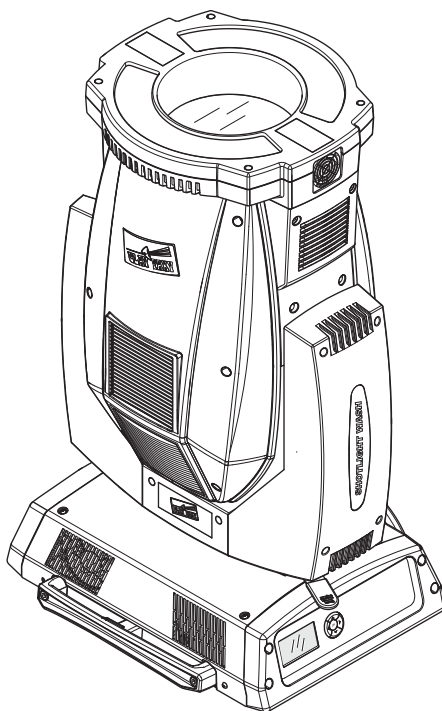


## INSTRUCTION MANUAL



### INDEX

Pag.	Contents
2	Safety information
3	Unpacking and preparation
4	Installation and start-up
5	Control panel
7	Menu setting
15	Maintenance
22	Technical information
22	Cause and solution of problems
23	Channel functions

*Congratulations on choosing a Clay Paky product!*

*We thank you for your custom.*

*Please note that this product, as all the others in the rich Clay Paky range, has been designed and made with total quality to ensure excellent performance and best meet your expectations and requirements.*

Carefully read this instruction manual in its entirety and keep it safe for future reference. It is essential to know the information and comply with the instructions given in this manual to ensure the fitting is installed, used and serviced correctly and safely.

CLAY PAKY S.p.A. disclaims all liability for damage to the fitting or to other property or persons deriving from installation, use and maintenance that have not been carried out in conformity with this instruction manual, which must always accompany the fitting.

CLAY PAKY S.p.A. reserves the right to modify the characteristics stated in this instruction manual at any time and without prior notice.

## SAFETY INFORMATION

### • Installation

Make sure all parts for fixing the projector are in a good state of repair.  
Make sure the point of anchorage is stable before positioning the projector.  
The safety chain must be properly hooked onto the fitting and secured to the framework, so that, if the primary support system fails, the fitting falls as little as possible.  
If the safety chain gets used, it needs to be replaced with a genuine spare.

### • Minimum distance of illuminated objects

The projector needs to be positioned so that the objects hit by the beam of light are at least 5 metres (16'5") from the lens of the projector.

### • Minimum distance from flammable materials

The projector must be positioned so that any flammable materials are at least 0.20 metres (8") from every point on the surface of the fitting.

### • Mounting surfaces

It is permissible to mount the fitting on normally flammable surfaces.

### • Maximum ambient temperature

Do not operate the fixture if the ambient temperature ( $T_a$ ) exceeds 40° C (104° F).

### • IP20 protection rating

The fitting is protected against penetration by solid bodies of over 12mm (0.47") in diameter (first digit 2), but not against dripping water, rain, splashes or jets of water (second digit 0).

### • Protection against electrical shock

Connection must be made to a power supply system fitted with efficient earthing (**Class I** appliance according to standard EN 60598-1).

It is, moreover, recommended to protect the supply lines of the projectors from indirect contact and/or shorting to earth by using appropriately sized residual current devices.

### • Connection to mains supply

Connection to the electricity mains must be carried out by a qualified electrical installer.  
Check that the mains frequency and voltage correspond to those for which the projector is designed as given on the electrical data label.  
This label also gives the input power to which you need to refer to evaluate the maximum number of fittings to connect to the electricity line, in order to avoid overloading.

### • Temperature of the external surface

The maximum temperature that can be reached on the external surface of the fitting, in a thermally steady state, is 150°C (302°F).

### • Maintenance

Before starting any maintenance work or cleaning the projector, cut off power from the mains supply.  
After switching off, do not remove any parts of the fitting for at least 10 minutes. After this time the likelihood of the lamp exploding is virtually nill. If it is necessary to replace the lamp, wait for another 20 minutes to avoid getting burnt.

The fitting is designed to hold in any splinters produced by a lamp exploding. The lenses must be mounted and, if visibly damaged, they have to be replaced with genuine spares.

### • Lamp

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

- Carefully read the "operating instructions" provided by the lamp manufacturer.
- Immediately replace the lamp if damaged or deformed by heat.

### • Battery

This product contains a rechargeable lead-acid battery. To preserve the environment, please dispose the battery at the end of its life according to the regulation in force. Instructions on how to remove the battery from the product are available on [www.claypaky.it](http://www.claypaky.it)

1500W 

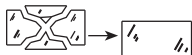


$t_a$  40°C

IP20



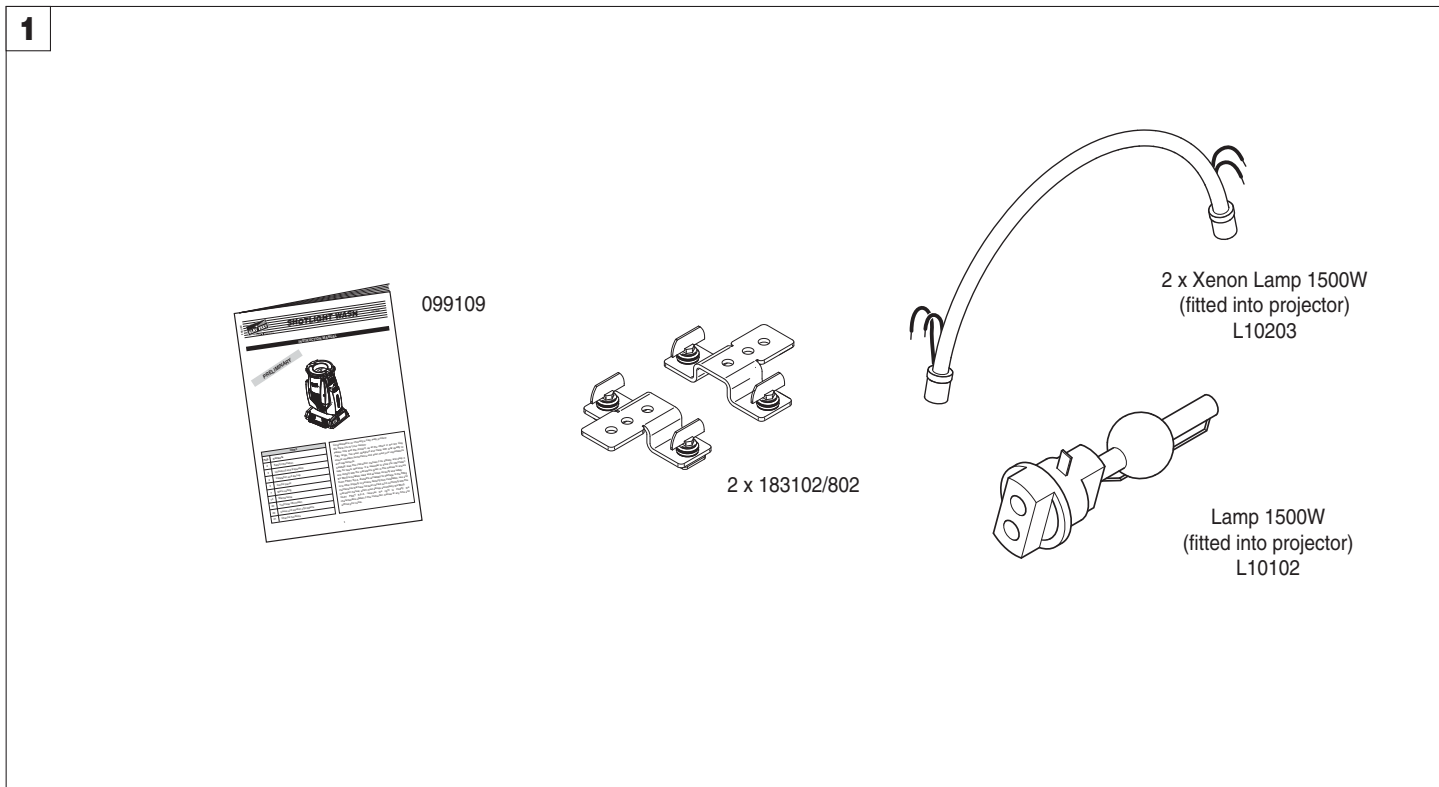
$t_c$  150°C



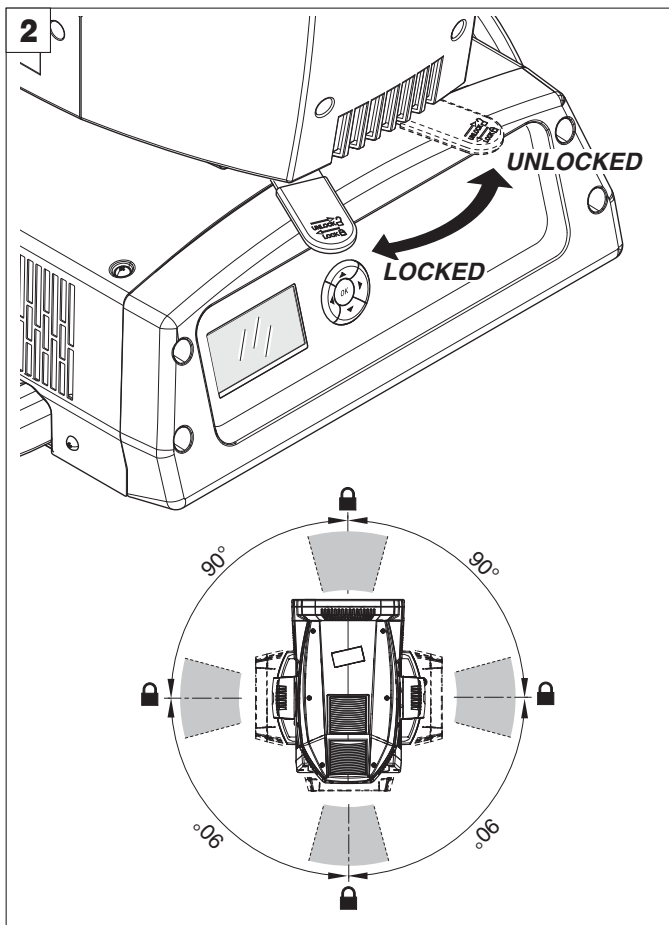
The products referred to in this manual conform to the European Community Directives to which they are subject:

- Low Voltage 2006/95/CE
- Electromagnetic Compatibility 2004/108/CE

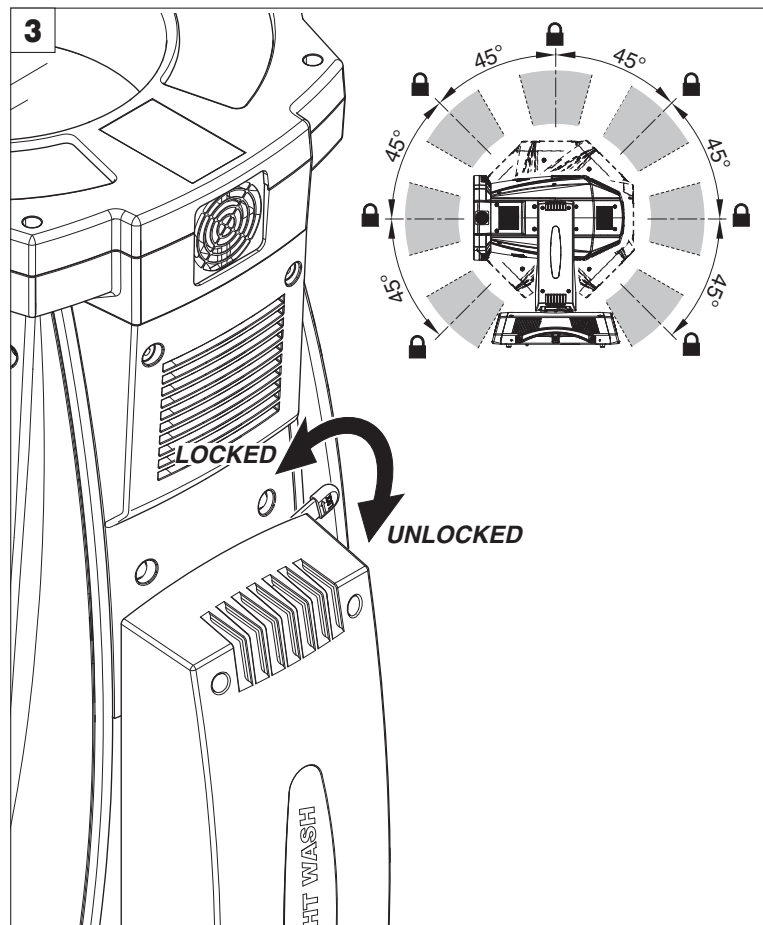
# UNPACKING AND PREPARATION



Packing contents - Fig. 1



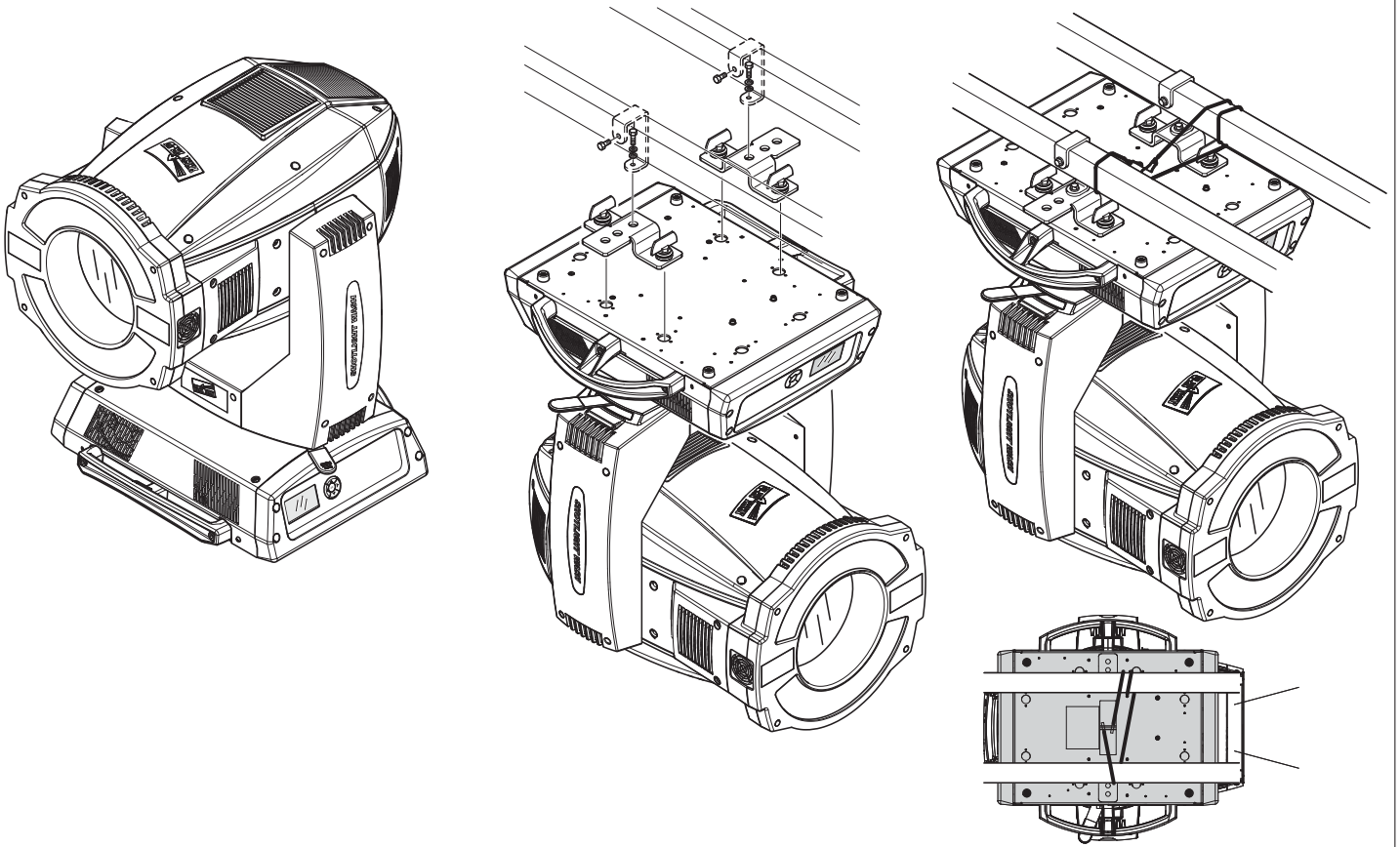
PAN Mechanism Lock and Release (every 90°) - Fig. 2



TILT Mechanism Lock and Release (every 45°) - Fig. 3

## INSTALLATION AND START-UP

4

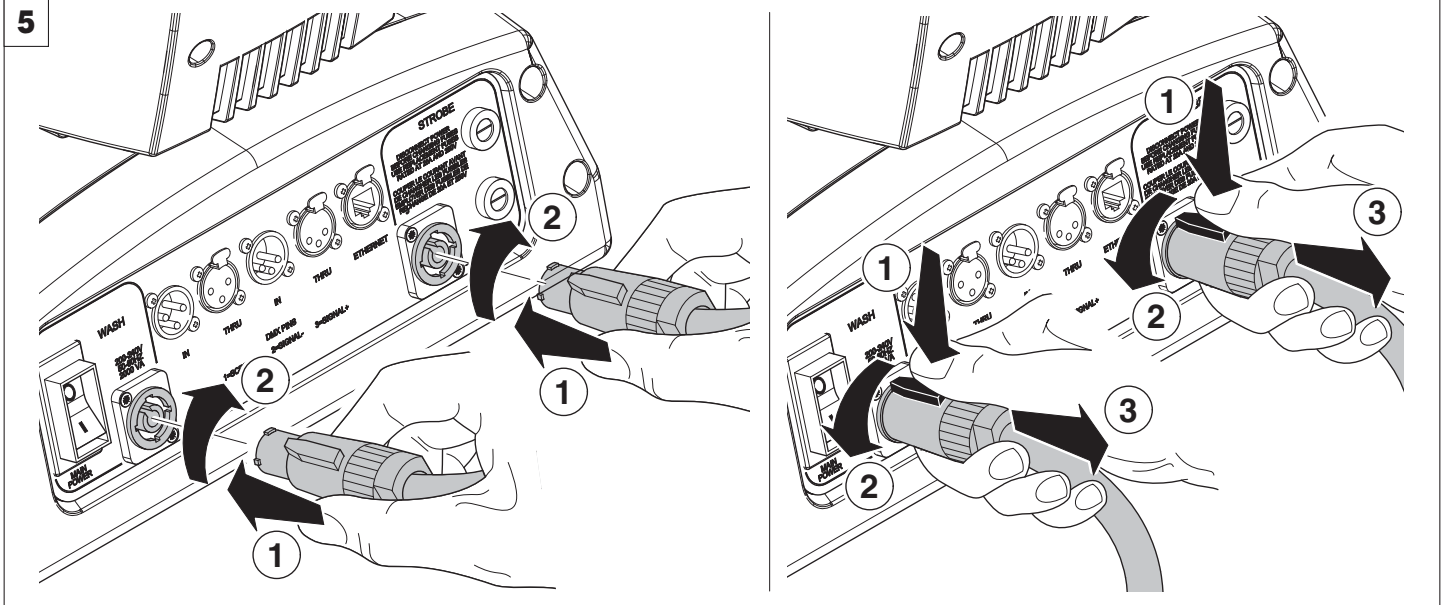


Installing the projector - Fig. 4

The projector can be installed on the floor resting on special rubber feet, on a truss or on the ceiling or wall.

**WARNING:** with the exception of when the projector is positioned on the floor, the safety cable must be fitted. (Cod. 105041/003 available on request). This must be securely fixed to the support structure of the projector and then connected to the fixing point at the centre of the base.

5



Connecting and disconnecting power cable - Fig. 5

## CONTROL PANEL

**6**

**IMPORTANT:** Always check the Phase and Neutral polarity to prevent problems occurring relating to the connection and synchronous performance of Strobe lamps in Shotlights connected to the same power line. If it is a three-phase network, power up the Shotlights using the same phase couple. If the power supply is external, connect all the Shotlights to the same generator or transformer.

Connecting to the mains supply - Fig. 6

**7**

**DMX 512 5 PIN**

**DMX 512 3 PIN**

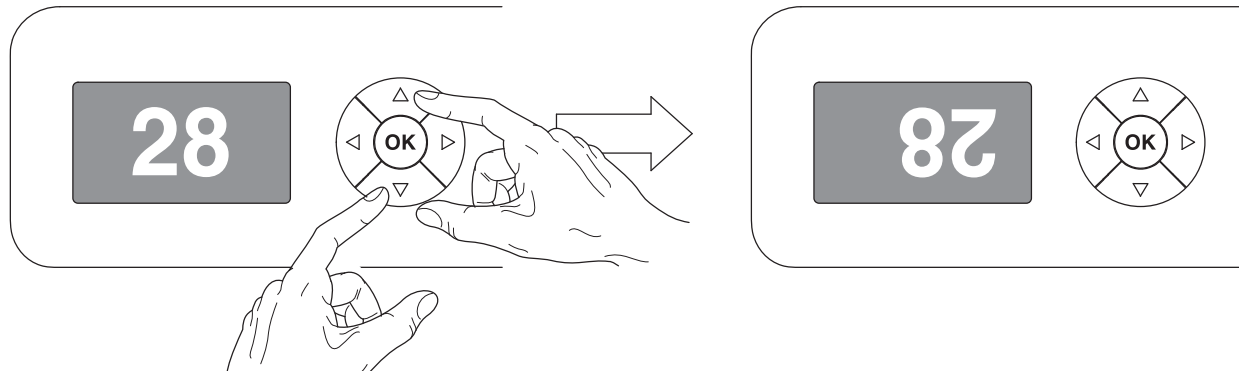
**Connecting to the control signal line (DMX) - Fig. 7**  
 Use a cable conforming to specifications EIA RS-485: 2-pole twisted, shielded, 120Ohm characteristic impedance, 22-24 AWG, low capacity. Do not use microphone cable or other cable with characteristics differing from those specified. The end connections must be made using XLR type 3 or 5-pin male/female connectors. A terminating plug must be inserted into the last projector with a resistance of 120Ohm (minimum 1/4 W) between terminals 2 and 3.  
**IMPORTANT:** The wires must not make contact with each other or with the metal casing of the connectors. The casing itself must be connected to the shield braid and to pin 1 of the connectors.

**8**



**Switching on the projector - Fig. 8**  
 Press the switch. The projector starts resetting the effects. At the same time, the following information scrolls on the display:

	Model Shotlight Wash	Firmware Version X.X.X Date - Hour	xxx (Fixture ID) Dmx Address xxx	System errors E: ..... W: .....
--	----------------------------	--	-------------------------------------	---------------------------------------

On conclusion of resetting in case of absence of dmX signal, Pan and Tilt move to the "Home" position (Pan 50% - Tilt 50%). The control panel (Fig. 8) has a display and buttons for the complete programming and management of the projector menu. The display can be in one of two conditions: rest status and setting status. When it is in the rest status, the display shows the projector's DMX address and the Fixture ID address (if set).  
 During menu setting status, after a wait time (about 30 seconds) without any key having been pressed, the display automatically returns to rest status. It should be noted that when this condition occurs, any possible value that has been modified but not yet confirmed with the **OK** key will be cancelled.



#### Reversal of the display - Fig. 9

To activate this function, press UP  and DOWN  keys simultaneously while the display is in the rest mode. This status will be memorised and maintained even for the next time it will be switched on. To return to the initial state, repeat the operation all over again.

#### Setting the projector starting address

On each projector, the starting address must be set for the control signal (addresses from 1 to 512).

The address can also be set with the projector switched off.

Setting the address: see pag. 8.

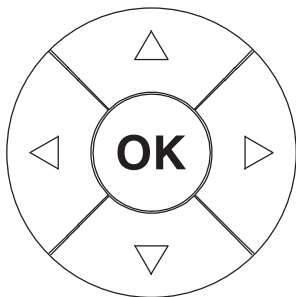
#### Setting the projector Fixture ID

On each projector, the Fixture ID address must be set for an easy identification of the fixtures in an installation (ID from 1 to 255).

The Fixture ID address can be set with the projector switched off.

Setting the Fixture ID: see pag. 8.

## Functions of the buttons - Using the menu



Confirms the displayed value, or activates the displayed function, or enters the successive menu.



DOWN

Decreases the value displayed (with auto-repetitions) or passes to the next item in the menu.



UP

Increases the value displayed (with auto-repetitions) or passes to the previous item in a menu.



LEFT

Return to the top level



RIGHT

Commute from units, tens, hundreds, in the "Address", "Fixture ID" and "Calibration" menù.


#### USING THE MENU:

1) Press  once – "Main Menu" appears on the display.

2) Use the UP  and DOWN  keys to select the menu to be used:

- Setup (Setup Menu): To set the setting options.
- Option (Option Menu): To set the operating options
- Informations (Informations Menu): To read the counters, software version and other information.
- Manual Control (Manual control Menu): To trigger the test and manual control functions.
- Test (Test Menu): To check the proper functioning of effects
- Advanced (Advanced Menu): Access to the "Advanced menu" is recommended for a trained technical personnel.


To enable the "Advanced" see pag.13

3) Press  to display the first item in the selected menu.

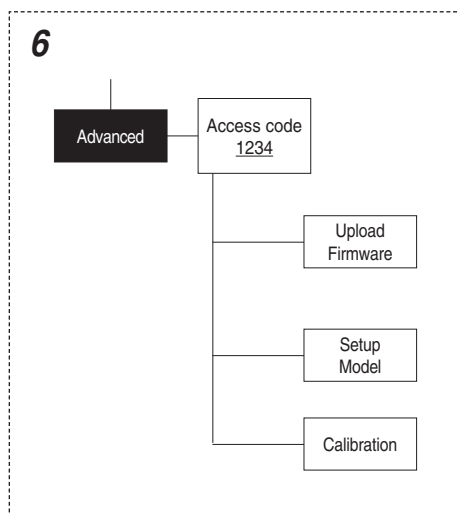
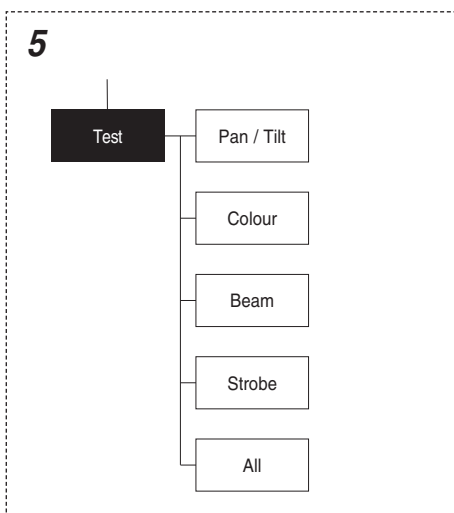
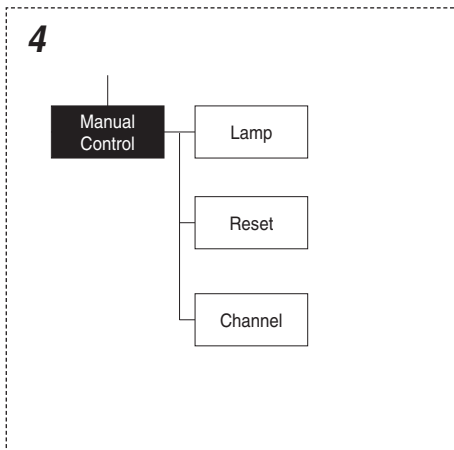
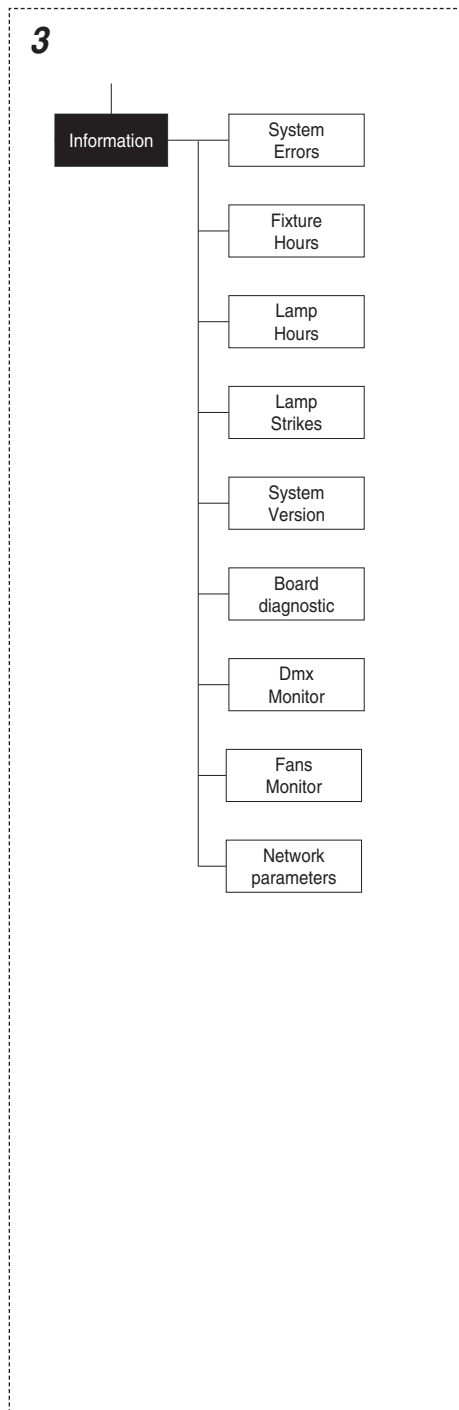
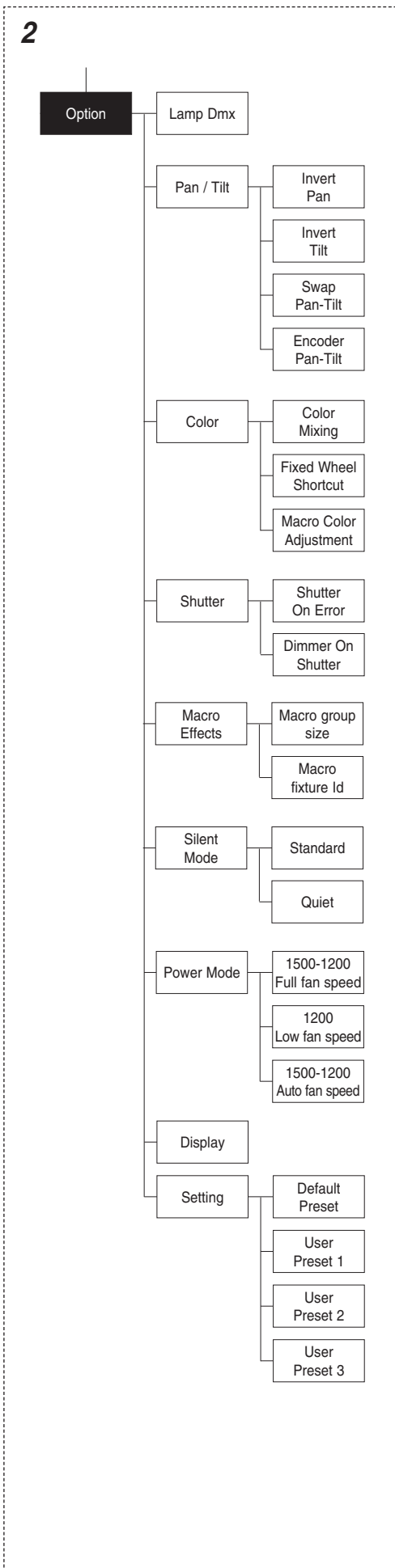
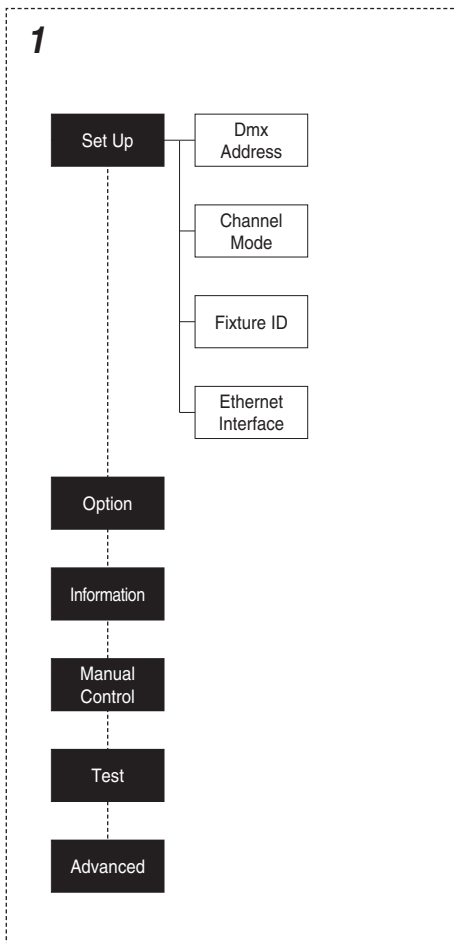
4) Use the UP  and DOWN  keys to select the MENU items.

#### Setting addresses and options with the projector disconnected

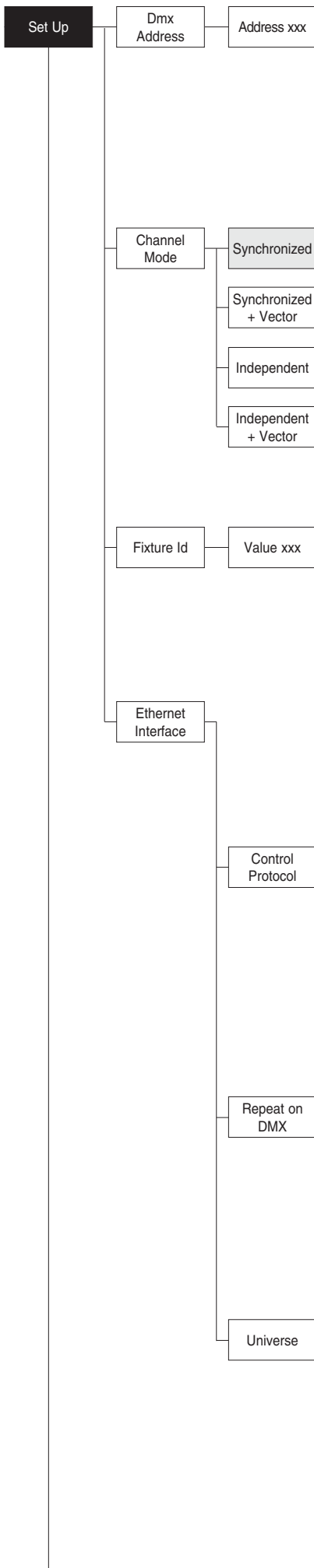
The projector's DMX address, as well as other possible operating options, can also be set when the appliance is disconnected from the electricity supply.

All that is needed is to press  to momentarily activate the display and thus access the settings. Once the required operations have been carried out, the display will switch off again after a wait time of 30 seconds.

# MENU SETTING



NOTE: On grey the default options



## SET UP MENU

### DMX ADDRESS

**NOTE: without the DMX signal the Address (XXX) flashing**

Allows you to select the DMX ADDRESS

- 1) Press **OK** - the current DMX Address appear on the display.
- 2) Use the UP **▲**, DOWN **▼**, RIGHT **▶** keys to plan the DMX Address.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### CHANNEL MODE

Allows you to select a channel arrangement from the 4 available.

- 1) Press **OK** - the current settings appear on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:
  - **Synchronized**
  - **Synchronized + Vector**
  - **Independent**
  - **Independent + Vector**
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### FIXTURE ID

Allows you to select the FIXTURE ID

- 1) Press **OK** - the current Fixture ID appear on the display.
- 2) Use the UP **▲**, DOWN **▼**, RIGHT **▶** keys to plan the Fixture ID.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### ETHERNET INTERFACE

It lets you set the Ethernet settings to be attributed to the projector.

- 1) Premere **OK**.
- 2) Use the UP **▲** and DOWN **▼** keys to select the "Ethernet Interface" options to set:

#### Control Protocol

It lets you select the "Control Protocol" Art-net to assign according to the control unit used:

- 1) Press **OK** the current setting appears on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:
  - **Disabled**
  - **Art-net on IP 2**
  - **Art-net on IP 10**
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep the current setting.

#### Repeat on DMX

It lets you enable the transmission of the Ethernet protocol by DMX signal to all the connected projectors.

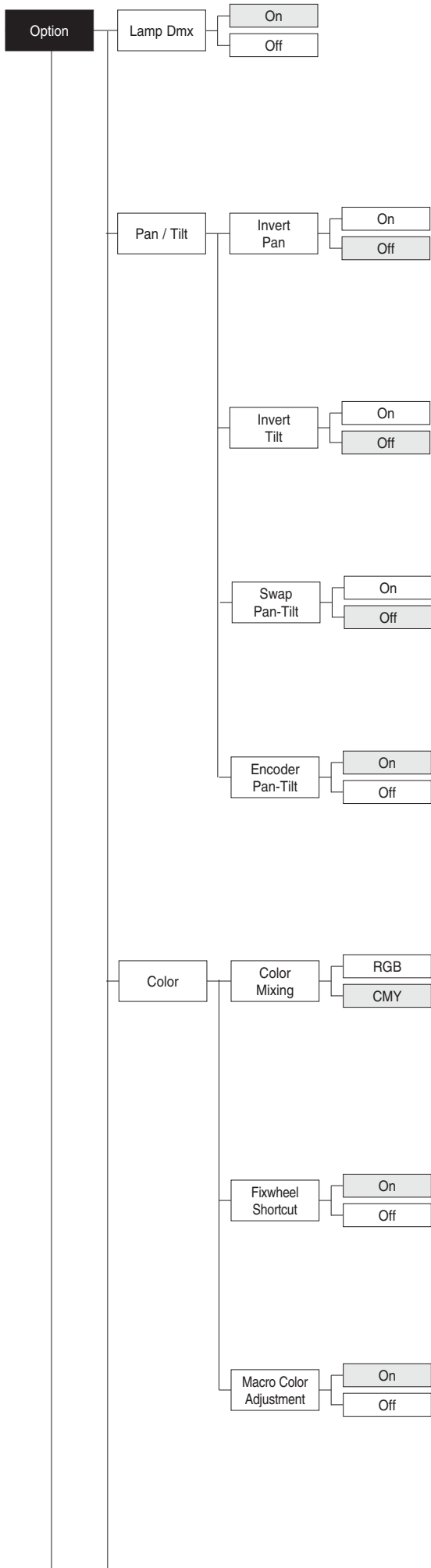
- 1) Press **OK** the current setting appears on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:
  - **Disabled:** DMX transmission disabled.
  - **Enabled on primary:** DMX transmission enabled.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep the current setting.

#### Universe

It lets you assign the "Universe" number to be assigned to a series of projectors.

- 1) Press **OK** - the current Universe address appears on the display.
- 2) Use the UP **▲**, DOWN **▼**, RIGHT **▶** keys to set the Universe address.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep the current setting.





## OPTIONS MENU

### LAMP DMX

Used for enabling lamp remote control channel.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) the lamp remote control channel.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### PAN / TILT

#### Invert pan

Used for reversing Pan movement.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) PAN inversion.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

#### Invert tilt

Used for reversing tilt movement.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) Tilt inversion.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

#### Swap Pan-Tilt

Used for swapping Pan and Tilt channels (as well as Pan fine and Tilt fine).

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) Pan and Tilt channel swap.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

#### Encoder Pan-Tilt

Used for enabling the Pan / Tilt encoders.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) Pan / Tilt encoders.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

### COLOR

#### Color mixing

Used for reversing the CMY color mixing system.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys select one of the following settings:  
RGB color mixing mode  
CMY color mixing mode
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

#### Fixed wheel short-cut

Used for optimizing color change time so that the disc turns in the direction that requires shorter movement.

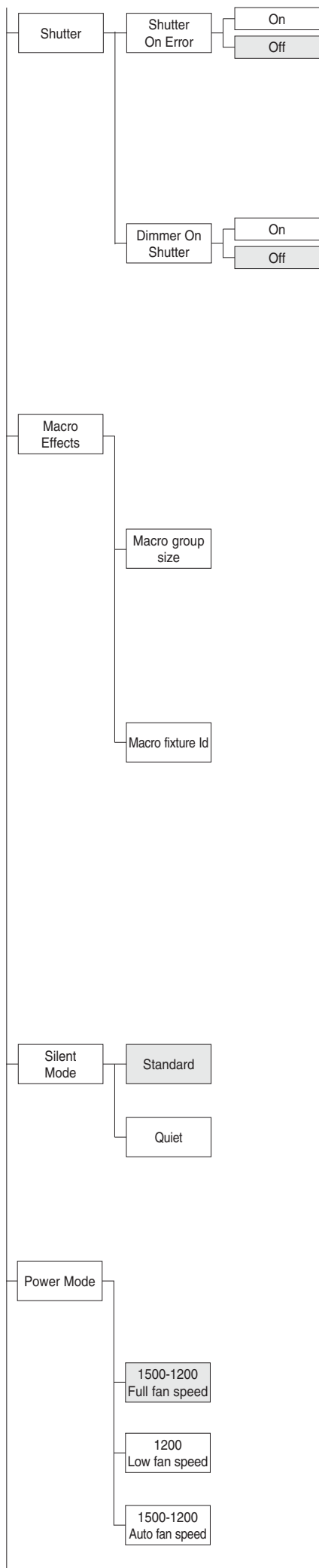
- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) color change optimization.
- 3) Press **OK** to confirm the selection, or LEFT **◀** to keep current settings.

#### Macro color adjustment

It lets you enable the overwriting of a "Macro Colour" with the Cyan, Magenta, Yellow, CTO and Colour wheel channels.

Press **OK** the current setting appears on the display.

- 1) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) the overwriting.
- 2) Press **OK** to confirm the selection or LEFT **◀** to keep the current setting.



## SHUTTER

### Shutter on error

Used for automatically closing the stop/strobe in the event of Pan/Tilt position error.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) automatic stop/strobe closing in the event of Pan/Tilt position error.
- 3) Press **OK** to confirm the selection, or LEFT **◀** to keep current settings.

### Dimmer on Shutter

Enables automatic closing of the dimmer when the strobe is completely closed.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) the automatic closing of the dimmer.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

## MACRO EFFECTS

It lets you select the “Macro Effects” set up from the two available.

- 1) Press **OK** the current setting appears on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:

### Macro group size

It lets you set the number of projectors to be included in the macro mode operation.

- 1) Press **OK**
- 2) Use the UP **▲**, DOWN **▼**, RIGHT keys to set the number of projectors to be included in the “Macro Effect” operation.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep the current setting.

### Macro fixture Id

It lets you attribute an ID address to the projector for the phase displacement for the scene’s starting time in Macro mode.

- 1) Press **OK**
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:

**Fixed to X.** (to assign to all the projectors to be included in the Macro operation).

**Auto by DMX Address:** According to the DMX address, it automatically detects the starting sequence of the scene in the Macro mode (to assign to all the projectors to be included in the Macro operation).

- 3) Press **OK** to confirm the selection or LEFT **◀** to keep the current setting.

## SILENT MODE

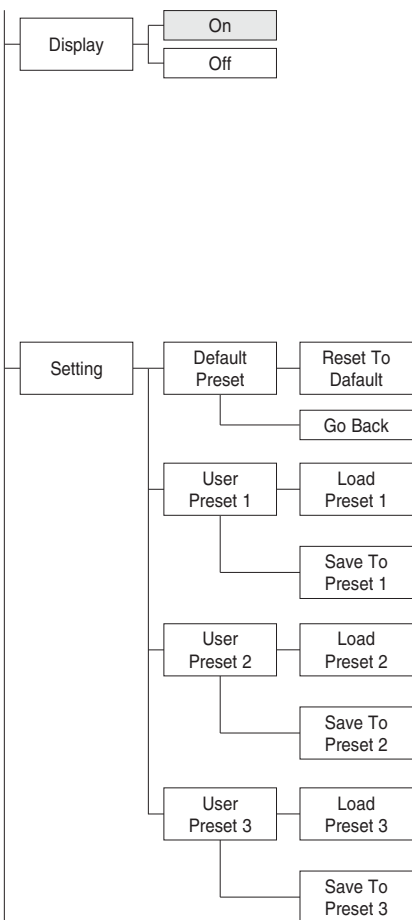
It lets you select the “Silent Mode” from the two available.

- 1) Press **OK** the current setting appears on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:
  - Standard:** Maximum speed and consequently maximum effects noise level.
  - Quiet:** reduces the speed of some effects, thereby reducing their noise level.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep the current setting.

## POWER MODE

Allows you to select a Power Mode from the three available.

- 1) Press **OK** - the current settings appear on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following settings:
  - **1500-1200W Full fan speed:** Lamp can change from full-power (1500W) to half-power (1200W) using the LAMP CONTROL channel. Fans always work at Full speed
  - **1200W Low fan speed:** Lamp constantly works in half-power mode (1200W) while the Fan always works at Low speed. With LAMP CONTROL channel you can only switch the lamp ON and OFF.
  - **1500-1200W Auto fan speed:** Lamp can change from full-power (1500W) to half-power (1200W) using the LAMP CONTROL channel. Automatically the fans switch from Full speed to Low speed respectively.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current setting.



## DISPLAY

Used for automatically reduce brightness on the display after about 30 seconds in idle.

- 1) Press **OK** - the current settings appear on the display (On or Off).
- 2) Use the UP **▲** and DOWN **▼** keys to enable (On) or disable (Off) the decreasing of display brightness.
- 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings.

## SETTING

Used to save 3 different settings of the items in the options menu and relative submenus.

- 1) Press **OK** - "Default preset" appears on the display.
- 2) Use the UP **▲** and DOWN **▼** keys to select one of the following configurations:
  - Default preset (\*)
  - User preset 1
  - User preset 2
  - User Preset 3
- 3) Press **OK** - "Load preset X" appears on the display.
- 4) Use the UP **▲** and DOWN **▼** keys to select:
  - Load preset X to recall a previously stored configuration.
  - Save to preset X to store the current configuration.
 a confirmation message (Are you sure?) appears on the display.
- 5) Select YES to confirm the selection or NO to keep the current setting and return to the next higher level.

### (\*) DEFAULT PRESET

Used for restoring default values on all options menu items and relevant submenus.

- 1) Press **OK**, a confirmation message (Are you sure?) appears on the display .
- 2) Select YES to confirm the selection or NO to keep current setting.

OPTION	DEFAULT
Lamp DMX	On
Invert Pan	Off
Invert Tilt	Off
Swap Pan-Tilt	Off
Encoder Pan-Tilt	On
Colour mixing	CMY
Fixed Wheel Shortcut	On
Macro Color Adjustment	On
Shutter on error	Off
Dimmer on Shutter	Off
Silent Mode	Standard
Power Mode	1500-1200W full fan speed
Display	On

System Errors

Fixture Hours

Total	XXX
Partial	XXX
Reset...	

Lamp Hours

Total	XXX
Partial	XXX
Reset...	

Lamp Strikes

Total	XXX
Partial	XXX
Reset...	

System Version

Board	Revis.	Hw.rv.
CPU brd	x.x.x	x.x
com.dev	x.x	
Flash bd	x.x	
0: PT-3f	x.x	x.x
1: 8-Ch	x.x	x.x
2: 6-Ch	x.x	x.x

## INFORMATION MENU

### SYSTEM ERRORS

Shows a list of warnings and messages relevant to errors occurred since the fixtures switching-on.

- Pressing **OK** you are allowed to reset the SYSTEM ERRORS list.  
A confirmation message (Are you sure you want to clear error list ?) appears on the display.
- Select YES to reset the list or NO to go back.

### FIXTURE HOURS

Used for displaying projector operating hours (total and partial).

- Press **OK** - Hours total and partial appears on the display.
  - Total counter**  
Counts the number of projector working life hours (from manufacture to date).
  - Partial counter**  
Counts the number of partial projector working life hours since the last reset to date.
- Press **OK** to reset partial projector working hours a confirmation message (Are you sure?) appears on the display.
- Select YES to reset partial projectors counter or NO to keep the current setting and return to the top menu level.

### LAMP HOURS

Used for displaying the lamp working hours (total and partial).

- Press **OK** - Hours total and partial appears on the display.
  - Total counter**  
Counts the number of projector working hours with the lamp on (from manufacture to date).
  - Partial counter**  
Counts the number of lamp working hours since the last reset to date.
- Press **OK** to reset partial lamp working hours, a confirmation message (Are you sure ?) appears on the display.
- Select YES to reset partial counter or NO to keep the current setting and return to the top menu level

### LAMP STRIKES

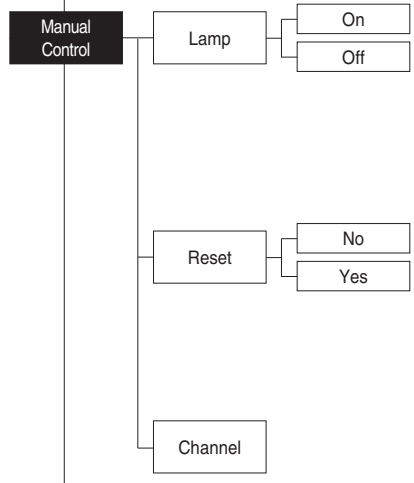
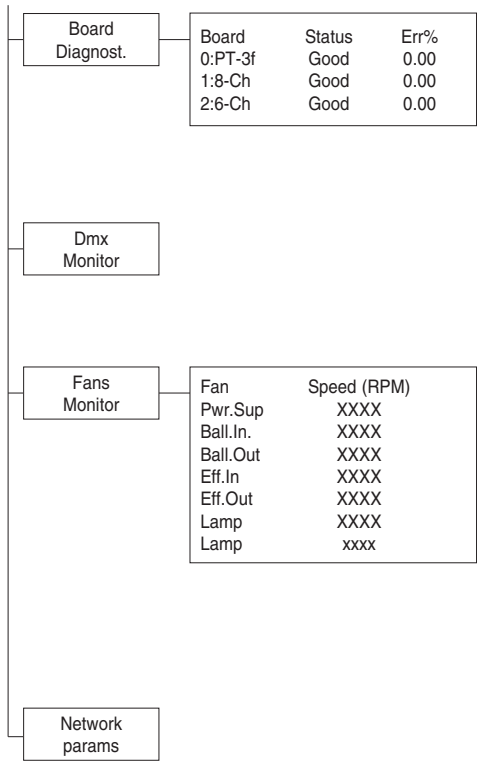
Used for displaying the number of times the lamp was turned on (total and partial).

- Press **OK** - the number of times the lamp was turned on (total and partial) appears on the display.
  - Total counter**  
Counts the number of times the lamp was turned on (from manufacture to date).
  - Partial counter**  
Counts the number of times the lamp was turned on since the last reset to date.
- Press **OK** to reset partial lamp strikes hours, a confirmation message (Are you sure ?) appears on the display.
- Select YES to reset partial counter or NO to keep the current setting and return to the top menu level

### SISTEM VERSION

Used for displaying the software and hardware version of each board installed in the projector.

- CPU brd (CPU board)
- Flash bd (Flash/Strobe CPU board)
- 0: PT-3f (Pan / Tilt board)
- 1: 8-Ch (8 channel board)
- 2: 6-Ch (6 channel board)



**BOARD DIAGNOSTIC**

Used for displaying the status error of each board installed in the projector:  
 0: PT-3f (Pan / Tilt board)  
 1: 8-Ch (8 channel board)  
 2: 6-Ch (6 channel board)

**DMX MONITOR**

Used for displaying the projector DMX channel level in bit (Val) and in percentage (Perc).

**FANS MONITOR**

Used for displaying the speed of each fan installed in the projector:  
 Pwr.Sup (Power supply Fan)  
 Ball. IN (Ballast IN Fan)  
 Ball. Out (Ballast OUT Fan)  
 Eff.IN (Effects IN Fan)  
 Eff.OUT (Effects OUT Fan)  
 Lamp (Lamp Fan)  
 Lamp (Lamp Fan)

**NETWORK PARAMS**

Allows the "Network" parameters of the projector to be displayed or:  
**IP address:** Internet Protocol address (two projectors must not have the same IP address)  
**IP mask: 255.0.0.0**  
**Mac address:** Media Access Control: the projector's Ethernet Address.

**MANUAL CONTROL**

**LAMP**

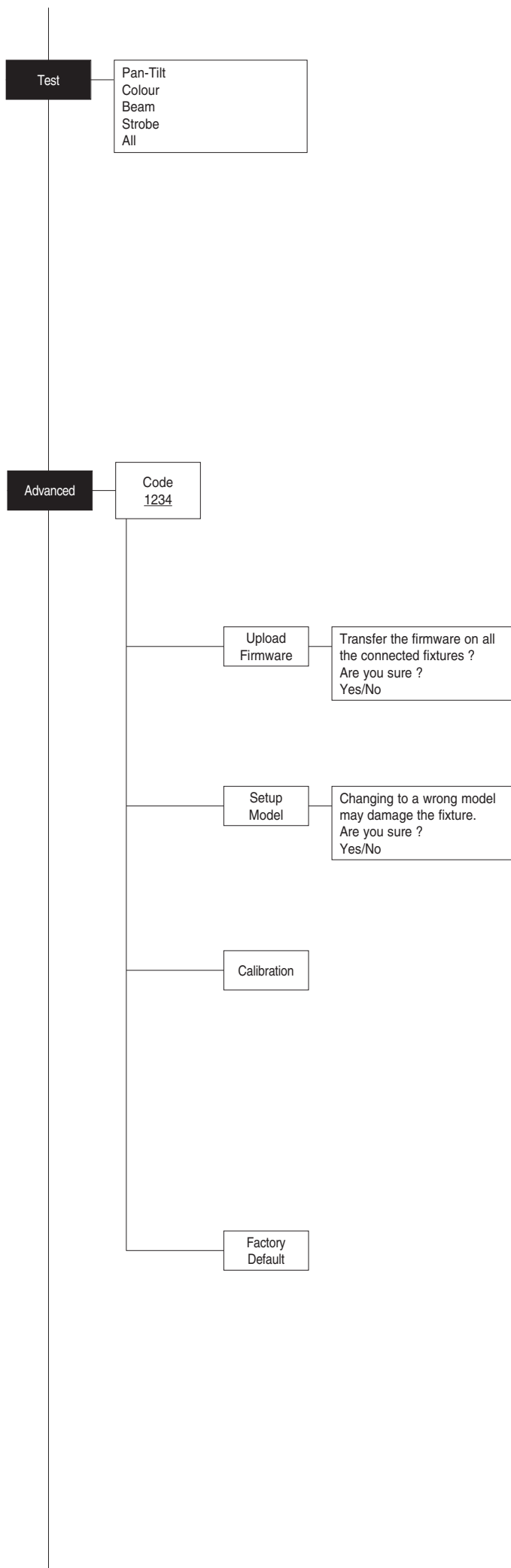
Used for turning lamp on and off from the projector control panel.  
 1) Press **OK** - the current settings appear on the display (On or Off).  
 2) Use the UP **▲** and DOWN **▼** keys to turn the lamp on (On) or off (Off)  
 3) Press **OK** to confirm the selection or LEFT **◀** to keep current settings and return to the top level.

**RESET**

Used for resetting the projector.  
 1) Press **OK** to reset the projectors, a confirmation message (Are you sure ?) appears on the display.  
 2) Select YES to starting reset the fixture or NO to keep the current setting and return to the top menu level.

**CHANNEL**

Used for setting channel levels from the projector control panel.  
 1) Press **OK** - the first channel appears on the display.  
 2) Use the UP **▲** and DOWN **▼** keys to select the required channel:  
 3) Press **OK** and use the UP **▲** and DOWN **▼** keys to select the required DMX level (value between 0 and 255).  
 4) Press LEFT **◀** to return to the top menu level.



## TEST MENU

### AUTOTEST

Allows you to check the proper functioning of effects.

- 1) Press **OK**.
- 2) Use the UP **▲** and DOWN **▼** keys to select the required test.
- 3) Press **OK** to confirm the selection or LEFT **◀** to return to the top menu level.

Test sequence:

Pan - Tilt effects (Pan & Tilt)

Colour effects (CMY / colour wheels)

Beam effects (Stopper-Strobe / Dimmer / Beam shaper / Zoom)

Strobe ( Strobe section)

All effects

## ADVANCED MENU

To enable the "Advanced Menu" set up the "Access code" (1234) using the UP **▲**, DOWN **▼**, RIGHT **▶** keys.

Press **OK** - "Menu advanced" appears on the display

### UPLOAD FIRMWARE

Allows you to transfer the firmware from 1 fixture to all the connected fixtures.

- 1) Press **OK**, a confirmation message appears on the display.
- 2) Select YES to start the firmware loading or NO to keep the current setting and return to the top menu level

### SETUP MODEL

Allows you to change the default model of projector.

- 1) Press **OK** a confirmation message appears on the display.
- 2) Select YES to define the model of projector or NO to keep the current setting and return to the top menu level.

### CALIBRATION

Allows you to adjust effects from the control panel to obtain perfect uniformity between the projectors.

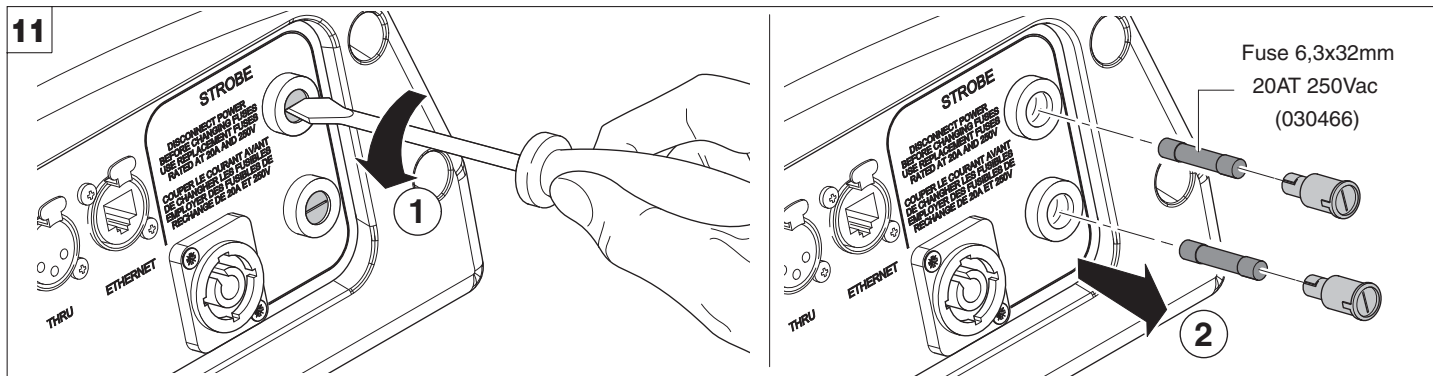
- 1) Press **OK** - "channels" appears on the display.
- 2) Using the UP **▲** and DOWN **▼** keys, select the effect you wish to regulate.
- 3) Press **OK** and use the RIGHT **▶**, UP **▲** and DOWN **▼** buttons to make the adjustment by setting a value between 0 and 255.
- 4) Press **OK** to confirm the selection or LEFT **◀** to keep current settings and return to the top level.

### FACTORY DEFAULT

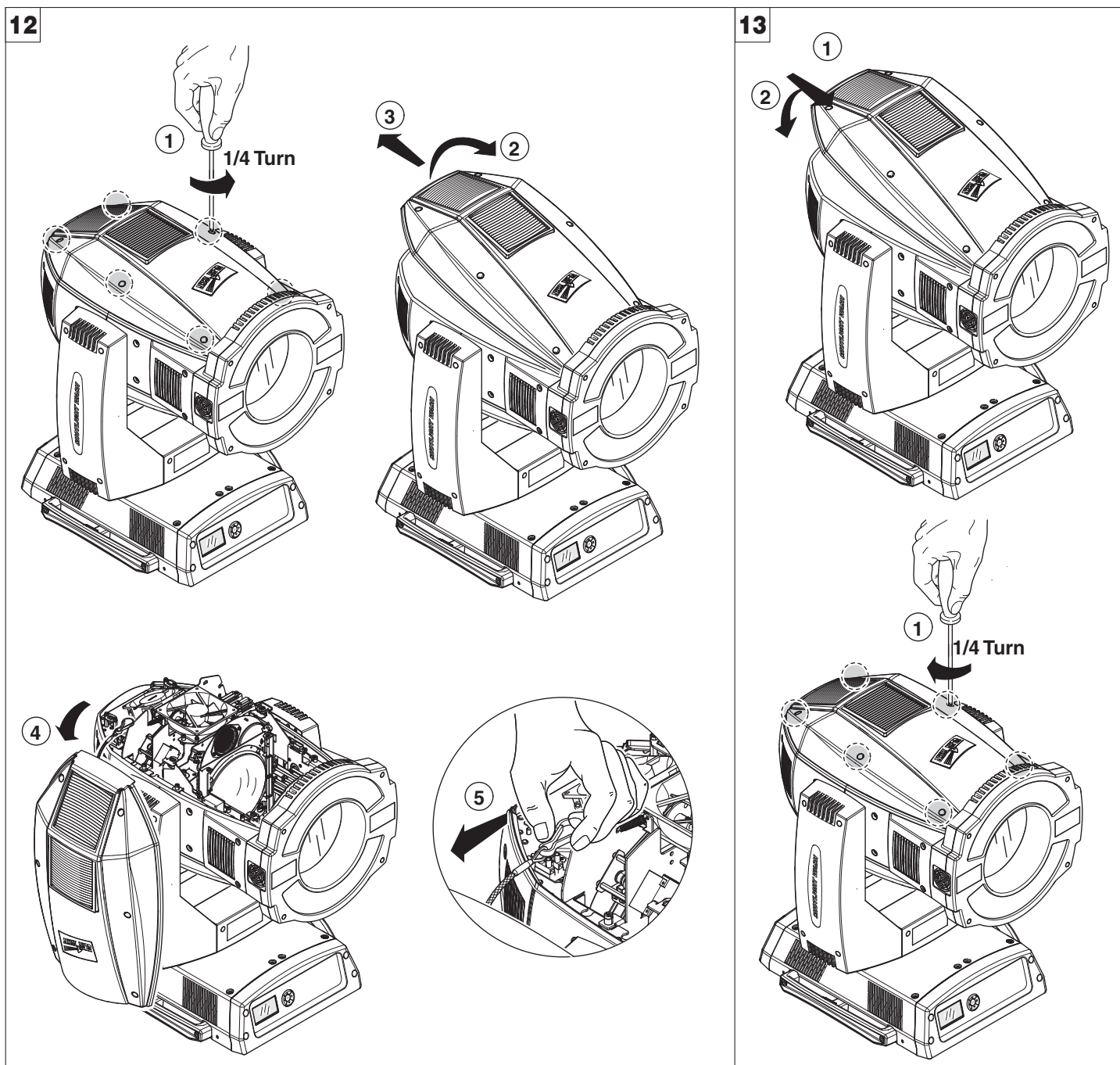
Allows you to restore default values of all channels (128).

- 1) Press **OK** - a confirmation message appears on the display (Reset calibration to factory default ?).
- 2) Select YES to reset calibration to factory default or NO to keep the current setting and return to the top menu level.

## MAINTENANCE



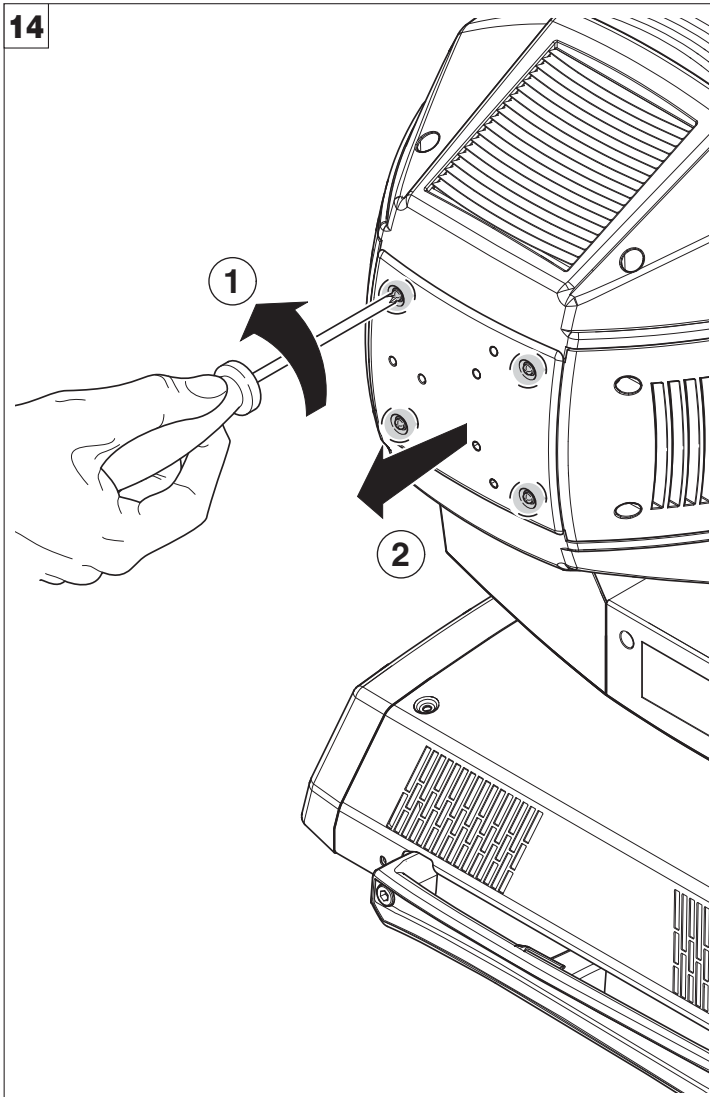
Replacing fuse - Fig. 11



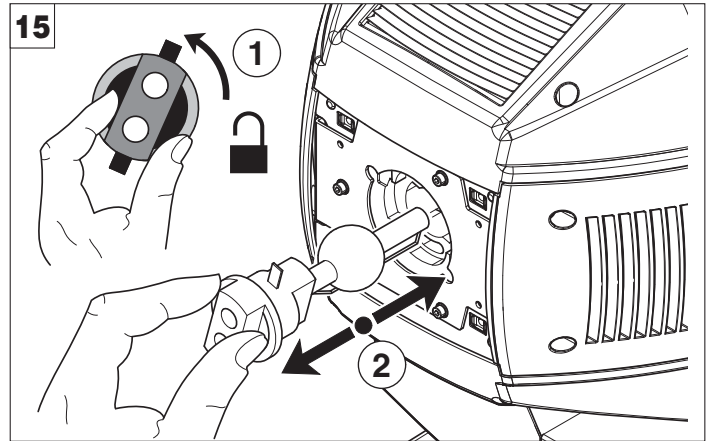
Locking and releasing Pan and Tilt movements - Refer to the instructions in the UNPACKING AND PREPARATION section.

Opening the head covers - Fig. 12

Closing the head covers - Fig. 13



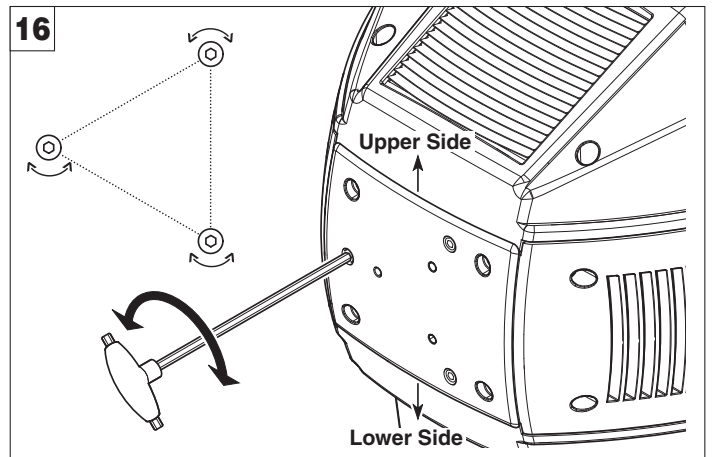
Opening and closing lamp compartment - Fig. 14



Lamp change - Fig 15

Take the new lamp out of its package and insert in the fitting.

**WARNING: do not touch the lamp's envelope with bare hands. Should this happen, clean the bulb with a cloth soaked in alcohol and dry it with a clean, dry cloth.**

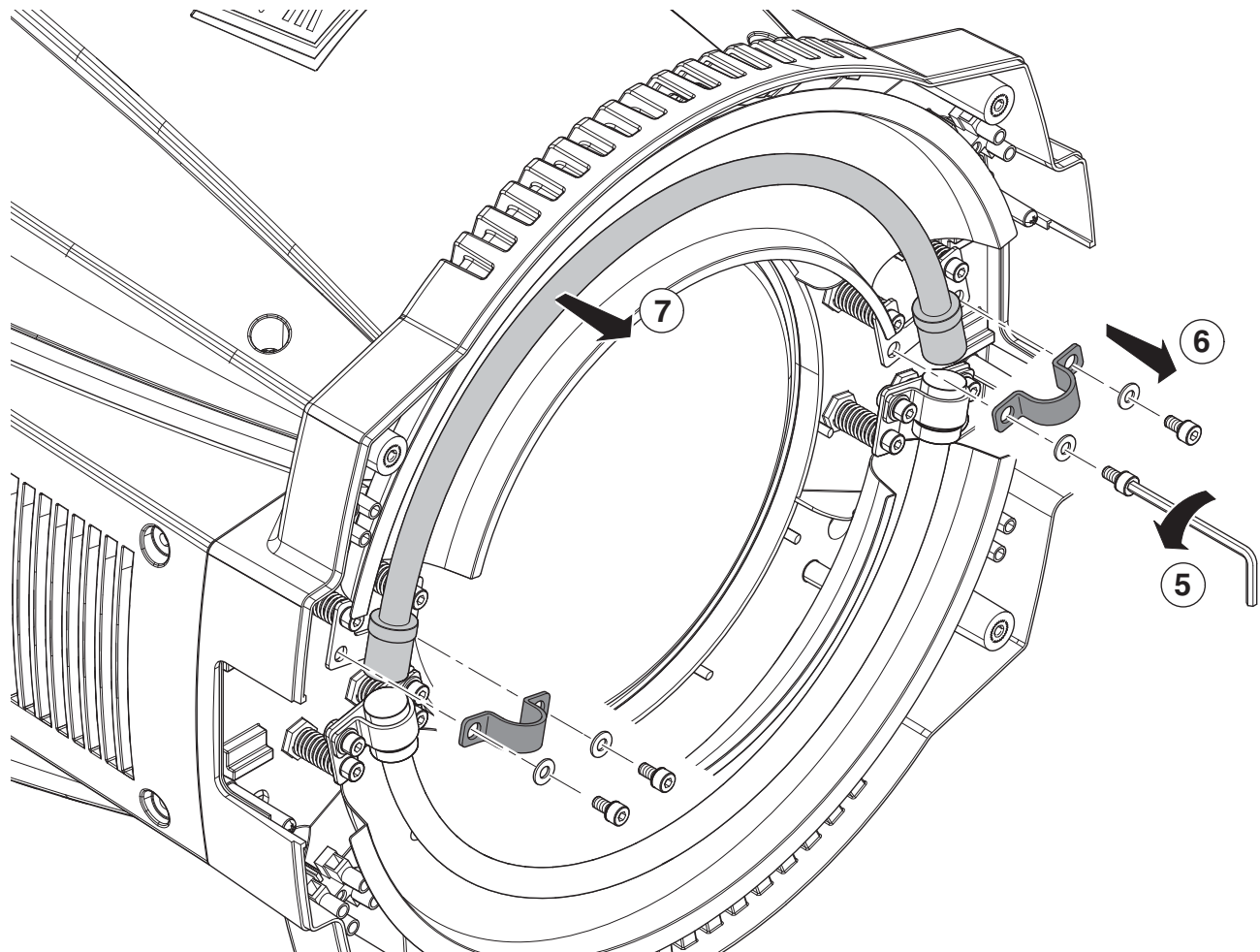
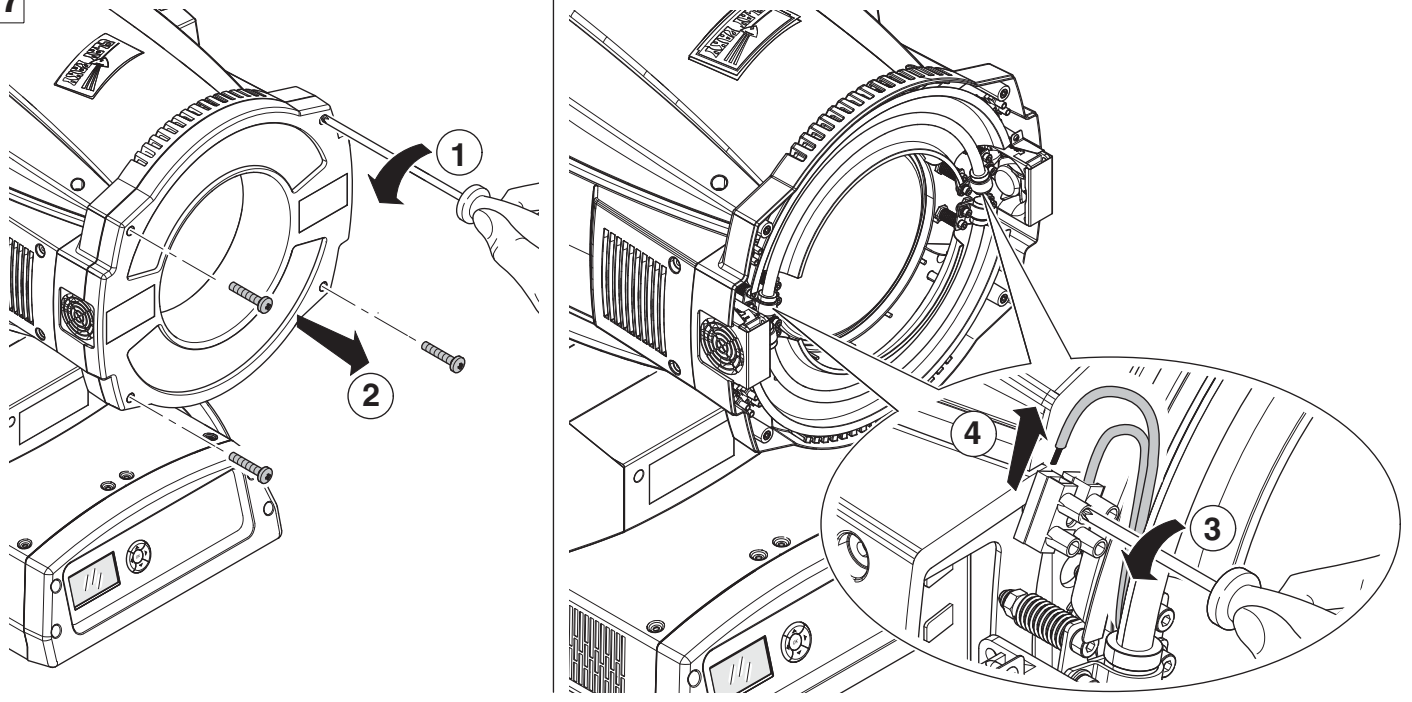


Lamp regulation - Fig. 16

To centre the lamp, turn the three adjusting screws as shown in the figure.



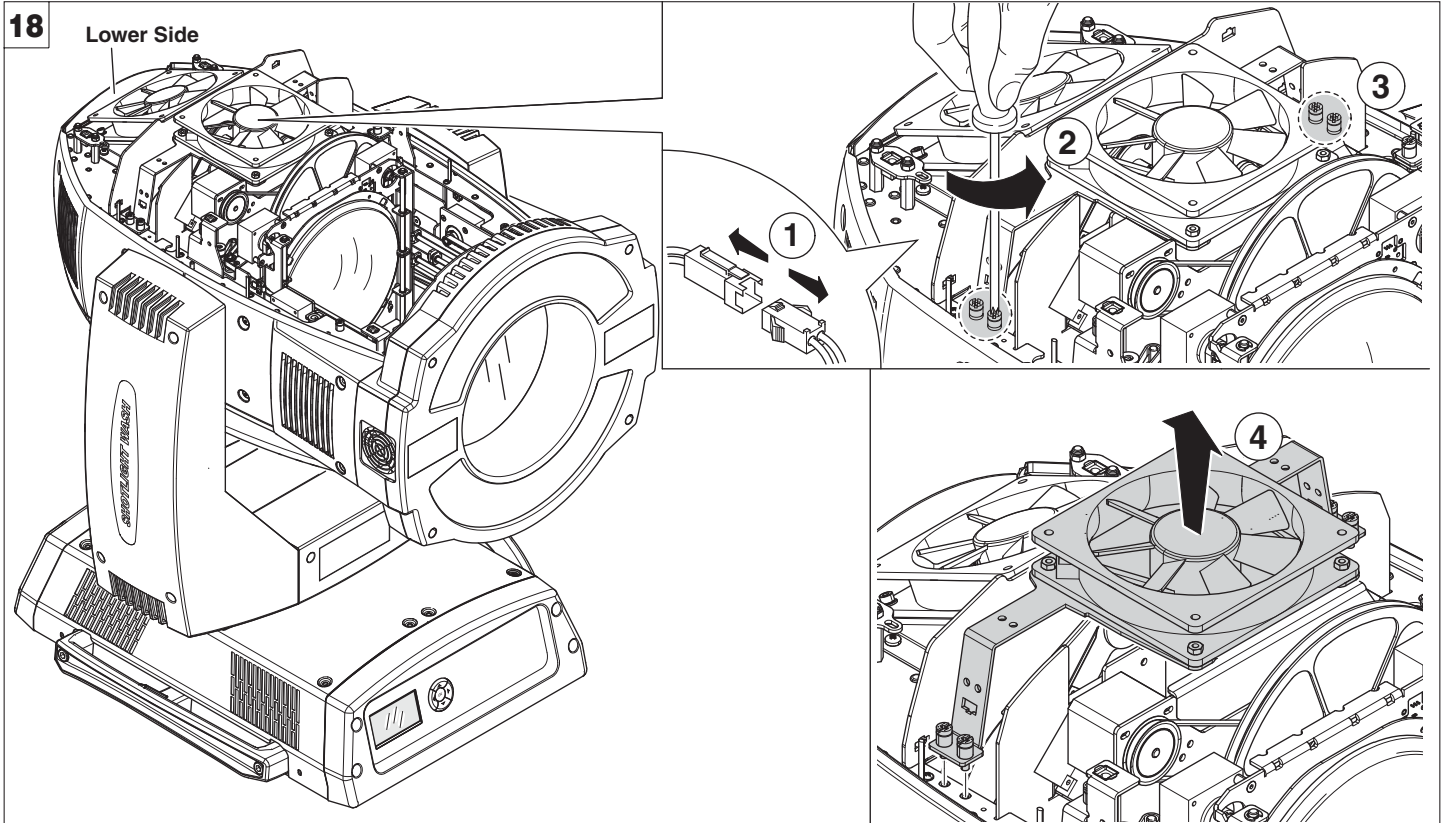
17



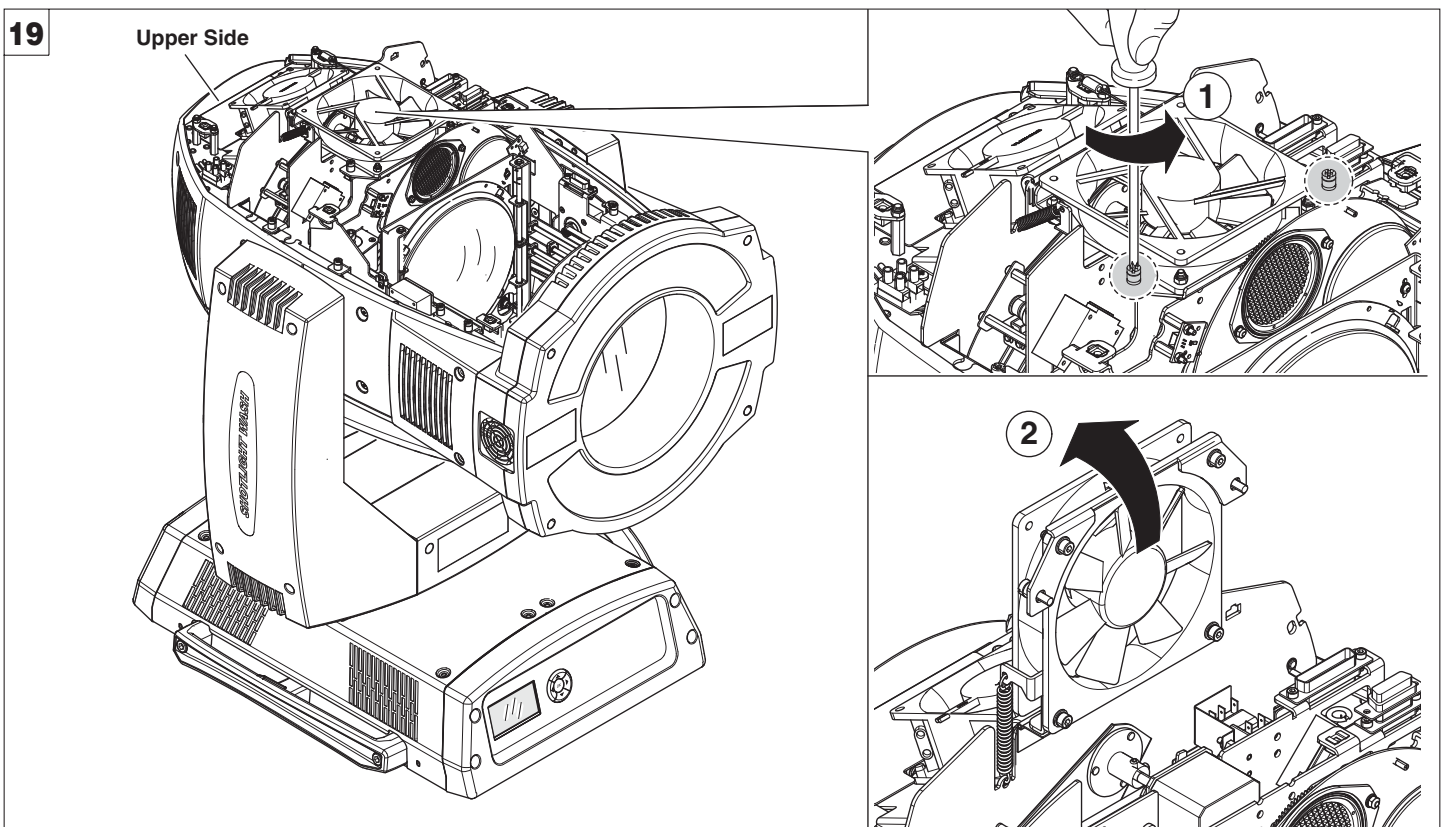
**Plused Xenon lamp change - Fig 17**

Take the new lamp out of its package and insert in the fitting.

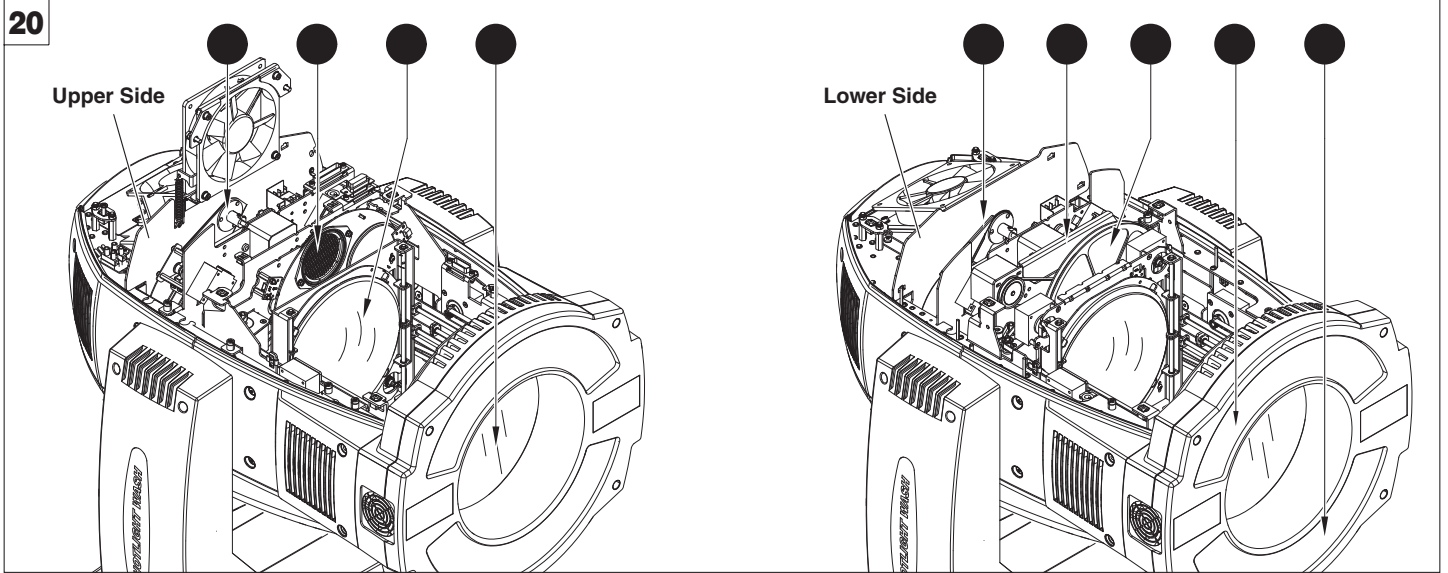
**WARNING: do not touch the lamp's envelope with bare hands. Should this happen, clean the bulb with a cloth soaked in alcohol and dry it with a clean, dry cloth.**



Fan support plate opening and closing (Lower side) - Fig. 18



Fan support plate opening and closing (Upper side) - Fig. 19

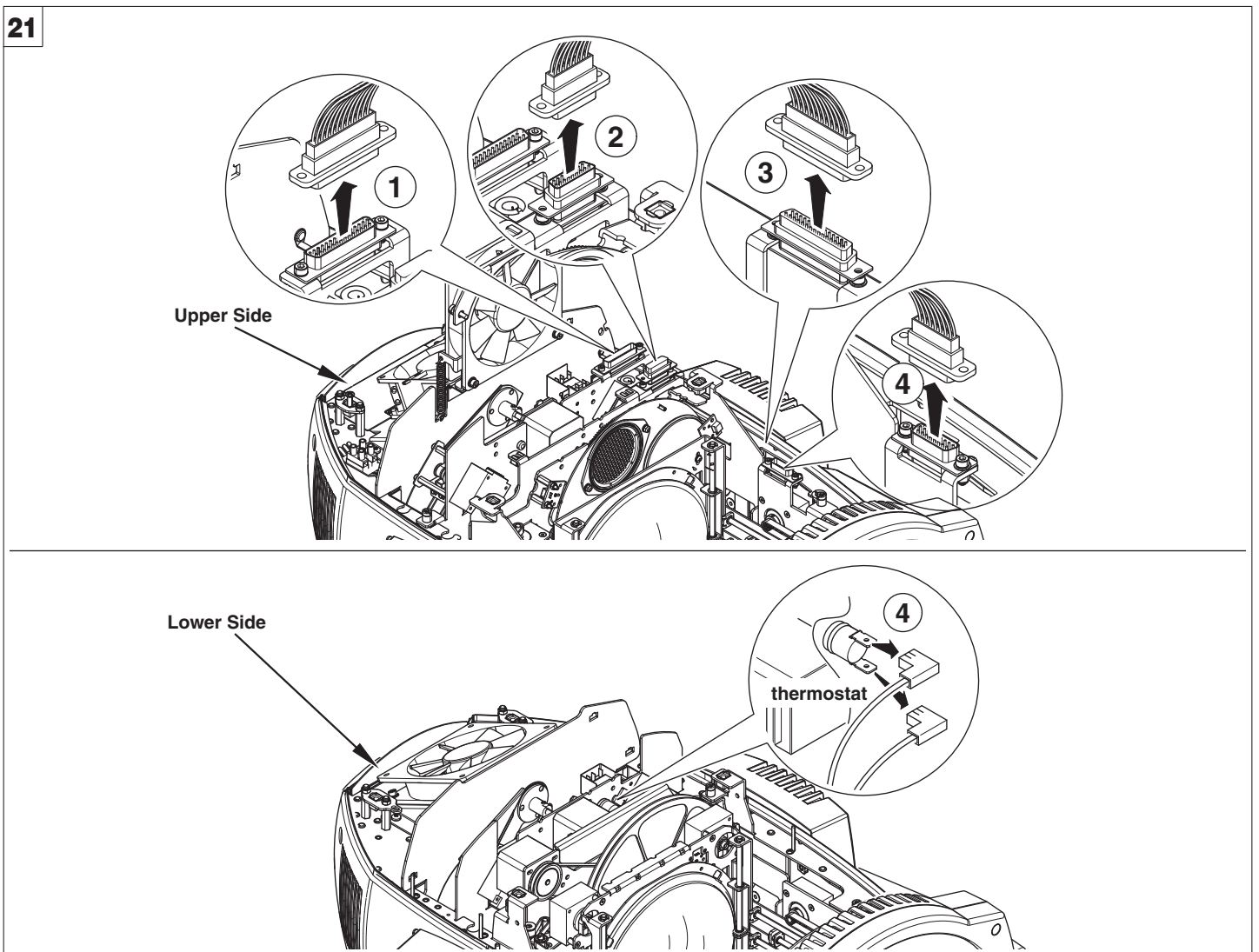


**Periodical cleaning - Fig. 20**

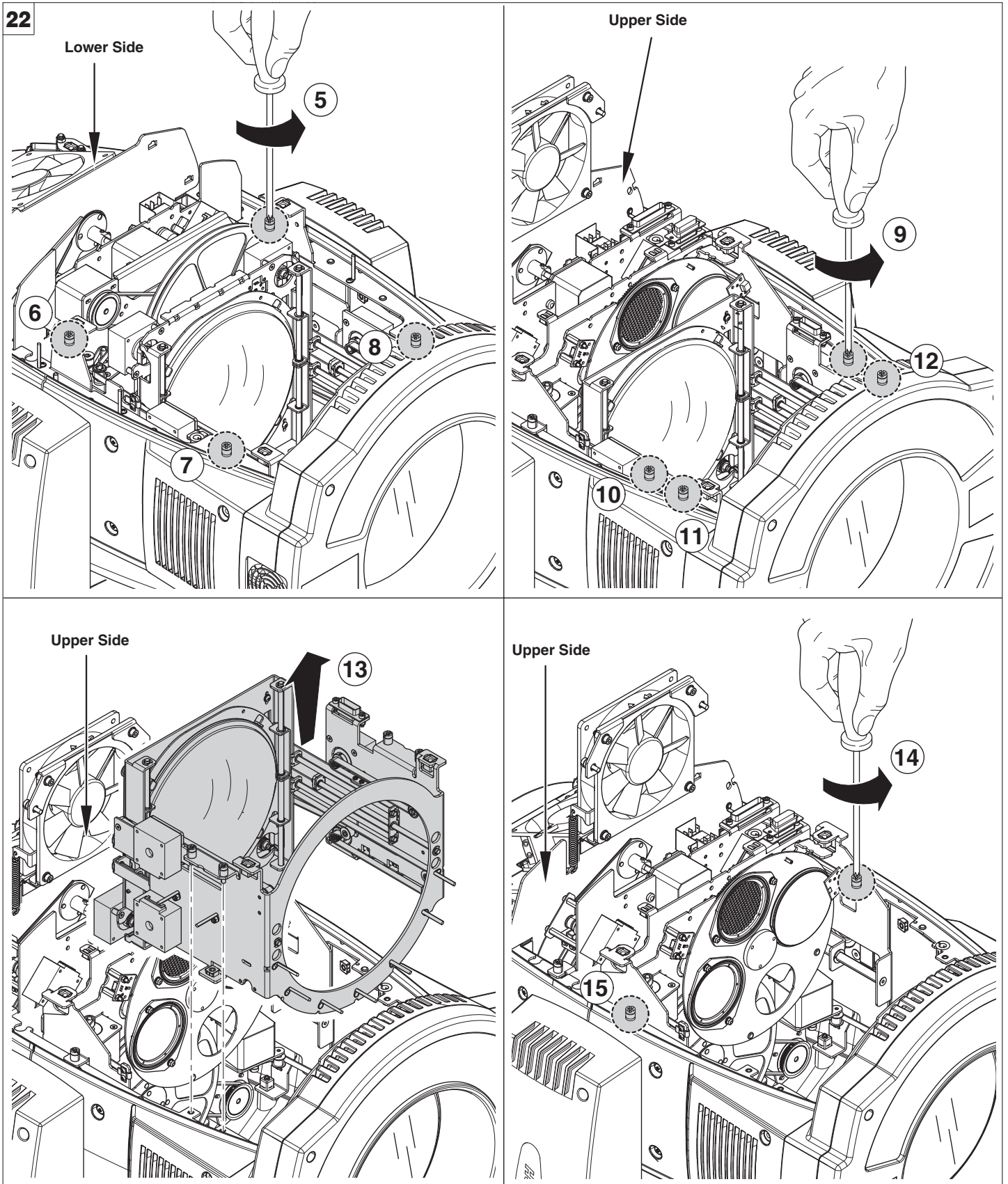
To ensure optimal operation and performance for a long time it is essential to periodically clean the parts subject to dust and grease deposits. The frequency with which the following operations are to be carried out depends on various factors, such as the amount of the effects and the quality of the working environment (air humidity, presence of dust, salinity, etc.).

Use a soft cloth dampened with any detergent liquid for cleaning glass to remove the dirt from the reflectors, from the lenses and filters. It is recommended that the projector undergoes an annual service by a qualified technician for special maintenance involving at least the following operations:

- General cleaning of internal parts.
- Restoring lubrication of all parts subject to friction, using lubricants specifically supplied by Clay Paky.
- General visual check of the internal components, cabling, mechanical parts, etc.
- Electrical, photometric and functional checks; eventual repairs.



**Extraction of the effect modules: Preliminary operations - Fig. 21**

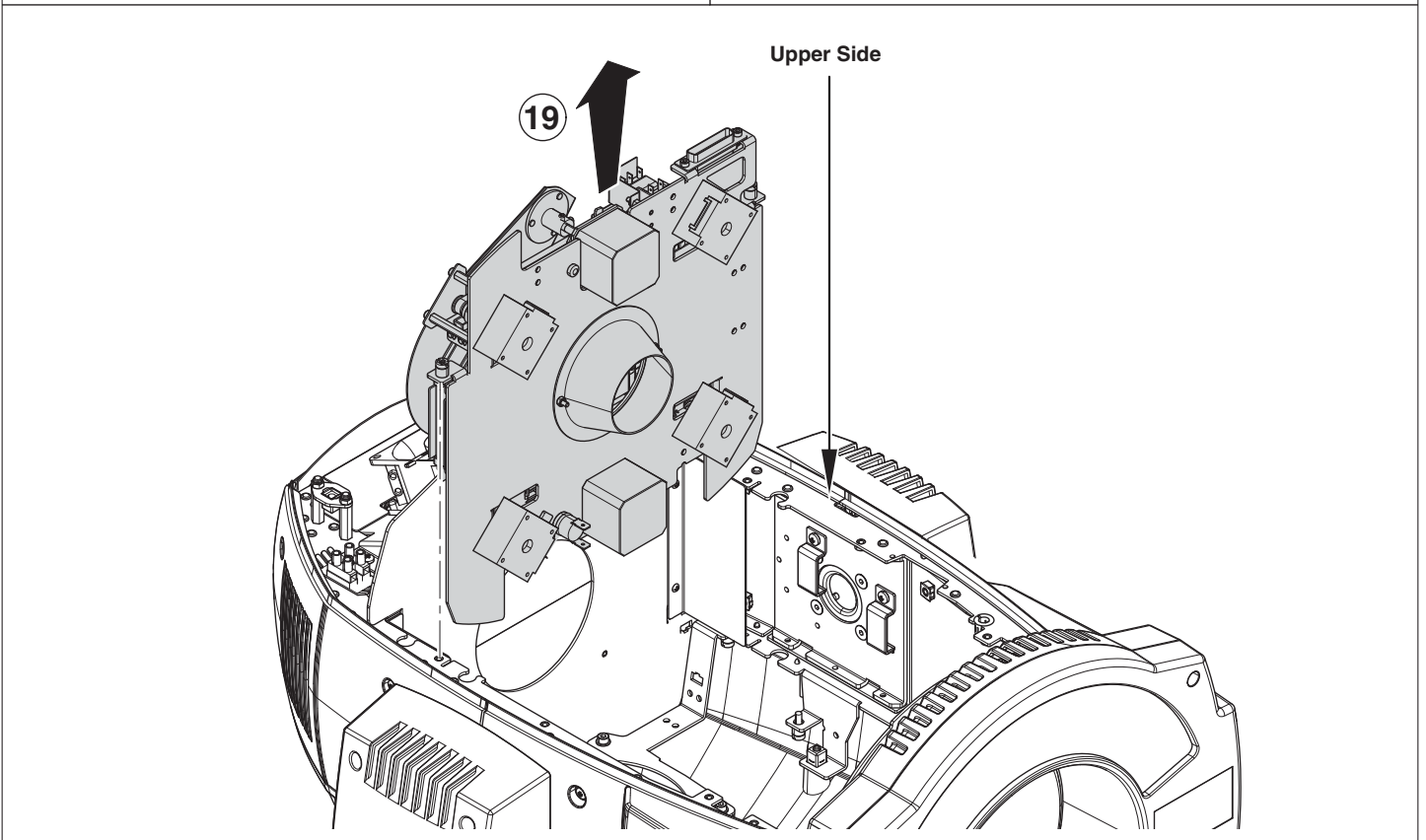
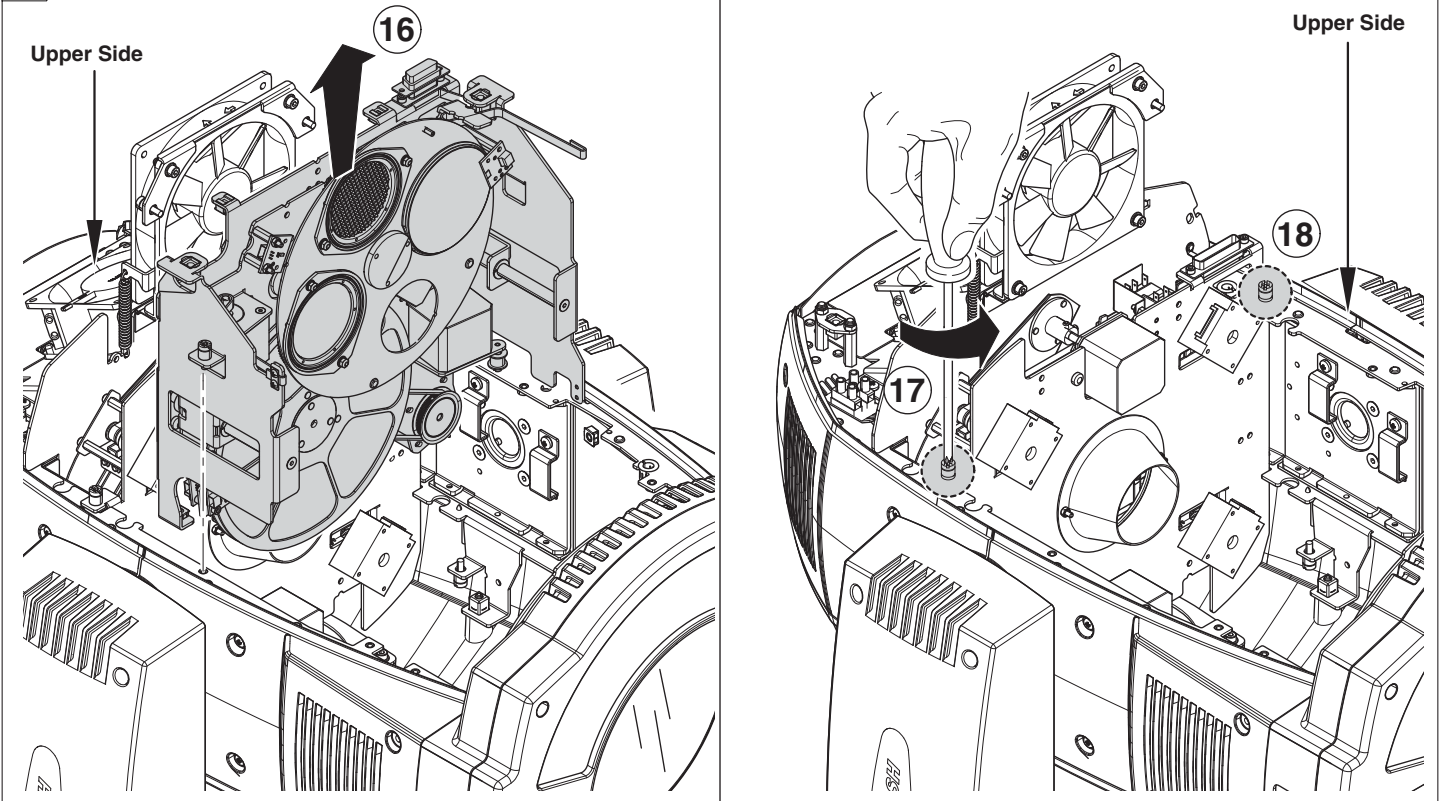


Extraction of the effect modules - Fig. 22

**IMPORTANT:** Grasp the modules using the support structure and not the details which could get damaged.

**Insertion of the effect modules:** Repeat the operations indicated in Fig. 20 and 21 in reverse order

23



Extraction of the effect modules - Fig 23

**IMPORTANT:** Grasp the modules using the support structure and not the details which could get damaged.

**Insertion of the effect modules:** Repeat the operations indicated in Fig. 20 and 21 in reverse order

## TECHNICAL INFORMATION

### Power supplies available

200-240V 50/60Hz

### Input power:

Wash: 2000VA

### Stroke:

- Typical current 12A
- Peak current 31.5A

### Lamp Wash:

Discharge lamp.

- Type HTI 1500W/60/P50-L Lok-it Osram (L10102)
- Cap PGJ50
- Colour temperature 6000 K
- Luminous flux 135000 lm
- Average life 750 h
- Any working position

### Lamp Strobe:

Lamp pulsed Xenon 1500W

- Type ER 9902 CPY [H] (L10203)
- Average life 500 h
- Any working position

### Motors:

21 stepper motors, operating with microsteps, totally microprocessor controlled.

### Optical unit:

Wash: Elliptic reflector with high luminous efficiency

Strobe: Special shape mirror reflector

### Channels:

Max 31 control channels.

### Inputs:

- DMX 512

### Movable body:

- Movement by means of two stepper motors, controlled by microprocessor.
- Automatic repositioning of PAN and TILT after accidental movement not controlled by control unit.
- Travel:
  - PAN = 540°
  - TILT = 252°
- Maximum speeds:
  - PAN = 6.8 (normal) / 5.3 (fast) 540°
  - TILT = 4.8 (normal) / 3.3 (fast) 252°
- Resolution:
  - PAN = 2.11°
  - PAN FINE = 0.008°
  - TILT = 0.98°
  - TILT FINE = 0.004°

### IP20 protection rating:

- Protected against the entry of solid bodies larger than 12mm (0.47").
- No protection against the entry of liquids.

### CE Marking:

In conformity with the European Union Low Voltage Directive 2006/95/CE and Electromagnetic compatibility Directive 2004/108/CE.

### Safety Devices:

- Bipolar circuit breaker with thermal protection.
- Automatic break in power supply in case of overheating or failed operation of cooling system.

### Cooling:

Forced ventilation with axial fans.

### Body:

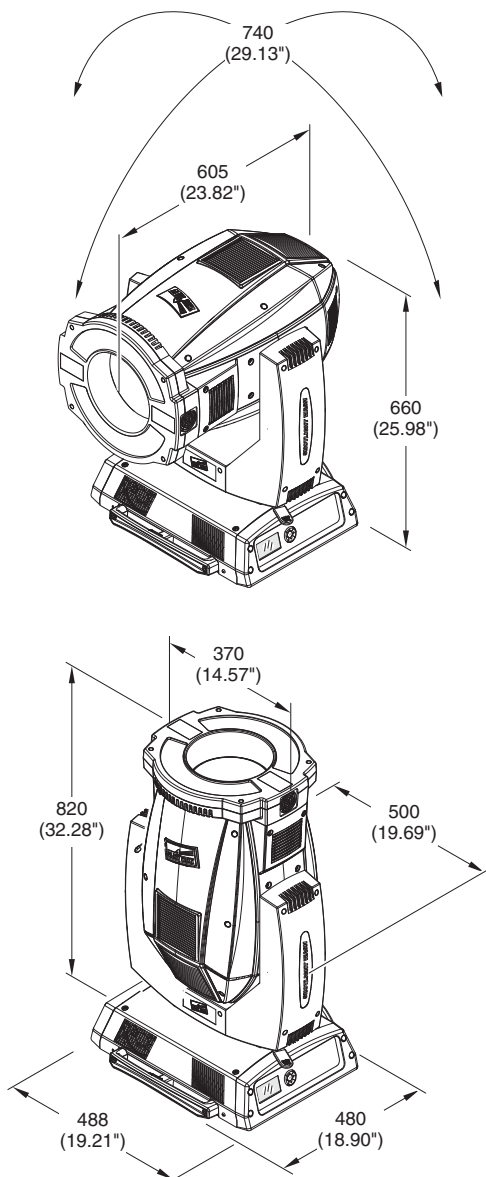
- Aluminium structure with die-cast plastic cover.
- Two side handles for transportation.
- Device locking PAN and TILT mechanisms for transportation and maintenance.

### Working position

Functioning in any position.

### Weights:

about 46,50 Kg.



## CAUSE AND SOLUTION OF PROBLEMS

THE PROJECTOR WILL NOT SWITCH ON			PROBLEMS
ELECTRONICS NON-OPERATIONAL			
DEFECTIVE PROJECTION			
REDUCED LUMINOSITY			
POSSIBLE CAUSES			CHECKS AND REMEDIES
●		No mains supply.	Check the power supply voltage.
●	●	Lamp exhausted or defective.	Replace the lamp. (See instructions).
	●	Signal transmission cable faulty or disconnected.	Replace the cables.
	●	Incorrect addressing.	Check addresses (see instructions).
	●	Fault in the electronic circuits.	Call an authorised technician.
	●	Lenses or reflector broken	Call an authorised technician.
	● ●	Dust or grease deposited.	Clean (see instructions).

## CHANNEL FUNCTION

### SHOTLIGHT WASH

CHANNEL	CHANNEL MODE	
	SYNCHRONIZED	INDEPENDENT
1	FLASH INTENSITY	FLASH INTENSITY LAMP 1
2	FLASH DURATION	FLASH DURATION LAMP 1
3	FLASH RATE	FLASH RATE LAMP 1
4	LAMP POWER	FLASH INTENSITY LAMP 2
5	MACRO FLASH	FLASH DURATION LAMP 2
6	CYAN	FLASH RATE LAMP 2
7	MAGENTA	LAMP POWER
8	YELLOW	MACRO FLASH
9	C.T.O	CYAN
10	COLOUR WHEEL 1	MAGENTA
11	COLOUR WHEEL 2	YELLOW
12	MACRO COLOURS	C.T.O
13	STOP / STROBE	COLOUR WHEEL 1
14	DIMMER	COLOUR WHEEL 2
15	DIMMER FINE	MACRO COLOURS
16	BEAM SHAPER CHANGE	STOP / STROBE
17	BEAM SHAPER ROTATION	DIMMER
18	ZOOM	DIMMER FINE
19	PAN	BEAM SHAPER CHANGE
20	PAN FINE	BEAM SHAPER ROTATION
21	TILT	ZOOM
22	TILT FINE	PAN
23	FUNCTION	PAN FINE
24	RESET	TILT
25	LAMP CONTROL (with Option "Lamp DMX" ON)	TILT FINE
26	PAN - TILT TIME (synchronized + vector mode)	FUNCTION
27	COLOUR TIME (synchronized + vector mode)	RESET
28	BEAM TIME (synchronized + vector mode)	LAMP CONTROL (with Option "Lamp DMX" ON)
29		PAN - TILT TIME (independent + vector mode)
30		COLOUR TIME (independent + vector mode)
31		BEAM TIME (independent + vector mode)

NOTE: On conclusion of resetting in case of absence of DMX signal, Pan & Tilt move to the "Home" position (Pan 50% - Tilt 50%) all the others channels stay at 0%.

- FLASH INTENSITY - channel 1 (synchronized mode)
- FLASH INTENSITY LAMP 1 - channel 1 (independent mode)
- FLASH INTENSITY LAMP 2 - channel 4 (independent mode)



BIT	%	EFFECT
255	100	MAXIMUM INTENSITY
.....	.....	
0	0.0	MINIMUM INTENSITY

- FLASH DURATION - channel 2 (synchronized mode)
- FLASH DURATION LAMP 1 - channel 2 (independent mode)
- FLASH DURATION LAMP 2 - channel 5 (independent mode)



BIT	%	EFFECT
255	100	MAXIMUM DURATION
.....	.....	
0	0.0	MINIMUM DURATION

- LAMP POWER - channel 4 (synchronized mode)
- channel 7 (independent mode)



BIT	%	EFFECT
255	100	LAMP 1 1500W POWER
.....	.....	
128	50	LAMP 1 & 2 750W POWER
.....	.....	
0	0.0	LAMP 2 1500W POWER

- FLASH RATE - channel 3 (synchronized mode)
- FLASH RATE LAMP 1 - channel 3 (independent mode)
- FLASH RATE LAMP 2 - channel 6 (independent mode)

BIT	%	EFFECT			
		Frequency (Hz)		BPM	
		50 Hz	60 Hz	50 Hz	60 Hz
225-255	88,2-100	12,500	15,000	750,0	900,0
208-224	81,7-88,0	8,333	10,000	500,0	600,0
198-207	77,5-81,2	6,250	7,500	375,0	450,0
190-197	74,2-77,0	5,000	6,000	300,0	360,0
183-189	71,7-74,0	4,167	5,000	250,0	300,0
176-182	69,0-71,2	3,571	4,286	214,3	257,1
171-175	67,0-68,7	3,125	3,750	187,5	225,0
166-170	65,0-66,7	2,778	3,333	166,7	200,0
161-165	63,2-64,7	2,500	3,000	150,0	180,0
157-160	61,7-63,0	2,273	2,727	136,4	163,6
153-156	60,0-61,2	2,083	2,500	125,0	150,0
149-152	58,2-59,5	1,923	2,308	115,4	138,5
146-148	57,0-58,0	1,786	2,143	107,1	128,6
142-145	55,5-56,7	1,667	2,000	100,0	120,0
139-141	54,2-55,0	1,563	1,875	93,8	112,5
136-138	53,2-54,0	1,471	1,765	88,2	105,9
133-135	52,0-53,0	1,389	1,667	83,3	100,0
130-132	51,0-51,7	1,316	1,579	78,9	94,7
127-129	49,7-50,5	1,250	1,500	75,0	90,0
124-126	48,7-49,5	1,190	1,429	71,4	85,7
122-123	48,0-48,2	1,136	1,364	68,2	81,8
119-121	46,7-47,5	1,087	1,304	65,2	78,3
117-118	46,0-46,2	1,042	1,250	62,5	75,0
114-116	44,7-45,5	1,000	1,200	60,0	72,0
112-113	44,0-44,2	0,962	1,154	57,7	69,2
110-111	43,2-43,7	0,926	1,111	55,6	66,7
107-109	42,0-43,0	0,893	1,071	53,6	64,3
105-106	41,2-41,7	0,862	1,034	51,7	62,1
103-104	40,5-41,0	0,833	1,000	50,0	60,0
101-102	39,5-40,0	0,806	0,968	48,4	58,1
99-100	38,7-39,0	0,781	0,938	46,9	56,3
97-98	38,0-38,2	0,758	0,909	45,5	54,5
95-96	37,0-37,5	0,735	0,882	44,1	52,9
93-94	36,2-36,7	0,714	0,857	42,9	51,4
91-92	35,5-36,0	0,694	0,833	41,7	50,0
89-90	34,7-35,0	0,676	0,811	40,5	48,6
87-88	34,0-34,2	0,658	0,789	39,5	47,4
85-86	33,2-33,7	0,641	0,769	38,5	46,2
83-84	32,5-33,0	0,625	0,750	37,5	45,0
82	32,0	0,610	0,732	36,6	43,9
80-81	31,2-31,7	0,595	0,714	35,7	42,9
78-79	30,5-31,0	0,581	0,698	34,9	41,9
77	30,0	0,568	0,682	34,1	40,9
75-76	29,5-29,7	0,556	0,667	33,3	40,0
73-74	28,7-29,0	0,543	0,652	32,6	39,1
72	28,2	0,532	0,638	31,9	38,3
70-71	27,5-28,0	0,521	0,625	31,3	37,5
68-69	26,7-27,0	0,510	0,612	30,6	36,7
67	26,2	0,500	0,600	30,0	36,0
65-66	25,5-26,0	0,490	0,588	29,4	35,3
64	25,0	0,481	0,577	28,8	34,6
62-63	24,2-24,7	0,472	0,566	28,3	34,0
61	24,0	0,463	0,556	27,8	33,3
59-60	23,2-23,7	0,455	0,545	27,3	32,7
58	23,0	0,446	0,536	26,8	32,1
56-57	22,0-22,5	0,439	0,526	26,3	31,6
55	21,7	0,431	0,517	25,9	31,0
54	21,2	0,424	0,508	25,4	30,5
52-53	20,5-21,0	0,417	0,500	25,0	30,0
51	20,0	0,410	0,492	24,6	29,5
49-50	19,0-19,5	0,403	0,484	24,2	29,0
48	18,7	0,397	0,476	23,8	28,6
47	18,2	0,391	0,469	23,4	28,1
45-46	17,5-18,0	0,385	0,462	23,1	27,7
44	17,0	0,379	0,455	22,7	27,3
43	16,7	0,373	0,448	22,4	26,9
41-42	16,0-16,2	0,368	0,441	22,1	26,5
40	15,5	0,362	0,435	21,7	26,1
39	15,0	0,357	0,429	21,4	25,7
38	14,7	0,352	0,423	21,1	25,4
36-37	14,0-14,2	0,347	0,417	20,8	25,0
35	13,7	0,342	0,411	20,5	24,7
34	13,2	0,338	0,405	20,3	24,3
33	13,0	0,333	0,400	20,0	24,0
31-32	12,0-12,5	0,329	0,395	19,7	23,7
30	11,7	0,325	0,390	19,5	23,4
29	11,2	0,321	0,385	19,2	23,1
28	11,0	0,316	0,380	19,0	22,8
27	10,5	0,313	0,375	18,8	22,5
26	10,0	0,309	0,370	18,5	22,2
24-25	9,5-9,7	0,305	0,366	18,3	22,0
23	9,0	0,301	0,361	18,1	21,7
22	8,7	0,298	0,357	17,9	21,4
21	8,2	0,294	0,353	17,6	21,2
20	8,0	0,291	0,349	17,4	20,9
19	7,5	0,287	0,345	17,2	20,7
18	7,0	0,284	0,341	17,0	20,5
17	6,7	0,281	0,337	16,9	20,2
15-16	6,0-6,2	0,278	0,333	16,7	20,0
14	5,5	0,275	0,330	16,5	19,8
13	5,0	0,272	0,326	16,3	19,6
12	4,7	0,269	0,323	16,1	19,4
11	4,2	0,266	0,319	16,0	19,1
10	4,0	0,263	0,316	15,8	18,9
9	3,7	0,260	0,313	15,6	18,8
8	3,2	0,258	0,309	15,5	18,6
7	3,0	0,255	0,306	15,3	18,4
6	2,5	0,253	0,303	15,2	18,2
5	2,0	0,250	0,300	15,0	18,0
0-4	0,0-1,7	OFF	OFF	OFF	OFF



• **MACRO FLASH**

- channel 5 (synchronized mode)
- channel 8 (independent mode)

BIT	%	EFFECT
253 - 255	99.0 - 100	SINGLE SHOT
240 - 252	94.0 - 98.7	MACRO OFF
226 - 239	88.7 - 93.7	RANDOM StrobeWShutter
212 - 225	83.2 - 88.2	RANDOM Strobe
198 - 211	77.5 - 83.0	RANDOM SawWave
184 - 197	72.0 - 77.0	RANDOM FadeInOut
170 - 183	66.7 - 71.7	RANDOM StrobeFlash
156 - 169	61.2 - 66.2	RANDOM BurstOnBlack
142 - 155	55.5 - 61.0	RANDOM FlashAndBlack
128 - 141	50.0 - 55.0	RANDOM UpDown
114 - 127	44.7 - 49.7	MACRO OFF
100 - 113	39.0 - 44.2	SawWaveUpDown
86 - 99	33.7 - 38.7	SawWave
72 - 85	28.2 - 33.2	FadeInOut
58 - 71	23.0 - 28.0	StrobeFlash
44 - 57	17.0 - 22.5	BurstOnBlack
30 - 43	11.7 - 16.7	FlashAndBlack
16 - 29	6.2 - 11.2	UpDown
12 - 15	4.7 - 6.0	ShutterSync Inverted
8 - 11	3.2 - 4.2	ShutterSync Normal
0 - 7	0.0 - 3.0	MACRO OFF

• **COLOUR MIXING - channel 6 - 7 - 8 (synchronized mode) channel 9 - 10 - 11 (independent mode)**

Operation with option color mixing: RGB

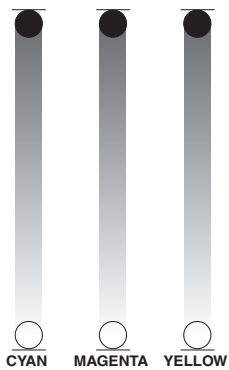


BIT	%	EFFECT
255	100	COLOUR EXCLUDED
0	0.0	COLOUR INSERTED

0% - 100% = 0.4 sec

**IMPORTANT:** The lamp dim to half power 1 second after all the 3 channels stay at 0% level. The lamp goes back to full power when the channels level is put higher than 0%.

Operation with option color mixing: CMY



BIT	%	EFFECT
255	100	COLOUR INSERTED
0	0.0	COLOUR EXCLUDED

0% - 100% = 0.4 sec

**IMPORTANT:** The lamp dim to half power 1 second after all the 3 channels stay at 100% level. The lamp goes back to full power when the channels level is put lower than 100%.

• **C.T.O. - channel 9 (synchronized mode) - 12 (independent mode)**



BIT	%	EFFECT
255	100	FILTER INSERTED
0	0.0	FILTER EXCLUDED

0% - 100% = 0.4 sec

• **COLOUR WHEEL 1 - channel 10 (synchronized mode) - 13 (independent mode)**



BIT	%	EFFECT
255	100	FAST ROTATION 160 rpm
128	50.0	SLOW ROTATION 0.2rpm
117	46.0	RED
97	38.0	UV FILTER
77	30.0	FULL GREEN
58	23.0	AQUAMARINE
39	15.0	ORANGE
20	8.0	BLUE
0	0.0	WHITE

• **COLOUR WHEEL 2 - channel 11 (synchronized mode) - 14 (independent mode)**



BIT	%	EFFECT
255	100	FAST ROTATION 160 rpm
128	50.0	SLOW ROTATION 0.2rpm
117	46.0	GREEN
97	38.0	PINK
77	30.0	CTB 8000
58	23.0	LIGHT GREEN
39	15.0	LAVENDER
20	8.0	CTO 3200
0	0.0	WHITE

• **STOP / STROBE - channel 13 (synchronized mode) - 16 (independent mode)**



BIT	%	EFFECT
252 - 255	98.7 - 100	OPEN
239 - 251	93.7 - 98.2	RANDOM FAST STROBE
226 - 238	88.7 - 93.2	RANDOM MEDIUM STROBE
213 - 225	83.7 - 88.2	RANDOM SLOW STROBE
208 - 212	81.7 - 83.2	OPEN
207	81.2	FAST PULSATION (12 pulse/sec)
108	42.5	SLOW PULSATION (1 pulse/sec)
104 - 107	41.0 - 42.0	OPEN
103	40.5	FAST STROBE (12 flash/sec)
4	1.7	SLOW STROBE (1 flash/sec)
0 - 3	0.0 - 1.2	CLOSED

**IMPORTANT:** The lamp dim to half power 1 second after the channel stay at 0% level. The lamp goes back to full power when the channel level is put higher than 0%.

• **DIMMER - channel 14 (synchronized mode) - 17 (independent mode)**



BIT	%	EFFECT
255	100	DIMMER OPEN
0	0.0	DIMMER CLOSE

0% - 100% = 0.33sec

The lamp is linearly dimmed from full power to half power electronically and mechanically from half power to off.

• MACRO COLOURS - channel 12 (synchronized mode) - 15 (independent mode)

COLOR NAME	BIT	%	ROSCO CODE	LEE CODE	CYAN BIT	MAGENTA BIT	YELLOW BIT	CTO BIT	WHEEL 1 BIT	WHEEL 2 BIT
Unused Range	186-255	73.0-100	-	-	-	-	-	-	-	-
CP Marine	184-185	72,0-72,5	N/A	N/A	255	83	0	0	0	117
CP Brown 2	182-183	71,2-71,7	N/A	N/A	0	121	0	255	39	117
CP Brown 1	180-181	70,5-71,0	N/A	N/A	0	103	0	0	39	117
CP Light green 2	178-179	69,7-70,0	N/A	N/A	0	0	0	0	0	117
CP Light green 1	176-177	69,0-69,5	N/A	N/A	0	0	0	0	0	58
CP Red 3	174-175	68,2-68,7	N/A	N/A	0	255	255	255	117	39
CP Red 2	172-173	67,5-68,0	N/A	N/A	0	255	0	0	0	117
CP Red 1	170-171	66,7-67,0	N/A	N/A	0	255	255	255	0	39
CP Deep magenta	168-169	66,0-66,2	N/A	N/A	0	255	0	255	0	39
CP Pink	166-167	65,0-65,5	N/A	N/A	0	0	0	255	0	39
CP Ice	164-165	64,2-64,7	N/A	N/A	0	0	0	0	58	20
CP Electric blue	162-163	63,7-64,0	N/A	N/A	255	0	0	0	58	39
CP Lavender	160-161	63,0-63,2	N/A	N/A	0	0	0	0	58	39
CP Green	158-159	62,0-62,5	N/A	N/A	255	0	0	0	0	117
CP Gold 2	156-157	61,2-61,7	N/A	N/A	0	71	255	255	0	20
CP Gold 1	154-155	60,5-61,0	N/A	N/A	0	0	0	255	0	20
CP Gold	152-153	59,5-60,0	N/A	N/A	0	0	0	255	0	0
Magenta	150-151	58,7-59,0	113	113	0	255	125	255	0	41
Light Lavender	148-149	58,0-58,2	52	52	60	84	0	87	0	0
Half CT straw	146-147	57,0-57,5	442	442	0	0	132	110	0	0
Lighter blue	144-145	56,2-56,7	353	353	136	0	134	80	0	0
Glacier blue	142-143	55,5-56,0	352	352	144	0	121	80	0	0
Fuschia pink	140-141	54,7-55,0	345	345	80	122	0	118	0	0
Mallard green	138-139	54,0-54,2	325	325	255	0	0	0	81	0
Jade	136-137	53,2-53,7	323	323	87	0	134	0	61	0
3/4 CT Orange	134-135	52,5-53,0	285	285	0	0	128	126	0	0
3/4 CTB	132-133	51,7-52,0	281	281	81	0	87	83	0	0
Half minus green	130-131	51,0-51,2	248	248	0	55	0	133	0	0
Minus green	128-129	50,0-50,5	247	247	0	77	0	133	0	0
1/4 CTO	126-127	49,5-49,7	206	206	0	48	116	98	0	0
1/2 CTO	124-125	48,7-49,0	205	205	0	0	99	103	0	0
Full CT Orange	122-123	48,0-48,2	204	204	0	58	131	158	0	0
1/4 CTB	120-121	47,0-47,5	203	203	22	42	104	84	0	0
1/2 CTB	118-119	46,2-46,7	202	202	81	29	95	89	0	0
Full CTB	116-117	45,5-46,0	201	201	89	22	61	72	0	0
Alice Blue	114-115	44,7-45,0	197	197	128	79	0	74	0	0
Congo Blue	112-113	44,0-44,2	181	181	255	255	0	163	0	0
Dark Lavender	110-111	43,2-43,7	180	180	125	128	0	88	0	0
Chrome Orange	108-109	42,5-43,0	179	179	0	69	255	255	0	0
Lagoon blue	106-107	41,7-42,0	172	172	132	0	112	0	58	0
Deep Lavender	104-105	41,0-41,2	170	170	85	101	0	118	0	0
Lilac tint	102-103	40,0-40,5	169	169	49	51	74	107	0	0
Daylight Blue	100-101	39,0-39,5	165	165	139	0	101	102	0	0
Flame red	98-99	38,2-38,7	164	164	0	255	255	255	0	0
Bastard amber	96-97	37,5-38,0	162	162	0	22	102	137	0	0
Deep Orange	94-95	36,7-37,0	158	158	0	104	255	255	0	0
Pink	92-93	36,0-36,2	157	157	0	113	1	224	0	0
Pale rose	90-91	35,0-35,5	154	154	0	32	54	129	0	0
Pale Gold	88-89	34,2-34,7	152	152	0	0	102	128	0	0
Bright rose	86-87	33,7-34,0	148	148	0	255	1	255	0	0
Apricot	84-85	33,0-33,2	147	147	0	71	67	255	0	0
Bright Blue	82-83	32,0-32,5	141	141	199	0	130	76	0	0
Primary green	80-81	31,2-31,7	139	139	0	0	255	71	77	0
Light green	78-79	30,5-31,0	121	121	0	0	255	0	58	0
Pale green	76-77	29,7-30,0	138	138	77	0	154	52	0	0
Special Lavender	74-75	29,0-29,5	137	137	95	83	33	110	0	0
Pale lavender	72-73	28,2-28,7	136	136	73	80	0	117	0	0
Deep golden amber	70-71	27,5-28,0	135	135	0	159	255	255	0	0
Golden amber	68-69	26,7-27,0	134	134	0	92	136	255	0	0
Medium blue	66-67	26,0-26,2	132	132	255	100	0	87	0	57
Marine blue	64-65	25,0-25,5	131	131	0	0	112	0	58	0
Bright pink	62-63	24,2-24,7	128	128	0	255	1	169	0	0
Mauve	60-61	23,7-24,0	126	126	119	255	0	255	0	0
Fern Green	58-59	23,0-23,2	122	122	0	0	0	87	0	116
Leaf green	56-57	22,0-22,5	121	121	111	0	205	0	0	0
Deep Blue	54-55	21,2-21,7	120	120	255	0	0	114	0	40
Dark blue	52-53	20,5-21,0	119	119	255	113	0	113	0	0
Light blue	50-51	19,5-20,0	118	118	168	0	129	80	0	0
Steel blue	48-49	18,7-19,0	117	117	117	0	128	110	0	0
Medium blue green	46-47	18,0-18,2	116	116	132	0	131	0	58	0
Peacock blue	44-45	17,0-17,5	115	115	77	0	110	0	77	0
Dark pink	42-43	16,2-16,7	111	111	0	108	1	164	0	0
Light Salmon	40-41	15,5-16,0	109	109	0	95	83	152	0	0
English rose	38-39	14,7-15,0	108	108	0	59	54	170	0	0
Light rose	36-37	14,0-14,2	107	107	0	85	29	170	0	0
Primary red	34-35	13,2-13,7	106	182	0	0	0	0	117	0
Orange	32-33	12,5-13,0	105	105	0	104	210	255	0	0
Deep amber	30-31	11,7-12,0	104	104	0	0	179	155	0	0
Straw	28-29	11,0-11,2	103	103	0	0	121	107	0	0
Light amber	26-27	10,0-10,5	102	102	0	0	170	132	0	0
Yellow	24-25	9,5-9,7	101	101	0	0	255	106	0	0
Spring yellow	22-23	8,7-9,0	100	100	0	0	188	83	0	0
Dark Yellow Green	20-21	8,0-8,2	90	90	182	0	255	67	0	0
Lime green	18-19	7,0-7,5	88	88	90	0	196	74	0	0
Just Blue	16-17	6,2-6,7	79	79	255	86	0	100	0	0
Tokyo Blue	14-15	5,5-6,0	71	71	255	170	0	109	57	0
Sky blue	12-13	4,7-5,0	068	068	237	55	92	105	0	0
Pale blue	10-11	4,0-4,2	063	063	97	0	115	102	0	0
Lavender	8-9	3,2-3,7	058	058	132	130	0	123	0	0
Bright Red	6-7	2,5-3,0	026	026	0	255	0	255	37	0
Med Yellow	4-5	1,7-2,0	010	010	0	0	212	80	0	0
Med bastard amber	2-3	1,0-1,2	004	004	0	0	115	89	0	0
Random Macro Color (only for Macro effects)	1	0,5	-	-	-	-	-	-	-	-
Unused Range	0	0,0	-	-	-	-	-	-	-	-

• DIMMER FINE - channel 15 (synchronized mode) - 18 (independent mode)



BIT	%	EFFECT
255	100	
0	0.0	

• BEAM SHAPER CHANGE - channel 16 (synchronized mode) - 19 (independent mode)



BIT	%	EFFECT
192-255	75.0-100	BEAM SHAPER 3
128-191	50.0-74.7	BEAM SHAPER 2
64-127	25.0-49.7	BEAM SHAPER 1
0 - 63	0.0 - 24.7	WHITE

• BEAM SHAPER ROTATION - channel 17 (synchronized mode) - 20 (independent mode)



BIT	%	EFFECT
255	100	FAST ROTATION (120 rpm)
193	75.5	SLOW ROTATION (3 rph)
191 - 192	74.7 - 75.0	STOP
190	74.2	SLOW ROTATION (3 rph)
128	50.0	FAST ROTATION (120 rpm)
127	49.7	POSITION 540°
105	41.7	POSITION 450°
84	33.0	POSITION 360°
63	24.7	POSITION 270°
42	16.2	POSITION 180°
21	8.2	POSITION 90°
0	0.0	POSITION 0°

• ZOOM - channel 18 (synchronized mode) - 21 (independent mode)

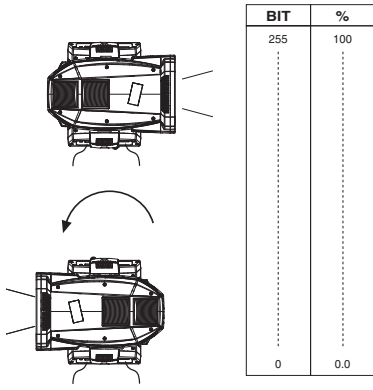


BIT	%	EFFECT
255	100	WIDE BEAM
0	0.0	NARROW BEAM

• **PAN - channel 19 (synchronized mode) - 22 (independent mode)**

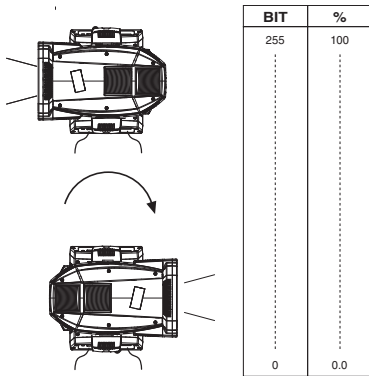
Operation with option *InvertPan*  $\diamond$  *Off*

(Tilt conventionally represented at 14% and option *Invert Tilt*  $\diamond$  *Off*)



Operation with option *InvertPan*  $\diamond$  *On*

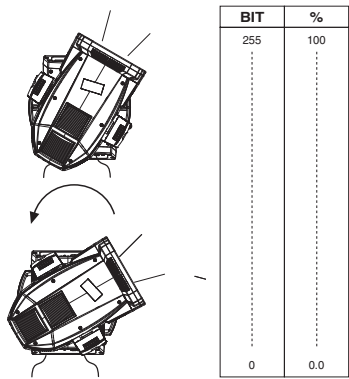
(Tilt conventionally represented at 14% and option *Invert Tilt*  $\diamond$  *Off*)



• **PAN FINE - channel 20 (synchronized mode) - 23 (independent mode)**

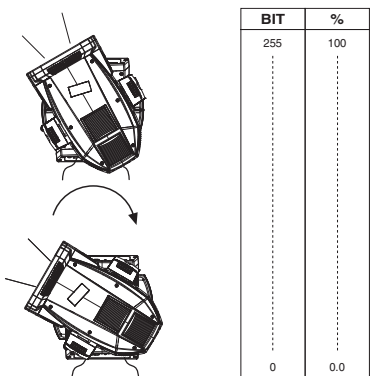
Operation with option *InvertPan*  $\diamond$  *Off*

(Tilt conventionally represented at 14% and option *Invert Tilt*  $\diamond$  *Off*)



Operation with option *InvertPan*  $\diamond$  *On*

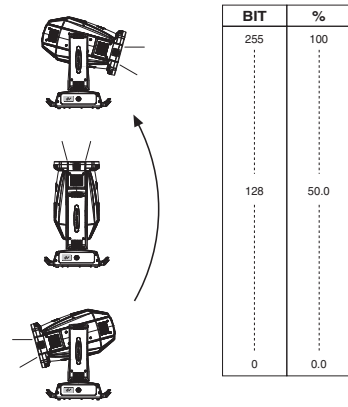
(Tilt conventionally represented at 14% and option *Invert Tilt*  $\diamond$  *Off*)



• **TILT - channel 21 (synchronized mode) - 24 (independent mode)**

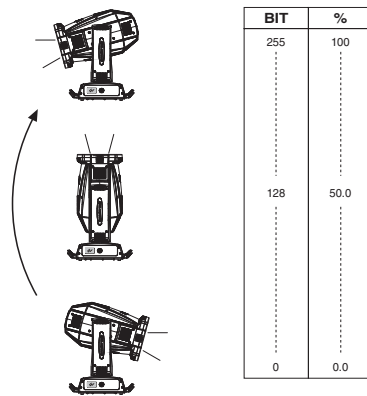
Operation with option *Invert Tilt*  $\diamond$  *Off*

(Pan conventionally represented at 0% and option *Invert Pan*  $\diamond$  *Off*)



Operation with option *Invert Tilt*  $\diamond$  *On*

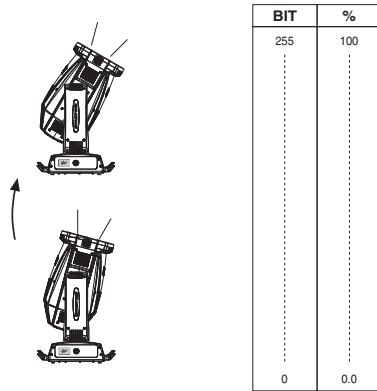
(Pan conventionally represented at 0% and option *Invert Pan*  $\diamond$  *Off*)



• **TILT FINE - channel 22 (synchronized mode) - 25 (independent mode)**

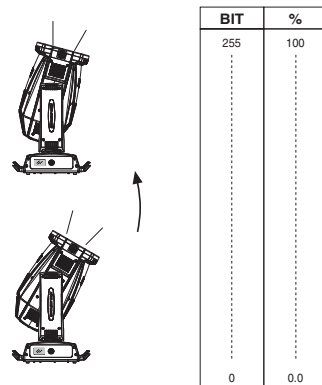
Operation with option *Invert Tilt*  $\diamond$  *Off*

(Pan conventionally represented at 0% and option *Invert Pan*  $\diamond$  *Off*)



Operation with option *Invert Tilt*  $\diamond$  *On*

(Pan conventionally represented at 0% and option *Invert Pan*  $\diamond$  *Off*)



• **FUNCTION - channel 23 (synchronized mode) - 26 (independent mode)**

BIT	%	EFFECT	
255	100	UNUSED RANGE	
⋮	⋮		
63	24.7		
51-62	20.0-24.2		DIMMER CURVE FUNCTION
38-50	14.7-19.5		
25-37	9.7-14.2	PAN-TILT FUNCTION	
12-24	4.7-9.5		FAST (Default)
0-11	0.0-4.2	UNUSED RANGE	

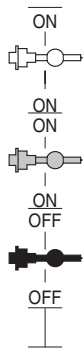
The functions are activated passing through unused range and staying 5 seconds in necessary level.

• **RESET - channel 24 (synchronized mode) - 27 (independent mode)**

BIT	%	EFFECT
255	100	COMPLETE RESET
⋮	⋮	Complete reset is activated passing through the unused range and staying 5 seconds in complete reset levels.
128	50.0	COMPLETE RESET
127	49.7	PAN / TILT RESET
⋮	⋮	Pan / Tilt reset is activated passing through the unused range and staying 5 seconds in Pan / Tilt reset levels.
77	30.0	PAN / TILT RESET
76	29.7	EFFECTS RESET
⋮	⋮	Effects reset is activated passing through the unused range and staying 5 seconds in Effects reset levels.
26	10.0	EFFECTS RESET
25	9.7	UNUSED RANGE
0	0.0	UNUSED RANGE

• **LAMP CONTROL (only with option LAMP DMX On)  
channel 25 (synchronized mode) - 28 (independent mode)**

**IMPORTANT:** Spotlight Wash is not provided with hot restrike igniter



BIT	%	EFFECT
255	100	LAMP ON (FULL POWER)
⋮	⋮	Lamp ignition after 5 s in full power levels. Immediate transition from half to full power.
180	70.5	LAMP ON (FULL POWER)
179	70.0	LAMP ON (HALF POWER)
⋮	⋮	Immediate transition from full to half power. Lamp ignition not allowed in half power.
101	39.5	LAMP ON (HALF POWER)
100	39.0	LAMP OFF
⋮	⋮	Lamp switch off passing through the unused range and staying 5 s in Lamp OFF levels.
26	10.0	LAMP OFF
25	9.7	UNUSED RANGE
0	0.0	UNUSED RANGE

## TIMING CHANNELS

Timing Channel	Channel function
Pan - Tilt time	Pan – Tilt – (Pan Fine – Tilt Fine)
Colour time	CMY – C.T.O. – Color wheel
Beam time	Dimmer – Zoom

## TIME TABLE

BIT	Seconds	BIT	Seconds	BIT	Seconds	BIT	Seconds	BIT	Seconds	BIT	Seconds
0	Full	43	8.6	86	24	129		172		216	
1	0.2	44	8.8	87		130	41	173	58	217	170
2	0.4	45	9	88		131		174		218	
3	0.6	46	9.2	89	25	132	42	175	59	219	180
4	0.8	47	9.4	90		133		176		220	
5	1	48	9.6	91	26	134	43	177	60	221	190
6	1.2	49	9.8	92		135		178		222	
7	1.4	50	10	93	27	136	44	179	65	223	200
8	1.6	51	10.2	94		137		180		224	
9	1.8	52	10.4	95	28	138	45	181	70	225	210
10	2	53	10.6	96		139		182		226	
11	2.2	54	11	97	29	140	46	183	75	227	220
12	2.4	55	12	98		141		184		228	
13	2.6	56	13	99	30	142	47	185	80	229	230
14	2.8	57	14	100	31	143	48	186	85	230	240
15	3	58	15	101		144		187		231	
16	3.2	59	16	102	32	145	49	188	90	232	250
17	3.4	60	17	103		146		189		233	
18	3.6	61	18	104	33	147	50	190	95	234	260
19	3.8	62	19	105		148		191		235	
20	4	63	20	106	34	149	51	192	100	236	270
21	4.2	64	21	107		150		193		237	
22	4.4	65	22	108	35	151	52	194	110	238	280
23	4.6	66	23	109		152		195		239	
24	4.8	67	24	110	36	153	53	196	120	240	290
25	5	68	25	111		154		197		241	
26	5.2	69	26	112	37	155	54	198	130	242	300
27	5.4	70	27	113		156		199		243	
28	5.6	71	28	114	38	157	55	200	140	244	280
29	5.8	72	29	115		158		201		245	
30	6	73	30	116	39	159	56	202	150	246	290
31	6.2	74	31	117		160		203		247	
32	6.4	75	32	118	40	161	57	204	160	248	310
33	6.6	76	33	119		162		205		249	
34	6.8	77	34	120	41	163	58	206	170	250	300
35	7	78	35	121		164		207		251	
36	7.2	79	36	122	42	165	59	208	180	252	310
37	7.4	80	37	123		166		209		253	
38	7.6	81	38	124	43	167	60	210	190	254	
39	7.8	82	39	125		168		211		255	Follow cue Data
40	8	83	40	126		169		212	150		
41	8.2	84	41	127		170		213			
42	8.4	85	42	128		171		214	160		
								215			

