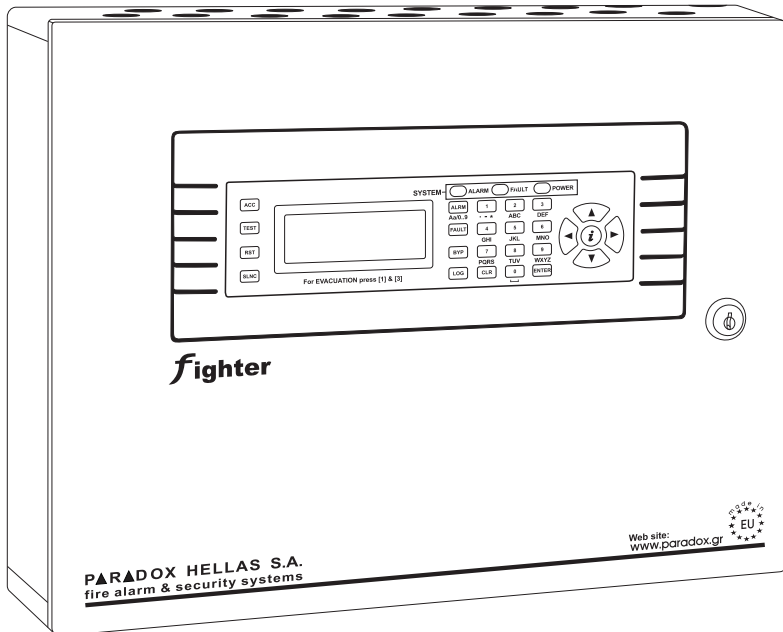# fighter

fighter

User Guide
Advanced Analogue Conventional Fire Alarm & Extinguishing Control Panel BUS Technology 8 – 72 Zones

Version: **1.0**
Revision: **2**

Declaration of Conformity

Advanced conventional fire alarm control panel Fighter is certified from EVPU (Notified body No.1293) according to European Directive **CPD** (Construction Products Directive 93/68/EEC) with certification number No.**1293-CPD-0308** of July 2, 2012.

-Standards:

EN 54-2: 1997/A1: 2006/AC: 1999
EN 54-4: 1997/A2: 2006/AC: 1999
EN 12094-1:2003 (Extinguishing)

Certificates can be found online at paradox.gr.

Manufacturer's Declaration

The design of the Fighter fire panel has been carried out under strict compliance with our ISO9001 quality management system. It covers software and hardware development and production procedures. All electrical components have been selected for proper operation of the panel and operate within their ratings when the environmental conditions outside the cabinet comply with class 3k5 of EN 60721-3-3.

IMPORTANT INFORMATION

Warranty

Paradox Hellas warrants its products to be free from defects in materials and workmanship under normal use for a period of two (2) years (the "Warranty Period") from the production-delivery date, identified by date code(s) indicated on the products. Because Paradox Hellas does not install or connect the products and because the products may be used in conjunction with products not manufactured by Paradox Hellas, Paradox Hellas cannot guarantee the performance of the fire alarm system and shall not be responsible in any way whatsoever for faulty installation or connection.

RoHS
COMPLIANT
2002/95/EC
RoHS directive compliance

The EC RoHS guideline has been released in order to reduce the heavy metal load in electrical and electronic products caused by e.g. lead and mercury. All manufacturers are obligated to provide only RoHS-compliant products to the European market, effective from July 1st, 2006.
Paradox Hellas hereby states that Fighter panel is fully compliant with RoHS 2002/95/EC directive.

Disposal of your old appliance

1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.

2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.

3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.

4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.

TABLE OF CONTENTS

1. Introduction

Thank you for purchasing the Fighter Fire Panel. The panel's main design goal was low cost (using conventional detectors) high modularity and flexible, easy installation with the use of a 4 wire system interconnect bus.

The Fighter panel is an advanced multipurpose analogue conventional fire alarm panel. It is expandable by means of modules that interconnect with 4 wire bus system. This allows the panel to be expanded up to 72 fire alarm zones, 72 relays and 8 keyboards. It can also be used for fire extinguishing applications.

The panel is fully customizable via a user interface from the keyboards. All parameters are displayed with hierarchical menus in 3 different access levels in an easy to understand and use manner. The system general status can be easily viewed at a glance from the led indicators on the keypads and the user can retrieve more information from the LCD character display and perform actions using the keyboard.

The layout and operation is designed with the user in mind and meant to be user friendly. The menus are designed to be logical and easily accessable.

2. System operation & Features
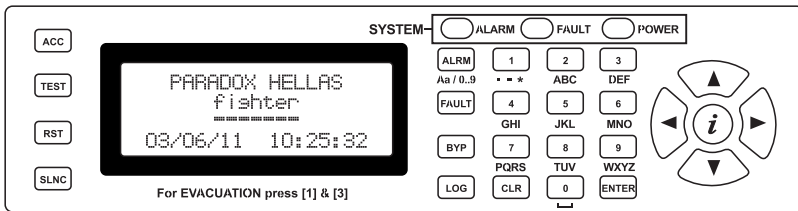
2.1 Keyboard description

Figure 1. Fighter keypad

Each keypad (Figure 1) has several buttons with some having different functions depending on the system's state. The following table summarizes each key's functionality. The following table summarizes each key's functionality:

[ACC]	**Button/Indicator** Enters access level 2 or 3. The corresponding access code is required. Factory default access codes are "2222" and "3333" for access levels 2 and 3 respectively.
[TEST]	**Button/Indicator** Tests the keypad by turning on all LEDs, the buzzer and display a test pattern on the LCD screen. **NOTE:** *The TEST LED which is combined with the test button, is also used as communication status indicator. When the LED is lit the keypad is sending data to the main board*.

[RST]	**Button/Indicator**
	Resets the panel's state including alarm zones, faults etc. (needs access level 2 or 3).
[SLNC]	**Button/Indicator**
	Silences alarms or faults (needs access level 2 or 3).
<ALRM> (Aa / 0..9)	**Button**
	Displays the system's ALARMS in two different screens. The first press shows a list of zones in Alarm; by pressing the button again the zones overview screen is shown. Further presses of the **<ALRM>** button alternates between these two screens. **Alternative function:** During text input field editing (access level 2 & 3 programming), changes character entry mode from numeric to T9 (text entry mode as used on mobile and telephone devices).
[BYP]	**Button/Indicator**
	Displays the system's disablements in two different screens. The first press shows a list of bypassed zones; by pressing the button again the zones overview screen is shown. Further presses of the **[BYP]** button alternates between these two screens.
<FAULT>	**Button**
	Displays the system's FAULTS in two different screens. The first press shows a list of zones in fault; by pressing the button again the zones overview screen is shown. Further presses of the **<FAULT>** button alternates between these two screens. **Alternative function:** During text input field editing (access level 2 & 3 programming), deletes the character that the cursor is over.
<LOG>	**Button**
	Shows the log events from the main board. While in the LOG screen the user can navigate through the log using the arrow keys (UP=RIGHT=get next log and DOWN=LEFT=get previous log).
<CLR>	**Button**
	Returns to the previous menu or to main menu depending the current menu.
<ENTER>	**Button**
	Selects an option/menu or submits a change during editing.
<NUM PAD> (keys 0-9)	**Button**
	Keys use for data entry and menu item selection. They can be operated either in numeric mode or in T9 (text and numbers) entry mode.
<*i*> (info key)	**Button**
	Displays help information about a menu or action. In the main screen it displays the Menu of Access Level 1 (informational).
<ARROW KEYS>	**Button**
	Navigate through menus, lists and log.

Table 1. Keyboard description

2.1.1 Data entry operation

The LCD and Keypad are used in various operations for data entry such as zone descriptions, dates, numeric settings etc. During data entry mode a designated area on the LCD is used for the input. The LCD characters allocated for the data field are enclosed in square brackets Figure 2. If the length of the data is greater than the available LCD character space, horizontal scrolling takes place. In this case the Left or Right (or both) square brackets enclosing the data are changed to "less than" or "greater than" signs indicating the direction of existing but not visible characters.

The data entry takes place in two different modes:

- Numeric data entry: The keypad is in numeric mode, and every time a key is pressed the corresponding number is produced on the screen.

- T9 entry mode: Each key has a set of characters (4 or 5) that are selected by promptly pressing the same key as many times needed. The characters allocated to each key are printed above them on the keypad mask (Figure 1). This mode is very popular with cellular phones and used for SMS text messaging.

Figure 2. Data entry examples

The operation of the keys during data entry is as follows:

<0> to <9>: Characters 0-9, A-Z and symbols.
<ALRM>: Switch keypad mode between Numeric and T9.
<FAULT>: Delete the character that the cursor is over.
<CLR>: Cancel editing and exit data entry mode.
<ENTER>: Accept editing saving data field and exit data entry mode.
<Left Arrow>, <Right Arrow>: Move cursor in the corresponding direction.
<Up Arrow>, Down Arrow>: Increase or decrease the character or numeric value highlighted by the cursor.

2.2 Access Levels

The fire panel during it's operation is said to be in a specific access level; from 1 to 3. Each access level defines what operations are allowed and what are protected. Each Access Level may be activated or "entered" by entering the requested code (or PIN) for the corresponding access level. Factory default access codes are "2222" and "3333" for access levels 2 and 3 respectively. There are operations and menus that require an elevated access level (other than 1, see Table 2 for operations summary). If the user initiates an operation that requires increased access level the system will prompt for the PIN, and once successfully entered, it will execute the operation and return to access level 1. Alternatively the user may request the menus of access level 2 or 3 (by pressing **[ACC]** key). In this case he/she will be prompted for the PIN and once successful, the access level menu will be displayed for further operations. While the access is granted, any operation under the specific access level is possible and the user will not be asked for the PIN every time. Elevated Access levels are canceled if the user willingly exits (by pressing **<CLR>**) or the menu times out due to user inactivity.

The Table 2 summarizes the basic functions and their required access level.

Basic Function	Access Level Required
Access level 2 menu	A.L.2 / A.L.3
Access level 3 menu	A.L.3
Zones Reset	A.L.2 / A.L.3
Silence	A.L.2 / A.L.3
Bypass	A.L.2 / A.L.3
Test	A.L.1
Log	A.L.1
Display alarms	A.L.1
Display Faults	A.L.1
Display bypasses	A.L.1
Evacuation	A.L.1 / A.L.2 / A.L.3
System Programming	A.L.3
Date/Time set	A.L.2 / A.L.3
Walk Test	A.L.2 / A.L.3
Periodic Test Confirmation	A.L.2 / A.L.3

Table 2. Basic functions required access levels

Since the system may have more than one installed key display units, an interlocking system ensures that only one is active at access levels 2 or 3. In this case the **[ACC]** key is constantly lit on the active key display. On the rest of the key display units the **[ACC]** key is producing three short flashes every 5 seconds. The user may press **[ACC]** on a locked key display to find out which unit is currently in elevated access mode. Figure 3 shows the information screen. To ensure that the system will never be locked untenanted in elevated access level, it detects user inactivity and drops to access level 1 automatically after a period of 30 seconds.

Figure 3. Access denied information screen

2.3 Users (master / normal, installer)

The fire panel apart from having two elevated access levels, also provides 9 users for access level 2; one Master and 8 Normal users. All users are limited to access level 2 operations (including the Master user). The Master user though may change the PIN codes for himself as well as all 8 Normal Users. Each Normal user can change only him/her own PIN. This system ensures that the Master user can have control over who is authorized to operate the system without disclosing his/her own PIN. This ensures future user control in the case of access revocation for a specific user.

The Access level 3 (A.L.3) user has full control over the entire system, including the Master and Normal user codes, programming and operation of the system. In other words Access level 3 (A.L.3) may perform operations that belong to the Access level 2 (A.L.2) group.

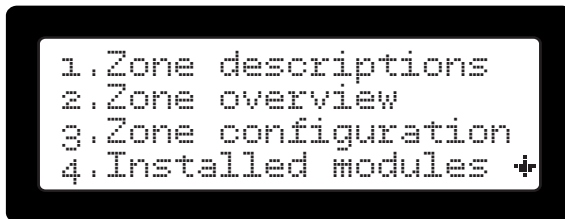## 3 System Information and status

Figure 4. Access Level 1 menu screen

In Access level 1 (A.L.1) the user may request through the level's menu a number of information screens. The A.L.1 menu is shown by pressing the *<i>* button while on the main screen (Figure 4). The items of the A.L.1 menu is as follows:

1. Zone descriptions
2. Zone overview
3. Zone configuration
4. Installed modules
5. Power levels
6. System info
7. Contact info

Pressing <i> on some screens will display a help screen with useful related information.

3.1 Zone descriptions (ALM1.1)

This screen shows a scrollable list of all installed zones along with their description. Selecting a zone (with the up/down arrows) and pressing <ENTER> will request A.L.2 code and enter the zone description editor.
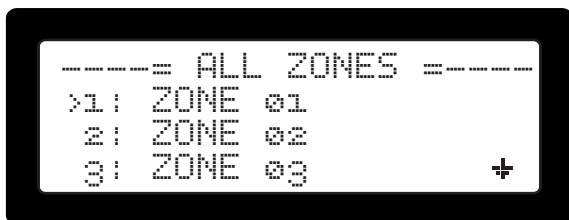

Figure 5. Zones descriptions screen

3.2 Zones overview (Zone states) (ALM1.2)

Figure 6. Zones overview screen

This screen shows an overview of all the installed zones. Each zone is represented by one LCD character. Each character space may have one of the following characters signifying a zone condition:

|▤|: Zone active and idle.
|Z|: Zone is in fault condition.
|R|: Relay corresponding to the zone is in fault.
|F|: Zone and corresponding relay in fault.
|A|: Zone is in alarm.
|I|: Intellizone is in pre-alarm state.
|a|: Zone is in alarm and corresponding relay is bypassed.
|z|: Zone is bypassed.
|r|: Relay is bypassed.
|b|: Zone and corresponding relay are bypassed.
|X034|: Cross-zone area in prerelease. 034 is shown as an example and indicates the time remaining before the release state is reached (in this case 34 seconds).
|H034|: Cross-zone area in prerelease state and HOLD button pressed. 034 is shown as an example and indicates the time remaining before the release state is reached (in this case 34 seconds).
|RLSD|: The cross-zone area is in the Released phase.
|S|: Cross-zone stopped from HOLD button in Pre-released phase.
|HOLD|: Cross-zone in the Released phase but stopped from the HOLD button.

While in the zones overview screen the bottom right of the screen shows one of the following labels meaning:

|NO FLTR|: No Filter. All conditions may appear on the character spaces.

|ALARMS|: Only alarm indications are displayed for each zone (character **|A|**, **|I|**, **|a|** and cross-zone indications (**|X034|**)).

|FAULTS|: Only fault indications are displayed for each zone (characters **|Z|**, **|R|** and **|F|**).

|BYPASS|: Only bypass indications are displayed for each zone (character **|z|**, **|r|** and **|b|**).

These filters may be activated by pressing the **<ALRM>**, **<FAULT>** and **[BYP]** buttons while in the Zones overview screen.

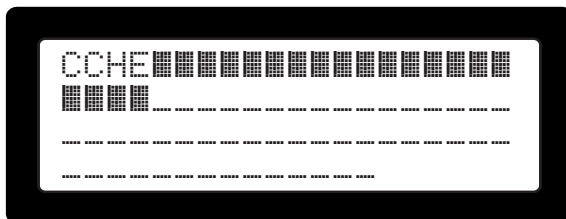## 3.3 Zone configuration (ALM1.3)

Figure 7. Zone configuration screen

Like the zones overview, this screen uses the same representation of one character space for each installed zone. Each character space represents the configuration that applies to the zone. The following character have the meaning:

|▓|: Normal zone.

|C|: The zone belongs to a cross-zoning group (4 zones) and is one of the two detector zones.

|E|: Extinguish button.

|H|: HOLD button input.

|i|: The zone belongs to an Intellizone group.

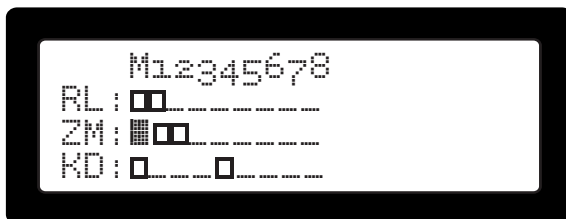## 3.4 Installed modules, Module Identification (ALM1.4)

Figure 8. Installed modules screen

This screen represents an overview of the installed modules (expansions) with each LCD character representing one module. The top LCD line forms an index with the module ID. The next 3 lines display the Relay expansion modules (**|RL|**), Zone modules

(|**ZM**|) and Key display modules (|**KD**|). The state of each module is shown with the following character representation:

|☐|: Module present and healthy. No extra PSU attached.

|▦|: Module present and healthy. Extra PSU is attached.

|__|: Module not installed.

|**L**|: Module is not present or not communicating.

|**F**|: Module reports zone or relay fault(s).

|**S**|: Attached PSU reports Mains power lost.

|**B**|: Attached PSU reports Battery connection fault.

|**R**|: Attached PSU reports batteries need replacing.

|**P**|: PSU and Battery in fault.

|**V**|: Module in low voltage mode / out of operation.

|**2**|: Keypad in access level 2.

|**3**|: Keypad in access level 3.

|**O**|: Selected module for identification (see bellow).

Module Identification

The system provides a mechanism for selecting a module and activating it's status LED or the LCD's backlight (for keypads). The selected module's LED produces a sequence of 3 rapid flashes and a pause every second. For Keypads the LCD backlight toggles on and off every second. This mechanism helps the installer or maintainer to identify a module without margin for error.

To select a module:

- In the "Installed modules" screen press **<ENTER>**: A small i appears on the top left of the screen and a cursor is activated.
- Move the cursor with the arrow keys over an installed module and press **<ENTER>**: The module character changes to |**O**|.
- The LED or backlight on the selected module start to flash with the identification pattern.
- To stop the identification pattern press **<ENTER>** again on the activated module or on an empty module space.

The **<CLR>** button on an activated keypad, will also deactivate the flashing pattern.

Only one module can be selected at any time. Selecting a new module while another one was active, will cancel the last activation.

Exiting the screen with a module selected will not stop the identification process.

The system's operation is not affected in any way by the module identification mechanism.

Pressing <i> will display a help screen with the above table.

3.5 Power levels (ALM1.5)

```
POWER LEVELS - Main
-----------------------
PSU 26.2  Bat 25.5
Mod 26.2  AC  OK
```

Figure 9. Power levels screen

Displays the voltage levels of the PSU, the backup battery, the module power source and the AC power condition. The units are Volts DC. The information is provided for all installed modules. If the shown module does not have a PSU connected only the Module voltage is displayed. The module voltage is the power level that actually feeds the electronics and consumptions of the specific module either coming from the Bus connection or the connected PSU.

The Up/Down Arrow keys are used to scroll through the installed modules.

This screen can also be easily reached by pressing **<Left Arrow>** once from the Main Screen.

3.6 System info (ALM1.6)

```
System serial number
=======================
 S/N: 000100
 VER: 1.00
```
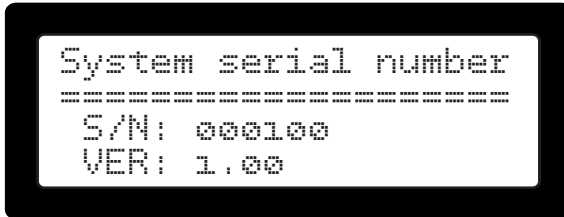
Figure 10. System info screen

This screen shows the serial number of the system. The serial number is kept in the main board and needs to be transferred every time it is requested. During that time the **|Retrieving data|** message is displayed.

3.7 Contact info (ALM1.7)

```
Contact info
=======================
2102855000
```

Figure 11. Contact info screen

Displays the installer pre-programmed contact information. Useful for keeping technical

support telephone number and/or other means of communication in case the installer must be contacted. The contents of this screen are programmed at A.L.3 menu item **|8.Additional Options|**.

4. Access Level 2 (A.L.2)

The items of the A.L.2 menu is as follows:
1. Evacuation Start
2. Bypass Zones
3. Bypass Relays
4. User's code
5. Zone descriptions
6. Periodic Test
7. Time/Date Adj.
8. Walk Test
9. Intellizone Cancel

Pressing <i> on some screens will display a help screen with useful related information.

• Press **[ACC]** button to enter access level 2: Access Code Prompt is displayed.
• Enter a valid PIN: Access Level 2 menu is displayed.

4.1 Evacuation (ALM2.1)

To activate the evacuation procedure:

• Press **<1>** for menu item **|1.Evacuation start|**: Setting for the evacuation procedure are displayed.
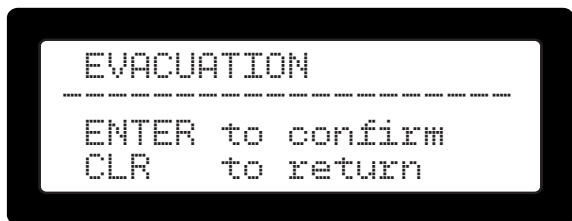• Press **<ENTER>** to confirm the evacuation or **<CLR>** to cancel the evacuation.

```
 EVACUATION
 ----------------------------------
 ENTER to confirm
 CLR   to return
```

Figure 12. Set global evacuation from keypad screen

4.2 Zone Bypasses (Zone disablements) (ALM2.2)

To activate a bypass on a zone:

• Press **<2>** to select menu item **|2. Bypass Zones|**: The list with all available zones is displayed (see Figure 13).
• Use **<Up> <Down>** keys to place the flashing cursor on the required zone.
• Use the **<Right Arrow>** to activate a bypass and **<Left Arrow>** to cancel a bypass.
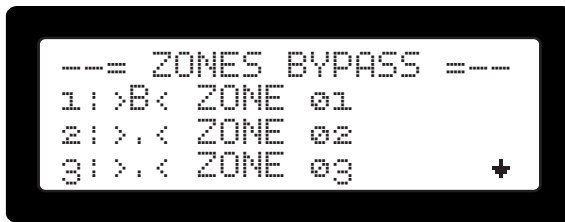• Once finished press **<CLR>** to exit access level 2 menu.

Figure 13. Bypassed zones activation screen

4.3 Relay Bypasses (ALM2.3)

To activate a bypass on a zone output:

- Press **<2>** to select menu item **|2. Bypass Zones|**: The list with all available zones is displayed (see Figure 14).
- Use **<Up> <Down>** keys to place the flashing cursor on the required zone.
- Use the **<Right Arrow>** to activate a bypass and **<Left Arrow>** to cancel a bypass.
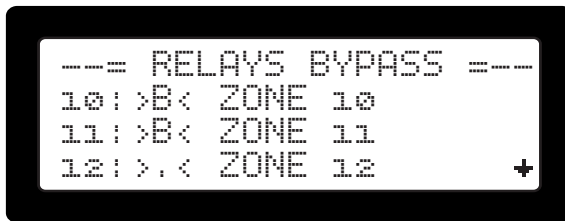- Once finished press **<CLR>** to exit access level 2 menu.

Figure 14. Bypassed relays activation screen

4.4 Bypass Information Screens

A quick overview of all active bypasses may be shown in a list. Only zones with active Zone or Relay bypasses will be included.

To get information about active bypasses:

- Press **[BYP]** button: A list with only bypassed zones is displayed. The list is scrollable with the arrow keys. In the list view each zone bypass is shown with either **(Z)**, **(R)** or **(Z+R)** in front of the zones description (Z stands for Zone, R for Relay).
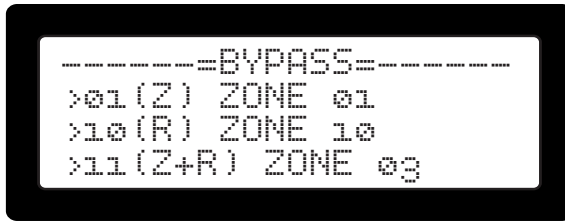
Figure 15. Bypassed zones & relays information screen

- Pressing **[BYP]** again: The zones overview screen (Figure 16) is displayed. Each zone is represented as one character. In the list view each zone bypass is shown with either **|(z)|**: Zone bypass only, **|(r)|**: Relay bypass only, **|(b)|**: Zone and relay bypass.
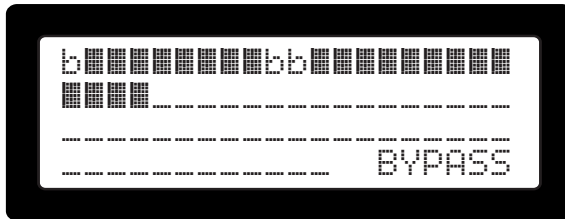

Figure 16. Bypassed zones overview screen

4.5 User's Code (ALM2.4)

To activate user's code:
- Press **<4>** to select menu item **|4.User's Code|**: The user's code settings are displayed to edit.
- Press **<ENTER>** to edit user's code, by using the alphanumeric buttons.
- Re-press **<ENTER>** to accept editing and add the name of user.
- Once finished press **<CLR>** to exit access level 2 menu.

4.6 Zone Descriptions (ALM2.5)

To zone descriptions:
- Press **<5>** to select menu item **|5.Zone Descriptions|**: The zone description list is displayed.
- **<Up> <Down>** keys to place the flashing cursor on the required zone.
- Use **<ENTER>** to edit zone description, by using the alphanumeric buttons.
- Once finished press **<CLR>** to exit access level 2 menu.

4.7 Periodic Test (ALM2.6)

To activate a periodic test:
- Press **<6>** to select menu item **|6.Periodic Test|**: The periodic test info are displayed.
- Use **<ENTER>** to verify the execution of periodic test.

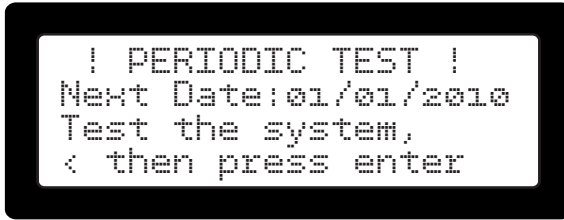- Once finished press **<CLR>** to exit access level 2 menu.

```
 ! PERIODIC TEST !
Next Date:01/01/2010
Test the system,
< then press enter
```

Figure 17. Access Level 2 Periodic Test screen

4.8 Time/Date Adj. (ALM2.7)

To activate a time / date adj.:

- Press **<7>** to select menu item **|7.Time/Date Adj|**: The time / date adj. settings are displayed.
- Use **<ENTER>** to edit a selection.
- Once finished press **<CLR>** to exit access level 2 menu.

```
Date - Time Input
————————————————————
Date 01/01/10
Time 03:13
```
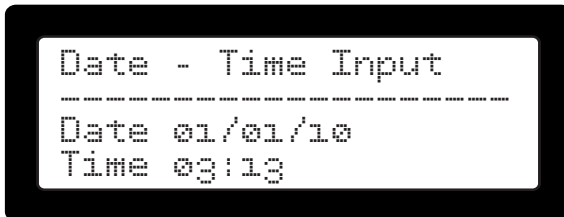
Figure 18. Οθόνη ρύθμισης Ώρας/Ημέρας

4.9 Walk Test (ALM2.8)

To activate walk test procedure:

- Press **<8>** to select menu item **|8.Walk Test|**: The walk test settings are dis-played.
- Select the walk test time out time.
- Press **<ENTER>** to start walk test procedure (all the detectors of the installation one by one).
- Once finished press **<CLR>** to exit access level 2 menu.

```
Walk test timeout
————————————————————
[060]
Seconds (10 - 900)
```

Figure 19. Set Walk Test cancellation time screen

4.10 Intellizone Cancel (ALM2.9)

To cancel intellizone procedure (if activated):

- Press **<9>** to select menu item |9.Intellizone Cancel|: The Cancel Intellizone screen is displayed.
- Press **<1>** to cancel intellizone procedure.
- Once finished press **<CLR>** to exit access level 2 menu.

For A.L.3 refer to Installation and Operation Manual.

FIGHTER Fire Alarm Control Panel Operation Summary

RESPONDING TO ALARM SIGNALS

1. Evacuate the area.
2. Notify the proper authorities immediately and state the nature and location of the emergency.
3. Be prepared to provide directions to firefighters when they arrive.

TO SILENCE ALARM NOTIFICATION SIGNALS

⚠️ *Alarm notification signals should not be silenced until after all occupants have been evacuated.*

1. Press the **[SLNC]** button.
2. Enter A.L.2 user code.

The Silenced button turns ON and all audible notification circuits turn OFF. New alarm events turn the notification circuits back ON.

TO RETURN THE SYSTEM TO NORMAL AFTER AN ALARM

1. Make sure all smoke detectors are free from smoke and all manual pull stations are reset.
2. Press the **[RST]** button.
3. Enter A.L.2 user code.

TO PERFORM A LAMP TEST (panel and remote annunciators)

1. Press and hold the **[TEST]** button.

RESPONDING TO TROUBLE SIGNALS

1. Investigate the cause of the trouble by pressing the **[FAULT]** button and notify the authorized service personnel immediately.

⚠️ *Trouble conditions may affect the panel's ability to provide early detection and indication of a fire. Clear trouble conditions immediately.*

TO SILENCE THE PANEL BUZZER

1. Press the **[SLNC]** button.
2. Enter A.L.2 user code.

The buzzer turns OFF. Any new events turn the buzzer back ON. Trouble conditions not cleared resound the buzzer after a predetermined time.

Installed by

Name:_____

Company:_____

Address:_____

Phone:_____

For service contact

Company:_____

Address:_____

Phone:_____

Acceptance Inspection by

Date:_____