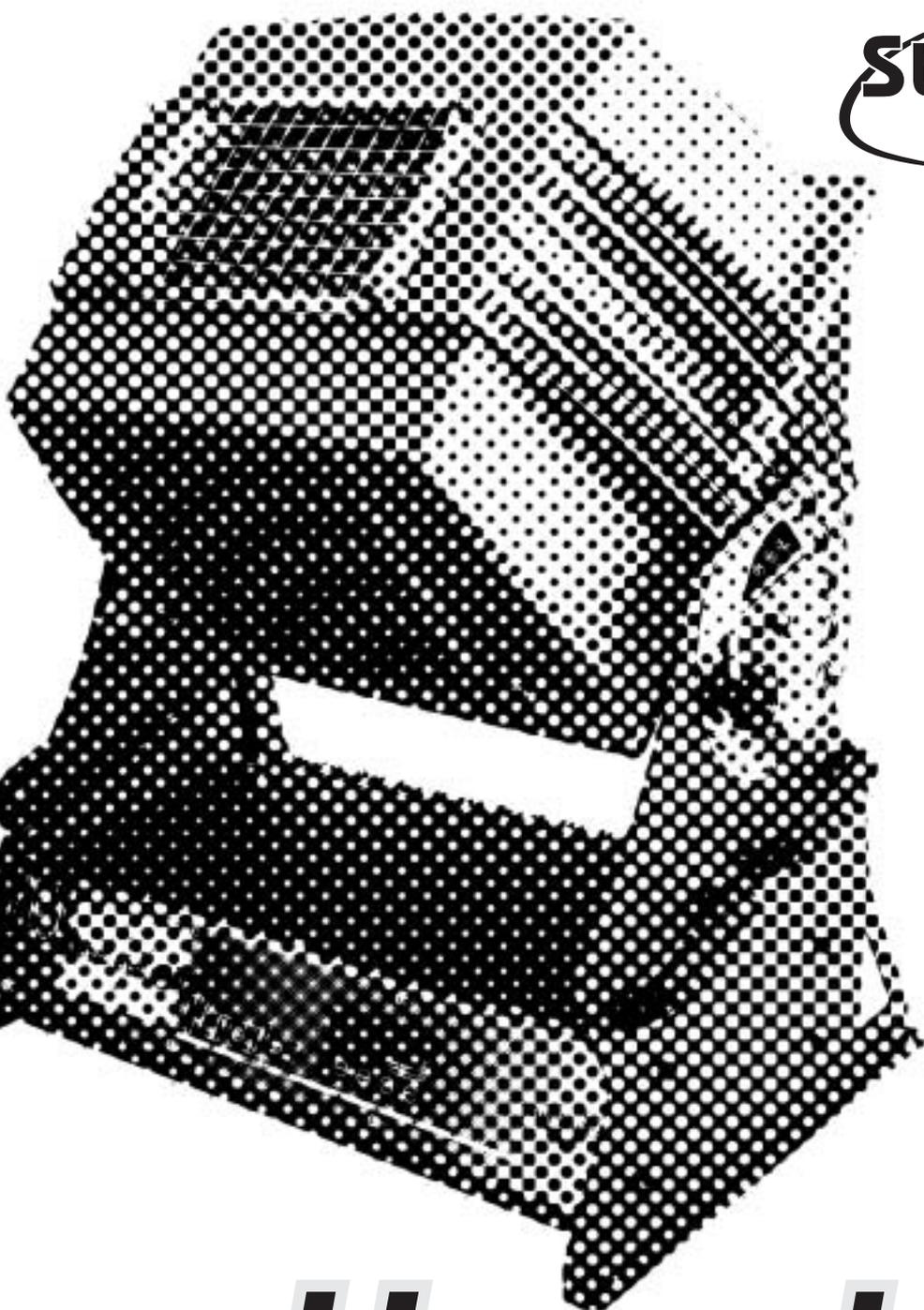


**PROVISIONAL**



# ***Hercules*** 800e

*Architectural Light*

**User's and operator's manual for art. 0305**

Safety informations .....	page 2
Technical features.....	page 3
Before using.....	page 4
Lamp installation, replacement and setting .....	page 5
Beam angle setting .....	page 6
Control panel .....	page 8
Control panel configuration and fixture management .....	page 9



## SAFETY INFORMATION

READ ALL CAUTIONS AND WARNINGS PRIOR TO OPERATE THIS EQUIPMENT.  
INSTRUCTION TO PREVENT INJURY OR DAMAGE DUE TO ELECTRIC SHOCK, FIRE, MECHANICAL HAZARDS AND  
UV RADIATION HAZARDS.

- PROTECTION AGAINST FIRE

1) This equipment is designed for use with the following lamps only: BA 800SE, MSD 575HR.

Other available lamps: HMP 575SE, MSA 600SE, MSR 575HR.

DO NOT USE ANY OTHER TYPE LAMP!

2) Maintain minimum distance of 0.5 meter from walls or any other type flammable surfaces.

3) Maintain minimum distance to lighted objects of 5.0 meter.

4) Replace fuses only with the specified type and rating.

5) Do not install the spot close to heat sources. Do not lay the connection cable on the spot when it is warm.

- PROTECTION AGAINST ELECTRIC SHOCK

1) This equipment must be earthed.

2) Class I equipment. The power supply cord includes a protective earthing conductor as part of the cord.

3) For connection to the mains supply proceed as page 4. The equipment must be connected to branch circuit having a circuit-breaker  $I_n=10A$   $I_d=0.03A$  (230VAC)

4) Disconnect power before lamp's replacement or servicing (service personnel).

- PROTECTION AGAINST MECHANICAL HAZARDS

1) Use secondary safety chain when fixing this equipment.

2) Hot lamp explosion hazard. Do not open the equipment for 600 seconds after switching off.

3) Equipment surface may reach temperature up to 100°C. Allow about five minutes before handling.

4) Replace the lamp if it is damaged or thermally deformed.

- PROTECTION AGAINST UV RADIATION HAZARDS

1) Do not start on this equipment without lamp enclosure or if the protection screens, or ultraviolet screens are damaged.

2) The protection screens, the lenses, or the ultraviolet filters must be replaced if they are visibly damaged and their effectiveness has been reduced, for example, by cracks or deep scratches.

3) Do not look directly at the lamp while lamp is on.

## INTRODUCTION

Thank you for choosing the Hercules800e !

The Hercules800e projects, thanks to an extremely efficient optic system (PATENT PENDING), a powerful light beam which can create numberless color shades. Its performances, in terms of luminosity and lighted surfaces, can reach incredible levels. New concept optical system (WxH 40°x45° or 45°x40°) with rotating parabole to illuminate the surface with maximum horizontal or vertical beam opening

The Hercules800e comes in unique version:

- Art. 0305 HERCULES 800E

The Hercules800e can work in automatic mode or in synchro mode, otherwise may be controlled by 8 bit DMX controllers

The input protocol is the DMX 512. To drive the Hercules800e we suggest to use either our controller Control Show 512, Fancy or the Easy Control.

To make the most of its possibilities and for a correct functioning of this unit in the years to come, we suggest you to read carefully this manual before connecting or putting the spot into use. By doing so you will gain experience with its commands and connections and you will be easily able to use it.

## YOUR REFERENCE

Always remember to give the serial number and to specify the model any time you address the seller for information or assistance.

## BASIC KIT

The basic kit of the Hercules800e flood projector consist of:

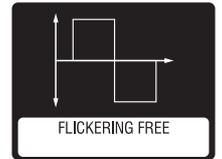
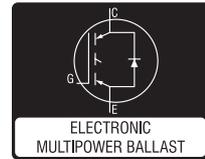
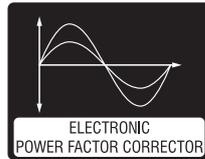
- Projector
- User's manual
- Power connector
- Studio Due warranty

Available on request:

- Lamp

## WARNING

Check that the fixture has not been damaged during transport. If it has been damaged or it does not work, address the seller. Whether the fixture has been shipped to you directly, please contact the shipping company. Only the consignee (person or company) can claim for these damages.



### TECHNICAL FEATURES

#### • LAMPS

Lamps	BA 800 SE	MSD 575 HR	Available lamps
Colour temperature	5.600° K	6.000° K	HMP 575 SE
Lamp life	1.000 hours	3.000 hours	MSR 575 HR
Luminous flux	65.000 lm	43.000 lm	MSA 600 SE
Colour rendering index	(Ra) > 90	(Ra) > 90	
Burning position	universal	universal	

#### • OPTIC COLOUR SYSTEM

Full CYM unlimited variety of colours and shades + 2 colours (red and pink)  
Color filter corrector (from 6500°K to 3200°K)  
High resolution stepper motors

#### • BEAM ANGLE

Beam angle (50%): WxH 40°x45° or 45°x40°  
New concept optical system with rotating parabole to illuminate the surface with maximum horizontal or vertical beam opening  
Motorised variation of the beam opening

#### • SETUP AND CONFIGURATION

Control panel with graphic LCD display and smart reading by DMX start address by a triple led display  
Easy and intuitive program and setup by a dynamic menu and four buttons  
Real time monitor and full control of lamp power and all electronic ballast parameters  
Stand-alone control: auto mode function master/slave (syncro mode) with 5 non editable standard programs and 4 programmes for customization by the user  
Built-in REAL TIME CLOCK for synchronised auto switch-on/off which is operated on a weekly timer (weekly schedule)

#### • CONTROL INPUT

Standard interface: RS-485; opto-couplet input  
Protocol: USITT DMX 512

#### • DMX CHANNELS

1= motor speed  
2=pink  
3=red  
4=filter corrector  
5=yellow  
6=cyan  
7=magenta  
8=dimmer  
9=aux  
10=beam angle  
11=remote reset- lamp on/off

#### • POWER SUPPLY

Rated voltage: 95-265V 47-63Hz (Electronic Ballast)  
Fuses: 2x8A  
Rated power: 1000Va  
Rated current: 4.5A (230V) - 9A (117V)

• POWER FACTOR CORRECTOR: built-in cos Ø 0.99

• IP RATE = IP 66

• DIMENSIONS (wxdxh): mm 650x610x740

• WEIGHT: Kgs. 62,0

**Studio Due**

**HERCULES 800E**  
art. 0305

Keep at least a distance of 0.5mt between the apparatus and inflammable surface nearby.  
Disconnect the unit from power before servicing

230 Vac ; 4,5A - 50 Hz

SN

QC

CIRCUIT - BREAKER

MAINS VOLTAGE	In	Id
230V	10A	0,03A

CONDUCTOR SIZES (length < 20mt.)

MAINS VOLTAGE	CROSS SELECTIONAL AREAS
230V	3X1,5 mm <sup>2</sup> (minimum)
110V	3x2,5 mm <sup>2</sup> (minimum)



pict.1

INPUT CONNECTOR IP 68

3 PIN CONNECTOR FOR DMX LINE

N = NEUTRAL  
L = LIVE  
⊥ = EARTH



pict.2

BEFORE USING



The equipment must be earthed. If this rule is not followed, the warranty will be void.

Read all cautions and warnings to page 2 prior to install this equipment. Particularly, read the follow:

- 1) Disconnect power before lamp's replacement or servicing (service personnel)
- 2) Do not open the lamp cover for 300 seconds after switching off
- 3) Wear gloves and goggles to re-lamping or to work inside the unit (service personnel)

Before connecting the equipment to the power system: make sure that the mains voltage and frequency correspond to rated values.

- The fixture is equipped for a mains voltage 95-265VAC, 47-63Hz.

The power supply cords construction is shown in pict.1. For connection to the mains supply proceed as pict.1.

The equipment must be connected to branch circuit having a circuit-breaker  $I_n=10A \cdot I_d=0.03A$  (230VAC)

- a) Do not install the spot close to the heat sources. Observe minimum distance between the fixtures of 1.5 meters. Do not lay the connection cable on the spot when it is warm.
- b) This unit must be positioned as to allow its ventilation.
- c) The unit must be positioned at least 50 cm. from walls or other flammable surfaces.
- d) Observe minimum distance to lighted objects of 5 meters.

External surface temperature  $T_a$  35°C:

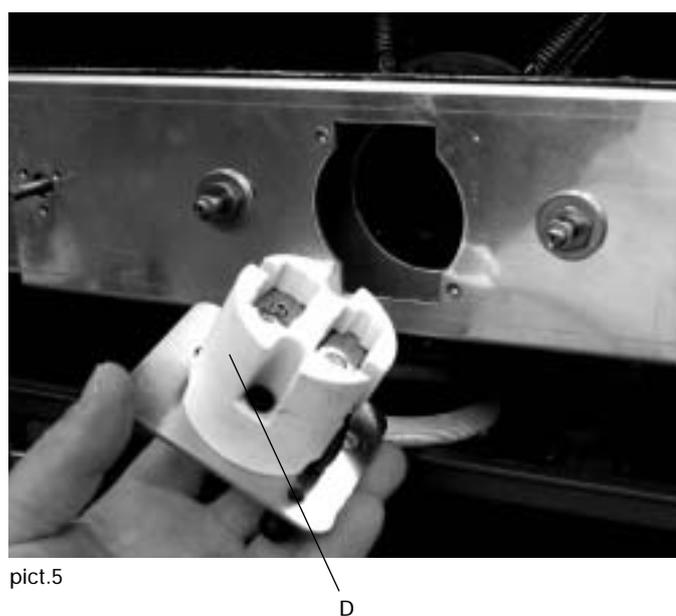
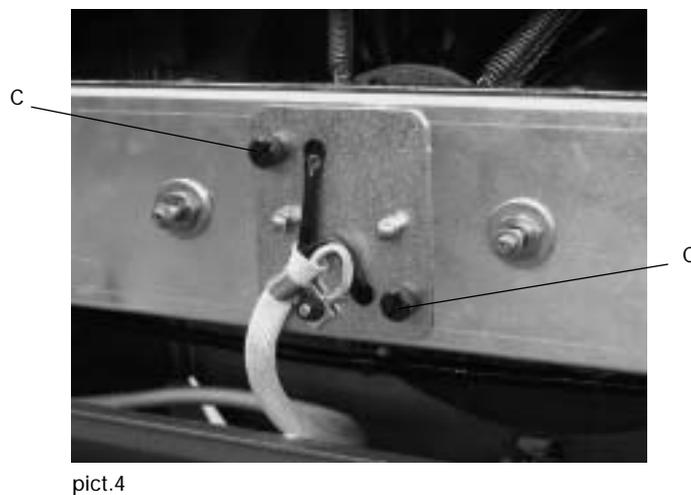
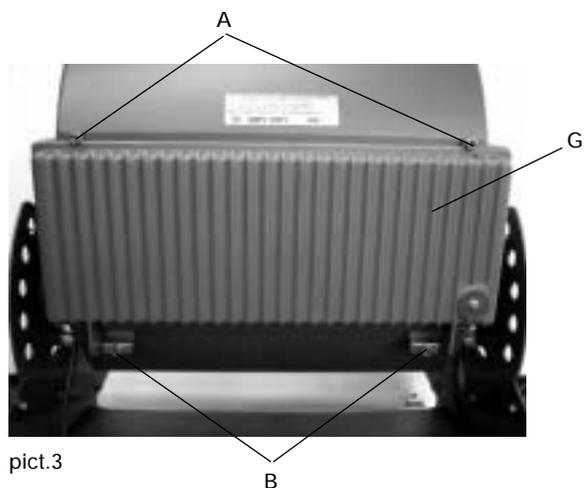
- After 10 minutes work;  $T_c=75^\circ C$ .
- Once the thermic balance has been obtained;  $T_c=100^\circ C$ .

- 4) The protection screens, the lenses, or the ultraviolet filters must be replaced if they are visibly damaged and their effectiveness has been reduced, for example, by cracks or deep scratches.
- 5) The lamp must be replaced if it has been damaged or thermally deformed.
- 6) Do not handle the spot by taking it by the head, but always by using the special handles.

 **WARNING**

In case of replacement of the lamp or maintenance, do not open the fixture unless 10 minutes have passed from the switching off.

This operation has to be done when the fixture is disconnected from the mains supply



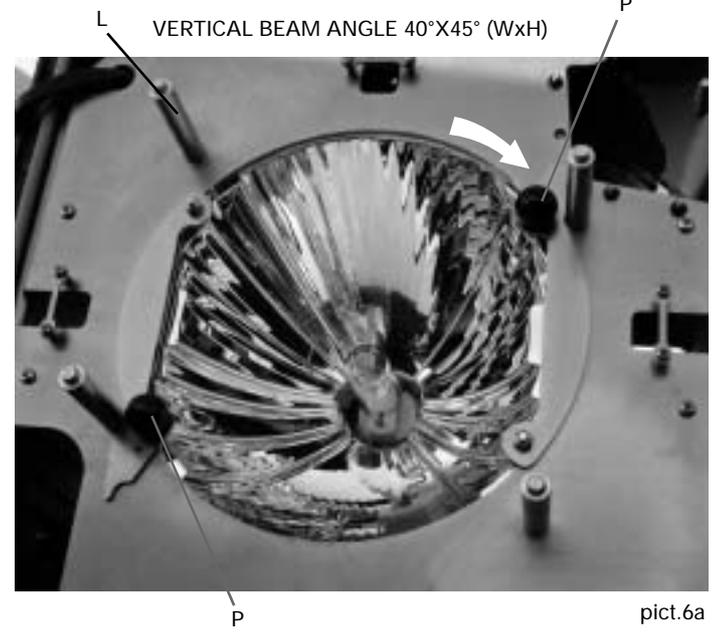
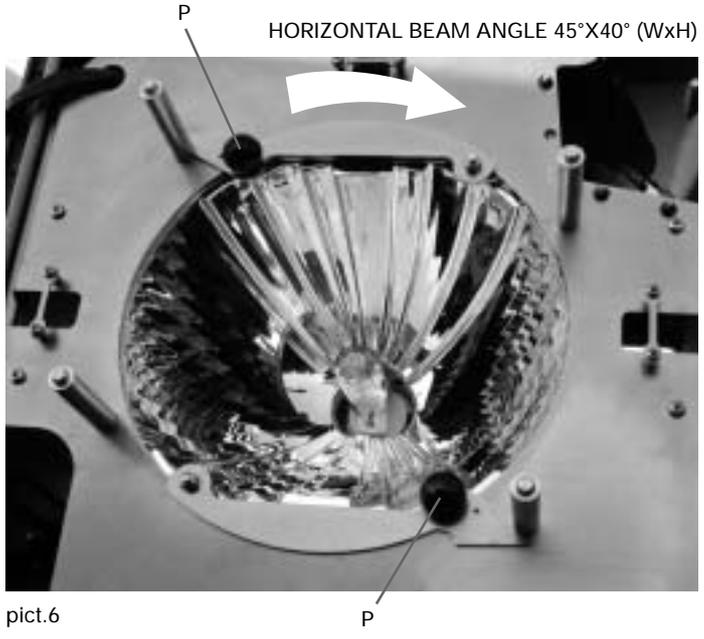
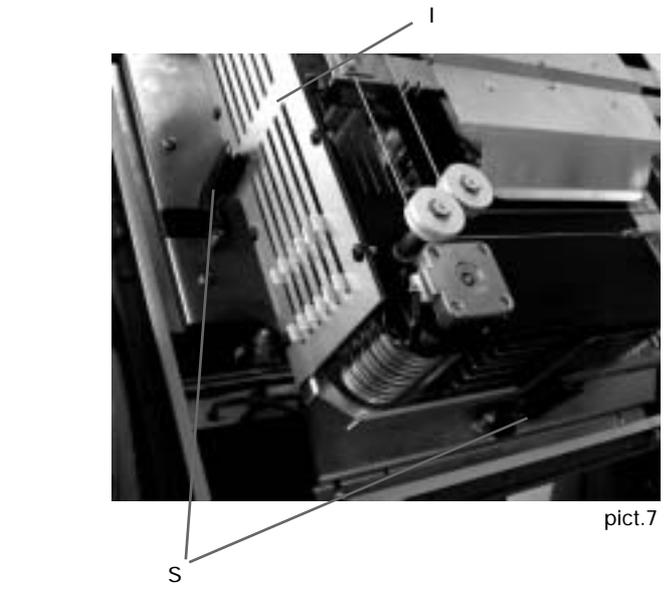
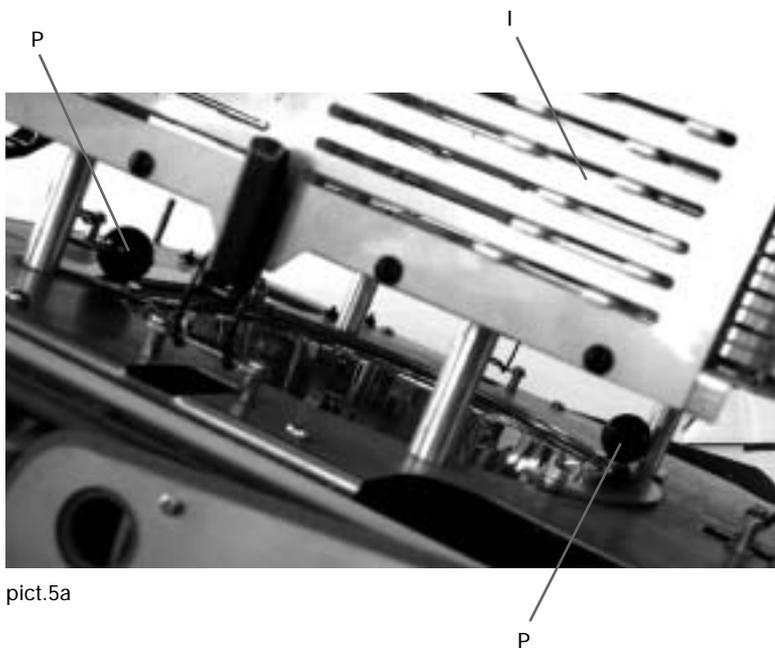
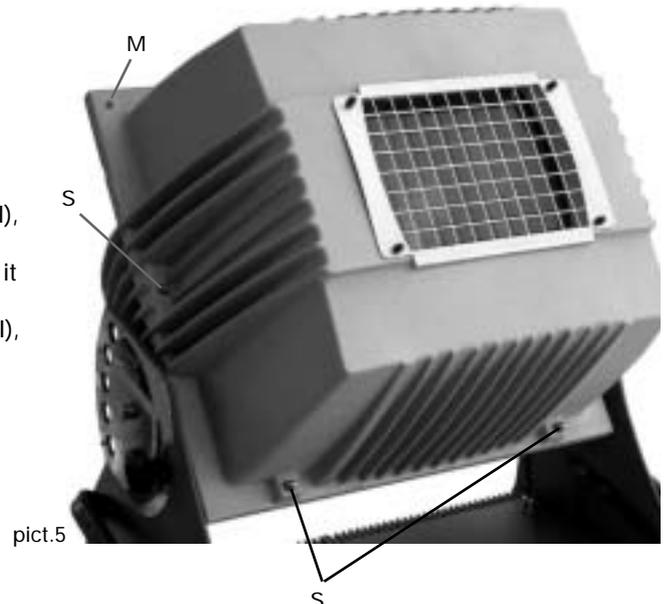
- 1) Disconnect power before lamp's replacement or servicing (service personnel)
  - 2) Do not open the lamp cover (G) for 600 seconds after switching off
  - 3) Wear gloves and goggles to re-lamping or to work inside the unit (service personnel).
  - 4) Loosen the two screws (B), unscrews completely the two screws (A) and open the lamp cover (G), pict.3
  - 5) Unscrews the two screws (C) on the lamp support plate, pict.4
  - 6) Remove the lamp holder (D) and insert the lamp into the lampholder, pict.5
- Do not touch the quartz bulb with fingers. If this happens, clean the bulb before use with dry cloth and alcohol.
- 7) Replace, with care, the lampholder (D) and screws the two screws (C).

BEAM ANGLE SETTING (default 45°x40° or 40°x45°)

The fixture, thanks to the new concept optical system with rotating parabole (WxD 45°x40° or 40°x45°), allows to illuminate the surfaces with maximum horizontal or vertical beam opening.

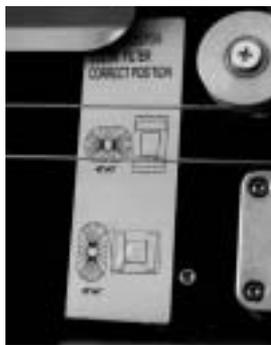
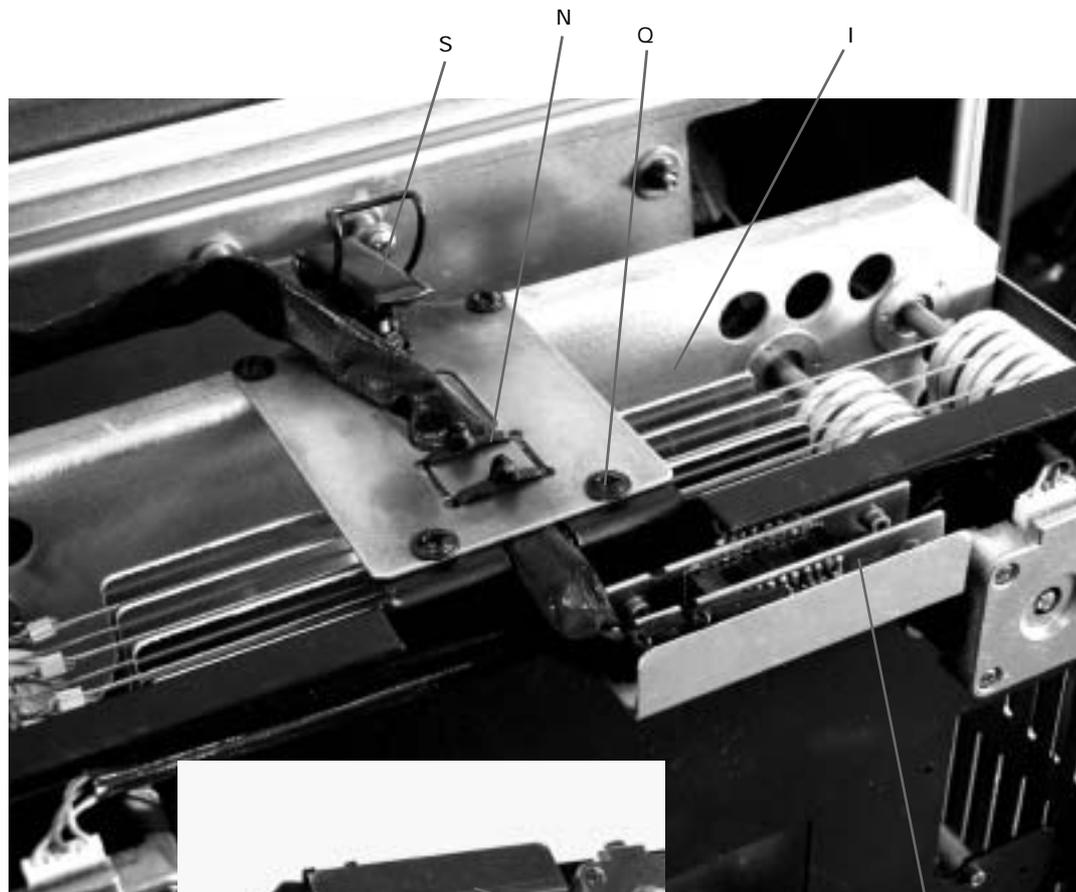
Operate as shown in the pictures below to set the vertical or horizontal parabole position (default position is 45°x40°).

- 1) Unscrews the six screws (S) on the head cover and remove it, pict 5
- 2) Loosen the two pommels (P) under the dichroic group (I), pict.5a
- 3) Rotate (clockwise) of 45° the parabole up to stop it, pict.6 and 6a
- 4) Screws the two pommels (P), pict.6a
- 5) Open the four spring lock (S) on the four side of the dichroic group (I), pict.7
- 6) Lift and rotate the dichroic group (counter-clockwise) and reposition it on the four cylindrical pin (L).
- 7) Close the four spring lock (S) on the four side of the dichroic group (I), pict.7



To completely remove the dichroic unit (I) operate as shown in the pictures below

- 1) Cut the two clamps (N)
- 2) Open the spring lock (S)
- 3) Unscrew the four screws (Q)
- 4) Remove the wire protection (U)
- 5) Open the other three spring lock (S) on the three side of the dichroic unit (I)
- 6) Unscrew and remove the wire protection (V)
- 7) Disconnect the connector (Z) and remove the dichroic unit (I)
- 8) Put again the two clamps (N) once the dichroic unit installation has been made



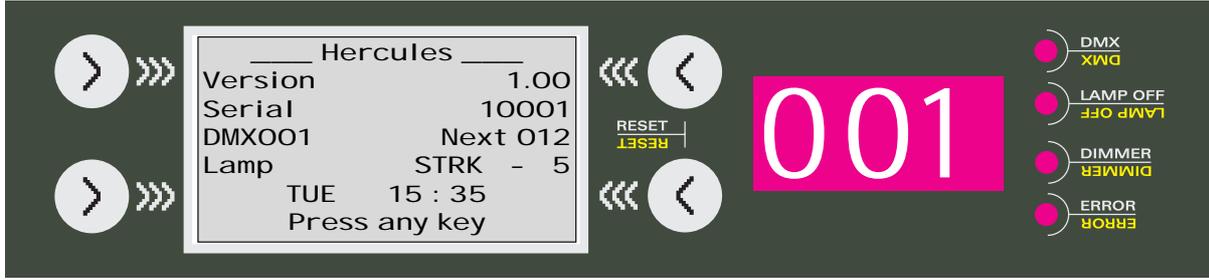
pict.9



pict.8

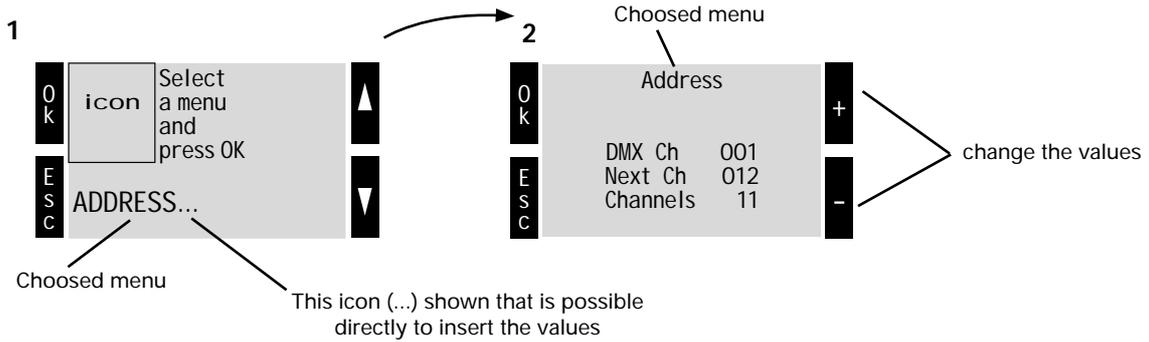
THE CONTROL PANEL

Here below you can see the control panel major screen.

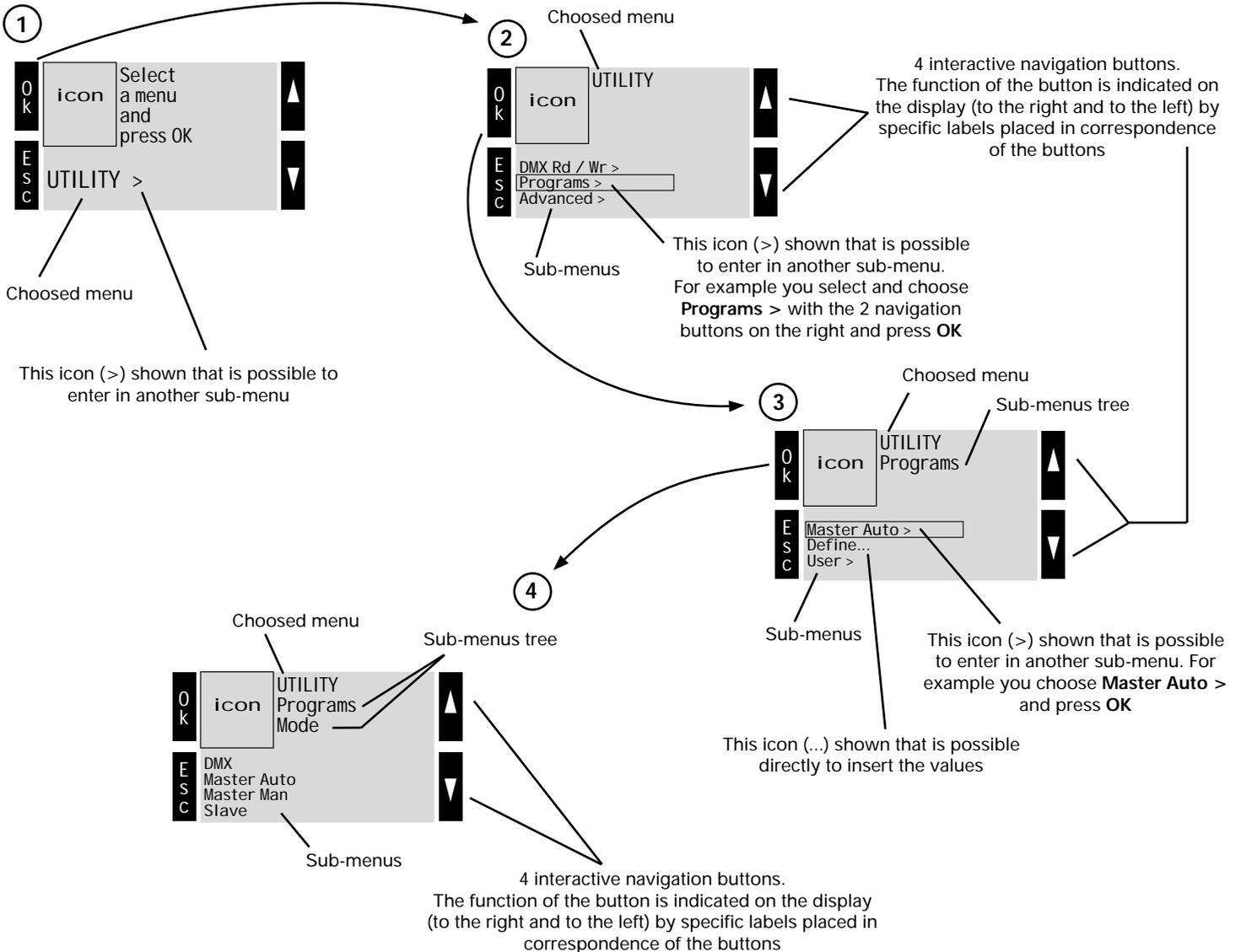


pict.10

EXAMPLE 1: (...) ICON



EXAMPLE 2: (>) ICON



## CONFIGURATION AND SETUP

The equipment can work as follows:

- DMX MODE: driving by controller DMX
- STAND ALONE: manual working/automatic by the small panel at machine-border. In this case the item can manage others Hercules connected to the same DMX line and checking the switching On and Off at times, arranged by an internal clock at week-planning.

### MANAGEMENT OF EQUIPMENT BY DMX SIGNAL

The DMX channel interested in Hercules 800 are 11. Excluding the reset remote function and lamp Off remote, the channel became 10.

CH1 MOTOR SPEED  
CH 2 COLOUR 1  
CH 3 COLOUR 2  
CH 4 COLOUR 3  
CH 5 COLOUR 4  
CH 6 COLOUR 5  
CH 7 COLOUR 6  
CH 8 DIMMER  
CH 9 AUX  
CH 10 FOCUS  
CH 11 RESET/SWITCHING OFF LAMP

Motor speed (8 levels): value 0...31 speed 1 (min), 32...63 speed 2, 64...95 speed 3, 96...127 speed 4, 128...159 speed 5, 160...191 speed 6, 192...223 speed 7, 224...255 speed 8 (MAX).

COLOUR 1 (progressive 256 levels): value 0...255  
COLOUR 2 (progressive 256 levels): value 0...255  
COLOUR 3 (progressive 256 levels): value 0...255  
COLOUR 4 (progressive 256 levels): value 0...255  
COLOUR 5 (progressive 256 levels): value 0...255  
COLOUR 6 (progressive 256 levels): value 0...255  
DIMMER (progressive 256 levels): value 0...255  
FOCUS (progressive 256 levels): value 0...255  
RESET/lamp SWITCHING OFF: value 0...127 no operation, 128...191 motor reset, 192...239 no operation, 240...250 lamp turning off, 251...255 no operation.

### ON BOARD CONTROL PANEL BASIC WORKING

By this panel you can set up the equipment for the best working.

By an internal memory it is possible to set up user programs allowing the working even without DMX controller.

In order to simplify the utilization and the configuration, the 4 buttons, placed on the external sides of the graphic display, take different functions according to the parameter we have to modify. The function of the button is indicated on the display by specific labels placed in correspondence of the buttons.

All the function parameters are shown in the main screen, such as: (see pict.10 page 8)

**Version XXX**  
**Serial XXX**  
**DMX XXX**  
**Next XXX**  
**Lamp status**  
**Weekly hour and day**

To enter the menu list you can push any button.

For each menu you can find another sub-menu.

In every menu and sub-menu you can find the button ESC, which allows, by pushing it, to go from a sub-menu to an external menu, up to the main screen.

MENU LIST (8 main menu)

ADDRESS (inserting first DMX channel used by the Hercules)

DIMM/SHUTT

> DIMMER  
    MOD1 (CH8=0 closed dimmer, CH4=255 opened dimmer)  
    MOD2 (CH8=255 closed dimmer, CH4=0 opened dimmer)  
> ADVANCED  
    TIME OUT (unable/disable shutter closing without DMX signal)

TIME... (fix the time between no signal DMX and shutter closing).

#### HRS COUNT

- > LAMP XXXX (lamp life)
- > FIXTURE XXXX (fixture life)

#### DISPLAY

- FLIP
- YES (for overturn the display visual)
- NO
- > ADVANCED
- AUTO SHUT
- YES (To permit the automatically turning off of display within 30 seconds)
- NO
- BRIGHTNESS (to fix the display brightness)

#### UTILITY

- > DMX Rd/Wr
  - PARAMETERS (to visualize enter DMX signals)
  - READ (to visualize the DMX channel value on line)
  - WRITE (bypass DMX signal in entry and direct parameters passing)
- > PROGRAMS
  - MODE
  - DMX (DMX function by external controller DMX signal)
  - MASTER AUTO (automatic function with timer switching)
  - MASTER MAN (automatic function. No timer)
  - SLAVE
- > DEFINE
- > USER
  - EDIT U1 (modify/record preset user U1)1
  - EDIT U2 (modify/record preset user U2)
  - EDIT U3 (modify/record preset user U3)
  - EDIT U4 (modify/record preset user U4)
- > ADVANCED
  - LANGUAGE (to choose language)
  - AUTO TST (function test)
  - FIXT RESET (reset item)
  - CLOCK SET (timer)

#### DMX SPEC

- RESET (unable/disable reset message reception from DMX remote controller)
- LAMP OFF (unable/disable switching off the lamp from DMX remote controller)

#### SERVICE

- > FORMAT
- > RS LMP HRS (to set to zero number of hours OPERATION TO DO AT EVERY SUBSTITUTION OF THE LAMP)
- > CALIBRAT1
  - CYAN (calibration fine colour1)
  - YELLOW (calibration fine colour 2)
  - MAGENTA (calibration fine colour 3)
  - DIMMER (calibration fine dimmer)
- > CALIBRAT2
  - COL 4 (calibration fine colour 4)
  - COL 5 (calibration fine colour 5)
  - COL 6 (calibration fine colour 6)
  - FOCUS (calibration fine focus)

#### BALLAST

- PARAMETERS (to visualize all working parameters of ballast)
- > ADVANCED
- STRIKES (to set number of attempts for lamp switching on)

## DMX CHANNEL SETTING

Enter into ADDRESS menu. Pressing button UP and DOWN you can set the value of required channel then you can push OK. Under the visualization of the current channel you can see even the channel number which must be set up in the next fixture. The number of channels used by Hercules 800 depends from the remote functionalities trained, such as switching off from remote and reset from remote.

If both of them are disabled the fixture engages 10 channels.

On the contrary if one of the two functions is able the engaged DMX channels are 11.

The selected value will be visualized on led display.

## MASTER/SLAVE MODE

The Hercules 800 can work both in DMX by remote controller, and automatically.

Thanks to the RTC (Real Time clock) it is possible to set 10 on/off weekly programs.

Working in MASTER the Hercules controls up to 16 slave Hercules, setting even the switching on/off. Thanks to all these functions you have a complete colour-change system.

The Hercules 800 is equipped with a special ballast made with high technology SWITCHING which permit to reduce the power consumption in stand by. During this waiting both the lamp and the motor driver are physically unconnected from the network.

Electric, guaranteed the most low use of energy possible.

For a correct use of HERCULES at automatic mode, it must make as follows:

- statement hour ah week day
- planning of one or more Preset user
- selection method of operations and carrying out program

## STATEMENT HOUR AND WEEK DAY

For set up the hour enter in UTILITY menu and in the ADVANCED sub-menu, finally select the voice CLOCK SET.

Place the hour and the week's day. Press ESC for exit and to save.

Set up the time is necessary if agrees use the week programmer.

Set up the hour is necessary for week programmer use only.

## PROGRAMMING OF A PRESET USER

To edit any PRESET it's important that the equipment both set for working in DMX

For the mode operative, enter in the menu UTILITY so in the sub-menu PROGRAMS.

The first voice sign if the equipment is set up like DMX, MASTER AUTO, MASTER MANUAL or SLAVE.

Pressing ok it's possible to change method.

At this point, in the menu UTILITY-PROGRAMS-USER, select EDIT UX(X is the preset number)

TIME voice will came out and it follows of all equipment parameters.

To go from parameter selection to the value introduction, press the CHS button.

The TIME parameter shows the time (seconds) of scene permanence (STEP TIME). If the value is 0, the step will not executed, it indicating the program end. The first step TIME value, it must be always major of 0.

Ex. PRESET U2-STEP1- TIME 3,STEP2 -TIME2,STEP3 TIME 4, STEP4-TIME0. In this case, when will be execution the PRESET U2, will got the following cycle: first scene(step) of 3 second, them the second scene of 2 second, third scene of 4 second, therefore again the first and so on.

Once set up the parameter of the step involved, press ESC for exit and to memorize. Means the button UP and DOWN select any other step to edit and repeat the procedure. When the PRESET user has been made, press ESC. The program will be memorized in the inside memory and now is ready for to be used.

## SELECTION THE OPERATIVE MODE AND PROGRAM EXECUTION

The HERCULES 800 can works as follows:

- DMX
- MASTER AUTO
- MASTER MANUAL
- SLAVE

In DMX mode, all the automatic functionality coming unqualified, it consenting the full control of the equipment by DMX remote controller.

The MASTER AUTO mode allow to control the switching on/off and the PRESET to carry out by a timer on border of the equipment with can make until 10 user program. This function allow to control the switching on/off of different HERCULES 800 connected at the line and set like SLAVE.

At MASTER AUTO mode the fixture came planed for to perform a specific preset for each start without consideration of timer

state.

For make an alteration at operative mode, enter in menu UTILITY so in sub-menu PROGRAMS.  
The first voice sign if the equipment is set up like DMX, MASTER AUTO, MASTER MANUAL or SLAVE.  
Pressing OK it is possible change mode

## PROGRAMS

The HERCULES 800 have two programs area.  
In the first coming saved the planning relative at MASTER AUTO mode, It including 10 cycles of switching on/off.  
In the second memory area there is the setting up of working at MASTER MANUAL mode.

Note: To make or to change a program, it's necessary the DMX mode.

Enter in the menu UTILITY-PROGRAMS-DEFINE  
The value at right of Program, show the program number that will be alter.  
The values 1..10 show the memory area used in the MASTER AUTO mode, while the value MM show that will be edited the memory area referring the MASTER MANUAL mode.

## CREATION AND MODIFICATION OF PROGRAMS

For the programs 1..10, it must advance as follows:

- 1) Insert the START TIME of program
- 2) Insert the STOP TIME of program
- 3) To choose the present to perform during the break of time fixed
- 4) Insert the week day or the combination of days which the program at hand it must to be carry out.

Once introduced all parameters, save the program and exit with ESC.

The program MM serve instead of set the preset that will be doing in the MASTER MANUAL mode.

In both case, the preset available are 1..6 and U1..U4. The first are inside the ROM memory of equipment and they aren't modifiable, while the preset user U1..U4 are at user arrangement.

## UTILIZATION OF DMX FUNCTIONALITY RD/WR (DMX TESTER)

The control panel of HERCULES 800 can be used also for controller the DMX line which it's connected.  
It's possible to visualize the value of 512 canals, the time between a date packet and other one it's the start code.  
The function WRITE allow otherwise, to send the dates directly to the equipment without the connection of a exterior controller DMX.

The following functions allow of checking quickly the line state and the correct function of the equipment.

Visualize the parameter of DMX line

Enter on menu UTILITY-DMX Rd/Wr-PARAMETERS  
Visualize the value of DMX channels  
Enter on menu UTILITY-DMX Rd/Wr-READ  
Send the value of parameters without the DMX controller  
Enter on menu UTILITY-DMX Rd/Wr-WRITE



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