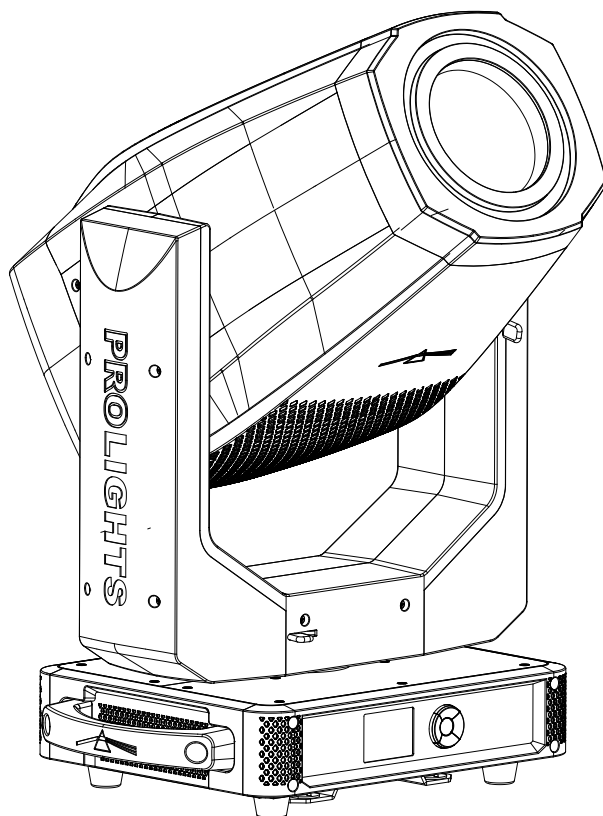


# RA2000PROFILEHB

LED MOVING PROFILE



USER MANUAL

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**Packing content**

- RA2000PROFILEHB
- Power cable
- OS25 (2 pcs)
- Safety cable
- User manual




**WARNING! Before carrying out any operations with the unit, carefully read this instruction manual and keep it with care for future reference. It contains important information about the installation, usage and maintenance of the unit.**



## SAFETY

### General instruction

- The products referred to in this manual conform to the European Community Directives and are there-

fore marked with  and approved for the North American Market.



- The unit is supplied with hazardous network voltage (230V~). Leave servicing to skilled personnel only. Never make any modifications on the unit not described in this instruction manual, otherwise you will risk an electric 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 units from indirect contact and/or shorting to earth by using appropriately sized residual current devices.
- The connection to the main network of electric distribution must be carried out by a qualified electrical installer. Check that the main frequency and voltage correspond to those for which the unit is designed as given on the electrical data label.
- This unit is not for home use, only professional applications.
- Never use the fixture under the following conditions:
  - in places wet;
  - in places subject to vibrations or bumps;
  - in places with a temperature of over 45 °C.
- Make certain that no inflammable liquids, water or metal objects enter the fixture.
- Do not dismantle or modify the fixture.
- All work must always be carried out by qualified technical personnel. Contact the nearest sales point for an inspection or contact the manufacturer directly.
- If the unit is to be put out of operation definitively, take it to a local recycling plant for a disposal which is not harmful to the environment.



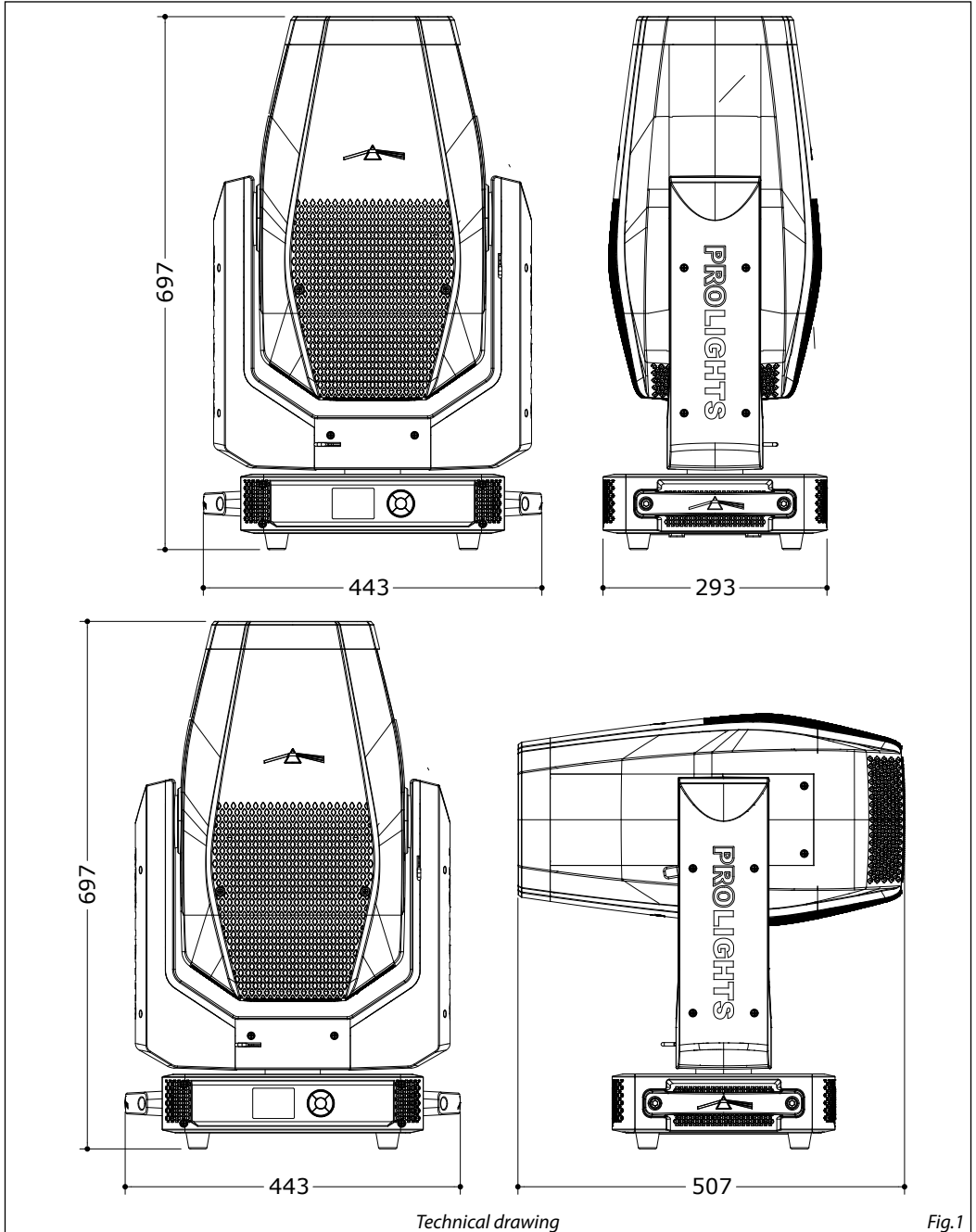
### Warnings and installation precautions

- If this device will be operated in any way different to the one described in this manual, it may suffer damage and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short circuit, burns, electric shock, etc.
- Before starting any maintenance work or cleaning the projector, cut off power from the main supply.
- Always additionally secure the projector with the safety rope. When carrying out any work, always comply scrupulously with all the regulations (particularly regarding safety) currently in force in the country in which the fixture's being used.
- For inside use only. Not designed for outside use.
- The minimum distance between the fixture and surrounding walls must be more than 50 cm and the air vents at the housing must not be covered in any case.
- Install the fixture in a well ventilated place.
- Keep any inflammable material at a safe distance from the fixture.
- The maximum temperature that can be reached on the external surface of the fitting, in a thermally steady state, is high. After power off, please cool down over 15 minutes.
- Shields, lenses or ultraviolet screens shall be changed if they have become damaged to such an extent that their effectiveness is impaired.
- The lamp (LED) shall be changed if it has become damaged or thermally deformed.
- Never look directly at the light beam. Please note that fast changes in lighting, e. g. flashing light, may trigger epileptic seizures in photosensitive persons or persons with epilepsy.
- This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the good condition/operation of the product and/or be a source of danger.
- We decline any liability deriving from improper use of the product.



- 1 - INTRODUCTION

1.1 TECHNICAL DRAWING



## 1.3 OPERATING ELEMENTS AND CONNECTIONS

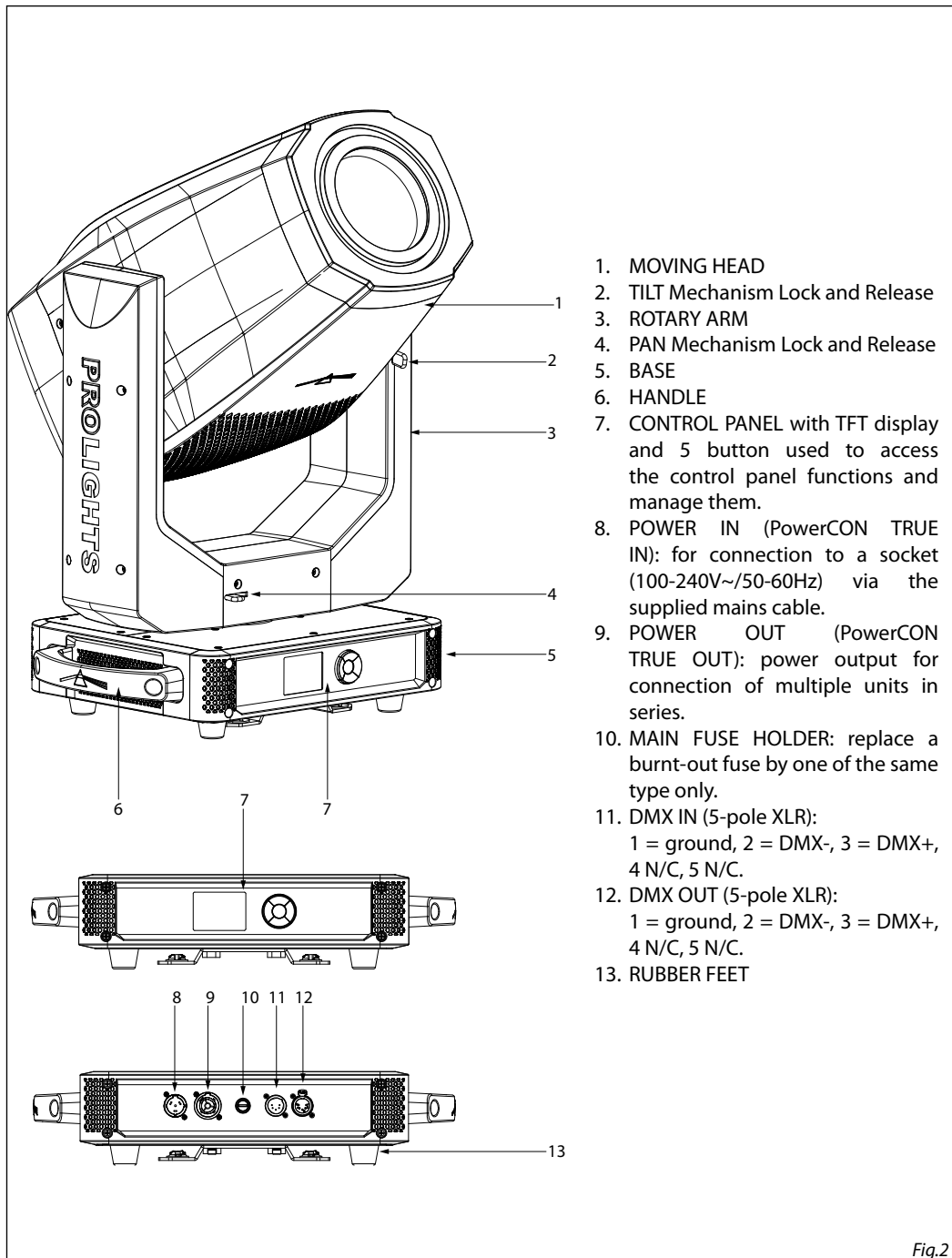


Fig.2

## - 2 - INSTALLATION

### 2.1 MOUNTING

The RA2000PROFILEHB may be set up on a solid and even surface. By means of the fixing facilities of the baseplate, the unit can also be mounted upside down to a cross arm. The base plate is shown in fig.3. For fixing, stable mounting clips are required. According to the figure, the bolts of the brackets are placed into the openings provided in the base plate and turned clockwise until they lock (to the stop). Always ensure that the unit is firmly fixed to avoid vibration and slipping while operating. The mounting place must be of sufficient stability and be able to support a weight of 10 times of the unit's weight. When carrying out any installation, always comply scrupulously with all the regulations (particularly regarding safety) currently in force in the country in which the fixture's being used. Always additionally secure the projector with the safety rope from falling down. For this purpose, fasten the safety rope at a suitable position so that the maximum fall of the projector will be 20 cm.

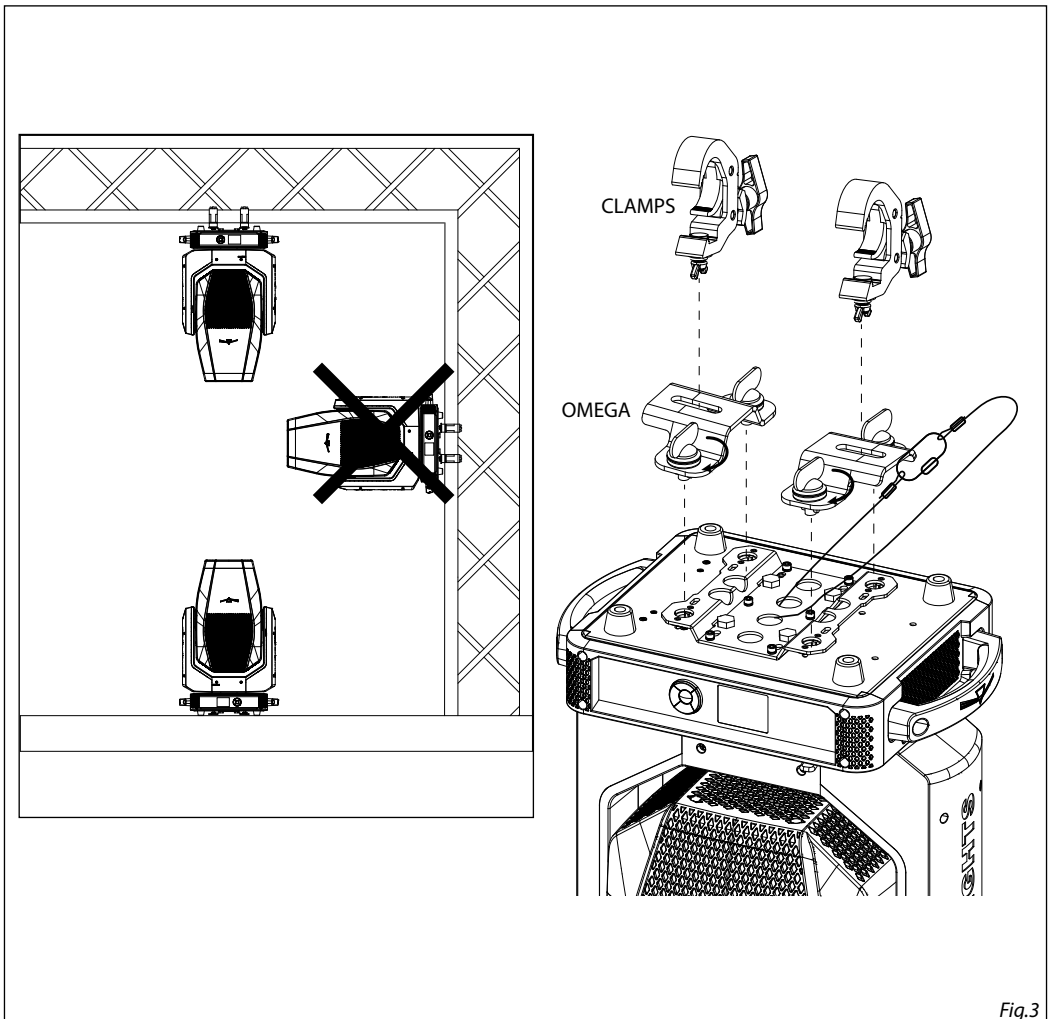


Fig.3

## - 3 - FUNCTIONS AND SETTINGS

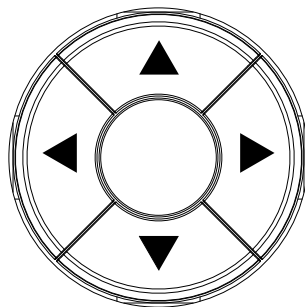
### 3.1 OPERATION

Connect the supplied main cable to a socket (100-240V~/50-60Hz). The unit will run built-in program to reset all motors to their home position. Shortly after that the RA2000PROFILEHB is ready for operation. To switch off, disconnect the mains plug from the socket. For a more convenient operation it is recommended to connect the unit to a socket which can be switched on and off via light switch.

NOTE: remove the pan and tilt lock before connecting the RA2000PROFILEHB to the power supply.

### 3.2 BASIC

The control panel of RA2000PROFILEHB has a display and 5 buttons for the complete programming and management of the projector menu (fig.4).







 UP	 DOWN	 LEFT	 RIGHT	ENTER
Increases the value displayed or passes to the previous item in a menu	Decreases the value displayed or passes to the next item in the menu	Return to the top level	Commute from units, tens, hundred in the menu	Confirms the displayed value, or activates the displayed function, or enters the successive menu

Fig.4 - Functions of the buttons and display icons

3.3 MENU STRUCTURE

MENU					
1	<b>CONNECT</b>	⇒ Address	⇒ Value (1-512)		
		DMX Mode	⇒ Standard 38Ch Standard 40Ch Extended 39Ch Extended 41Ch Extended 42Ch	Standard 38Ch	
2	<b>SET UP</b>	⇒ Movement	⇒ Pan Reverse	⇒ NO/YES	Default: No
			Tilt Reverse	⇒ NO/YES	Default: No
			Pan Feedback	⇒ NO/YES	Default: Yes
			Tilt Feedback	⇒ NO/YES	Default: Yes
		⇒ Screen	⇒ Backlight	⇒ On/10s/20s/ 30s	Default: On
			Flip Display	⇒ NO/AUTO/YES	Default: No
			Warn Cue	⇒ ON/OFF	Default:On
			Key Lock	⇒ NO/YES	Default: No
		⇒ Fixture	⇒ Dimmer Mode	⇒ OFF/Dimmer 1/Dimmer 2/Dimmer 3	Default: Off
			Fans Mode	⇒ Auto/Silent/High/Off	Default: Auto
			Temperature unit	⇒ °C /°F	Default: °C
		⇒ Auto Test	⇒ Auto Test ...		
		⇒ Manual Test	⇒ Pan	⇒ Value (000-255) for each function	Default:
			Pan Fine		Tilt=128
			Tilt		Dimmer=255
			Tilt Fine		Shutter = 255
			P/T Speed		
			Dimmer		
			Shutter		
			Cyan		
Magenta					
Yellow					
CTO					
Color					
Gobo					
RGobo					
PrismRot.					
Effect					
REffect					
Focus					
Zoom					
Frost 1					
Frost 2					
Iris					

Fr.shutters Rot.                   ⇒ Value (000-255) for each function  
 Fr.shutter 1 Move.  
 Fr.shutter 1 Swiv.  
 Fr.shutter 2 Move.  
 Fr.shutter 2 Swiv.  
 Fr.shutter 3 Move.  
 Fr.shutter 3 Swiv.  
 Fr.shutter 4 Move.  
 Fr.shutter 4 Swiv.

---

3 **ADVANCED**   ⇒ Reset           ⇒ All                   ⇒ Value (000-255) for each function  
 Pan  
 Tilt  
 Cyan  
 Magenta  
 Yellow  
 CTO  
 Color  
 Gobo  
 Prism  
 Effect  
 Focus  
 Zoom  
 Frost1  
 Frost2  
 Iris  
 Fr.shutters Rot.  
 Fr.shutter 1 M1  
 Fr.shutter 1 M2  
 Fr.shutter 2 M1  
 Fr.shutter 2 M2  
 Fr.shutter 3 M1  
 Fr.shutter 3 M2  
 Fr.shutter 4 M1  
 Fr.shutter 4 M2

Adjust	⇨	Pan Tilt Cyan Magenta Yellow CTO Color Gobo RGobo Prism Rot Prism Effect Focus Zoom Frost 1 Frost 2 Iris Fr.shutters Rot. Fr.shutter 1 M1 Fr.shutter 1 M2 Fr.shutter 2 M1 Fr.shutter 2 M2 Fr.shutter 3 M1 Fr.shutter 3 M2 Fr.shutter 4 M1 Fr.shutter 4 M2	⇨	Value (000-255) for each function
--------	---	--	---	-----------------------------------

4

**INFORMATION**

Factory Reload	⇨	NO/YES	⇨	Value (000-255)
⇨ Fixture Time	⇨	0-9999		
Temperature	⇨	58 °C		
Fans Speed	⇨	**%		
Software Version	⇨	DISP- V1.0 NET-V1.0 CTR1-XY- V1.0 CTR2- MOTOR -V1.0 CTR3-MOTOR-V1.0 CTR4-MOTOR-V1.0 FPGA-----2.0		
UID	⇨	15D00237****		
View DMX				

### 3.4 LINKING

Several units may be interconnected in order to control all further slave units to the same effect of the master unit.

1. Connect the DMX OUT of the master unit via 3/5-pole XLR cable to the DMX IN of the first slave unit.
2. Connect the DMX OUT of the first slave unit to the DMX IN of the second slave unit, etc. until all units are connected in a chain.

### 3.5 DMX ADDRESSING CONFIGURATION

To enter the DMX mode, follow these steps:

- Press the ENTER button to access the main menu.
- Press the UP/DOWN button to scroll the menu, select **Connect**, then press the ENTER button to enter the next menu.
- Press the UP/DOWN button to scroll through the menu, select the **Address** and press the ENTER key.
- Press the arrow keys to select the desired value (**001-512**).
- Press the ENTER key to confirm the setting.
- Press the LEFT button repeatedly to exit the menu and save changes.

### 3.6 DMX MODE CONFIGURATION

RA2000PROFILEHB has 5 DMX channel configurations that can be accessed from the control panel.

- Press the ENTER button to access the main menu.
- Press the UP/DOWN button to scroll through the menu, select **Connect**, then press the ENTER button to enter the next **DMX Mode** menu.
- Press the ENTER button and select **DMX Mode** with the UP/ DOWN button, then confirm the selection with the ENTER button.
- Use the UP/DOWN button to select the desired DMX channel configuration (**Standard 38Ch, Standard 40Ch, Extended 39Ch, Extended 41Ch, Extended 42Ch**), then press the ENTER button to confirm your choice.
- Press the LEFT button repeatedly to exit the menu and to save the changes made.

The tables on page 19, 20, 21, 22, 23, 24 indicate the operating modes and related DMX values. As a DMX interface, the unit has 5-pin XLR contacts.

### 3.7 DMX ADDRESSING

For operation via a light control unit with DMX512 protocol, simply connect RA2000PROFILEHB to the controller. The projector has a DMX channel configuration that can be accessed from the control panel. In order to control RA2000PROFILEHB with a light control unit, the DMX start address must be set for the first DMX channel.

If, for example, address 33 is provided on the control unit to control the function of the first one DMX channel, the start address 33 must be set on the RA2000PROFILEHB. The other panel functions will be automatically assigned to the following addresses.



Number of DMX channels	Start address (example)	DMX Address occupied	Next possible start address for unit No. 1	Next possible start address for unit No. 2	Next possible start address for unit No. 3
38	33	33-70	71	109	147
39	33	33-71	72	111	150
40	33	33-72	73	113	153
41	33	33-73	74	115	156
42	33	33-74	75	117	159

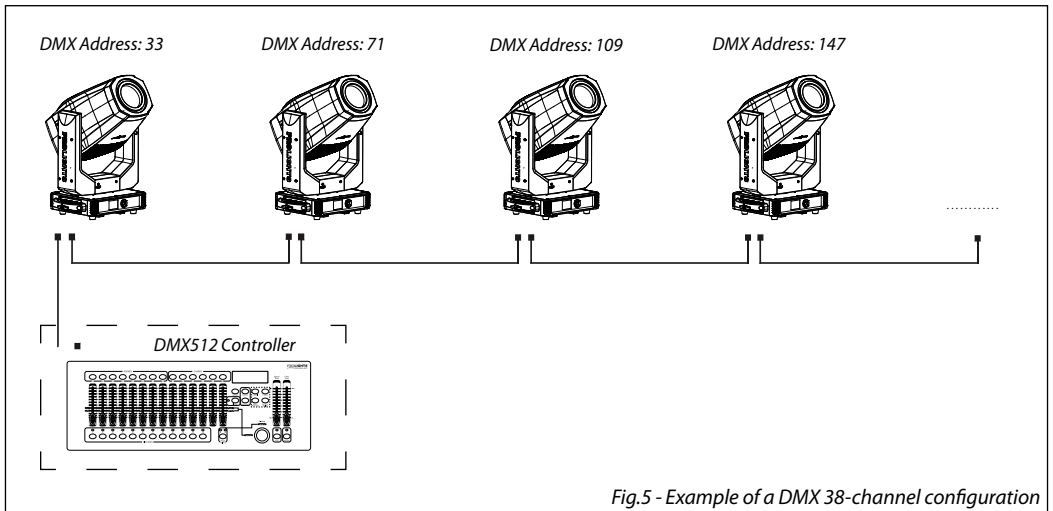


Fig.5 - Example of a DMX 38-channel configuration

### 3.8 MOVEMENT

- Press the ENTER button to access the main menu.
- Press the UP/DOWN button to scroll through the menu, select **Set Up**, then press the ENTER button access the next menu.
- Press the UP/DOWN button to select **Movement** and press the ENTER button to proceed.
- Select the proposed option with the UP/DOWN button and press the ENTER button to confirm.
  - **Pan Reverse** - Rotation in the opposite direction of the moving head. NO to deactivate the function (normal setting); YES to activate the function (Pan Reverse).
  - **Tilt Reverse** - Inclination in the opposite direction of the moving head. NO to deactivate the function (normal setting), YES to activate the function (Tilt Reverse).
  - **Pan/Tilt Feedbacks** - Rearrange Pan/Tilt position after accidental shift. Select NO for deactivate the function or YES to activate the function.
- Press the ENTER button to confirm the selection.
- Press the LEFT button repeatedly to exit the menu and to save the changes made.

### 3.9 SCREEN

- It is possible to modify the following parameters, related to the display, following the same procedure:
- Press the ENTER button to access the main menu.
- Press the UP/DOWN button to scroll through the menu, select **Set Up**, then press the ENTER button access the next menu.
- Press the UP/DOWN button to select **Screen** and press the ENTER button to proceed.
- Select the proposed option with the UP/DOWN button and press the ENTER button to confirm.
  - **Backlight** - Auto Off display backlight. This function allows you to switch off automatically the backlighting of the display after a certain time which can be set using the directional keys. To have the display always on select On or set a value between those shown (10s, 20s, 30s) to turn off the display once the chosen time has elapsed, after exiting the menu.
  - **Flip Display** - Display orientation. This feature allows you to rotate the display by 180 ° to get a better view of the display when the unit is hanging upside down. Select YES to activate the function or NO to deactivate it.
  - **Warn Cue** - Warning of error. Use the arrow keys to select OFF or ON depending on whether or not the display shows error warnings.
  - **Key lock** - With this function, you can lock the keys on the control panel to prevent, for example, tampering with the settings. If this function is activated, the keys are locked automatically. To disable or temporarily disable or disable the key lock function, press the keys in the following order to regain access to the menu commands:
    - UP, DOWN, UP, DOWN, ENTER. Select YES to activate the function or NO to deactivate it.
    - Press the ENTER button to confirm the selection.
    - Press the LEFT key repeatedly to exit the menu and to save the changes made.

### 3.10 FIXTURE

- **Dimmer mode** - select this function to choose and simulate different dimming curves:
  - Press the ENTER button to access the main menu.
  - Press the UP/DOWN button to scroll through the menu, select **Set Up**, then press the ENTER button access the next menu.
  - Press the UP/DOWN button to select **Fixture** and press the ENTER button to proceed.
  - Press the UP/DOWN button to scroll through the menu, then select **Dimmer** mode and press the ENTER button to confirm.
  - Press the UP/DOWN button to select the mode (**Off - Dimmer1 - Dimmer2 - Dimmer3**), then press the ENTER button to confirm your choice.
  - Press the LEFT button repeatedly to exit the menu and to save the changes made.
    - **Temperature** - Select this function to set the unit of measurement of the temperature shown on the display:
      - Press the ENTER button to access the main menu.
      - Press the UP/DOWN button to scroll through the menu, select **Set Up**, then press the ENTER button to access the next menu.
      - Press the UP/DOWN button to select **Fixture** and press the ENTER button to proceed.
      - Press the UP/DOWN button to scroll through the menu, then select **Temperature °C/F** and press the ENTER button to confirm.
      - Press the UP / DOWN button to select the **Celsius / Fahrenheit** measurement unit, then press the ENTER button to confirm the selection.
      - Press the LEFT button repeatedly to exit the menu and to save the changes made.

### 3.11 FANS MODE

- Select this function to set the fan operating mode:
- Press the ENTER button to access the main menu.
- Press the UP/DOWN button to scroll through the menu, select **Set Up**, then press the ENTER button access the next menu.
- Press the UP/DOWN button to select **Fixture** and press the ENTER button to proceed.
- Press the UP/DOWN button to scroll through the menu, then select **Fans Mode** and press the ENTER button to confirm.
- Press the UP/DOWN button to select the **Auto/Silent/High/Off** mode, then press the ENTER button to confirm your choice.
- Press the LEFT button repeatedly to exit the menu and to save the changes made.

### 3.12 AUTO E MANUAL TEST

Through these menus it is possible to test the functioning of all the functions of the moving head.

### 3.13 RESET OF THE FUNCTIONS

You can start a preset program to restore the selected function:

- Press the ENTER button to access the main menu.
- Press the UP/DOWN button to scroll through the menu, select **Advanced**, then press the ENTER button to enter the next menu.
- Press the UP/DOWN button to select **Reset** and press the ENTER button to access the next menu.
- Press the UP/DOWN button to scroll through the menu, then select the function you want to reset between those.
- Press the ENTER button to confirm the selection and wait for the selected function to be restored.
- Press the LEFT button repeatedly to exit the menu and to save the changes made.

### 3.14 ADJUST

- This function allows you to change all parameters. Press the UP/DOWN buttons to select one of the parameters and press ENTER to change the value (**000-999**) using the UP/DOWN buttons.
- Press the ENTER button to confirm your choice.
- Press the LEFT button repeatedly to exit the menu and to save the changes made.

### 3.15 INFORMATION ON THE DEVICE

- To view all the information on the device, proceed as follows:
- Press the ENTER button to access the main menu.
- Press the UP/DOWN button to select Information, then press the ENTER button to access the next menu.
- Press the UP/DOWN button to scroll through the menu, then select one of the following information and press the ENTER button to display it.
  - **Fixture Time** - Through the **Fixture Time** function, the operating time of the projector can be shown on the display.
  - **Temperature** - Through the **Temperature** function it is possible to display on the display the temperature inside the moving head, where the lamp is located. The temperature can be displayed in degrees Celsius or Fahrenheit.
  - **Fans Speed** - Through the **Fans Speed** function it is possible to display on the display the fan speed present near the lamp. The speed measurement is expressed in RPM (revolutions per minute).
  - **Software Version** - Through the **Software Version** function, the version of the installed software can be

viewed on the display.

- **UID** - Select the **UID** function to display the identification ID for the RDM control.
- Press the LEFT button repeatedly to exit the menu.

### **3.16 DMX VIEW**

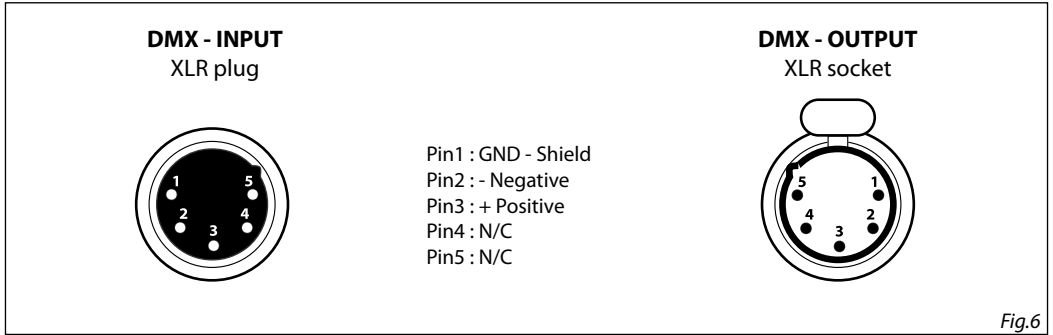
Select the View DMX to visualize the DMX values received by the fixture for each channel during its operation.

NOTE: if the Motor fast mode is active, the speeds of all the engines increase to the maximum possible. The RA2000PROFILEHB manages all the motors in a “smooth” mode by default, when the Motor fast mode is activated the speeds increase to max and the smooth is lost.

### 3.17 CONNECTION OF THE DMX LINE

DMX connection employs standard XLR connectors. Use shielded pair-twisted cables with  $120\Omega$  impedance and low capacity.

The following diagram shows the connection mode:



#### ATTENTION

The screened parts of the cable (sleeve) must never be connected to the system's earth, as this would cause faulty fixture and controller operation.

Over long runs can be necessary to insert a DMX level matching amplifier.

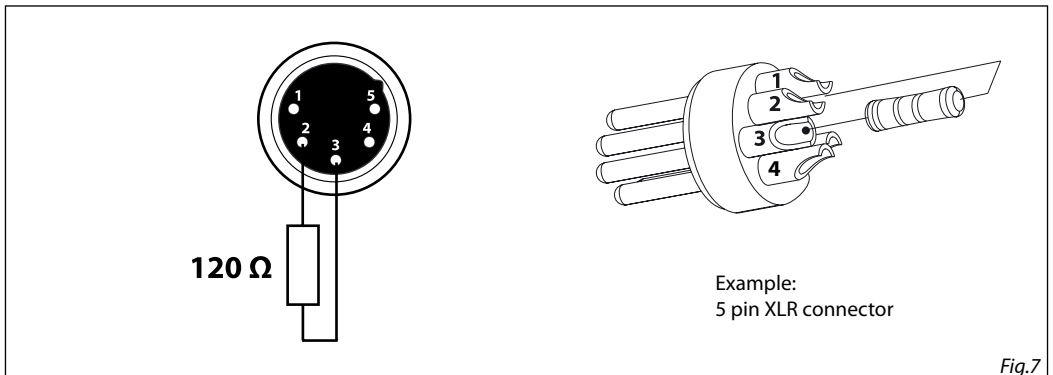
For those connections the use of balanced microphone cable is not recommended because it cannot transmit control DMX data reliably.

- Connect the controller DMX input to the DMX output of the first unit.
- Connect the DMX output to the DMX input of the following unit. Connect again the output to the input of the following unit until all the units are connected in chain.
- When the signal cable has to run longer distance is recommended to insert a DMX termination on the last unit.

### 3.18 CONSTRUCTION OF THE DMX TERMINATION













The termination avoids the risk of DMX 512 signals being reflected back along the cable when they reach the end of the line: under certain conditions and with certain cable lengths, this could cause them to cancel the original signals.

The termination is prepared by soldering a  $120\Omega$  1/4 W resistor between pins 2 and 3 of the 5-pin male XLR connector, as shown in figure.



## 3.19 DMX CONTROL

38 Ch	39 Ch	40 Ch	41 Ch	42 Ch	FUNCTION	DMX Value
1	1	1	1	1	<b>PAN 8bit</b> 0~100%	000 - 255
2	2	2	2	2	<b>PAN 16bit</b> 0~100%	000 - 255
3	3	3	3	3	<b>TILT 8bit</b> 0~100%	000 - 255
4	4	4	4	4	<b>TILT 16bit</b> 0~100%	000 - 255
5	5	5	5	5	<b>P/T SPEED</b> Fastest to slowest Movement with Blackout	000 - 250 251 - 255
6	6	6	6	6	<b>SHUTTER</b> No function (shutter open) Shutter effect slow to fast No function (shutter open) Pulse-effect in sequences No function (shutter open) Random Shutter effect slow to fast No function (shutter open)	000 - 010 011 - 082 083 - 093 094 - 163 164 - 174 175 - 243 244 - 255
7	7	7	7	7	<b>DIMMER 8bit</b> 0~100%	000 - 255
8	8	8	8	8	<b>DIMMER 16bit</b> 0~100%	000 - 255
9	9	9	9	9	<b>DIMMER SPEED MODE</b> Preset dimmer speed from display menu Dimmer speed mode off Dimmer speed mode1 (fast speed) Dimmer speed mode2 (middle speed) Dimmer speed mode3 (slow speed)	000-051 052-101 102-152 153-203 204-255
10	10	10	10	10	<b>CYAN</b> 0~100%	000 - 255
11	11	11	11	11	<b>MAGENTA</b> 0~100%	000 - 255
12	12	12	12	12	<b>YELLOW</b> 0~100%	000 - 255
13	13	13	13	13	<b>CTO</b> 0~100%	000 - 255

38 Ch	39 Ch	40 Ch	41 Ch	42 Ch	FUNCTION	DMX Value
14	14	14	14	14	<b>COLOR</b> Open Open+Color1 Color1 Color1+Color2  Color2 Color2+ Color3  Color3 Color3+ Color4  Color4 Color4+Color5  Color5 Color5+ Color6  Color6 Color6+ Open Stop to fast(Forward Spin) Fast to stop(Revers Spin) Positioning from 0-360 degrees(Indexing)	000-004 005-009 010-013 014-018 019-022 023-027 028-031 032-036 037-040 041-045 046-049 050-054 055-058 059-063 064-095 096-127 128-255
15	15	15	15	15	<b>ROTATING GOBO WHEEL</b> Open Position 1  Position 2  Position 3  Position 4  Position 5  Position 6  Position 7  Position 1 (Position 1 Shake,from slow to fast) Position 2 (Position 2 Shake,from slow to fast) Position 3 (Position 3 Shake,from slow to fast) Position 4 (Position 4 Shake,from slow to fast) Position 5 (Position 5 Shake,from slow to fast) Position 6 (Position 6 Shake,from slow to fast) Position 7 (Position 7 Shake,from slow to fast) Stop to fastest (Forward Wheel Spin) Stop to fastest (Reverse Wheel Spin)	000 - 005 006 - 010 011 - 015 016 - 020 021 - 025 026 - 030 031 - 035 036 - 040 041 - 055 056 - 070 071 - 085 086 - 100 101 - 115 116 - 130 131 - 145 146 - 200 201 - 255
16	16	16	16	16	<b>RGOBO</b> Positioning from 0-360 degrees(Indexing) Slowest to fastest(Forward Spin) Stop Fastest to Slowest(Reverse Spin)	000 - 191 192 - 221 222 - 225 226 - 255

38 Ch	39 Ch	40 Ch	41 Ch	42 Ch	FUNCTION	DMX Value
/	/	17	17	17	<b>RGBOBO FINE</b>	000 - 255
17	17	18	18	18	<b>PRISM ROT</b> Open Insertion and Positioning from 0-360(Index) Slowest to fastest (Forward Spin) Fastest to Slowest (Reverse Spin)	000 - 005 006 - 191 192 - 223 224 - 255
		19	19	19	<b>PRISM ROT FINE</b>	000 - 255
18	18	20	20	20	<b>FROST 1</b> Frost1 0->100%	000 - 255
19	19	21	21	21	<b>FROST 2</b> Frost1 0->100%	000 - 255
/	20	/	22	22	<b>AUTO FOCUS</b> Auto Focus Off <b>Hole</b> 4 metres 6 metres 8 metres 10 metres 12 metres 14 metres 16 metres 18 metres <b>Rotating gobo wheel</b> 4 metres 6 metres 8 metres 10 metres 12 metres 14 metres 16 metres 18 metres Reserved	000 - 000 001 - 007 008 - 015 016 - 023 024 - 031 032 - 039 040 - 047 048 - 055 056 - 063 064 - 071 072 - 079 080 - 087 088 - 095 096 - 103 104 - 111 112 - 119 120 - 127 128 - 255
20	21	22	23	23	<b>FOCUS 8bit</b> Focus	000 - 255
21	22	23	24	24	<b>FOCUS 16bit</b> Focus Fine	000 - 255
22	23	24	25	25	<b>ZOOM 8bit</b> Zoom	000 - 255
23	24	25	26	26	<b>ZOOM 16bit</b> Zoom Fine	000 - 255

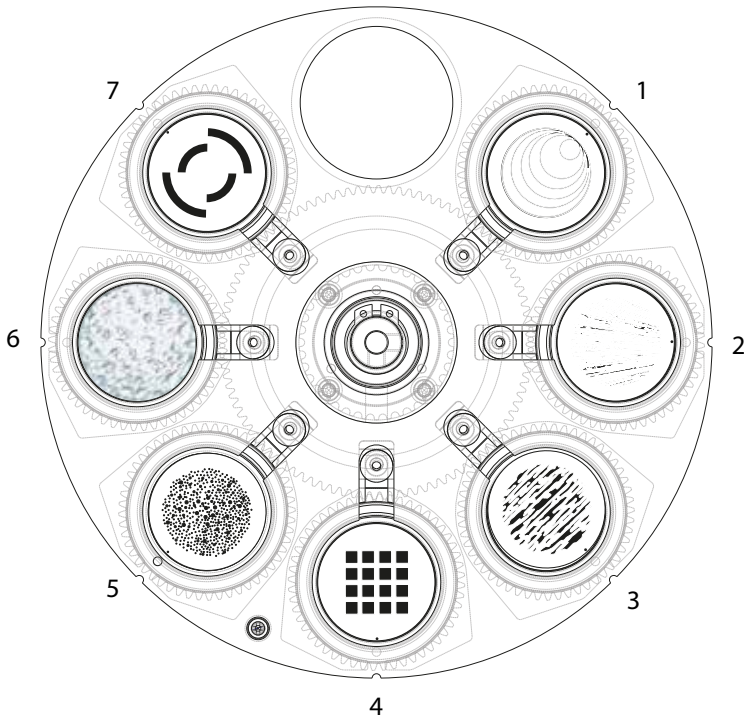
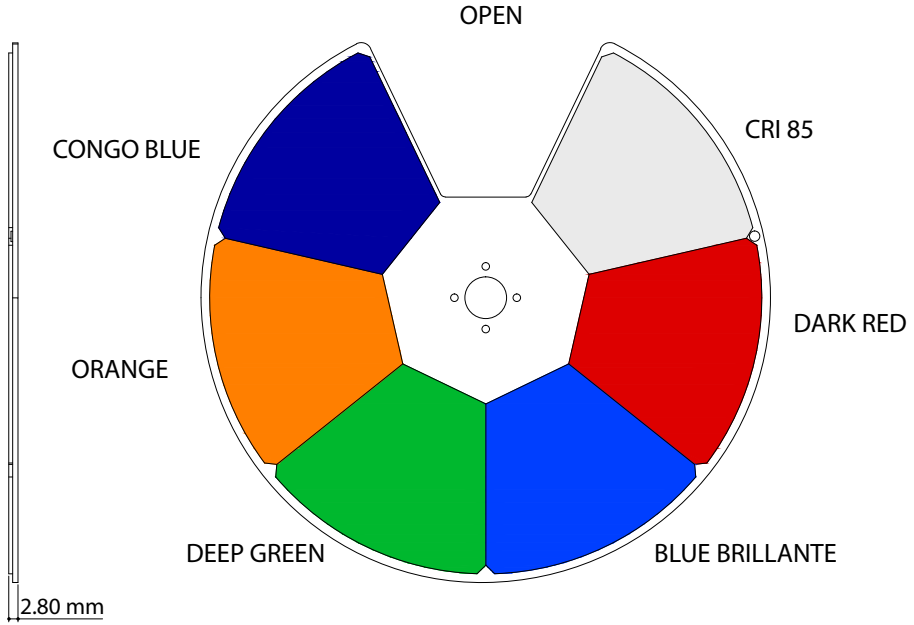


38 Ch	39 Ch	40 Ch	41 Ch	42 Ch	FUNCTION	DMX Value
24	25	26	27	27	<b>EFFECT WHEEL</b> 0~100%	000 - 255
25	26	27	28	28	<b>ROT EFFECT</b> Open/No Function Forward stop to fastest Stop Reverse stop to fastest	000 - 003 004 - 127 128 - 131 132 - 255
26	27	28	29	29	<b>IRIS</b> From large to small Open and close by arrive slow to fast (Effects) Open from slow to fast (Effects) Close from slow to fast (Effects)	000 - 063 064 - 127 128 - 191 192 - 255
27	28	29	30	30	<b>FRAMING SHUTTER 1 MOVEMENT</b> Movement from outward to inward	000 - 255
28	29	30	31	31	<b>FRAMING SHUTTER 1 SWIVELLING</b> Swivelling from -25 degrees towards 0 degrees 0 degrees Swivelling from 0 degrees to +25 degrees	000 - 127 128 129 - 255
29	30	31	32	32	<b>FRAMING SHUTTER 2 MOVEMENT</b> Movement from outward to inward	000 - 255
30	31	32	33	33	<b>FRAMING SHUTTER 2 SWIVELLING</b> Swivelling from -25 degrees towards 0 degrees 0 degrees Swivelling from 0 degrees to +25 degrees	000 - 127 128 129 - 255
31	32	33	34	34	<b>FRAMING SHUTTER 3 MOVEMENT</b> Movement from outward to inward	000 - 255
32	33	34	35	35	<b>FRAMING SHUTTER 3 SWIVELLING</b> Swivelling from -25 degrees towards 0 degrees 0 degrees Swivelling from 0 degrees to +25 degrees	000 - 127 128 129 - 255
33	34	35	36	36	<b>FRAMING SHUTTER 4 MOVEMENT</b> Movement from outward to inward	000 - 255
34	35	36	37	37	<b>FRAMING SHUTTER 4 SWIVELLING</b> Swivelling from -25 degrees towards 0 degrees 0 degrees Swivelling from 0 degrees to +25 degrees	000 - 127 128 129 - 255
35	36	37	38	38	<b>FRAMING SHUTTER ROTATION</b> Rotation from left to center Center Rotation from center to right	000 - 127 128 129 - 255

38 Ch	39 Ch	40 Ch	41 Ch	42 Ch	FUNCTION	DMX Value
					<b>SHUTTERS MACROS</b>	
					No Function	000 - 003
					Macro 1	004 - 011
					Macro 2	012 - 018
					Macro 3	019 - 025
					Macro 4	026 - 032
					Macro 5	033 - 039
					Macro 6	040 - 047
					Macro 7	048 - 054
					Macro 8	055 - 061
					Macro 9	062 - 068
					Macro 10	069 - 075
					Macro 11	076 - 082
					Macro 12	083 - 090
					Macro 13	091 - 097
					Macro 14	098 - 104
					Macro 15	105 - 111
36	37	38	39	39	Macro 16	112 - 118
					Macro 17	119 - 125
					Macro 18	126 - 133
					Macro 19	134 - 140
					Macro 20	141 - 147
					Macro 21	148 - 155
					Macro 22	156 - 161
					Macro 23	162 - 168
					Macro 24	169 - 176
					Macro 25	177 - 183
					Macro 26	184 - 190
					Macro 27	191 - 197
					Macro 28	198 - 204
					Macro 29	205 - 211
					Macro 30	212 - 219
					Macro 31	220 - 226
					Macro 32	227 - 233
					Macro 33	234 - 240
					Macro 34	241 - 247
					Macro 35	248 - 255
37	38	39	40	40	<b>SHUTTERS MACRO SPEED</b>	
					Speed From Slow to Fast	000 - 255

38 Ch	39 Ch	40 Ch	41 Ch	42 Ch	FUNCTION	DMX Value
				41	<b>FAN CONTROL</b> No Function Linear fan speed 100 to 0% Auto Mode Silent Mode Studio Mode Performance Mode Follow output/A Kind of auto mode TBD (No Function, from display menu)	000-001 002-201 202-207 208-213 214-219 220-225 226-231 232-255
38	39	40	41	42	<b>CONTROL</b> No Function Reset All Pan&tilt Reset Effects Reset Gobo Reset Shutter Reset Other Reset Color Reset Motor fast mode No Function TBD(No Function)	000-007 008-015 016-023 024-031 032-039 040-047 048-055 056-063 064-071 072-111 112-255

3.20 COLOR - GOBOS WHEEL



## - 4 - MAINTENANCE

### 4.1 MAINTENANCE AND CLEANING THE UNIT

- Make sure the area below the installation place is free from unwanted persons during setup.
- Switch off the unit, unplug the main cable and wait until the unit has cooled down.
- All screws used for installing the device and any of its parts should be tightly fastened and should not be corroded.
- Housings, fixations and installation spots (ceiling, trusses, suspensions) should be totally free from any deformation.
- When the lens is visibly damaged due to cracks or deep scratches, it must be replaced.
- The main cables must be in impeccable condition and should be replaced immediately even when a small problem is detected.
- In order to protect the device from overheating the cooling fans (if any), and ventilation openings should be cleaned monthly.

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.
- General visual check of the internal components, cabling, mechanical parts, etc.
- Electrical, photometric and functional checks; eventual repairs.

Warning: we strongly recommend internal cleaning to be carried out by qualified personnel!

### 4.2 FUSE REPLACEMENT

1. Disconnect this product from the power outlet.
2. Using a screwdriver, unscrew the fuse holder cap from the housing.
3. Remove the blown fuse and replace with a good fuse of the same type and rating.
4. Screw the fuse holder cap back in place and reconnect power.

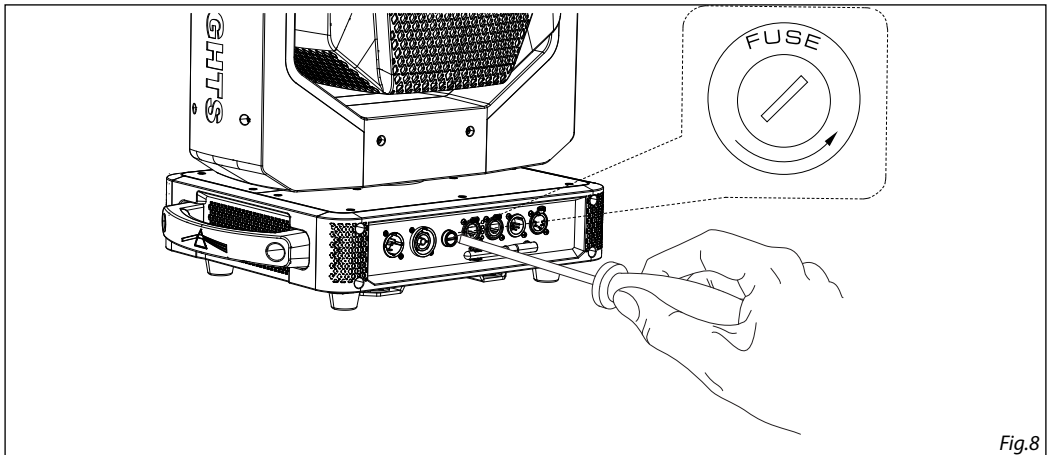


Fig.8

### 4.3 TROUBLESHOOTING

Problems	Possible causes	Checks and remedies
Fixture does not light up	<ul style="list-style-type: none"> <li>• No mains supply</li> <li>• Dimmer fader set to 0</li> <li>• All color faders set to 0</li> <li>• Faulty LED</li> <li>• Faulty LED board</li> </ul>	<ul style="list-style-type: none"> <li>• Check the power supply voltage</li> <li>• Increase the value of the dimmer channels</li> <li>• Increase the value of the color channels</li> <li>• Replace the LED board</li> <li>• Replace the LED board</li> </ul>
General low light intensity	<ul style="list-style-type: none"> <li>• Dirty lens assembly</li> <li>• Misaligned lens assembly</li> </ul>	<ul style="list-style-type: none"> <li>• Clean the fixture regularly</li> <li>• Install lens assembly properly</li> </ul>
Fixture does not power up	<ul style="list-style-type: none"> <li>• No power</li> <li>• Loose or damaged power cord</li> <li>• Faulty internal power supply</li> </ul>	<ul style="list-style-type: none"> <li>• Check for power on power outlet</li> <li>• Check power cord</li> <li>• Replace internal power supply</li> </ul>
Fixture does not respond to DMX	<ul style="list-style-type: none"> <li>• Wrong DMX addressing</li> <li>• Damaged DMX cables</li> <li>• Bouncing signals</li> </ul>	<ul style="list-style-type: none"> <li>• Check control panel and unit addressing</li> <li>• Check DMX cables</li> <li>• Install terminator as suggested</li> </ul>

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

