



# Astra Wash37Pix

37x40W RGBW moving wash light with 4°-54° zoom, pixel control and pixel ring



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## USER MANUAL

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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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# INDEX

|                                                           |           |
|-----------------------------------------------------------|-----------|
| <b>SAFETY INFORMATION</b>                                 | <b>02</b> |
| <b>1 - PACKAGING</b>                                      | <b>05</b> |
| PACKAGE CONTENT .....                                     | 05        |
| OPTIONAL ACCESSORIES .....                                | 05        |
| <b>2 - TECHNICAL DRAWING</b>                              | <b>05</b> |
| <b>3 - PAN AND TILT LOCK</b>                              | <b>06</b> |
| <b>4 - INSTALLATION</b>                                   | <b>07</b> |
| MOUNTING .....                                            | 07        |
| <b>5 - CONNECTION TO THE MAINS SUPPLY</b>                 | <b>08</b> |
| <b>6 - START UP</b>                                       | <b>08</b> |
| CONNECT AND DISCONNECT POWER FROM THE PRODUCT .....       | 08        |
| <b>7 - PRODUCT OVERVIEW</b>                               | <b>09</b> |
| <b>8 - DMX CONNECTION</b>                                 | <b>10</b> |
| CONNECTION OF THE CONTROL SIGNAL: DMX LINE .....          | 10        |
| INSTRUCTIONS FOR A RELIABLE DMX CONNECTION .....          | 10        |
| CONNECTION DAISY CHAIN .....                              | 10        |
| CONNECTION OF THE DMX LINE .....                          | 10        |
| CONSTRUCTION OF THE DMX TERMINATION .....                 | 11        |
| DMX ADDRESSING .....                                      | 11        |
| ETHERNET CONNECTION .....                                 | 11        |
| ETHERNET OPERATION .....                                  | 11        |
| ETHERNET TO DMX OPERATIONS .....                          | 12        |
| OPERATION AS A WIRELESS TRANSMITTER .....                 | 12        |
| IN TO WDMX .....                                          | 12        |
| OPERATION AS A WIRELESS RECEIVER .....                    | 13        |
| WDMX TO DMX (RX) .....                                    | 13        |
| <b>9 - CONTROL PANEL</b>                                  | <b>14</b> |
| DISPLAY AND BUTTONS LAYOUT .....                          | 14        |
| <b>10 - MENU STRUCTURE</b>                                | <b>15</b> |
| <b>11 - SHORTCUT</b>                                      | <b>17</b> |
| <b>12 - RDM FUNCTIONS</b>                                 | <b>18</b> |
| <b>13 - DMX CHARTS</b>                                    | <b>20</b> |
| Fixture Engine .....                                      | 20        |
| Pixel Engine .....                                        | 22        |
| <b>14 - RING LAYOUT</b>                                   | <b>29</b> |
| <b>15 - PIXEL LAYOUT</b>                                  | <b>29</b> |
| <b>16 - ERROR MESSAGES</b>                                | <b>30</b> |
| IDENTIFICATION OF ELECTRONIC BOARDS .....                 | 31        |
| <b>17 - PERIODICAL CLEANING</b>                           | <b>32</b> |
| <b>18 - ACCESSORIES INSTALLATION</b>                      | <b>33</b> |
| EGG CRATE (ASTRAW37PEC - OPTIONAL) .....                  | 33        |
| MATT BLACK COVER FOR RING (ASTRAW37MBCR - OPTIONAL) ..... | 34        |
| <b>19 - MAINTENANCE</b>                                   | <b>35</b> |
| MAINTENANCE AND CLEANING THE PRODUCT .....                | 35        |
| REPLACING THE FUSE .....                                  | 35        |
| VISUAL CHECK OF PRODUCT HOUSING .....                     | 35        |
| TROUBLESHOOTING .....                                     | 36        |

# SAFETY INFORMATION



## WARNING!

- See <https://www.prolights.it/product/ASTRAWASH37PIX#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.



## Protection and Warning against electrical shock

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



## Installation

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



#### **Minimum distance of illuminated objects**

- The projector needs to be positioned so that the objects hit by the beam of light are at least 0.3 meters (0.98 ft) from the lens of the projector.

**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> -10 °C**

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

- Do not operate the fixture if the ambient temperature (T<sub>a</sub>) is below -10 °C (14 °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.



#### **Indoor use**

- This product is designed for indoor and dry environments.
- Do not use in wet location and do not expose the fixture to rain or moisture.
- Never use the fixture in places subject to vibrations or bumps.
- Make certain that no inflammable liquids, water or metal objects enter the fixture.
- Excessive dust, smoke fluid, and particle build up degrades performance, causes overheating and will damage the fixture.
- Damages caused by inadequate cleaning or maintenance are not covered by the product warranty.



#### **Light collimation optical system**

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

**T<sub>c</sub> 58 °C**

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

- The surface of the fixture can reach up to 58 °C (136.4 °F) during operation. Avoid contact with people and materials.



#### **Radio receiver**

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



#### **Maintenance**

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



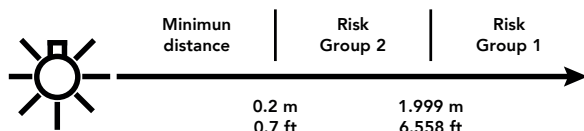
### Photobiological safety

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



### Do not stare at the operating light source

- Do not look directly at the LED source during operation. It can be harmful to the eyes and skin.
- During Installation, operation and maintenance, be prepared for the fixture to light and move suddenly when connected to power.
- The device should be positioned so that prolonged staring into the luminaire at a distance closer than 1.999 m (6.558 ft) is not expected.



### Disposal

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



### The product contains a lithium ion battery

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



### The products to which this manual refers comply with:

- 2014/35/EU - Safety of electrical equipment supplied at low voltage (LVD).
- 2014/30/EU - Electromagnetic Compatibility (EMC).
- 2011/65/EU - Restriction of the use of certain hazardous substances (RoHS).
- 2014/53/EU - Radio Equipment Directive (RED).



### The products to which this manual refers comply with:

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



### FCC Compliance:

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

# 1 - PACKAGING

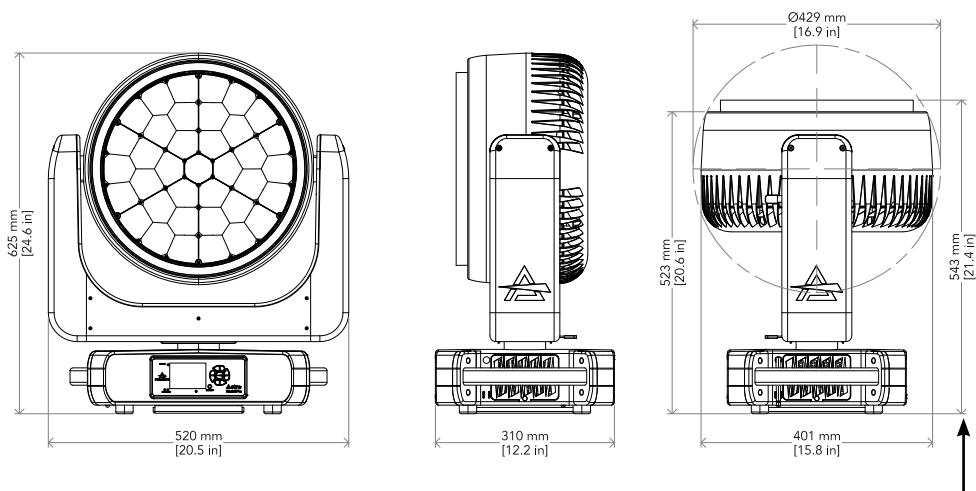
## PACKAGE CONTENT

- 1x ASTRAWASH37PIX;
- 1x 1,5 meters power cable (BARE END - NEUTRIK POWERCON TRUE1 IP65);
- 2x OS24;
- User Manual.

## OPTIONAL ACCESSORIES

- WSBBR512G6: blackBox R-512 G6 receiver 512Ch, 2.45GHz, DMX&RDM, Bluetooth, G3, G4, G4S, G5, CRMX.
- WSBBR512G5: blackBox R-512 G5 receiver 512Ch, 2.45GHz & 5.8GHz, DMX/RDM optional.
- WSBBF1G6: blackBox F-1 G6 transrec, 512ch, 2.45GHz, DMX&RDM, Bluetooth, G3, G4, G4S, G5, CRMX.
- WSBBF1G5: blackBox F-1 G5 transmitter, 2,45GHz & 5.2/5,8 GHz, DMX/RDM, 512Ch.
- TOUR53415L03BK: dmx cable HC5340. CANCE5MXX XLR 5p->CANCE5FXX XLR (f) 5p, L.3m.
- INF53415L03: dmx cable HC5340. SETMC5MXXB XLR 5p->SETMC5FXXB XLR (f) 5p L.3m.
- 958225L03: 3x2.5mm TH07 Cable, 16A 3p PwCon MXW, 16A 3p PwCon FXW, L. 3m.
- 9513FXWL03: ass. 3x2.5mm TH07 cable, 16A 3p 230V CEE plug, MENAC3FXW socket, L.3 m.
- 9533FXWL03: ass. 3x2.5mm TH07 cable, SHUKO plug, MENAC3FXW socket, L.3m.
- RSR1235A/B: steel security cable for hanging bodies, inox steel shackle, L=120 cm, silver/black.
- C6002: slim aluminium clamp, 200 kg loading, 48-51 mm tubes, M10 bolt.
- FCLASTRAW37PIX: flight case for 2 pcs of ASTRAWASH37PIX.
- ASTRAW37PEC: egg crate for ASTRAWASH37PIX.
- OS24: quick-lock omega bracket.
- UPBOX2: firmware uploader kit, USB IN, 3-pin XLR DMX OUT.
- ASTRAW37MBCR: matt black cover for ring for ASTRAWASH37PIX

# 2 - TECHNICAL DRAWING

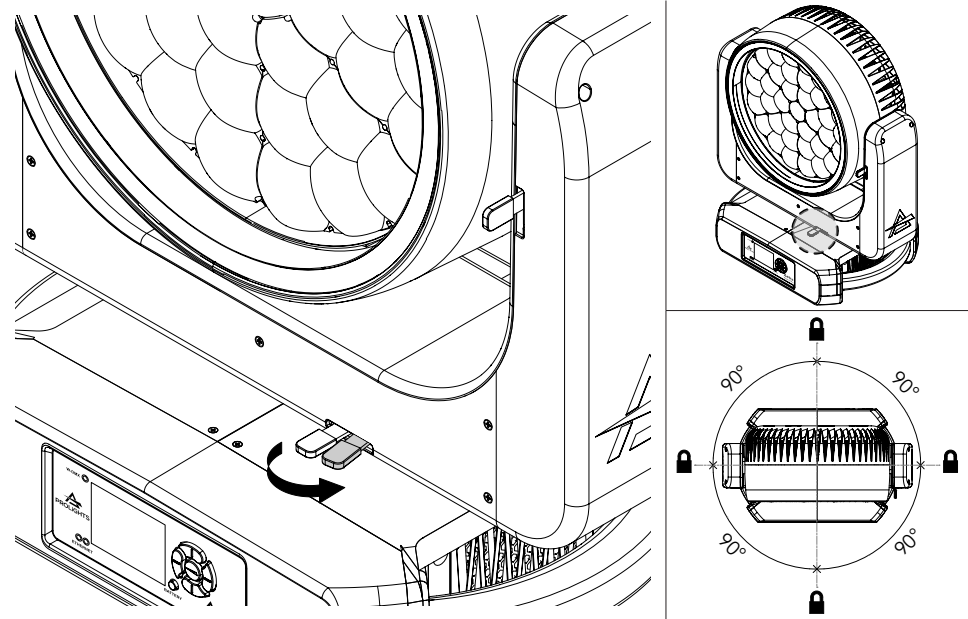


Weight: 26.4 kg - 58.20 lbs

Fig. 01

### 3 - PAN AND TILT LOCK

PAN Mechanism lock and release



TILT Mechanism lock and release

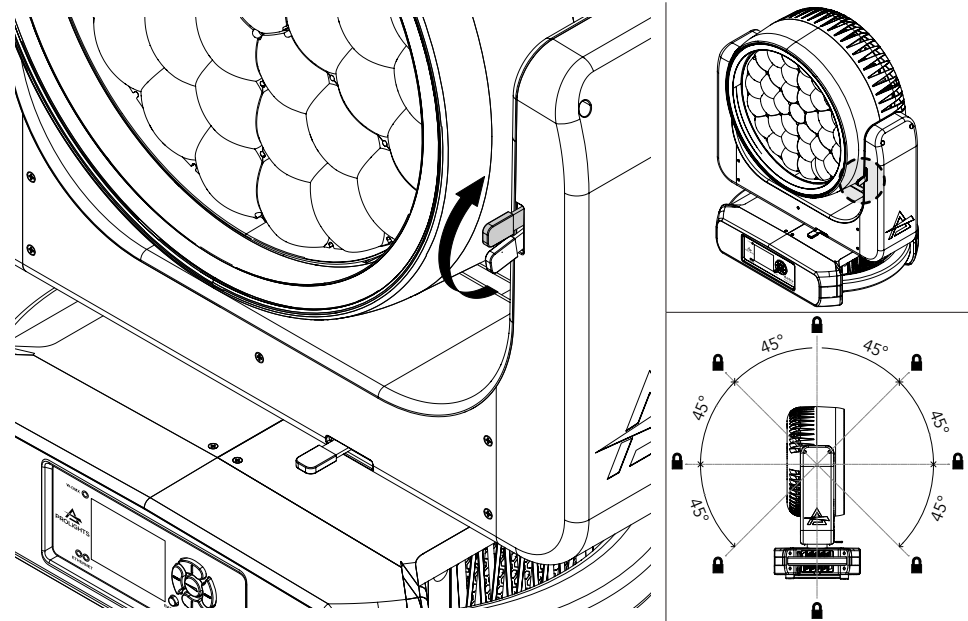


Fig. 02

## 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.

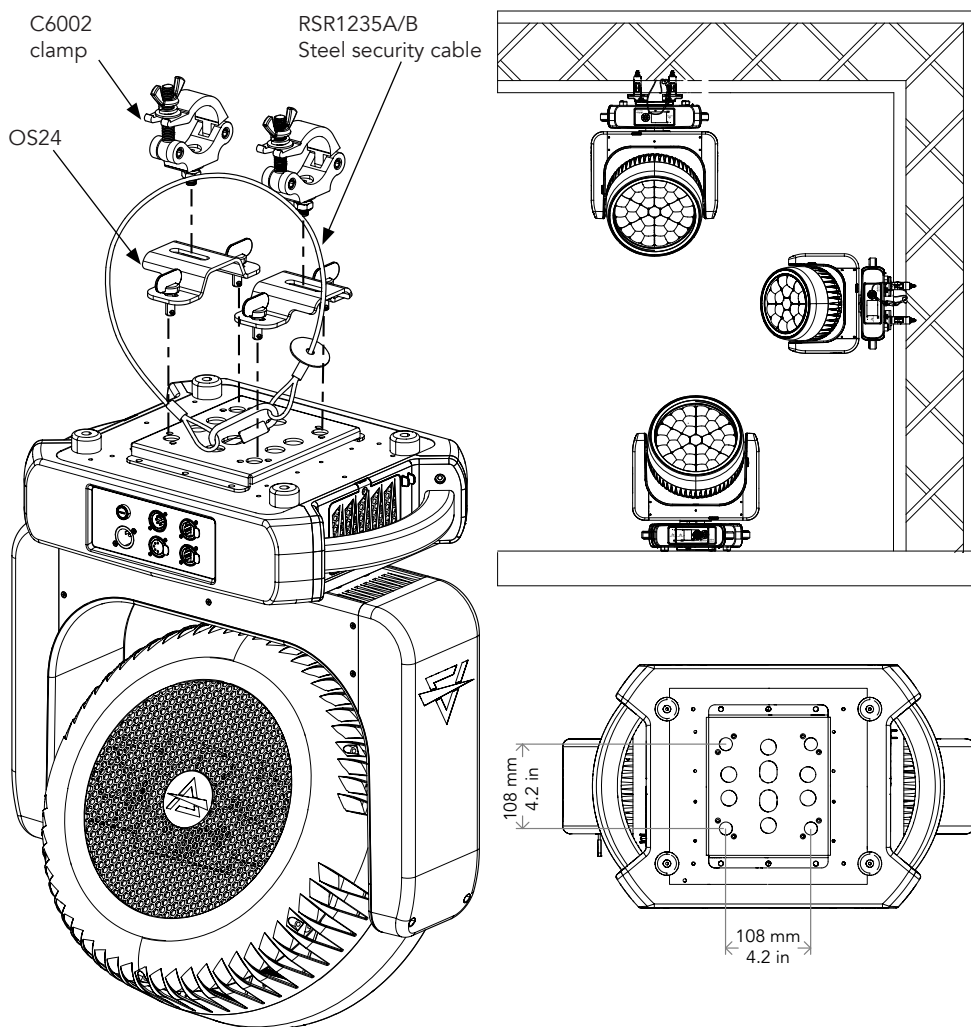


Fig. 02

## 5 - CONNECTION TO THE MAINS SUPPLY

**WARNING:** For protection from electric shock, the fixture must be earthed!  
The product is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-240 Volts.  
If you need to install a power plug on the power cable to allow connection to power outlets, install a grounding-type (earthed) plug, following the plug manufacturer's instructions. If you have any doubts about proper installation, consult a qualified electrician.  
The max power consumption is 1227W.

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

## 6 - START UP

### CONNECT AND DISCONNECT POWER FROM THE PRODUCT

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

## 7 - PRODUCT OVERVIEW

1. SAFETY EYE to attach safety cable.
2. USER INTERFACE with display and buttons for access to the control panel functions.
3. PAN Mechanism lock and release.
4. TILT Mechanism lock and release.
5. DMX IN (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C.
6. DMX OUT (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C.
7. ETHERCON CONNECTORS IN / OUT signal.
8. MAIN FUSE HOLDER: replace a burnt-out fuse by one of the same type only (T15A 250V).
9. POWER IN: for connection to the Mains 100-240V~/50-60Hz.
10. ANTENNA of Wireless DMX Receiver internal module.

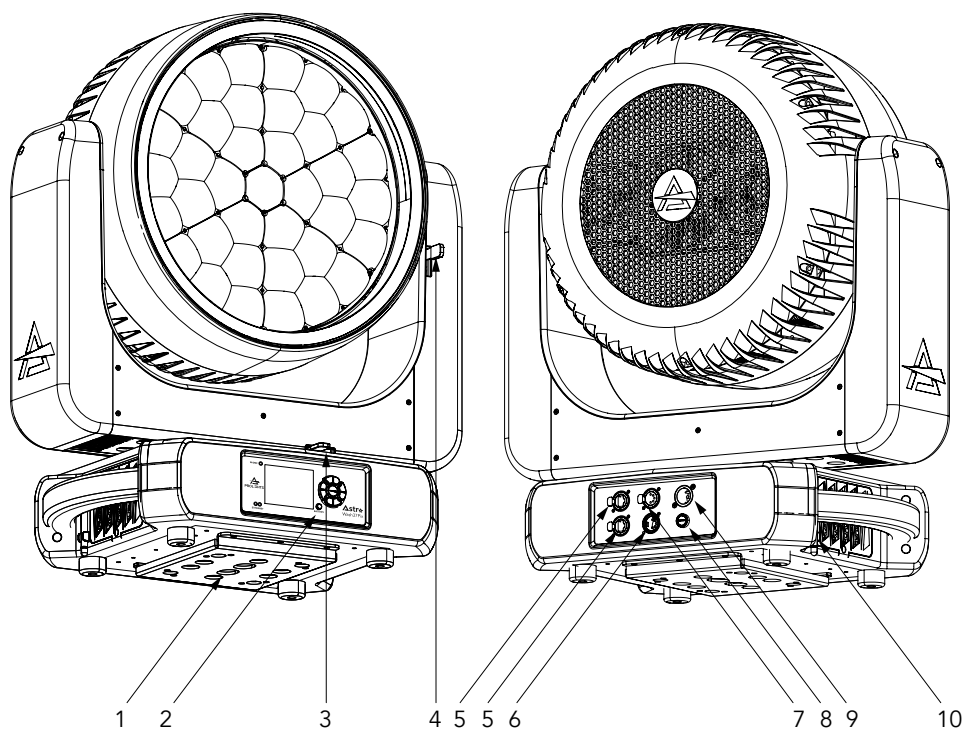


Fig. 03

# 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

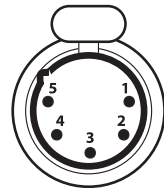


Fig. 04

## 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:

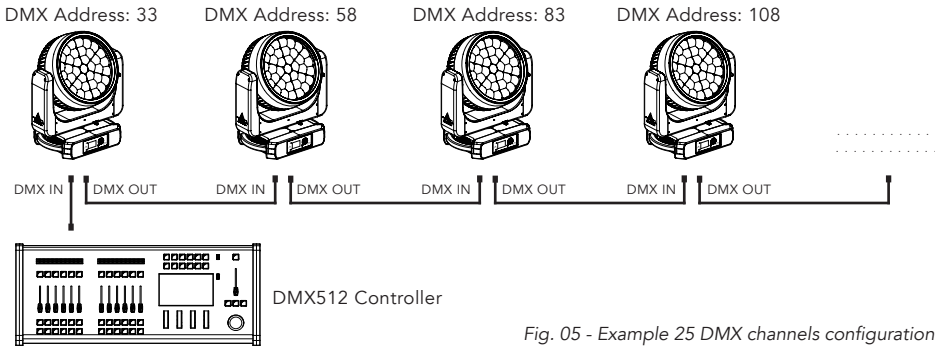


Fig. 05 - Example 25 DMX channels configuration

## CONSTRUCTION OF THE DMX TERMINATION

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

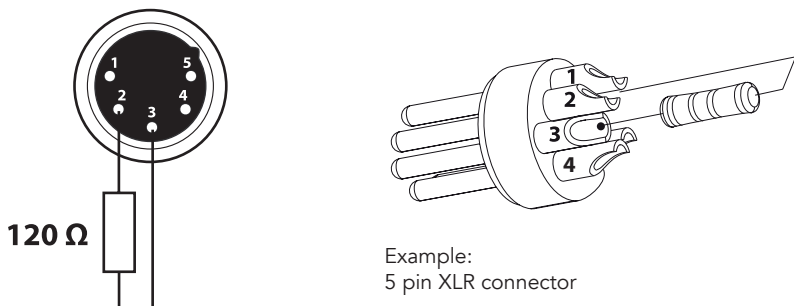


Fig. 06

## DMX ADDRESSING

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

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

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

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

To set the fixture's DMX address:

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

## ETHERNET CONNECTION

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

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

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

## ETHERNET OPERATION

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

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

## ETHERNET TO DMX OPERATIONS

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

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

## OPERATION AS A WIRELESS TRANSMITTER

ASTRAWASH37PIX can be used as wireless transmitter to transmit DMX signal to different wireless receivers. To use ASTRAWASH37PIX as wireless transmitter, please follow the procedure below:

1. Push ENTER button until you show CONNECT on display, then press ENTER button to confirm.
  2. Use UP/DOWN buttons for select WIRELESS, then press ENTER to confirm.
  3. Push ENTER button on WDMX ON/OFF function and enable it to ON.
  4. Select WDMX mode and set it on Transmitter (please note that WDMX mode will be available only if WDMX ON/OFF is set to ON).
  5. Ensure that the receiver units are not connected to any other transmitter. Please refer to "Reset the receiver" paragraph.
  6. Enable TX LINK to ON to link transmitter to receivers (please note that TX LINK will be available only if WDMX mode is set to Transmitter).
- The transmitter scans for all unlinked receivers for a period of about 5 seconds.
  - If the connection fails, check the position of the receiver.
  - The wireless icon on the receiver display indicates the received signal strength.

## Unlinking the transmitter

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

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

## IN TO WDMX

This function enables or disables the transmission through wireless of the DMX signal from the transmitter side to the receiver.

Any incoming signal (ArtNet, sACN or DMX) is retransmitted through wireless.

If the ASTRAWASH37PIX protocol selected is ArtNet / sACN, the WDMX module will retransmit the DMX values contained in the ArtNet / sACN signal received from the ASTRAWASH37PIX.

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

## **OPERATION AS A WIRELESS RECEIVER**

ASTRAWASH37PIX can be used as wireless receiver connected to a wireless transmitter.

To use ASTRAWASH37PIX as wireless receiver, please follow the procedure below:

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

### **Reset the receiver**

Follow the procedure below to reset the receiver.

1. Push MENU button until you show CONNECT on display, then press ENTER button to confirm.
  2. Use UP/DOWN buttons for select Wireless, then press ENTER to confirm.
  3. Enable RX RESET to ON.
- The wireless icon on the receiver display indicates the received signal strength.

### **WDMX TO DMX (RX)**

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

# 9 - CONTROL PANEL

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

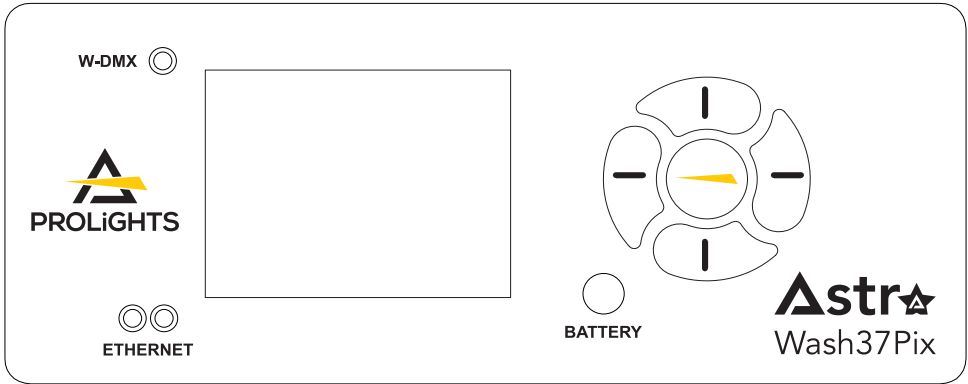
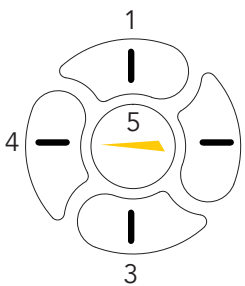


Fig. 07

## DISPLAY AND BUTTONS LAYOUT

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

|                                                                                                        |                                                                                                         |                                                                                     |                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|                       | 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>• Return to the top level.</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>• Commute from units, tens, hundred in the menu.</li></ul>                                    |
|                                                                                                        | 5                                                                                                       |  | <ul style="list-style-type: none"><li>• Used to access the menu tree or to return a previous menu window.</li></ul>                 |
|                     | <ul style="list-style-type: none"><li>• To switch on the display through the battery.</li></ul>         |                                                                                     |                                                                                                                                     |
| <b>W-DMX</b>        | <ul style="list-style-type: none"><li>• LED indicator for Wireless dmx (color red and green).</li></ul> |                                                                                     |                                                                                                                                     |
| <br><b>ETHERNET</b> | <ul style="list-style-type: none"><li>• LED indicator for Ethernet network.(color orange).</li></ul>    |                                                                                     |                                                                                                                                     |

# 10 - MENU STRUCTURE

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

| MENU |         |                 |                  |                                                           |                                                                |                                                                                                                                                                               |                                                                                                                               |
|------|---------|-----------------|------------------|-----------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 1    | CONNECT | ADDRESS         | FIXTURE          | DMX / WDMX                                                |                                                                | 001-512                                                                                                                                                                       | Set address used for Fixture and for Pixel patch.                                                                             |
|      |         |                 |                  | sACN                                                      |                                                                |                                                                                                                                                                               |                                                                                                                               |
|      |         |                 |                  | ARTNET                                                    |                                                                |                                                                                                                                                                               |                                                                                                                               |
|      |         |                 | PIXELS           | FOLLOW FIXTURE                                            |                                                                | 001-512                                                                                                                                                                       |                                                                                                                               |
|      |         |                 |                  | DMX / WDMX                                                |                                                                |                                                                                                                                                                               |                                                                                                                               |
|      |         |                 |                  | sACN                                                      |                                                                |                                                                                                                                                                               |                                                                                                                               |
|      |         |                 |                  | ARTNET                                                    |                                                                |                                                                                                                                                                               |                                                                                                                               |
|      |         |                 |                  | sACN + KLINGNET                                           |                                                                |                                                                                                                                                                               |                                                                                                                               |
|      |         |                 |                  | ARTNET + KLINGNET                                         |                                                                |                                                                                                                                                                               |                                                                                                                               |
|      |         | DMX MODE        | FIXTURE          | BASIC<br>FX<br>STANDARD<br>EXTENDED                       |                                                                | Set DMX chart for Main Fixture.                                                                                                                                               |                                                                                                                               |
|      |         |                 | PIXELS           | OFF<br>RING<br>PIXELS                                     |                                                                | Set DMX chart for Pixel Fixture.                                                                                                                                              |                                                                                                                               |
|      |         | WIRELESS        | WDMX ON/OFF      | ON/OFF                                                    |                                                                | Enable/Disable the wireless card.                                                                                                                                             |                                                                                                                               |
|      |         |                 | WDMX MODE        | TRANSMITTER/<br>RECEIVER                                  |                                                                | Allows to choose whether to set the wireless on the Transmitter or Receiver. WDMX mode is unlocked only if WDMX ON / OFF is ON.                                               |                                                                                                                               |
|      |         |                 | TX LINK          | ON/OFF                                                    |                                                                | TX link unlock when the unit is set as a transmitter.                                                                                                                         |                                                                                                                               |
|      |         |                 | TX UNLINK        | ON/OFF                                                    |                                                                | Disconnect the transmitter from all receivers. TX unlink unlocks only if WDMX mode is on transmitter.                                                                         |                                                                                                                               |
|      |         |                 | RX RESET         | ON/OFF                                                    |                                                                | Total reset of the receiver. RX reset unlocks only if WDMX mode is receiver.                                                                                                  |                                                                                                                               |
|      |         |                 | IN TO WDMX (TX)  | OFF<br>MAIN FIXTURE TO<br>WDMX<br>PIXEL ENGINE TO<br>WDMX |                                                                | Enable/Disable the transmission of the DMX values via wdmx. Main Fixture to WDMX: transmitt main fixture DMX values. Pixel Engine to WDMX: transmitt pixel engine dmx values. |                                                                                                                               |
|      |         |                 | WDMX TO DMX (RX) | ON/OFF                                                    |                                                                | Enable/Disable the retransmission of the DMX from the receiver to the other units connected by cable to the receiver itself.                                                  |                                                                                                                               |
|      |         |                 | ETHERNET SETTING | ARTNET SETTINGS                                           | IP ADDRESS<br>NET<br>SUBNET<br>UNIVERSE                        |                                                                                                                                                                               | Set IP address of the fixture. Set Net for ArtNet protocol. Set Subnet for ArtNet protocol. Set Universe for ArtNet protocol. |
|      |         | sACN SETTINGS   |                  |                                                           | Set IP address of the fixture. Set Universe for sACN protocol. |                                                                                                                                                                               |                                                                                                                               |
|      |         |                 |                  | MERGE<br>MODE                                             | OFF/HTP/<br>LTP                                                | Set Merge Mode for sACN protocol.                                                                                                                                             |                                                                                                                               |
|      |         | ETHERNET TO DMX |                  | ON<br>OFF                                                 |                                                                | Enable / Disable DMX retransmission from sACN/ArtNet signal to DMX out port.                                                                                                  |                                                                                                                               |
|      |         | KLINGNET        |                  | ON<br>OFF                                                 |                                                                | Enable / Disable Klingnet functionality for sACN / ArtNet protocols.                                                                                                          |                                                                                                                               |

|   |       |                  |                        |                                                                 |                                                                                                                                                                   |
|---|-------|------------------|------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | SETUP | SCREEN           | BACKLIGHT              | ON<br>10 s<br>20 s<br>30 s                                      | Allows you to select the timing after that display will switch automatically off when unactive.                                                                   |
|   |       |                  | FLIP DISPLAY           | ON<br>OFF<br>AUTO                                               | Allows you to rotate the display by 180°.                                                                                                                         |
|   |       |                  | KEY LOCK               | ON<br>OFF                                                       | Allows you lock the buttons on the control panel by a password. Press following combinations (password) in order to access to the user menu : UP, DOWN, UP, DOWN. |
|   |       | MOVEMENT         | PAN REVERSE            | ON<br>OFF                                                       | Allows you to reverse Pan movement.                                                                                                                               |
|   |       |                  | TILT REVERSE           | ON<br>OFF                                                       | Allows you to reverse Tilt movement.                                                                                                                              |
|   |       |                  | PAN/TILT FEEDBACK      | ON<br>OFF                                                       | To activate / deactivate the reading of the feedbacks given by the encoders.                                                                                      |
|   |       |                  | PAN/TILT MODE          | SLOW<br>MEDIUM<br>FAST<br>SYNC                                  | To choose the horizontal/ vertical movement speed. SYNC mode will sync movement speed with the whole ASTRAWASH family fixtures.                                   |
|   |       |                  | HOME POSITION          | STANDARD<br>CUSTOM                                              | To choose the home position.                                                                                                                                      |
|   |       | FIXTURE SETTINGS | FAN MODE               | AUTO<br>SILENT<br>HIGH                                          | Select Fan behaviour.                                                                                                                                             |
|   |       |                  | WHITE CALIBRATION      | OFF<br>STUDIO<br>8000K                                          | Manufacturer calibration to grant performance and color consistency.                                                                                              |
|   |       |                  | DMX FAULT              | HOLD<br>BLACKOUT                                                | To choose the behaviour of fixture in case of dmx signal lost.                                                                                                    |
|   |       |                  | STATUS LED             | ON<br>OFF                                                       | To turn the status LEDs on the front panel on or off.                                                                                                             |
|   |       |                  | ZOOM MODE              | STANDARD<br>PIXELS                                              | Select zoom mode.                                                                                                                                                 |
|   |       |                  | DIMMER CURVE           | LINEAR<br>S-CURVE<br>SQUARE LAW<br>INV. SQUARE LAW              | Select different curve behaviour of dimmer.                                                                                                                       |
|   |       |                  | DIMMER SPEED           | AUTO<br>FAST<br>MEDIUM<br>SLOW                                  | Linear dimmer behaviour.<br>Dimmer curve adding long fade.<br>Dimmer curve adding medium fade.<br>Dimmer curve adding little fade.                                |
|   |       |                  | LED FREQUENCY          | 600Hz<br>1200Hz<br>2000Hz<br>4000Hz<br>6000Hz<br>25KHz<br>50KHz | Select PWM frequency.                                                                                                                                             |
|   |       |                  | INVERT MAPPING         | ON<br>OFF                                                       | Invert mapping for Pixel fixture.                                                                                                                                 |
|   |       |                  | INVERT ZOOM            | ON<br>OFF                                                       | Invert zoom values.                                                                                                                                               |
|   |       |                  | TRANSFER CONFIGURATION | WITHOUT DMX ADDRESS                                             | To transfer the same menu settings of one fixtures to all the other in the daisy chain, including or not the dmx address.                                         |
|   |       |                  |                        | WITH DMX ADDRESS                                                |                                                                                                                                                                   |
|   |       | BATTERY          | INSERTED               |                                                                 | To select if the battery is removed.                                                                                                                              |
|   |       |                  | REMOVED                |                                                                 |                                                                                                                                                                   |

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

## 11 - SHORTCUT

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

# 12 - RDM FUNCTIONS

The product can communicate using RDM (Remote Device Management) protocol over a DMX512 Networks.

RDM is a bi-directional communications protocol for use in DMX512 control systems, it is the open standard for DMX512 device configuration and status monitoring.

The RDM protocol allows data packets to be inserted into a DMX512 data stream without affecting existing non-RDM equipment. It allows a console or dedicated RDM controller to send commands to and receive messages from specific fixtures.

The PIDs in the following tables are supported in the product.

RDM is also available on Wireless and Tiny's Downstead must be enabled in its custom PIDs to work.

| Category                   | Parameter                        | PID    | GET | SET |
|----------------------------|----------------------------------|--------|-----|-----|
| <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_BLOCK_ADDRESS                | 0x0140 | x   | x   |
|                            | DMX_FAIL_MODE                    | 0x0141 | x   | x   |
|                            | DMX_STARTUP_MODE                 | 0x0142 | x   | 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   |     |
| <b>Sensors</b>             | SENSOR_DEFINITION                | 0x0200 | x   |     |
|                            | SENSOR_VALUE                     | 0x0201 | x   | x   |
|                            | RECORD_SENSORS                   | 0x0202 |     | x   |
|                            | BURN_IN                          | 0x0440 | x   | x   |

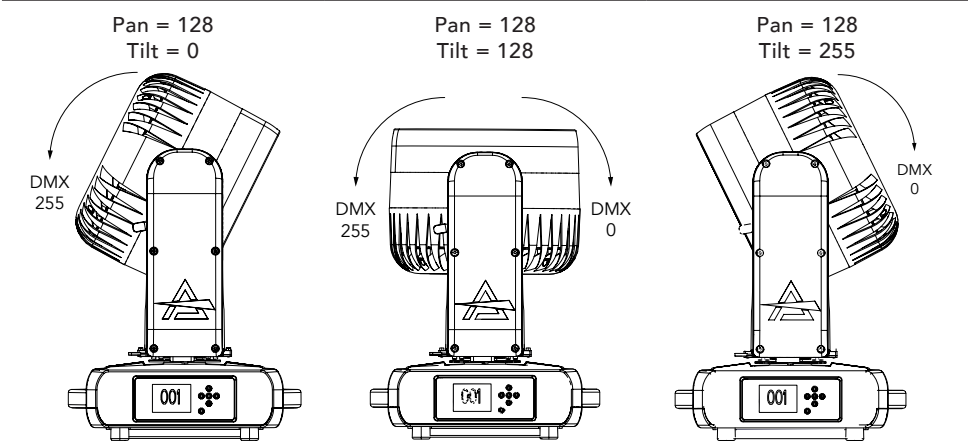
|                                   |                                                                    |        |   |   |
|-----------------------------------|--------------------------------------------------------------------|--------|---|---|
| <b>Power/Lamp Settings</b>        | DEVICE_HOURS                                                       | 0x0400 | x | x |
|                                   | LAMP_HOURS                                                         | 0x0401 | x | x |
|                                   | LAMP_STRIKES                                                       | 0x0402 | x | x |
|                                   | LAMP_STATE                                                         | 0x0403 | x | x |
|                                   | LAMP_ON_MODE                                                       | 0x0404 | x | x |
|                                   | DEVICE_POWER_CYCLES                                                | 0x0405 | 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>Control</b>                    | IDENTIFY_DEVICE                                                    | 0x1000 | x | x |
|                                   | RESET_DEVICE                                                       | 0x1001 |   | x |
|                                   | POWER_STATE                                                        | 0x1010 | x | x |
|                                   | PERFORM_SELFTEST                                                   | 0x1020 | x | x |
|                                   | SELF_TEST_DESCRIPTION                                              | 0x1021 | x |   |
|                                   | CAPTURE_PRESET                                                     | 0x1030 | x | x |
|                                   | PRESET_PLAYBACK                                                    | 0x1031 | x | x |
|                                   | IDENTIFY_MODE                                                      | 0x1040 | x | x |
|                                   | PRESET_INFO                                                        | 0x1041 | x |   |
|                                   | PRESET_STATUS                                                      | 0x1042 | x | x |
|                                   | PRESET_MERGEMODE                                                   | 0x1043 | x | x |
|                                   | POWER_ON_SELF_TEST                                                 | 0x1044 | x | x |
| <b>IP &amp; DNS Configuration</b> | IPv4_CURRENT_ADDRESS                                               | 0x0705 | x |   |
|                                   | IPv4_STATIC_ADDRESS                                                | 0x0706 | x | x |
| <b>Custom Pids</b>                | FIX. ENGINE PROT. (0:W/DMX 1:sACN 2:ArtNet)                        | 0x8010 | x | x |
|                                   | PIX. ENGINE PROT. (0:W/DMX 1:sACN 2:ArtNet 3:sAK 4:ArtK 5:K 6:sAN) | 0x8020 | x | x |
|                                   | PIX. ENGINE ADDR. (1-512)                                          | 0x8030 | x | x |
|                                   | PIX. ENGINE MODE (0:Off 1:Ring 2:Pixel)                            | 0x8040 | x | x |
|                                   | KLINGNET (0:Off 1:On)                                              | 0x8050 | x | x |

# 13 - DMX CHARTS

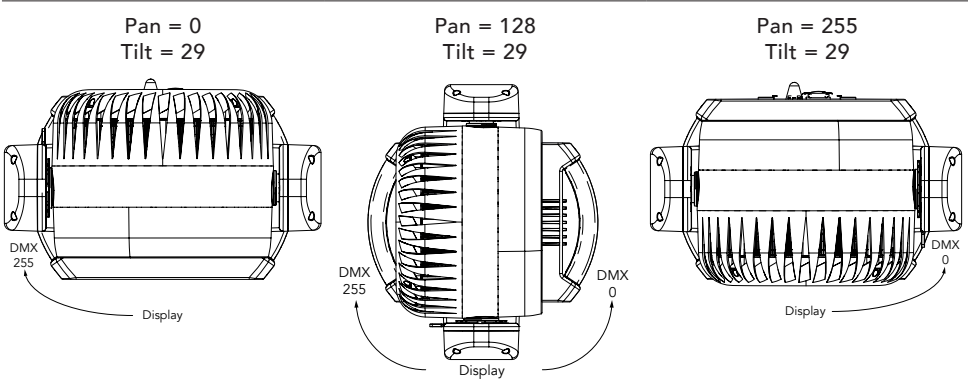
RDM Model ID  
0xA007

## PAN/TILT POSITION RELATED TO DMX VALUES

Home position set to STANDARD



Tilt movement range: 233°  
Pan movement range: 540°



## Fixture Engine

| Ch | Basic                                | FX                                   | Standard                             | Extended                             |
|----|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| 1  | Pan                                  | Pan                                  | Pan                                  | Pan                                  |
| 2  | Pan Fine                             | Pan Fine                             | Pan Fine                             | Pan Fine                             |
| 3  | Tilt                                 | Tilt                                 | Tilt                                 | Tilt                                 |
| 4  | Tilt Fine                            | Tilt Fine                            | Tilt Fine                            | Tilt Fine                            |
| 5  | Dimmer                               | Dimmer                               | Dimmer                               | Dimmer                               |
| 6  | Dimmer Fine                          | Dimmer Fine                          | Dimmer Fine                          | Dimmer Fine                          |
| 7  | Shutter / Strobe                     | Shutter / Strobe                     | Shutter / Strobe                     | Shutter / Strobe                     |
| 8  | Red                                  | Red                                  | Red                                  | Red                                  |
| 9  | Green                                | Green                                | Red Fine                             | Red Fine                             |
| 10 | Blue                                 | Blue                                 | Green                                | Green                                |
| 11 | White                                | White                                | Green Fine                           | Green Fine                           |
| 12 | Color Macro                          | CCT                                  | Blue                                 | Blue                                 |
| 13 | CCT                                  | Zoom                                 | Blue Fine                            | Blue Fine                            |
| 14 | Zoom                                 | Crossfade Pixel Engine Protocol      | White                                | White                                |
| 15 | Crossfade Pixel Engine Protocol      | Crossfade from Color to Pixel Engine | White Fine                           | White Fine                           |
| 16 | Crossfade from Color to Pixel Engine | Crossfade from White to Color        | Color Macro                          | Color Macro                          |
| 17 | Crossfade from White to Color        | Control                              | CCT                                  | CCT                                  |
| 18 | Control                              | Pattern                              | Zoom                                 | Zoom                                 |
| 19 | Ring Foreground Intensity            | Pattern Speed                        | Zoom Fine                            | Zoom Fine                            |
| 20 | Ring Foreground Strobe               | Pattern Fade                         | Crossfade Pixel Engine Protocol      | Crossfade Pixel Engine Protocol      |
| 21 | Ring Foreground Red                  | Pattern Transition                   | Crossfade from Color to Pixel Engine | Crossfade from Color to Pixel Engine |
| 22 | Ring Foreground Green                | Foreground Intensity                 | Crossfade from White to Color        | Crossfade from White to Color        |
| 23 | Ring Foreground Blue                 | Foreground Strobe                    | Control                              | Control                              |
| 24 |                                      | Background Intensity                 | CTO on colors                        | CTO on colors                        |
| 25 |                                      | Background Strobe                    | Tint                                 | Tint                                 |
| 26 |                                      | Background Red                       | Ring Foreground Intensity            | Pattern                              |
| 27 |                                      | Background Green                     | Ring Foreground Strobe               | Pattern Speed                        |
| 28 |                                      | Background Blue                      | Ring Foreground Red                  | Pattern Fade                         |
| 29 |                                      | Background White                     | Ring Foreground Green                | Pattern Transition                   |
| 30 |                                      | Ring Dimmer                          | Ring Foreground Blue                 | Foreground Intensity                 |
| 31 |                                      | Ring Pattern                         |                                      | Foreground Strobe                    |
| 32 |                                      | Ring Pattern Speed                   |                                      | Background Intensity                 |
| 33 |                                      | Ring Pattern Fade                    |                                      | Background Strobe                    |
| 34 |                                      | Ring Pattern Transition              |                                      | Background Red                       |
| 35 |                                      | Ring Foreground Intensity            |                                      | Background Green                     |

## Fixture Engine

| Ch | Basic | FX                        | Standard | Extended                  |
|----|-------|---------------------------|----------|---------------------------|
| 36 |       | Ring Foreground Strobe    |          | Background Blue           |
| 37 |       | Ring Foreground Red       |          | Background White          |
| 38 |       | Ring Foreground Green     |          | Ring Dimmer               |
| 39 |       | Ring Foreground Blue      |          | Ring Pattern              |
| 40 |       | Ring Background Intensity |          | Ring Pattern Speed        |
| 41 |       | Ring Background Strobe    |          | Ring Pattern Fade         |
| 42 |       | Ring Background Red       |          | Ring Pattern Transition   |
| 43 |       | Ring Background Green     |          | Ring Foreground Intensity |
| 44 |       | Ring Background Blue      |          | Ring Foreground Strobe    |
| 45 |       |                           |          | Ring Foreground Red       |
| 46 |       |                           |          | Ring Foreground Green     |
| 47 |       |                           |          | Ring Foreground Blue      |
| 48 |       |                           |          | Ring Background Intensity |
| 49 |       |                           |          | Ring Background Strobe    |
| 50 |       |                           |          | Ring Background Red       |
| 51 |       |                           |          | Ring Background Green     |
| 52 |       |                           |          | Ring Background Blue      |

| Channel | Pixel Engine |         |          |
|---------|--------------|---------|----------|
|         | Off          | Ring    | Pixel    |
| 1       |              | Red 1   | Red 1    |
| 2       |              | Green 1 | Green 1  |
| 3       |              | Blue 1  | Blue 1   |
| 4       |              | White 1 | White 1  |
| 5       |              | Red 2   | Red 2    |
| 6       |              | Green 2 | Green 2  |
| 7       |              | Blue 2  | Blue 2   |
| 8       |              | White 2 | White 2  |
| 9       |              | Red 3   | Red 3    |
| 10      |              | Green 3 | Green 3  |
| 11      |              | Blue 3  | Blue 3   |
| 12      |              | White 3 | White 3  |
| 13      |              | Red 4   | Red 4    |
| 14      |              | Green 4 | Green 4  |
| 15      |              | Blue 4  | Blue 4   |
| 16      |              | White 4 | White 4  |
| 17      |              |         | Red 5    |
| 18      |              |         | Green 5  |
| 19      |              |         | Blue 5   |
| 20      |              |         | White 5  |
| 21      |              |         | Red 6    |
| 22      |              |         | Green 6  |
| 23      |              |         | Blue 6   |
| 24      |              |         | White 6  |
| 25      |              |         | Red 7    |
| 26      |              |         | Green 7  |
| 27      |              |         | Blue 7   |
| 28      |              |         | White 7  |
| ...     |              |         | ..       |
| 145     |              |         | Red 37   |
| 146     |              |         | Green 37 |
| 147     |              |         | Blue 37  |
| 148     |              |         | White 37 |

| Bas | FX | Std | Ext | Function                                                                                                                                                                                                                                                                                                                                                                                                                                    | DMX Value                                                                                                                                                                                                                                                                                                                                                                                          | Default |
|-----|----|-----|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 1   | 1  | 1   | 1   | <b>PAN</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                       | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 128     |
| 2   | 2  | 2   | 2   | <b>PAN FINE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                  | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 128     |
| 3   | 3  | 3   | 3   | <b>TILT</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                      | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 128     |
| 4   | 4  | 4   | 4   | <b>TILT FINE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                 | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 128     |
| 5   | 5  | 5   | 5   | <b>DIMMER</b><br>Lineary from close to open                                                                                                                                                                                                                                                                                                                                                                                                 | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 000     |
| 6   | 6  | 6   | 6   | <b>DIMMER FINE</b><br>Lineary from close to open                                                                                                                                                                                                                                                                                                                                                                                            | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 000     |
| 7   | 7  | 7   | 7   | <b>SHUTTER</b><br>Close<br>Strobe from slow to fast<br>Open<br>Pulse in from slow to fast<br>Open<br>Pulse out from slow to fast<br>Open<br>Random from slow to fast<br>Open                                                                                                                                                                                                                                                                | 000 ÷ 001<br>002 ÷ 062<br>063 ÷ 064<br>065 ÷ 125<br>126 ÷ 127<br>128 ÷ 188<br>189 ÷ 190<br>191 ÷ 251<br>252 ÷ 255                                                                                                                                                                                                                                                                                  | 255     |
| 8   | 8  | 8   | 8   | <b>RED</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                       | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 255     |
|     |    | 9   | 9   | <b>RED FINE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                  | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 255     |
| 9   | 9  | 10  | 10  | <b>GREEN</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                     | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 255     |
|     |    | 11  | 11  | <b>GREEN FINE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 255     |
| 10  | 10 | 12  | 12  | <b>BLUE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                      | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 255     |
|     |    | 13  | 13  | <b>BLUE FINE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                 | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 255     |
| 11  | 11 | 14  | 14  | <b>WHITE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                     | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 255     |
|     |    | 15  | 15  | <b>WHITE FINE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                          | 255     |
| 12  |    | 16  | 16  | <b>COLOR MACRO</b><br>Open<br>Red<br>Green<br>Blue<br>Cyan<br>Magenta<br>Yellow<br>Dirty White<br>Alice Blue<br>Congo Blue<br>Dark Steel Blue<br>Deep Lavender<br>Lilac Ting<br>Daylight Blue<br>Flame Red<br>Bastard Amber<br>Deep Orange<br>Pale Gold<br>Apricot<br>Bright Blue<br>Primary Green<br>Special Lavender<br>Pale Lavender<br>Deep Golden Amber<br>Medium Blue<br>Bright Pink<br>Mauve<br>Dark Green<br>Lee Green<br>Dark Blue | 000 ÷ 001<br>002 ÷ 003<br>004 ÷ 005<br>006 ÷ 007<br>008 ÷ 009<br>010 ÷ 011<br>012 ÷ 013<br>014 ÷ 015<br>016 ÷ 017<br>018 ÷ 019<br>020 ÷ 021<br>022 ÷ 023<br>024 ÷ 025<br>026 ÷ 027<br>028 ÷ 029<br>030 ÷ 031<br>032 ÷ 033<br>034 ÷ 035<br>036 ÷ 037<br>038 ÷ 039<br>040 ÷ 041<br>042 ÷ 043<br>044 ÷ 045<br>046 ÷ 047<br>048 ÷ 049<br>050 ÷ 051<br>052 ÷ 053<br>054 ÷ 055<br>056 ÷ 057<br>058 ÷ 059 | 000     |

| Bas | FX | Std | Ext | Function                                                                                                                              | DMX Value | Default |
|-----|----|-----|-----|---------------------------------------------------------------------------------------------------------------------------------------|-----------|---------|
| 12  |    | 16  | 16  | <b>COLOR MACRO</b>                                                                                                                    |           | 000     |
|     |    |     |     | Light Blue                                                                                                                            | 060 ÷ 061 |         |
|     |    |     |     | Steel Blue                                                                                                                            | 062 ÷ 063 |         |
|     |    |     |     | Medium Blue÷Green                                                                                                                     | 064 ÷ 065 |         |
|     |    |     |     | Peacock Blue                                                                                                                          | 066 ÷ 067 |         |
|     |    |     |     | Magenta                                                                                                                               | 068 ÷ 069 |         |
|     |    |     |     | Dark Pink                                                                                                                             | 070 ÷ 071 |         |
|     |    |     |     | Middle Rose                                                                                                                           | 072 ÷ 073 |         |
|     |    |     |     | Light Salmon                                                                                                                          | 074 ÷ 075 |         |
|     |    |     |     | English Rose                                                                                                                          | 076 ÷ 077 |         |
|     |    |     |     | Light Rose                                                                                                                            | 078 ÷ 079 |         |
|     |    |     |     | Orange                                                                                                                                | 080 ÷ 081 |         |
|     |    |     |     | Deep Amber                                                                                                                            | 082 ÷ 083 |         |
|     |    |     |     | Straw                                                                                                                                 | 084 ÷ 085 |         |
|     |    |     |     | Light Amber                                                                                                                           | 086 ÷ 087 |         |
|     |    |     |     | Spring Yellow                                                                                                                         | 088 ÷ 089 |         |
|     |    |     |     | Dark Yellow Green                                                                                                                     | 090 ÷ 091 |         |
|     |    |     |     | Just Blue                                                                                                                             | 092 ÷ 093 |         |
|     |    |     |     | Sky Blue                                                                                                                              | 094 ÷ 095 |         |
|     |    |     |     | Lavender                                                                                                                              | 096 ÷ 097 |         |
|     |    |     |     | Light Lavender                                                                                                                        | 098 ÷ 099 |         |
|     |    |     |     | Pink Carnation                                                                                                                        | 100 ÷ 101 |         |
|     |    |     |     | Medium Pink                                                                                                                           | 102 ÷ 103 |         |
|     |    |     |     | Light Pink                                                                                                                            | 104 ÷ 105 |         |
|     |    |     |     | Sunset Red                                                                                                                            | 106 ÷ 107 |         |
|     |    |     |     | Dark Amber                                                                                                                            | 108 ÷ 109 |         |
|     |    |     |     | Gold Amber                                                                                                                            | 110 ÷ 111 |         |
|     |    |     |     | Medium Amber                                                                                                                          | 112 ÷ 113 |         |
|     |    |     |     | Fire                                                                                                                                  | 114 ÷ 115 |         |
|     |    |     |     | Surprise Peach                                                                                                                        | 116 ÷ 117 |         |
|     |    |     |     | Straw Tint                                                                                                                            | 118 ÷ 119 |         |
|     |    |     |     | Medium Yellow                                                                                                                         | 120 ÷ 121 |         |
|     |    |     |     | Lee Minus Green                                                                                                                       | 122 ÷ 123 |         |
|     |    |     |     | Pale Gold                                                                                                                             | 124 ÷ 125 |         |
|     |    |     |     | Orange                                                                                                                                | 126 ÷ 127 |         |
|     |    |     |     | Deep Straw                                                                                                                            | 128 ÷ 129 |         |
|     |    |     |     | Rose Purple                                                                                                                           | 130 ÷ 131 |         |
|     |    |     |     | Deep Purple                                                                                                                           | 132 ÷ 133 |         |
|     |    |     |     | Soft Green                                                                                                                            | 134 ÷ 135 |         |
|     |    |     |     | Reserved                                                                                                                              | 136 ÷ 211 |         |
|     |    |     |     | 2800K                                                                                                                                 | 212 ÷ 213 |         |
|     |    |     |     | 3000K                                                                                                                                 | 214 ÷ 215 |         |
|     |    |     |     | 3200K                                                                                                                                 | 216 ÷ 217 |         |
|     |    |     |     | 3400K                                                                                                                                 | 218 ÷ 219 |         |
|     |    |     |     | 3600K                                                                                                                                 | 220 ÷ 221 |         |
|     |    |     |     | 3800K                                                                                                                                 | 222 ÷ 223 |         |
|     |    |     |     | 4000K                                                                                                                                 | 224 ÷ 225 |         |
|     |    |     |     | 4200K                                                                                                                                 | 226 ÷ 227 |         |
|     |    |     |     | 4400K                                                                                                                                 | 228 ÷ 229 |         |
|     |    |     |     | 4600K                                                                                                                                 | 230 ÷ 231 |         |
|     |    |     |     | 4800K                                                                                                                                 | 232 ÷ 233 |         |
|     |    |     |     | 5000K                                                                                                                                 | 234 ÷ 235 |         |
|     |    |     |     | 5200K                                                                                                                                 | 236 ÷ 237 |         |
|     |    |     |     | 5400K                                                                                                                                 | 238 ÷ 239 |         |
|     |    |     |     | 5600K                                                                                                                                 | 240 ÷ 241 |         |
|     |    |     |     | 6000K                                                                                                                                 | 242 ÷ 243 |         |
|     |    |     |     | 6500K                                                                                                                                 | 244 ÷ 245 |         |
|     |    |     |     | 7000K                                                                                                                                 | 246 ÷ 247 |         |
|     |    |     |     | 8000K                                                                                                                                 | 248 ÷ 249 |         |
|     |    |     |     | 9000K                                                                                                                                 | 250 ÷ 251 |         |
|     |    |     |     | 10000K                                                                                                                                | 252 ÷ 253 |         |
|     |    |     |     | Full On                                                                                                                               | 254 ÷ 255 |         |
| 13  | 12 | 17  | 17  | <b>CCT</b><br>Linear from 2800K to 10000K                                                                                             | 000 ÷ 255 | 000     |
| 14  | 13 | 18  | 18  | <b>ZOOM</b><br>Lineary from 0% to 100%                                                                                                | 000 ÷ 255 | 000     |
|     |    | 19  | 19  | <b>ZOOM FINE</b><br>Lineary from 0% to 100%                                                                                           | 000 ÷ 255 | 000     |
| 15  | 14 | 20  | 20  | <b>CROSSFADE PIXEL ENGINE PROTOCOL</b><br>Fades from 1 <sup>st</sup> to 2 <sup>nd</sup> protocol according to the combination choosed | 000 ÷ 255 | 000     |

| Bas | FX | Std | Ext | Function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DMX Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Default |
|-----|----|-----|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 16  | 15 | 21  | 21  | <b>CROSSFADE FROM COLOR ENGINE TO PIXEL ENGINE</b><br>Linear from Color Engine to Pixel Engine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 000     |
| 17  | 16 | 22  | 22  | <b>CROSSFADE FROM WHITE TO COLOR</b><br>Linear from CCT to Color engine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 255     |
| 18  | 17 | 23  | 23  | <b>CONTROL</b><br>No Function<br>KLINGNET ON<br>KLINGNET OFF<br>PAN REVERSE ON<br>PAN REVERSE OFF<br>TILT REVERSE ON<br>TILT REVERSE OFF<br>PAN/TILT MODE FAST<br>PAN/TILT MODE MEDIUM<br>PAN/TILT MODE SLOW<br>PAN/TILT MODE SYNC<br>MOVEMENT IN BLACKOUT ON<br>MOVEMENT IN BLACKOUT OFF<br>HOME POSITION STANDARD<br>HOME POSITION CUSTOM<br>DISPLAY ON<br>DISPLAY 10S<br>DISPLAY 20S<br>DISPLAY 30S<br>FLIP DISPLAY ON<br>FLIP DISPLAY OFF<br>FLIP DISPLAY AUTO<br>KEY LOCK ON<br>KEY LOCK OFF<br>FAN MODE AUTO<br>FAN MODE SILENT<br>FAN MODE HIGH<br>WHITE CALIBRATION OFF<br>WHITE CALIBRATION STUDIO<br>WHITE CALIBRATION 8000K<br>NO SIGNAL HOLD<br>NO SIGNAL BLACKOUT<br>STATUS LED ON<br>STATUS LED OFF<br>DIMMER CURVE LINEAR<br>DIMMER CURVE S+CURVE<br>DIMMER CURVE SQUARE LAW<br>DIMMER CURVE INVERSE SQUARE LAW<br>DIMMER SPEED AUTO<br>DIMMER SPEED FAST<br>DIMMER SPEED MEDIUM<br>DIMMER SPEED SLOW<br>LED FREQUENCY 600HZ<br>LED FREQUENCY 1200HZ<br>LED FREQUENCY 2000HZ<br>LED FREQUENCY 4000HZ<br>LED FREQUENCY 6000HZ<br>LED FREQUENCY 25KHZ<br>LED FREQUENCY 50KHZ<br>INVERT MAPPING ON<br>INVERT MAPPING OFF<br>ZOOM MODE STANDARD<br>ZOOM MODE PIXELS<br>INVERT ZOOM OFF<br>INVERT ZOOM ON<br>TUNGSTEN EMULATION ON<br>TUNGSTEN EMULATION OFF<br>RESET ALL<br>RESET PAN<br>RESET TILT<br>RESET PAN/TILT<br>RESET ZOOM<br>Reserved<br>ETH TO DMX OFF<br>ETH TO DMX ON (MAIN FIXTURE TO DMX)<br>ETH TO DMX ON (PIXEL ENGINE TO DMX)<br>WDMX TO DMX OFF<br>WDMX TO DMX ON<br>IN TO WDMX OFF<br>IN TO WDMX ON (MAIN FIXTURE TO WDMX)<br>IN TO WDMX ON (PIXEL ENGINE TO WDMX)<br>Reserved<br>FACTORY DEFAULT OF CONTROL FUNCTIONS | 000 ÷ 001<br>002 ÷ 003<br>004 ÷ 005<br>006 ÷ 007<br>008 ÷ 009<br>010 ÷ 011<br>012 ÷ 013<br>014 ÷ 015<br>016 ÷ 017<br>018 ÷ 019<br>020 ÷ 021<br>022 ÷ 023<br>024 ÷ 025<br>026 ÷ 027<br>028 ÷ 029<br>030 ÷ 031<br>032 ÷ 033<br>034 ÷ 035<br>036 ÷ 037<br>038 ÷ 039<br>040 ÷ 041<br>042 ÷ 043<br>044 ÷ 045<br>046 ÷ 047<br>048 ÷ 049<br>050 ÷ 051<br>052 ÷ 053<br>054 ÷ 055<br>056 ÷ 057<br>058 ÷ 059<br>060 ÷ 061<br>062 ÷ 063<br>064 ÷ 065<br>066 ÷ 067<br>068 ÷ 069<br>070 ÷ 071<br>072 ÷ 073<br>074 ÷ 075<br>076 ÷ 077<br>078 ÷ 079<br>080 ÷ 081<br>082 ÷ 083<br>084 ÷ 085<br>086 ÷ 087<br>088 ÷ 089<br>090 ÷ 091<br>092 ÷ 093<br>094 ÷ 095<br>096 ÷ 097<br>098 ÷ 099<br>100 ÷ 101<br>102 ÷ 103<br>104 ÷ 105<br>106 ÷ 107<br>108 ÷ 109<br>110 ÷ 111<br>112 ÷ 113<br>114 ÷ 115<br>116 ÷ 117<br>118 ÷ 119<br>120 ÷ 121<br>122 ÷ 123<br>124 ÷ 125<br>126 ÷ 127<br>128 ÷ 129<br>130 ÷ 131<br>132 ÷ 133<br>134 ÷ 135<br>136 ÷ 137<br>138 ÷ 139<br>140 ÷ 141<br>142 ÷ 253<br>254 ÷ 255 | 000     |

| Bas | FX | Std | Ext | Function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | DMX Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Default |
|-----|----|-----|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|     |    | 24  | 24  | <b>CTO ON COLORS</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 000     |
|     |    | 25  | 25  | <b>TINT</b><br>+25 % to +0 % magenta<br>balanced<br>+0 % to +25 % green                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 000 ÷ 127<br>128<br>129 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 128     |
|     | 18 |     | 26  | <b>PATTERN</b><br>No FX<br>All rings In & Out<br>All rings In & Out Bouncing<br>Single Ring In & Out<br>Single Ring In & Out Bouncing<br>All Pixels In & Out in Right Direction<br>Single Line In & Out in Right Direction<br>Single Line In & Out Bouncing in Left / Right Direction<br>All Pixels In & Out in Bottom Direction<br>Single Line In & Out in Bottom Direction<br>Single Line In & Out Bouncing in Top / Bottom Direction<br>Half Pixels rotating clockwise<br>Fixture divided into 2 parts ring effect<br>Random with 1px Density<br>Random with 2px Density<br>Random with 4px Density<br>Random with 5px Density<br>Random with 7px Density<br>Pixel Going around Ring 1<br>Pixel Going around Ring 1<br>Pixel Going around Ring 2<br>Pixel Going around Ring 2<br>Pixel Going around Ring 2<br>Pixel Going around Ring 2<br>Clock rotating anti-clockwise<br>Two squares rotating while moving from center<br>Wiggling Line<br>Two rotating 2x2px squares<br>Pixels In & Out on Ring 2 side to side<br>Triangle from 9 pixels rotate to right<br>Wiggling clock<br>2 hands moving up and down<br>Aperture effect<br>Aperture Effect with 1 px only<br>2 Pixels Going around Ring 2<br>3 Pixels Going around Ring 2<br>Bottom Half Open / Close than Top Half Open Close<br>Moving Fists<br>Pixels coming in zigzak shape<br>2 Arc's rotating<br>2 2px wide lines rotating | 000 ÷ 016<br>017 ÷ 022<br>023 ÷ 028<br>029 ÷ 034<br>035 ÷ 040<br>041 ÷ 046<br>047 ÷ 052<br>053 ÷ 058<br>059 ÷ 064<br>065 ÷ 070<br>071 ÷ 076<br>077 ÷ 082<br>083 ÷ 088<br>089 ÷ 094<br>095 ÷ 100<br>101 ÷ 106<br>107 ÷ 112<br>113 ÷ 118<br>119 ÷ 124<br>125 ÷ 130<br>131 ÷ 136<br>137 ÷ 142<br>143 ÷ 148<br>149 ÷ 154<br>155 ÷ 160<br>161 ÷ 166<br>167 ÷ 172<br>173 ÷ 178<br>179 ÷ 184<br>185 ÷ 190<br>191 ÷ 196<br>197 ÷ 202<br>203 ÷ 208<br>209 ÷ 214<br>215 ÷ 220<br>221 ÷ 226<br>227 ÷ 232<br>233 ÷ 238<br>239 ÷ 244<br>245 ÷ 250<br>251 ÷ 255 | 000     |
|     | 19 |     | 27  | <b>PATTERN SPEED</b><br>Indexing<br>CW from fast to slow<br>Stop<br>CCW from slow to fast                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 000 ÷ 127<br>128 ÷ 190<br>191 ÷ 192<br>193 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 000     |
|     | 20 |     | 28  | <b>PATTERN FADE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 000     |
|     | 21 |     | 29  | <b>PATTERN TRANSITION</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 000     |
|     | 22 |     | 30  | <b>FOREGROUND INTENSITY</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 000     |
|     | 23 |     | 31  | <b>FOREGROUND STROBE</b><br>Close<br>Strobe from slow to fast<br>Open<br>Pulse in from slow to fast<br>Open<br>Pulse out from slow to fast<br>Open<br>Random from slow to fast<br>Open                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 000 ÷ 001<br>002 ÷ 062<br>063 ÷ 064<br>065 ÷ 125<br>126 ÷ 127<br>128 ÷ 188<br>189 ÷ 190<br>191 ÷ 251<br>252 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                 | 255     |

| Bas | FX | Std | Ext | Function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | DMX Value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Default |
|-----|----|-----|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|     | 24 |     | 32  | <b>BACKGROUND INTENSITY</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 000     |
|     | 25 |     | 33  | <b>BACKGROUND STROBE</b><br>Close<br>Strobe from slow to fast<br>Open<br>Pulse in from slow to fast<br>Open<br>Pulse out from slow to fast<br>Open<br>Random from slow to fast<br>Open                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 000 ÷ 001<br>002 ÷ 062<br>063 ÷ 064<br>065 ÷ 125<br>126 ÷ 127<br>128 ÷ 188<br>189 ÷ 190<br>191 ÷ 251<br>252 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                       | 255     |
|     | 26 |     | 34  | <b>BACKGROUND RED</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 000     |
|     | 27 |     | 35  | <b>BACKGROUND GREEN</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 000     |
|     | 28 |     | 36  | <b>BACKGROUND BLUE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 000     |
|     | 29 |     | 37  | <b>BACKGROUND WHITE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 000     |
|     | 30 |     | 38  | <b>RING DIMMER</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 000     |
|     | 31 |     | 39  | <b>RING PATTERN</b><br>No FX<br>Single Line going around Ring 1<br>Single Line going around Ring 2<br>Single Line going around Ring 3<br>Single Line going around Ring 4<br>Single Line going around Ring 5<br>Two Lines going around Ring 1<br>Two Lines going around Ring 2<br>Two Lines going around Ring 3<br>Two Lines going around Ring in opposed direction 1<br>Two Lines going around Ring in opposed direction 2<br>Two Lines going around Ring in opposed direction 3<br>Three Lines going around Ring 1<br>Three Lines going around Ring 2<br>Six Lines going around Ring<br>Random Pixels 20 steps 1<br>Random Pixels 20 steps 2<br>Random Pixels 20 steps 3<br>Random Pixels 20 steps 4<br>Random Pixels 20 steps 5<br>Ring Opening and closing in horizontal axis<br>Ring Opening and closing in vertical axis<br>Ring Opening and closing in horizontal and vertical axis<br>Ring Opening in horizontal axis and closing in vertical axis<br>Ring divided into 4 parts chase<br>Ring divided into 8 parts chase<br>2 Lines going from Left to Right Loop<br>2 Lines going from Top to Bottom Loop<br>Ring divided into 4 parts doing chase<br>Ring divided into 4 parts doing chase<br>Ring divided into 4 parts doing chase<br>Reserved<br>TopBottomLeftRight<br>2 Lines Swing<br>Random Open of pixels<br>Pixel 1 thru 102 On than 102 thru 1 Off<br>Pixel 1 thru 102 On than 1 thru 102 Off<br>Moving anchor<br>Anchor rotated 180 degree | 000 ÷ 016<br>017 ÷ 022<br>023 ÷ 028<br>029 ÷ 034<br>035 ÷ 040<br>041 ÷ 046<br>047 ÷ 052<br>053 ÷ 058<br>059 ÷ 064<br>065 ÷ 070<br>071 ÷ 076<br>077 ÷ 082<br>083 ÷ 088<br>089 ÷ 094<br>095 ÷ 100<br>101 ÷ 106<br>107 ÷ 112<br>113 ÷ 118<br>119 ÷ 124<br>125 ÷ 130<br>131 ÷ 136<br>137 ÷ 142<br>143 ÷ 148<br>149 ÷ 154<br>155 ÷ 160<br>161 ÷ 166<br>167 ÷ 172<br>173 ÷ 178<br>179 ÷ 184<br>185 ÷ 190<br>191 ÷ 196<br>197 ÷ 214<br>215 ÷ 220<br>221 ÷ 226<br>227 ÷ 232<br>233 ÷ 238<br>239 ÷ 244<br>245 ÷ 250<br>251 ÷ 255 | 000     |
|     | 32 |     | 40  | <b>RING PATTERN SPEED</b><br>Indexing<br>CW from fast to slow<br>Stop<br>CCW from slow to fast                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 000 ÷ 127<br>128 ÷ 190<br>191 ÷ 192<br>193 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 000     |
|     | 33 |     | 41  | <b>RING PATTERN FADE</b><br>Lineary from 0% to 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 000 ÷ 255                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 000     |

| Bas | FX | Std | Ext | Function                                                                                                                                                                                    | DMX Value                                                                                                         | Default |
|-----|----|-----|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---------|
|     | 34 |     | 42  | <b>RING PATTERN TRANSITION</b><br>Lineary from 0% to 100%                                                                                                                                   | 000 ÷ 255                                                                                                         | 000     |
| 19  | 35 | 26  | 43  | <b>RING FOREGROUND INTENSITY</b><br>Lineary from 0% to 100%                                                                                                                                 | 000 ÷ 255                                                                                                         | 000     |
| 20  | 36 | 27  | 44  | <b>RING FOREGROUND STROBE</b><br>Close<br>Strobe from slow to fast<br>Open<br>Pulse in from slow to fast<br>Open<br>Pulse out from slow to fast<br>Open<br>Random from slow to fast<br>Open | 000 ÷ 001<br>002 ÷ 062<br>063 ÷ 064<br>065 ÷ 125<br>126 ÷ 127<br>128 ÷ 188<br>189 ÷ 190<br>191 ÷ 251<br>252 ÷ 255 | 255     |
| 21  | 37 | 28  | 45  | <b>RING FOREGROUND RED</b><br>Lineary from 0% to 100%                                                                                                                                       | 000 ÷ 255                                                                                                         | 000     |
| 22  | 38 | 29  | 46  | <b>RING FOREGROUND GREEN</b><br>Lineary from 0% to 100%                                                                                                                                     | 000 ÷ 255                                                                                                         | 000     |
| 23  | 39 | 30  | 47  | <b>RING FOREGROUND BLUE</b><br>Lineary from 0% to 100%                                                                                                                                      | 000 ÷ 255                                                                                                         | 000     |
|     | 40 |     | 48  | <b>RING BACKGROUND INTENSITY</b><br>Lineary from 0% to 100%                                                                                                                                 | 000 ÷ 255                                                                                                         | 000     |
|     | 41 |     | 49  | <b>RING BACKGROUND STROBE</b><br>Close<br>Strobe from slow to fast<br>Open<br>Pulse in from slow to fast<br>Open<br>Pulse out from slow to fast<br>Open<br>Random from slow to fast<br>Open | 000 ÷ 001<br>002 ÷ 062<br>063 ÷ 064<br>065 ÷ 125<br>126 ÷ 127<br>128 ÷ 188<br>189 ÷ 190<br>191 ÷ 251<br>252 ÷ 255 | 255     |
|     | 42 |     | 50  | <b>RING BACKGROUND RED</b><br>Lineary from 0% to 100%                                                                                                                                       | 000 ÷ 255                                                                                                         | 000     |
|     | 43 |     | 51  | <b>RING BACKGROUND GREEN</b><br>Lineary from 0% to 100%                                                                                                                                     | 000 ÷ 255                                                                                                         | 000     |
|     | 44 |     | 52  | <b>RING BACKGROUND BLUE</b><br>Lineary from 0% to 100%                                                                                                                                      | 000 ÷ 255                                                                                                         | 000     |

14 - RING LAYOUT (Pan@0 - Tilt@29)

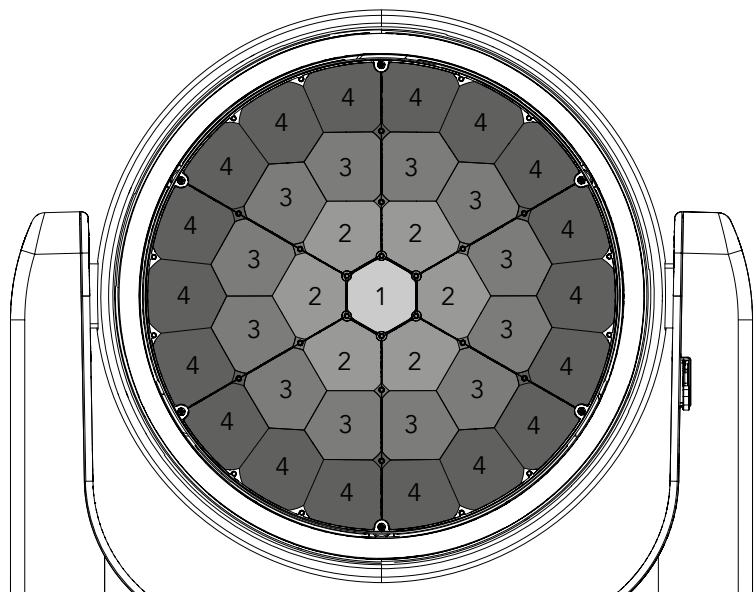


Fig. 08

15 - PIXEL LAYOUT (Pan@0 - Tilt@29)

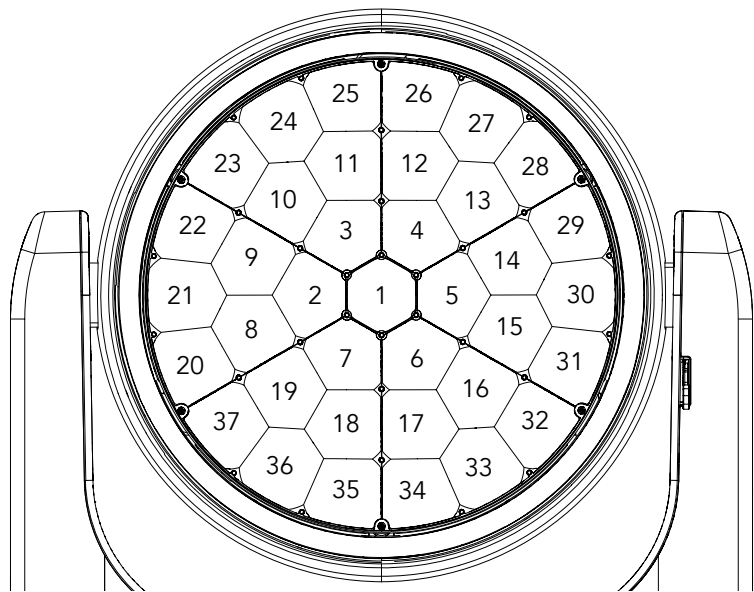


Fig. 09

## 16 - 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 31 you can see the location of the various pcb boards.

| ERROR SHOWED ON SCREEN         | POSSIBLE CAUSES                                                                                                                                                                                                                                                                                                                                                                                         | COLOUR MESSAGES | PCB |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----|
| [DISPLAY BATTERY ERROR]        | Battery not present or not detected from the display PCB.                                                                                                                                                                                                                                                                                                                                               | Green           | 1U  |
| [BASE FAN ERROR]               | Blower for cooling base failed.                                                                                                                                                                                                                                                                                                                                                                         | Green           | 1U  |
| [DMX ACTIVE]                   | If transfer configuration is used with dmx signal connected.                                                                                                                                                                                                                                                                                                                                            | Green           | 1U  |
| [MAINTENANCE TIME]             | Need to be done standard maintenance and also reset of elapsed time.                                                                                                                                                                                                                                                                                                                                    | Green           | 1U  |
| [PAN/TILT PCB ERROR]           | Pan tilt pcb not detected.                                                                                                                                                                                                                                                                                                                                                                              | Blue            | 2U  |
| [PAN MOTOR ERROR]              | This message will appear after the reset of the product if: <ul style="list-style-type: none"> <li>the PAN magnetic-indexing circuit detect a failure (sensor failed or magnet is missing);</li> <li>or the stepping motor is defective;</li> <li>or its driving IC on the PCB is defective;</li> <li>or the product is not located in the default position after the reset of the fixture.</li> </ul>  | Blue            | 2U  |
| [TILT MOTOR ERROR]             | This message will appear after the reset of the product if: <ul style="list-style-type: none"> <li>the TILT magnetic-indexing circuit detect a failure (sensor failed or magnet is missing);</li> <li>or the stepping motor is defective;</li> <li>or its driving IC on the PCB is defective;</li> <li>or the product is not located in the default position after the reset of the fixture.</li> </ul> | Blue            | 2U  |
| [PAN SENSOR ERROR]             | Pan sensor not detected.                                                                                                                                                                                                                                                                                                                                                                                | Blue            | 2U  |
| [TILT SENSOR ERROR]            | Tilt sensor not detected.                                                                                                                                                                                                                                                                                                                                                                               | Blue            | 2U  |
| [PAN ENCODER ERROR]            | Pan encoder not detected.                                                                                                                                                                                                                                                                                                                                                                               | Blue            | 2U  |
| [TILT ENCODER ERROR]           | Tilt encoder not detected.                                                                                                                                                                                                                                                                                                                                                                              | Blue            | 2U  |
| [LED FAN ERROR]                | One of the blowers for cooling the source failed, the source has been switched OFF.                                                                                                                                                                                                                                                                                                                     | Blue            | 2U  |
| [DRIVER/LED PCB ERROR]         | Led driver pcb not detected                                                                                                                                                                                                                                                                                                                                                                             | Yellow          | 3U  |
| [ZOOM ERROR]                   | Failure detected during the reset of the ZOOM system, if the zoom lens is not located in its default position.                                                                                                                                                                                                                                                                                          | Yellow          | 3U  |
| [LED DRIVER TEMPERATURE ERROR] | This error message indicates that an overheating in the head has occurred and the lamp has been switched OFF by the product protection system.                                                                                                                                                                                                                                                          | Yellow          | 3U  |
| [LED PCB ERROR]                | LED PCB 1 not detected during reset                                                                                                                                                                                                                                                                                                                                                                     | Yellow          | 3U  |

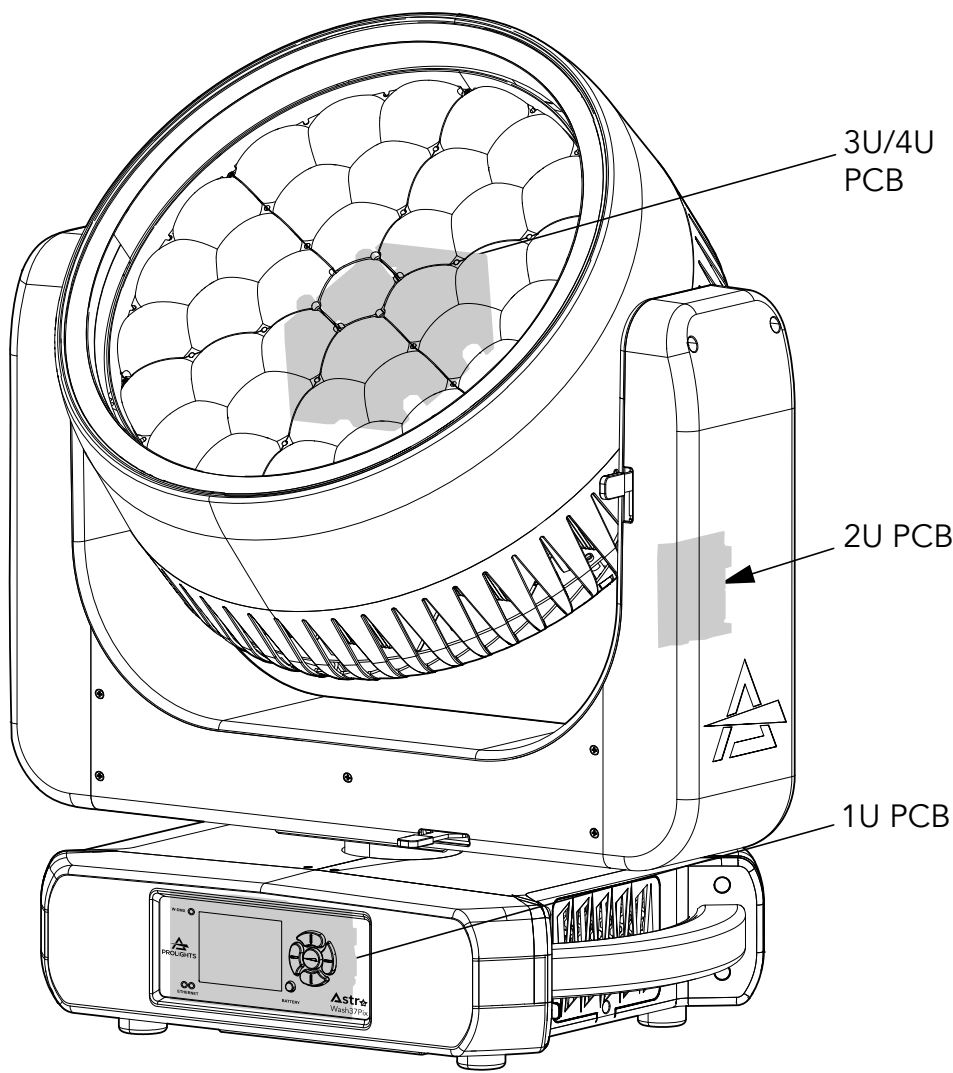
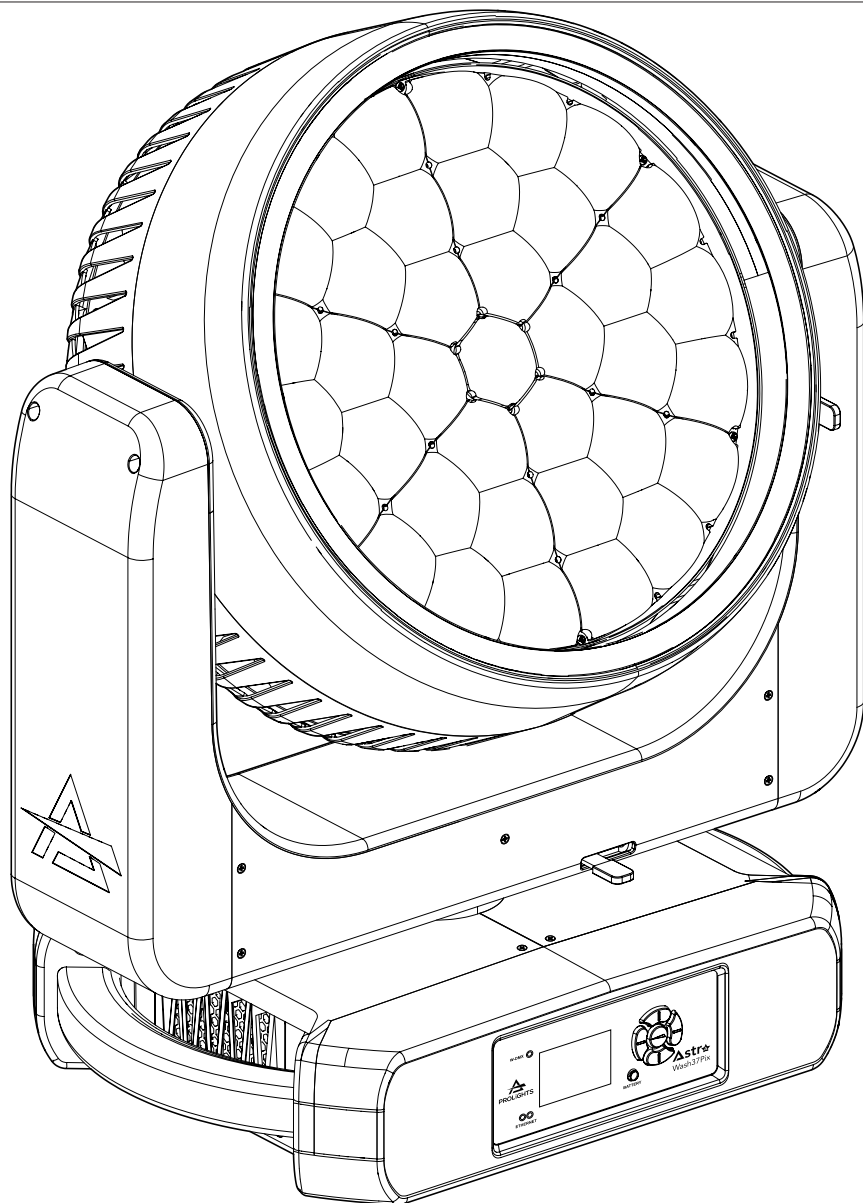


Fig. 10

# 17 - PERIODICAL CLEANING

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

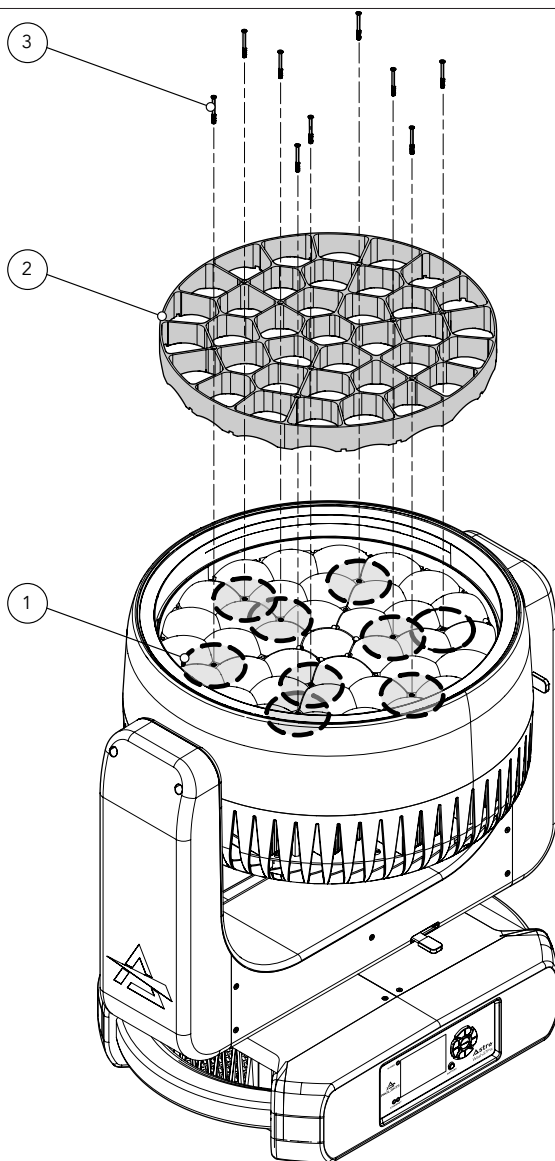


Use a soft cloth dampened with any detergent liquid for cleaning to remove the dirt from the optics.

Fig. 11

## 18 - ACCESSORIES INSTALLATION

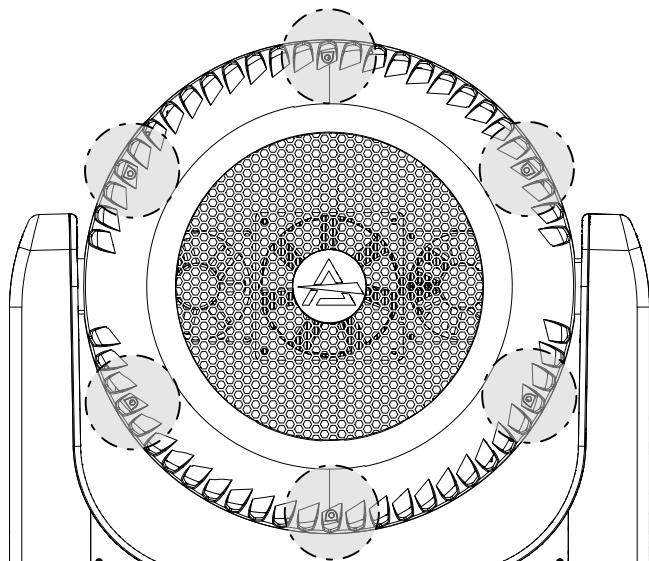
### EGG CRATE (ASTRAW37PEC - OPTIONAL)



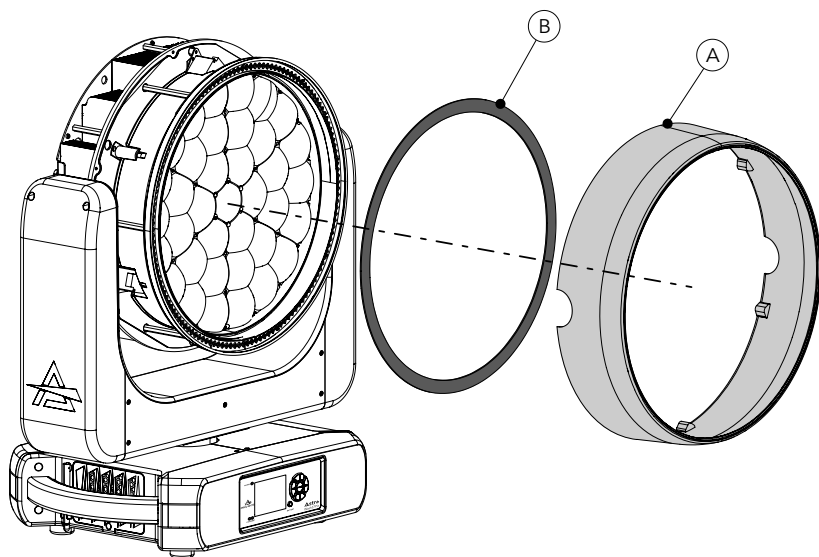
Before removing rear cover, place the head in a horizontal position and engage both the PAN and TILT locks for added stability. See the "PAN AND TILT LOCK" paragraph.  
Loosen and remove the marked six screws (1). Then insert the egg crate (2) and fix the six screws (3).

Fig. 12

1



2



Before removing rear cover, place the head in a horizontal position and engage both the PAN and TILT locks for added stability. See the "PAN AND TILT LOCK" paragraph.  
 Loosen and remove the six marked screws (1) and remove the back head cover.  
 Also remove the front head cover (A). Then remove the frost ring and insert the accessory in its place (B).  
**NOTE: The matte surface of the accessory must face outwards.**

Fig. 13

## 19 - MAINTENANCE

### MAINTENANCE AND CLEANING THE PRODUCT

**WARNING:** Disconnect from the mains before starting any maintenance work

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

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

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

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

### REPLACING THE FUSE

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

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

## TROUBLESHOOTING

| Problems                                                                  | Possible causes                                                                                                                                 | Checks and remedies                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product doesn't power ON.                                                 | <ul style="list-style-type: none"> <li>No power to the product.</li> </ul>                                                                      | <ul style="list-style-type: none"> <li>Check that power is switched ON and cables are plugged in.</li> </ul>                                                                                                                                                                                                                                                                                              |
|                                                                           | <ul style="list-style-type: none"> <li>Fuse blown or internal fault.</li> </ul>                                                                 | <ul style="list-style-type: none"> <li>Check if the Fuse is intact and eventually replace it if necessary.</li> <li>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.</li> </ul> |
| Product reset correctly but does not respond correctly to the controller. | <ul style="list-style-type: none"> <li>Bad signal connection.</li> </ul>                                                                        | <ul style="list-style-type: none"> <li>Inspect connections and cables. Fix eventual bad connections. Repair or replace damaged cables.</li> </ul>                                                                                                                                                                                                                                                         |
|                                                                           | <ul style="list-style-type: none"> <li>Signal connection not terminated.</li> </ul>                                                             | <ul style="list-style-type: none"> <li>Insert DMX termination plug in signal output socket of the last product on the signal line.</li> </ul>                                                                                                                                                                                                                                                             |
|                                                                           | <ul style="list-style-type: none"> <li>Incorrect addressing of the product.</li> </ul>                                                          | <ul style="list-style-type: none"> <li>Check the product address and control settings.</li> </ul>                                                                                                                                                                                                                                                                                                         |
|                                                                           | <ul style="list-style-type: none"> <li>One of the product is defective and is corrupting the signal transmission on the signal line.</li> </ul> | <ul style="list-style-type: none"> <li>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.</li> </ul>                                                                                                                                 |
| Timeout error after fixture reset.                                        | <ul style="list-style-type: none"> <li>One or more hardware components requires mechanical adjustments.</li> </ul>                              | <ul style="list-style-type: none"> <li>Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.</li> </ul>                                                                                                                                                                                                                                   |
| Mechanical effect loses position.                                         | <ul style="list-style-type: none"> <li>Mechanical hardware require cleaning, adjustment or lubrication.</li> </ul>                              | <ul style="list-style-type: none"> <li>Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.</li> </ul>                                                                                                                                                                                                                                   |
| Light output turn OFF Intermittently.                                     | <ul style="list-style-type: none"> <li>Fixture is too hot.</li> </ul>                                                                           | <ul style="list-style-type: none"> <li>Check product stored error messages.</li> <li>Allow product to cool.</li> <li>Clean the product and airflow filters.</li> <li>Reduce ambient temperature.</li> </ul>                                                                                                                                                                                               |
|                                                                           | <ul style="list-style-type: none"> <li>Hardware failure (temperature sensor, fans, Light source...).</li> </ul>                                 | <ul style="list-style-type: none"> <li>Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.</li> </ul>                                                                                                                                                                                                                                   |
| General low light intensity.                                              | <ul style="list-style-type: none"> <li>Dirty lens assembly.</li> </ul>                                                                          | <ul style="list-style-type: none"> <li>Clean the fixture regularly.</li> </ul>                                                                                                                                                                                                                                                                                                                            |
|                                                                           | <ul style="list-style-type: none"> <li>Dirty or damaged filters.</li> </ul>                                                                     | <ul style="list-style-type: none"> <li>Install lens assembly properly.</li> </ul>                                                                                                                                                                                                                                                                                                                         |

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.

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

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