®

f.a.l

NOCTURNO 2500

Instruction Manual

model :

PF 2958   NOCTURNO 2500

ATTENTION

This instruction manual contains important information about the installation and use of the projector. Please read and follow these instruction carefully.

ATTENTION

Always ensure that the power to the projector is disconnected before opening the projector or commencing any maintenance work.

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INDEX

01 – SAFETY INFORMATION

❖ Do not attempt to dismantle and modify the projector.

❖ Do not allow contact with water or any other fluids, or metallic objects（IP 44）.

❖ Not allowed to be mounted directly on inflammable surfaces.

❖ Do not stick filters, masks or other materials directly onto glass.

❖ Keep at least 0.5m distance between the projector and adjacent inflammable surface.

❖ The projector must only be used complete with its protective grill and/or front glass.

❖ The projector grill, glasses or ultraviolet filter must be changed if they are visibly damaged to the point at which their effectiveness is diminished, for example by becoming cracked or deeply scratched.

❖ The lamp must be replaced if it becomes damaged or deformed by heat.

❖ 5m Keep at least 5 m between the lamp and the illuminated surfaces.

❖ Avoid direct exposure to the light from the lamp. The light is harmful to the eye.

❖ Note: the lamp reaches very high temperatures, allow at least 15 minutes for the lamp to cool completely before attempting to handle it.

❖ To ensure the reliability of the projector it should be kept clean. It is recommended that the fan should be cleaned every 15 days. The glass and dichroic filters should also be regularly cleaned to maintain an optimum light output. In locations such as discotheques the output glass should be cleaned every week as smoke fluid can condense on it and very quickly reduce the light output.

02 – GETTING STARTED

In this section you will find some brief steps to follow to start using the projector immediately. These few instructions are essential for connecting and supplying the projector, but not to exhaust the several functions the apparatus is capable to do. You are strongly invited to read the rest of this instructions manual once installed the projector, so as to get more insight and acquire full control on the fixture functionalities. For further deepening on single steps, you are send back to the relevant section, indicated in the brackets.

1. Open the shipping box and verify that all equipment necessary to operate the system has arrived intact. If any equipment is missing or damaged, contact your F.A.L. dealer immediately.

1 Nocturno 2500   1 instructions manual   1 Allen screw driver
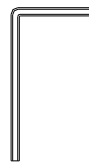
Before beginning initial setup of your Nocturno 2500, make sure that there is no evident damage caused by transportation. In the event that the unit's housing or cable is damaged, do not plug it in and do not attempt to use it until after contacting your F.A.L. dealer for assistance.

2. Insert either HMD 2500 or MSA 2500 the lamp into the projector（see section 04）.

3. Position the projector and secure it firmly（see section 03）.

4. The projector can be controlled with DMX 512 signal. The DMX cables are located in the base of the projector near the outgoing power cord.

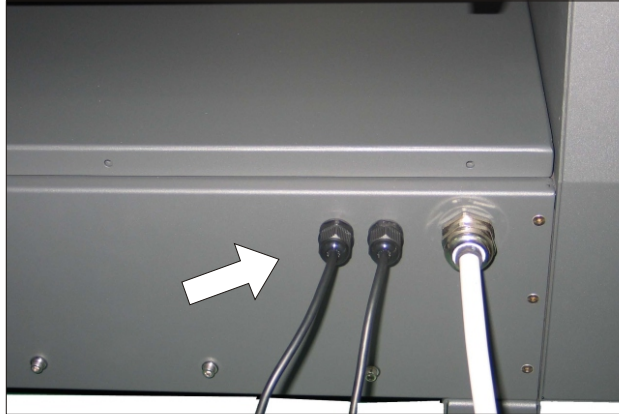5. Connect one mains power plug（see section 05）to the power cord outgoing from the projector; this plug should have the proper IP protection rating regarding to the installation typology. Connect the main power to the projector, paying attention to the voltage and frequency marked on the panel.

The projector executes a reset routine; during this step, the display on the base will show the word **FAL**. When the reset is finished, the display will show the word **C 1**, indicating that the start address is the DMX channel 1 and so the projector will respond only to the commands sent by the DMX controller starting from channel 1. The LED over the ENTER button will be off（NO DMX, in fact no controller is connected yet）.
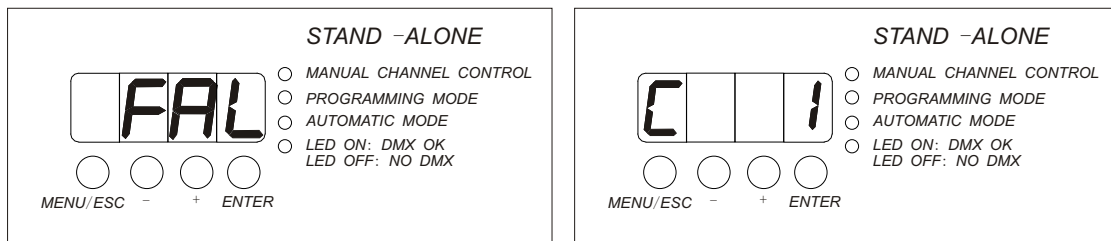
If one of the three LEDs labelled MANUAL CHANNEL CONTROL, PROGRAMMING MODE or AUTOMATIC MODE is on, the projector will not respond to the control signals sent by the light controller. Read in section 08 how to return to the remote control.

6. If you have to control many projectors, you may specify a different start address for each one, otherwise skip to point 7.

Press MENU/ESC button until the display will show **CHAN**. Press ENTER. Press "+" or "−" buttons as many times as needed to visualize the desired channel number. For a fast advancing keep the button hold. Press ENTER to confirm your setting.

7. Connect the DMX bus to the light controller, it the case.

03 – INSTALLING THE PROJECTOR

FLOOR POSITION
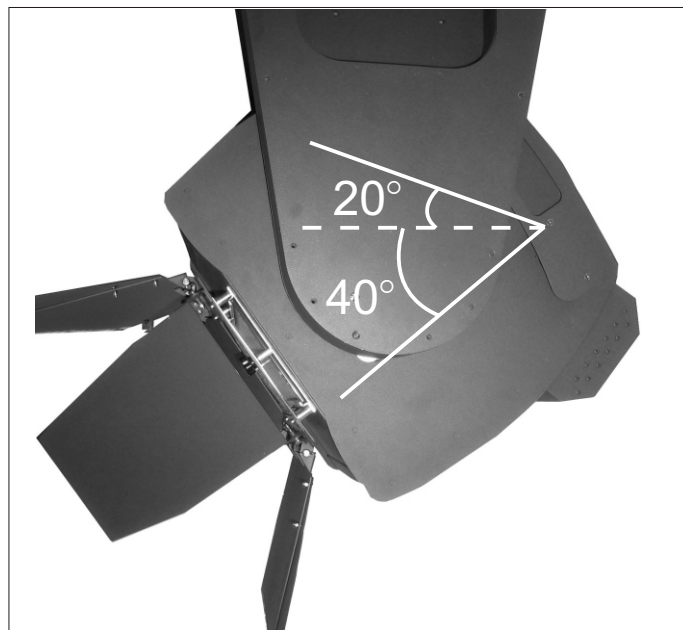
To fix the Nocturno 2500 on the floor, the projector head can be positioned in a angle of – 50° / + 60° .

HANGING POSITION

To fix the Nocturno 2500 in mounting position, the projector head can be positioned in a angle of – 40° /+ 20° .

Note that: in hanging position you have to reverse the head in order to keep the fans in the bottom（Rain drops don't have to enter the head）.

To fix the Nocturno 2500 is necessary, when the installation has to be on a raised−from −the ground support, to reverse the projector and remove the four feet, attach the optional bracket（PF2965） that allows the Nocturono 2500 to rotate at random on the base of the projector, and then fix it with the screws provided. Take out the 2 optional clamps, mount them on the metal bar which has 2 holes, hang the clamps on the structure, and then fasten the screws of the clamps in order to ensure the projector is hang firmly. Always ensure that the structure on which you are mounting the projector is secure and is able to support the weight of each unit. .

Tighten the safety chain in a way that would lead to the shortest possible fall of the projector.

Safety chain

Clamp

Fixing bracket（PF2965）
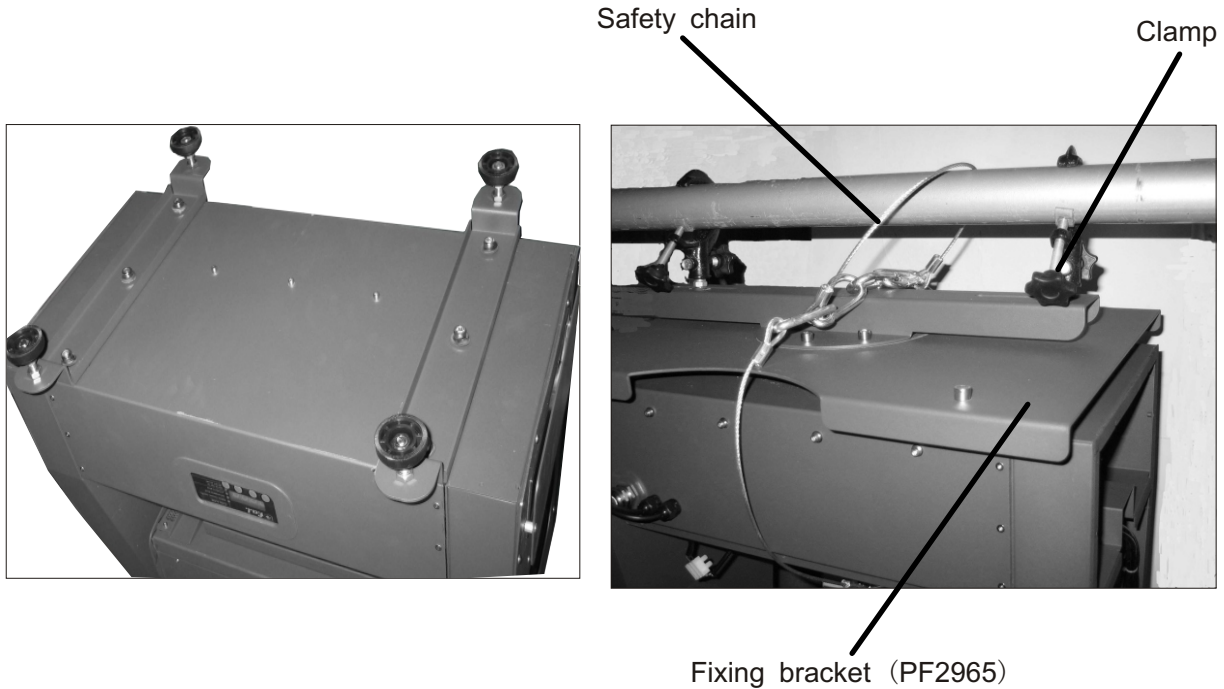
04 - FITTING THE LAMP

Open the lamp access hatch （1） by undoing the 6 screws （2）, then lift out the cover.
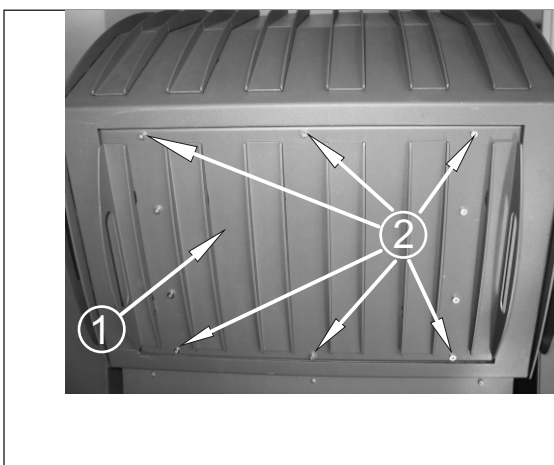
The lamp holder presents two cut – outs in the side panels of the reflector assembly. Position the 2500W lamp in the cut – outs by first lowering the 2 lamp retaining levers ③ As shown in detail in fig. A, insert the lamp and push it in the centre of the reflector without forcing fig. B.

Nocturno 2500 can use either Philips MSA 2500 DE or Osram HMD 2500 lamps. However, the installing procedure for the electrical connections is quite different for the two cases, due to differences in construction.

Fig. A   Fig. B
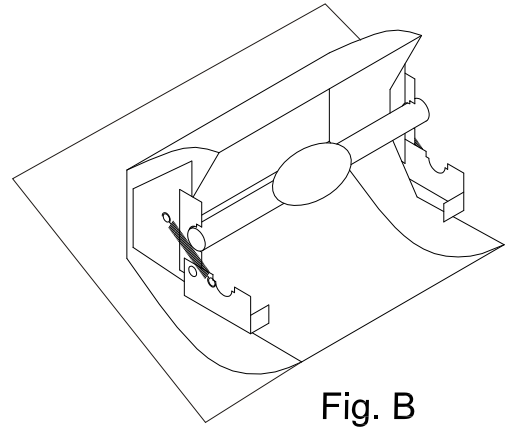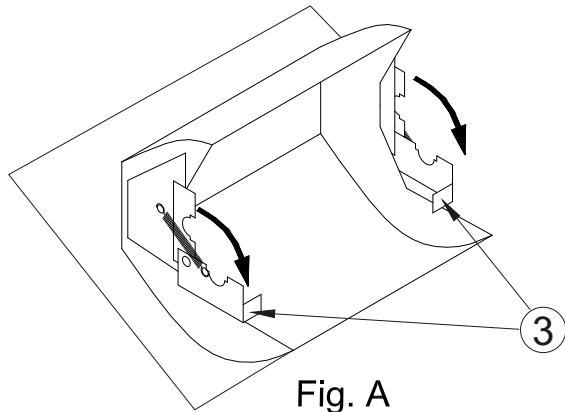
The lamp presents a metallic flange (4) in one end, which is used for mounting it in the lamp holder: turn the lamp so that the glass pip (5) on the bulb is facing towards the reflector. The flange (4) should be inserted in either one of the two slots (6), depends on lamp orientation according to the ignitor's wires cross section (see later).
Do not touch the glass part of the lamp with your fingers. Care should always be taken when handling these lamps.
The lamp holder (8) presents a fixing screw to keep the lamp supply cables. Osram lamps have already these cables connected to the lamp terminals, while Philips lamps do not have these cables, so you have to use additional conductors which must be fixed to the lamp. Loosen the knurled nuts (7), insert the terminals and tighten the nuts.

PHILIPS MSA 2500 DE

OSRAM HMD 2500
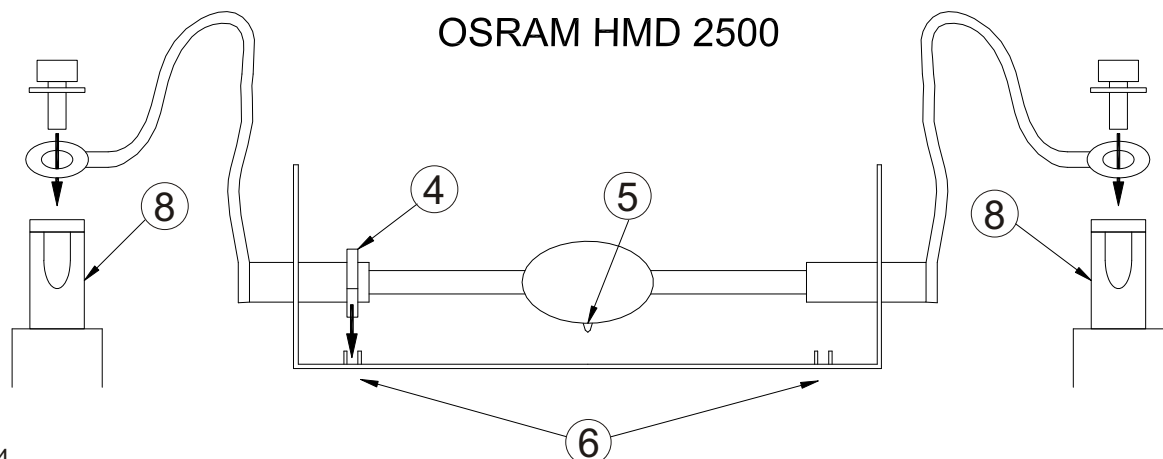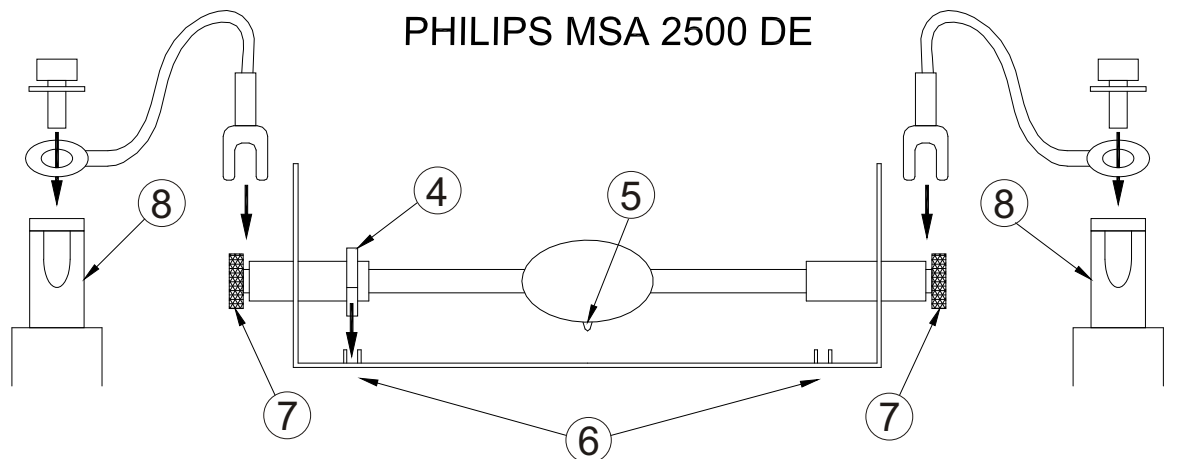
The two wires coming from the ignitor are connected to the lamp holders (8) and have different cross section: the bigger one is the high voltage terminal, while the smaller one is the neutral. The extension cables on the lamp (either Osram and Philips) have different sizes, too. When replacing the lamp you have to pay attention to this difference in size and install the lamp in the right orientation, that means the bigger extension cable on the lamp have to be connected to the lamp holder carrying the bigger wire (and consequently the high voltage terminal on the lamp should be near the high voltage lamp holder, otherwise you will not be able to make the connection due to the minimal length of the extension wires).

Then close the lamp retaining levers (3) and ensure the lamp is firmly tightened, close the inner cover and finally the Nocturno 2500 access hatch.

Always read the manufacturers "Instructions for use" enclosed with the lamp.

05 – POWER SUPPLY – MAINS

Connect one mains power plug (which should have the proper IP protection rating regarding to the installation typology) to the power cord (9) outgoing from the base of the projector; connect the mains power to the projector, paying attention to the voltage and frequency marked on the panel. The wire colours are explained in the following table.

L = Brown

E = Yellow/Green

N = Blue

IMPORTANT

It is essential that each projector is correctly earthed and that electrical installation conforms to all relevant standards. Power consumption of the Nocturno 2500 is 3900VA at 230V.

WATCHDOG SYSTEM

When the projector is switched on the electronics perform a reset, this function rotates the internal motors thus allowing the microprocessor control system to register the positions of all motors under its control. When the lamp strikes and "fires up" it can create a certain amount of electrical noise within the projector that has the potential to disturb the microprocessor. The Nocturno 2500 is fitted with an electronic watchdog system that monitors the microprocessor and will initiate a reset if the functioning of the microprocessor has been disturbed.

06 – CONTROL CONNECTIONS

The Nocturno 2500 can accept digital control signals in DMX 512 (1990) format. Connection between controller and projector and between one projector and another must be made with 2 core screened cable, with each core having at least a 0.5 mm^2 cross section. Connection to and from the projector is via cannon 3 pin XLR, plugs and sockets.
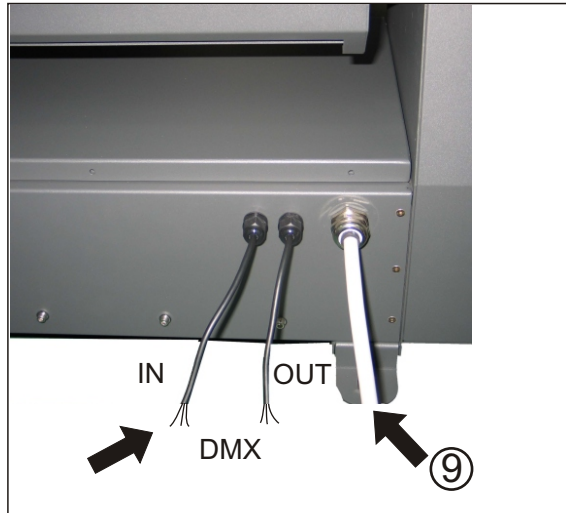
Open the two DMX plug (10) and socket (11) and connect the wires of the two signal cables coming from the projector in the following way:

	INPUT		OUTPUT
GND	SCREEN PIN 1	GND	SCREEN PIN 1
DATA –	WHITE PIN 2	DATA –	WHITE PIN 2
DATA +	RED PIN 3	DATA +	RED PIN 3
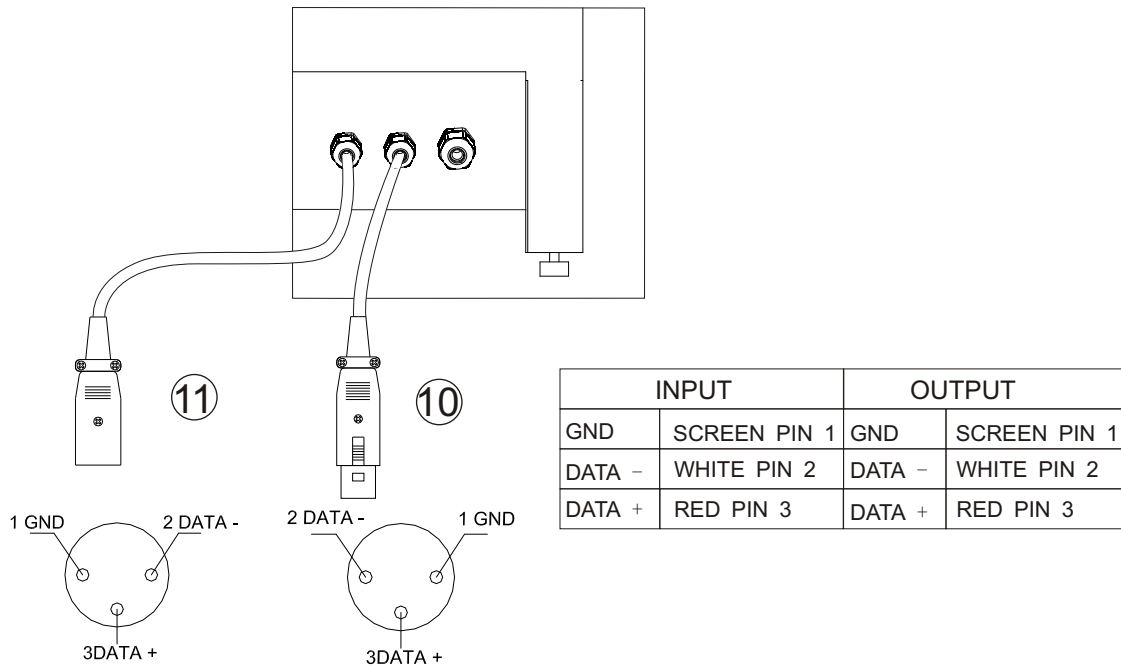
Note: care should be taken to ensure that none of the connections touch the body of the plug or each other. The body of the plug is not connected in any way.

The cable from the DMX controller is connected to the DMX IN line (11) and the cable out to the next projector is connector to the DMX OUT (10).
When a correct DMX signal is present the green DMX ok LED near the display will lit. When the signal is not present or it is incorrect, the LED will be off.

07 – PROJECTOR ADDRESES

The Nocturno 2500 is controlled with 5 DMX channels. Each projector must be given a digital start address number so that the correct projector responds to the correct control signals. This digital start address is the channel number from which the projector starts to "listen" to the digital control information being sent out from the controller. This digital encoding must be done on each projector.
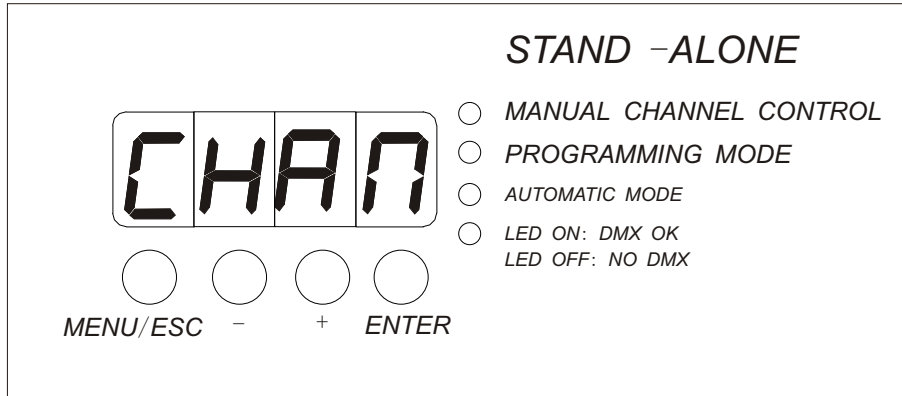
Push once the button marked MENU/ESC on the front panel and the display will show the word

$CHAN$. Use the "+" and "-" buttons to select the desired start address in the display. For example, projector 1 address 1, projector 2 address 6, projector 3 address 11, etc. Confirm your settings by pressing the button marked ENTER.

```
                            STAND –ALONE
   ┌──────────────────┐
   │                  │     ○  MANUAL CHANNEL CONTROL
   │   ┌──┬──┬──┬──┐   │     ○  PROGRAMMING MODE
   │   │ C│ H│ A│ N│   │     ○  AUTOMATIC MODE
   │   └──┴──┴──┴──┘   │     ○  LED ON: DMX OK
   │    ○   ○   ○   ○  │        LED OFF: NO DMX
   │                  │
   │  MENU/ESC  –  +  ENTER
   └──────────────────┘
```

08 – SETUP OPTIONS

The Nocturno 2500 gives the possibility to choose 9 options. These options can be activated by pressing the MENU/ESC button. The display will show the name of the options (which is indicated on the front panel under the display) starting from option 1, the DMX start address. The "+" and "-" buttons will scroll the list of options. Press the ENTER button to enter the sub-menu of the desired option; here you can set other parameters of the projector or simply you are asked to activate or deactivate the option. With the "+" and "-" buttons you can choose between YES or NO, press ENTER to confirm your choice.

Option 1 – **DMX ADDRESS**

When the display shows $CHAN$ press ENTER. Press the "+" and "-" buttons as many times as needed to display the desired channel number. For fast advancing keep and hold the button. Press ENTER to confirm the setting.

Option 2 – **PROJECTOR MASTER**

Remove from DMX IN socket the connector coming from the lighting controller: the projector must be disconnected from the DMX bus in order to be used as a master; then connect the slaves projectors to the master unit via the DMX OUT socket.

When the display shows $MAST$ press ENTER. The display will show a sub-menu where you can choose the master functioning of the projector. Move inside this sub-menu with "+" and "-" buttons:

❖ $AUTO$, automatic mode; the master unit executes his own sequence and sends to the DMX bus the control values for the slaves (up to three). These slaves then do the steps as stored in the master memory. Press ENTER, now you have 3 options, use the "+" and "-" buttons to scroll:

_ $5L\ 0U$. Press ENTER to activate a slow automatic sequence; the AUTOMATIC MODE LED near the display will lit and the display will show the words: $AUEO\ \_\ 5L\ 0U\ \_$ $\Gamma U\Pi$. Press the MENU/ESC button to stop the execution and get back, the LED turns off.

_ $FR5E$. Press ENTER to activate a slow automatic sequence; the AUTOMATIC MODE LED near the display will lit and the display will show the words: $AUEO\ \_\ FR5E\ \_$ $\Gamma U \Pi$. Press the MENU/ESC button to stop the execution and get back, the LED turns off.

_ $U5E\Gamma$. Press ENTER to activate the user sequence stored with option 5. The AUTOMATIC MODE LED will lit and the display will show $AUEO\ \_\ U5E\Gamma\ \_$ $\Gamma U \Pi$. Press the MENU/ESC button to return.

❖ $\Pi U5\ I$, automatic music mode *(NOT ACTIVE AT THE MOMENT)*.

❖ $L\ I\Pi\ I$, *(NOT ACTIVE AT THE MOMENT)*.

❖ $54\Pi C$, *(NOT ACTIVE AT THE MOMENT)*.

Option 3 – **PROJECTOR SLAVE**

When the display shows $5L\ AU$ press ENTER. The display will show a sub-menu where you can choose the number of the slave projector (from 1 to 3). Automatically, the master projector addresses correctly each slave. Move inside this sub-menu with "+" and "-" buttons:

❖ $5L\ -\ I$, projector slave #1. Press ENTER, select with the "+" and "-" buttons the word $HE5$ and confirm your selection with ENTER. The projector is now the slave 1.

❖ $5L\ -2$, projector slave #2. Press ENTER, select with the "+" and "-" buttons the word $HE5$ and confirm your selection with ENTER. The projector is now the slave 2.

❖ $5L\ -3$, projector slave #3. Press ENTER, select with the "+" and "-" buttons the word $HE5$ and confirm your selection with ENTER. The projector is now the slave 3.

❖ $AUEO$, automatic mode; the master unit executes his own sequence and sends to the DMX bus the control values for the slaves (up to three). These slaves then do the steps as stored in the master memory. Press ENTER, now you have 3 options, use the "+" and "-" buttons to scroll:

_ $5L\ 0U$. Press ENTER to activate a slow automatic sequence; the AUTOMATIC MODE LED near the display will lit. Press the MENU/ESC button to stop the execution and get back, the LED turns off.

_ $FR5E$. Press ENTER to activate a slow automatic sequence; the AUTOMATIC MODE LED near the display will lit. Press the MENU/ESC button to stop the execution and get back, the LED turns off.

_ $U5E\Gamma$. Press ENTER to activate the user sequence stored with option 5. The AUTOMATIC MODE LED will lit. Press MENU /ESC to return.

_ $EHPE$, this option sets the synchronisation between master and slaves.

The slave units can synchronise in 2 different ways with the master unit. You can choose to have all units synchronised on the same step, so for example if the master is on step 1, the slaves will all also be on step 1 of whichever sequence they were set to. When the master is on step 2, the slaves will also be on step 2, and so on. Or alternatively, you can choose to have only the changing of a step to another synchronised, which means that it does not matter which step any unit is on: when the master advances a step, the slaves will also advance a step, but they need not all be on the same step number of whichever sequence they were set to. The synchronisation is achieved very simply, the master unit transmits a DMX signal on DMX channels 1 and 2.

The signal on channel 1 is usually at 0 (zero), when the master unit advances a step in the selected auto sequence, it sends a DMX level of 255 on channel 1 for a period of 500 milliseconds. When the slave unit(s) receive this, they will advance 1 step of their selected auto sequence. They may or may not be on the same step number of the sequence as the master but they will advance a step together with the master.

The DMX signal on channel 2 is slightly different. The master sends a DMX level on channel 2 which corresponds to the number of the step in the sequence. So if the master is on step 10 of the sequence, for example, it will be sending DMX level 10 on channel 2. The slave units set to listen to this channel will replay the step corresponding to the received DMX level. In this way the slave always knows which step the master is on and in the example will replay step 10 of the sequence.

When the display show $\cancel{L}\mathcal{HPE}$ press ENTER and use " + " buttons to display $\mathcal{CH}\ \mathsf{I}$ or $\mathcal{CH2}$; press ENTER to choose the desired synchronisation option.

Option 4 – **FIXED VALUES**

With this option you can set manually the DMX values for each channel in the projector to obtain one desired scene and save them. In this operating mode the projector does not respond anymore to the DMX control signal. Automatically, if you turn off the projector in the FVAL menu, these values will be reloaded when you turn on the projector again. If you exit the menu, the control returns to the DMX bus.

When the display shows $\mathcal{FUAL}$ press ENTER. The MANUAL CHANNEL CONTROL LED will turn on, indicating that you are modifying the DMX values manually. The display will show a sub-menu where you can choose the DMX channel to be manually controlled. Scroll the list with "+" or "-":

❖ $\mathcal{CH}\ \mathsf{I}, \mathcal{CH}\ 2$,..., channel to be modified. Press ENTER on the desired channel. The display will show $d\ \ \ \ \mathcal{D}$. Use "+" or "-" to set the DMX values. For fast advancing keep and hold the button. Press ENTER to confirm and return; repeat the previous steps for the other channels.

❖ $\mathcal{SAUE}$, you have to save your settings to activate and reload them. If you press MENU/ESC in the FVAL menu without saving, all your settings will be lost. To save the channels settings choose SAVE, press ENTER, "+" or "-" to display $\mathcal{HES}$ and ENTER to confirm.

Option 5 – **USER PROGRAMMING** *(NOT AVAILABLE AT THE PRESENT REVISION)*

When the display shows $\mathcal{USEr}$ press ENTER. The display will show a sub-menu where you can edit the scenes and then save them inside the projector memory.

Option 6 – **DISPLAY BRIGHTNESS**

When the display shows $\mathcal{br}\ \mathsf{IG}$ press ENTER. The display will show a sub-menu where you Can choose the display brightness ($\mathcal{D}$, I , ..., ID). Select the number with "+" or "-" and confirm with ENTER.

Option 7 – **REVERSE DISPLAY**

When the display shows $\Gamma d5P$ press ENTER. Select with the "+" and "-" buttons the word

$H E 5$ and confirm your selection with ENTER: option 7 is then activated, which inverts the visualization of the numerical display.

Option 8 – **LAMP TIMER**

When the display shows $L H \Pi P$ press ENTER to show the lamp operating life in hours. To

reset the counter press ENTER again, the display will show $L H \Pi L$. Press ENTER, use "+" or

"-" to select $H E 5$ and press ENTER to clear the counter.
The lamp time meter is also cleared every time you restore the factory settings (see option 9).

Option 9 – **DIAGNOSTIC**

When the display shows $d IH L$ press ENTER. You can move with "+" or "-" in the sub-menu.

- ❖ $\Gamma E 5 E$, reset. Press ENTER, select $H E 5$ with "+" or "-" and press ENTER to confirm: the projector performs a reset.

- ❖ $F H L E$, factory settings. Press ENTER, select $H E 5$ with "+" or "-" and press ENTER to confirm: all the options settings will be cleared to the original settings. The display

   will show $U H I E = F H L$ and then exits this option.

- ❖ $d E \Pi U$, the projector executes a demo sequence. Press ENTER, the projector starts the

   demo, the AUTOMATIC MODE LED will lit, the display will show $d E \Pi U = \Gamma U \Pi$. Press MENU/ESC to exit.

- ❖ $L H L b$, calibrate the motors, useful during the unit setup. Press ENTER, select $H E 5$ with "+" or "-" and press ENTER to confirm. The motors go to their zero position. To exit the

   calibration, choose ΠU in the CALb menu and press ENTER.

- ❖ $U P L \Gamma$, software upgrade. You can connect the projector to the serial port of a PC via a

   DMX adapter and upgrade the software of the unit. Press ENTER, select $H E 5$ with "+"

   or "-" and confirm with ENTER. The display will show $\Gamma E L$; the PC tells you when finished. Now you have to restart the projector.

- ❖ $E E 5 E$, projector test. Press ENTER, the projector starts a test sequence to verify that all the functions are currently running (channel by channel), the AUTOMATIC MODE LED will

   lit and the display will show $E E 5 E = \Gamma U \Pi$. Press MENU/ESC to exit.

- ❖ $U F F 5$, motor zero cross, *OPTION NOT ACTIVE ON NOCTURNO.*

- ❖ $U E \Gamma 5$, check the version of the electronic boards. Press ENTER, the display will show a sub-menu and you can scroll with "+" or "-":

   - $\Pi H I \Pi$, press ENTER to see the projector main board number.

   - $E H b L$, press ENTER to see the specific projector control board number.

   - $5 E 9 U$, press ENTER to see the stored sequence identification number.

   - $L U H d$, press ENTER to see the loader number; the loader is used to upgrade

      the projector's firmware with the option $U P L \Gamma$. *NOT AVAILABLE.*

   - $\Pi U d U$, *NOT AVAILABLE.*

09 – MASTER – SLAVE OPERATION

Nocturno 2500 can run internal auto sequence stored in the projector memory without using any light controller. It can be set either as a master or slave unit.

In master mode (option 2) the projector runs the selected program and sends through the DMX bus a synchronisation signal to all the slaves connected to the bus.

In slave mode (option 3) the projector runs the selected program and synchronises with the master (the channel used for this is set by option TYPE).

Attention: in every DMX bus there must be present only one projector set as a master.

To set the projectors as master or slave, follow the instructions in section 08.

Connect all the slaves to the master via standard DMX cables, as explained in section 06. The slave units can synchronise in 2 different ways with the master unit. You can choose to have all units synchronised on the same step, so for example if the master is on step 1 of any sequence, the slaves will all also be on step 1 of whichever sequence they were set to. When the master is on step 2 the slaves will also be on step 2, and so on. Or alternatively, you can choose to have only the changing of a step to another synchronised, which means that it does not matter which step any unit is on, when the master advances a step the slaves will also advance a step, but not on the same step number of whichever sequence they were set to.

The advantages of this flexibility are that you could have, for example, all units set to the same sequence number and synchronised to be on the same step number, and in this way all units will be projecting exactly the same colours with each step of the sequence.

Alternatively you could have one slave set to synchronise step numbers with the master unit and another one set to synchronise only the changing of steps; in this way you have 2 projectors always on the same colour and a third projector always with a different colour but still changing it's colour at the same time as the other 2 projectors.

This system also means that you can use a suitably programmed controller to synchronise units replaying their automatic sequences together with other projectors replaying sequences programmed in the controller. You could also use a controller to call individual steps from the auto sequences in the projectors.

To select which mode of synchronisation you require, you need to set option TYPE on the projectors you have designated as slaves.

With option TYPE set on CH2 the slaves will follow the DMX level information being sent on DMX channel 2. All projectors that are connected will then follow step by step the same step number as is being replayed on the master. As mentioned above it is your choice as to whether all projectors are running the same auto sequence. If the auto sequences selected are different and if they have a different number of steps, the sequence will continue to cycle on both master and slave(s) until the DMX level sent by the master returns to 0 (zero) when all slaves will again return to step 1 in their sequences together with the master.

To exit the master/slave functionality press MENU/ESC.

10 – DMX CHANNEL FUNCTIONS

Channel	Function
1	Cyan
2	Yellow
3	Magenta
4	Black out
5	Lamp control

In the following diagrams you will find the control values in DMX units (0–255) for all the channels of the projector. Some channels present fixed values (e. g. dimmer) : in this case intermediate values are added to the vertical bar ; the number indicates the **starting** DMX value for the next step. So, for example, in the dimmer channel the numbers 20–240 means that the dimmer ranges from DMX 20 to DMX 239, because 240 is the starting value for "open".
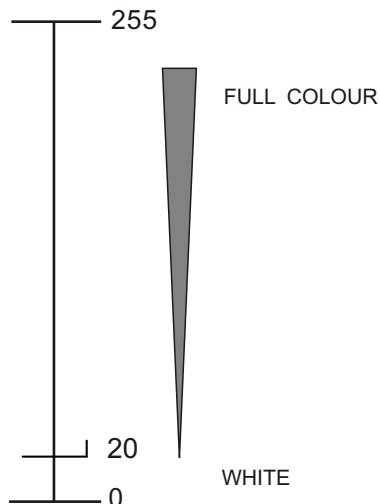
CHANNEL 1 – CYAN

255

FULL COLOUR

20

WHITE

0
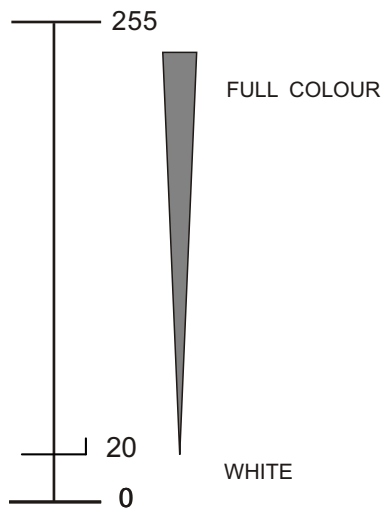
Nocturno 2500 provides a CYM subtractive colour mixing to obtain a vast range of colours, by mean of channels 1, 2 and 3. Channel 1 controls the Cyan filter, channel 2 the Yellow and channel 3 the Magenta.
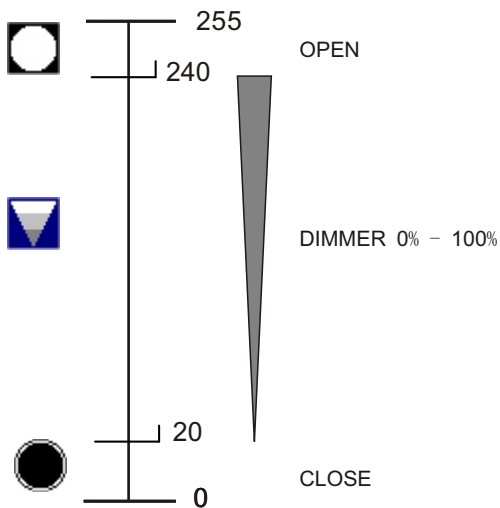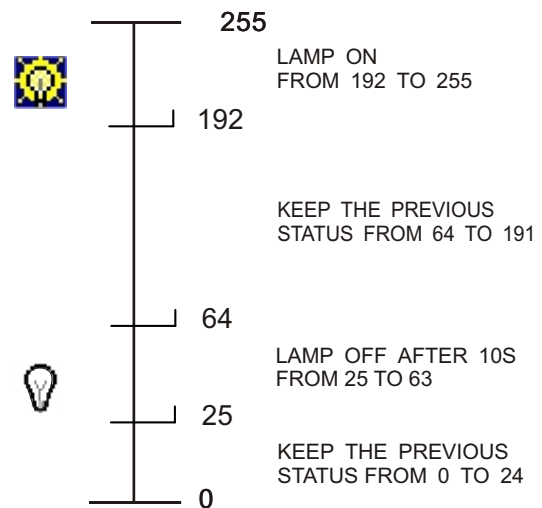With all channels to 0 you have the white, with all channels to 255 you have black.

If the DMX value sent on channel 1 stays in the range from 4 to 6 DMX unit for more than 6 seconds, the projector will start a reset sequence (Remote Requested Reset). The electronics are re-started and all motors moved to their home positions exactly as they do when the power is first switched on, but the lamp is not switched off in this sequence, although the beam will be blacked out.

CHANNEL 2 – YELLOW

255

FULL COLOUR

20

WHITE

0

CHANNEL 3 – MAGENTA

255

FULL COLOUR

20

WHITE

0

CHANNEL 4 – DIMMER – BLACK OUT

255

240 — OPEN

DIMMER 0% – 100%

20

CLOSE

0

CHANNEL 5 – LAMP CONTROL

255

192

LAMP ON
FROM 192 TO 255

KEEP THE PREVIOUS
STATUS FROM 64 TO 191

64

LAMP OFF AFTER 10S
FROM 25 TO 63

25

KEEP THE PREVIOUS
STATUS FROM 0 TO 24

0

11 – CHANGING THE GLASS AND ADJUST THE BARNDOOR

1. CHANGING THE GLASS

(1) Undo the knob (12) which hold in place the glass.
(2) Remove the glass (13).
(3) Insert a new glass to your requirements.
(4) Fasten the knob (12).
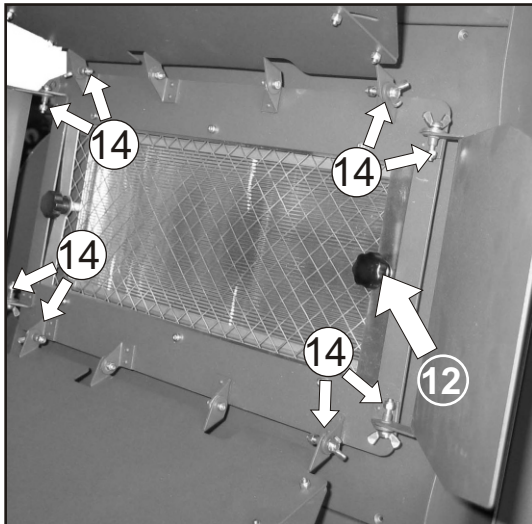
2. ADJUST THE BARNDOOR

Loosen the screws (14) and adjust the barndoor leaves.
When the beam angle gets to the point what you need, please fasten the screws (14).

12 – MAINTENANCE

If the projectors glass becomes damaged or broken it should be replaced.

If the lamp becomes damaged or deformed in any way it must be replaced.

If the light from the lamp appears dim this would normally indicate that it is reaching the end of its life and it should be changed at once, old lamp run to the extremity of their life can explode.

The Nocturno 2500 also has two thermal protection devices that will switch off the projector in case of overheating, should this operate, check that the fans are not blocked, and if they are dirty clean them before switching on the projector again.

Check that the fans are operational, if not call a qualified technician.

13 – KEEPING THE PROJECTOR CLEAN

To ensure the reliability of the projector it should be kept clean. It is recommended that the fans should be cleaned every 15 days with compressed air and in case of more resistant dirt with one soft brush. The fans in the bottom side of the head have removable covers to facilitate easy cleaning. These should be removed from the head for cleaning and then carefully re-attached. The glass and dichroic filters should also be regularly cleaned to maintain an optimum light output. In exterior locations the front glass should be checked and, if necessary, cleaned every week as rainwater can carry many impurities that can obscure the glass and block light output.

14 – TROUBLESHOOTING

PROBLEM	POSSIBLE SOLUTION
The projector does not start	Check the power connections
The lamp comes on but the projector does not respond to the controller.	Check the digital start address (section 07) and check the wiring of the control cable (section 06)
The projector only functions intermittently	Check the fans are working and are not dirty
The projector image appears to have a halo	Check the lamp is installed correctly (section 04)
The beam appears dim	The lamp may be at the end of its life and should be replaced. Check the optics ar clean.
The projector do not synchronise in Master / Slave operation	Check the DMX line (all slaves should be showing a green DMX OK LED)
The projector does not respond to DMX but makes changes of colour etc. by itself	Check that the projector is not in automatic stand alone mode and you are manually modifying the channels (section 08)

15 – ELECTRICAL DIAGRAM
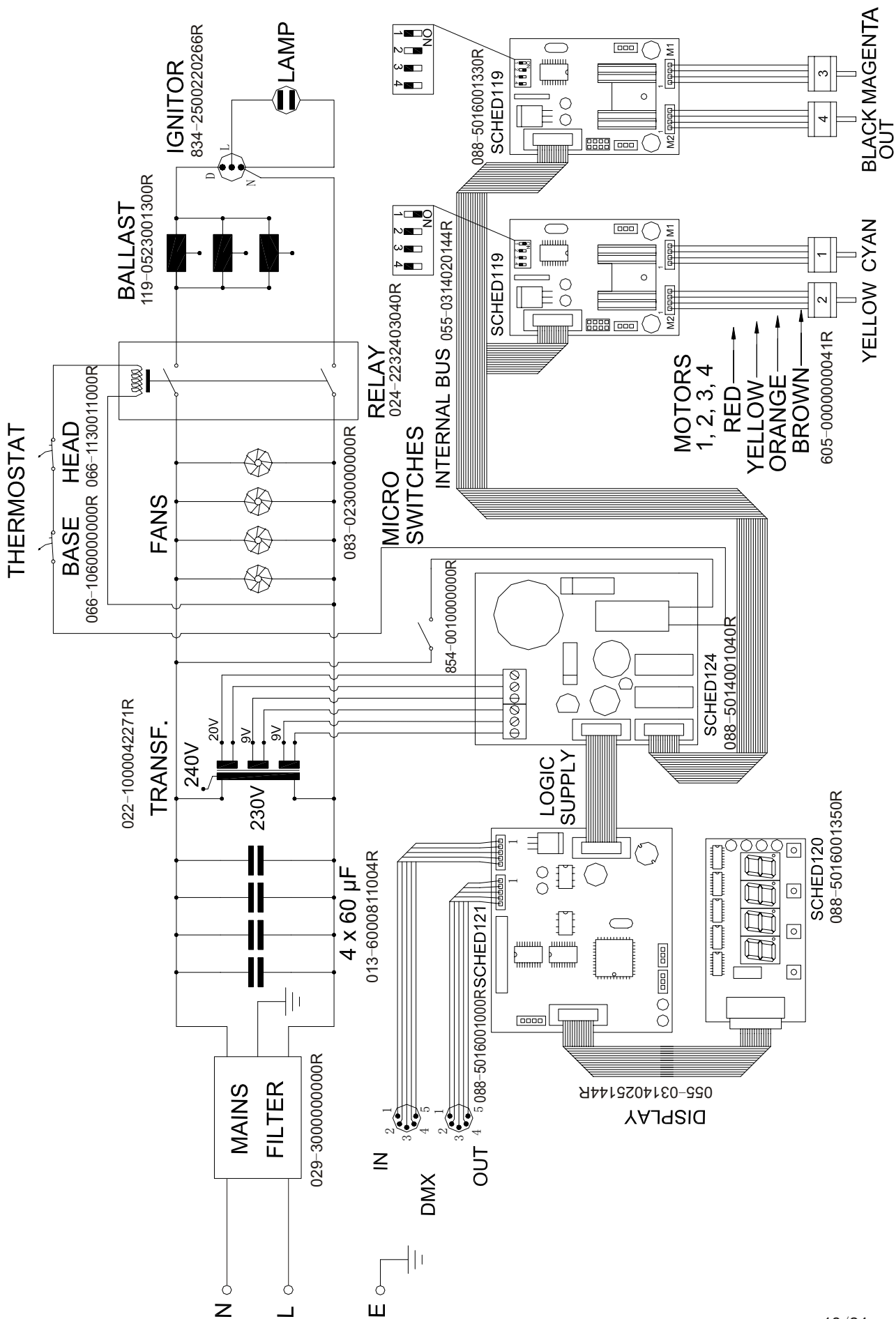
16 – TECHNICAL DATA

POWER SUPPLY：	230V, 50/60Hz（to order）
POWER CONSUMPTION：	3900VA at 230V（with internal power factor correction）
LAMP：	HMD 2500W dischange lamp（Osram） Colour temperature 6000K Life 2000 hours（manufacturer ratings） MSA 2500W DE dischange lamp（Philips） Colour temperature 5600K Life 2000 hours（manufacturer ratings）
COLOURS：	Cyan, Yellow, Magenta coulour mixing
DIMMING／BLACKOUT：	Symmetrical shutter system Provides linear dimming from 0% to 100%
MOTORS：	4 microstepping stepper motors
CONTROL：	Standard DMX 512 with digital display and 4 buttons 5 control channels Automatic mode： internal pre-programmed automatic sequence. Functions in Master and Slave modes
COOLING：	Forced cooling via axial fans.
HOUSING：	In extruded aluminium and plate steel Epoxy paint finish Easy access to lamp and main components Protection rating IP44
DIMENSIONS：	718mm X 507mm X 858mm Weight 87kg

Important information for the correct recycle／treatment procedures of this equipment

The European Directive 2002／96／EC on Waste Electrical and Electronic Equipment（WEEE），requires that old lighting fixtures must not be disposed of the normal unsorted municipal waste stream. Old appliances must be collected separately in order to optimise the recovery and recycling of the materials they contain and reduce the impact on human health and the environment.

The crossed out ″wheeled bin″ symbol on the product reminds you of your obligation, that when you dispose the appliance it then must be separately collected.

Consumer should contact their local authority or retailer for information concerning the correct disposal of their old appliance.

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