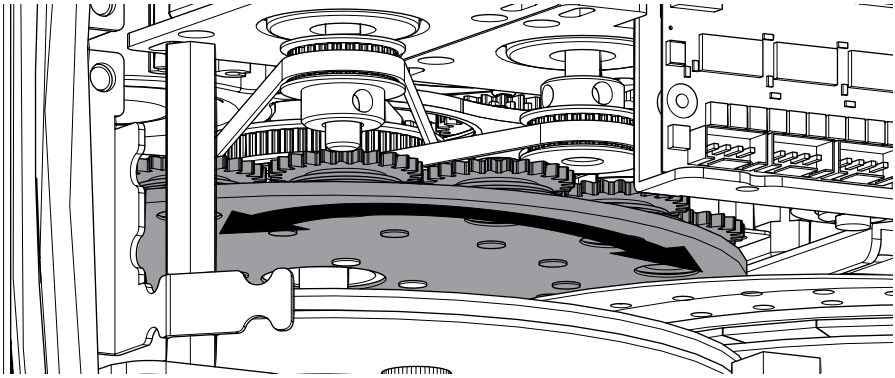


Unclip the safety cable on both sides (2).

Fig. 17

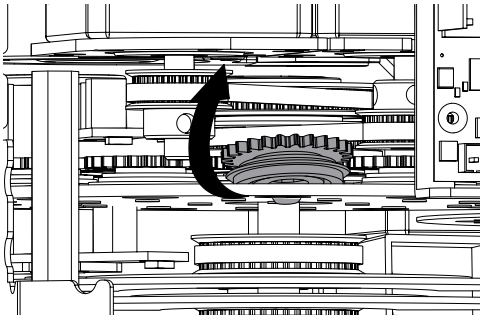
19 - GOBOS REPLACEMENT

1

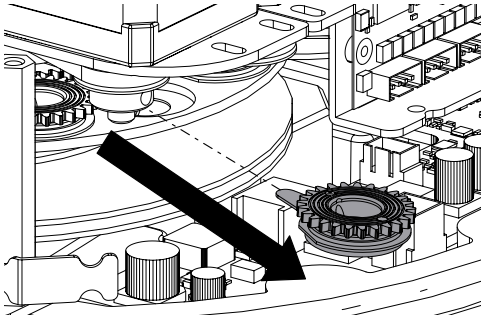


Open the head covers (see the "PERIODICAL CLEANING" paragraph, point 1).
Use the "GOBO REPLACEMENT" menu to choose the gobo to be replaced, the wheel will rotate as shown in the image (1). The selected gobo is indicated by the arrow.

2

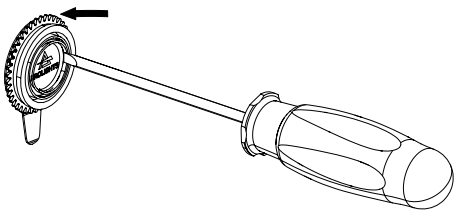


3

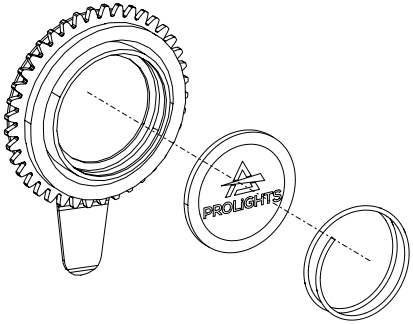


Gently remove the gobo holder from the gobo wheel (2, 3).

4



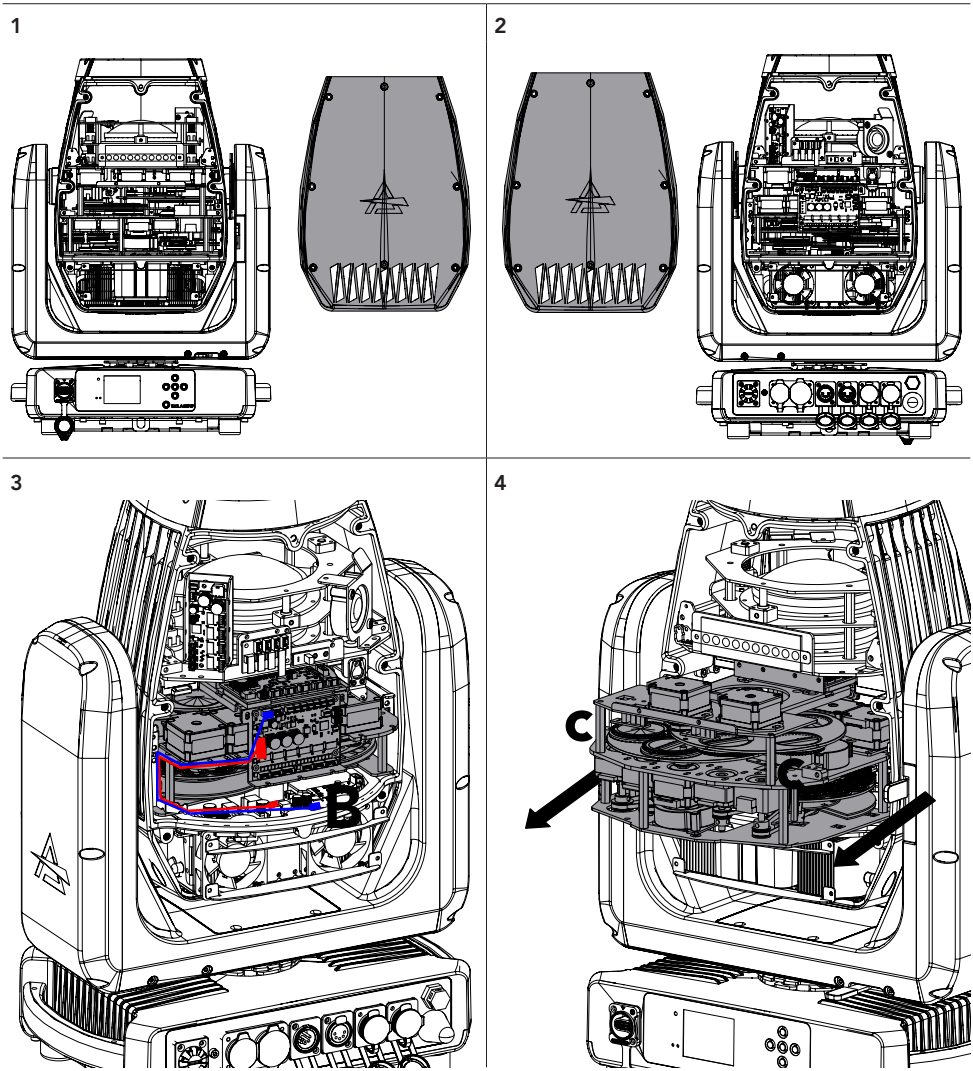
5



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

Fig. 18

20 - GOBOS, CMY, COLOR MODULE REMOVAL



To remove the module, proceed as follows:

- Open both head covers (drawing 1 and 2);
- Disconnect the two connectors, power and serial bus plugs (marked B in drawing 3);
- Unscrew the two screws marked in the front view (marked C in drawing 3);
- Pull out the plate with Profile module (drawing 4);

Fig. 19

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.

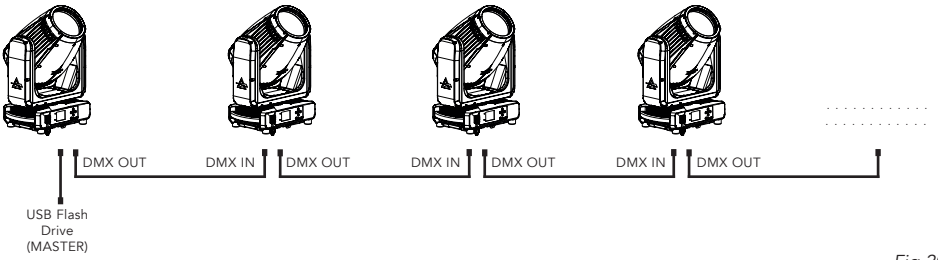
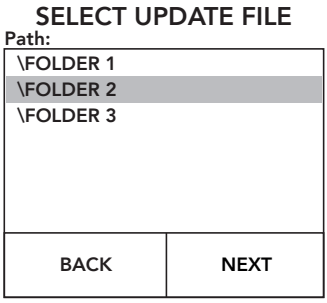


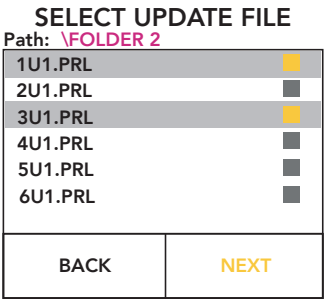
Fig 20

To update the device, proceed as follows:

1

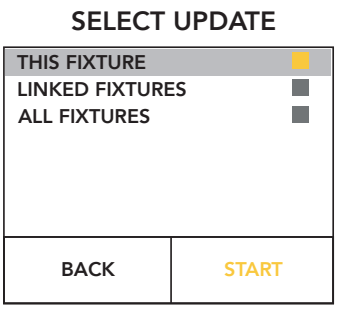


2

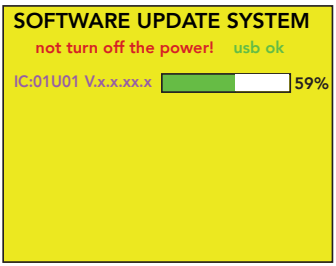


- With the machine turned on, insert the USB drive;
- A screen will appear showing the files and folders on the USB stick, so use the UP and DOWN buttons to go to the directory with the update files and press ENTER (figure 1). To return to the previous path press the LEFT button;
- Select the files to 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



2



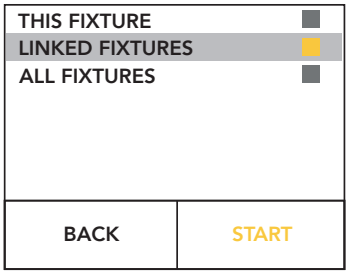
- To update only the Master Fixture, press ENTER on "THIS FIXTURE", a yellow square will be shown, select "START" pressing RIGHT button, then press ENTER to confirm. (Figure 1);
- A screen with the progress of the update will appear (Figure 2), once update is completed the fixture will restart automatically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

Fig 21

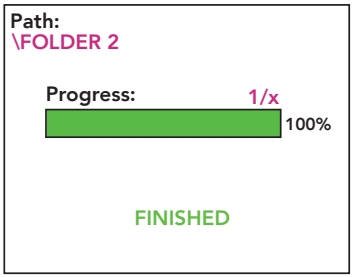
UPDATE LINKED FIXTURES - ALL FIXTURES

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

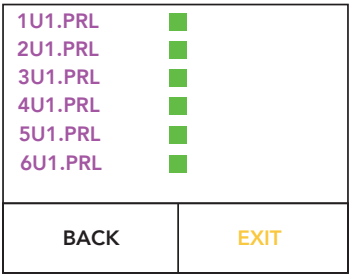
1



2



3



4

- 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 22

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.

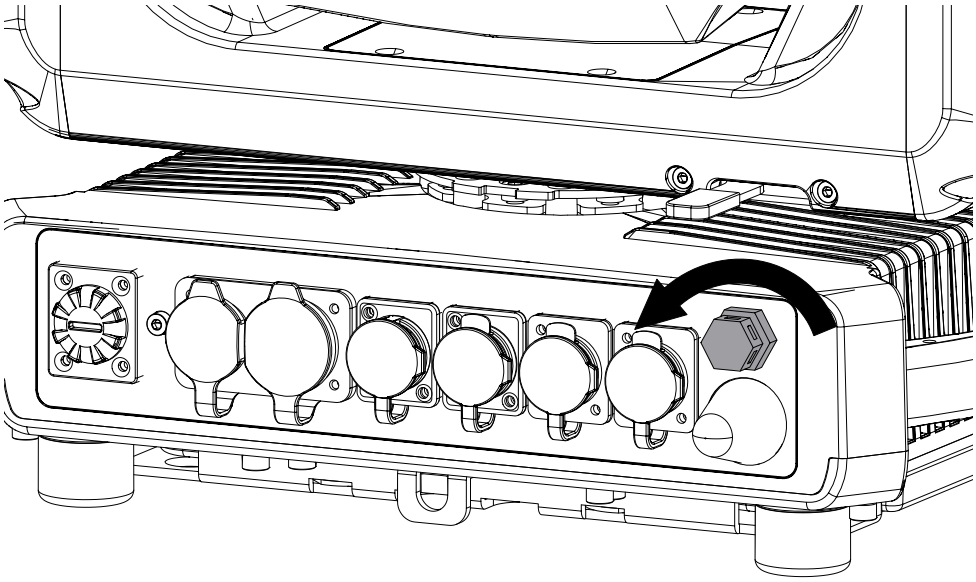
Problems	Possible causes	Checks and remedies
Product doesn't power ON	• No power to the product	• Check that power is switched ON and cables are plugged in.
	• Fuse blown or internal fault	• Check if the Fuse is intact and eventually replace it if necessary. • Contact the PROLIGHTS Service or authorized 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 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.

23 - TEST OF IP65 RATING

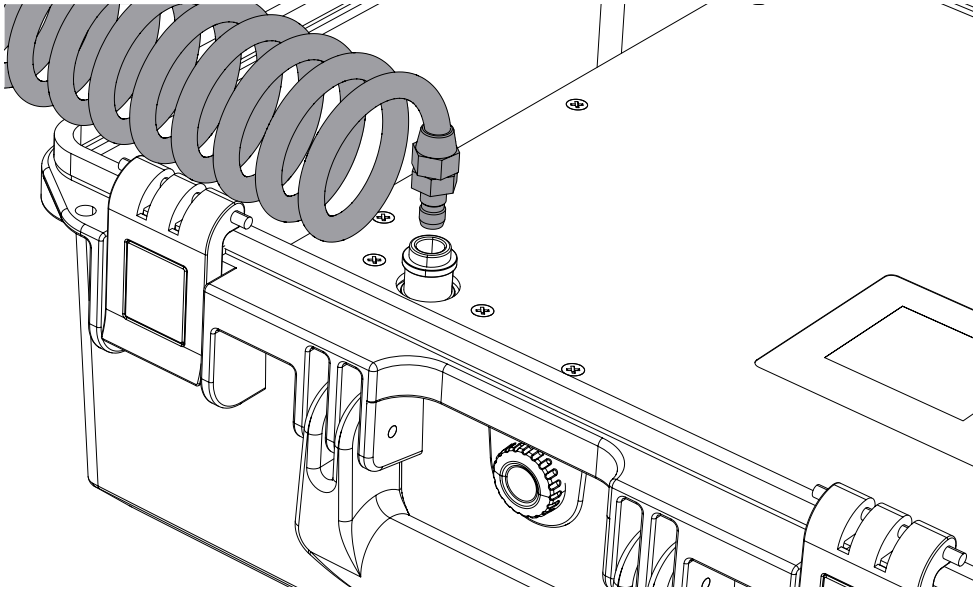
It is recommended to verify IP grade using IPTESTBOX every time the bodies are removed for maintenance.

1



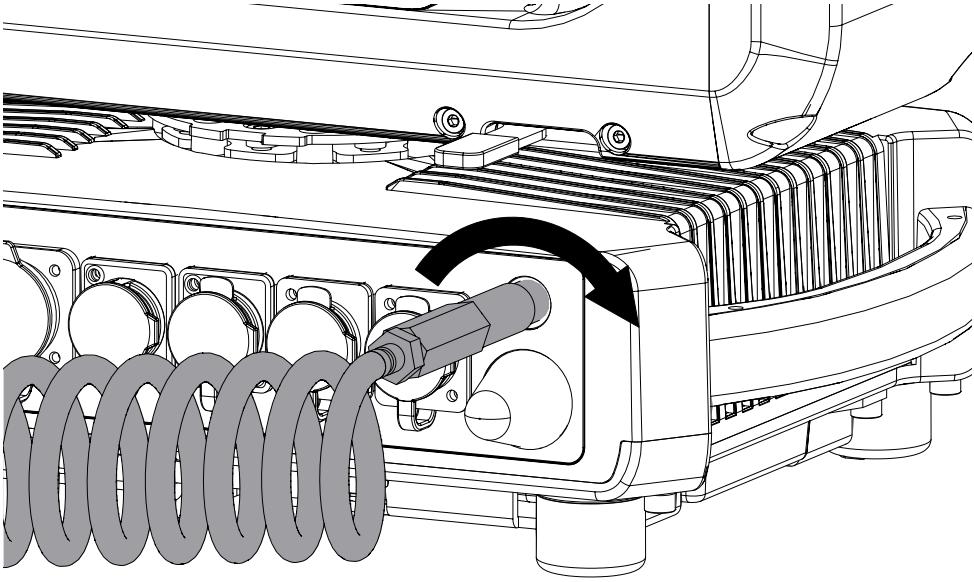
Remove the gore valve from the connections panel.

2



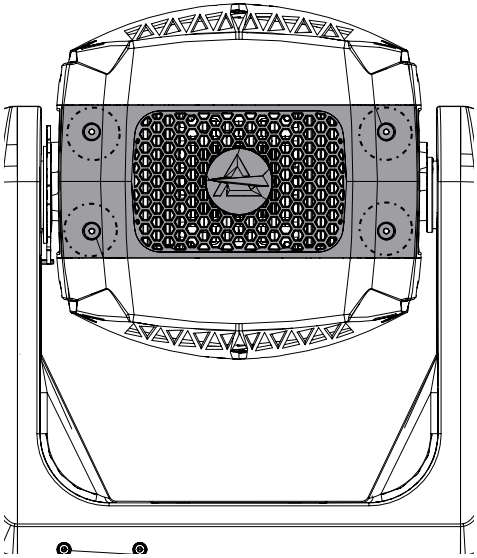
Connect the air hose to the IPTESTBOX by inserting the quick-connect fitting into the coupler.

3

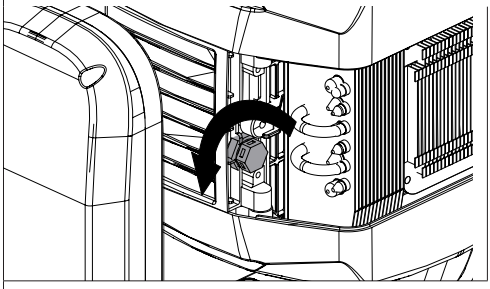


Insert the threaded end into the threaded valve hole socket and start the IP TEST.

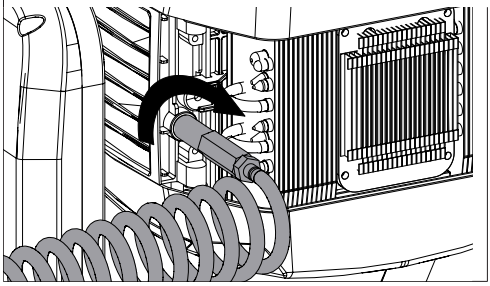
4



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 gole socket (6).
For the operating procedure using the instrument, refer to the IPTESTBOX user manual.

Fig. 23

Note

Note

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