EURODIM Twin Tech

User
Manual
V 1.1

ADB
Lighting Technologies

Table of content

1. Foreword

This user manual relates to the human-machine interface (HMI or TTD HUMAN INTERFACE) present on the EURODIM Twin Tech plug-in dimmer cabinet.

The present manual describes the functions developed in the software version 5.060.

This manual will help you configure your Twin Tech cabinet following the initial installation of your equipment, or when changing or adding a module within your cabinet.

Important note: The present manual does not describe the functions relating to the ADB service menu. This menu is dedicated to qualified personnel trained by the hardware supplier, and to the ADB Lighting Technologies technical department.

Read this guide attentively before using the interface.

Important: the screen pages available in this manual are provided for information purposes only and are subject to modification by ADB at any time.

2. Description of the Unit
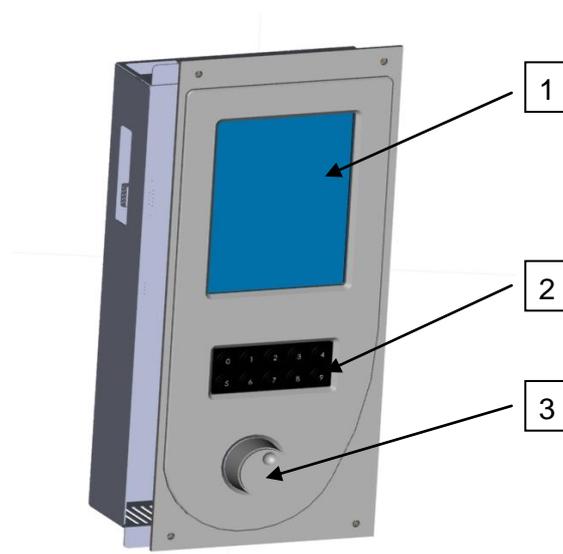
The user is provided with:
1 - A backlit LCD touch-screen enabling access to all menus
2 - A numeric keyboard
3 - A navigation/validation pushbutton - wheel

When the right-hand side door of the cabinet is opened, the rear of the Unit gives access to the following:
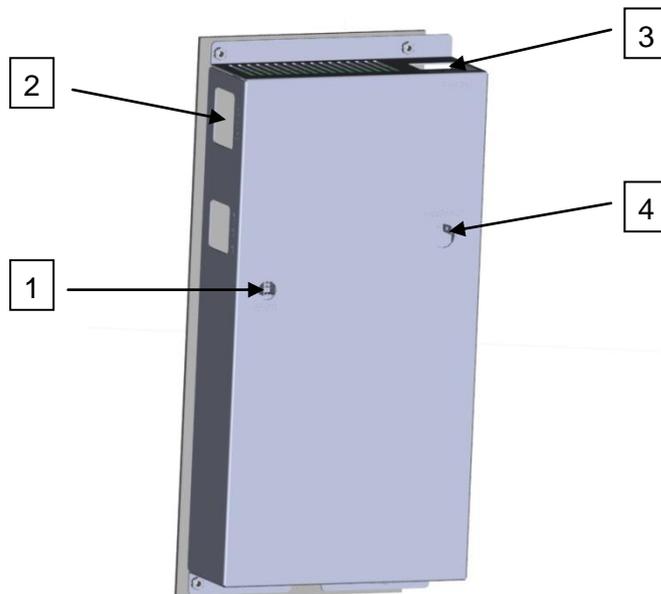
1 - An opening on the rear face to activate the software reset button (in the event that the touch screen becomes blocked)
2 - An opening in the side face for insertion of the SD memory card
3 - A connector to link up to the Twin Tech cabinet Controller units.
4 - A contrast potentiometer and a brightness potentiometer for the LCD touch-screen

An original memory card is provided with the Unit. The Unit and its interface are not operational as long as the card is not inserted into its slot.

The SD memory card can be changed by another SD memory card if the conditions are respected:

1 - The maximum size is 2GB
2 - You can copy the following files from de origin card to new card:
- EDTT1
- EDTT2
- TRANSLAT (if it is present on the origin card)
- Help

3. Using the TTD HUMAN INTERFACE (HMI)

3.1 LCD Display

When the cabinet is activated, an initial home page appears on the LCD display, allowing access to the "Cabinet diagnostic" screen page, which is considered as the main screen.

Manually pressing the touch-zones on the main screen or the screens of the different menus generally enables the user to:
- Edit a field to be filled in,
- Validate the said field,
- Increment or decrement a value,
- Validate or cancel a function,
- Display one of the different available menus,
- Return to the main screen or the list of menus.

The key or zone selected is highlighted.

There is no recording confirmation when the screen page is changed.

When a field is edited and its value is modified, it is possible to cancel its recording before validation by pressing another touch-zone on the screen.

3.2 Numeric Keyboard

The numeric keyboard enables the user to:
- Add a field's value when the field is edited,
- Increment a field's value (by pressing key 1) or decrement (by pressing key 0),
- Directly access a screen page: next page using key 1; previous page using key 0;
- Enter the access code in order to access the different user levels.

Note: Any value entered that is beyond the user range is limited to the maximum value.

3.3 Navigation Wheel

The wheel may be handled by rotating clockwise or anti-clockwise in order to:
- Select a field from a menu or choose a menu from the two menu screen pages,
- Cancel the validation of a field when the latter is edited.

Pressing the navigation wheel enables the user to:
- – Edit a field to be filled in,
- – Validate the highlighted field,
- – Validate or cancel a function,
- – Select a menu or function.

4. Accessing the TTD HUMAN INTERFACE (HMI)

There are several possible user access levels. The first two screens (home and main screen) are accessible to all users.

An access code needs to be entered in order to access the "Menu" screen. Depending on the authorised access level, the user will be able to make modifications or launch functions.

The table below indicates the functions accessible to the user according to the access level:

Function/menu	Level 0 Code 5555	Level 1 Code 6666	Level 2 Code 7777	Level 3 Code 8888
View the parameters	No	Yes	Yes	Yes
Edit the patch	No	No	Yes	Yes
Test a dimmer	No	No	Yes	Yes
Alter the settings	No	No	Yes	Yes
Scan the loads	No	No	No	Yes
Edit the laws and multiplying factor	No	No	No	Yes
Edit the ARTNET parameters	No	No	Yes	Yes
Manage the Cues	No	No	Yes	Yes
Load/Save the parameters	No	No	No	Yes
Manually synchronise between controllers	No	No	No	Yes
ADB service	No	No	No	No

Level 0 does not allow access to any menu or function.

Depending on the authorised access level, certain functions or menus remain blocked. Should you attempt to access these, the software will ask you to enter the access code for the next level in order to authorise access to the function or menu.

The access-level indication can be viewed on all the screen pages. It is located in the top right-hand corner and is signalled by a figure representing the current access level (from 0 to 3), followed by a key symbol.

3 ⊡━

5. Screensaver

If whilst accessing a screen page other than the home page, the user does not handle the touch-screen, keyboard or wheel for a period of more than one minute, the software returns to the home page. The access code will become 0. To access the "Menu" screen pages, an access code will again need to be entered.

6. Online Assistance

A "HELP" key is provided in the bottom right-hand corner of all of the screen pages, allowing touch-access to a help function, relating to the page consulted.
Press the "BACK" touch-button to return to the screen page.

7. Menu Tree-Structure

```
                              ┌──────────┐      ┌──────────┐      ┌──────────┐
                              │ Menu 2   │─────▶│Scan loads│─────▶│  Learn   │
                              └──────────┘      └──────────┘      └──────────┘
                                   │                 │
                                   │                 │            ┌──────────┐
                                   │                 └───────────▶│   Scan   │
                                   │                              └──────────┘
                                   │            ┌──────────┐
                                   ├───────────▶│  Mod.    │
                                   │            │measurements│
                                   │            └──────────┘
                                   │            ┌──────────┐
                                   ├───────────▶│ Mod. Diag.│
                                   │            └──────────┘
                                   │            ┌──────────┐
                                   ├───────────▶│Artnet Patch│
                                   │            └──────────┘
                                   │            ┌──────────┐
                                   ├───────────▶│ See Artnet│
                                   │            └──────────┘
                                   │            ┌──────────┐
                                   ├───────────▶│Artnet config.│
                                   │            └──────────┘
                                   │            ┌──────────────┐
                                   ├───────────▶│ADB Service (functions│
                                   │            │not described)│
                                   │            └──────────────┘
                                   │            ┌──────────┐
                                   └───────────▶│Synchronisation│
                                                └──────────┘
```
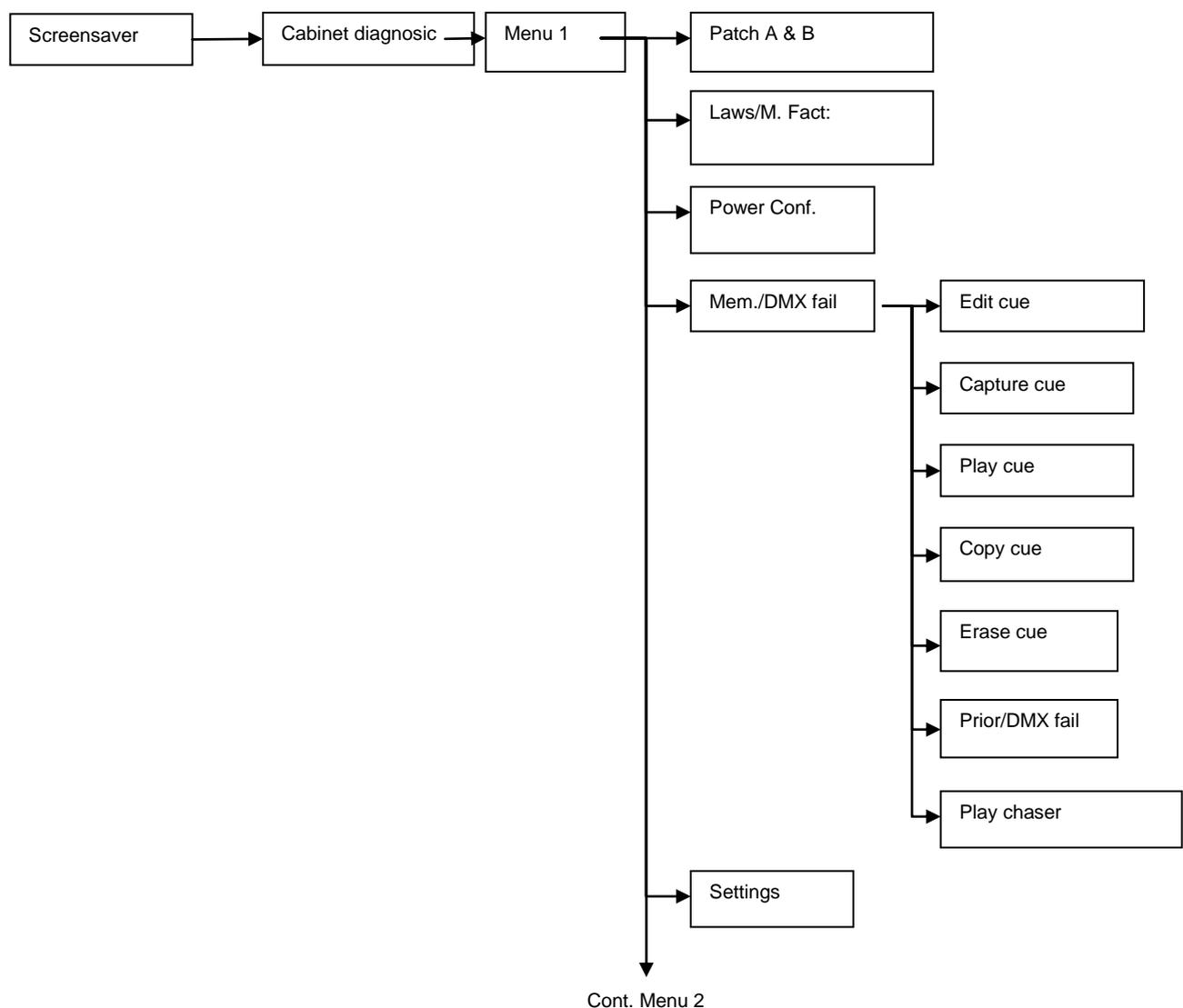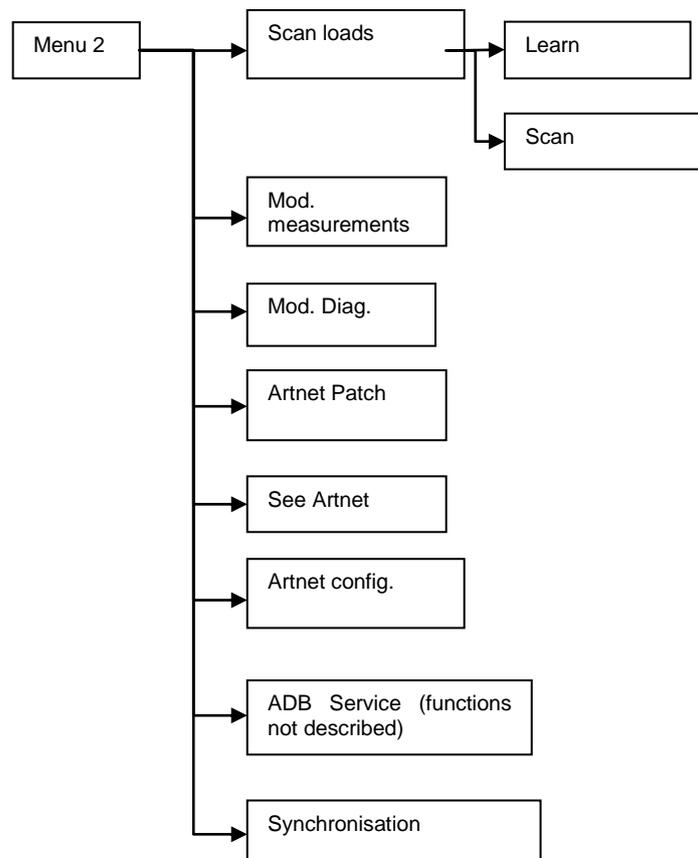
8. Cabinet Configuration

The upper part of the Twin Tech cabinet may be equipped with:
– Two Controller units,
– or a Controller unit and a backup power supply module.

The Controller units, control all of the circuits (128 max.) constituting the modules available in the cabinet (32 max.), according to the configuration recorded by the Unit software (patch) and the channel values present on the DMX A, DMX B and ARTNET inputs (ETHERNET connection).
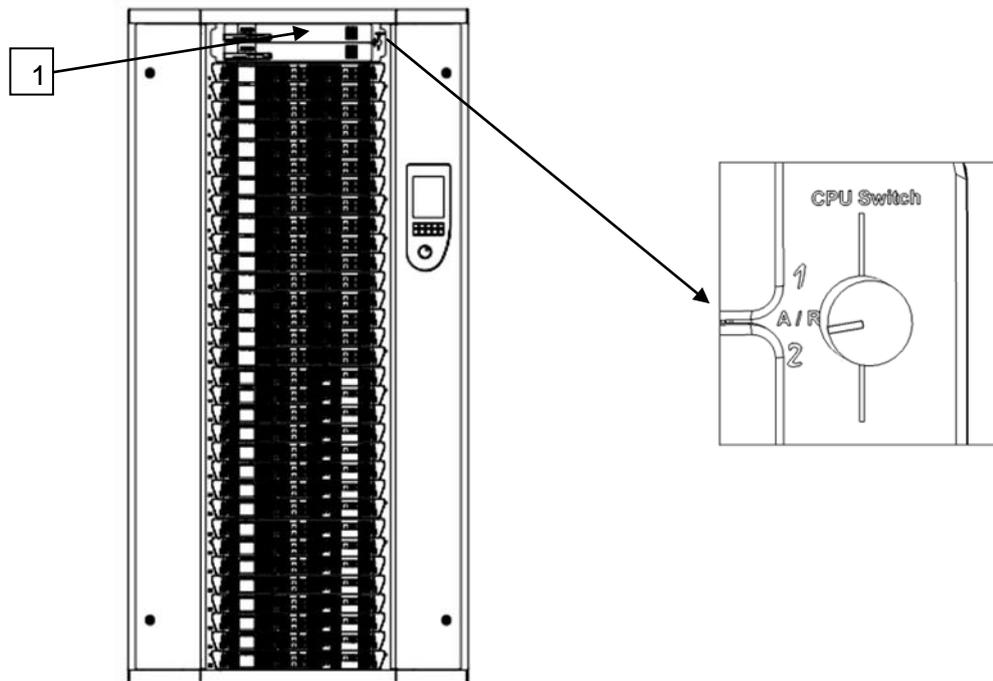
8.1 Synchronization

The human interface is synchronized continuously between two controllers (if present).

If two controllers are present, data from a controller (the one inserted into the slot from the top), with the exception of the page "Diagnosis of the cabinet" or information from the selected controller using the tabs "CTRL1" and "CTRL2".

If the controller 1 is a not functional, timing continues with the controller 2.

If the cabinet has only one controller all the information obtained from this controller

Note: Only the controller in slot from the top is able to detect modules in the cabinet (see Chapter Power Configuration) and to report the status of sinewave and thyristor modules with full diagnostic option (see section "Module Measuring" and "Diagnostic Modules") If one controller is functional and inserted into the slot at the bottom, the cabinet will work but the human interface will not be able to present the modules or diagnostic information modules

8.2 Module Control

The selector allows the Controller unit in service to be chosen. It may be set to position 1, A/R or 2.

When a controller is selected (1 or 2), the DMX A, DMX B and ARTNET signals present at this controller's input are used.
The software configuration is HTP (Highest Take Precedence) by default. It is the highest value of the DMX A, DMX B and ARTNET inputs (three available universes) and cue played and allocated to a circuit that is taken into account in order to give the output dimming level.

When the selector is set to A/R, the circuits of each module are controlled according to the following rule: the highest value amongst the DMX A, DMX B and ARTNET inputs of the two controllers is taken into account when controlling this circuit.

Example: Control using DMX A and DMX B inputs

Controller 1

DMX A   circuit 1=100%

DMX B   circuit 2= 0%

Circuit 1=100%

DMX A   circuit 1=90%

Controller 2

Circuit 2= 100%

DMX B   circuit 2=100%
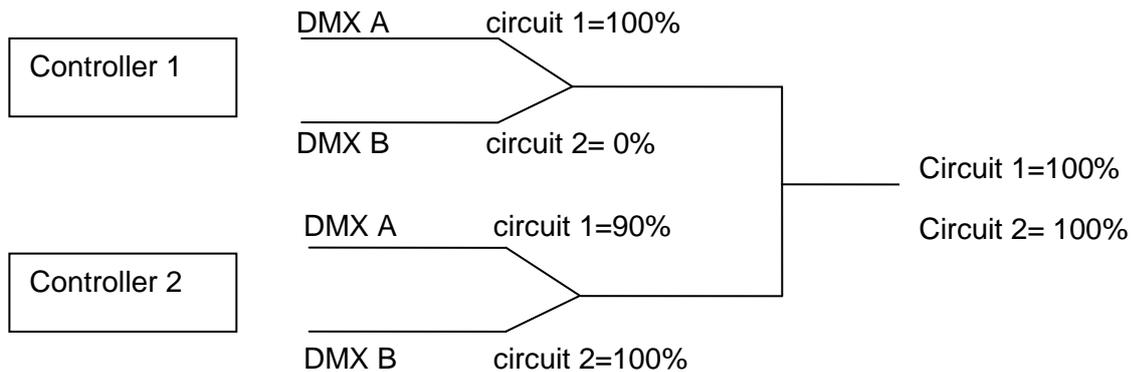
Notes: The PCB3031 board also enables:
  − the DMX A inputs to be connected between controllers (SW1, selectors 5 and 6 set to ON)
  − the DMX B inputs to be connected between controllers (SW1, selectors 7 and 8 set to ON)
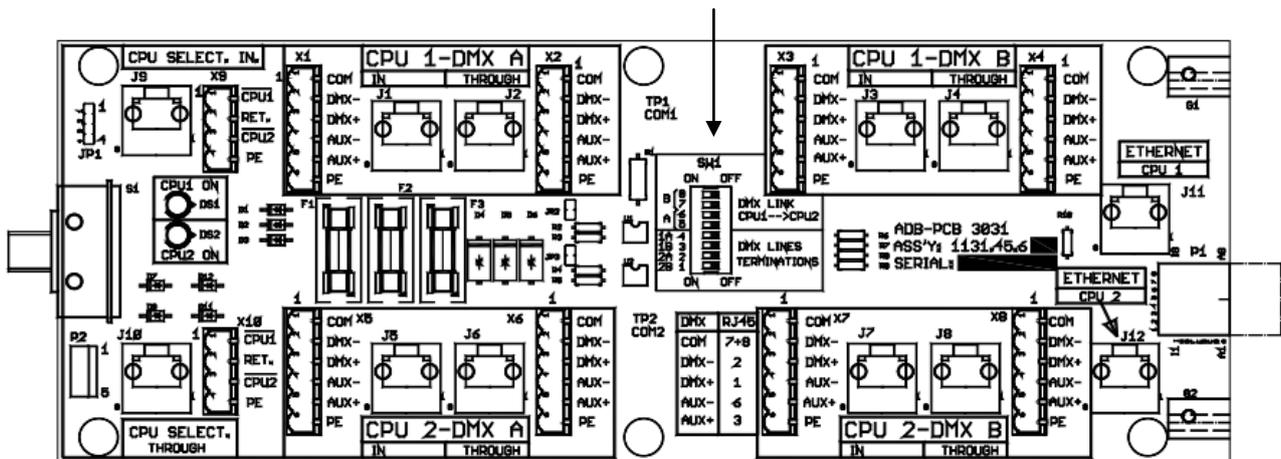
PCB 3031 board

9. Cabinet Ventilation

The cabinet is ventilated by three fans arranged at the top of the cabinet, which extract hot air from the cabinet. These fans can operate at two different extraction speeds (1 and 2).

The fans start on speed 1 (normal air extraction) if one of the circuits is controlled at above 50% intensity. Below 50%, all the fans are idle.

Speed 2 is engaged (high air extraction) when a sinewave module and/or a module fitted with four RCBO (MCB + RCD) is present in the cabinet and it is controlled. The speed 2 is also engaged if the fans run in speed 1 and the temperature is too much high. The speed is held up to that temperature is again acceptable*.

When the conditions described above are no longer met, the fans continue to operate for a further five minutes at speed 1 before stopping.

10. Initial User Configuration

The identification of the modules present in the cabinet is controlled by the Controller 1.

This verification is automatic. A warning message signals any identification fault or error. See Power Configuration menu in the event of an alarm.

The user must then:
- Define or validate the control of each module's circuits by allocating the DMX channels. See Patch, ARTNET Patch and ARTNET Configuration menus.
- Define the laws and multiplying factor applicable on each of the circuits constituting a module with respect to the loads that are wired at each circuit's output. These laws enable each of the loads to be controlled correctly and risk-free (See Laws/Mult.Fact[1]. menu).
- Define the type of modules to be used in order to dim the light by accepting the list of modules identified by the controller (see power configuration menu)

10.1 Description of the Laws
The following laws are pre-recorded and available in the "Laws/Mult.Fact." menu: Linear, V120, Fluo, Preheat, Square, Tv, BBC, Switch, Tv2, VRT, as well as six user defined laws enabling free configuration by the user.

Important notes:
- The user defined laws (1 to 6) are configured by default in order to apply the Linear law.
- The six user laws are only editable via the optional TTD Management Software.
- Switch law: presented in the form of a hysteresis, with a transition from 0 to 255 at 15% and transition from 255 to 0 at 12% (see switch curve).

10.2 Applications of Laws on Specific Modules

10.2.1 Fluo Module (TTD/F*)
The first two outputs are used for the dimmer. The law of one's choice is applied here.

The last two outputs are used for the preheat: the switch law (ON/OFF) shall be used.

* The maximum ambient temperatures are defined in the EURODIM Twin Tech data sheet.

---

[1] Mult Fact. = Multiplication Factor or Reduction of the maximum possible output level of a dimmer circuit.

10.2.2 Module DimSwitch with Dual filtering (TDD/HD*)

When the user chooses the switch law, the circuit is automatically configured with a filtering characterised by a 200 µs rise time.

For all other laws, the circuit uses a filtering characterised by a 400 µs rise time.

The rise time is 400 µs by default.

Law curve giving the relationship between the DMX input (0 to 255) of the function law and the output after application of the law in the same units.
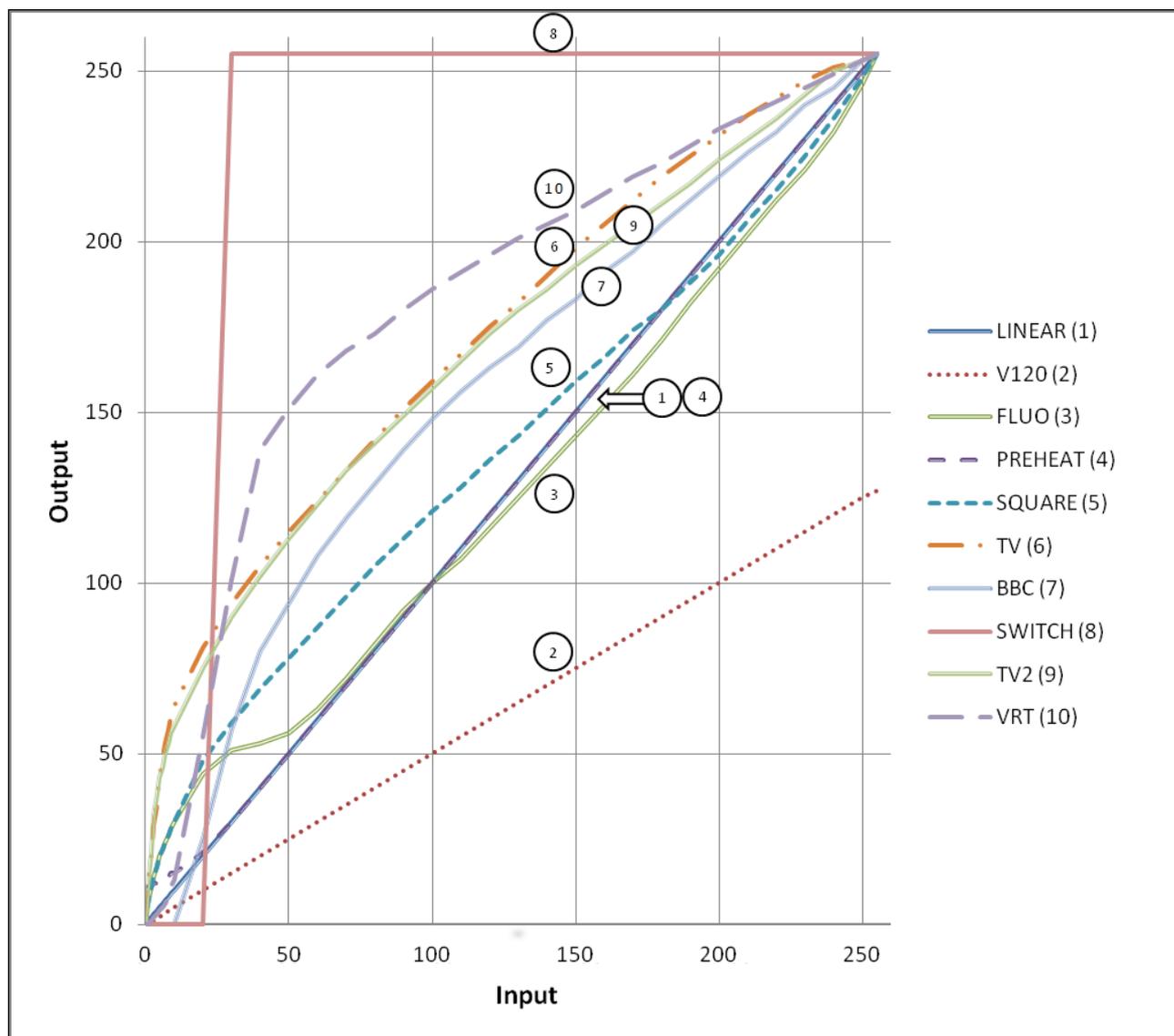
11. Presentation of the Home Page
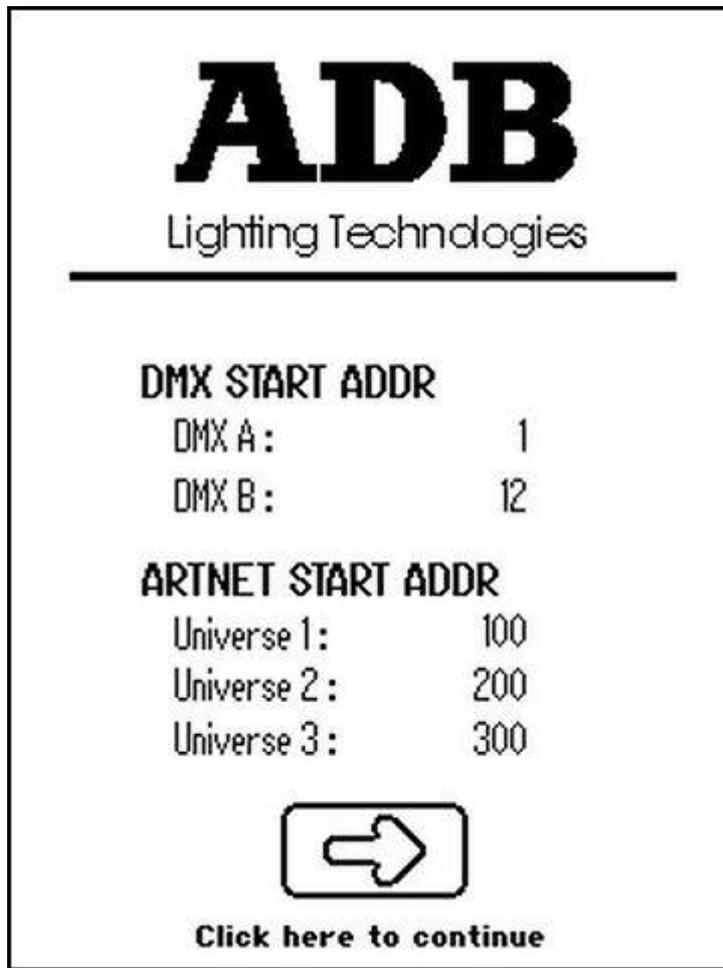
This screen page is displayed as soon as the cabinet is switched on. It gives the information concerning the start address for the DMX A and B inputs and the three ARTNET universes.

Information available for start address (valid for DMX and ARTNET):
- − "x": channel value to address cabinet output 1, $1 \le x \le 512$
- − "not used": channel value = 0 or > 512
- − "- - - - -": no circuit physically present in cabinet location 1, or circuit identification error in cabinet location 1 or operating fault

To access the diagnostic page, press the arrow.

12. Presentation of the Cabinet Diagnostic Page

This screen shows the cabinet diagnostic information.
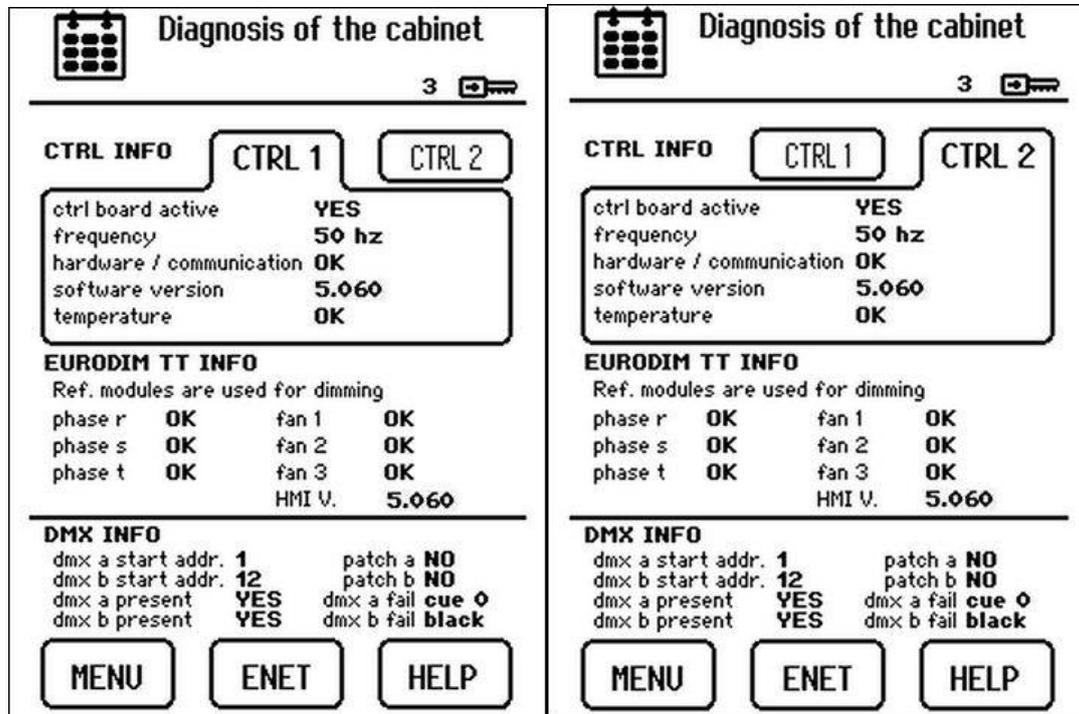
This page is divided into three zones:
- − A zone (CTRL1 or CRTL2 tab) providing information on the controllers,
- − A zone (EURODIM TT INFO) providing general information on the cabinet's operation, identification of the modules by the controller and signalling the alarms,
- − A zone (INFO DMX) providing information on the DMX inputs and the functions associated with these inputs.

Two keys enable the user to:
- − Access the two menu screen pages; MENU key. To access the Menu, when prompted by a specific window the user access code needs to be entered using the keyboard, without validating.
- − Access the ARTNET information; ENET key. This page is accessible regardless of the user access level.

12.1 Controller (CTRL) Information

Note: The information is present if the controller is physically connected and operational in the cabinet.

- − CTRL board active:
    - • "Yes" if the controller is selected by the cabinet controller selector (position 1 for controller 1 and position 2 for controller 2 or A/R for both),
    - • "No" if the controller is not selected (circuits not controlled by this controller).

- − Frequency: displays the network frequency measured at the controller's input

- Hardware/communication:
  - "OK" if the controller is operating correctly,
  - "Not OK" if a problem is detected. In this case, an error message and an exclamation mark appear in the EURODIM TT INFO zone.

- Software version: software version present in the controller

- Temperature:
  - "OK" if the temperature measured in the controller is acceptable,
  - "Not OK" if the temperature measured in the controller is too much high. In this case, the control value of all of the active circuits is reduced by 1% every minute until the temperature measured becomes again acceptable* (also see paragraph on the operation of the ventilation within the cabinet).

12.2 EURODIM Twin Tech Information

The first row of information available informs the user via a message that the cabinet and the modules are in operation.

The message: "reference modules are used for dimming" indicates that all the modules installed in the cabinet are identified by the software and enable the cabinet to operate normally.

An error message may be displayed instead.

In this case, press the exclamation mark to display a screen page, "Error list".

- R, S, T phase: "OK" or "Not OK", checking the presence of the mains phases at the controller,

- Fan 1, 2, 3: "OK" or "not OK", checking the rotation of each fan arranged in the top of the cabinet and ensuring air extraction,

- Software version: software version present in the Human-Machine interface (TTD HUMAN INTERFACE (HMI)) Unit.

When any problem is detected by the cabinet. An exclamation mark then appears to the right of the screen page. In this case, press the exclamation mark to display a screen page, "Error list".

12.3 DMX Information

- DMX A/B start address DMX A, DMX B channel value to address cabinet output 1
  - "x": 1 ≤ x ≤ 512
  - "not used": channel value = 0 or > 512
  - "- - - - -": no circuit physically present in cabinet location 1, or circuit identification error in cabinet location 1 or operating fault.

- DMX A/B present: Yes;
  - Yes: DMX signal reception detected
  - No: DMX signal reception missing.

- Patch A/B (see "PATCH" menu):
- Yes: the addressing filled-in in each patch at the circuits is not in ascending order,
- No: the addressing filled-in in each patch at the circuits is in ascending order,
  e.g. 1, 2, 3, 4, ..., 128 where 32 modules of four circuits are present in the cabinet.

* The maximum ambient temperatures are defined in EURODIM Twin Tech data sheet.

- DMX A/B fail: action implemented in the absence of an DMX A/B signal (see "Priority/DMX fail" menu), three actions are possible:
  - "last value": the last values received to control the circuits are used on a permanent basis as long as the DMX signal is missing,
  - "cue 0:" the DMX signal channel values are replaced by the content of cue 0 with a fade time of cue 0 and will be played as long as the DMX signal is missing,
  - "black": the control value of each circuit fades to black in five seconds.

When the DMX signal is present again, we return to the DMX values with a five-second fade.

13. Presentation of the ARTNET Information Page
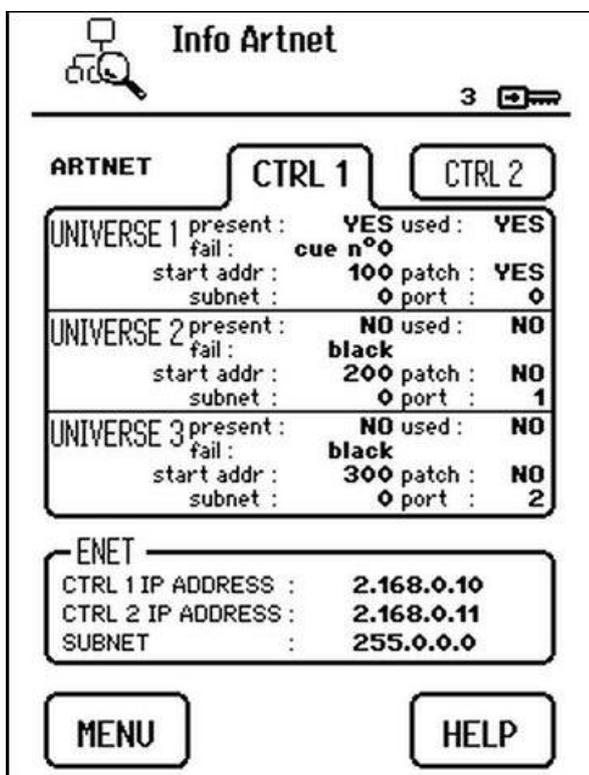
Explanation of the fields: see chapter: "ARTNET INFO".

14. Description of the Menus
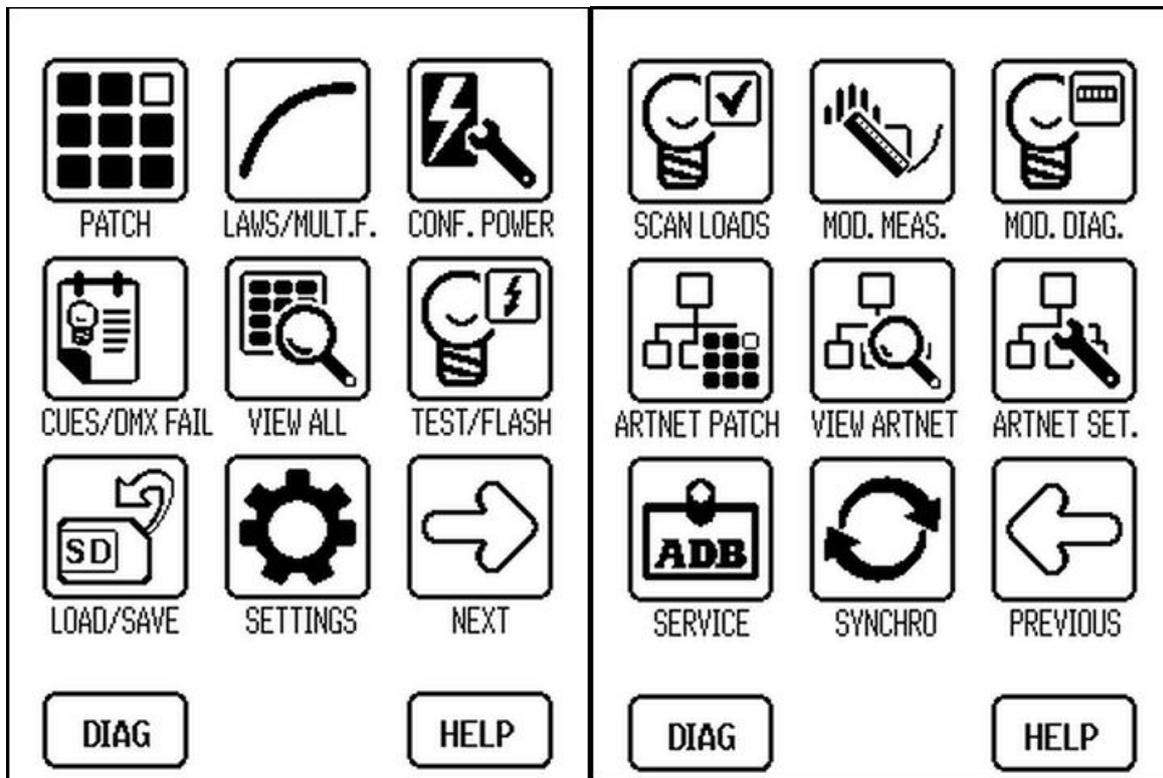
Two screen pages are available in order to choose a function, enabling the cabinet to be configured using one of the following menus:

- Patch: to edit patch A or B for each circuit
- Laws/Mult.F: to choose the law used and the multiplying factor for each of the circuits
- Conf. Power: to assign the modules used and detected in the 32 cabinet locations
- Cues/DMX fail: cue management and action to be performed after a absence of DMX/ARTNET
- View all: overall view of all the parameters per module or per circuit
- Test/Flash: to launch a test or the flash of a circuit
- Load/Save: to save and load the parameters of the controllers and of each circuit
- Settings: Human-Machine interface configuration
- Scan loads: to measure/scan the loads connected at the outputs of each circuit
- Mod. Meas.: gives the voltage and current measurements for each circuit
- Mod. Diag.: gives the diagnosis of the outputs of each module
- ARTNET patch: to edit the patch of the three ARTNET universes for each circuit
- View ARTNET: general information on the ARTNET universes and the Ethernet connection
- ARTNET set.: to configure the three ARTNET universes
- ADB Service: function available to ADB technical service only
- Synchro: to synchronise the parameters recorded between each of the controllers

ADB
Lighting Technologies

Note: All the information displayed in the different menus originates from controller 1 if two controllers are present in the cabinet.

If only controller 2 is present, all the information displayed in the different menus will originate from the latter. When changing the patch, power multiplication factor, law... the new data is sent to each controller. The cirsuits defined as « empty slot » or « undefined slot » are not editable and not visible in any screens. It appears again when the circuit will not be declared as "empty slot" or "undefined slot".

15. Patch Menu

This function is used to configure a patch on a circuit or set of circuits for the DMX A and DMX B signal.

This configuration enables the user to attribute the value of a DMX A and DMX B signal channel to the control of one of the cabinet's circuits.
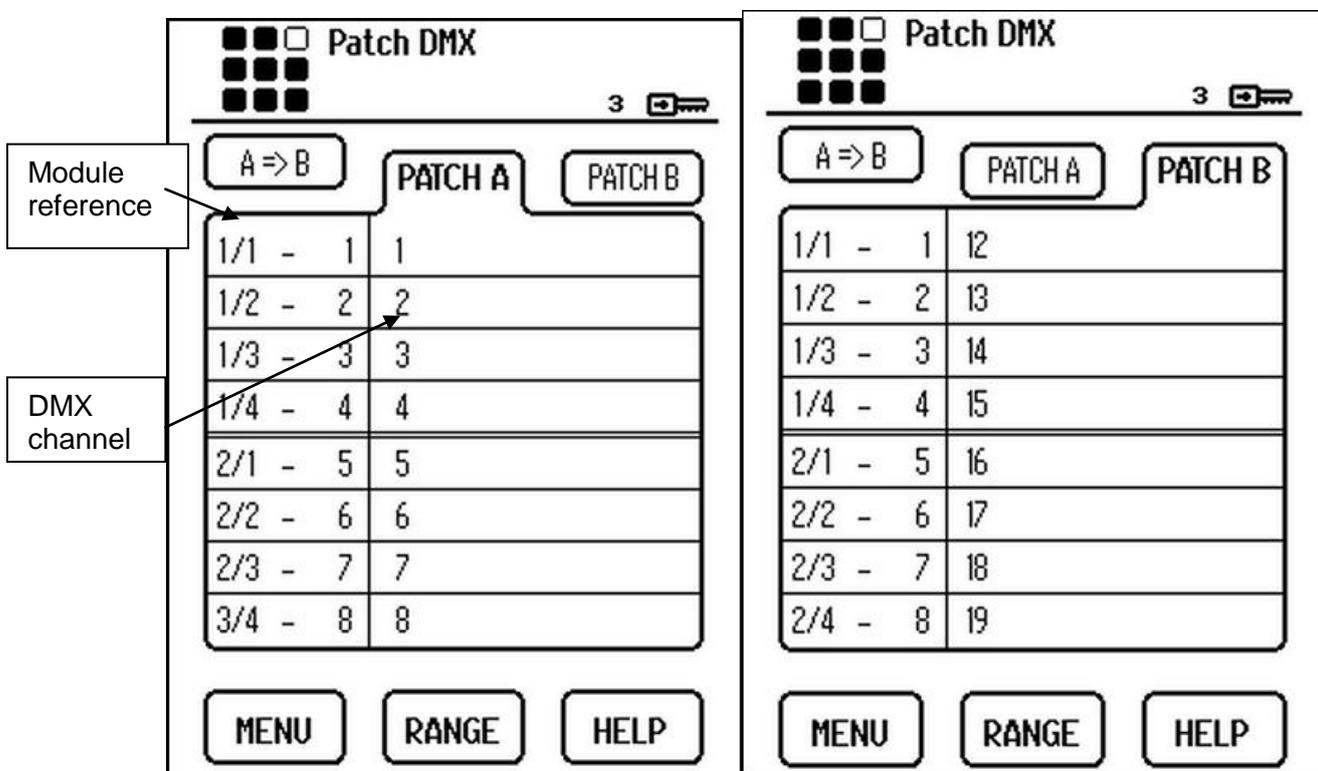
Reminder

The referencing of the modules in the cabinet starts at 1 in relation to the first location located at the top of the cabinet, up to 32.

The left-hand column contains the referencing of the modules and circuits present in the cabinet.

The figure in the right-hand column is the channel attributed in the DMX signal.

Select patch A or B to start with

Use the wheel to rapidly move between all the rows of the patch. The row selected is highlighted.

To attribute a channel, position on a row and use:

- The touch-screen and the numeric keyboard to enter a value,
- Press key 1 directly to increment the value by 1 (between 1 and 512) in relation to the first value available on a previous row,
- Press key 0 directly to decrement the value by 1 (between 1 and 512) in relation to the first value available on a previous row,
- The Range key in order to enter values between two circuit references.

Important: Specific case for row 1/1: if key 0 or 1 is used, the value taken into consideration corresponds to the content of output 128 if available, otherwise output 127, and so on.
If the value entered is 0 or greater than 512, the circuit is not controllable and the message "Not used" is displayed.

15.1 Range Key

Used to attribute an ascending patch value in graduations of 1 to a set of circuits, included within one section.
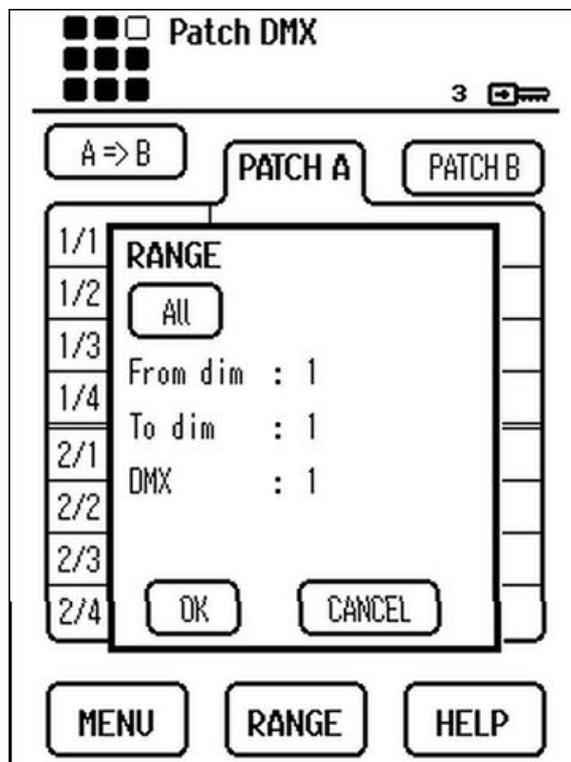
Enter:
- The start dimmer number (From dim),
- The end dimmer number (To dim),
- The start channel value to be taken into consideration for incrementation in graduations of 1,
- Confirm with the OK button.

Note: the circuit's first number ("From dim") must be $\leq$ the circuit's second number ("To dim") during definition of the range. Otherwise, the range between two circuits cannot be validated.

The ALL key is used in order to directly fill-in the cabinet's 128 circuits.

15.2   A ⟹ B Key

Used to copy all of the values from patch A to patch B and make them identical

16. Laws and Multiplying Factor Menu

This function is used to attribute a law and a multiplying factor to a circuit or set of circuits.

See explanation on the curves of the laws in a specific paragraph.
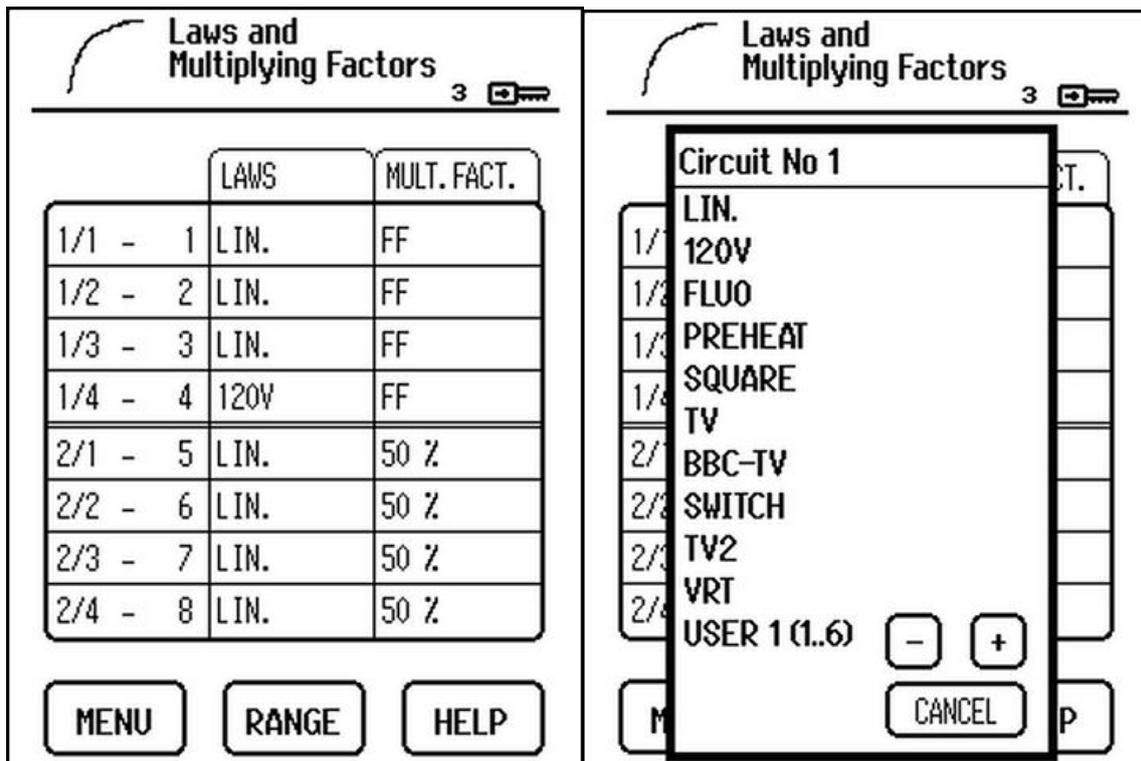
Reminder

The left-hand column contains the referencing of the modules and circuits present in the cabinet:
  − Example: Value 1/1: references module 1/circuit 1 of the module
  − The right-hand figure indicates the output on the cabinet (from 1 to 128).

In the Laws column we select the law that we wish to attribute to a circuit.
(This choice will depend on the type of load connected at the circuit output)

Important: after validation, this action has an immediate effect on the light dimming.

In the Multiplying Factor column, we attribute a multiplying factor (between 0 and 100%) to the circuit.
Ultimately, the circuit control value is as follows:
DMX channel value → law applied to the circuit → multiplying factor.

Example of a circuit's output voltage:

Entry	DMX channel value (50%)	120 V law	Mult. fact.: 50%
230 V	115 V	57 V	29 V

Use the wheel in order to rapidly move to the row of a circuit. The row selected is highlighted.

To attribute a law, position on a row:
- Touch the zone where the current law is displayed, making the table of available laws appear,
- Touch to select the law from the table; the law selected is highlighted,
- For the user laws, first select the number (between 1 and 6) using the + and - keys
- Touch the highlighted zone to validate and attribute to the circuit.

To attribute a multiplying factor, position on a row:
- Touch the zone where the multiplying factor is displayed in order to edit the value,
- Enter the value using the numeric keyboard (between 0 and 100%)
- Touch the zone where the new value is displayed in order to validate.

Important: after validation, this action has an immediate effect on the light dimming.

Note: If the value attributed is 100%, the screen displays "FF". Any value entered that is beyond 100 is limited to 100 (FF).
If the law attributed to a circuit is the switch law, the multiplying factor is forced to 100% (FF) by the software.

16.1 Range Key

Used to attribute the same law and the same multiplying factor to a set of circuits, included within a range.
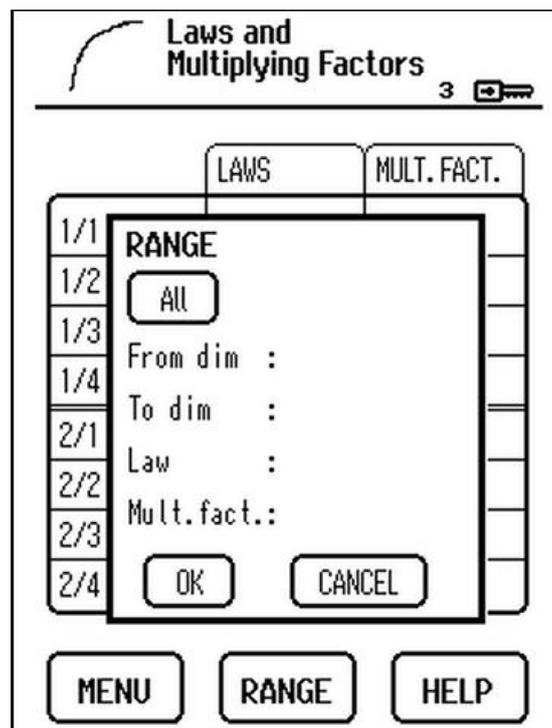
Enter:
- The start dimmer number (From dim),
- The end dimmer number (To dim),
- The law to be attributed to these circuits,
- The multiplying factor to be attributed to these circuits,
- Confirm with the OK button.

Note: the circuit's first number ("From dim") must be $\leq$ the circuit's second number ("To dim") during definition of the range. Otherwise, the range between two circuits cannot be validated.

The ALL key is used if we wish to enter the cabinet's 128 circuits directly.

17. Power Configuration Menu

This function configures the module type depending on its position in the cabinet.

Reminder

The referencing of the modules in the cabinet starts at 1 in relation to the first location situated at the top of the cabinet, up to 32.

The left-hand column contains the referencing of the modules and circuits present in the cabinet:
- Example: Value 1/1: references module 1/circuit 1 of the module
- The right-hand figure indicates the output on the cabinet (from 1 to 128)

Module identification

All the modules are fitted with an EEPROM cue, which contains an ID code. When the modules are installed in the cabinet, this ID is communicated to the controller.

This information is available in the "Present" column.

In this column, the following information can be obtained: a correct ID or "Undefined slot" for a module that is unidentified by the controller or uninstalled.

TD4x3/MN/1R

TECHNOLOGY:
S (sinewave - standard with diagnostics only with 3R or 4R)
T (thyristor dimmer with 400μs rise time)
P (thyristor dimmer with 200μs rise time)
F (Fluo dimmer with 200μs and remote controlled preheat)
R (DimSwitch with 200μs rise time)
H(DimSwitch with dual 200μs/400μs rise time-standard with diagnostics)
N (Non-Dim no remote control)

D (Full diagnostic version - optional)

Number of circuits in the module

Rated Load in kW of each circuit in the module

MN (MCB with 1P+N protection)

RCD protection: No RCD
1R (per module)
2R (2 individual protections - Fluo)
3R (3 individual protections)
4R (4 individual protections)

EURODIM TWIN TECH module identification table

In the Reference column, we are given the type of module that will actually be used by the controller to control the circuits. This reference may be modified manually. If a position in the cabinet is not used, the user must fill it in as an "undefined slot".

Use the wheel to view the ID of each module.

17.1 COMPARE Key

This function is used to compare the ID given in the PRESENT column and the ID given in the REFERENCE column, for each module. This is used to check that the content of the references is up-to-date with respect to the modules actually installed.

When the key is selected, two messages can be displayed:
- "Ref. and present modules are identical": In this case, there is no module identification problem,
- "Ref. and present modules are different". The message also displays the number of different modules. When the "OK" button is touched, the screen automatically displays the first module where the ID is different. In this case, it is necessary to verify the identification of the module physically present in the cabinet and, if necessary, modify the ID in the "REFERENCE" column.

17.2 REF. ← PRES. Key

This function is used to copy the content of the IDs of the PRESENT column to the REFERENCE column, for all the modules.

<u>Attributing an ID</u>

To attribute an ID to a module in the REFERENCE column, position on the module using the wheel:
- Touch the module zone, leading the module ID table to appear,
- Touch to select a reference from the table; the reference selected is highlighted,
- Touch the highlighted reference to validate and attribute to the module.

17.3 Range Key

Used to attribute the same ID to a set of modules, included within a range.
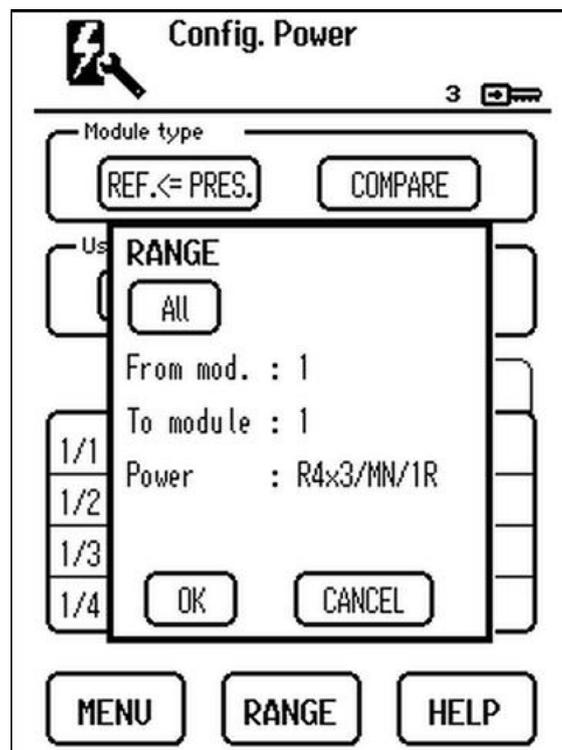
Enter:
- − The start module number,
- − The end module number,
- − The ID to be attributed to these modules,
- − Confirm with the OK button.

Note: the module's first number ("From module") must be $\leq$ the module's second number ("To module") during definition of the range. Otherwise, the range between two modules cannot be validated.

The ALL key is used in order to directly enter the cabinet's 32 modules.

A window opens when we exit the menu after a change has been made to a module's reference in a given location. The user is invited to go to the patch menu, if necessary.

18. Cues Menu
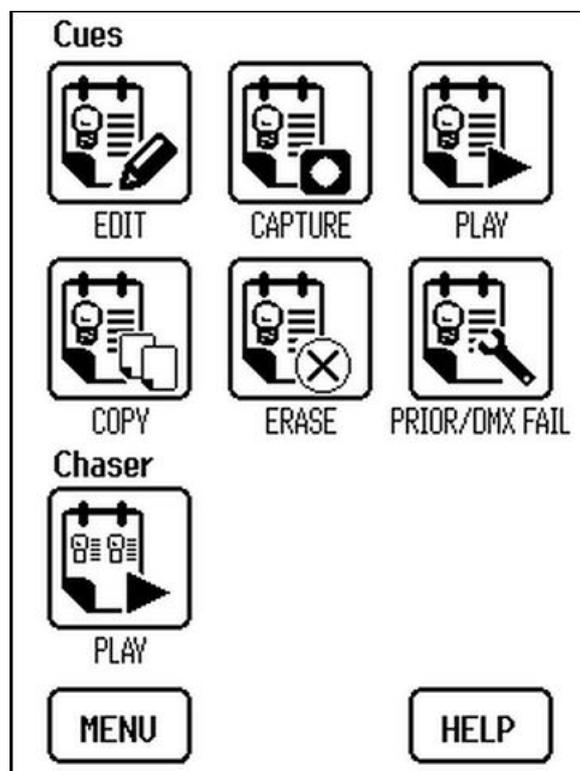
80 cues + 1 emergency cue[2] (cue no. 0) are available to record pre-defined circuit-control values. These cues can be played.

A special (emergency) cue bearing the no. 0 is available to replace the circuit-control values in the event that the DMX and/or ARTNET signals is not present. See "PRIOR/DMX FAIL" sub-menu

---

[2] According to the human-interface hardware version installed on the cabinet, it is possible for only the emergency cue (no. 0) to be available.

ADB
Lighting Technologies

Several sub-menus are available:
- Cue - Edit: Enter the cue content
- Cue - Capture: Capture the DMX/ARTNET signals in a cue
- Cue - Play: Control the circuits by playing a cue
- Cue - Copy: Copy the content of one cue to another cue
- Cue - Erase: Erase a cue's content
- Cue - PRIOR. DMX FAIL: Select a source to replace a absence of DMX/ARTNET
- Chaser - Play all existing cues on loop

19. Cues Menu - Edit

This function is used to fill in the content of the 80 cues + cue 0. A control intensity is allocated to each of the 128 circuits constituting the cabinet.
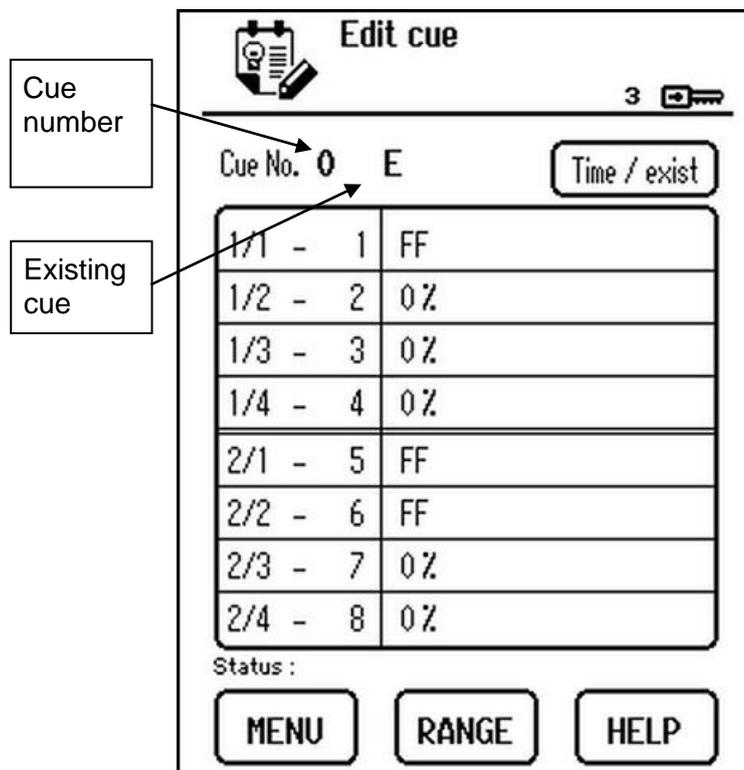
The sign "E" signifies that the cue exists and that it may be played. See "PLAY" sub-menu.

A cue can be made existing or non-existing. If it is non-existing, it may not be played and will not be included in the chaser. See "Time/Exist" key.

Cue "0" always exists but it will not be played in the chaser.

Selecting a cue

To select a cue to be edited position on the cue number (highlighted), either by touching the screen or using the wheel.

To edit the cue number:
- − Touch the screen or use the wheel to select the zone of the number in question,
- − Type the number using the keyboard,
- − Confirm the cue to be edited by touching the zone, or use the wheel.

Otherwise, press keyboard key 1 to scan the cues in ascending order, or press keyboard key 0 to scan the cues in descending order.

Important: When a cue is edited, there is a loading time. The status row at the bottom of the page informs the user of this status. Wait for the synchronisation to be complete in order to obtain a correct reading of the intensities of each of the cue's circuits.

Attributing intensity

To attribute a control intensity, position on a row using the wheel:
- − Touch the zone where the intensity is displayed in order to edit the value,
- − Enter the value using the numeric keyboard (between 0 and 100%)
- − Touch the zone where the new value is displayed in order to validate.

To identically recopy the intensity of the preceding circuit, use keyboard key.

Note: If the value attributed is 100%, the screen displays FF. Any value entered that is beyond 100 is limited to 100.
Any value entered into a non-existing cue will render it existing.
The backup (validation) of the intensities is conducted upon leaving the cue or function.

19.1 Range Key

Used to attribute the same intensity to a set of circuits, included within a range.
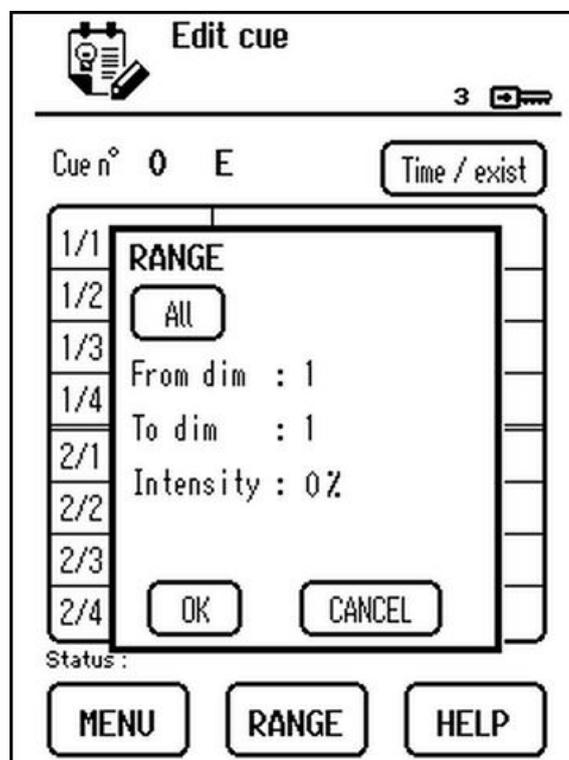
Enter:
- The start dimmer number (From dim),
- The end dimmer number (To dim),
- The intensity to be attributed to these circuits,
- Confirm with the OK button

Note: the circuit's first number ("From dim") must be $\leq$ the circuit's second number ("To dim") during definition of the range. Otherwise, the range between two circuits cannot be validated.

The ALL key is used in order to directly enter the 128 circuits of the cabinet.

19.2 Time/Exist Key

Used to attribute an intensity rise time for all of the circuits when a cue is played.

Used to attribute a wait time. This function will be used when the chaser is played. See "CHASER - PLAY" sub-menu.

Used to render a cue existing or non-existing.

Enter:
- The fade time (minutes, seconds),
- The wait time (minutes, seconds),
- The existence of the cue (select yes/no),
- Confirm with the OK button.

Note: the maximum time taken into account for the minutes is limited to 99 minutes.

ADB
Lighting Technologies

20. Cues Menu - Capture

Instead of entering the cues using the Editing function, this function is used to capture the highest intensity of the sources present at the controller's input (DMX & ARTNET), this being the case for each circuit, and to save it in a cue (from 0 to 80).

```
       Capture DMX / ARTNET
                        3 🔑

Cue n°  0   E   [CAPTURE] [SAVE]

1/1  -  1 | FF
1/2  -  2 | 0%
1/3  -  3 | 0%
1/4  -  4 | 0%
2/1  -  5 | FF
2/2  -  6 | FF
2/3  -  7 | 0%
2/4  -  8 | 0%

Status :

[MENU]              [HELP]
```

Selecting a cue

To select a cue, go to the cue number (highlighted), either by touching the screen or using the wheel.

To edit the cue number:
- Touch the screen or use the wheel to select the zone of the number in question,
- Type the number using the keyboard,
- Validate the cue by touching the screen to select the zone in question, or using the wheel.

Otherwise, press keyboard key 1 to scan the cues in ascending order, or press keyboard key 0 to scan the cues in descending order.

Important: when a cue is edited, there is a loading time. The status row at the bottom of the page informs the user of this status. Wait for the synchronisation to be complete in order to obtain a correct reading of the intensities of each of the cue's circuits.

20.1 DMX/ARTNET Capture

Press the "CAPTURE" key to launch the memorisation operation. The values appear in the table after a few seconds. The cue number is followed by an asterisk (*) to indicate that the captured DMX/ARTNET values are displayed. Press the "SAVE" key to save the intensities in the cue displayed. The cue becomes existing ("E").

21. Cues Menu - Play

This function is used to play an existing cue.

The fade time corresponds to the rise time defined in the "Cue–Edit" menu.

```
┌─────────────────────────────┐
│  ┌──┐    Play cue            │
│  │▣▤│▶                       │
│  └──┘              3  ▣━     │
│ ─────────────────────────   │
│ Cue n° 0  E   Fade time : ┌────┐│
│               1 min 5sec  │PLAY││
│                           └────┘│
│ ┌──────┬──────────────────┐ │
│ │1:1 - 1│                  │ │
│ ├──────┼──────────────────┤ │
│ │1:2 - 2│                  │ │
│ ├──────┼──────────────────┤ │
│ │1:3 - 3│                  │ │
│ ├──────┼──────────────────┤ │
│ │1:4 - 4│                  │ │
│ ├──────┼──────────────────┤ │
│ │2:1 - 5│                  │ │
│ ├──────┼──────────────────┤ │
│ │2:2 - 6│                  │ │
│ ├──────┼──────────────────┤ │
│ │2:3 - 7│                  │ │
│ ├──────┼──────────────────┤ │
│ │3:4 - 8│                  │ │
│ └──────┴──────────────────┘ │
│ Status :                    │
│ ┌────────┐      ┌────────┐  │
│ │ MENU   │      │ HELP   │  │
│ └────────┘      └────────┘  │
└─────────────────────────────┘
```
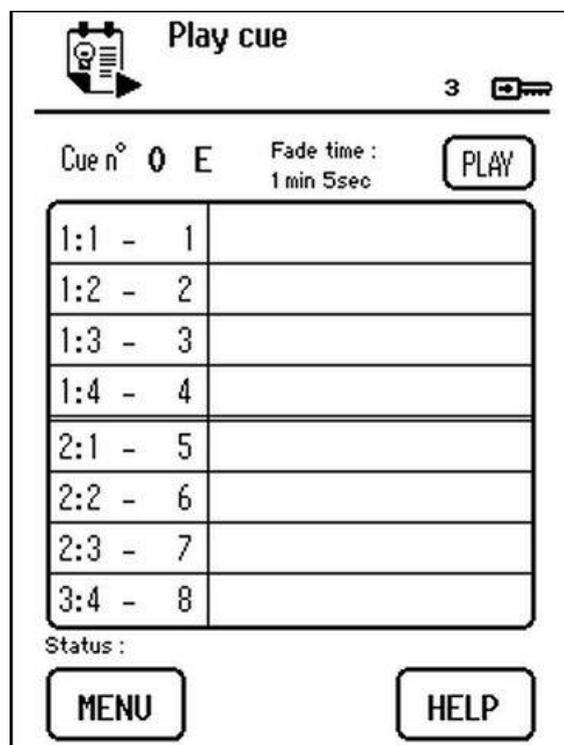
Selecting a cue

Only the existing cues will be displayed. ("E")

To select a cue, position on the cue number (highlighted), either by touching the screen or using the wheel.

To edit the cue number:
- Touch the screen or use the wheel to select the zone of the number in question,
- Type the number using the keyboard,
- Validate the cue by touching the screen to select the zone in question, or using the wheel.

Otherwise, press keyboard key 1 to scan the cues in ascending order, or press keyboard key 0 to scan the cues in descending order.

Play a cue

Press the "Play" key to launch the cue.

The information in this status lets you know the progress of memory fade:
- "Fade to cue x": progressive rise to the nominal control intensity of each circuit,
- "Cue played x": the fade is completed; the memory is played with current output values.

Press the "Stop" key to interrupt the play. The DMX/ARTNET will entirely regain control in five seconds with a fade.

Note: It is not possible to replay a cue immediately after a stop, it is necessary to wait until the fade to DMX is completed.

DMX => CUE => DMX
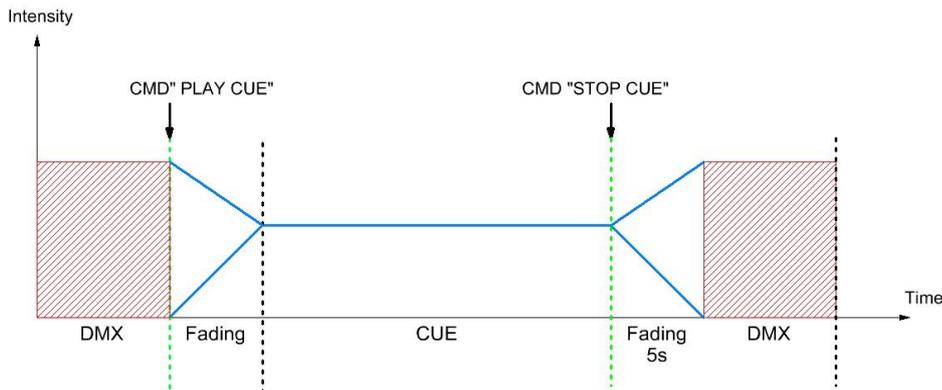
DMX => CUE #1=> CUE #2=> DMX
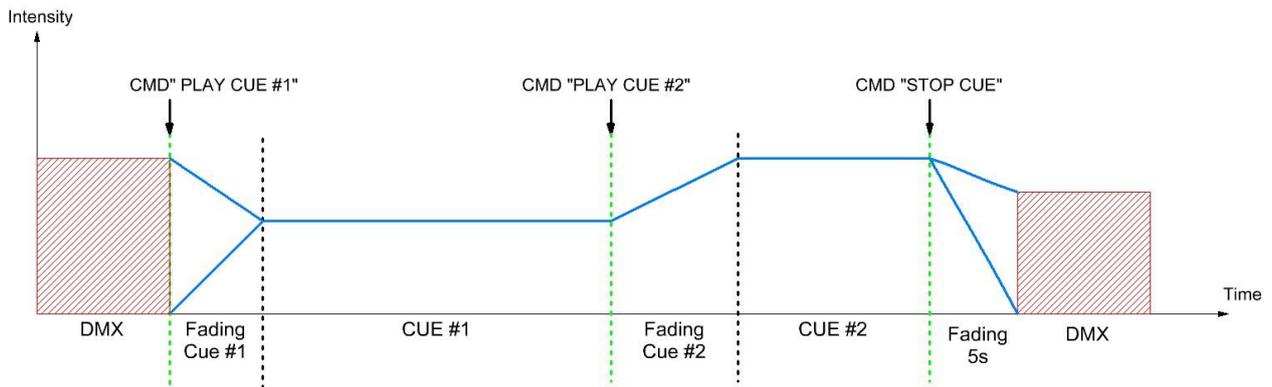
22. Cues Menu - Copy

This function is used to copy an existing cue to any other cue (existing or not).
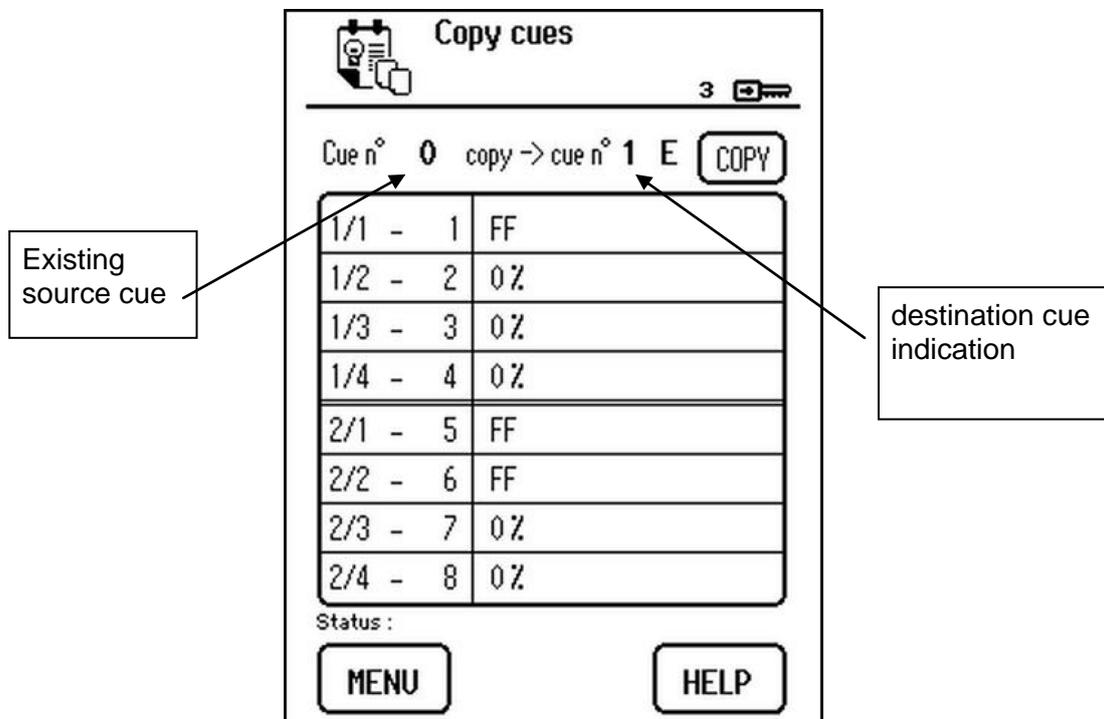
Selecting the original cue

The field memory source can only display **existing memories**.

Note: Cue 0 always exists.

To select a cue, position on the cue number (highlighted), either by touching the screen or using the wheel.

To edit the cue number:
  − Touch the screen or use the wheel to select the zone of the number in question,
  − Type the number using the keyboard,
  − Validate the cue by touching the screen to select the zone in question, or using the wheel.

Otherwise, press keyboard key 1 to scan the cues in ascending order, or press keyboard key 0 to scan the cues in descending order.

Selecting the destination cue

Each of the cues may be overwritten.

To select a cue, position on the cue number (highlighted), either by touching the screen or using the wheel.

To edit the cue number:
  − Touch the screen or use the wheel to select the zone of the number in question,
  − Type the number using the keyboard,
  − Validate the cue by touching the screen to select the zone in question, or using the wheel.

Otherwise, press keyboard key 1 to scan the cues in ascending order, or press keyboard key 0 to scan the cues in descending order.

Copy

Press the 'COPY' button and confirm in order to perform the cue copying operation.

23. Cues Menu - Erase

This function is used to delete the existing cues only.
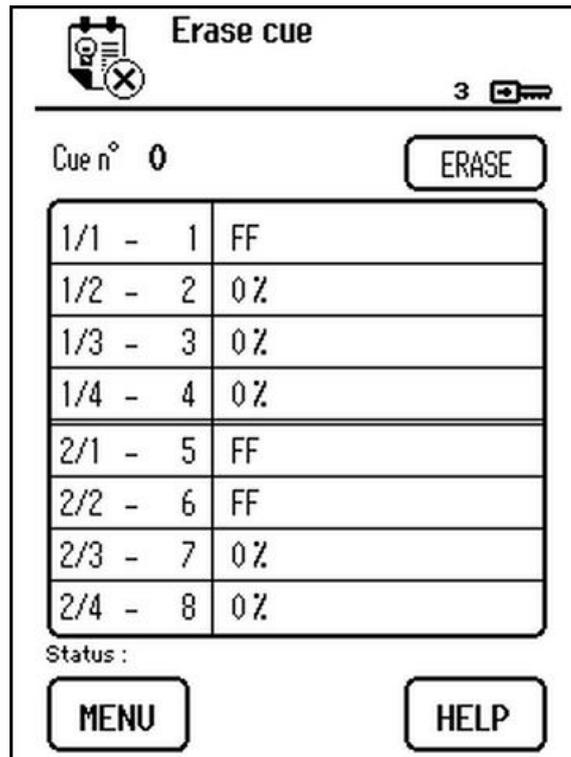
Selecting a cue

Only the **existing cues** will be displayed.

Note: Cue 0 always exists.

To select a cue, go to the cue number (highlighted), either by touching the screen or using the wheel.

To edit the cue number:
- Touch the screen or use the wheel to select the zone of the number in question,
- Type the number using the keyboard,
- Validate the cue by touching the screen to select the zone in question, or using the wheel.

Otherwise, press keyboard key 1 to scan the cues in ascending order, or press keyboard key 0 to scan the cues in descending order.

Erase

Press the 'ERASE' button and confirm to validate the deletion.

The cue then takes the following values by default:

ADB
Lighting Technologies

- Intensity: 0%
- Fade time: 0 min 5 sec
- Wait time: 0 min 5 sec
- Cue exists: No

Note: Cue 0 may be deleted (i.e. filled in with the default parameters) but it will continue to exist.
- Intensity: 0%
- Fade time: 0 min 5 sec
- Wait time: 0 min 5 sec
- Cue exists: YES

24. Cues Menu - Priority/DMX fail

This function is used to prioritise the selection amongst the DMX/ARTNET inputs and cue played, and also to replace a missing source.

Priority to the highest value present

The DMX/ARTNET values are no longer taken into consideration in the priority
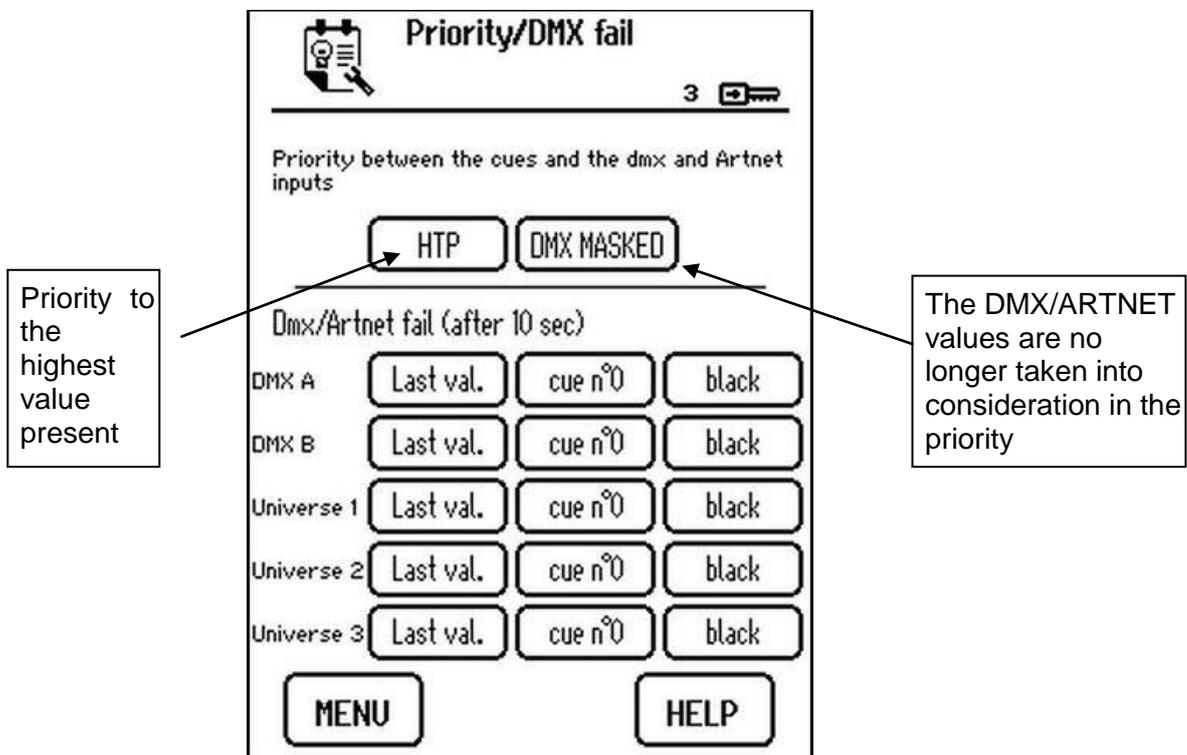
24.1 Priority

When memory is performed using the "play memory", the DMX / ARTNET can be hidden by selecting "DMX MASK" or if the highest value between memory and DMX / ARTNET shall be taken, select HTP.

24.2 DMX/ARTNET fail

In case of DMX or ARTNET signals is not present or failure, the latest values are kept for 10 seconds. After that the source is replaced by one of three options:
- The last control value received from the source that has disappeared,
- Control by cue 0 with fade (rise time of cue 0),
- 0% control (black) with fade in five seconds.

Example with the Memory 0 with the circuit 1 at 95%

~~DMX A circuit 1=100%~~
Memory 0 circuit 1=95%

Controller 1

DMX B circuit 2= 0%

Circuit 1=95%

DMX A circuit 1=90%

Circuit 2= 100%

Controller 2

DMX B circuit 2=100%
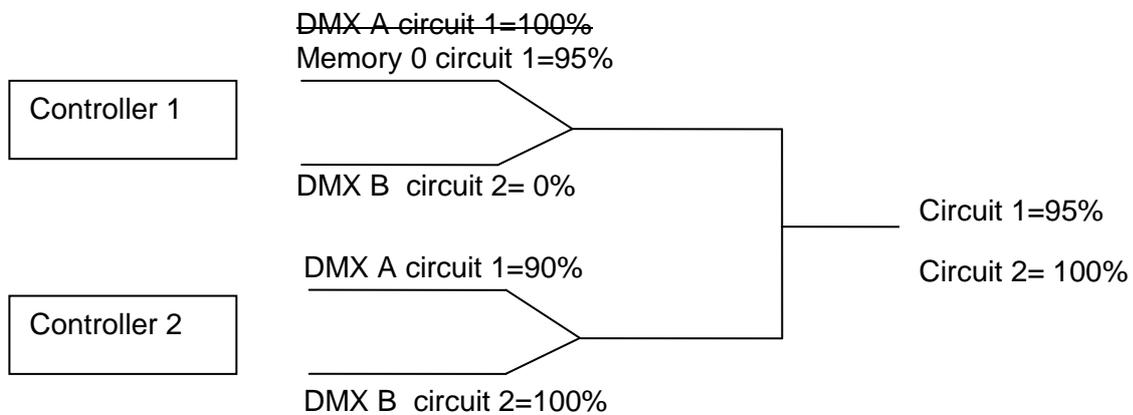
Select one of the possibilities by touching one of the keys.

25. Cues Menu – Play Chaser

This function is used to link up the play of all **existent** cues, except cue 0.

```
┌─────────────────────────────┐
│ ▦▦  Play chaser             │
│ ▼▶                          │
│                    3 ▣▭      │
│ ─────────────────────────── │
│                             │
│ ┌─────────────────────────┐ │
│ │ Cues in the chaser      │ │
│ │ 1,                      │ │
│ │                         │ │
│ │                         │ │
│ │                         │ │
│ └─────────────────────────┘ │
│                             │
│                             │
│ Status:                     │
│ ┌────────┐      ┌────────┐  │
│ │ MENU   │      │ HELP   │  │
│ └────────┘      └────────┘  │
└─────────────────────────────┘
```
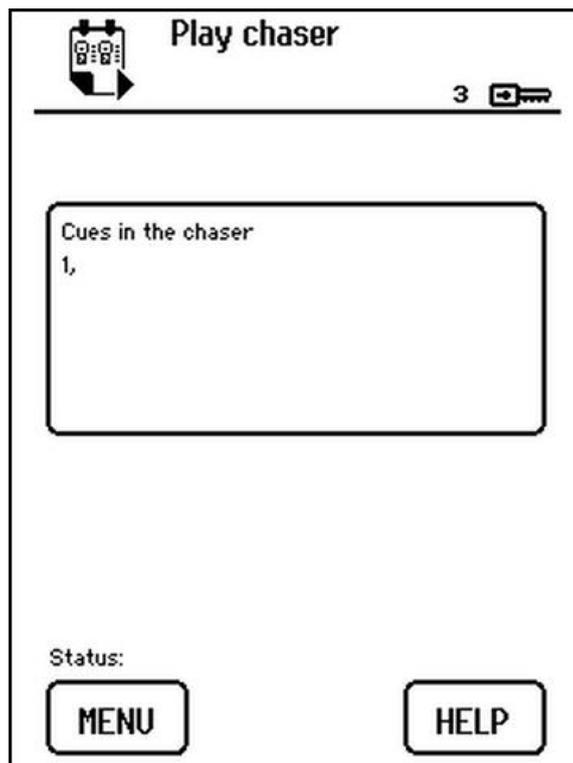
The list of cues played is displayed in the window.

Press the "PLAY" key to launch the chaser. The cues are played in ascending order.

Press the "Stop" key to interrupt the chaser. The DMX/ARTNET signals once more control the circuits.

The chaser may not be replayed immediately after a stop. It is necessary to wait for five seconds before the chaser can be launched again.

DMX =>CHASER (Cue #1 ,#2) => DMX
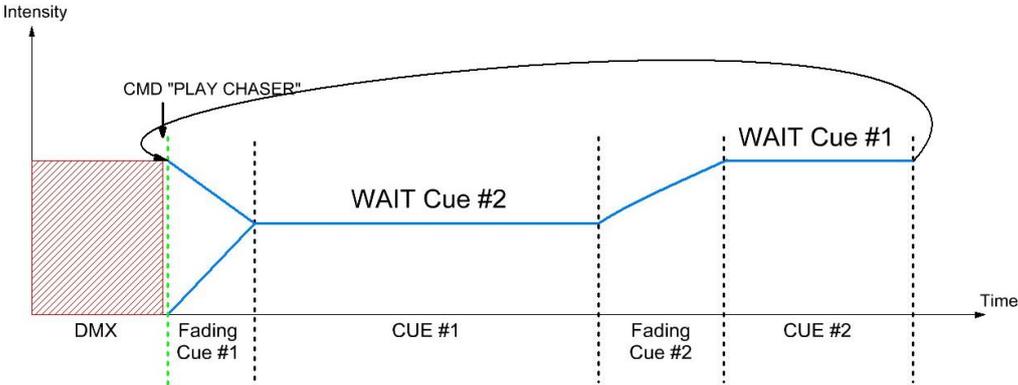
26. Overview

This function displays all parameters in modules

Parameters displayed are:
- **Power info:** the type of module used by the controllers.
- **Circuit qty**.: Number of circuit in the module.
- **Circui**t: position of the circuit taking into account the number of circuit in the previous modules.
- **Patch A, B** refers to the DMX patch for A and B.
- **Patch C, D, E**: refers to the patch for Artnet universe 1, 2, 3.
- **Laws**: laws applied to this circuit.
- **Multipl. Fact.** : Multiplying factor applied to the circuit.

Note: If a module contains less than four circuits, the circuits will be displayed with empty "------" to indicate that there is not physically present in the circuit module.

Selection of modules and outputs.
To select a module or an output, position the cursor on the number of the module or the output (highlighted), either by touchscreen or use of the dial.
To view the settings of the module:
- Touch the screen on the area of the number or use the wheel,
- Type the number on the keypad,
- Confirm the number by pressing on the touch sensitive area or using the dial.
Otherwise, press 1 to scan the keypad modules or outputs in ascending order or press the 0 key on the keyboard to scan the modules or the output in descending order.

The field module and output are related, that is to say that if you manually change the field or output module to the other will automatically update.

27. Test and Flash Menu

This menu is used to test the outputs of each circuit via a command from controller 1 or 2.

Output/patch relationship
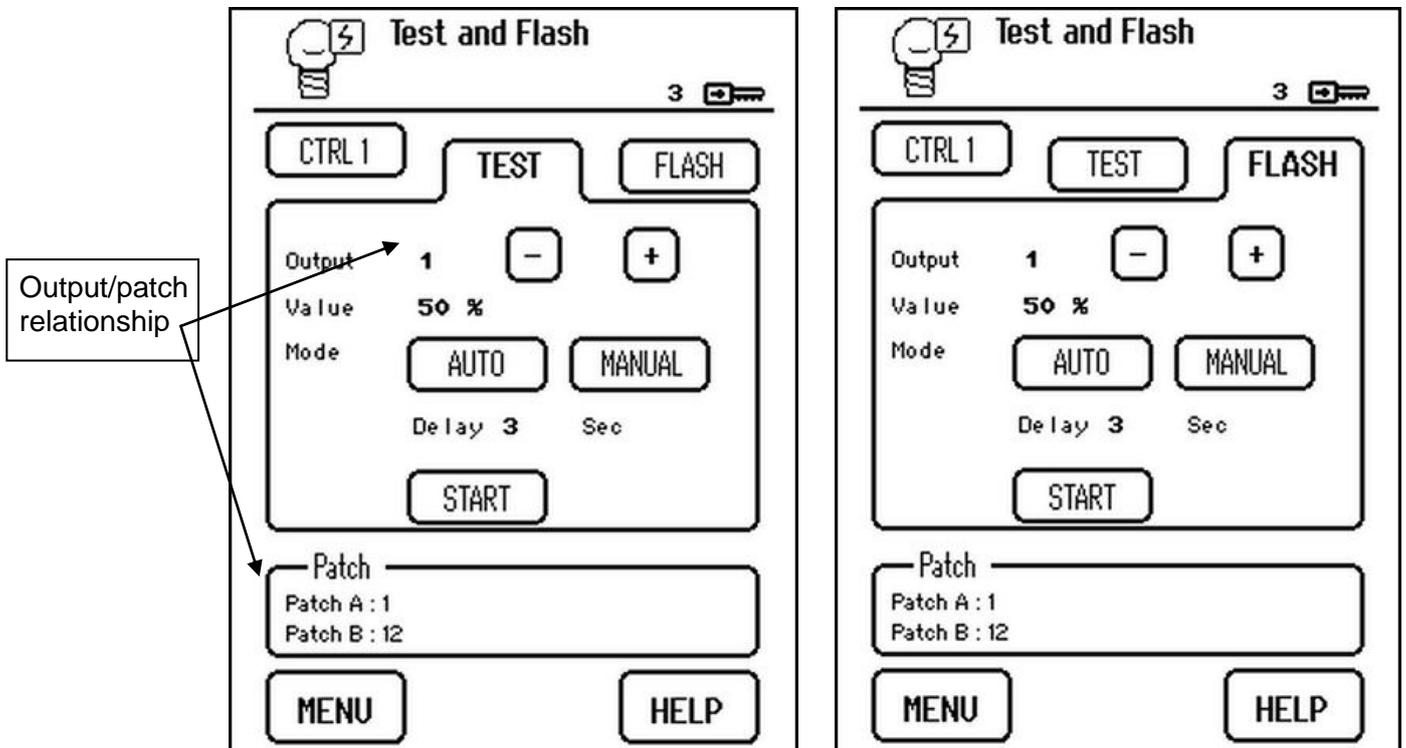
In order to be able to control a circuit (output) or a set of circuits with respect to controller 1 or 2 (if present), verify the position of the cabinet selector in order to ensure that it matches the control by the controller selected on the screen.

Select the controller that is to control the output to be tested, touch-key "CTRL 1" or "CTRL 2".

Note: When a test or a flash is launched, the DMX/ARTNET are cut off.

27.1 Test Tab

Touch to select the test tab.

Used to control a circuit with constant intensity.

To select an output, position on the output number (highlighted), either by touching the screen or using the wheel.

To edit the output number:
– Touch the screen to select the output number or use the wheel,
– Type the number using the keyboard,
– Validate the output by touching the screen to select the zone in question, or using the wheel.

Otherwise, press keyboard key 1 (or the + key on the screen) to increment the output number or press keyboard key 0 (or the - key on the screen) to decrement the output number.

According to the output function selected, the - value of corresponding patches A and B is displayed.

Adjust, in the same manner:
– the output control intensity, value row, intensity between 0 and 100% (FF)

- the output control duration, delay row, duration between 0 (~ 0.5 secs) and 60 secs

Touch the screen or use the wheel to select either the manual or automated test.

Manual test: only the selected output associated with a reference module will be controlled with the set intensity.

Automated test: all outputs starting from the selected output will be tested one after the other for the duration and with the set intensity except the channels defined as "undefined slot" or "Empty slot".

Press the "START" key to launch the manual or automated cycle.

Press the same "START" key to stop the manual or automated cycle.

27.2   Flash Tab

Touch to select the Flash tab.

Used to control a circuit with automated variation of the intensity between 0 and the set value.

To select an output, position on the output number (highlighted), either by touching the screen or using the wheel.

To edit the output number:
- Touch the screen to select the output number or use the wheel,
- Type the number using the keyboard,
- Validate the output by touching the screen to select the zone in question, or using the wheel.

Otherwise, press keyboard key 1 (or the + key on the screen) to increment the output number or press keyboard key 0 (or the - key on the screen) to decrement the output number.

According to the output function selected, the - value of corresponding patches A and B is displayed.

Adjust, in the same manner:
- the output control intensity, value row, intensity between 0 and 100% (FF)
- the output control duration, delay row, duration between 0 (~ 0.5 secs) and 60 secs

Touch the screen or use the wheel to select either the manual or automated test.

Manual test: only the selected output will be controlled with automated variation of the intensity.

Automated test: all outputs starting from the selected output will be tested one after the other throughout the duration and with variation of the intensity except the channels defined as "undefined slot" or "Empty slot".

Press the "START" key to launch the manual or automated cycle.

Press the same "START" key to stop the manual or automated cycle.

28. Load/Save Menu

This function is used to save or load the parameters of the cabinet, such as patch A & B, the multiplying factor, the laws and the power configuration. Furthermore, it is possible to choose to save the 80+1 cues upon confirmation.
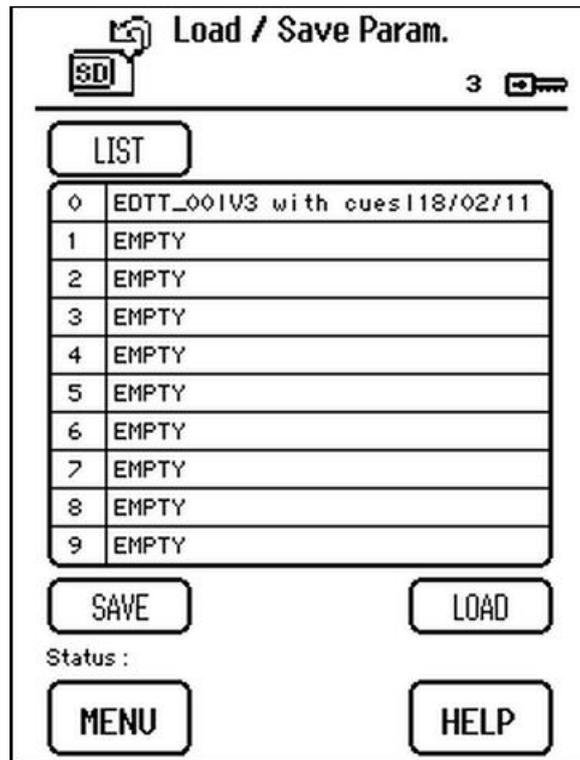
In order to conduct a save (backup) or load operation, the SD card must be present in the slot planned in the TTD HUMAN INTERFACE (HMI) Unit, located behind the right contractors door.

If no card is detected, the status row displays "No card detected".

The "List" key is used to reread the content of the backup files present on the SD card.

There are ten locations available on the card in order to conduct backups.

Each file saved is recorded in the following form:
- EDTT-01 (02, 03, …), gives the file name,
- V3, backup version,
- With cue or without cue with backup or without backup of the cues in the file,
- 18/02/11: date of manual recording of the backup.

28.1 Saving the parameters

Select one of the ten locations in which to save, either by touching the screen or using the wheel.

We can position on an existent file. In this case, the file is overwritten during the save (without a confirmation request)

Touch the "SAVE" key to launch the save.

A first window requests the save date to be manually recorded. After validation, a second window requests confirmation of the save cue execution (yes/no). Next, a third window requests the user's confirmation of the save operation configured as described.

The status row enables the user to monitor the state of progress of the save operation.

28.2   Loading the parameters

Select one of the save files, either by touching the screen or using the wheel.

Touch the "LOAD" key to launch the load operation.

A window is displayed, asking the user to confirm the loading of the cues (yes/no) if they have been recorded in the file.

The status row enables the user to monitor the state of progress of the load operation.

The operation to load the parameters to the controller is completed when the status indicates "Synchronisation completed", do not leave the function before the message appears.

29. Settings Menu

This function is used to activate the buzzer, select the TTD HUMAN INTERFACE (HMI) display language, activate the screensaver and indicate a database change.
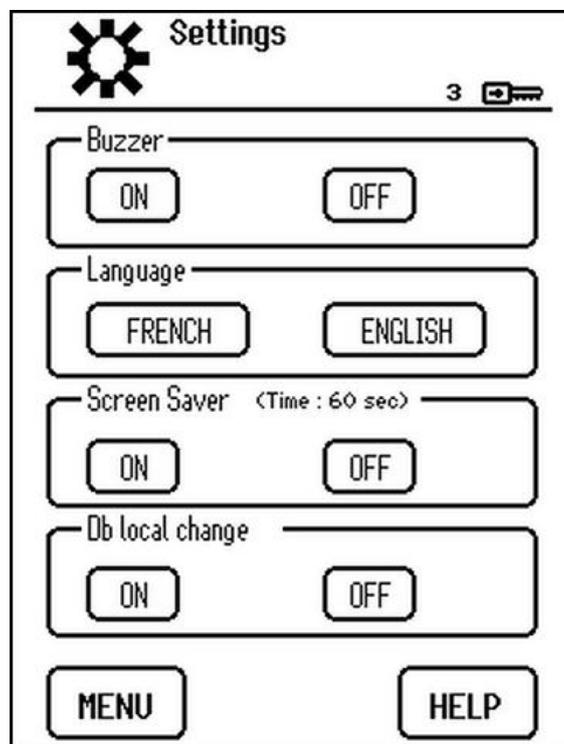
Touch to select the settings:
 − Buzzer: When it is activated ("ON"), the buzzer emits the signal when there has been an action on the wheel, the numeric touchpad or the touch-screen,
 − Language: French/English,
 − Screensaver: If the screensaver is active ("ON"), the TTD HUMAN INTERFACE (HMI) returns to the home page if there has not been any action by the user and resets the user level to zero. A level-four user access code is required in order to deactivate the screensaver,
 − Changing the database: When a PC is connected to the cabinet with TT manager and the latter makes a modification to a parameter, the user may be alerted, but without the possibility of intervening:
   • "ON" selected: in this case, the TTD HUMAN INTERFACE (HMI) displays the diagnostic page, opens a window and displays "Controller synchronisation",

- "OFF" selected: the modifications are made but the screen is not changed.

30. Load Scanning Menu

Important: This function can only be used if the sequential diagnostic kit has been installed in the cabinet, it being used to measure the neutral current on the module power line (busbar).

This function is used to scan the loads present at the output of each circuit and check that the loads have not changed with respect to a previous state.

This verification is performed in two stages:
- Learn: to define the reference loads present at the output,
- Scan: to launch the load verification operation.
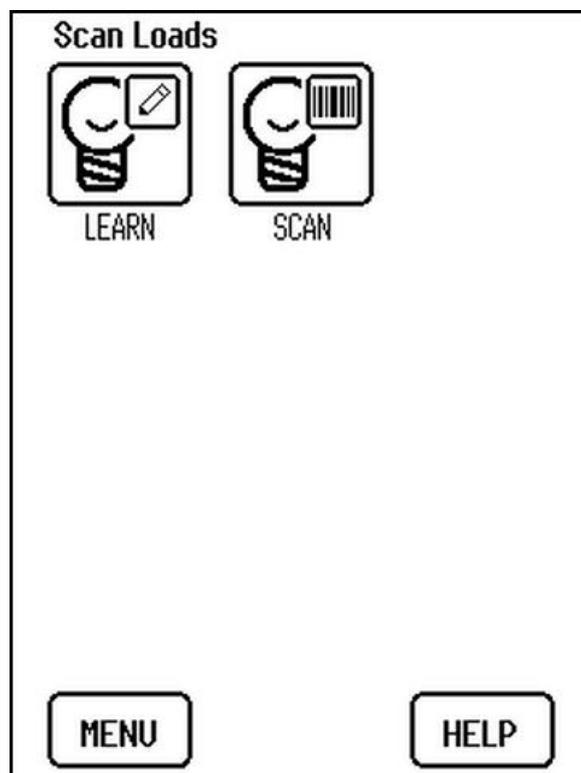
31. Load Scanning Menu - Learn

Important: This function can only be used if the sequential diagnostic kit has been installed in the cabinet, it being used to measure the neutral current on the module power line (busbar).

This function is used to define the reference loads present at the output of each circuit.
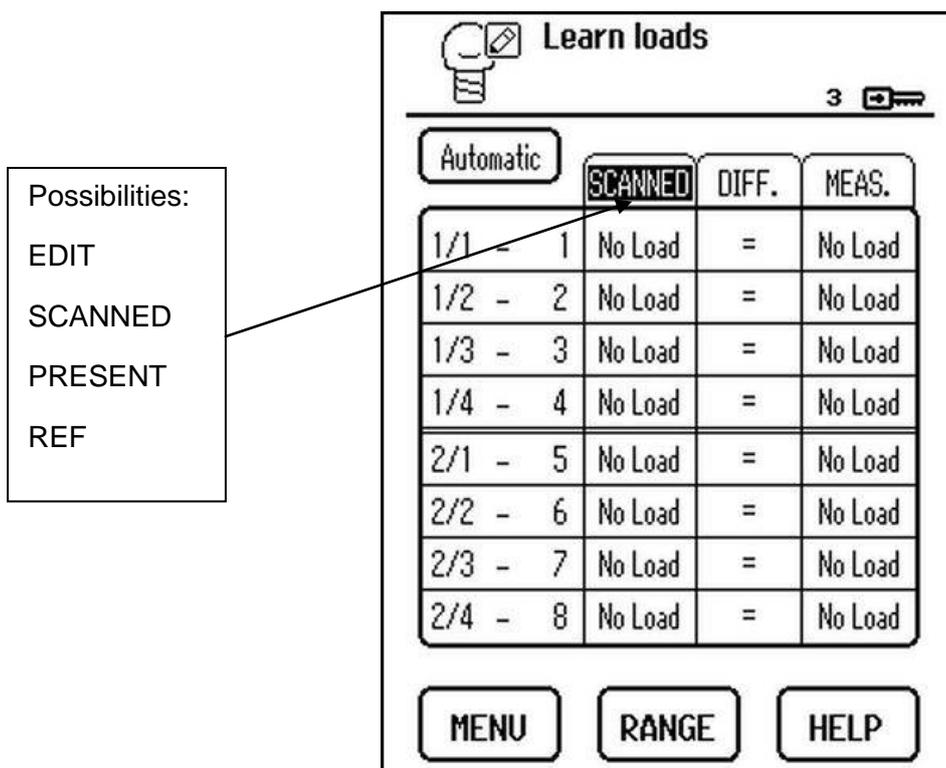
After start up the following information is available:
- There is no load present in the "EDIT" column (left-hand column),
- The information displayed in the "MEASUREMENT" column is "unknown".

The "DIFF." column is used to check whether the information in the left-hand and right-hand columns is the same or different (= or ≠).

The load connected at the output of each circuit can be defined manually or automatically.

31.1 Manually selecting the loads

To select a circuit, position on the row (highlighted), either by touching the screen or using the wheel.

To edit and select a load:
- Touch the screen to select the row or use the dial,
- A table featuring all the available loads is displayed,
- Select a load value present in the table, either by touching the screen or using the wheel,
- Validate the selected load by touching the screen to select the value or using the wheel,
- The load value is displayed in the "EDIT" column.
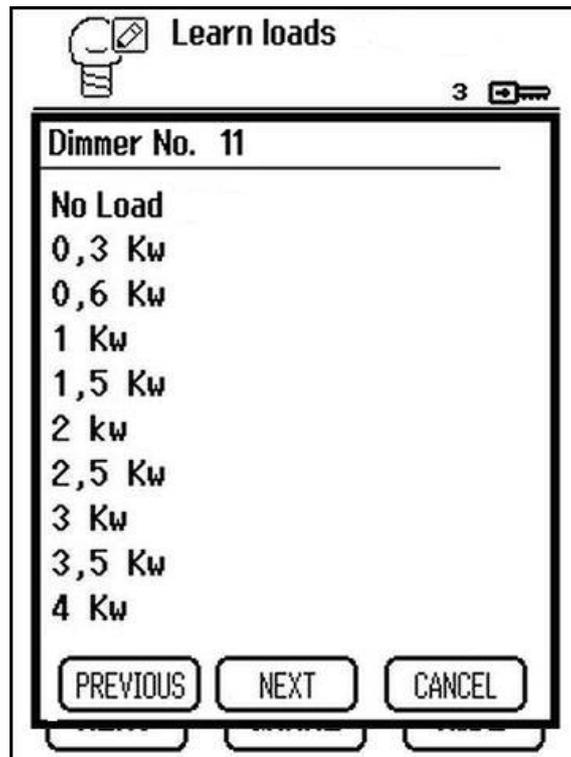
31.2   Range Key

Used to attribute the same load value to a set of circuits, included within a range.
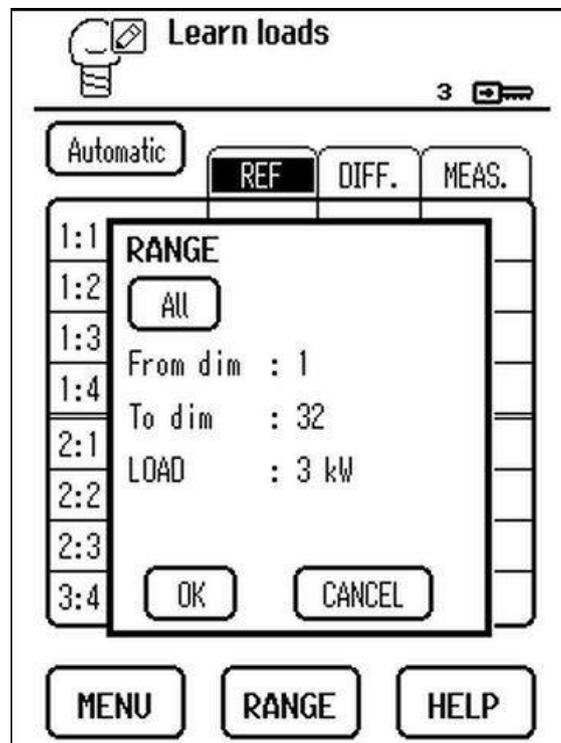
Enter:
- The start dimmer number (From dim),
- The end dimmer number (To dim),
- The load to be attributed to these circuits (a table appears enabling the load to be selected, see manual load selection),
- Confirm with the OK button.

Note: the circuit's first number ("From dim") must be $\leq$ the circuit's second number ("To dim") during definition of the range. Otherwise, the range between two circuits cannot be validated.

The ALL key is used in order to directly enter the 128 circuits of the cabinet.

31.3 Automatically selecting the loads

Press the "AUTOMATIC" key; three options are available:
- Measurement: the load information available in the "Measurement" column of all the circuits is recopied to the "EDIT" column. After copying, the name of the left-hand column changes and becomes "SCANNED",
- Present: the information originating from the PRESENT column (see Power Configuration menu) are recopied into the "EDIT" column. After copying, the name of the left-hand column changes and becomes "PRESENT",
- Reference: the information originating from the REFERENCE column (see Power Configuration menu) are recopied into the "EDIT" column. After copying, the name of the left-hand column changes and becomes "REFERENCE",

Select one of the options, either by touching the screen or using the wheel and confirm the choice.

Note: for the options PRESENT and REFERENCE, the column is updated automatically based on what was defined in "conf.puiss."

Automatic	REF	DIFF.	MEAS.
1:1 - 1	5KW	=	5KW
1:2 - 2	5KW	=	5KW
1:3 - 3	5KW	=	5KW
1:4 - 4	5KW	=	5KW
2:1 - 5	3KW	=	3KW
2:2 - 6	3KW	=	3KW
2:3 - 7	3KW	=	3KW
3:4 - 8	3KW	=	3KW

MENU   RANGE   HELP

Automatic selection: Reference

32. Loads Scanning Menu - Scan

Important: this function is only accessible if the sequential diagnostic kit has been installed in the cabinet. In effect, it is used to measure the neutral current on the module power line (busbar).

This function is used to launch a test verify the loads present at the output of each circuit using a current measurement in relation to the loads provided by the "Load verification – Learn" menu.
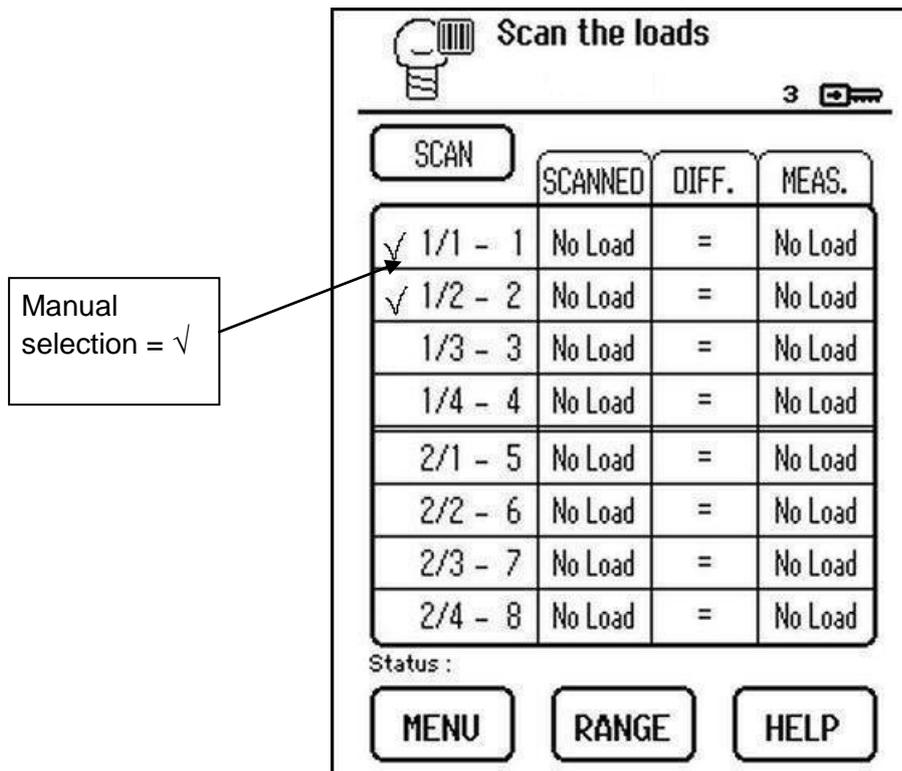
Manual selection = √

32.1 Selecting the outputs to be scanned

There are several ways to manually select the outputs that we wish to scan:
- By touching the module/dimmer number,
- By selecting the row using the wheel by pressing down,
- By positioning on the row using the wheel and by pressing key 1 to select (press key 0 to deselect)

A validation symbol appears in front of the module/dimmer number.

Important note: It is not possible to select a sinewave or FLUO module circuit for the scan (see status).
A circuit cannot be selected if the switch law is applied (see information in Status) because in this case, this circuit's load is not dimmable
A circuit cannot be selected if it is defined as "Non dim" (see information in Status) because in this case, this type of module does not enable dimming

32.2 Range Key

Used to select a set of circuits to be scanned, included within a range.

Important note: the FLUO, Non Dim and sinewave modules and those circuits that apply the switch law will not be selected.

Enter:
- The start dimmer number (From dim),
- The end dimmer number (To dim),
- Confirm with the OK button.

Note: the circuit's first number ("From dim") must be $\leq$ the circuit's second number ("To dim") during definition of the range. Otherwise, the range between two circuits cannot be validated.

The ALL key is used in order to directly select the 128 circuits of the cabinet.
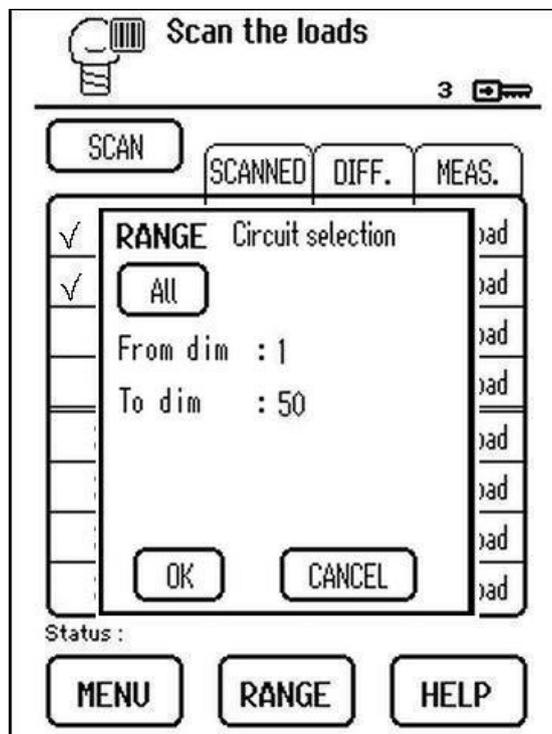
32.3 Scanning the Outputs

Launch the scan by pressing the "SCAN" key. Confirm your choice.

Several stages are conducted during the scan of a circuit's output and which can be viewed on the status row:

- Test at 14% (of 230V) in order to detect the presence of a short circuit
  (Stopping of the procedure in the event of a short-circuit).
- Dimming of the output up to 50%
- Measurement of the neutral current at 50%

Important note: The scan can only be conducted if there is no sinewave module present in the cabinet, even if it is not selected for the scan. The sinewave modules need to be removed from the cabinet before launching the scan

The result of the measurement appears in the "MEASUREMENT" column.

The following information can be found:
- Load value,
- No load,
- Overload,

There is an overload if:
- for a module of 3KW, a load $\geq$ 4KW has been measured,
- for a module of 5KW, a load > 7KW has been measured,

The circuit currently being scanned is automatically highlighted. This function vanishes as soon as you use the dial or select another output on the touchscreen. To find this function, press the number "6" on the numerical keyboard.

When the load scan is completed, we can verify the differences in the table between the modules recorded (left-hand column) and the load values measured (right-hand column). The $\neq$ sign appears in the central column in the event of an inconsistency.

33. Module Measurements Menu

This function displays the values measured for the sinewave and thyristor modules with a full-diagnostic option
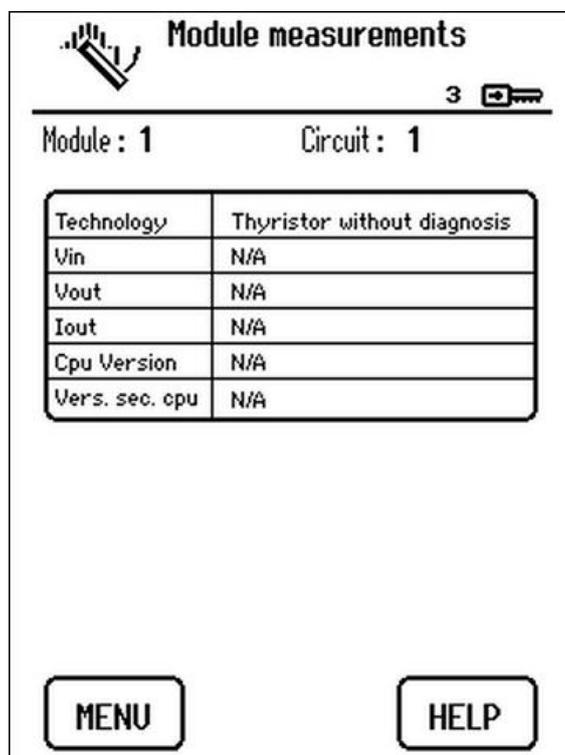
Only the sinewave or thyristor/fluo modules with full-diagnostic option can give measurements or diagnostic. The fluo and thyristor modules without this diagnosis will always give **N/A** (not available).

Information displayed according to the module type:

circuit technology	Sinewave, thyristor, fluo with or without diagnosis
input V	voltage measured at the module input (identical information for the four circuits); Voltage in V
output V	Voltage measured at the output of each circuit; Sinewave module: always N/A
output I	Output current per circuit. Sinewave and Thyristor modules with Diag: measurement (A) accurate to one decimal point
Controller vers.	Module software version
Controller sec. vers.	Indication available only for sinewave modules

33.1   Selecting the modules and circuits

To select a module or circuit, position on the module or dimmer number (highlighted), either by touching the screen or using the wheel.
To display the module or circuit measurements:
- Touch the zone of the number or use the wheel,
- Type the number using the keyboard,
- Validate the number by touching the screen to select the zone in question, or using the wheel.

Otherwise, press keyboard key 1 to scan the modules (circuits) in ascending order, or press keyboard key 0 to scan the modules (circuits) in descending order.

34. Modules Diagnosis Menu

This menu is used to verify the operation of the modules and obtain detailed information on the operation of each circuit. It is useful in the event that an error is detected and displayed in the diagnostic screen page.
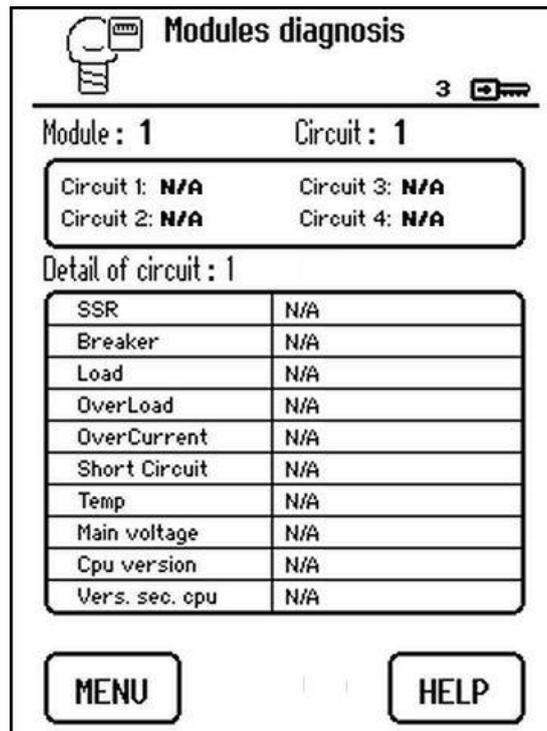
34.1 Selecting the modules and circuits

To select a module or circuit, position on the module or dimmer number (highlighted), either by touching the screen or using the wheel.

To display the module or circuit measurements:
- − Touch the screen to select the zone of the number in question, or use the wheel,
- − Type the number using the keyboard,
- − Validate the number by touching the screen to select the zone in question, or using the wheel.

Otherwise, press keyboard key 1 to scan the modules (circuits) in ascending order, or press keyboard key 0 to scan the modules (circuits) in descending order.

The first frame provides a summary of the functional status of each of the circuits constituting the "OK" or "Not OK" module. In the event of a problem detected on a circuit, display the circuit to obtain more details on the malfunction.

The second frame is the detail for each of the circuits constituting the module.

Information displayed for each circuit, according to the module type:

Thyristor (per circuit)	Sinewave: always "**N/A**"
	
	Thyristor with Diag:
	   1 - Displays "**OK**" if everything is fine
	   2 - Displays "**Damaged**": if a voltage > 210 V is measured whereas the control measured by the module is < 25 %

Breaker (per circuit)	Sinewave:
	   1 - Displays "**N/A**" if the control value is $\leq$ 17 % or the circuit is overloaded or short-circuited
	   2 - Displays "**OK**" if the control value is > 17 % and not overloaded or short-circuited
	   3 - Displays "**triggered**" if the control value is control $\geq$ 17 % and no output voltage is measured on the circuit
	
	Thyristor (per circuit):
	   1 - Displays "**OK**" if the breaker is engaged
	   2 - Displays "**disengaged**" if the breaker has blown

Load (per circuit)	Sinewave & Thyristor with diag:
	   1 - Displays "**N/A**":
	     • The control is set to zero
	     • and/or the output voltage is too low
	   2 - Displays "**NO**":
	     • If the control value is > 0
	     • The output voltage is measured
	     • and the current is not measured
	   3 - Displays "**YES**"
	     • If the control is present
	     • And the output voltage and the output current is measured

Overloads (per circuit)	Sinewave:
	   1 - Displays "**light**": if the voltage is > 13 A for 30 secs
	   2 - Displays "**medium**": if the current is > 16 A for 10 secs
	     • Here, the control decreases every 500 ms until the current reaches < 13 A
	   3 - Displays "**Severe**": if the current is > 20 A for 1 sec
	     • The control is automatically set to zero
	     • After 2 mins, an actual control test is repeated and if the overload is "severe" again, a second test is conducted. If the overload is still **severe**, a status message is displayed at the bottom of the screen, requesting the user to set all the DMX/ARTNET inputs of the circuit to zero for 30 secs.
	
	Thyristor with diag.:
	   1 - Displays "**N/A**" if the breaker has blown
	   2 - Displays "**YES**" if the breaker is OK and:
	     • If the load is $\geq$ 3.5KW (for a 3kW module)
	     • if the load $\geq$ 5.5.5KW (for a 5kW module)
	     • if the load is > 11KW (for a 10kW module)
	   3 - Displays "**NO**" in all other cases

OverCurrent (per circuit)	Sinewave: • Displays "low": if the current is > 13 A • Displays "average": if the current is > 16 A • Displays "Severe": if the current is > 20 A Thyristor with diag.: always "**N/A**"
Short-circuit (per circuit)	Sinewave: Displays "**NO**" Displays "**YES**": • The control is automatically set to zero • After 2 mins, an actual control test is repeated and if the overload is "severe" again, a second test is conducted. If the overload is still **severe**, a status message is displayed at the bottom of the screen, requesting the user to set all the DMX/ARTNET inputs of the circuit to zero for 30 secs. Thyristor with diag.: always **N/A**
Temperature	Sinewave: 1 - Displays "**OK**" 2 - Displays "**too high**" => automatic control reduction until the temperature now longer exceeds the threshold set **Note**: The measure be different between the ½ circuits and the ¾ circuits Thyristor with diag.: always **N/A**
Main voltage	Sinewave: 1 - Displays "**OK**" Cases 2 and 3 do not trigger a module error as it is the main voltage that is incorrect 2 - Displays "**Too high**" 3 - Displays "**too low**" **Note:** If the main voltage < 205 V, the sinewave module no longer controls its circuits Thyristor: always **N/A**
Controller vers.	Module software version
Sec. vers. Controller	Indication available only for sinewave modules

35. ARTNET Patch Menu

This function is used to configure a patch on a circuit or a set of circuits for each of universes 1, 2 and 3.

This configuration is used to attribute the value of a channel of each universe to the control of a circuit of the cabinet.
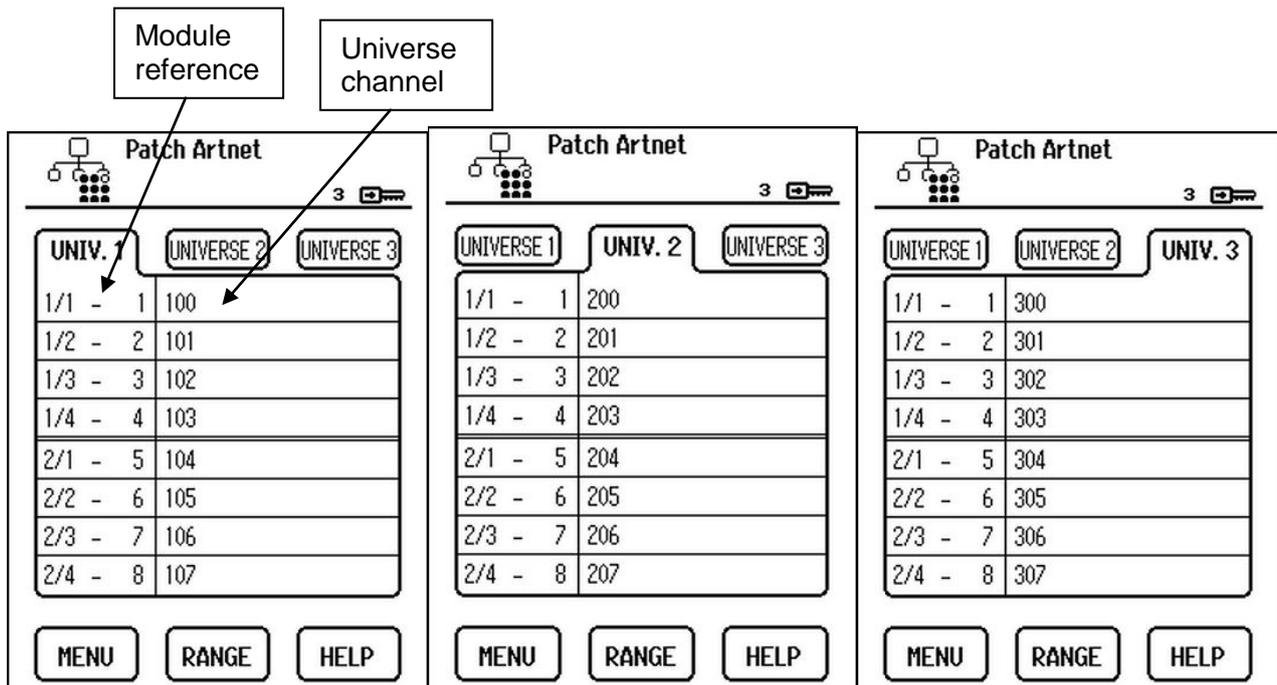
Reminder

The referencing of the modules in the cabinet starts at 1 in relation to the first location situated at the top of the cabinet, up to 32.

The left-hand column contains the referencing of the modules and circuits present in the cabinet:
  – Example: Value 1/1: references module 1/circuit 1 of the module
  – The right-hand figure indicates the output on the cabinet (from 1 to 128).

The channel attributed for each universe is given in the right-hand column.

Start by selecting universe 1, 2 or 3.

Use the wheel to rapidly move between all the rows of the patch. The row selected is highlighted.

To attribute a channel, position on a row and use:
  – The touch-screen and the numeric keyboard to enter a value,
  – Press key 1 directly to increment the value by 1 (between 1 and 512) in relation to the first value available on a previous row,
  – Press key 0 directly to decrement the value by 1 (between 1 and 512) in relation to the first value available on a previous row,
  – The Range key in order to enter values between two circuit references.

Important: Specific case for row 1/1: If key 0 or 1 is used, the value taken into consideration corresponds to the content of output 128 if available, otherwise to output 127, and so on.
If the value entered is 0 or greater than 512, the circuit cannot be coordinated and the message "Not used" is displayed.

35.1 Range Key

Used to attribute an ascending patch value in graduations of 1 to a set of circuits, included within a range.
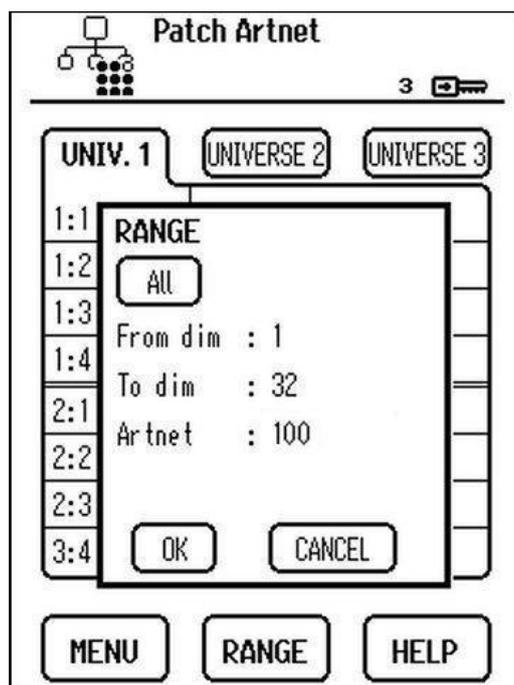
Enter:
- The start dimmer number (From dim),
- The end dimmer number (To dim),
- The start channel value to be taken into consideration for the increment in steps of 1
- Confirm with the OK button.

Note: the circuit's first number ("From dim") must be $\leq$ the circuit's second number ("To dim") during definition of the range. Otherwise, the range between two circuits cannot be validated.

The ALL key is used in order to directly enter the 128 circuits of the cabinet.

36. ARTNET Info Menu

These two screens show the status of the ARTNET connections, the configuration information for the three universes managed by each controller, as well as the IP addresses entered at each controller.
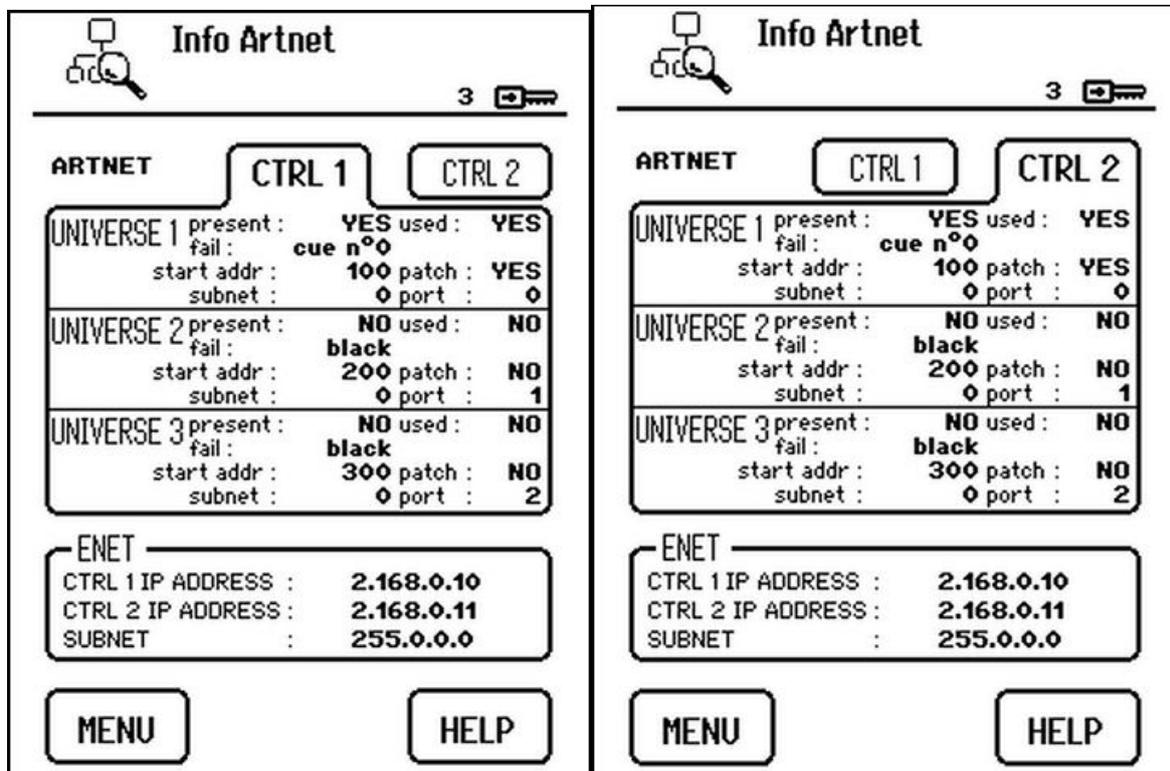
This page is divided into two zones:
- A zone (CTRL1 or CRTL2 key) providing information on the status of the universes and their configurations for each controller,
- A zone (ENET) providing the IP addresses entered for each controller.

Note: Only the "ARTNET present/missing" information depends on the controller.
In effect, each controller has its own ARTNET input. The back button, called "MENU" or "DIAG" is used to return to the previous screen.

36.1 ARTNET Information

For each of the three universes (1, 2, 3), the following information is available:
- Present:
  - "Yes": detection of the Ethernet frame corresponding to the universe,
  - "No": no reception of the Ethernet frame corresponding to the universe.

- Used: see "ARTNET Configuration" menu
  - "yes": the universe values are taken into consideration for the control of the circuits
  - "no": the universe values are not taken into consideration for the control of the circuits

- Fail: action implemented in the absence of the universe (see "Priority/DMX fail" menu), three actions are possible:

- "last value": the last values received to control the circuits are used permanently as long as the universe is missing,
- "cue" 0: the values of the universe channels are replaced by the content of cue 0 and will be played as long as the universe is missing,
- "black": the control value of each circuit fades to zero intensity (black) in 5 seconds.
- When the universe is present once more, a fade is launched to the intensities given by ARTNET in a time of 5 seconds.

When the universe is present once more, a fade is launched to the intensities given by ARTNET in a time of 5 seconds.

- start addr.: value of the universe channel to address cabinet output 1, see "ARTNET PATCH" menu
  - "x": $1 \le x \le 512$
  - "not used": channel value = 0 or > 512
  - "- - - - -": no circuit physically present in cabinet location 1, or circuit identification error in cabinet location 1 or operating fault.

- Patch: see "ARTNET PATCH" menu,
  - Yes: the addressing entered in each patch at the circuits is not in ascending order,
  - No: the addressing entered in each patch at the circuits is in ascending order, e.g. 1, 2, 3, 4,…., 128 in the case where 32 modules are present in the cabinet.

- Subnet: value between 0 and 15, see "ARTNET config" menu

- Port: value between 0 and 15, see "ARTNET config" menu

Note: When the ARTNET entries are controlled by an ISIS rotating ADB console, all the subnets must have the same number.

Ethernet Information

The IP address of each controller and the value of the sub-network mask are given.

Important: the IP addresses of each controller must be different. If this is not the case, it is imperative to address the ADB technical department.

37. ARTNET Configuration Menu

This function configures the ARTNET universes for the two controllers as well as the subnet and port values.
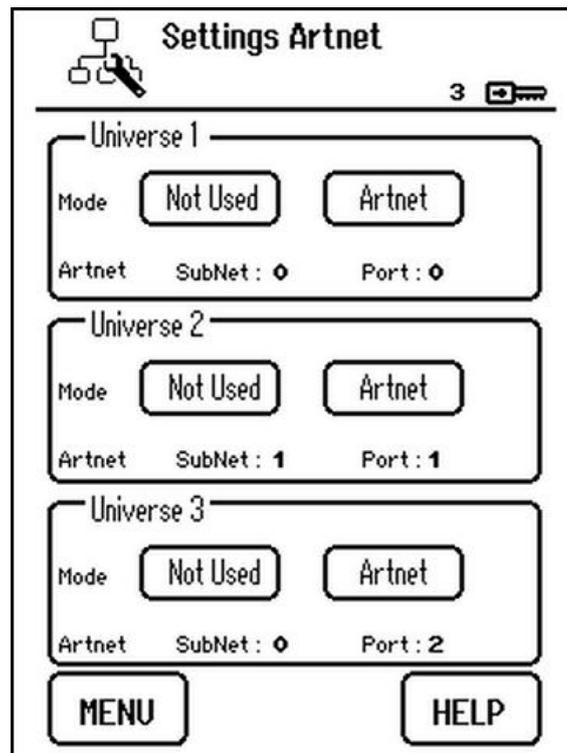
37.1 Selecting Universe Mode

For each universe, choose the operating mode:
- "Not Used" mode: the universe is not taken into consideration for the control of the circuits,
- "ARTNET" mode: the universe is taken into consideration for the control of the circuits.

Touch to select the mode. The mode selected must be highlighted.

37.2 Subnet and Universe Port

For each universe, fill-in the subnet and the port such that it is identical to the configuration of the control console.

Subnet and port value: between 0 and 15.

Position on the subnet value (port), either by touching the screen or using the wheel. The value is highlighted.
- Type the value using the keyboard,
- Validate the value by touching the screen to select the zone in question, or using the wheel.

38. Synchronisation Menu

This function is used to perform a copy operation between the controllers in the event that a new CTRL (blank or containing old data) is put in place in the cabinet.

Data copied:
- Patch DMX & ARTNET,
- Laws,
- Cues,
- Modules used,
- Cue priority,
- ARTNET configuration,
- Load measurements,
- Action in the event of a absent source.
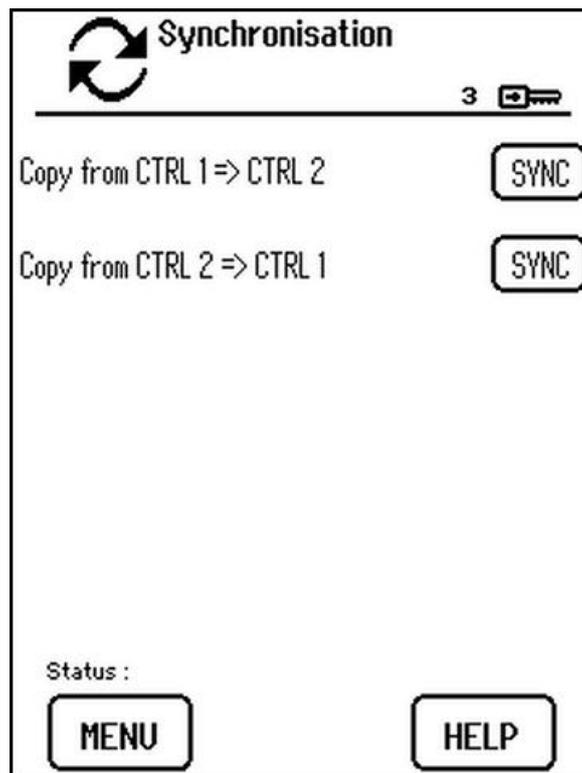
Touch one of the "SYNC" keys to launch the copy procedure between controllers, that is, from controller 1 to controller 2 or vice versa.

A window opens and a confirmation request is requested.
During the copy operation, the Status row indicates the state of progress by displaying the percentage copied.
When the copy operation is completed, the following information is displayed: "Synchronisation completed".

39. Managing the Alarms

The cabinet diagnostic page indicates any malfunctions of the cabinet with a warning message.

Example: "Choose the modules to be used".

An exclamation mark also appears. Touch the exclamation mark to display a screen page, grouping together the errors list.

Diagnosis of the cabinet

CTRL INFO — CTRL 1 — CTRL 2

ctrl board active	YES
frequency	50 hz
hardware / communication	OK
software version	5.060
temperature	OK

EURODIM TT INFO
Ref. modules are used for dimming

phase r	OK	fan 1	OK
phase s	OK	fan 2	OK
phase t	OK	fan 3	OK
		HMI V.	5.060

DMX INFO
dmx a start addr.	1	patch a	NO
dmx b start addr.	12	patch b	NO
dmx a present	YES	dmx a fail	cue 0
dmx b present	YES	dmx b fail	black

MENU   ENET   HELP

Warning message

39.1 Errors List Screen Page

Errors list

CTRL 1 — CTRL 2

Eurodim TT

CTRL BOARD

Modules

DIAG   HELP

ADB
Lighting Technologies
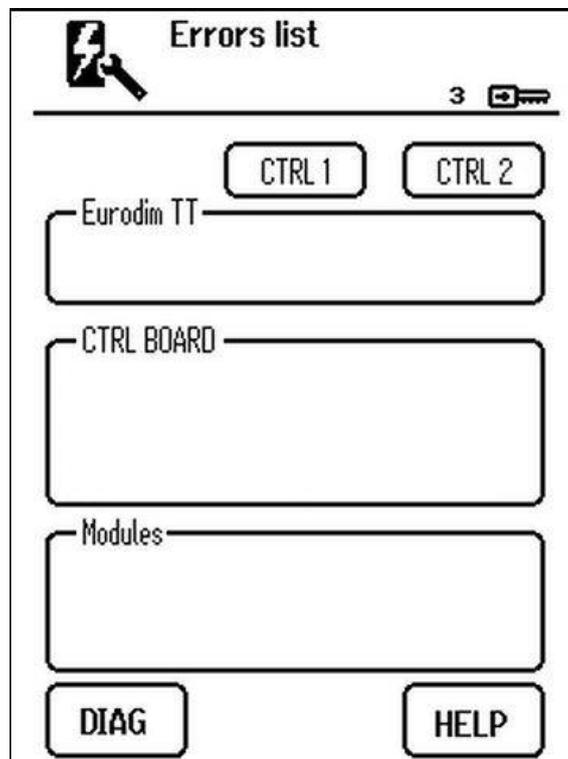
The two CTRL1 and CTRL2 keys are used to display the errors detected by each controller.

Indeed, each controller can display different errors, in the CTRL frame in particular.

Touch one of the two keys to display the error messages.

39.2   List of Errors displayed in the EURODIM Twin Tech Frame

1 -   Displays an error on a mains phase: example: "phase r error". Explanation: the voltage measured at the controller input is outside the operation range.
2 -   Displays an error on a cabinet fan that is not functioning: example: "error FAN 1".

39.3   List of Errors displayed in the CTRL Board Frame

1 -   "CTRL error": explanation: there are three processors in each controller. Processor 2 or 3 is not responding. In this case, no dimming will be possible on this controller.
2 -   "Comm. error": the controller is not responding to TTD HUMAN INTERFACE (HMI) messages.
3 -   "24 V error": explanation: the 24 V power measurement inside the controller is outside the operation range.
4 -   "Temperature error": explanation: the temperature measured in the controller is not acceptable*.
5 -   "9 V error": explanation: the 9 V power measurement inside the controller is outside the operation range.
6 -   "Control 9 V error": explanation: the control 9 V power measurement is outside the operation range.
7 -   "1V2 error: explanation: the internal 1V2 power measurement is outside the operation range.
8 -   "Frequency error": explanation: the mains frequency measured at the controller input is different from the frequency configured in the TTD HUMAN INTERFACE (HMI).
9 -   "Software version error": explanation: the software to be found on the controller (processor 1, processor 2, processor 3) and that in the TTD HUMAN INTERFACE (HMI) Unit are not identical.

In all of these cases, only ADB technical personnel can intervene

39.4   List of Errors displayed in the Modules Frame

- "x module(s) different"
  The modules actually present in the cabinet are not those used for dimming.
  Displays the number of different modules detected.
  Explanation: difference between the reference column and the column present on the CONF. POWER screen.
  Press the CONF. POWER button that appears next to the error. This provides a shortcut to the CONF. POWER menu.
  Press the REF.>-PRES button in order to copy the list of modules present in the REFERENCE column

- "Error on the x, y module(s)" (only for the Sinewave or Thyristor/Fluo modules with full-diagnostic option)
  Explanation: Operating error detected on one or more modules. Displays the number of modules where an error has been detected.
  For more information, press the MOD DIAG button that appears next to the error. This provides a shortcut to the MOD. DIAG. menu of the module of the first circuit experiencing an error.

* The maximum ambient temperatures are defined in the EURODIM Twin Tech data sheet.

Directly displays the first circuit where an error has been detected. Verify on which circuit row the error appears.

- "Choose the module to be used"
  The modules used by thee controller do not correspond to those of the REFER and PRESENT columns in the CONF. POWER menu in IHM. The database is not identical.
  Press the CONF. POWER button that appears next to the error. This provides a shortcut to the CONF. POWER menu.
  Press the REFER button to update the database and delete the error.
  This error can occur when a cabinet's TTD HUMAN INTERFACE (HMI) is replaced.

40. Fault-Clearing Guide

Each controller is equipped with several LEDs for visual monitoring the information available on the interface.

Light	State	Operation	Action
RUN light (green)	Flashes	OK	
RUN light (green)	Solid or off	Controller operating error (crashing)	Switch the cabinet off/on at the mains to remove the error, where applicable
DMX A, B (orange)	Flashes	Communication with the console	
DMX A, B (orange)	Off	No communication with the console	Verify the connection with the console at the cabinet
Ethernet (orange)	Flashes	Communication ensured with the network	
Ethernet (orange)	Off	No communication with the network	Verify the connection at the cabinet
Alarm (red)	Solid	Alarm detected	See diagnostic screen
DMX A, B ENET, ALARM	Flash	Controller operating error	Switch the cabinet off/on at the mains to remove the error, where applicable

40.1 Procedure to be followed in the Event of an Error

Errors list	Action	Downgraded mode
r, s, t phase error	− Verify the external network − Verify the connections on the cabinet − Verify the main breaker in the cabinet − Verify the CTRL fuses	The modules connected on the faulty phase are no longer useable.
Fan 1, 2, 3 error	− Proceed with replacing the cabinet's faulty fan	Risk of an increase in the temperature inside the cabinet. See temperature error.
Controller error	− Switch the cabinet off/on at the mains to remove the error, where applicable − Switch to the controller (if present) using the cabinet selector − Stop the cabinet and proceed with replacing the controller	
Communication error	− Verify the connections between the TTD HUMAN INTERFACE (HMI) and the cabinet	TTD HUMAN INTERFACE (HMI) will no longer be synchronised with this controller
24 V, 9 V, 9 V control and 1V2 error	− Switch to the controller (if present) using the cabinet selector − Stop the cabinet and proceed with replacing the controller	
Temperature error	− Refresh the room temperature (See chapter cabinet fan)	Automatic reduction of the circuit control value until the temperature is acceptable
Frequency error	− Verify the mains frequency at the cabinet's input − Verify the operating frequency selected in the software (ADB service menu)	Poor circuit control (outputs flash)
Software version error	− Change the faulty CTRL or reload the software from the TTD HUMAN INTERFACE (HMI) (ADB service menu)	

* The maximum ambient temperatures are defined in the EURODIM Twin Tech data sheet.