



# Astra Beam120IP

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



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## USER MANUAL

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## ***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](http://www.prolights.it) , or can be inquired to the official PROLIGHTS distributors of your territory ([https://www.prolights.it/sales\\_network.html](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/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<sub>a</sub> 45 °C**

### **Max operating ambient temperature (T<sub>a</sub>)**

- Do not operate the fixture if the ambient temperature (T<sub>a</sub>) exceeds 45 °C (113 °F).

**T<sub>a</sub> -20 °C**

### **Minimum operating ambient temperature (T<sub>a</sub>)**

- Do not operate the fixture if the ambient temperature (T<sub>a</sub>) 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<sub>c</sub> 59,1 °C**

### **Temperature of the external surface**

- The surface of the fixture can reach up to 59.1 °C (138.4 °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 or move suddenly when connected to power.
- The device should be positioned so that prolonged staring into the luminaire at a distance closer than 25.0 m (82,0 ft) (0.25 second expose) is not expected.
- No direct eye exposure to the beam shall be permitted, RG3 EC 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.



### 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.



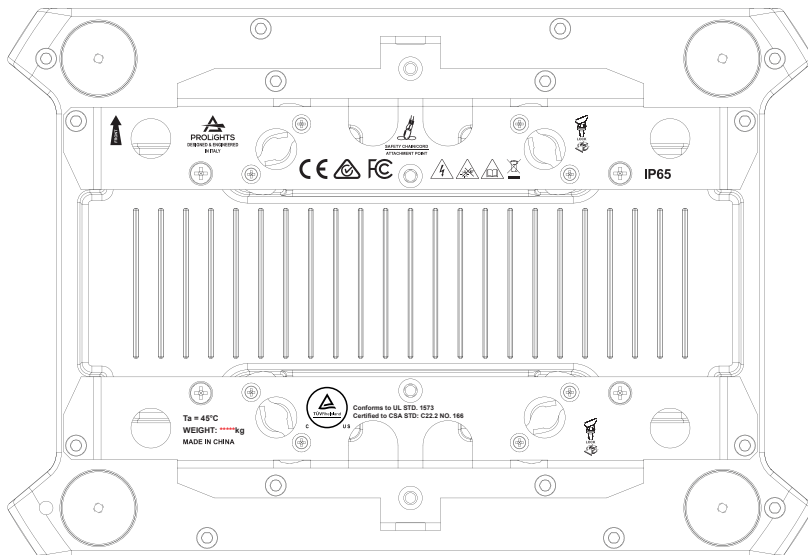
### FCC Compliance:

- 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.

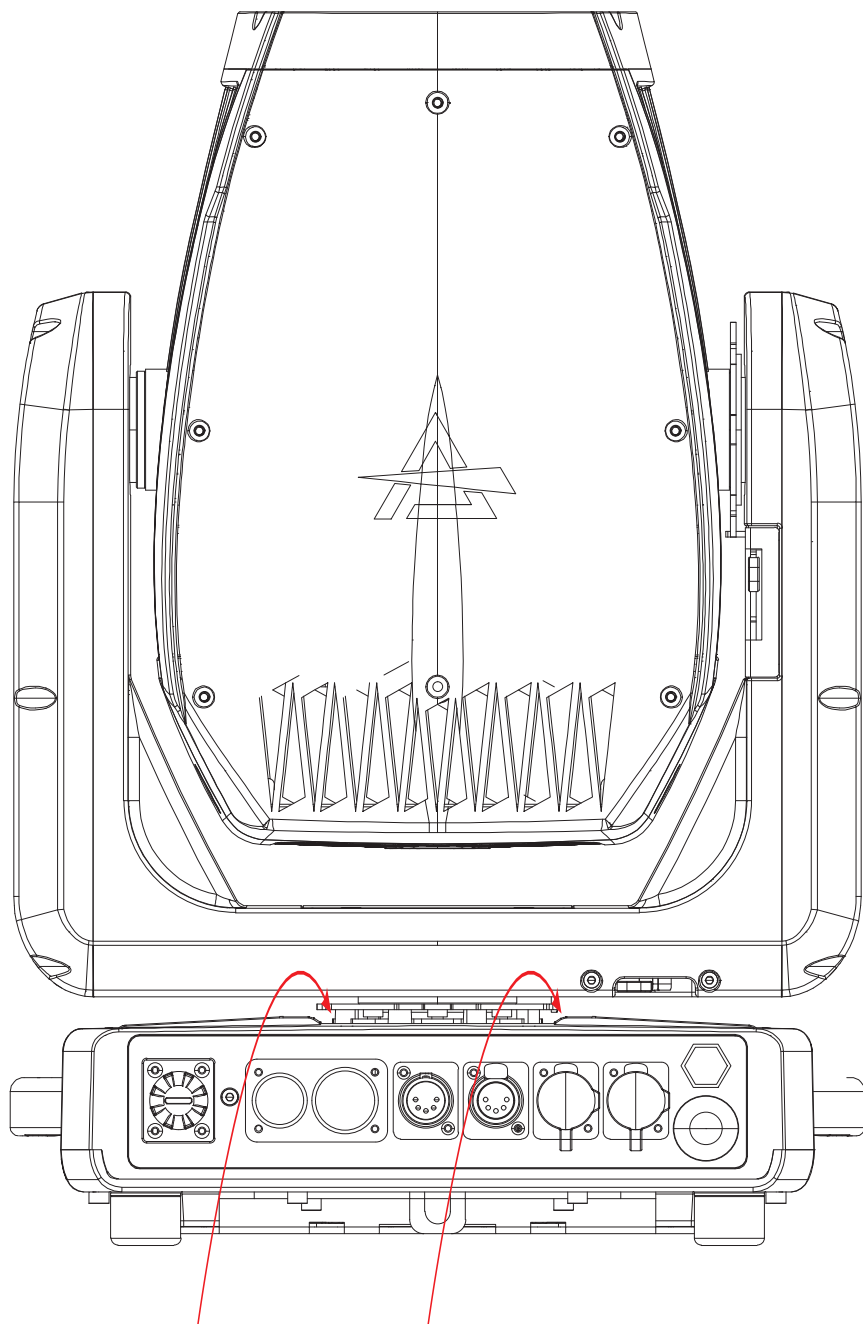


### Other general guidelines

- 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 m above any surface upon which persons other than operators, performers, or employees are permitted to stand or 2.5 m 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 3.0 m vertically. The lowest tip of the Hazard Zone should be no lower than 3.0 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>.

**CLASS 1**  
LASER PRODUCT

COMPLIES WITH FDA PERFORMANCE  
STANDARDS FOR LASER PRODUCTS  
EXCEPT FOR CONFORMANCE WITH  
IEC 60825-1 ED. 3, AS DESCRIBED IN  
LASER NOTICE NO.56,DATED MAY 8, 2019



22x20mm



80x20mm

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



COMPLIES WITH IEC PERFORMANCE  
STANDARDS FOR LASER PRODUCTS  
EXCEPT FOR CONFORMANCE WITH  
EN 60825-1 ED. 3, AS DESCRIBED IN  
LASER NOTICE NO. 04/2019 MAY 9, 2019

80x20mm

Please apply the WARNING label in this position

# 1 - PACKAGING

## PACKAGE CONTENT

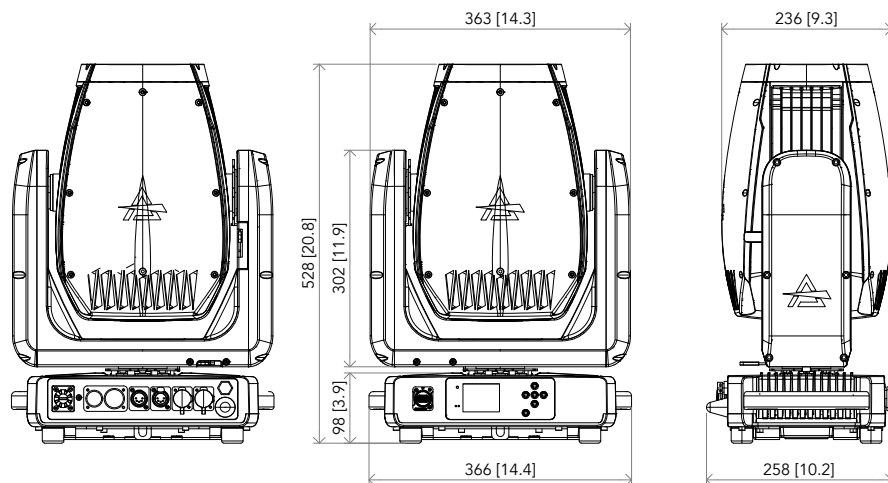
- 1x ASTRABEAM120IP.
- 1x 1,5 meters 3G1,5mmq power cable (BARE END - SEETRONIC POWERCON TRUE1 IP65).
- 2x OSIPPLUS.
- 1x Antenna.
- User Manual.

## 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

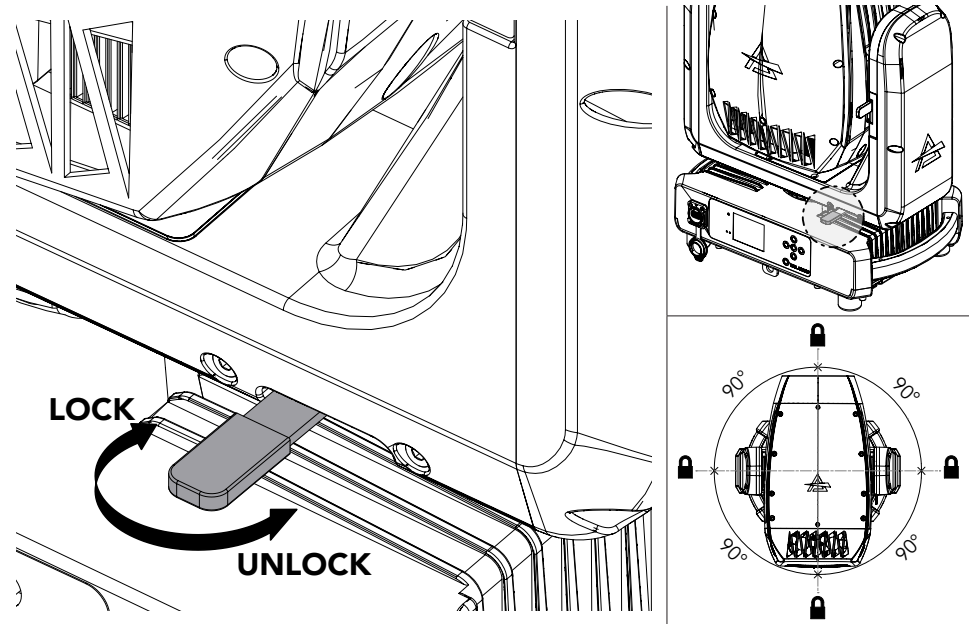


Weight: 24 kg - 52,91 lbs

Fig. 01

### 3 - PAN AND TILT LOCK

PAN Mechanism lock and release



TILT Mechanism lock and release

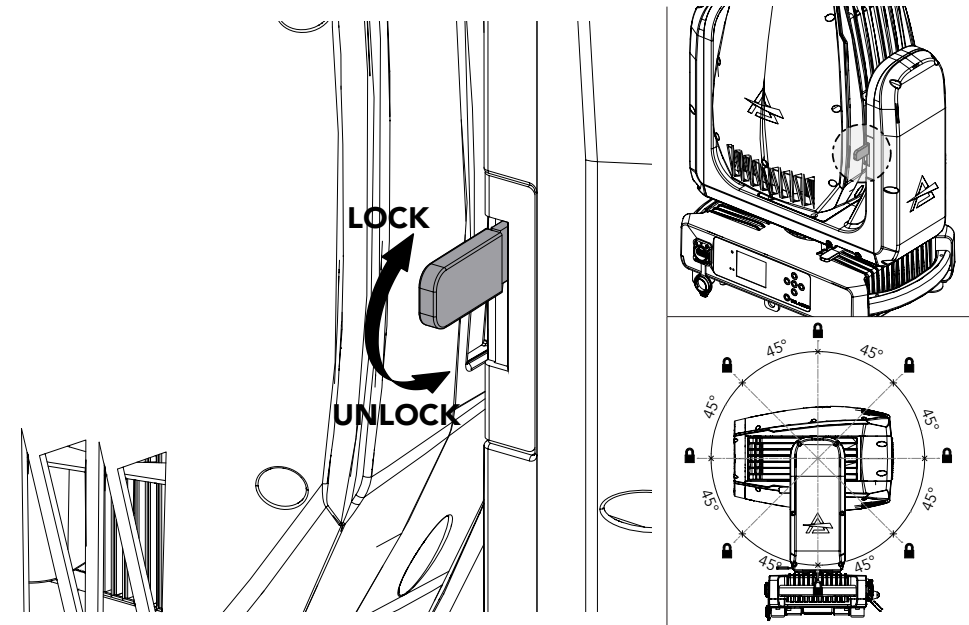


Fig. 02

## 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.

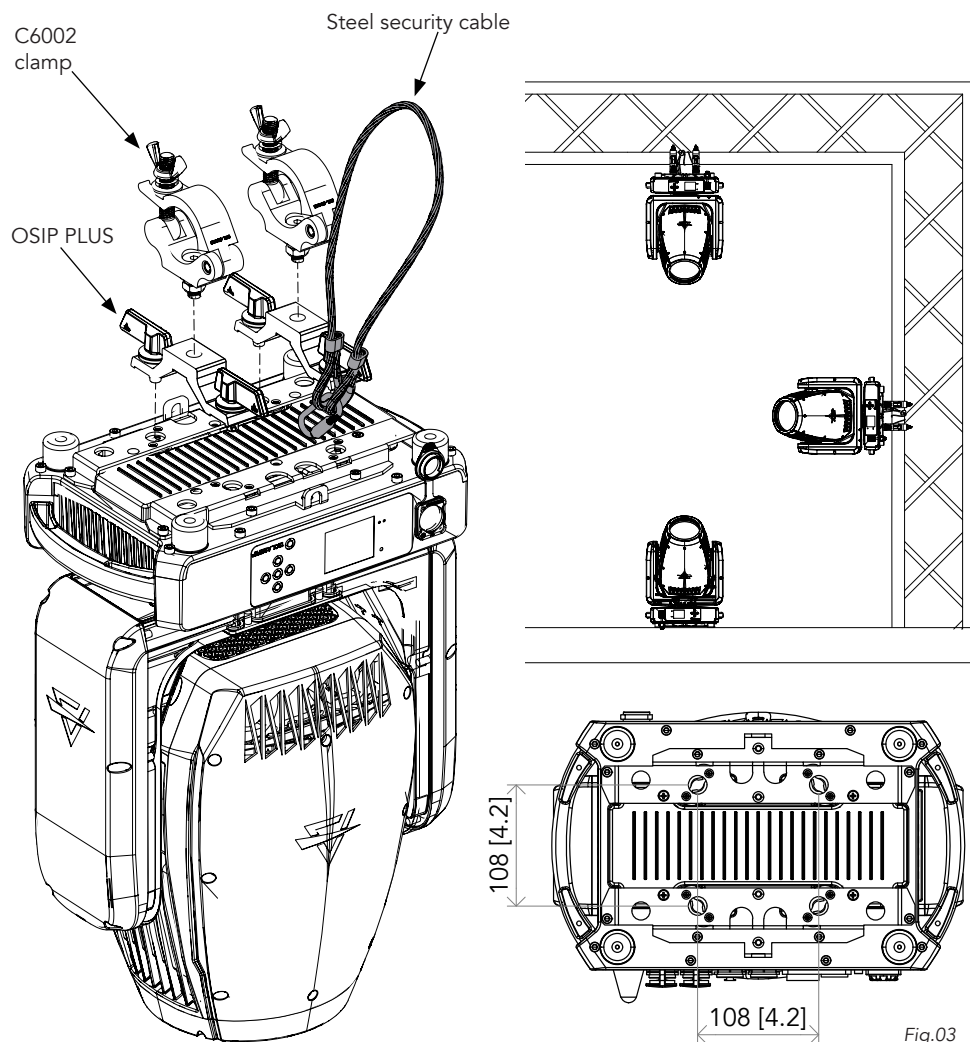


Fig.03

# 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.

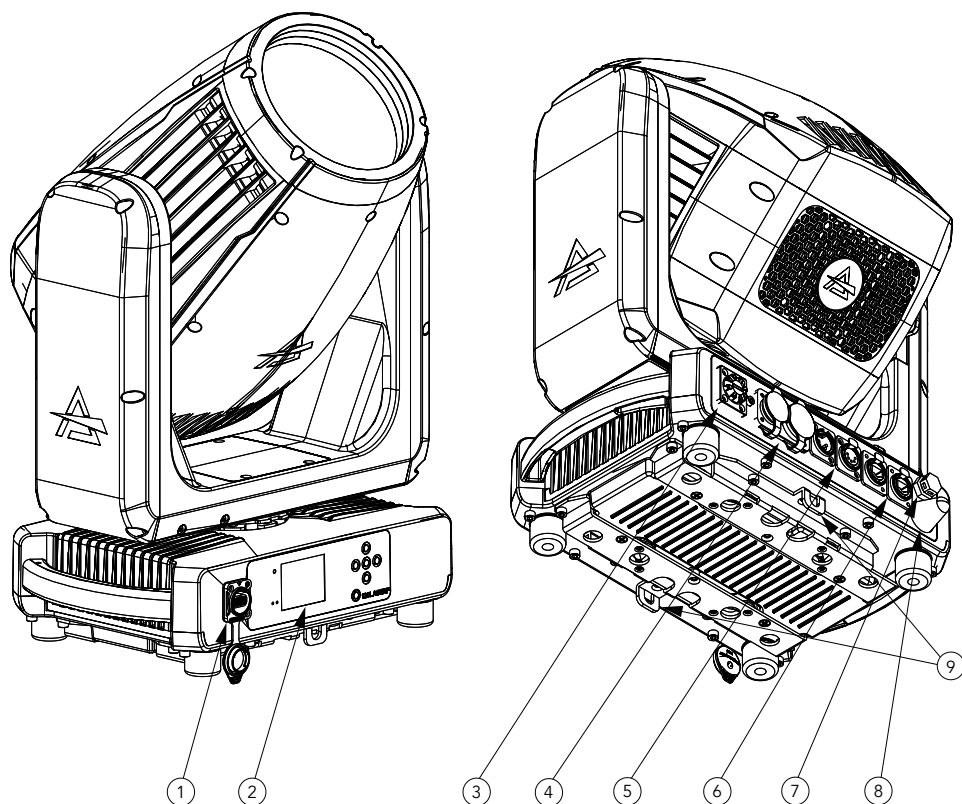


Fig 04

# 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

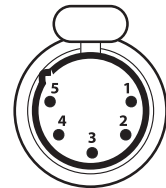


Fig. 05

## 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:

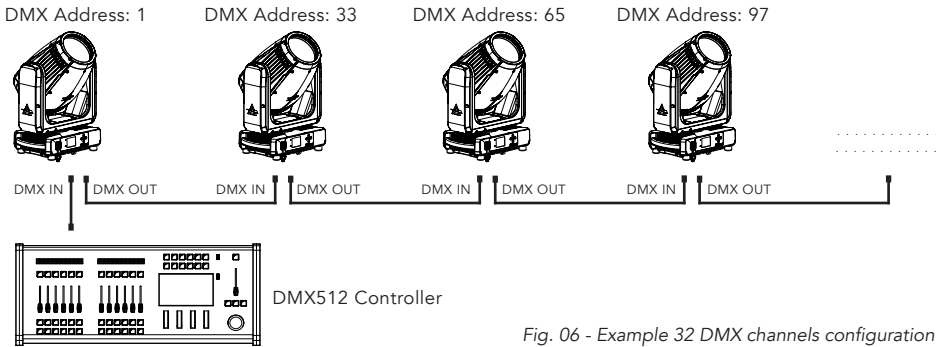


Fig. 06 - Example 32 DMX channels configuration

## 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.

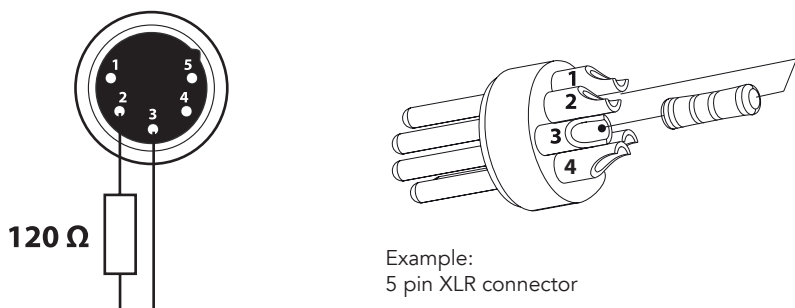


Fig. 07

## 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.

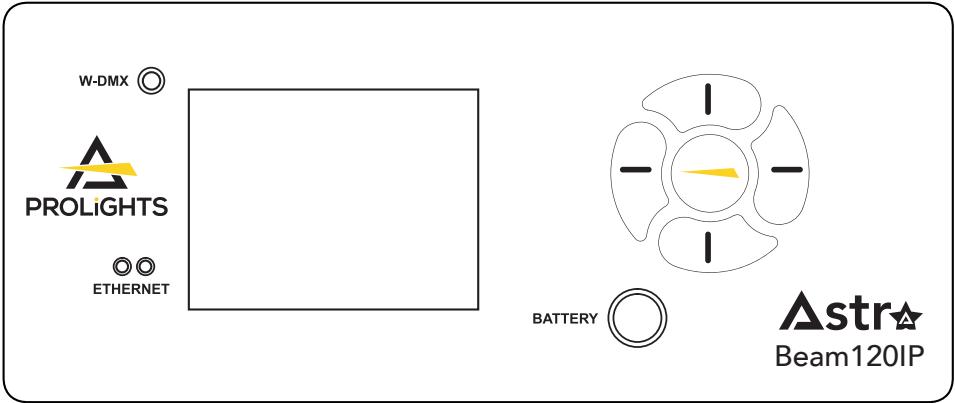


Fig. 08

## 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. Button 1 is the top button with an upward arrow. Button 2 is the right button with a rightward arrow. Button 3 is the bottom button with a downward arrow. Button 4 is the left button with a leftward arrow. Button 5 is the central button with a yellow rightward arrow. | 1 |  | <ul style="list-style-type: none"><li>Browse upwards through the menu list and increases the numeric value displayed.</li></ul>                                                                |
|                                                                                                                                                                                                                                                                                                                                      | 2 |  | <ul style="list-style-type: none"><li>Scroll from left to right when entering numerical values, switching between hundreds, tens and units</li></ul>                                           |
|                                                                                                                                                                                                                                                                                                                                      | 3 |  | <ul style="list-style-type: none"><li>Browse downwards through the menu list and decreases the numeric value displayed.</li></ul>                                                              |
|                                                                                                                                                                                                                                                                                                                                      | 4 |  | <ul style="list-style-type: none"><li>Return to the top level, or scroll from right to left when entering numerical values, switching between units, tens and hundreds</li></ul>               |
|                                                                                                                                                                                                                                                                                                                                      | 5 |  | <ul style="list-style-type: none"><li>Used to confirm the displayed value, or activate the displayed function or to access the menu tree or to return a previous menu window.</li></ul>        |
|                                                                                                                                                                                                                                                                                                                                      |   |  | <ul style="list-style-type: none"><li>Switch on the display using backup battery. Hold for 5s.</li><li>Switch off display by pressing button 4 for 5s while on being on Home screen.</li></ul> |

# 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         | <b>DMX</b>       | 1-512                          |                  |                   | Set DMX Address for Main fixture                                                                                                                                  |
|                     | sACN             |                                |                  |                   |                                                                                                                                                                   |
|                     | ARTNET           |                                |                  |                   |                                                                                                                                                                   |
| DMX MODE            | <b>STANDARD</b>  |                                |                  |                   |                                                                                                                                                                   |
| WIRELESS            | CRMX ON/OFF      | ON                             |                  |                   | Enable the wireless card.                                                                                                                                         |
|                     |                  | <b>OFF</b>                     |                  |                   |                                                                                                                                                                   |
|                     | 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                          |                  |                   |                                                                                                                                                                   |
|                     |                  | <b>RX</b>                      |                  |                   |                                                                                                                                                                   |
|                     | 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)  | <b>ON</b>                      |                  |                   | Enable/Disable the transmission of the DMX from the transmitter to the receiver via CRMX                                                                          |
|                     |                  | OFF                            |                  |                   |                                                                                                                                                                   |
|                     | CRMX TO DMX (RX) | <b>ON</b>                      |                  |                   | 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.<br>TX MODE: When in TX mode, message on screen: "Linking Key available only in RX Mode"                   |
|                     |                  |                                | LINKING MODE     | CRMX              |                                                                                                                                                                   |
|                     |                  |                                | LINKING UNIVERSE | CRMX2             |                                                                                                                                                                   |
|                     |                  |                                |                  | A                 |                                                                                                                                                                   |
|                     |                  |                                |                  | B (Only in CRMX2) |                                                                                                                                                                   |
|                     |                  |                                |                  | C                 |                                                                                                                                                                   |
|                     |                  |                                |                  | D (Only in CRMX2) |                                                                                                                                                                   |
|                     |                  |                                |                  | E                 |                                                                                                                                                                   |
|                     |                  |                                |                  | F (Only in CRMX2) |                                                                                                                                                                   |
|                     |                  |                                |                  | G                 |                                                                                                                                                                   |
|                     |                  |                                |                  | H (Only in CRMX2) |                                                                                                                                                                   |
|                     |                  | <b>OFF</b>                     |                  |                   |                                                                                                                                                                   |
| 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          |         |                                                                                                                         | Toggle and Set Merge mode for sACN. |
|                   |                 | MERGE MODE    | OFF           |         |                                                                                                                         |                                     |
|                   |                 |               | 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.<br>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                |         |         |                                                                                                                                                                                         |
|                  |                   | ULTRA FAST          |         |         |                                                                                                                                                                                         |
| DIMMER           | DIMMER CURVE      | LINEAR              |         |         | Check pag.20 for further details                                                                                                                                                        |
|                  |                   | S-CURVE             |         |         |                                                                                                                                                                                         |
|                  |                   | SQUARE LAW          |         |         |                                                                                                                                                                                         |
|                  |                   | INVERSE SQUARE LAW  |         |         |                                                                                                                                                                                         |
|                  | DIMMER SPEED      | AUTO                |         |         | Check pag.21 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 |         |         |                                                                                                                                                                                         |
| WITH DMX ADDRESS |                   |                     |         |         |                                                                                                                                                                                         |

## MENU: ADVANCED

| LEVEL 1             | LEVEL 2           | LEVEL 3 | LEVEL 4 | LEVEL 5 | DESCRIPTION                                                                                                                                                                                                                                                                                         |
|---------------------|-------------------|---------|---------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SOURCE<br>FREQUENCY | <b>600 Hz</b>     |         |         |         | Select PWM frequency.<br>NOTE: Using higher LED Frequency<br>color accuracy may be slightly compro-<br>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        |         |         |         |                                                                                                                                                                                                                                                                                                     |
|                     | ZOOM / FOCUS      |         |         |         |                                                                                                                                                                                                                                                                                                     |
|                     | COLORS            |         |         |         |                                                                                                                                                                                                                                                                                                     |
|                     | GOBOS / ANIMATION |         |         |         |                                                                                                                                                                                                                                                                                                     |
|                     | EFFECTS           |         |         |         |                                                                                                                                                                                                                                                                                                     |
| CALIBRATION         | PASSWORD          |         |         |         | <i>To calibrate Password: 050</i>                                                                                                                                                                                                                                                                   |
| MANUAL<br>CONTROL   | PAN               |         |         |         | Manual Control of each functionality via<br>display.<br>If this function is accessed with a valid<br>DMX signal present, values are taken<br>from last DMX frame received.<br>Signal is ignored while fixture stays in<br>this menu.<br>Timeout for screen is inhibited. No<br>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<br>DEFAULT   | BASIC RELOAD      | YES     |         |         | Default of all parameters excepted<br>Calibration                                                                                                                                                                                                                                                   |
|                     |                   | NO      |         |         |                                                                                                                                                                                                                                                                                                     |
|                     | FACTORY RELOAD    | YES     |         |         | Delete all USER PRESETS stored<br>(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.<br>Fixture Hours is countered based on general operation time.<br>Hours are countered since Power is plugged in.<br>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.

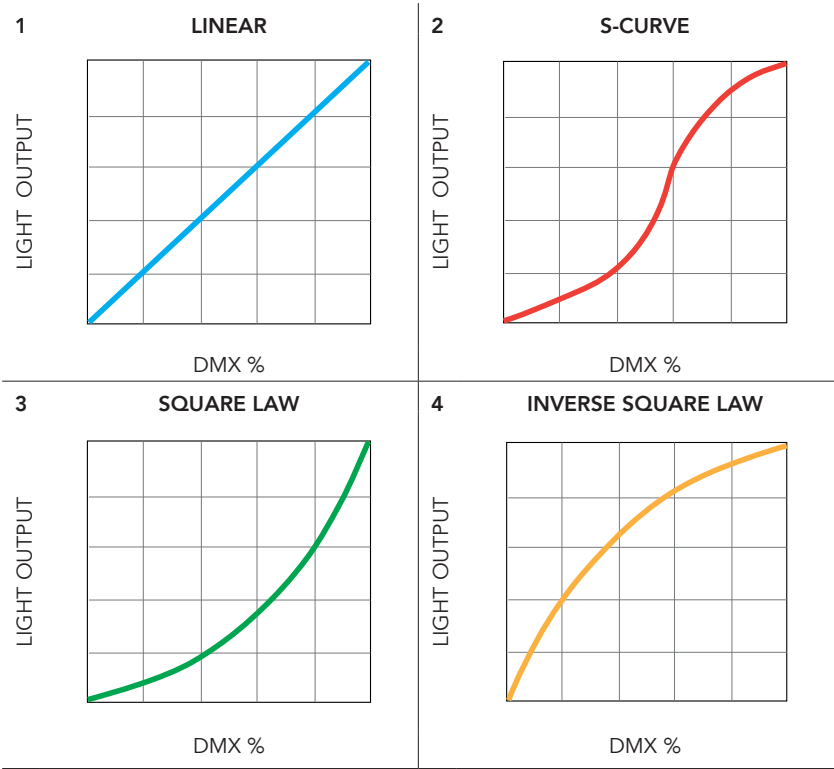


Fig 09

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.

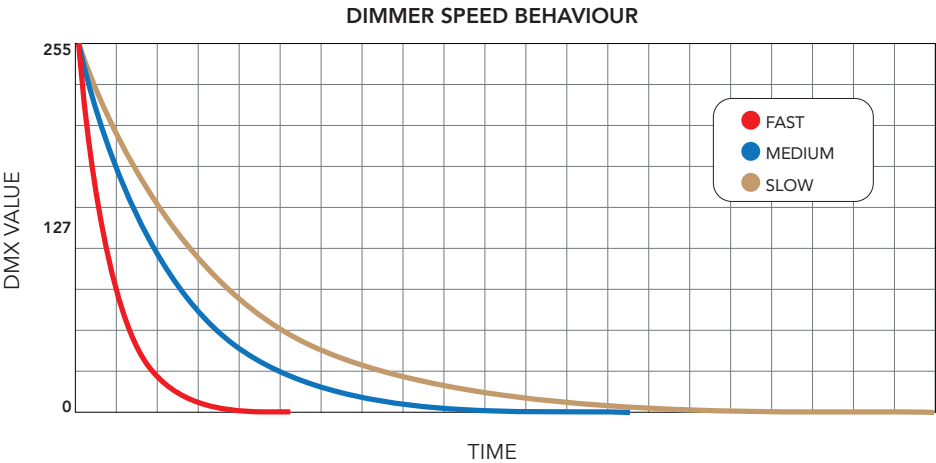


Fig 10

# 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 |
|----------------------------|----------------------------------|--------|-----|-----|
| <b>Product Information</b> | 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   |     |
| <b>DMX512 Setup</b>        | 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   |
| <b>Sensors</b>             | SENSOR_DEFINITION                | 0x0200 | x   |     |
|                            | SENSOR_VALUE                     | 0x0201 | x   | x   |
|                            | RECORD_SENSORS                   | 0x0202 |     | x   |
| <b>Dimmer Settings</b>     | 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 |
|-----------------------------------|------------------------|--------|-----|-----|
| <b>Power/Lamp Settings</b>        | 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   |
| <b>Display Settings</b>           | DISPLAY_INVERT         | 0x0500 | x   | x   |
|                                   | DISPLAY_LEVEL          | 0x0501 | x   | x   |
| <b>Configuration</b>              | 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   |     |
| <b>IP &amp; DNS Configuration</b> | IPV4_CURRENT_ADDRESS   | 0x0705 | x   |     |
|                                   | IPV4_STATIC_ADDRESS    | 0x0706 | x   | x   |
| <b>Control</b>                    | 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<br>1: Yes               |
| DMX_FAULT                  | 0x82DD | x   | x   | 0-1     | <b>0: Hold</b><br>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 |          |           | RDM Model ID |
|-------------------------|----------|-----------|--------------|
| ID                      | DMX Mode | Footprint | 0xA038       |
| 1                       | STANDARD | 32        |              |

## PAN/TILT POSITION RELATED TO DMX VALUES

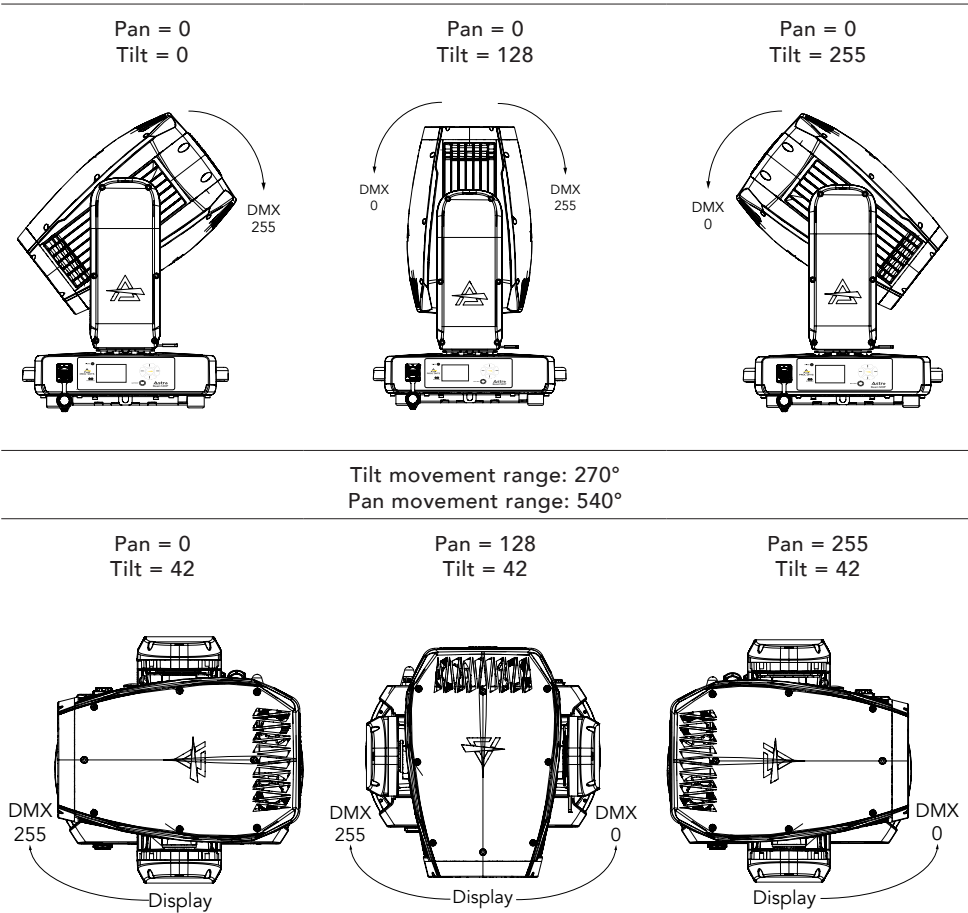


Fig. 11

## DMX Chart Summary

| DMX MODE                  | Function               |
|---------------------------|------------------------|
| <b>STANDARD<br/>32 ch</b> |                        |
| 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          | Name          | Function                                 | DMX  |     | Default |
|-------------------|---------------|------------------------------------------|------|-----|---------|
| STANDARD<br>32 ch |               |                                          | 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                        |      |     |         |
|                   |               | Open                                     | 0    |     | 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          | Name        | Function                     | DMX  |     | Default |  |  |
|-------------------|-------------|------------------------------|------|-----|---------|--|--|
| STANDARD<br>32 ch |             |                              | FROM | TO  |         |  |  |
| 13                | Color Wheel | Green                        | 48   |     | 0       |  |  |
|                   |             | 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 |         |  |  |
|                   |             | Minus green 1/2              | 114  |     |         |  |  |
|                   |             | 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          | Name             | Function                         | DMX  |     | Default |  |  |
|-------------------|------------------|----------------------------------|------|-----|---------|--|--|
| STANDARD<br>32 ch |                  |                                  | FROM | TO  |         |  |  |
| 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          | Name           | Function                                | DMX  |     | Default |
|-------------------|----------------|-----------------------------------------|------|-----|---------|
| STANDARD<br>32 ch |                |                                         | FROM | TO  |         |
| 15                | Rot Gobo Wheel | Gobo 9                                  | 75   | 77  | 0       |
|                   |                | 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 |         |
|                   |                | Gobo Shake 6                            | 130  | 137 |         |
|                   |                | 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 |         |
| 16                | Gobo Rot       | Gobo Indexing                           |      |     | 0       |
|                   |                | Gobo index 0° - 360°                    | 0    | 255 |         |
|                   |                | Gobo Rotation                           |      |     |         |
|                   |                | No rotation                             | 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       |
| 18                | Fixed Gobo     | Open                                    | 0    | 2   | 0       |
|                   |                | Animation insertion                     | 3    | 16  |         |
|                   |                | Gobo selection                          |      |     |         |
|                   |                | Open                                    | 17   | 19  |         |
|                   |                | 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  |         |

| DMX MODE          | Name       | Function                    | DMX  |     | Default |
|-------------------|------------|-----------------------------|------|-----|---------|
| STANDARD<br>32 ch |            |                             | FROM | TO  |         |
| 18                | Fixed Gobo | GOBO 11                     | 30   | 30  | 0       |
|                   |            | 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 (Wide Open)         | 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 |         |
|                   |            | 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          | Name                      | Function                                        | DMX  |     | Default |  |
|-------------------|---------------------------|-------------------------------------------------|------|-----|---------|--|
| STANDARD<br>32 ch |                           |                                                 | FROM | TO  |         |  |
| 18                | Fixed Gobo                | GOBO 26                                         | 174  | 178 | 0       |  |
|                   |                           | GOBO 27                                         | 179  | 183 |         |  |
|                   |                           | GOBO 28                                         | 184  | 188 |         |  |
|                   |                           | GOBO 29 (Wide Open)                             | 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)                    |      |     |         |  |
|                   |                           | 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                                             |      |     |         |  |
| 21                | Prism Wheel A<br>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)                    |      |     |         |  |
|                   |                           | 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                                             |      |     |         |  |

| DMX MODE<br>STANDARD<br>32 ch | Name                      | Function                              | DMX  |     | Default |
|-------------------------------|---------------------------|---------------------------------------|------|-----|---------|
|                               |                           |                                       | FROM | TO  |         |
| 23                            | Prism Wheel B<br>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  |         |
|                               |                           | PAN/TILT MODE ULTRA FAST              | 16   | 17  |         |
|                               |                           | reserved                              | 18   | 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  |         |

| DMX MODE          | Name    | Function                             | DMX  |     | Default |
|-------------------|---------|--------------------------------------|------|-----|---------|
| STANDARD<br>32 ch |         |                                      | FROM | TO  |         |
| 32                | Control | DIMMER CURVE SQUARE LAW              | 76   | 77  | 0       |
|                   |         | 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  |         |
|                   |         | 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."<br>" | 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

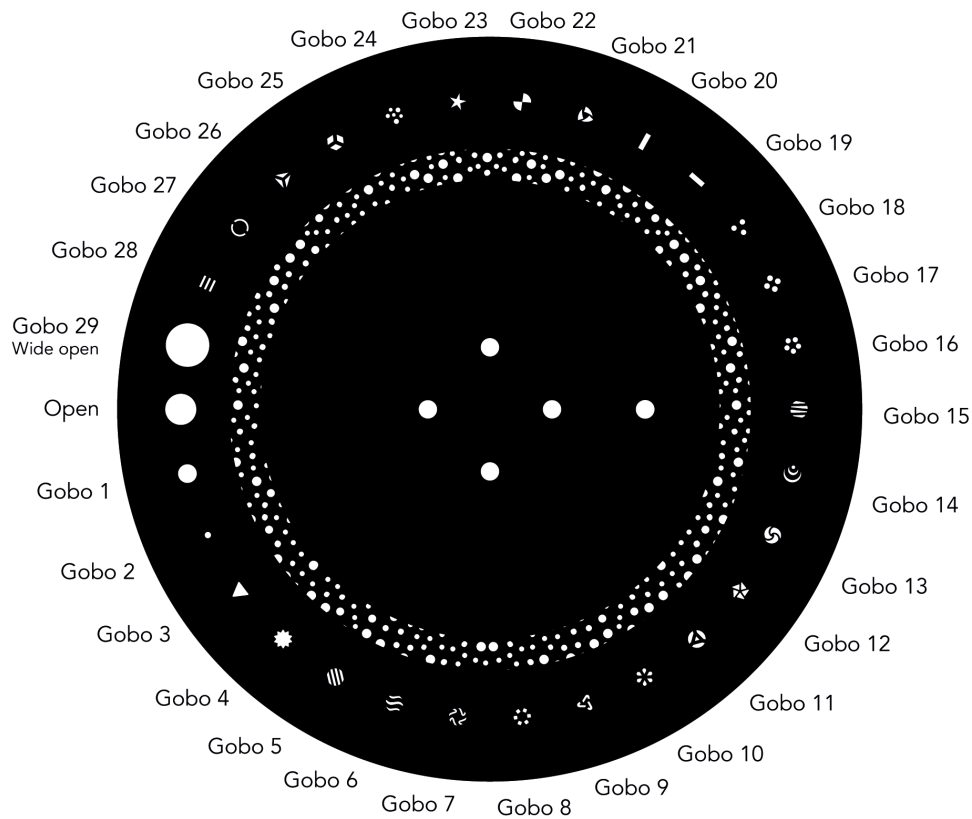
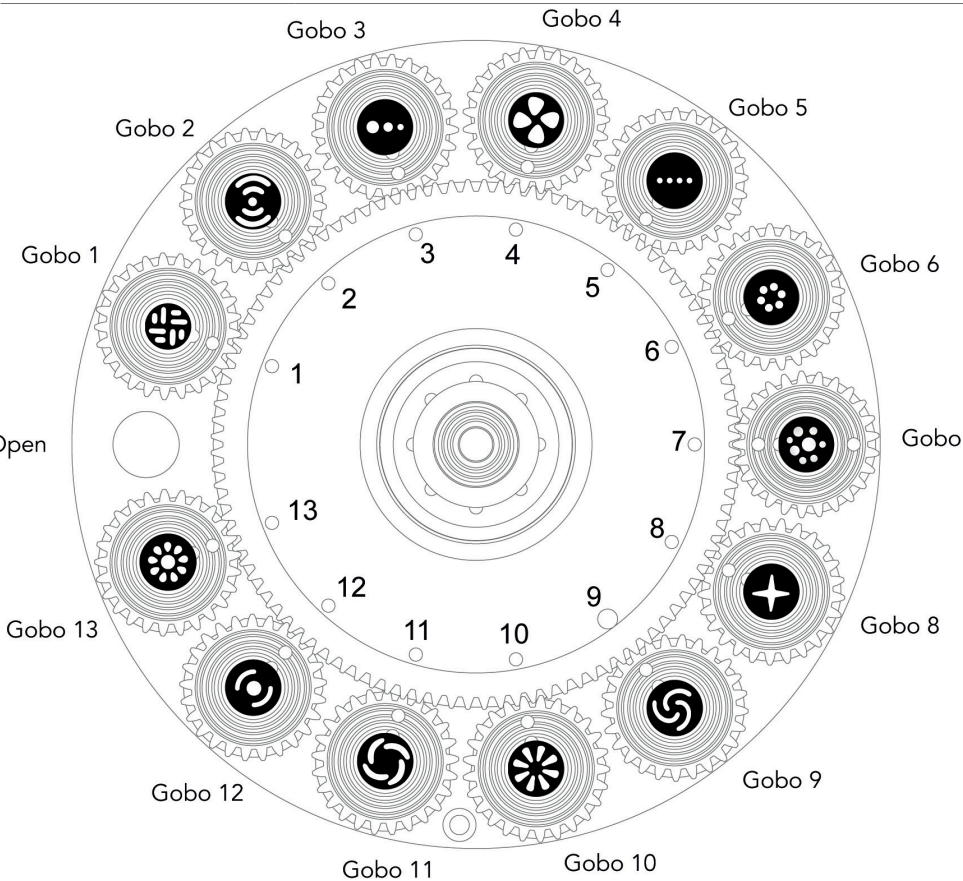
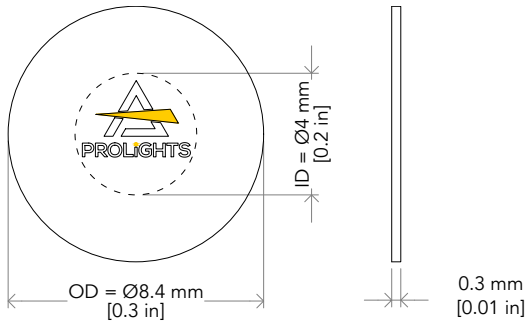


Fig. 12

# 15 - ROTATING GOBOS WHEEL

Gobo dimensions:

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



**ATTENTION!** Load with mirror surface toward the light source.

Fig. 13

# 16 - COLOR WHEEL

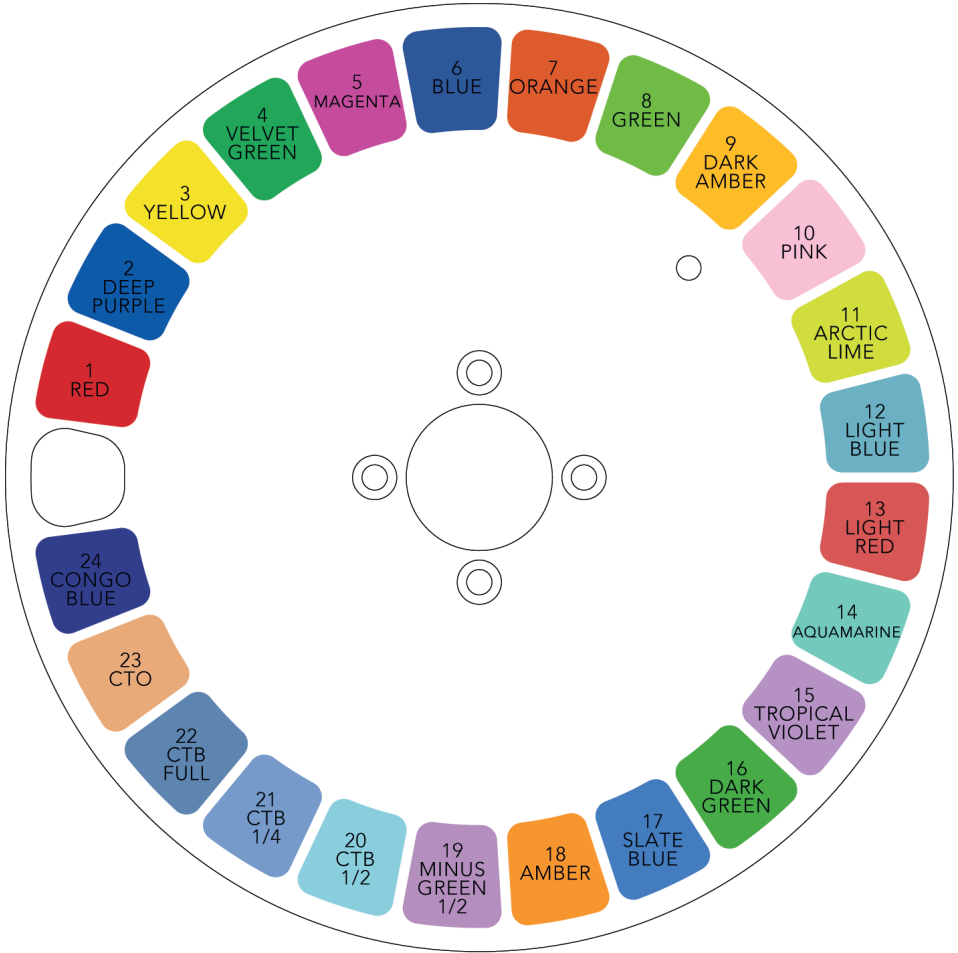


Fig. 14

# 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

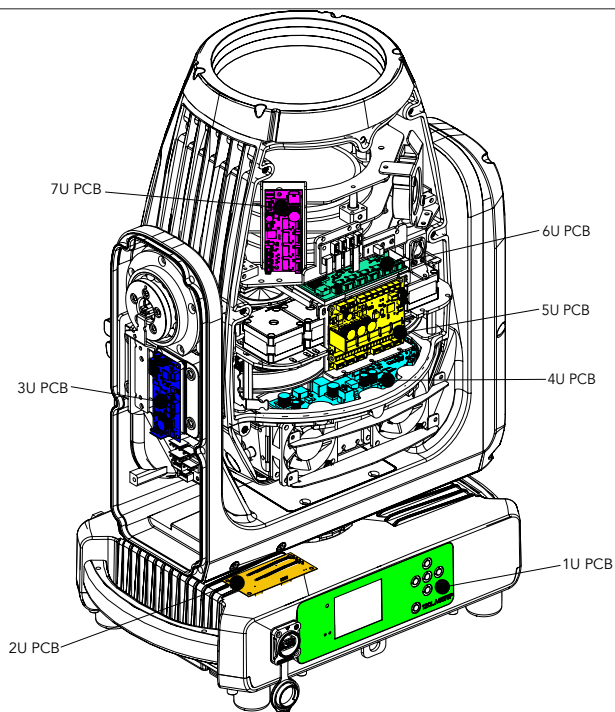
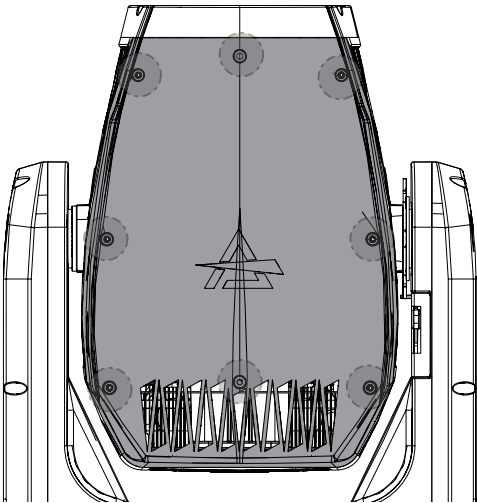


Fig. 15

# 18 - PERIODICAL CLEANING

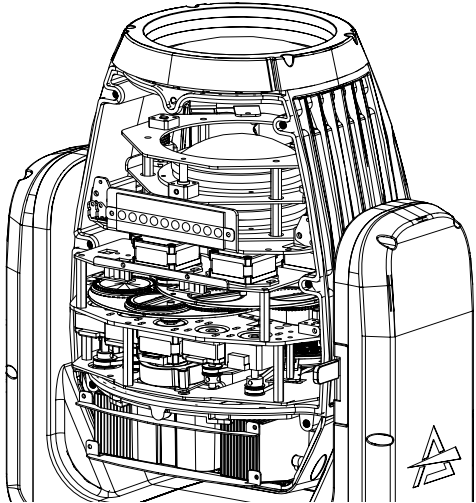
WARNING! Turn OFF power and allow approximately 20 minutes for the fixture to cool down.

1



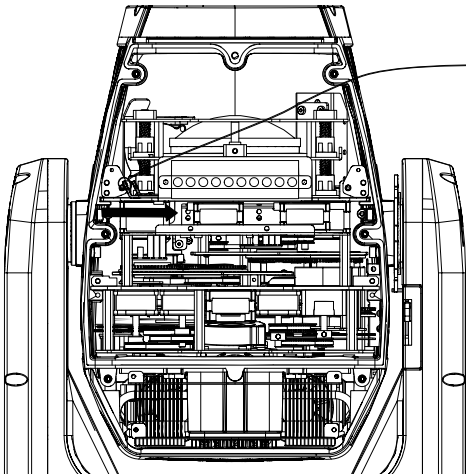
Before removing rear cover, place the head in a horizontal position and engage both the PAN and TILT locks for added stability. See the "PAN AND TILT LOCK" paragraph (pag. 6). Loosen and remove the marked screws and opening the head covers (1) from both sides.

3

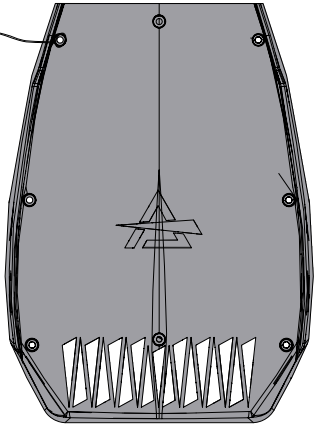


Use a soft cloth dampened with any detergent liquid for cleaning glass to remove the dirt from the reflectors, from the lenses and filters.

2



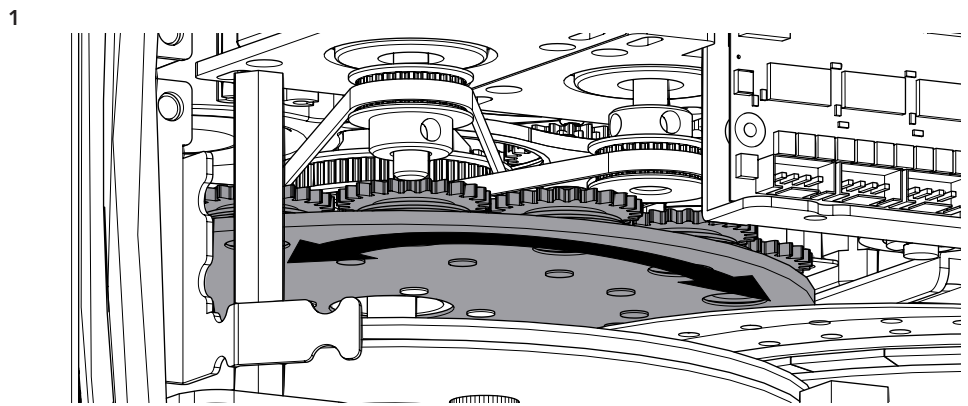
Unclip the safety cable on both sides (2).



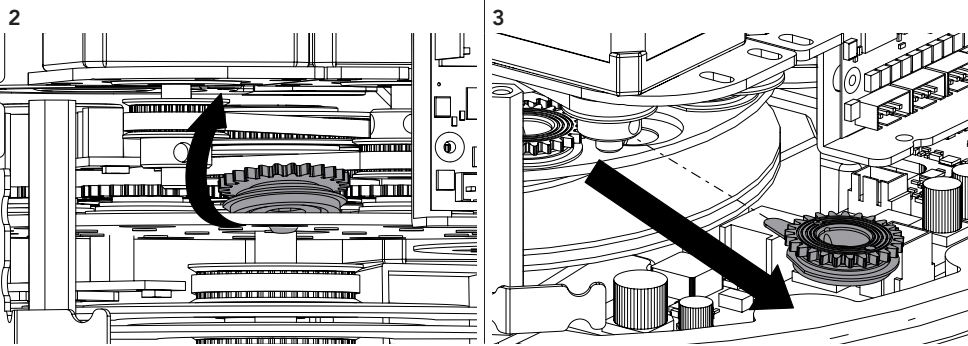
Safety cable

Fig. 16

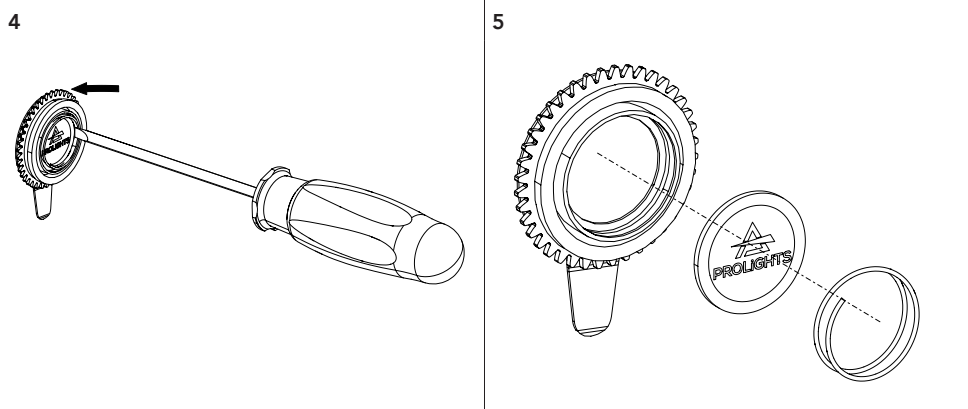
# 19 - GOBOS REPLACEMENT



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.



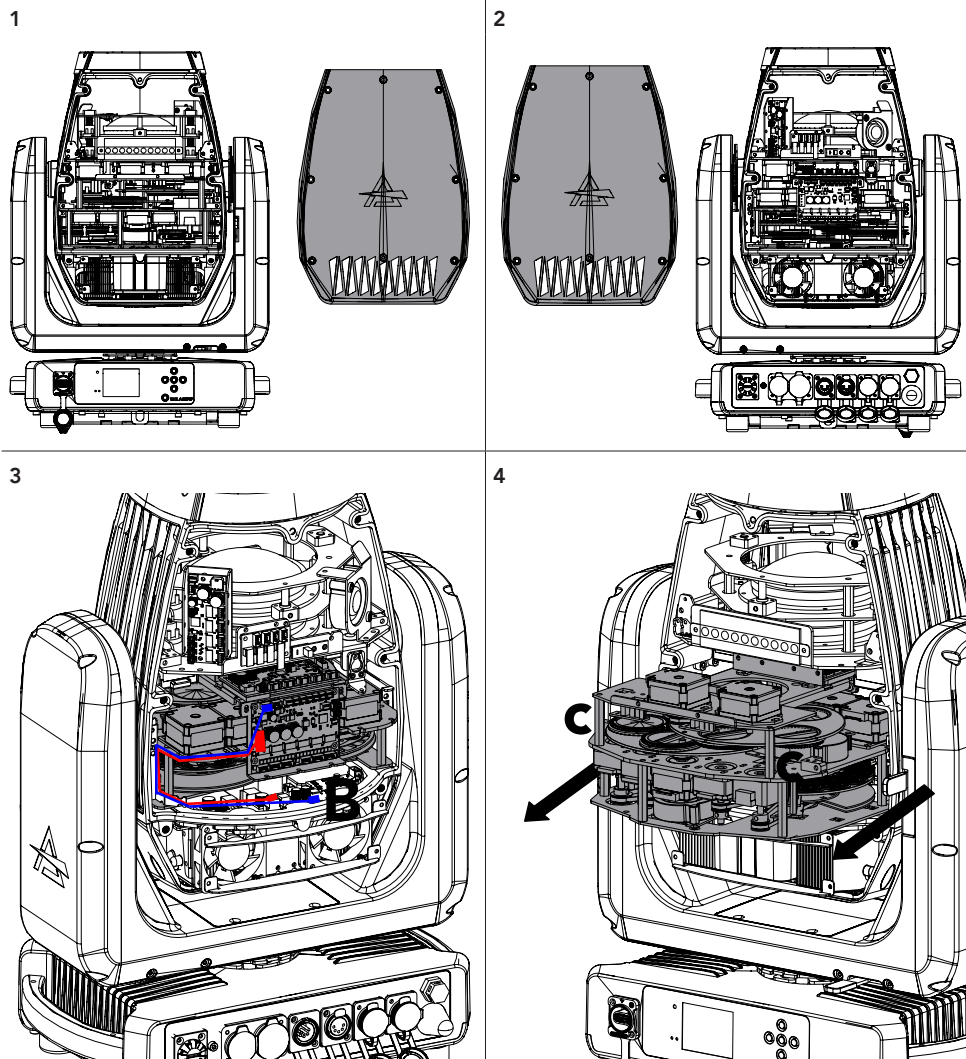
Gently remove the gobo holder from the gobo wheel (2, 3).



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

Fig. 17

## 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);

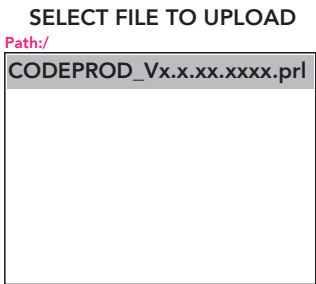
Fig. 18

# 21 - USB UPDATE MODE

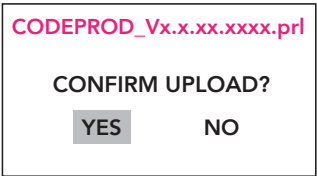
NOTE: It is necessary to prepare a FAT32-formatted flash drive for the update and copy the prl files onto it. It is advisable to use a flash drive that is empty and free of other files to facilitate the update.

To update the device, proceed as follows:

1



2



- With the machine turned on, insert the USB drive;
- The update firmware menu will appear, so use the UP and DOWN buttons to select the file to be updated and press ENTER (figure 1).
- To confirm the update, move with the LEFT and RIGHT buttons and select YES by pressing ENTER (Figure 2).

## 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:

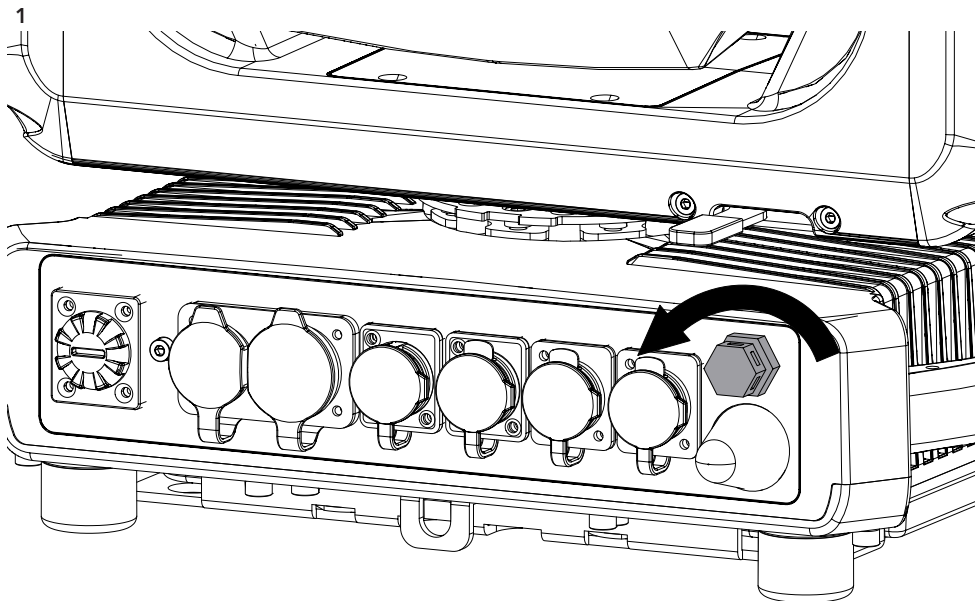
- enter the menu, go to INFORMATIONS and press Enter
- go to FIXTURE TIME and press Enter
- finally go to MAINTENANCE TIME and press Enter
- Press enter again and enter the password 050 to reset the message.

| 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.<br>• 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.<br>• Allow product to cool.<br>• Clean the product and airflow filters.<br>• 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.                                                                                                                                                                                                                                                                                                                     |

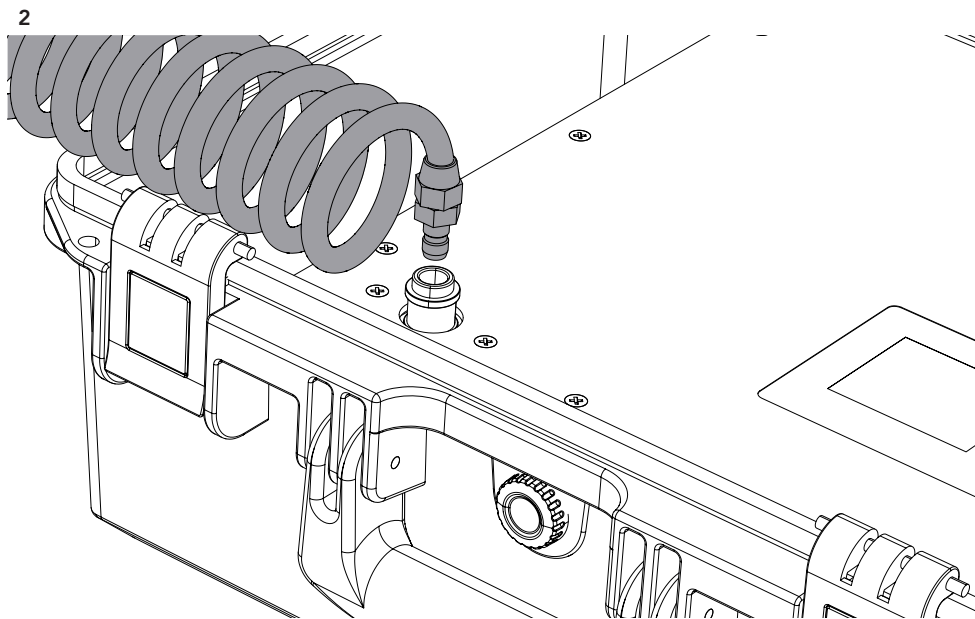
Contact an authorized service center in case of technical problems or not reported in the table can not be resolved by the procedure given in the table.

## 23 - TEST OF IP65 RATING

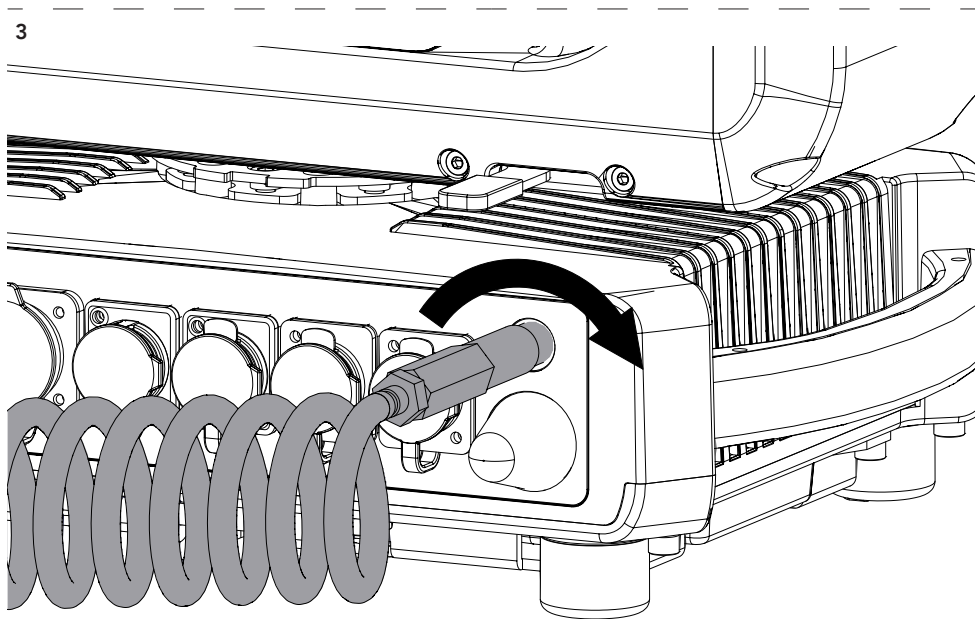
It is recommended to verify IP grade using IPTESTBOX every time the bodies are removed for maintenance.



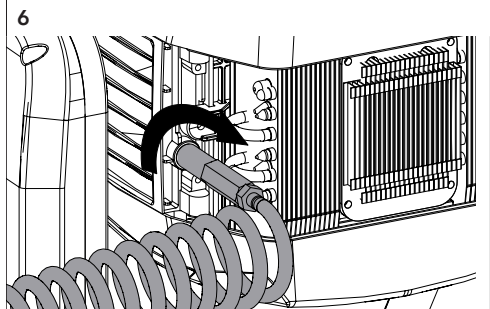
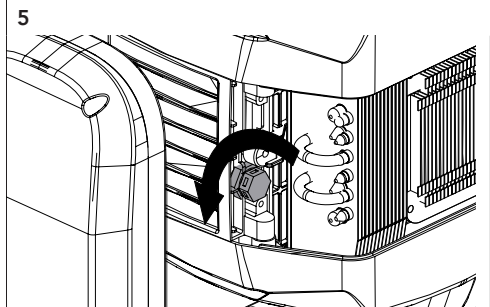
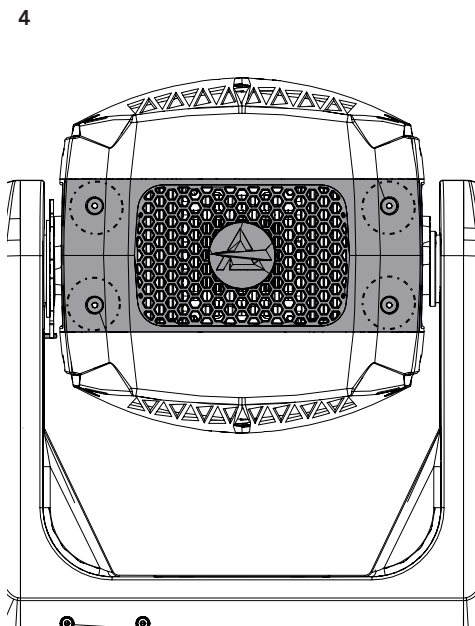
Remove the Gore valve from the connections panel.



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



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



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. 22

## Note

## Note



