CLAY PAKY®

www.claypaky.it

ALPHA WASH 1500

C61320

INSTRUCTION MANUAL

PRELIMINARY
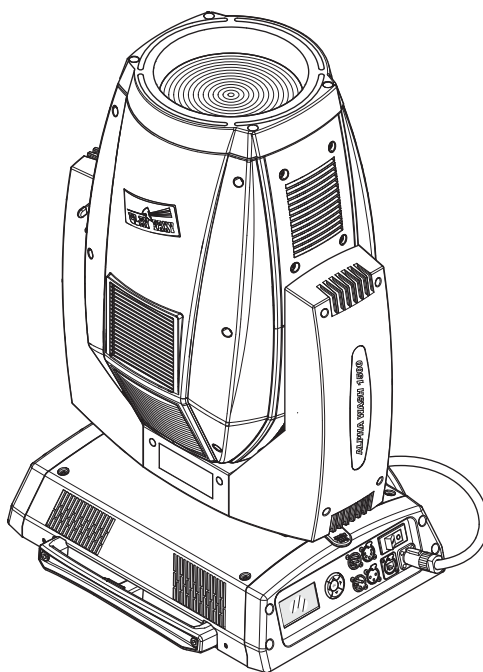
INDEX

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 (Ta) 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**

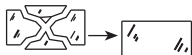---
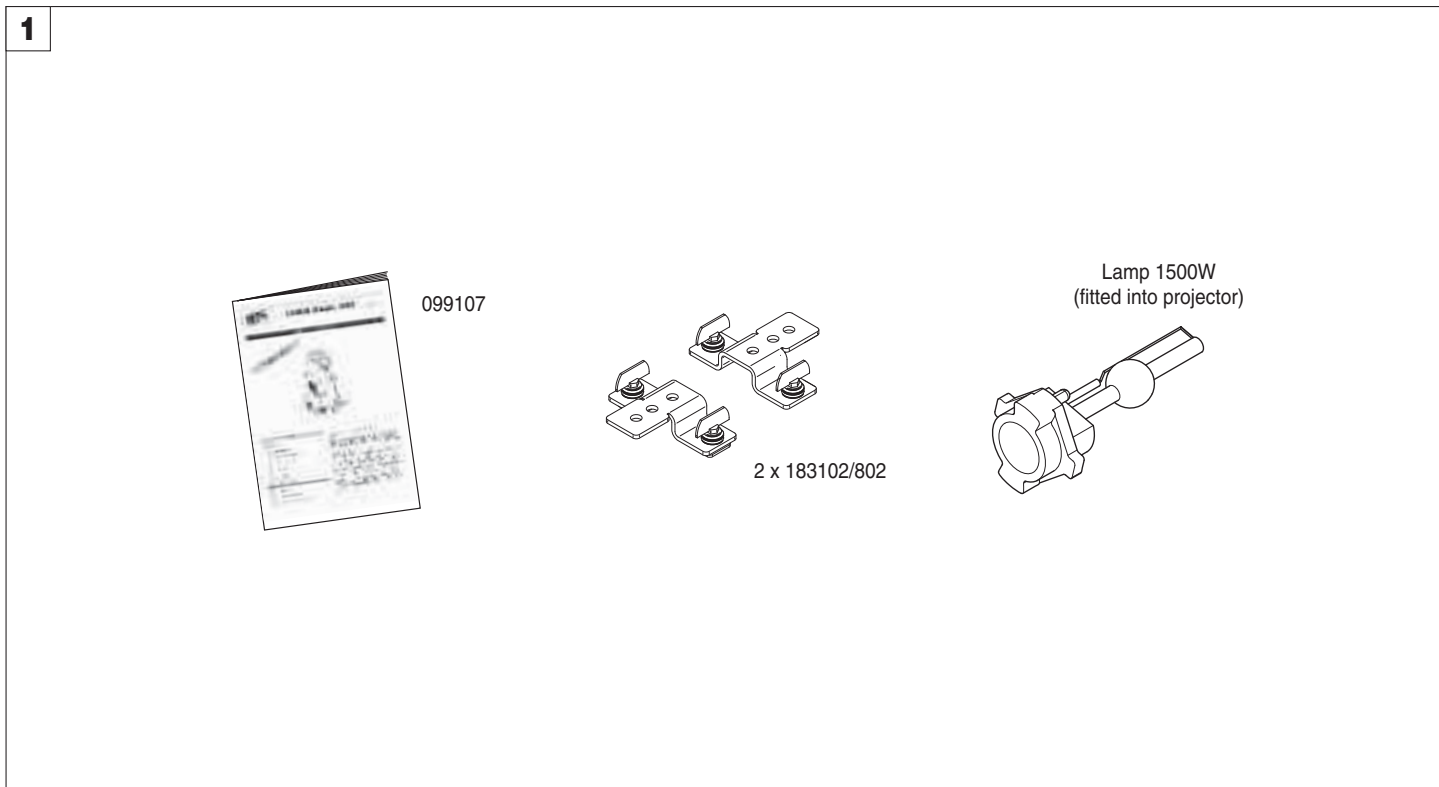
The products referred to in this manual conform to the European Community Directives to which they are subject:
• Low Voltage 2006/95/CE
• Electromagnetic Compatibility 2004/108/CE

1500W ⊂.....5.....m

F

t_a 40°C

IP20

t_c 150°C

Pb

CE

1

099107

Lamp 1500W
(fitted into projector)

2 x 183102/802

Packing contents - Fig. 1

2

UNLOCKED

LOCKED

90°

90°

90°

90°

3

45°

45°

45°

45°

45°

45°

LOCKED

UNLOCKED
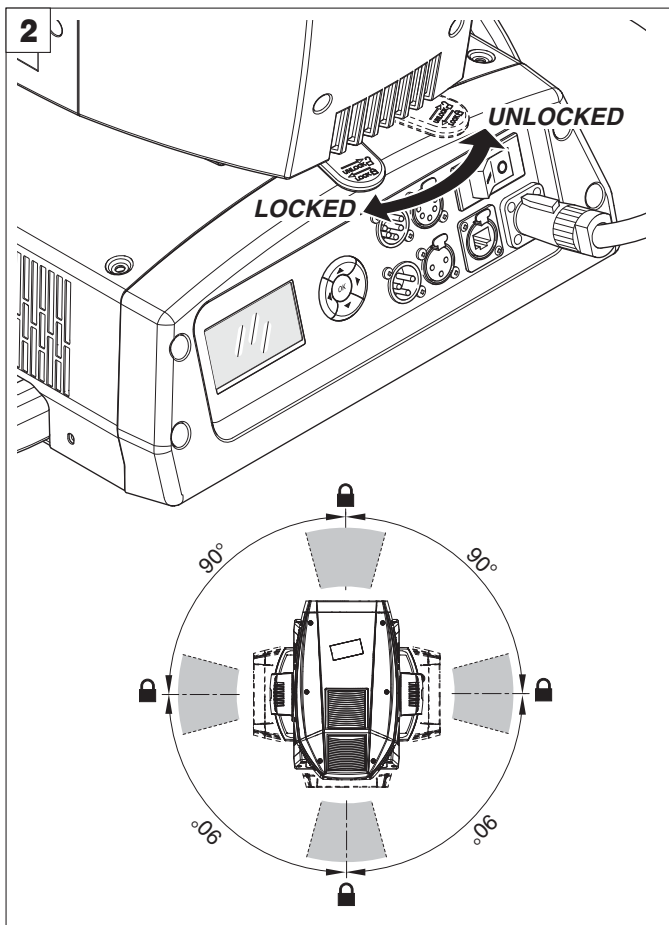
PAN Mechanism Lock and Release (every 90°) - Fig. 2
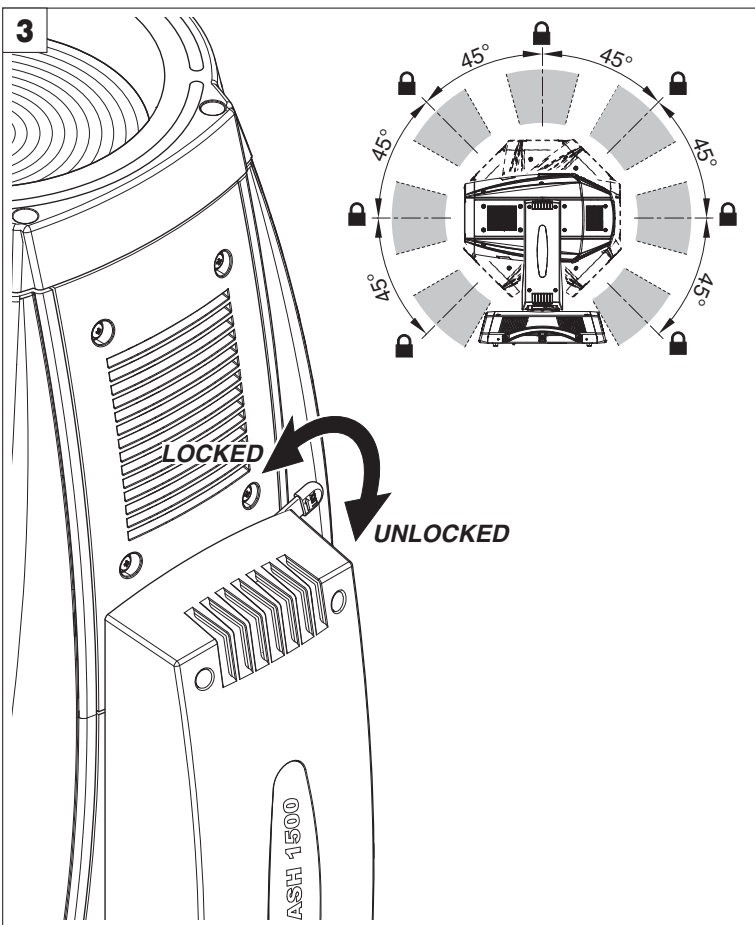
TILT Mechanism Lock and Release (every 45°) - Fig. 3
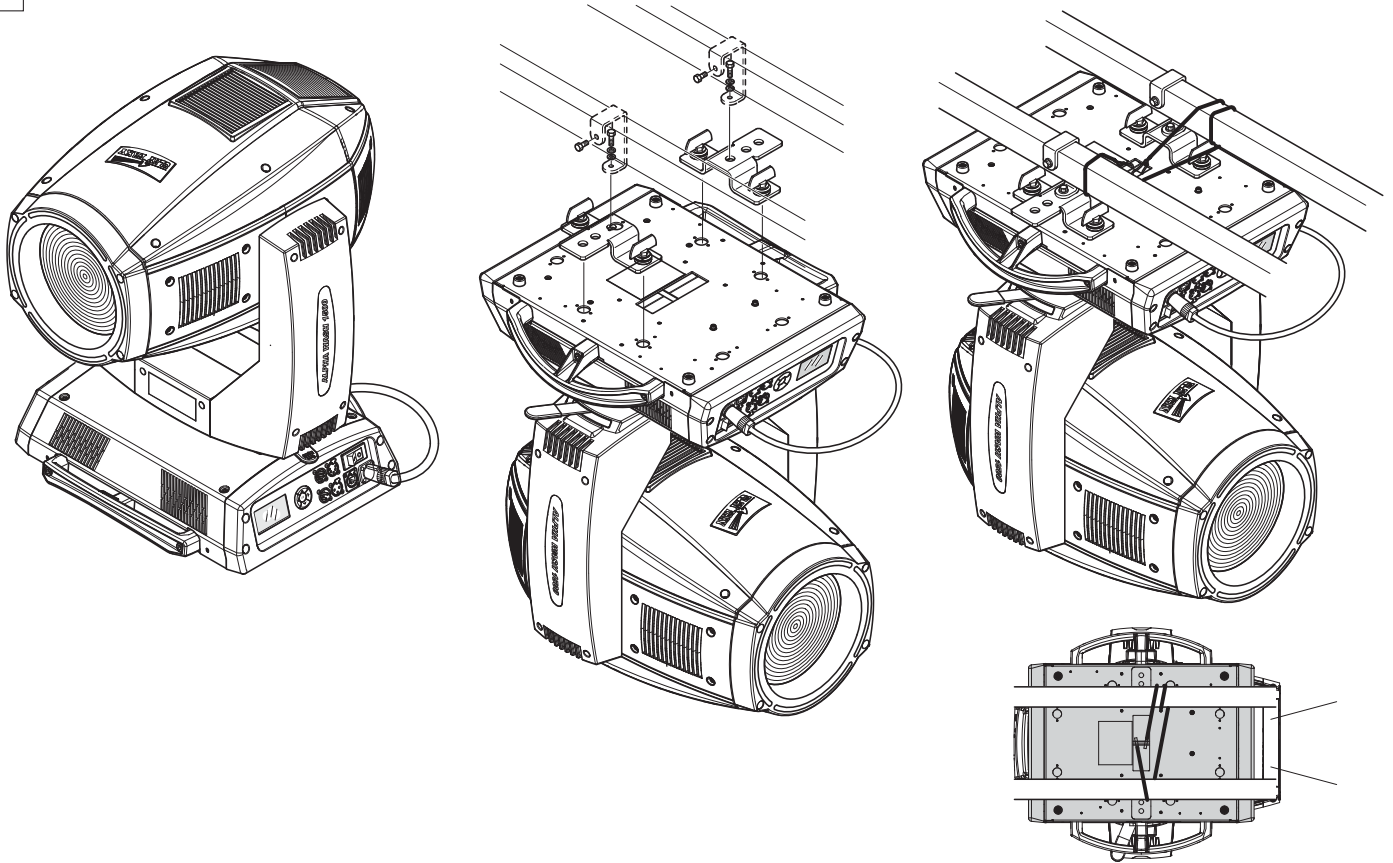
Installing the projector - Fig. 4
The projector can be installed on the floor resting on special rubber feet, on a truss or on the ceiling or wall.
WARNING: *with the exception of when the projector is positioned on the floor, the safety cable must be fitted. (Cod. 105041/003 available on request).*
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.
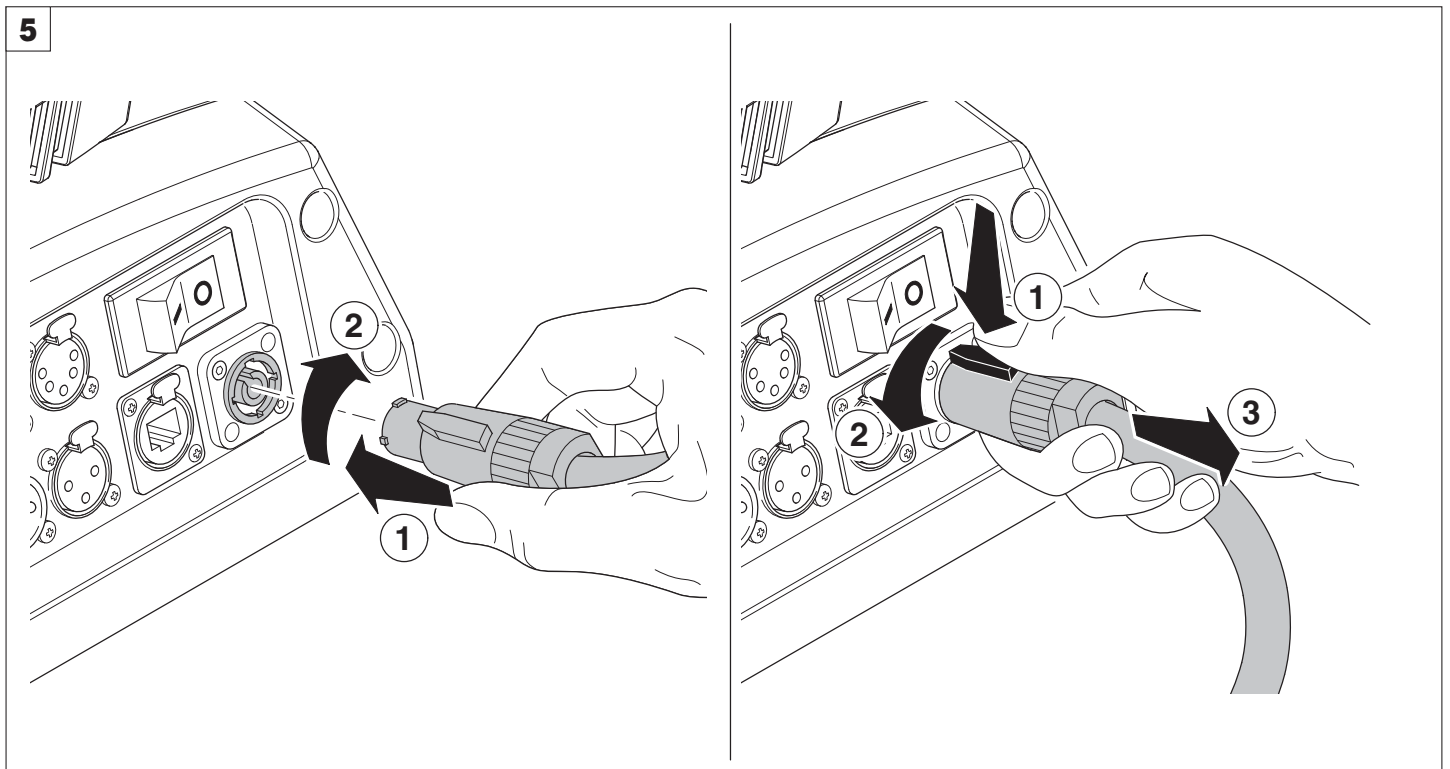
Connecting and disconnecting power cable - Fig. 5

6

Connecting to the mains supply - Fig. 6

7

DMX 512

DMX 512
5 PIN

SCREEN
— SIGNAL
+ SIGNAL

DMX 512
3 PIN

SIGNAL —
SIGNAL +
SCREEN

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 ma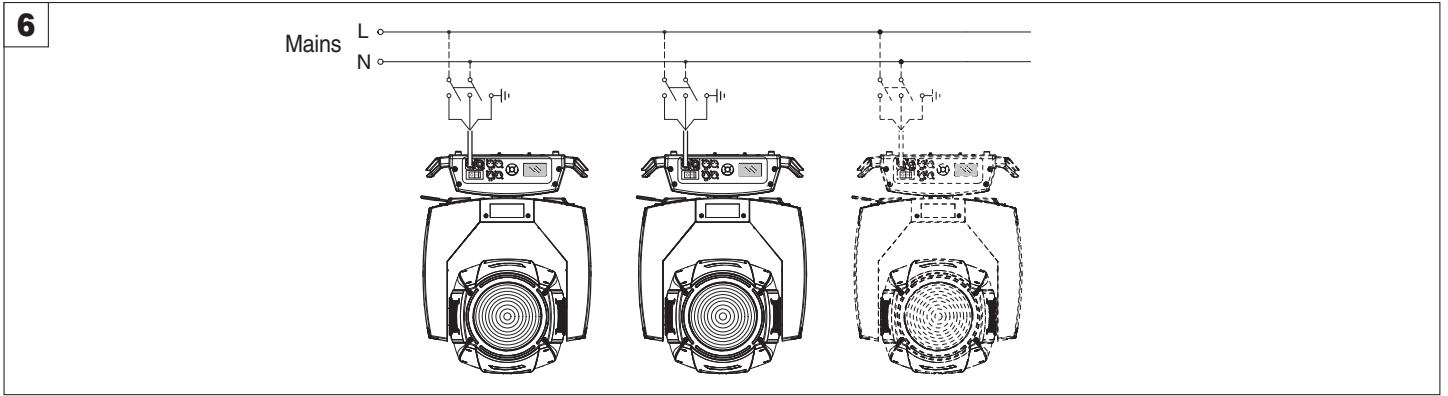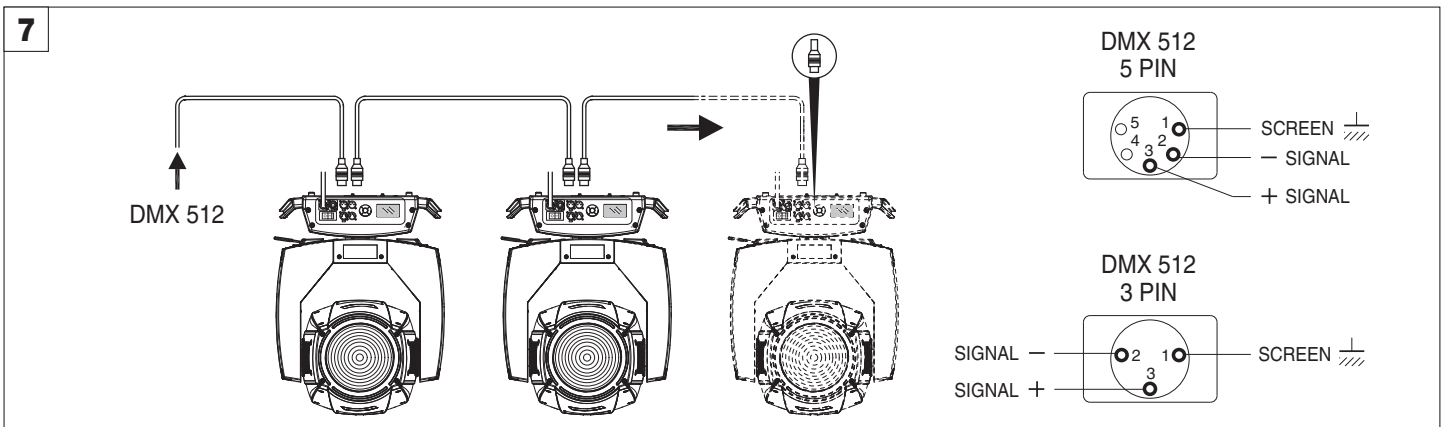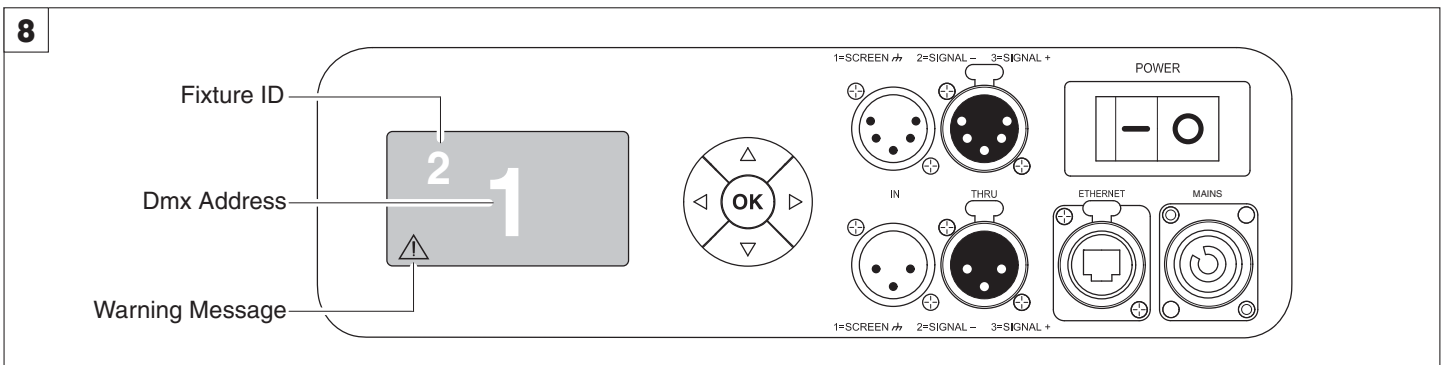le/female connectors. A terminating plug must be inserted into the last projector with a resistance of 120Ohm (minimum 1/4 W) between terminals 2 and 3.
IMPORTANT: The wires must not make contact with each other or with the metal casing of the connectors. The casing itself must be connected to the shield braid and to pin 1 of the connectors.

8

Fixture ID

Dmx Address

Warning Message

1=SCREEN 2=SIGNAL — 3=SIGNAL +

POWER

IN THRU ETHERNET MAINS

1=SCREEN 2=SIGNAL — 3=SIGNAL +

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:

CLAY PAKY	Model Alpha WASH 1500	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 than when this condition occurs, any possible value that has been modified but not yet confirmed with the ⊛ key will be cancelled.
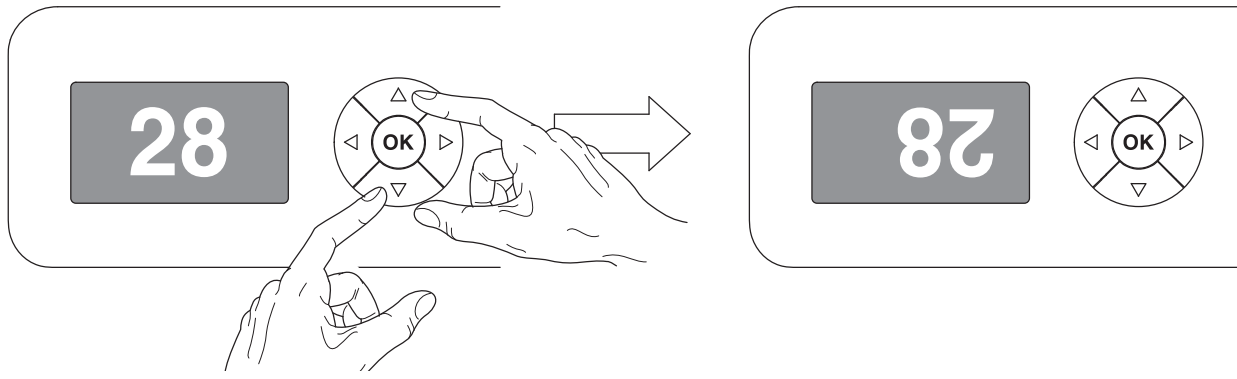
Reversal of the display - Fig. 9

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.

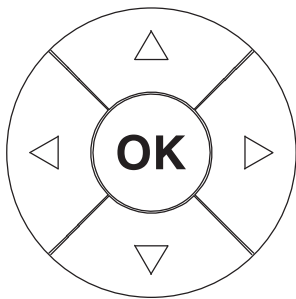## Functions of the buttons - Using the menu

(OK)	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 (OK) 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 functionning 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 (OK) 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 (OK) 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.

1

Set Up
- Dmx Address
- Channel Mode
- Fixture ID
- Ethernet Interface

Option

Information

Manual Control

Test

Advanced

2

Option
- Lamp Dmx
- Pan / Tilt
  - Invert Pan
  - Invert Tilt
  - Swap Pan-Tilt
  - Encoder Pan-Tilt
- Color
  - Color Mixing
  - Fixed Wheel Shortcut
  - Macro Color Adjustment
- Shutter
  - Shutter On Error
  - Dimmer On Shutter
- Silent Mode
  - Standard
  - Quiet
- Power Mode
  - 1500-1200 Full fan speed
  - 1200 Low fan speed
  - 1500-1200 Auto fan speed
- Display
- Setting
  - Default Preset
  - User Preset 1
  - User Preset 2
  - User Preset 3

3

Information
- System Errors
- Fixture Hours
- Lamp Hours
- Lamp Strikes
- System Version
- Board Diagnost.
- Dmx Monitor
- Fans Monitor
- Network params

4

Manual Control
- Lamp
- Reset
- Channel

5

Test
- Pan / Tilt
- Colour
- Beam
- Gobo
- All

6

Advanced
- Access code 1234
  - Upload Firmware
  - Setup Model
  - Calibration

Continue ➔

NOTE: On grey the default options

```
┌──────────┐   ┌──────────┐   ┌──────────────┐
│  Set Up  │───│   Dmx    │───│ Address xxx  │
└──────────┘   │ Address  │   └──────────────┘
     │         └──────────┘
     │
     │         ┌──────────┐   ┌──────────────┐
     │         │ Channel  │───│   Standard   │
     │         │   Mode   │   └──────────────┘
     │         └──────────┘   ┌──────────────┐
     │                    └───│    Vector    │
     │                        └──────────────┘
     │
     │         ┌──────────┐   ┌──────────────┐
     │         │ Fixture Id│──│  Value xxx   │
     │         └──────────┘   └──────────────┘
     │
     │         ┌──────────┐
     │         │ Ethernet │
     │         │ Interface│
     │         └──────────┘
     │                        ┌──────────────┐
     │                    ├───│   Control    │
     │                    │   │  Protocol    │
     │                    │   └──────────────┘
     │                    │
     │                    │   ┌──────────────┐
     │                    ├───│  Repeat on   │
     │                    │   │    DMX       │
     │                    │   └──────────────┘
     │                    │
     │                    │   ┌──────────────┐
     │                    └───│   Universe   │
     │                        └──────────────┘
```
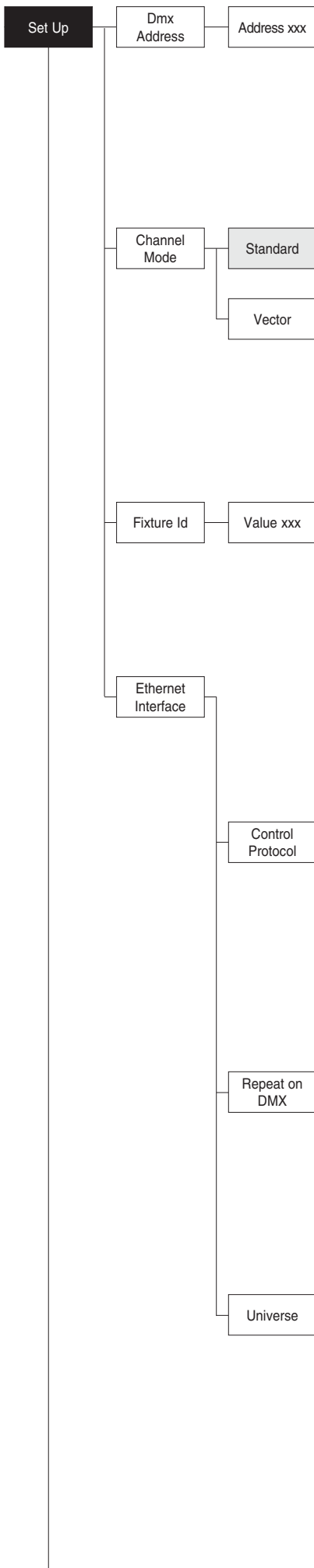
DMX ADDRESS

NOTE: without the DMX signal the Address (XXX) flashing
Allows you to select the DMX ADDRESS
1) Press ⓞⓚ - the current DMX Adress appear on the display.
2) Use the UP ⬆, DOWN ⬇, RIGHT ▶ keys to plan the DMX Address.
3) Press ⓞⓚ to confirm the selection or LEFT ◀ to keep current settings.

CHANNEL MODE
Allows you to select a channel arrangement from the two available.
1) Press ⓞⓚ - the current settings appear on the display (Standard or Vector).
2) Use the UP ⬆ and DOWN ⬇ keys to select one of the following settings:
   - **Standard**
   - **Vector**
3) Press ⓞⓚ to confirm the selection or LEFT ◀ to keep current settings.

FIXTURE ID
Allows you to select the FIXTURE ID
1) Press ⓞⓚ - the current Fixture ID appear on the display.
2) Use the UP ⬆, DOWN ⬇, RIGHT ▶ keys to plan the Fixture ID.
3) Press ⓞⓚ 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 ⓞⓚ.
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 ⓞⓚ 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 ⓞⓚ 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 ⓞⓚ 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 ⓞⓚ 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 ⓞⓚ – the current Universe address appears on the display.
2) Use the UP ⬆, DOWN ⬇, RIGHT ▶ keys to set the Universe address.
3) Press ⓞⓚ to confirm the selection or LEFT ◀ to keep the current setting.

OPTIONS MENU

```
Option ─── Lamp Dmx ─── On
                        Off

       ─── Pan / Tilt ─── Invert ─── On
                          Pan        Off

                          Invert ─── On
                          Tilt       Off

                          Swap ─── On
                          Pan-Tilt   Off

                          Encoder ─── On
                          Pan-Tilt    Off

       ─── Color ─── Color ─── RGB
                     Mixing    CMY

                     Fixwheel ─── On
                     Shortcut     Off

                     Macro Color ─── On
                     Adjustment      Off
```
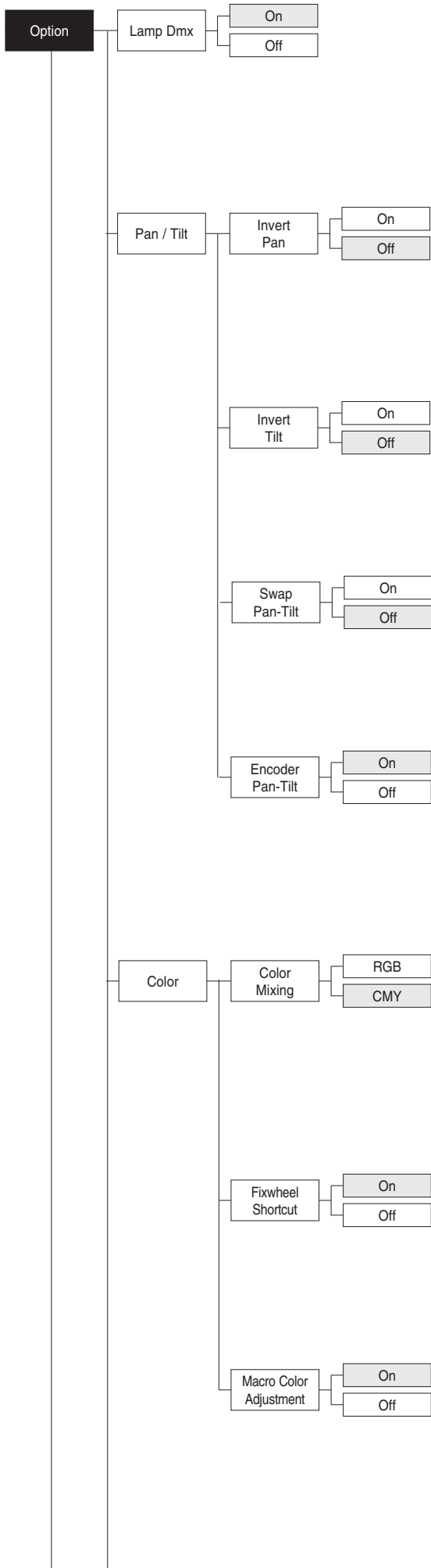
LAMP DMX

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 (◄) tto 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.

Menu Tree (left column)

- Shutter
  - Shutter On Error
    - On
    - Off
  - Dimmer On Shutter
    - On
    - Off
- Silent Mode
  - Standard
  - Quiet
- Power Mode
  - 1500-1200 Full fan speed
  - 1200 Low fan speed
  - 1500-1200 Auto fan speed
- Display
  - On
  - Off
- Setting
  - Default Preset
    - Reset To Dafault
    - Go Back
  - User Preset 1
    - Load Preset 1
    - Save To Preset 1
  - User Preset 2
    - Load Preset 2
    - Save To Preset 2

SHUTTER

Shutter on error

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

1) Press ⊙K - 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 ⊙K to confirm the selection, or LEFT ◀ to keep current settings.

Dimmer on Shutter

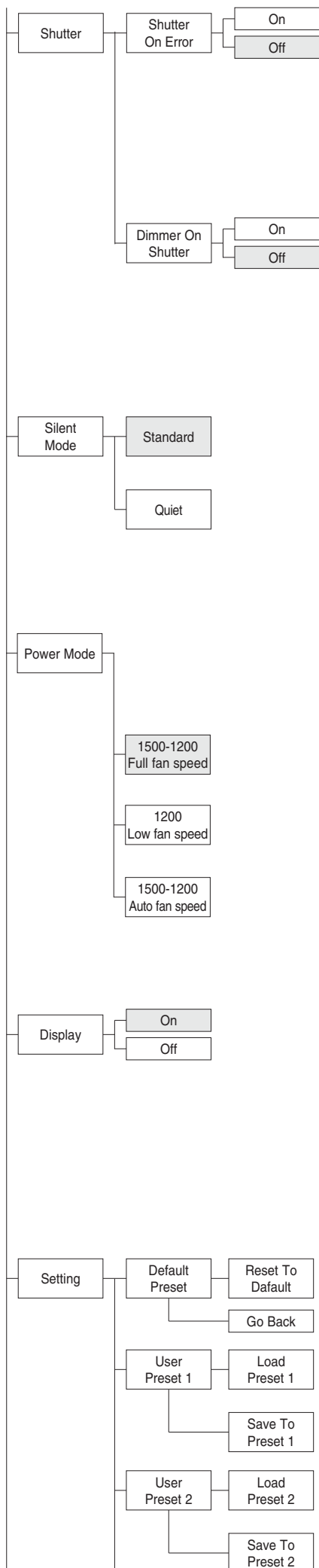Enables automatic closing of the dimmer when the strobe is completely closed.

1) Press ⊙K – 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 ⊙K to confirm the selection or LEFT ◀ to keep current settings.

SILENT MODE

It lets you select the "Silent Mode" from the two available.

1) Press ⊙K 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 ⊙K 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 ⊙K - 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 ⊙K 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 ⊙K - 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 ⊙K 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 ⊙K - "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 ⊙K - "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.
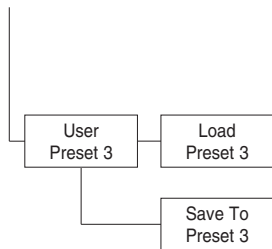
Load
Preset 3

Save To
Preset 3

- 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 selction 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

INFORMATION MENU

SYSTEM ERRORS

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

1) 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.

2) Select YES to reset the list or NO to go back.

FIXTURE HOURS

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

1) 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.

2) Press (OK) to reset partial projector working hours a confirmation message (Are you sure?) appears on the display.

3) 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).

1) 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.

2) Press (OK) to reset partial lamp working hours, a confirmation message (Are you sure ?) appears on the display.

3) 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).

1) Press (OK) - the number of times the lamp was turned on (total and

Information

System
Errors

Fixture
Hours

Total   XXX
Partial   XXX
                Reset...

Lamp
Hours

Total   XXX
Partial   XXX
                Reset...

Lamp
Strikes

Total   XXX
Partial   XXX
                Reset...

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.

2) Press (OK) to reset partial lamp strikes hours, a confirmation message (Are you sure ?) appears on the display.

3) Select YES to reset partial counter or NO to keep the current setting and return to the top menu level

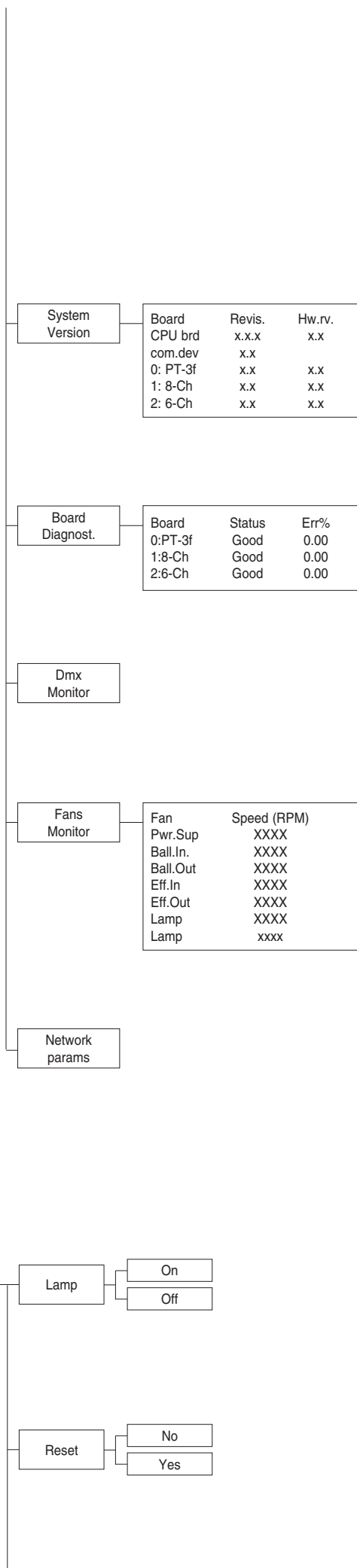| System Version |
| --- |

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

SISTEM VERSION

Used for displaying the software and hardware version of each board installed in the projector.
CPU brd (CPU board)
0: PT-3f (Pan / Tilt board)
1: 8-Ch (8 channel board)
2: 6-Ch (6 channel board)

Board Diagnost.

Board	Status	Err%
0:PT-3f	Good	0.00
1:8-Ch	Good	0.00
2:6-Ch	Good	0.00

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

DMX MONITOR

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

Fans Monitor

Fan	Speed (RPM)
Pwr.Sup	XXXX
Ball.In.	XXXX
Ball.Out	XXXX
Eff.In	XXXX
Eff.Out	XXXX
Lamp	XXXX
Lamp	xxxx

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

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:
Mac address: Media Access Control: the projector's Ethernet Address.

MANUAL CONTROL

Manual Control		Lamp		On
				Off

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		No
		Yes

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.
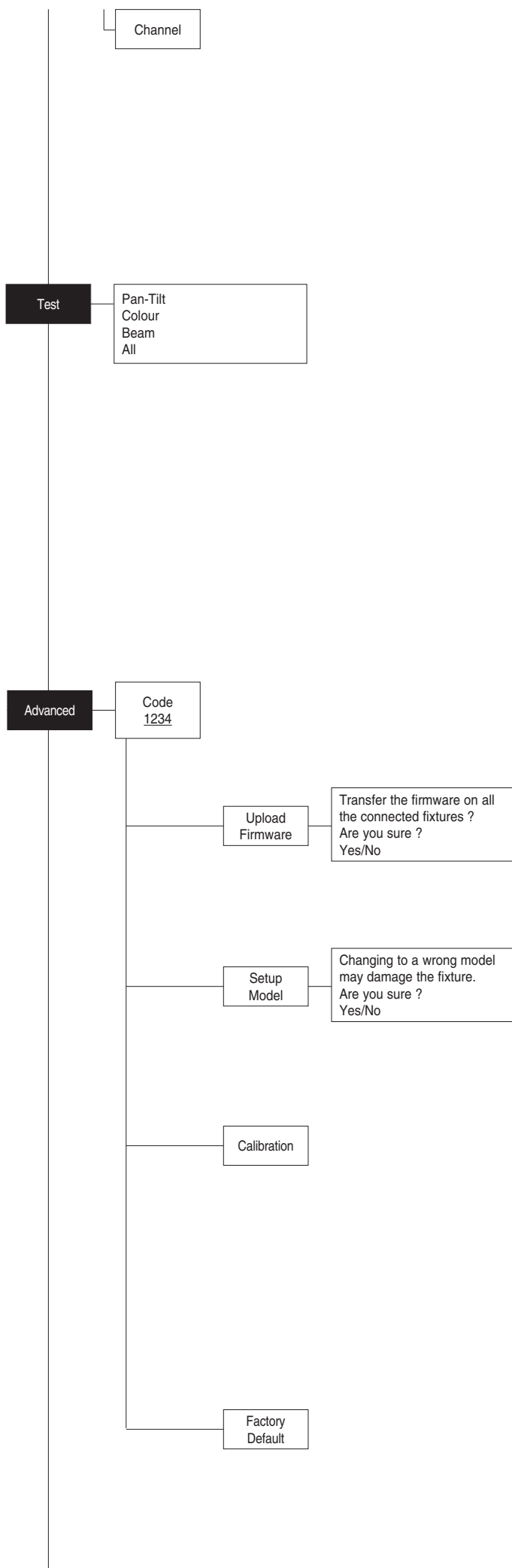
Channel

CHANNEL
Used for setting channel levels from the projector control panel.
1) Press ⓄⓀ - the first channel appears on the display.
2) Use the UP ⬆ and DOWN ⬇ keys to select the required channel:
3) Press ⓄⓀ 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

Test

Pan-Tilt
Colour
Beam
All

AUTOTEST
Allows you to check the proper functioning of effects.
1) Press ⓄⓀ .
2) Use the UP ⬆ and DOWN ⬇ keys to select the required test.
3) Press ⓄⓀ to confirm the selection or LEFT ◀ to return to the top menu level.

Test sequence:
Pan - Tilt effects (Pan & Tilt)
Colour effects (CMY, colour wheel)
Beam effects (Stopper-Strobe / Dimmer / Iris / Beam shaper)
All effects

ADVANCED MENU

Advanced

Code
1234

To enable the "Advanced Menu" set up the "Access code" (1234) using the UP⬆, DOWN ⬇, RIGHT ▶ keys.
Press ⓄⓀ - "Menu advanced" appears on the display

Upload
Firmware

Transfer the firmware on all the connected fixtures ?
Are you sure ?
Yes/No

UPLOAD FIRMWARE
Allows you to transfer the firmware from 1 fixture to all the connected fixtures.
1) Press ⓄⓀ, 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

Changing to a wrong model may damage the fixture.
Are you sure ?
Yes/No

SETUP MODEL
Allows you to change the default model of projector.
1) Press ⓄⓀ 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

CALIBRATION
Allows you to adjust effects from the control panel to obtain perfect uniformity between the projectors.
1) Press ⓄⓀ - "channels" appears on the display.
2) Using the UP ⬆ and DOWN ⬇ keys, select the effect you wish to regulate.
3) Press ⓄⓀ and use the RIGHT ▶, UP⬆ and DOWN ⬇ buttons to make the adjustment by setting a value between 0 and 255.
4) Press ⓄⓀ to confirm the selection or LEFT ◀ to keep current settings and return to the top level.

Factory
Default

FACTORY DEFAULT
Allows you to restore default values of all channels (128).
1) Press ⓄⓀ – 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.
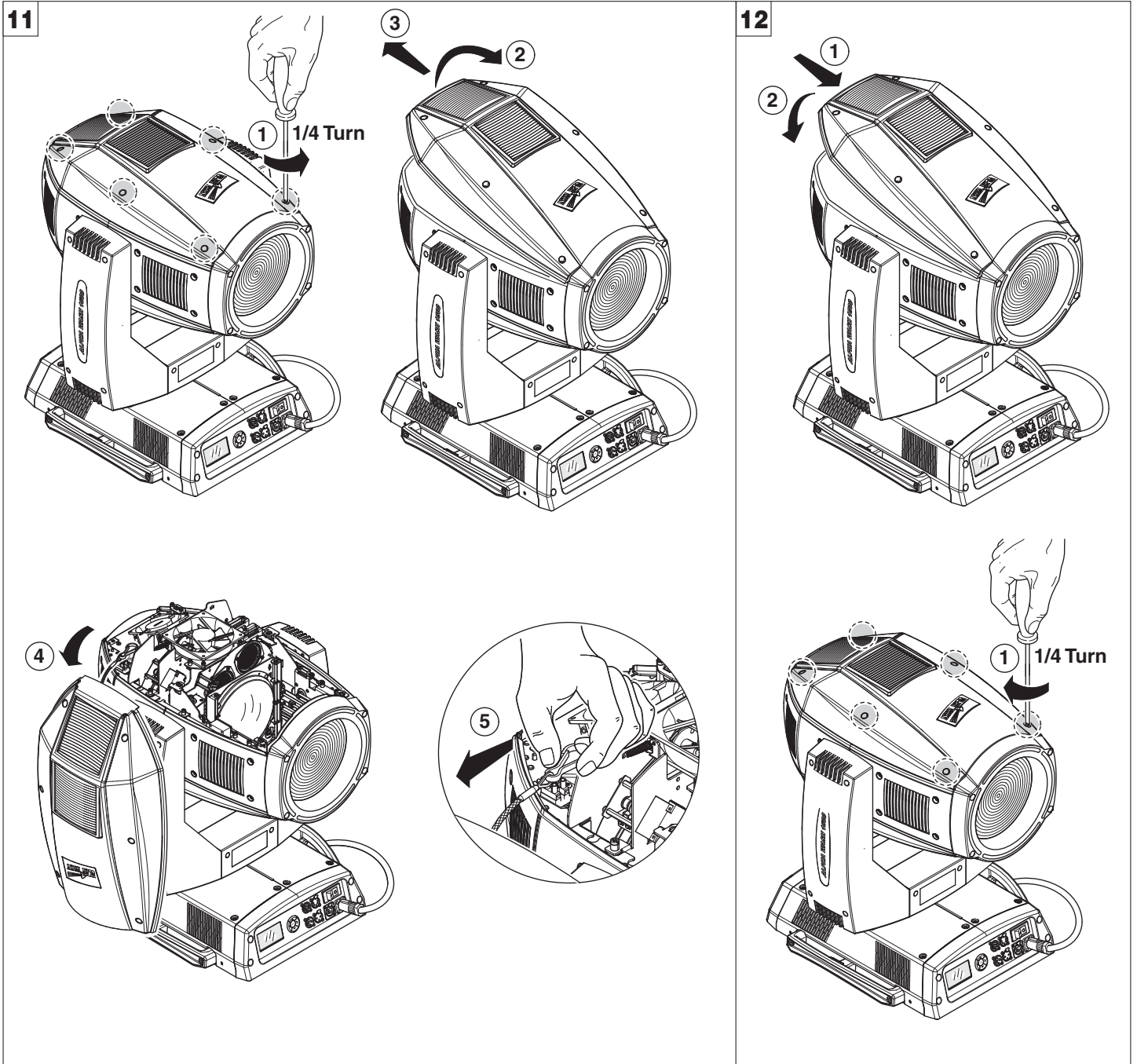
Locking and releasing Pan and Tilt movements - Refer to the instructions in the UNPACKING AND PREPARATION section.
Opening the head covers - Fig. 11.

Closing the head covers - Fig. 12.

13
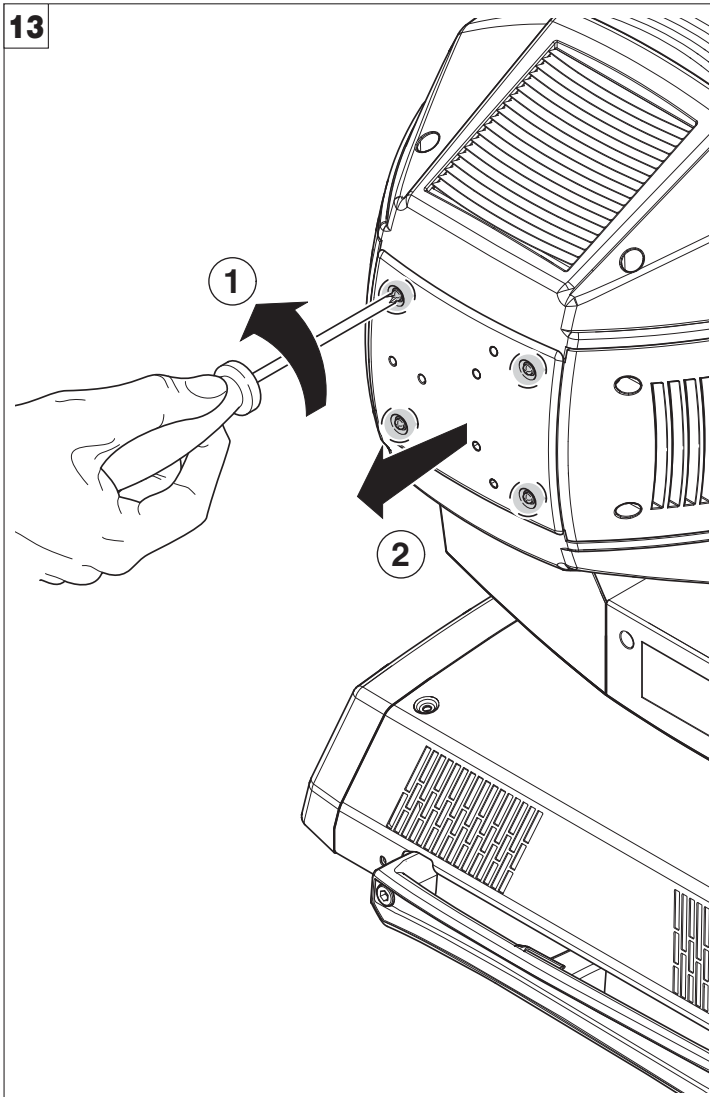
Opening and closing lamp compartment - Fig. 13

14
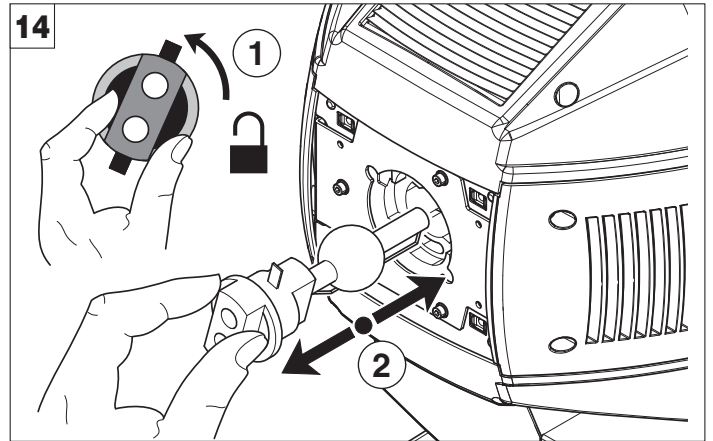
Lamp change - Fig 14
Take the new lamp out of its package and insert in the fitting.
WARNING: *do not touch the lamp's envelope with bare hands.
Should this happen, clean the bulb with a cloth soaked in alcohol
and dry it with a clean, dry cloth.*

15
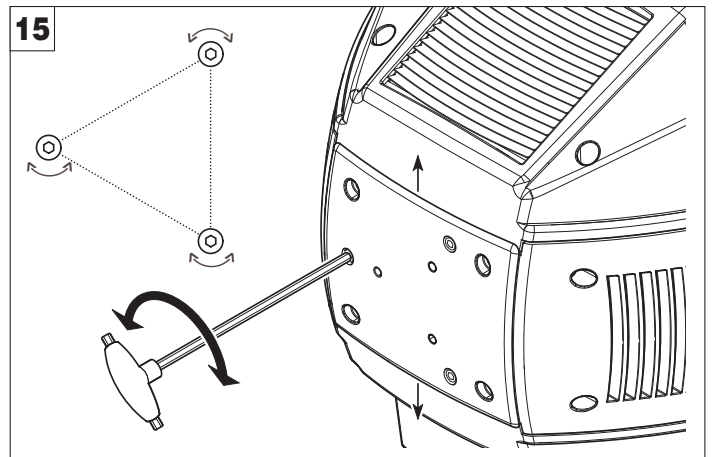
Lamp regulation - Fig. 15
To centre the lamp, turn the three adjusting screws as shown in the figure.
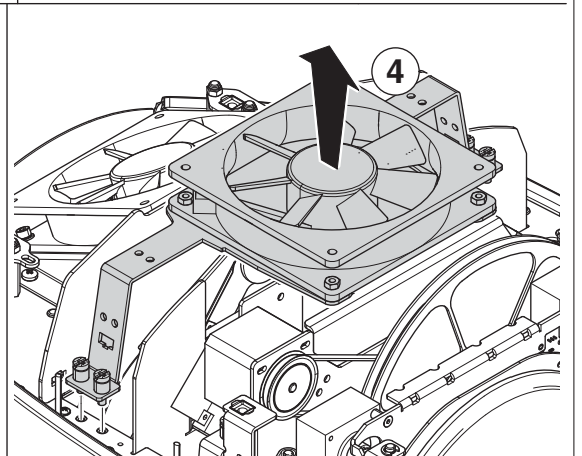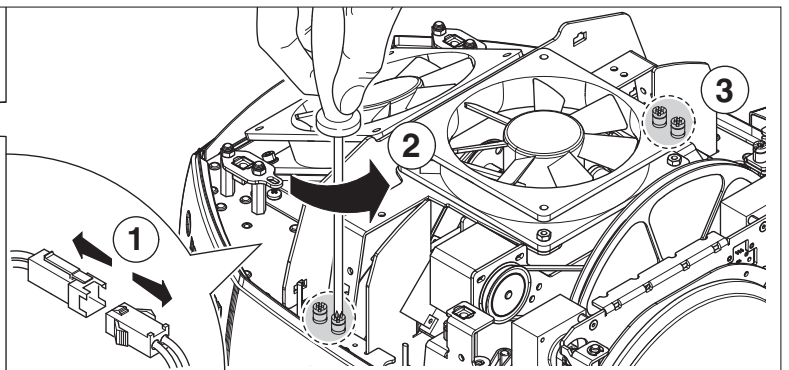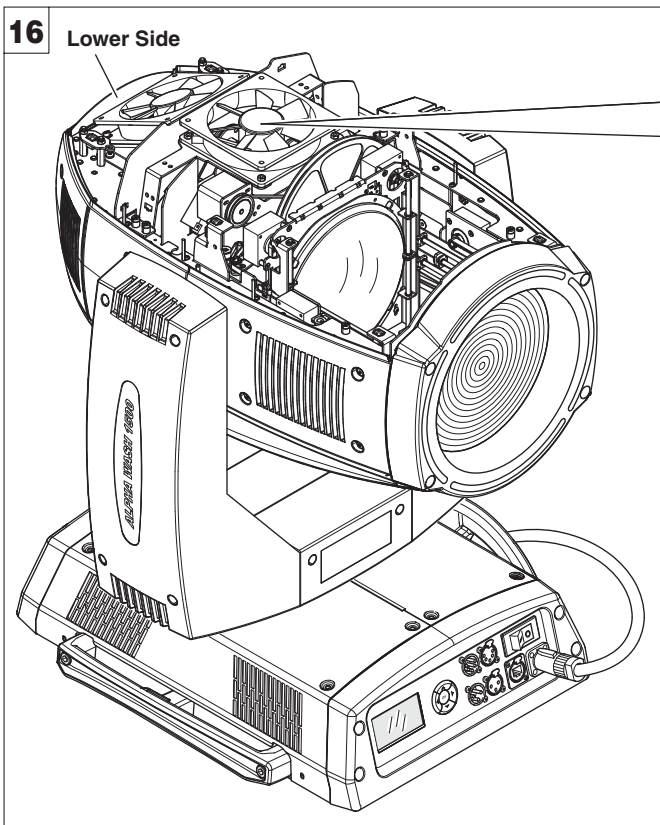
16 Lower Side

Fan support plate opening and closing (Lower side) - Fig. 16
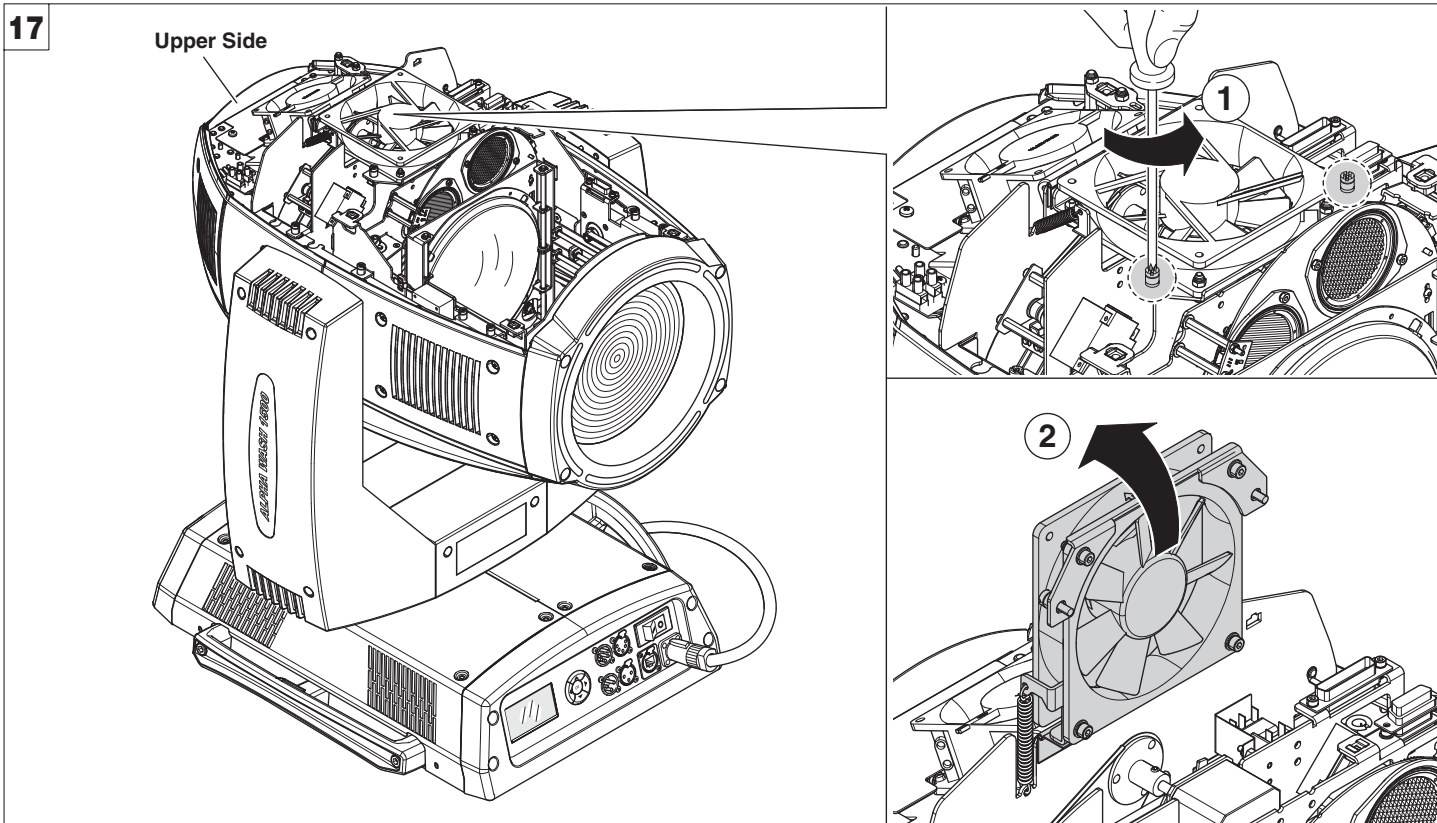
Fan support plate opening and closing (Upper side) - Fig. 17
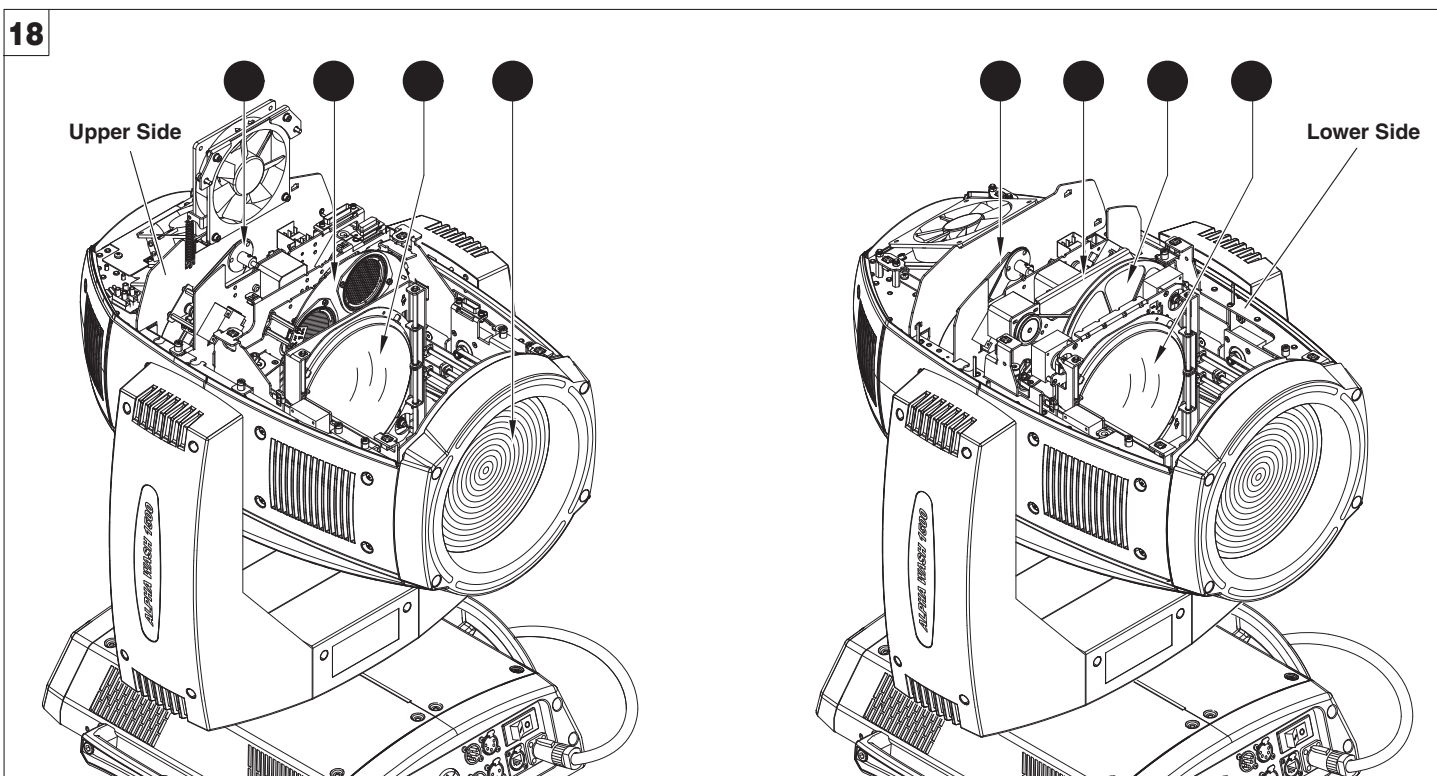
Periodical cleaning - Fig. 18

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.

19

Upper Side

1

2

3

4

Lower Side

4

Thermostat
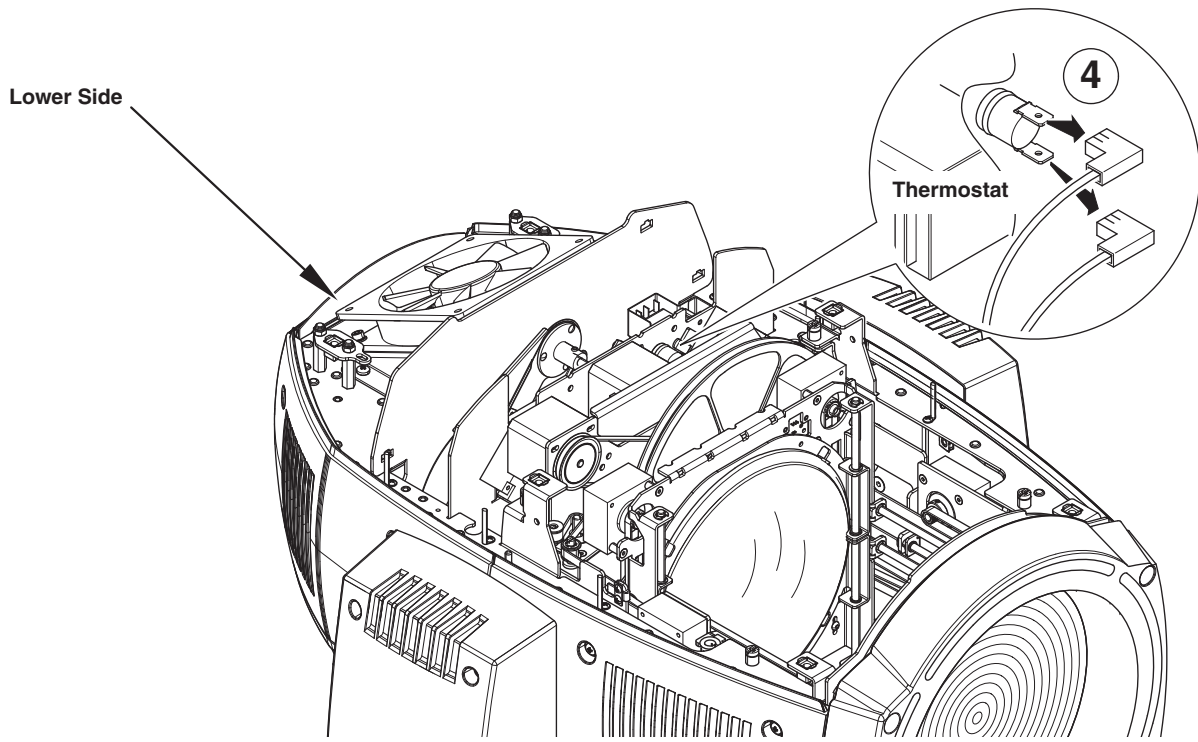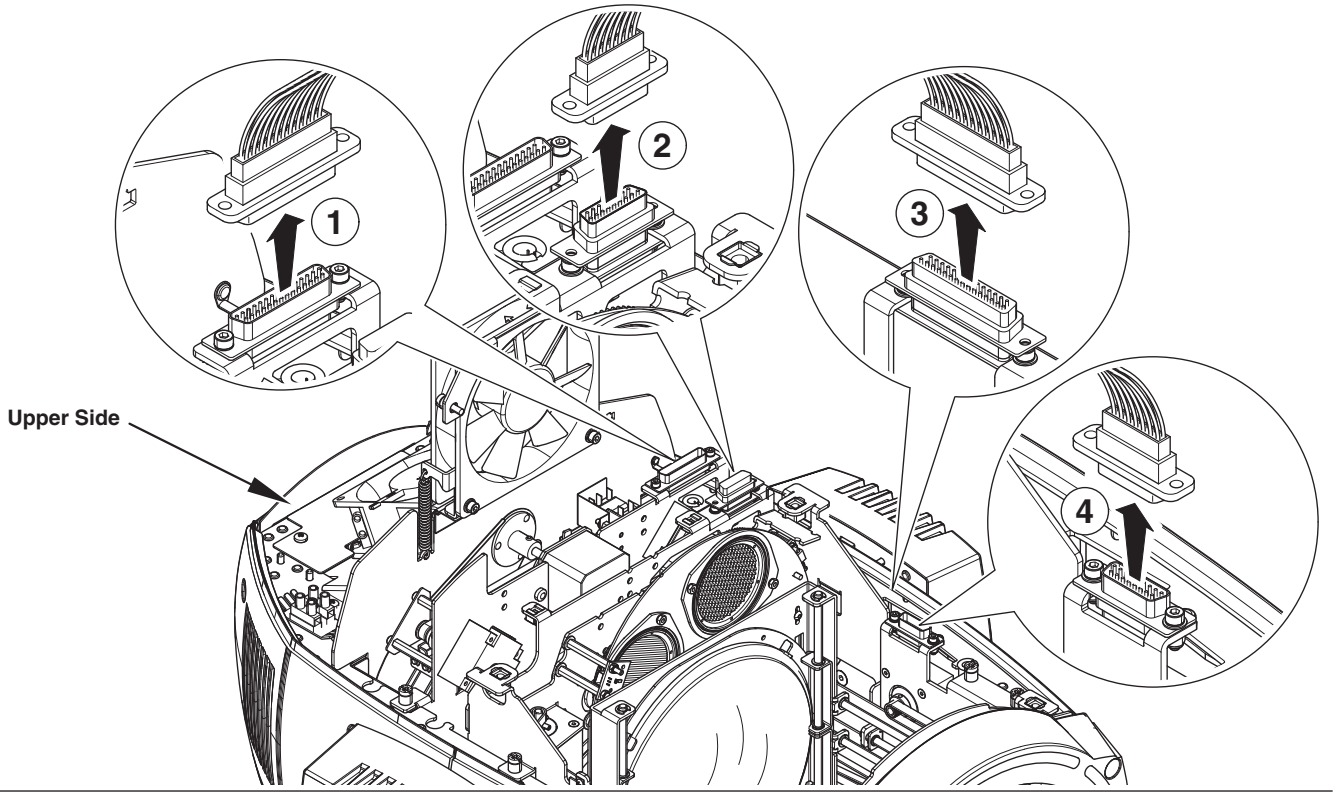
Extraction of the effect modules: Preliminary operations - Fig. 19

20

Lower Side

Upper Side

Upper Side
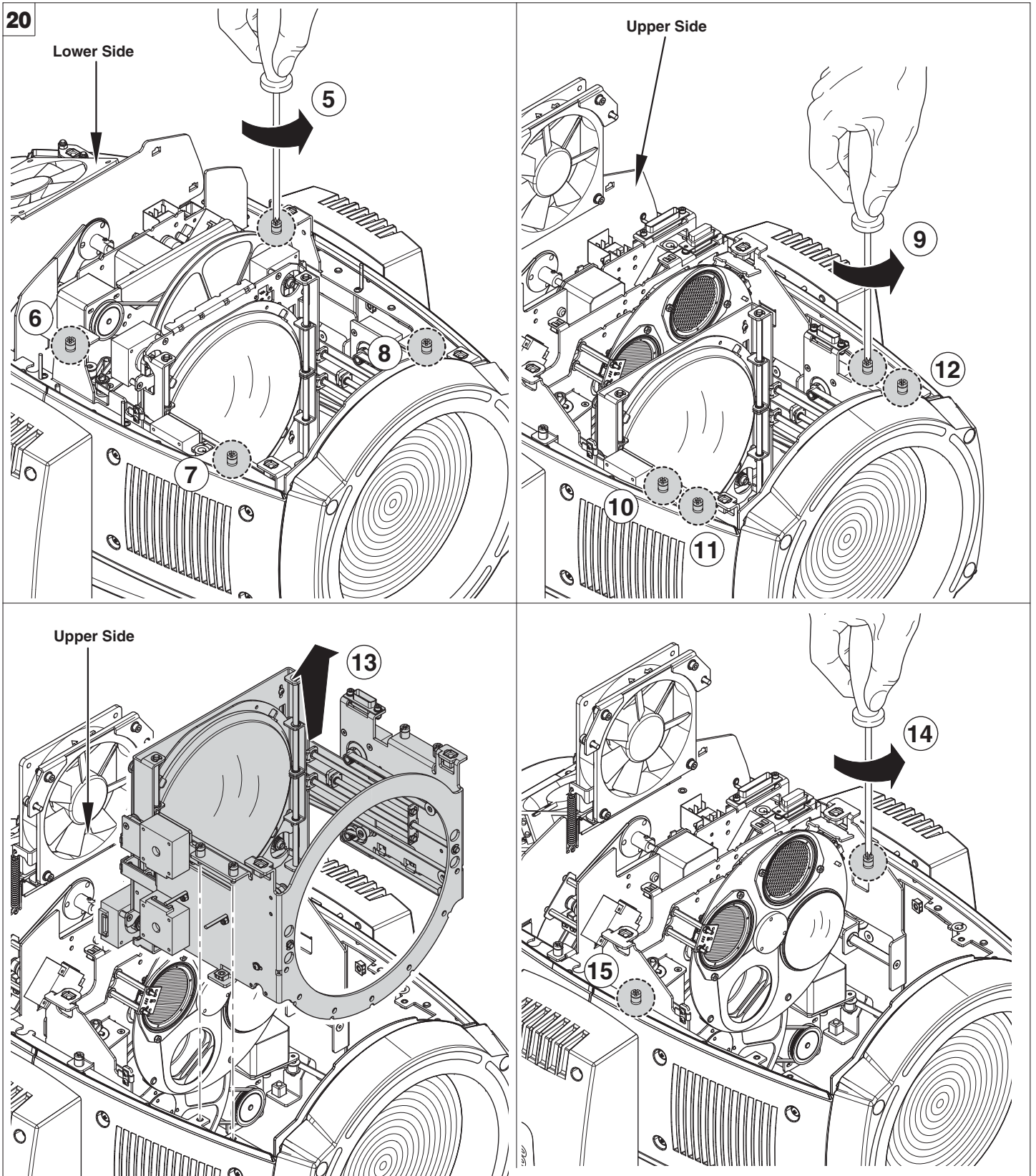
Extraction of the effect modules - Fig. 20
IMPORTANT: Grasp the modules using the support structure and not the details which could get damaged.
Insertion of the effect modules: Repeat the operations indicated in Fig. 20 and 21 in reverse order

Upper Side

16

Upper Side

18

17

Upper Side

19
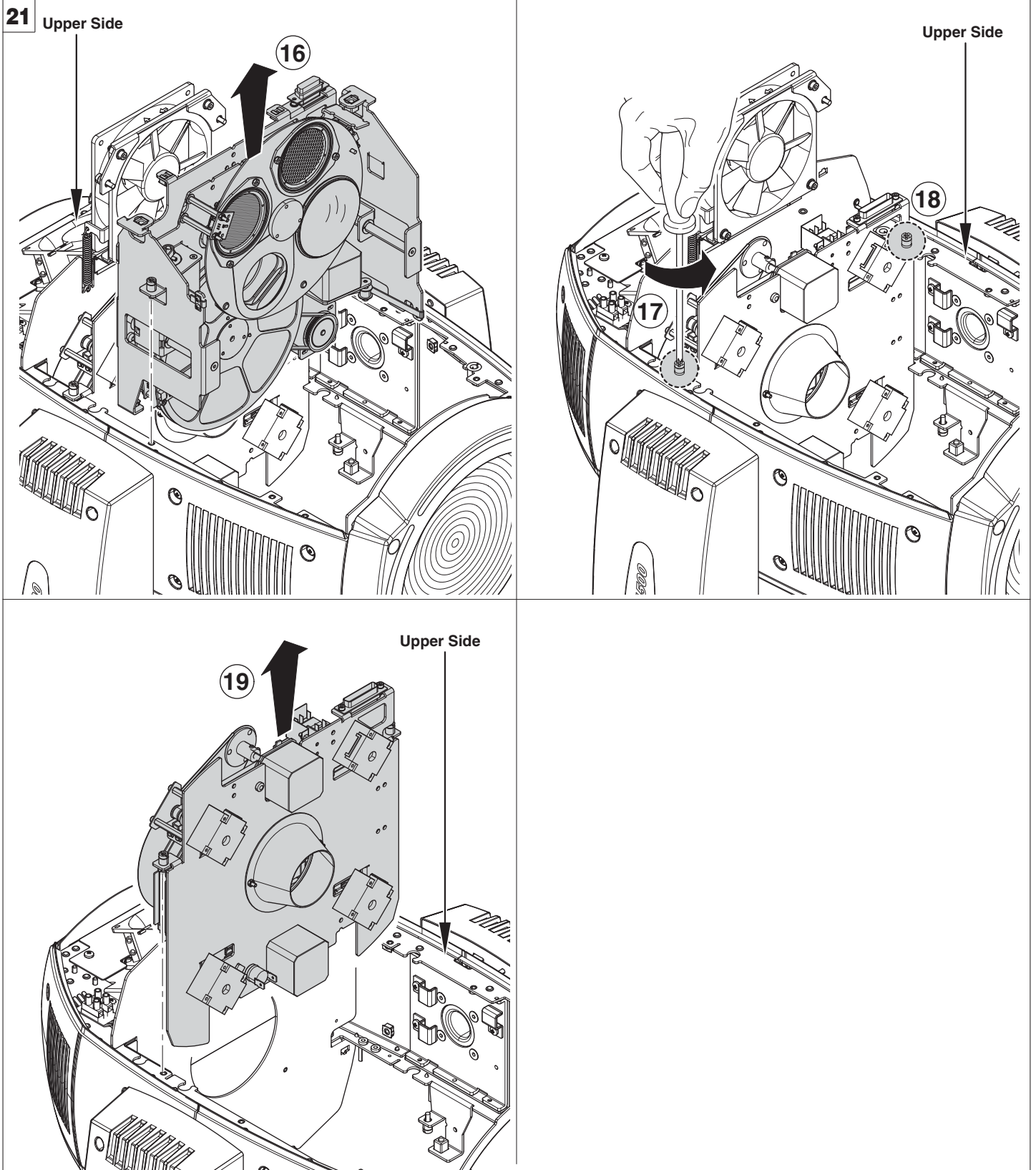
Extraction of the effect modules - Fig 21
IMPORTANT: Grasp the modules using the support structure and not the details which could get damaged.
Insertion of the effect modules: Repeat the operations indicated in Fig. 20 and 21 in reverse order

TECHNICAL INFORMATION

Power supplies available
200-240V 50/60Hz

Input power
• 2000VA a 230V 50Hz.

Lamp
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

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

Optical unit
• Elliptic reflector with high luminous efficiency

Channels
Max 23 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 = 4.0 sec (360°)
  - TILT = 3.2 sec (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 44.90 Kg (98lbs, 12ozs).

Dimensions:
570 (22.44")
660 (25.98")
261 (10.28")
785 (30.91")
500 (19.69")
488 (19.21")
480 (18.90")
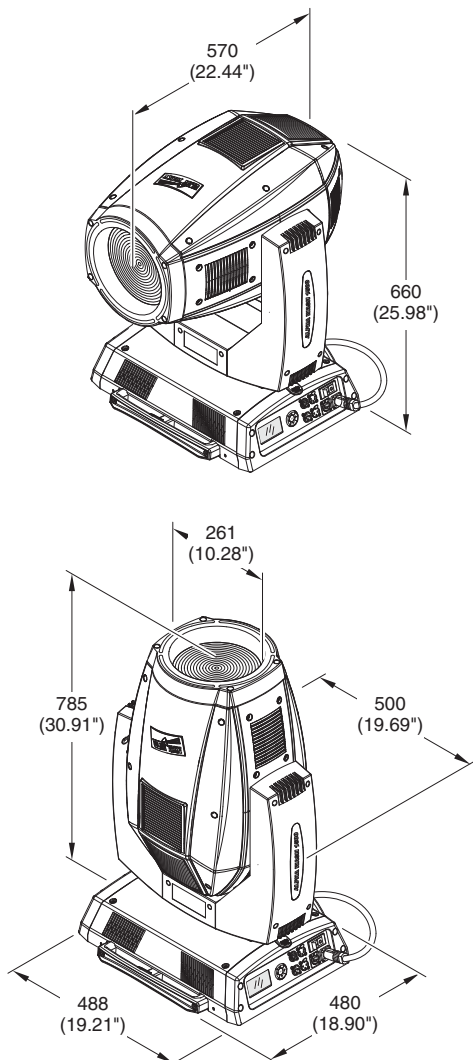
CAUSE AND SOLUTION OF PROBLEMS

					PROBLEMS
THE PROJECTOR WILL NOT SWITCH ON					
	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).

ALPHA WASH 1500

CHANNEL	CHANNEL MODE	
	STANDARD	VECTOR
1	CYAN	CYAN
2	MAGENTA	MAGENTA
3	YELLOW	YELLOW
4	C.T.O	C.T.O
5	COLOUR WHEEL 1	COLOUR WHEEL 1
6	COLOUR WHEEL 2	COLOUR WHEEL 2
7	MACRO COLOURS	MACRO COLOURS
8	STOP / STROBE	STOP / STROBE
9	DIMMER	DIMMER
10	DIMMER FINE	DIMMER FINE
11	BEAM SHAPER CHANGE	BEAM SHAPER CHANGE
12	BEAM SHAPER ROTATION	BEAM SHAPER ROTATION
13	ZOOM	ZOOM
14	PAN	PAN
15	PAN FINE	PAN FINE
16	TILT	TILT
17	TILT FINE	TILT FINE
18	FUNCTION	FUNCTION
19	RESET	RESET
20	LAMP CONTROL (with Option "Lamp DMX" ON)	LAMP CONTROL (with Option "Lamp DMX" ON)
21		PAN - TILT TIME
22		COLOUR TIME
23		BEAM TIME

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%.

• COLOUR MIXING - channel 1 - 2 - 3

Operation with option color mixing: RGB

BIT	%	EFFECT
255	100	COLOUR EXCLUDED
0	0.0	COLOUR INSERTED

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

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 4

BIT	%	EFFECT
255	100	FILTER INSERTED
0	0.0	FILTER EXCLUDED

• COLOUR WHEEL 1 - channel 5

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 6
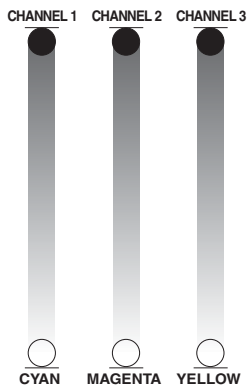

BIT	%	EFFECT
255	100	FAST ROTATION 160 rpm
128	50.0	SLOW ROTATION 0.2rpm
117	46.0	GREEN
97	38.0	PINK
77	30.0	CTB 8000
58	23.0	LIGHT GREEN
39	15.0	LAVENDER
20	8.0	CTO 3200
0	0.0	WHITE

• MACRO COLOURS - channel 7

COLOR NAME	BIT	%	ROSCO CODE	LEE CODE	CYAN BIT	MAGENTA BIT	YELLOW BIT	CTO BIT	WHEEL 1 BIT	WHEEL 2 BIT
Unused Range	0	0,0	-	-	-	-	-	-	-	-
Random Macro Color (only for Macro effects)	1	0,5	-	-	-	-	-	-	-	-
Mad bastard amber	2-3	1,0-1,2	004	004	0	0	115	89	0	0
Mad Yellow	4-5	1,7-2,0	010	010	0	0	212	80	0	0
Bright Red	6-7	2,5-3,0	026	026	0	255	0	255	37	0
Lavender	8-9	3,2-3,7	058	058	132	130	0	123	0	0
Pale blue	10-11	4,0-4,2	063	063	97	0	115	102	0	0
Sky blue	12-13	4,7-5,0	068	068	237	55	92	105	0	0
Tokyo Blue	14-15	5,5-6,0	071	071	255	170	0	109	57	0
Just Blue	16-17	6,2-6,7	079	079	255	86	0	100	0	0
Lime green	18-19	7,0-7,5	088	088	90	0	196	74	0	0
Dark Yellow Green	20-21	8,0-8,2	090	090	182	0	255	67	0	0
Spring yellow	22-23	8,7-9,0	100	100	0	0	188	83	0	0
Yellow	24-25	9,5-9,7	101	101	0	0	255	106	0	0
Light amber	26-27	10,0-10,5	102	102	0	0	170	132	0	0
Straw	28-29	11,0-11,2	103	103	0	0	121	107	0	0
Deep amber	30-31	11,7-12,0	104	104	0	0	179	155	0	0
Orange	32-33	12,5-13,0	105	105	0	104	210	255	0	0
Primary red	34-35	13,2-13,7	106	182	0	0	0	0	117	0
Light rose	36-37	14,0-14,2	107	107	0	85	29	170	0	0
English rose	38-39	14,7-15,0	108	108	0	59	54	170	0	0
Light Salmon	40-41	15,5-16,0	109	109	0	95	83	152	0	0
Dark pink	42-43	16,2-16,7	111	111	0	108	1	164	0	0
Peacock blue	44-45	17,0-17,5	115	115	77	0	110	0	77	0
Medium blue green	46-47	18,0-18,2	116	116	132	0	131	0	58	0
Steel blue	48-49	18,7-19,0	117	117	117	0	128	110	0	0
Light blue	50-51	19,5-20,0	118	118	168	0	129	80	0	0
Dark blue	52-53	20,5-21,0	119	119	255	113	0	113	0	0
Deep Blue	54-55	21,2-21,7	120	120	255	0	0	114	0	40
Leaf green	56-57	22,0-22,5	121	121	111	0	205	0	0	0
Fern Green	58-59	23,0-23,2	122	122	0	0	0	87	0	116
Mauve	60-61	23,7-24,0	126	126	119	255	0	255	0	0
Bright pink	62-63	24,2-24,7	128	128	0	255	1	169	0	0
Marine blue	64-65	25,0-25,5	131	131	0	0	112	0	58	0
Medium blue	66-67	26,0-26,2	132	132	255	100	0	87	0	57
Golden amber	68-69	26,7-27,0	134	134	0	92	136	255	0	0
Deep golden amber	70-71	27,5-28,0	135	135	0	159	255	255	0	0
Pale lavender	72-73	28,2-28,7	136	136	73	80	0	117	0	0
Special Lavender	74-75	29,0-29,5	137	137	95	83	33	110	0	0
Pale green	76-77	29,7-30,0	138	138	77	0	154	52	0	0
Light green	78-79	30,5-31,0	121	121	0	0	255	0	58	0
Primary green	80-81	31,2-31,7	139	139	0	0	255	71	77	0
Bright Blue	82-83	32,0-32,5	141	141	199	0	130	76	0	0
Apricot	84-85	33,0-33,2	147	147	0	71	67	255	0	0
Bright rose	86-87	33,7-34,0	148	148	0	255	1	255	0	0
Pale Gold	88-89	34,2-34,7	152	152	0	0	102	128	0	0
Pale rose	90-91	35,0-35,5	154	154	0	32	54	129	0	0
Pink	92-93	36,0-36,2	157	157	0	113	1	224	0	0
Deep Orange	94-95	36,7-37,0	158	158	0	104	255	255	0	0
Bastard amber	96-97	37,5-38,0	162	162	0	22	102	137	0	0
Flame red	98-99	38,2-38,7	164	164	0	255	255	255	0	0
Daylight Blue	100-101	39,0-39,5	165	165	139	0	101	102	0	0
Liliac tint	102-103	40,0-40,5	169	169	49	51	74	107	0	0
Deep Lavender	104-105	41,0-41,2	170	170	85	101	0	118	0	0
Lagoon blue	106-107	41,7-42,0	172	172	132	0	112	0	58	0
Chrome Orange	108-109	42,5-43,0	179	179	0	69	255	255	0	0
Dark Lavender	110-111	43,2-43,7	180	180	125	128	0	88	0	0
Congo Blue	112-113	44,0-44,2	181	181	255	255	0	163	0	0
Alice Blue	114-115	44,7-45,0	197	197	128	79	0	74	0	0
Full CTB	116-117	45,5-46,0	201	201	89	22	61	72	0	0
1/2 CTB	118-119	46,2-46,7	202	202	81	29	95	89	0	0
1/4 CTB	120-121	47,0-47,5	203	203	22	42	104	84	0	0
Full CT Orange	122-123	48,0-48,2	204	204	0	58	131	158	0	0
1/2 CTO	124-125	48,7-49,0	205	205	0	0	99	103	0	0
1/4 CTO	126-127	49,5-49,7	206	206	0	48	116	98	0	0
Minus green	128-129	50,0-50,5	247	247	0	77	0	133	0	0
Half minus green	130-131	51,0-51,2	248	248	0	55	0	133	0	0
3/4 CTB	132-133	51,7-52,0	281	281	81	0	87	83	0	0
3/4 CT Orange	134-135	52,5-53,0	285	285	0	0	128	126	0	0
Jade	136-137	53,2-53,7	323	323	87	0	134	0	61	0
Mallard green	138-139	54,0-54,2	325	325	255	0	0	0	81	0
Fuschia	140-141	54,7-55,0	345	345	80	122	0	118	0	0
Glacier blue	142-143	55,5-56,0	352	352	144	0	121	80	0	0
Lighter blue	144-145	56,2-56,7	353	353	136	0	134	80	0	0
Half CT straw	146-147	57,0-57,5	442	442	0	0	132	110	0	0
Light Lavender	148-149	58,0-58,2	052	052	60	84	0	87	0	0
Magenta	150-151	58,7-59,0	113	113	0	255	125	255	0	41
CP Gold	152-153	59,5-60,0	N/A	N/A	0	0	0	255	0	0
CP Gold 1	154-155	60,5-61,0	N/A	N/A	0	0	0	255	0	20
CP Gold 2	156-157	61,2-61,7	N/A	N/A	0	71	255	255	0	20
CP Green	158-159	62,0-62,5	N/A	N/A	255	0	0	0	0	117
CP Lavender	160-161	63,0-63,2	N/A	N/A	0	0	0	0	58	39
CP Electric blue	162-163	63,7-64,0	N/A	N/A	255	0	0	0	58	39
CP Ice	164-165	64,2-64,7	N/A	N/A	0	0	0	0	58	20
CP Pink	166-167	65,0-65,5	N/A	N/A	0	0	0	255	0	39
CP Deep magenta	168-169	66,0-66,2	N/A	N/A	0	255	0	255	0	39
CP Red 1	170-171	66,7-67,0	N/A	N/A	0	255	255	255	0	39
CP Red 2	172-173	67,5-68,0	N/A	N/A	0	255	0	0	117	0
CP Red 3	174-175	68,2-68,7	N/A	N/A	0	255	255	255	117	39
CP Light green 1	176-177	69,0-69,5	N/A	N/A	0	0	0	0	0	58
CP Light green 2	178-179	69,7-70,0	N/A	N/A	0	0	0	0	0	117
CP Brown 1	180-181	70,5-71,0	N/A	N/A	0	103	0	0	39	117
CP Brown 2	182-183	71,2-71,7	N/A	N/A	0	121	0	255	39	117
CP Marine	184-185	72,0-72,5	N/A	N/A	255	83	0	0	0	117
Unused Range	186-255	73,0-100	-	-	-	-	-	-	-	-

• STOP / STROBE - channel 8

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
108	42.5	SLOW PULSATION
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 9

BIT	%	EFFECT
255	100	
0	0.0	

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

• DIMMER FINE - channel 10

BIT	%	EFFECT
255	100	
0	0.0	

• BEAM SHAPER CHANGE - channel 11

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 12

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 13

BIT	%	EFFECT
255	100	WIDE BEAM
0	0.0	NARROW BEAM

• PAN - channel 14

Operation with option InvertPan ↕ Off
(Tilt conventionally represented at 14% and option Invert Tilt ↕ Off)

BIT	%
255	100
0	0.0
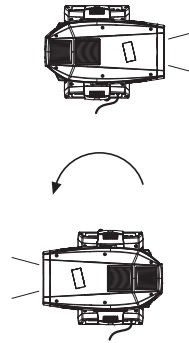
Operation with option InvertPan ↕ On
(Tilt conventionally represented at 14% and option Invert Tilt ↕ Off)
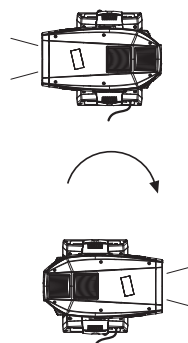
BIT	%
255	100
0	0.0

• PAN FINE - channel 15

Operation with option InvertPan ↕ Off
(Tilt conventionally represented at 14% and option Invert Tilt ↕ Off)

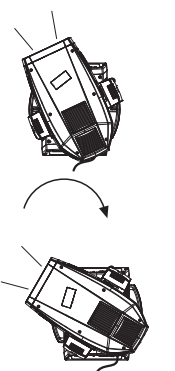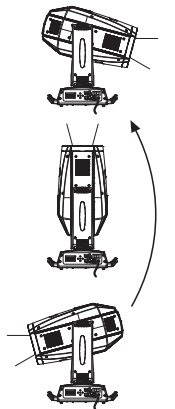| BIT	%
255	100
0	0.0
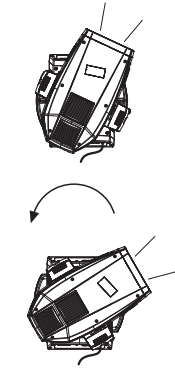
Operation with option InvertPan ↕ On
(Tilt conventionally represented at 14% and option Invert Tilt ↕ Off)

BIT	%
255	100
0	0.0

• TILT - channel 16

Operation with option Invert Tilt ↕ Off
(Pan conventionally represented at 0% and option Invert Pan ↕ Off)

BIT	%
255	100
128	50.0
0	0.0

Operation with option Invert Tilt ↕ On
(Pan conventionally represented at 0% and option Invert Pan ↕ Off)

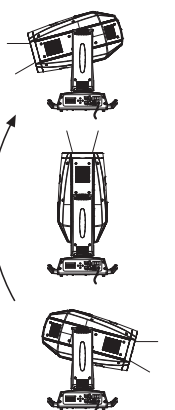| BIT	%
255	100
128	50.0
0	0.0

• TILT FINE - channel 17

Operation with option Invert Tilt ↕ Off
(Pan conventionally represented at 0% and option Invert Pan ↕ Off)

BIT	%
255	100
0	0.0
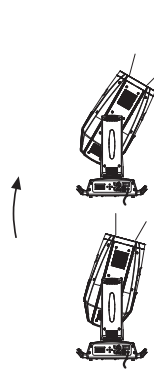
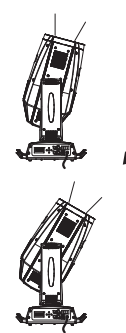*Operation with option Invert Tilt ↕ On*
(Pan conventionally represented at 0% and option Invert Pan ↕ Off)

BIT	%
255	100
0	0.0

• FUNCTION - channel: 18

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

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

• RESET - channel: 19

BIT	%	EFFECT
255	100	COMPLETE RESET
		Complete reset is activated passing throug 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 throug 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 throug the unused range and staying 5 seconds in Effects reset levels.
26	10.0	EFFECTS RESET
25	9.7	
		UNUSED RANGE
0	0.0	

• **LAMP CONTROL (only with option LAMP DMX On) - channel: 20**

IMPORTANT: Alpha Wash 1500 is not provided with hot restrike igniter
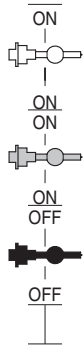
BIT	%	EFFECT
255	100	LAMP ON (FULL POWER)
		Lamp ignition after 5 s in full power levels.
		Immediate transition from half to full power.
180	70.5	LAMP ON (FULL POWER)
179	70.0	LAMP ON (HALF POWER)
		Immediate transition from full to half power.
		Lamp ignition not allowed in half power.
101	39.5	LAMP ON (HALF POWER)
100	39.0	LAMP OFF
		Lamp switch off passing throug the unused range and staying 5 s in Lamp OFF levels.
26	10.0	LAMP OFF
25	9.7	UNUSED RANGE
0	0.0	

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