HLogic Security Technology

Addressable Fire Alarm Control Panel

HST-HP201-2

Contents

1. Introduction

HST-HP201-2 is an addressable fire alarm control panel capable to connect up to 250 HST addressable devices per loop. With its extra large graphical display, it configures almost all panel settings via its very simple interface or with it's built in PC interface via HST RINGER configuration software. It stores almost all different actions monitored up to 4000 event log records.

HST-HP201-2 covers all small to medium size fire detection system needs.

2. Features & specifications

- 2 onboard detection loops with maximum 250 devices per loop (HST protocol).

- 2 onboard programmable monitored conventional sounder lines.

- 3 onboard programmable relays.

- 3 onboard programmable dry contact inputs.

- 1 onboard free 24 voltage output.

- 4 onboard fixed alarm functional keys (silence buzzer, silence alarm, resound alarm, reset).

- 1 onboard fixed evacuate key.

- 2 onboard programmable keys.

- Full navigation keys & full numeric keypad.

- 16 onboard functional LED indicators for different panel states.

- 250 zones with 32 onboard zonal LED indicators.

- 4000 event log records.

- Large graphical display (240 X 128 pixels).

- 1 RS-232 interface for PC panel con_guration tool.

- Lock key for con_guration update access.

- Real time clock.

- Main supply input voltage: 230VAC 50Hz.

- Main supply output voltage: 27VDC.

- Main supply output current: 6.5A max.

- Panel main fuse current: 5A.

- Battery type: 2 X 12V 7Ah sealed lead acid.

- Battery charging voltage: 27VDC.

- Battery charging current: 700mA.

- Free volatge output: 24V, 800 mA self ressetable fuse.

- Sounder lines: 24V, 800 mA self ressetable fuse.

- Sounder lines end of line resistance: 10KΩ.

- Detection loop current: 190mA max(250 loop devices connected).

- Loop protocol: HST.

- Display: graphical LCD 240X128 pixels.

- Computer interface: RS232.

- Weight: ~ 4Kg(without batteries).

- Dimensions: 450X370X120 mm.

- Color: Grey.

- Current consumption (normal): 410 mA max(500 loop devices connected).

- Current consumption (alaram): 1670 mA max(500 loop devices connected, 18 sounders & bells connected).

Relays   Sounders   Dry Inputs   Power Out   Loops

● Fire   ● Power On

● Evacuate   ● General Fault

● Pre-Alarm   ● System Fault

● Silence Buzzer   ● Power Fault

● Silence Alarm   ● Loop Fault

● Delay On   ● Sounder Fault

● General Disable   ● Test

● Sounder Disable   ● MCU Fault

Fire In Zone

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

1 2 3
4 5 6
7 8 9
MENU 0 EXIT

Silence Buzzer   Silence Alarm   Resound Alarm   Reset   Evacuate   Test   F1   F2   Enable

3. Components

3.1. Power circuits

HST-HP201-2 contains a switched mode power supply module producing 27VDC from 230VAC/50Hz main input source. Main panel board is protected with 5A/20 mm fast response glass fuse located at the lower right side of the board. Care must be taken when changing this fuse in case of failure. Same rating must be mounted in the board to avoid panel damage. There is another fuse located inside the main terminal block which holds 230VAC input terminal located at the upper right part of the panel.

Also panel has terminals to connect 2 X 12V/7Ah sealed lead acid batteries for panel backup power in case of failure of main input power. Main panel board has a charging circuit to charge the batteries. Charging circuit is automatically disconnected as soon as batteries are fully charged to save batteries life time. Main power & batteries are monitored from main power failure and batteries disconnection failure.

There is a place at the middle of the main board for 3V coin battery. It is only used to keep panel date & time saved even if main input power and batteries are not connected. If coin battery is removed, panel date and time will be set to its default values (Monday 01-Jan-2007 12:00 AM).

Panel can produce free 24VDC output which can be used to power even loop output devices which require external power source or any other equipment. This free output is fused @ 1A. It is highly recommended to not use this output voltage with different devices when panel is powered from batteries to save battery current as much as possible especially when main power will take long time for restore.
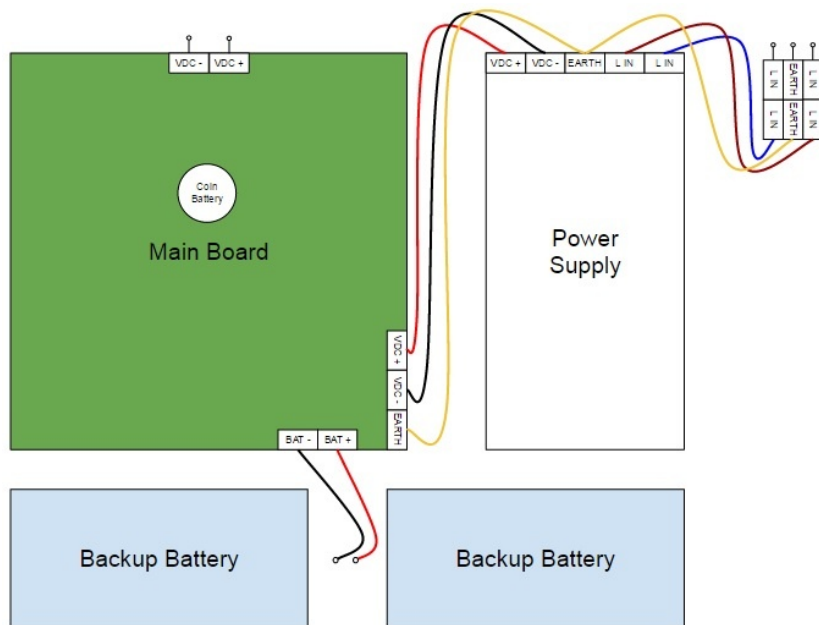
3.2. Input & output circuits

3.2.1. Loop detectors

HST-HP201-2 contains 2 class A detection loop circuits. Each loop can hold up to 250 addressable loop devices. Loop output devices (Sounders, Modules,…) should not exceed 64 devices per loop and remaining could be input devices (Detectors, Call points,…). Loop communication protocol is HST protocol.

Loop resistance should not exceed 90Ω for reliable operation. Loops are monitored for open & short circuit faults and communication errors. Each loop can be enabled or disabled based on its usage. By default Loop 1 is enabled and Loop 2 is disabled.

Maximum loop current is 400mA. Detection loops cannot produce enough power for loop devices which require high power (Sounders,…), so external power source should be used (free 24VDC panel output).
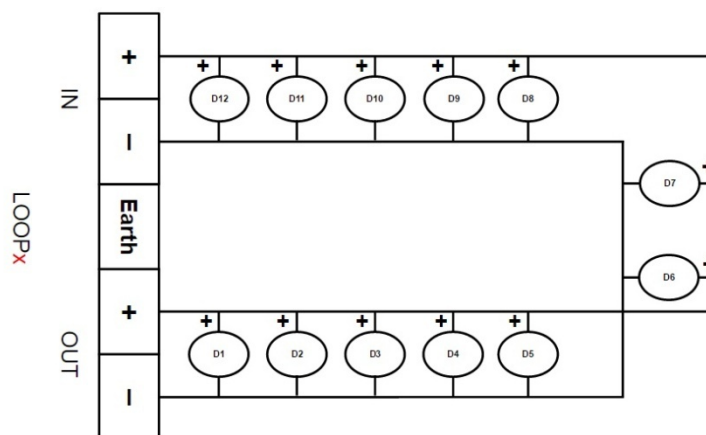
3.2.2. Dry contacts

HST-HP201-2 contains 3 dry contact remote inputs. Triggering of any input is done by connecting 0V terminal beside input terminal with the selected input. Input signal is latched

until fire reset. After fire reset if remote input is still connected to 0V terminal, programmed action will be active again. Triggering any input is available under access level 1 so care must be taken in programming any of remote inputs. By default all inputs are not programmed so there will be no effect if connected to 0V terminal. Inputs can be programmed from panel configuration menus or from computer software.
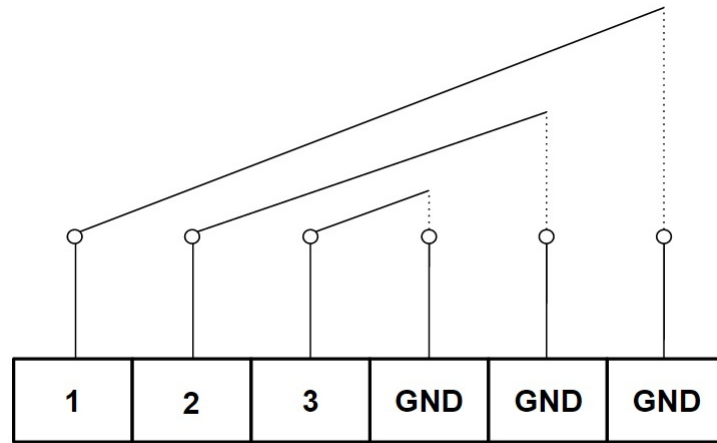
Dry Inputs

3.2.3. Sounders

HST-HP201-2 contains 2 class B monitored conventional sounder circuits used to connect different conventional sound strobe or bell devices. Each circuit is fused @1A.10KΩ end of line resistor must be connected for open & short circuit faults detection. By default both sounder circuits trigger on any fire or manual evacuate conditions. Different configurations can be done from panel configuration menus or from computer software.
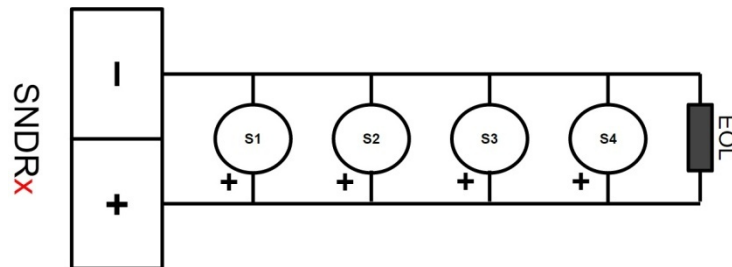
3.2.4. Relays

HST-HP201-2 contains 3 form C dry contact relays. All relays are rated 2A @ 30VDC. By default relay 1 & 3 trigger on any fire or manual evacuate conditions while relay 2 triggers on any fault conditions. Different configuration can be done from panel configuration menus or from computer software.
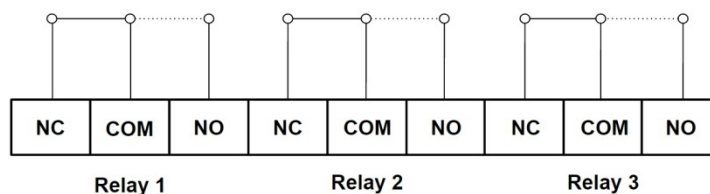
3.2.5. Computer interface

HST-HP201-2 has one RS232 interface which can be connected directly to a computer serial port via standard straight DB9 cable. Panel connector is located lower left side of the panel. Serial connection settings are fixed with the following values: 9600 BPS baud rate, 8 data bits, no parity bits, 1 stop bit and no handshaking.

3.3. Front panel controls

3.3.1. Numeric keys

HST-HP201-2 contains full numeric keypad used for general panel operation and panel programming.

3.3.2. Navigation keys

HST-HP201-2 contains 4 arrow keys, ENTER key and EXIT key used for general panel operation and panel programming.

3.3.3. MENU key

HST-HP201-2 contains one MENU key used to access panel internal menus for programming. Entering menus requires level 2 access.
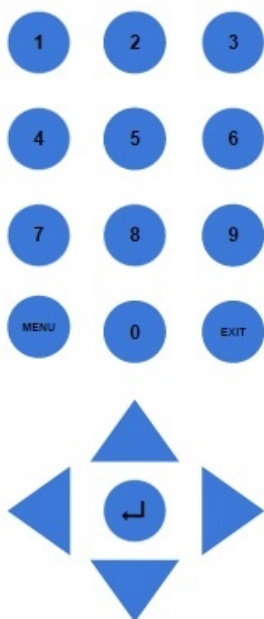
3.3.4. Fire function keys

HST-HP201-2 contains 5 fire functions keys used to perform all fire related actions. Triggering any fire function key is under level 2 access except Silence Buzzer key which is under level 1 access.

- Silence Buzzer key: Used to silnece panel buzzer after fire or fault condition.

- Silence Alarm key: Used to silence on board relays, on borad sounders and loop output devices after fire condition.

- Resound Alarm key: Used to resound the silenced onboard, relays, on borad sounders and loop output devices after fire codition.

- **Reset** key: Used to perform panel reset after fire or fault condition. All onboard and loop modules will return to its default state. In case that condition which caused the fire or fault is still active, panel will change its state again according to the active event.

- **Evacuate** key: Used to perform manual evacuate action.

3.3.5. General function keys

HST-HP201-2 contains 2 onboard general function keys which can be programmed independently to perform one of several functions. Triggering any function key is under level 2 access. By default keys are not programmed so there will be no effect when pressed. Keys can be programmed from panel configuration menus or from computer software.

3.3.6. Test key

HST-HP201-2 contains one Test key which is used to start LCD & LEDs test for 2 seconds. LCD will draw HST Logo and all Icons in an inverted way and all LEDs will be turned on.

3.3.7. Enable key

HST-HP201-2 contains one enable key which must be turned on before saving any panel settings. Icon is shown on LCD when enable key is on. Enable key should be normally turned off to secure panel data from unauthorized changes.
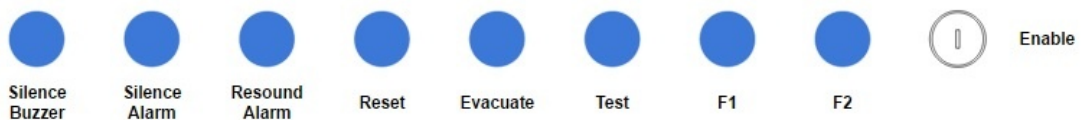
3.4. Front panel indicators

3.4.1. LCD

HST-HP201-2 contains 240X128 pixels graphical LCD. It shows all panel information & operations and details on fire & fault conditions. It is also used in panel programming & configuration.

3.4.2. LEDs

HST-HP201-2 contains 48 onboard LED indicators with different colors used to show different panel status.

- 🟢 Power On: Indicates the presence of panel power (main power terminals or backup batteries).

- 🔴 Fire: Indicates the presence of at least one fire condition.

- 🔴 Evacuate: Indicates the presence of at least one manual evacuate condition.

- 🔴 Pre-Alarm: Indicates the presence of at least one pre-alarm condition.

- 🟡 Silence Buzzer: Indicates that Silence Buzzer key is pressed after fire or fault condition. It will be turned off in case of another fire or fault condition is triggered.

- 🟡 Silence Alarm: Indicates that Silence Alarm key is pressed after fire condition.

- 🟡 Delay On: Indicates that at least one output loop device or onboard output circuit is delayed after presence of fire or manual evacuate conditions. It will be turned off when time delay expires.

- 🟡 General Disable: Indicates the presence of at least one component (all loops, loop device, zone, on board circuit) is disabled.

- 🟡 Sounder Disable: Indicates the presence of at least one on board sounder circuit is disabled.

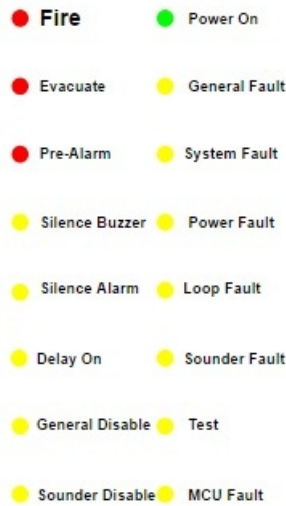- 🟡 General Fault: Indicates the presence of at least one panel fault condition. It will be turned off when all panel faults are restored.

- 🟡 System Fault: Indicates the presence of at least one loop device fault condition. It will be turned off with fire reset.

- 🟡 Power Fault: Indicates the presence of disconnection of main power terminals or battery terminals. It will be turned off when fault restored.

- 🟡 Loop Fault: Indicates the presence of at least one loop open circuit fault, short circuit fault or communication fault. It will be turned off when fault restored.

- 🟡 Sounder Fault: Indicates the presence of at least one onboard sounder circuit open circuit fault or short circuit fault. It will be turned off when fault restored.

- 🟡 Test: Indicates that panel is under test condition.

- 🟡 MCU Fault: Indicates the presence of panel processor unrecognized behavior.

● **Fire**   ● Power On

● Evacuate   ● General Fault

● Pre-Alarm   ● System Fault

● Silence Buzzer ● Power Fault

● Silence Alarm   ● Loop Fault

● Delay On   ● Sounder Fault

● General Disable ● Test

● Sounder Disable ● MCU Fault

- ●Zone 1…32: Each LED Indicates the presence of at least one fire condition in its zone ID.

Fire In Zone

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
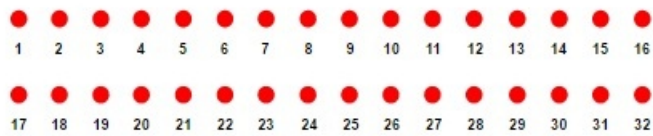
3.4.3. Buzzer

HST-HP201-2 contains a buzzer which sounds at any fire or fault condition. It can be silenced manually by pressing Silence Buzzer key at access level 1. It stops sounding automatically in case of fire reset or in case of all fault conditions have been restored.

4. Installation
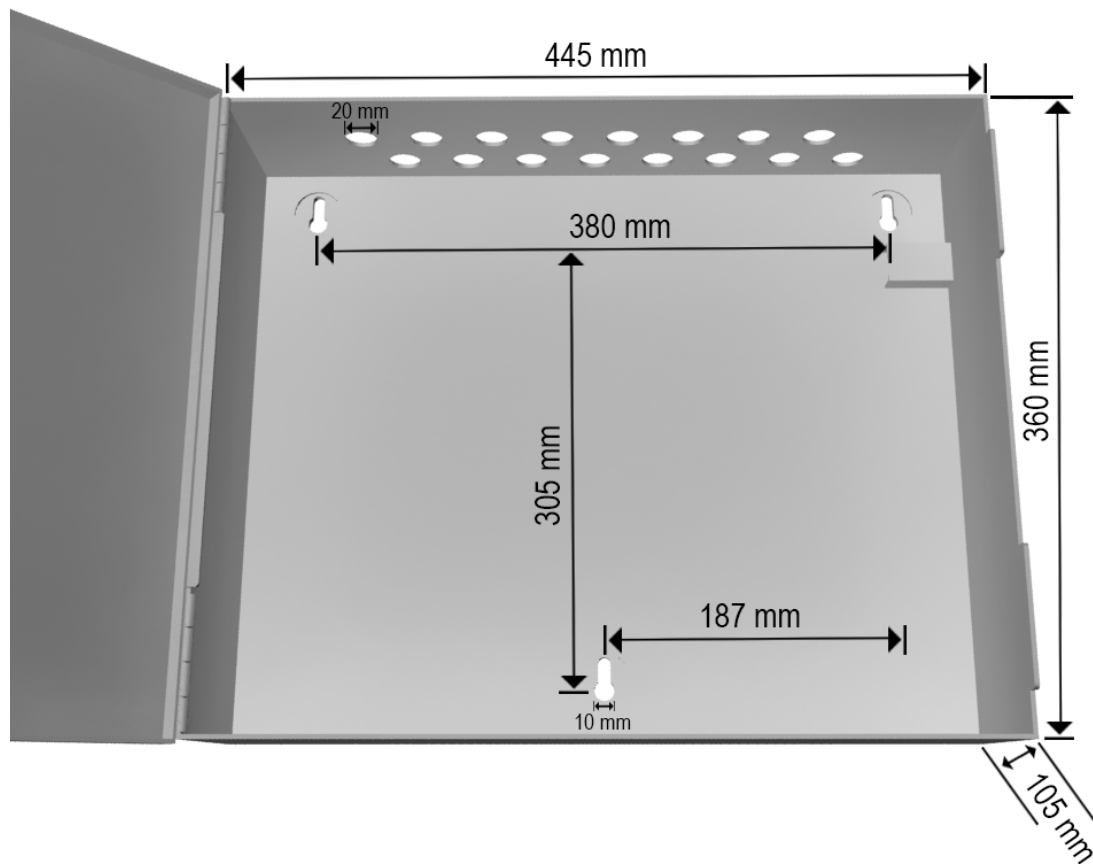
Before working with panel mounting, wrist strap must be used to discharge any static charges to the ground from human body to protect board electronic sensitive elements. Input power terminals and battery terminals must be completely disconnected.

As shown from panel case drawing, it contains 3 holes for mounting. Panel contains sufficient place to mount the case without removing the main board. If this is not possible for some cases, main board can be removed. First remove all connected cables at the upper side of the main board. Remove power socket at the right down side of the board. Remove the left side cable which connects the main board to the display board by opening the lock parts of the socket and unplug the cable. Then remove the 6 screws which mount the main board to the case. There is one at each side of the board and one at the top middle and one at the bottom center.

Mark and drill the holes and attach screw elements and tighten it. Clean drilling place from any dust then install the main board and fix it with the 6 screws. Install all removed cables.

At the top side of the case, there are 16 X 20mm holes used for insertion of different cables to the panel. Remove only black plastic parts which close the needed holes.

5. Panel operation

HST-HP201-2 will not power on if backup batteries is the only power source connected. Panel must be powered on with its main power.

After power on, power LED is on and LCD displays HST logo while panel is initializing its hardware modules and it's saved data.

After initialization, panel displays loops scanning window. Panel scans loops one by one to identify all connected devices to this loop. If this is the first time to power on the panel, it will save directly what is identified. If this is not the first time to power on the panel, it will compare what is identified to what was previously saved in the panel. If mismatch is detected, panel will display all errors after scan phase is finished. If there is any error in communication with the loop, loop scan will be aborted and loop communication fault will be trigged after scanning phase is finished. If one loop is disabled, panel will skip scanning this loop. If all loops are disabled (which is not a normal behavior), panel will not scan any loop and general disabled LED will be on. By default, loop 1 is enabled and loop 2 is disabled.
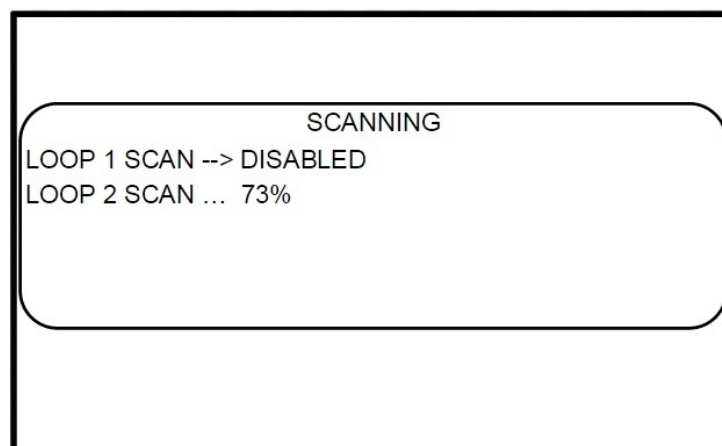
After scanning, panel displays its main window. Date & time are displayed at the upper left part of the LCD. Logo and panel model are displayed at the upper right part of the LCD. Panel name and current status are displayed down to date and time information.

First fire and other fire, fault and manual evacuate information are displayed at middle of LCD. Last row in the LCD is used to display some icons which identify some information about panel current status.

LCD backlight is on by default. In case of no updates on LCD (except date & time), LCD backlight will be turned off after 10 minutes. LCD backlight can be turned on again with any change on LCD.

```
FRI 01-May-2015
01:20 PM                      HST
MAIN PANEL 1
STATUS: NORMAL              <HST-HP201-2>
FIRST
FIRE



FIRE FAULT EVACUATE
```
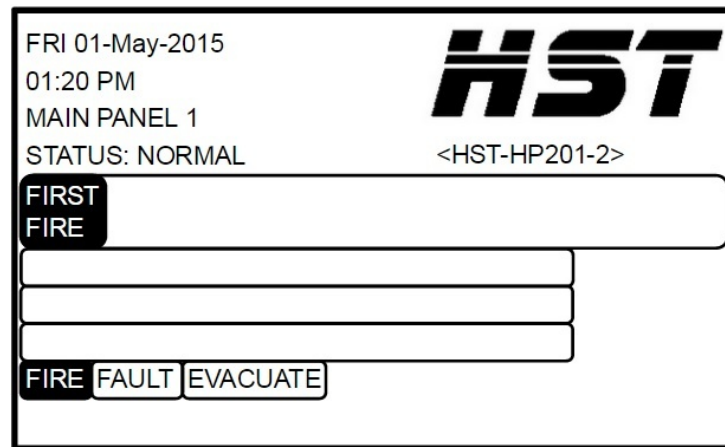
5.1. Access levels

HST-HP201-2 has 3 access levels for different panel operations from panel users.

Access level 1 is the least secure level and has no protected password. It is the default level after power on and it has the ability to see different fire and fault information at the main screen and it can silence panel buzzer.

Access level 2 is the medium secure level and it is protected by password. Added to access level 1 permissions, at fire or fault conditions, it has the ability to silence the trigged alarms, re-sound the silenced alarm, and perform fire reset. Also it can trigger Evacuate key on the panel.

Access level 2 users can also access panel programming & configuration menus through Menu key on the panel. Users can only see all panel configuration data but they cannot make any changes to it.

Access level 3 is the highest secure level and is protected by password. Added to access level 1 & 2 permissions, it has the ability to change any panel configuration data and it has access to 4th sub menu which contains advanced panel operations.

To make changes to any panel configuration data, with level 3 access, enable key must be turned on to proceed saving any changes.

Access level 2 & 3 passwords and enable key must only be known and kept to the identified persons who have the permissions to perform different panel functions.

```
FRI 01-May-2015
01:20 PM
MAIN PANEL 1
STATUS: NORMAL              <HST-HP201-2>
FIRST
FIRE
              ACCESS LEVEL 2
              PASSWORD: ****

FIRE FAULT EVACUATE
```



```
FRI 01-May-2015
01:20 PM


              MAIN MENU

1.SYSTE        ACCESS LEVEL 3      D CONFIG.
3.LOOPS        PASSWORD: ****      D CONFIG.


L V
L 2
```
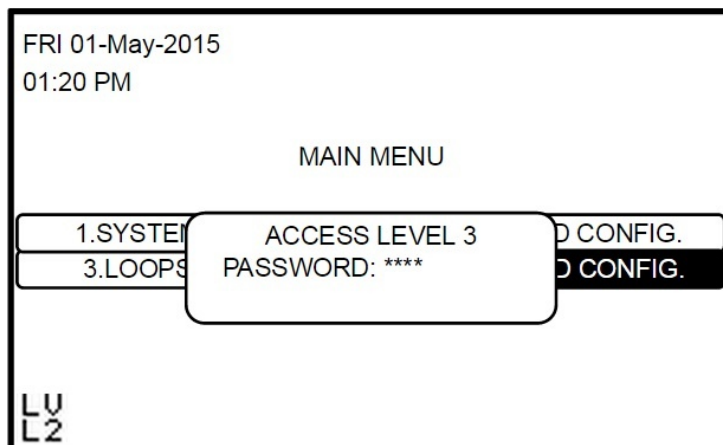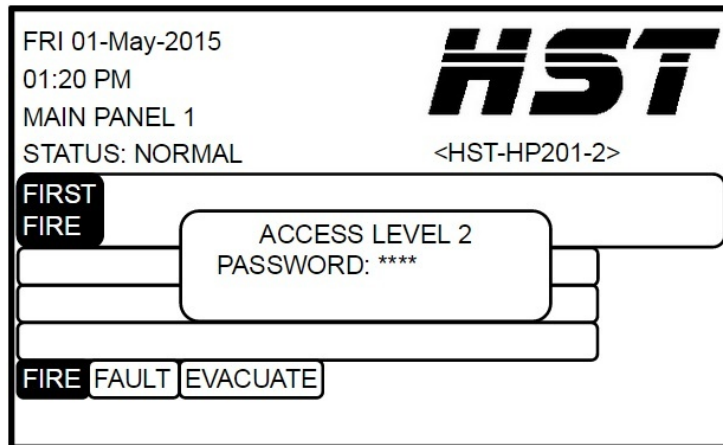
5.2. Panel states

HST-HP201-2 has 7 different panel states.
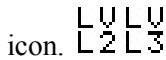
- Init & Stop state: This panel mode is valid at power up while panel is intializing its modules and when panel is doing restore for all its default data. Any fire or fault conditions will happen in this phase will be ingnored by the panel.

- Scan state: This panel mode is valid at scaning phase after power up or when loops auto learn is requested from programming menus. Only loops fault and loop devices fault will be triggered after scanning is finsihed. Any other fire or fault conditions will be ignored.

- PC state: This panel mode is valid when computer software starts to update part or all of panel configuration data. Panel will not enter PC mode if it has one or more fire conditions. If panel has one or more fault conditions, it will do automatically fire reset. Any new fire or fault conditions will be ignored by the panel. LCD displays PC mode window. Panel will restart itself after computer software finishes its update within the panel.

```
FRI 01-May-2015
01:20 PM


                        PC MODE


CONFIGURATION UPDATE 070%
████████████████████████████████████░░░░░░░
```
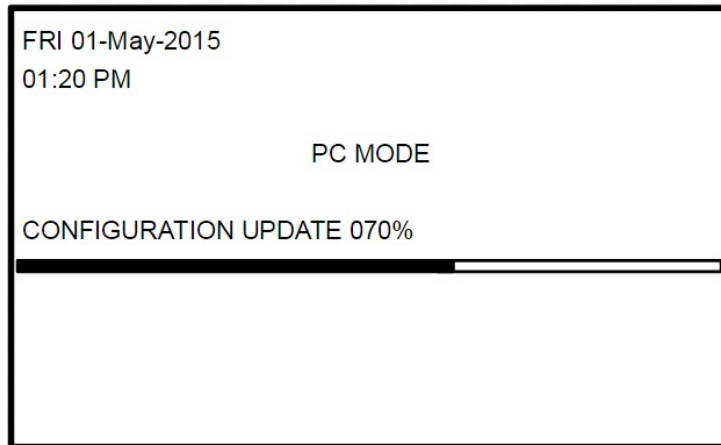
- Normal state: This panel mode is valid as long as there is no fire or fault conditions within the panel. In this mode, panel can detect any fire, manual evacuate or fault conditions for all monitired modules. LCD will write normal state message down to date and time fields. Normal state is entered again after fire reset opearation..

- Fire state: This panel mode is valid when any fire condition is detected. Panel will change its LCD staus message to fire status down to date and time fields.

- Evacuate state: This panel mode is valid when any manual evacuate condition is detected. Panel will change its LCD staus message to evacuate status only if there is no fire conditions in the panel. Fire conditions always override any fault or manual evacuate conditions.

- Fault state: This panel mode is valid when any fault is detected withing the panel. Detected faults are: Loop faults, Loop devices faults, Power faults and onboard sounder faults. Panel will change its LCD staus message to fault status only if there is no fire or manual evacuate conditions in the panel. Fire conditions always override any fault or manual evacuate conditions. Evacuate conditions always override any fault conditions.

5.3. LCD icons

HST-HP201-2 has 8 different LCD icons used to show some information about panel operation. It is ordered from left to right of the screen.

- Access level: It shows current panel access level. Access level 1 does not display any icon. L2 L3

- Enable Key: Icon is displayed when Enable key is on.

- Battery disconnected: Icon is displayed when backup batteries are not connected to the panel.

- Main power disconnected: Icon is displayed when panel is powered from backup batteries. It is displayed on the same place of battery disconnected Icon (3rd icon).

- Loop fault: Icon is displayed when any loop fault is deteced (open circuit, short circuit, communication fault).

- Sounder fault: Icon is displayed when any onboard sounder fault is deteced (open circuit, short circuit).

- Silence buzzer: Icon is displayed when panel buzzer is manually silenced.

- Silence alarm: Icon is displayes when active alarms are manually silenced.

5.4. Working with main screen

HST-HP201-2 main screen is the default LCD screen that shows all fire & fault related conditions information. Current system status is displayed at the left. By default, status is normal which means that no fire or fault conditions are present at the panel.

First fire condition that panel detects after normal state is displayed at LCD and will not be removed until fire reset is triggered. Its information is displayed on 2 lines. First line contains name of the module which initiates the fire condition and its type. Second line contains ID of the module, its loop in case of loop module (for onboard inputs, there is no loop), its corresponding zone and date and time of initiation.

```
FRI 01-May-2015              _____
01:20 PM                     HST
MAIN PANEL 1
STATUS: FIRE                 <HST-HP201-2>
┌──────────┐
│ FIRST    │ NODE 009          <SMOKE DET> 001
│ FIRE     │ ID: 009  L: 2  Z: 001    13:20  01 / 05 / 2015
└──────────┘
┌─────────────────────────────────────┐
│                                     │
│                                     │  001 / 001
│                                     │
└─────────────────────────────────────┘
┌FIRE┐FAULT│EVACUATE│
```
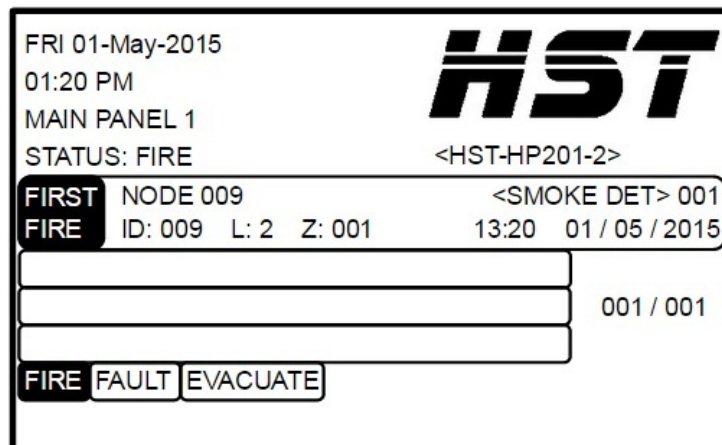
Note that after loop scan, default name which is given to loop device is 'NODE XXX'. XXX represents the ID of the device. So 'NODE 009' is the name of the loop device not it's ID. Name can be changed using programming menus.

After first fire field, there are 3 lines to show different fire, fault or manual evacuate conditions based on which tab is highlighted at the bottom. You can switch between different tabs with left and right arrows. If one list contains more than 3 conditions, you can show the remaining records with up and down arrows.

List is ordered from the newest condition till the oldest condition. When new condition is detected, its list will be updated and displayed at the top of its tab. If its tab is not the last selected one, it will be selected automatically. For example, if new fire is detected and the last selected tab is fault tab, fire tab will be selected and new fire will be displayed at the top. First

fire is not repeated in the fire tab window. For loop devices disconnected faults, if fault is restored, its record will be removed from fault tab menu.

```
FRI 01-May-2015                   HST
01:20 PM
MAIN PANEL 1
STATUS: FIRE              <HST-HP201-2>
┌──────┐
│FIRST │ NODE 009              <SMOKE DET> 005
│FIRE  │ ID: 009  L: 2  Z: 001   13:20  01 / 05 / 2015
├──────┴────────────────────────────┐
│ FIRE        @ NODE 013      001    │
├────────────────────────────────┬──┘
│ FIRE        @ NODE 102      002 │  005 / 005
├────────────────────────────────┤
│ FIRE        @ NODE 085      003 │     ▼
└────────────────────────────────┘
┌────┐┌─────┐┌────────┐
│FIRE││FAULT││EVACUATE│
└────┘└─────┘└────────┘
```

```
FRI 01-May-2015                   HST
01:20 PM
MAIN PANEL 1
STATUS: FAULT             <HST-HP201-2>
┌──────┐
│FIRST │
│FIRE  │
├──────┴────────────────────────────┐
│ FAULT       @ NODE 087      001    │
├────────────────────────────────┬──┘
│ FAULT       @ NODE 030      002 │  006 / 006
├────────────────────────────────┤
│ FAULT       @ NODE 100      003 │     ▼
└────────────────────────────────┘
┌────┐┌─────┐┌────────┐
│FIRE││FAULT││EVACUATE│
└────┘└─────┘└────────┘
```

```
FRI 01-May-2015                   HST
01:20 PM
MAIN PANEL 1
STATUS: EVACUATE          <HST-HP201-2>
┌──────┐
│FIRST │
│FIRE  │
├──────┴────────────────────────────┐
│ EVACUATE  @ BOARD EVACUATE KEY  001│
├────────────────────────────────┬──┘
│ EVACUATE  @ NODE 051        002 │  002 / 002
├────────────────────────────────┤
│                                 │
└────────────────────────────────┘
┌────┐┌─────┐┌────────┐
│FIRE││FAULT││EVACUATE│
└────┘└─────┘└────────┘
```

There are 2 numbers at the right of the screen displayed when there are active conditions. The left number is number of conditions in the current selected tab (fire, fault or evacuate). The right number is total number of fire, fault and evacuate condition in the whole panel. For example if the panel detects 7 fire conditions and 9 fault conditions and 2 manual evacuate conditions, So when fire tab is selected the numbers will be 007/018. When fault tab is selected the numbers will be 009/018. When evacuate tab is selected then number will be 002/018.

```
FRI 01-May-2015
01:20 PM
MAIN PANEL 1
STATUS: FIRE                    <HST-HP201-2>
FIRST  NODE 009              <SMOKE DET> 016
FIRE   ID: 009  L: 2  Z: 001   13:20  01 / 05 / 2015
FAULT        @ NODE 087      010          ▲
FAULT        @ NODE 030      011    009 / 018
FAULT        @ NODE 100      014          ▼
FIRE FAULT EVACUATE
```
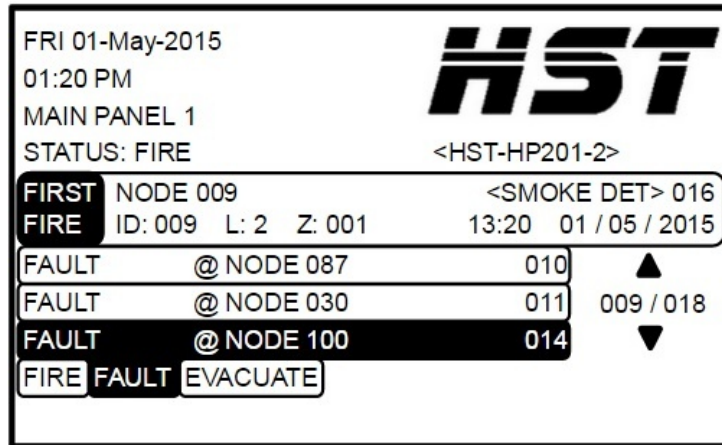
List menu contains only type of the condition and name of the module. To show all information of the selected condition, press ENTER key. Detailed information is displayed. First line contains type of the condition (fire, fault or evacuate), ID of the condition and total number of conditions with same type. Second line contains name of the module and its type. Third line contains ID of the module, its loop (in case of loop devices), and its zone. Fourth line contains date and time of initiation. For loop devices fault, first line will contain also type of fault.

```
FRI 01-May-2015
01:20 PM
MAIN PANEL 1
STATUS: FIRE                    <HST-HP201-2>
FIRE                              001 / 003
NODE 009                        <SMOKE DET>
ID: 009   LOOP: 2   ZONE: 002
13:20       01/05/2015
```

```
FRI 01-May-2015
01:20 PM
MAIN PANEL 1
STATUS: FAULT                   <HST-HP201-2>
FAULT      <NODE DISCONNECTED>    001 / 003
NODE 009                        <SMOKE DET>
ID: 009   LOOP: 2   ZONE: -
13:20       01/05/2015
```
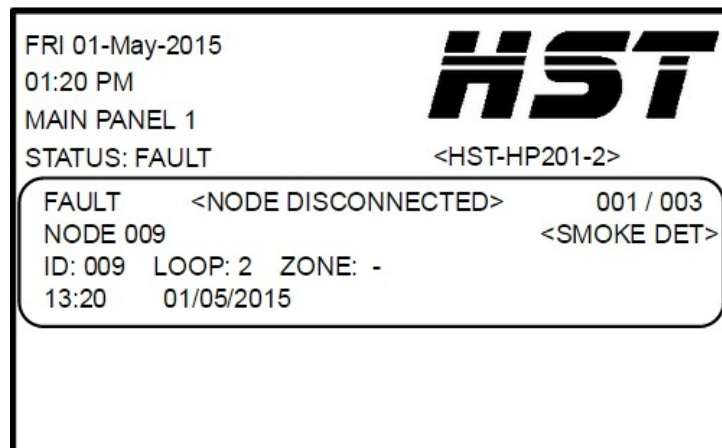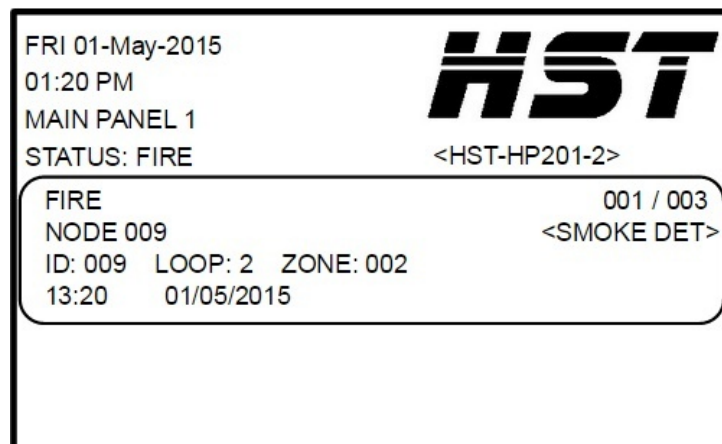
Use up and down arrow keys to go to details of the next condition of the same type. Press EXIT key to go to main screen again.

Power faults, loop faults and onboard sounder faults have no records in fault tab. It is only displayed as icons at the last row of the LCD. Icon is removed automatically when fault is restored.
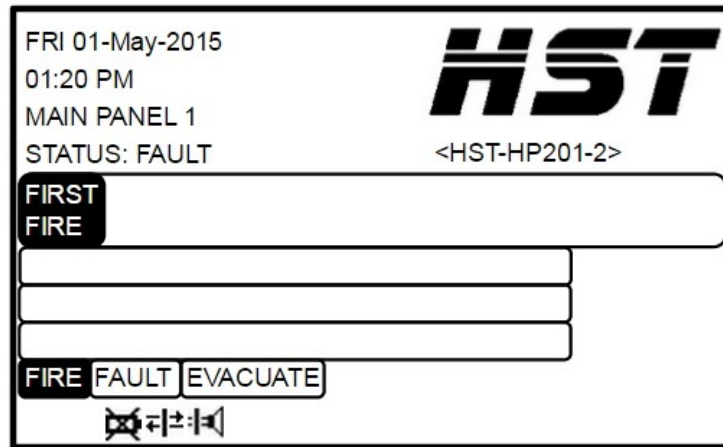
For loop faults and sounder faults, LCD icon will not contain which loop or sounder has the fault. To know which ID, go to sounders config sub menu inside on board config menu or loops config sub menu inside loops config menu. ! Icon is displayed in front of faulty sounder or loop.
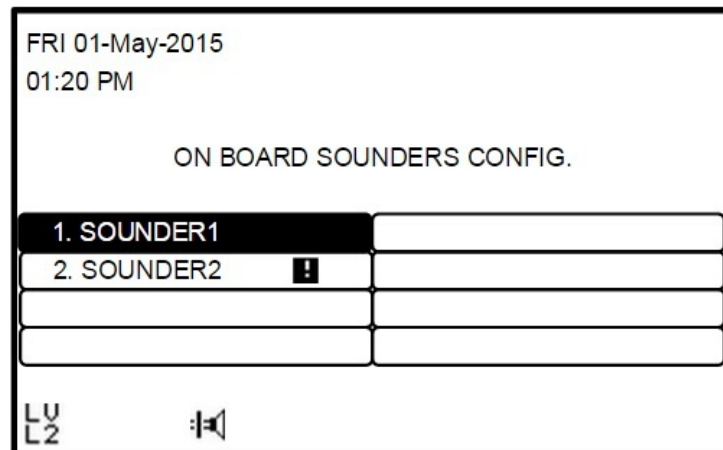
Type of fault (open circuit, short circuit or communication fault for loops) is only known from event status sub menu inside system config menu.
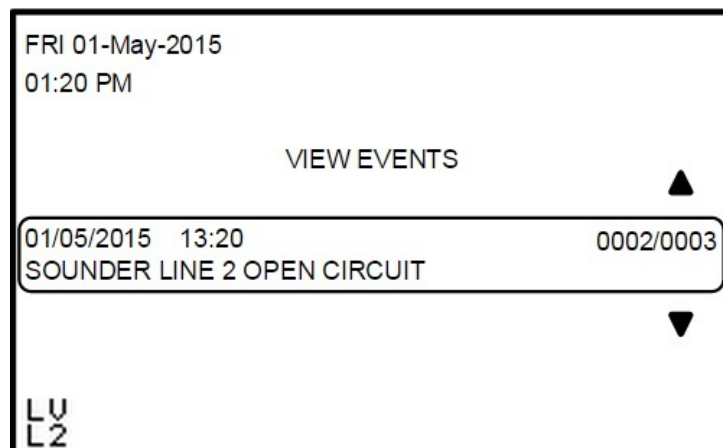
For any fire or fault condition, panel buzzer will be active continuously. You can silence the buzzer by pressing Silence Buzzer key at access level 1. Silence buzzer LED activates and silence buzzer icon appears on LCD. Buzzer will trigger again with any new fire or fault condition. Silence buzzer LED deactivates and silence buzzer icon disappears from LCD. Buzzer stops with fire reset or when all panel faults are restored.

For any fire condition, on board panel relays, on board panel sounders and loop output device should activate by default (based on its configuration and panel configuration). You can silence activated outputs (based on its configuration) by pressing Silence Alarm key at access level 2. Silence alarm LED activates and silence alarm icon appears on LCD. Silenced alarms will trigger again with any new fire condition (based on panel configuration). Silence alarm LED deactivates and silence alarm icon disappears from LCD. Alarms stop with fire reset.

For any onboard output module and loop output module its configuration activates with fault actions, it will not be silenced by Silence Alarm key. It stops only with fire reset.

You can re-sound activated alarms by pressing Resound Alarm key at access level 2. Silenced alarms will trigger again with any new fire conditions (based on panel configuration). Silence alarm LED deactivates and silence alarm icon disappears from LCD.

```
FRI 01-May-2015
01:20 PM                      HST
MAIN PANEL 1
STATUS: EVACUATE              <HST-HP201-2>

FIRST
FIRE

EVACUATE  @ BOARD EVACUATE KEY  001

                                         001 / 002

 FIRE  FAULT  EVACUATE
```
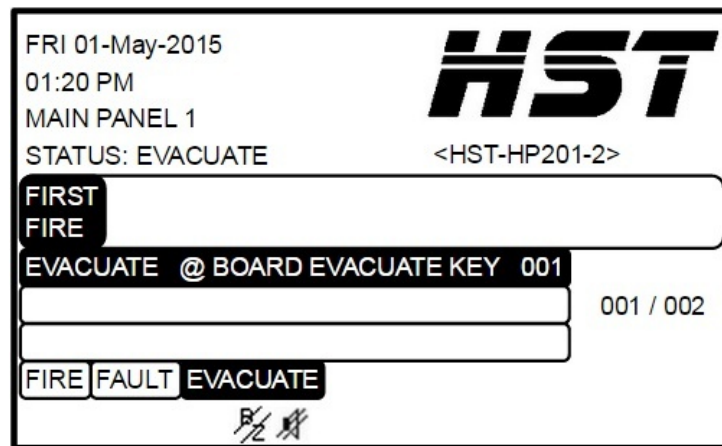
Fire reset can be done by pressing Reset key at access level 2. Buzzer and all alarms stop and all faults are cleared.

You can trigger manual evacuate from board by pressing Evacuate key at access level 2. On board evacuate key has fixed name 'BOARD EVACUATE KEY' and fixed key ID 7.

When panel is at access level 2 or access level 3, in case of no activity on the keypad for 30 seconds, panel will automatically switch to access level 1. Access level icon on LCD will be cleared.

6. Programming

HST-HP201-2 can be programmed from its onboard keypad or from PC via its RS232 interface. All features can be done from onboard keypad.

6.1. Onboard programming

To enter main configuration menu, press MENU key. If panel is at level 1 access, enter level 2 password from the numeric keypad and press ENTER key. If panel is at level 2 access or level 3 access, pressing MENU key is enough to go to main configuration menu.

Pressing EXIT key will go to the main window with the last access level used. Within any internal menu, pressing EXIT key will go up to the parent level of the currently working menu.

```
FRI 01-May-2015
01:20 PM


                    MAIN MENU


    1.SYSTEM CONFIG.      2.ON BOARD CONFIG.
    3.LOOPS CONFIG.       4.ADVANCED CONFIG.




 LV
 L2
```
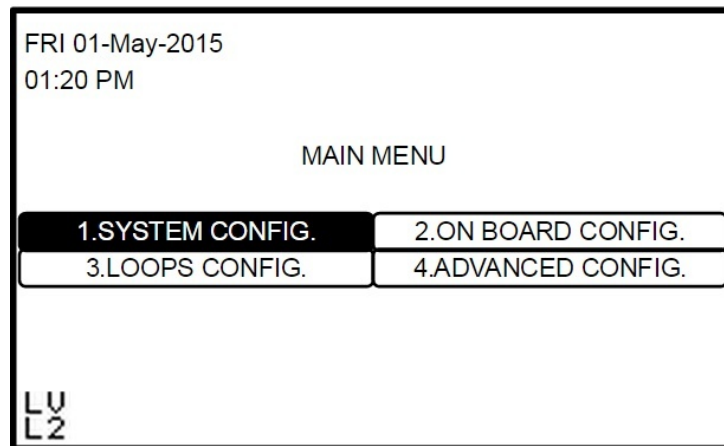
Main configuration menu consists of 4 sub menus. Each one has several configuration items. To go to any of sub menus, use arrow keys to highlight the needed sub menu and press ENTER or press directly the sub menu number from the numeric keypad.

- System configuration: This menu is used to configure and display general functions of the panel.

- On board configuration: This menu is used to configure and display all the onboard circuits on the panel

- Loops configuration: This menu is used to configure and display all loop and devices relates settings. Also it is used to configure and display all zones related settings.

- Advanced configuration: This menu is used to trigger some advanced commands to the panel. Accessing this menu requires entering level 3 access password. Working with this menu items must be very careful and must be restricted to highly knowledgeable persons.

Within panel configuration menus, if no key is pressed for 30 seconds, panel will exit all the configuration menus and will go to main window with level 1 access.

6.1.1. Sub menu items

6.1.1.1.   Menu1: System configuration

This menus consists of 7 menu items

```
FRI 01-May-2015
01:20 PM


                    SYSTEM CONFIG.


        1.SET DATE          5.GENERAL CONFIG.
        2.SET TIME          6.EVENTS STATUS
    3.LEVEL 2 PASSWORD      7.VIEW EVENTS
        4.PANEL NAME

LV
L2
```

1. Set date

To select this item use arrow keys to highlight it and press ENTER key or press 1 key from numeric keypad.

This menu is used to update panel date. Enter new date using numeric keypad with format DD/MM/YY. Digits [20] will be entered automatically at the beginning of the year field. You can delete the last number pressed using left arrow key. Press ENTER key to save the new date.

Panel date is preserved within the panel in case of onboard coin battery is mounted in its place in the main board even if the main power supply terminals and the backup batteries are removed. Panel date will be lost if coin battery is removed and will return to the initial panel date Monday 01-Jan-2007.

```
FRI 01-May-2015
01:20 PM


                       SET DATE


 NEW DATE(DD/MM/YY):
 01 / 05 / 2015



LV
L2
```

2. Set time

To select this item use arrow keys to highlight it and press ENTER key or press 2 key from numeric keypad.

This menu is used to update panel time. Enter new time using numeric keypad with format HH:MM. Time is entered with 24 hours format but will be displayed on the main window with 12 hours format. You can delete the last number pressed using left arrow key. Press ENTER key to save the new time.

Panel time is preserved within the panel in case of onboard coin battery is mounted in its place in the main board even if the main power supply terminals and the backup batteries are removed. Panel time will be lost if coin battery is removed and will return to the initial panel time 12:00 AM.

```
┌─────────────────────────────────────────┐
│ FRI 01-May-2015                          │
│ 01:20 PM                                 │
│                                          │
│                  SET TIME                │
│                                          │
│ ╭──────────────────────────────────────╮│
│ │NEW TIME(HH/MM):                      ││
│ │13 : 20                               ││
│ ╰──────────────────────────────────────╯│
│                                          │
│                                          │
│                                          │
│ L U                                      │
│ L 2                                      │
└─────────────────────────────────────────┘
```

3. Level 2 password

To select this item use arrow keys to highlight it and press ENTER key or press 3 key from numeric keypad.

This menu is used to change level 2 access password. Enter new 4 digits password. Password must be entered twice for configuration. After entering 4th digit of the password enter the same password again. It will be written on a separate line on the display. Character [*] will be displayed on the screen for each digit. To save the new level 2 password, enable key must be turned on. Press ENTER key. If panel is at level 3 access state, new level 2 password will be saved directly. If panel is at level 1 or level 2 access states, panel will display level 3 access password window. Enter the 4 level 3 password digits and press ENTER key.

```
┌─────────────────────────────────────────┐
│ FRI 01-May-2015                          │
│ 01:20 PM                                 │
│                                          │
│             NEW LEVEL 2 PASSWORD         │
│                                          │
│ ╭──────────────────────────────────────╮│
│ │PASSWORD: ****                        ││
│ │RE-TYPE :   ****                      ││
│ ╰──────────────────────────────────────╯│
│                                          │
│                                          │
│                                          │
│ L U                                      │
│ L 2                                      │
└─────────────────────────────────────────┘
```

4. Panel name

To select this item use arrow keys to highlight it and press ENTER key or press 4 key from numeric keypad.

This menu is used to change panel name which is displayed at the main window. Current panel name will be displayed on the screen. Press 0 key to show on screen keyboard. Current Panel name will be removed from the screen. Use arrow keys to move between letters. Press ENTER key to select the highlighted letter. It will be entered at the panel name field. Use directly the numeric keypad to enter numbers within the panel name. Select the left arrow symbol from the one screen keyboard to delete the last entered letter. Select [OK] symbol from the on screen keyboard to close it. Press EXIT key to close the on screen keyboard and return to the current panel name. Maximum characters for panel name are 16 characters. To save the new panel name, enable key must be turned on. Press ENTER key. If panel is at level 3 access state, new panel name will be saved directly. If panel is at level 1 or level 2 access states, panel will display level 3 access password window. Enter the 4 level 3 password digits and press ENTER key.

```
FRI 01-May-2015
01:20 PM


                PANEL NAME

PANEL NAME: MAIN PANEL 1


        Q W E R T Y U I O P
        A S D F G H J K L _ ←
        Z X C V B N M   ( ) OK
LV
L2
```
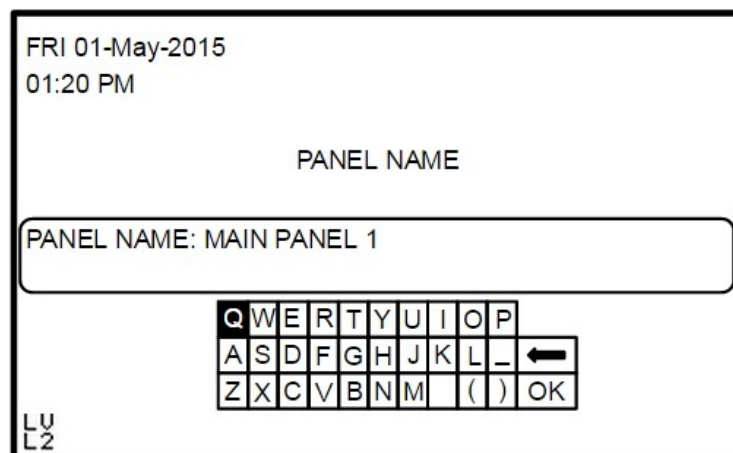
5. General configuration

To select this item use arrow keys to highlight it and press ENTER key or press 5 key from numeric keypad.

This menu is used to change some generic fire alarm related configurations. For each configuration item, if [X] symbol is displayed, this means that the function is active. If [X] symbol is not displayed, this means that the function is not active. To change one configuration item, use arrow keys to highlight it and press 0 key to change its state. Pressing 0 key will toggle [X] symbol in front of highlighted configuration item.

- Resound on 2nd fire in same zone: When panel is in active fire state and alarm is silenced. If selected, any new fire from same active zone will trigger the silenced alarms. If not selected, any new fire from same active zone will not trigger the silenced alarms.

- Bypass output delay on 2nd fire: When panel is in active fire state and output delay is active for any output devices. If selected, any new fire will cancel the remaining delayed time and will trigger the delayed output devices. If not selected, any new fire will keep the delayed output devices off till the delayed time expires.

To save the new configuration items states, enable key must be turned on. Press ENTER key. If panel is at level 3 access state, new configuration items states will be saved directly. If

panel is at level 1 or level 2 access states, panel will display level 3 access password window. Enter the 4 level 3 password digits and press ENTER key.

```
FRI 01-May-2015
01:20 PM


              GENERAL CONFIG.

 RESOUND ON 2ND FIRE IN SAME ZONE        [ ]
 BYPASS OUTPUT DELAY ON 2ND FIRE         [ ]




 L V
 L 2
```

6. Events status

To select this item use arrow keys to highlight it and press ENTER key or press 6 key from numeric keypad.

This menu is used to display information about the memory used to store the different panel log events. First line displays the total number of records the panel can store. Second line displays the current used records from memory. Third line displays the total number of free records.

```
FRI 01-May-2015
01:20 PM


              EVENTS STATUS


 TOTAL CAPACITY: 4000 EVENTS
 USED EVENTS:    0000 EVENTS
 FREE EVENTS:    4000 EVENTS



 L V
 L 2
```

7. View events

To select this item use arrow keys to highlight it and press ENTER key or press 7 key from numeric keypad.

This menu is used to display stored panel log events. Log events are displayed from the newest one to the oldest one. Use down and up arrow keys to show next and previous log event.

```
FRI 01-May-2015
01:20 PM

              VIEW EVENTS
                                              ▲

01/05/2015   13:20                      0002/0003
EVACUATE @ BOARD EVACUATE KEY

                                              ▼


L V
L 2
```
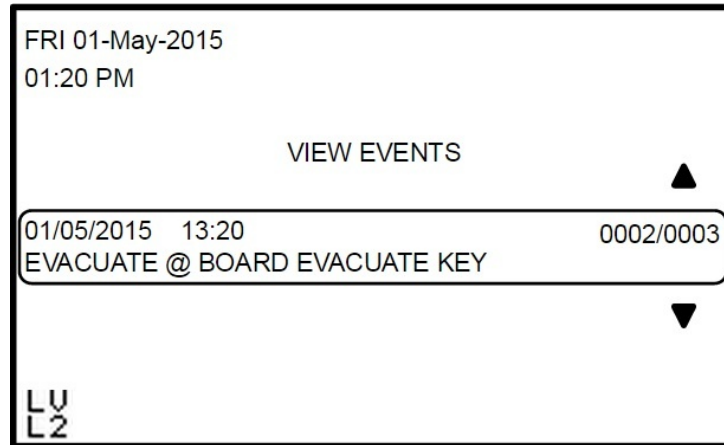
6.1.1.2.   Menu2: On board configuration

This menus consists of 5 menu items

```
FRI 01-May-2015
01:20 PM

              ON BOARD CONFIG.


 1.RELAYS CONFIG.          5.KEYS CONFIG.
 2.SNDRS CONFIG.
 3.AUXPWRS CONFIG.
 4.INPUTS CONFIG.

L V
L 2
```

1. Relays configuration

To select this item use arrow keys to highlight it and press ENTER key or press 1 key from numeric keypad.

This menu is used to configure all panel onboard relays. You can select any relay using arrow key and press ENTER key on the highlighted key or press the key number directly from numeric keypad. All relays have the same configuration. Only default settings may be different for some relays.

```
┌─────────────────────────────────────────┐
│ FRI 01-May-2015                          │
│ 01:20 PM                                 │
│                                          │
│          ON BOARD RELAYS CONFIG.         │
│                                          │
│   ┌──────────────────────┐ ┌──────────┐ │
│   │■■■ 1.RELAY1 ■■■■■■■■■■│ │          │ │
│   ├──────────────────────┤ ├──────────┤ │
│   │     2.RELAY2         │ │          │ │
│   ├──────────────────────┤ ├──────────┤ │
│   │     3.RELAY3     ⊠   │ │          │ │
│   ├──────────────────────┤ ├──────────┤ │
│   │                      │ │          │ │
│   └──────────────────────┘ └──────────┘ │
│  L V                                     │
│  L 2                                     │
└─────────────────────────────────────────┘
```

X Icon in front of a relay means that this relay is in disabled state.

After selecting one relay, relay configuration window appears with its last saved parameter value.

First configuration is relay name. It is only used for relay identification and will not be shown on the display. To change it, highlight it will arrow keys and press 0 key. On screen keyboard will be shown at the top right corner of the display. Working with it is exactly same as described in changing panel name section.

Second configuration is which events will trigger the relay. There are 4 fixed events, 'Fire', 'Fault, 'Evacuate' and 'Pre Alarm'. To make the relay triggers or does not trig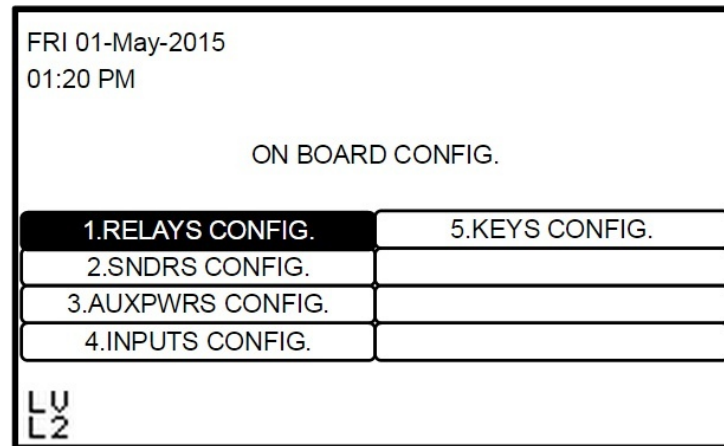ger on one event, highlight it with arrow key and press 0 key. If X symbol appears in front of the event, this means that the relay will trigger on this event. If X symbol does not appear in front of the event, this means that the relay will not trigger on this event. For the relays and all outputs, selection of more than one event is accepted.

Third configuration is the silence state of the relay. This means that if the relay will return its contacts to NC State when Silence Alarm key is pressed or will keep its contacts to NO state even if Silence Alarm key is pressed. To change it, highlight it with arrow keys and press 0 key. If X symbol appears in front of it, this means that the relay will stop with silence alarm state. If X symbol does not appear in front of the event, this means that the relay will not stop with silence alarm state.

Fourth configuration is disabled state of the relay. This means that if the relay will be function or not regardless of the current panel state. To change it, highlight it with arrow keys and press 0 key. If X symbol appears in front of it, this means that the relay will be disabled and not working. If X symbol does not appear in front of it, this means that the relay will be working normally. If disabled is active, after saving, general disabled LED will be on.

Fifth configuration is zone number. Zone for on board relays is fixed to zone 0 and cannot be changed.

Sixth configuration is delay value. It is used to postpone the relay trigger to a defined amount. The number represents number of half minutes of delay. For example, if value is 3, so the delay value is 1.5 minutes. If value is 12, so the delay value is 6 minutes. Minimum value is 0 which means that no delay for this relay and it will trigger directly when at least

one of its selected events is active. Maximum value is 14 which mean that maximum delay is 7 minutes. To change the delay value, highlight it with arrow keys and directly enter the new delay value. A new small window appears beside the last delay value. Press ENTER key after entering the new delay value. If value is accepted, it will be shown. If value is wrong, X symbol appears beside the wrong value. While entering the new delay value, press EXIT key to cancel entering a new delay value.

After finishing updates of configuration, enable key must be on to save the new values. Press ENTER key. If panel is at access level 3, new data will be saved directly. If panel is at access level 2, window appears to enter access level 3 password to proceed with saving.

```
FRI 01-May-2015
01:20 PM

              ON BOARD RELAYS CONFIG.
RELAY 1 NAME: FIRE RELAY
FIRE              [x] | EVACUATE           [x]
FAULT             [ ] | PRE-ALARM          [ ]
SILENCEABLE       [x] |
DISABLED          [ ] |
ZONE              000 | O/P DELAY          000
LV
L2
```

2. Sounders configuration

To select this item use arrow keys to highlight it and press ENTER key or press 2 key from numeric keypad.

This menu is used to configure all panel onboard sounder lines. You can select any sounder line using arrow key and press ENTER key on the highlighted key or press the key number directly from numeric keypad. All sounder lines have the same configuration. Only default settings may be different for some sounder lines.

```
FRI 01-May-2015
01:20 PM

              ON BOARD SOUNDERS CONFIG.


         1.SOUNDER1
         2.SOUNDER2      ⊠



LV
L2
```

X Icon in front of a sounder lines means that this sounder line is in disabled state.

After selecting one sounder line, sounder line configuration window appears with its last saved parameter value.

First configuration is sounder line name. It is only used for sounder line identification and will not be shown on the display. To change it, highlight it will arrow keys and press 0 key. On screen keyboard will be shown at the top right corner of the display. Working with it is exactly same as described in changing panel name section.

Second configuration is which events will activate the sounder line. There are 4 fixed events, 'Fire', 'Fault, 'Evacuate' and 'Pre Alarm'. To make the sounder line activates or does not activate on one event, highlight it with arrow key and press 0 key. If X symbol appears in front of the event, this means that the sounder line will activate on this event. If X symbol does not appear in front of the event, this means that the sounder line will not activate on this event. For the sounder lines and all outputs, selection of more than one event is accepted.

Third configuration is the silence state of the sounder line. This means that if the sounder line will deactivate when Silence Alarm key is pressed or will keep active even if Silence Alarm key is pressed. To change it, highlight it with arrow keys and press 0 key. If X symbol appears in front of it, this means that the sounder line will stop with silence alarm state. If X symbol does not appear in front of the event, this means that the sunder line will not stop with silence alarm state.

Fourth configuration is disabled state of the sounder line. This means that if the sounder line will be function or not regardless of the current panel state. To change it, highlight it with arrow keys and press 0 key. If X symbol appears in front of it, this means that the sounder line will be disabled and not working. If X symbol does not appear in front of it, this means that the sounder line will be working normally. If disabled is active, after saving, general disabled and sounder disabled LEDs will be on.

Fifth configuration is zone number. Zone for on board sounder lines is fixed to zone 0 and cannot be changed.

Sixth configuration is delay value. It is used to postpone the sounder line activation to a defined amount. The number represents number of half minutes of delay. For example, if value is 3, so the delay value is 1.5 minutes. If value is 12, so the delay value is 6 minutes. Minimum value is 0 which means that no delay for this sounder line and it will activate directly when at least one of its selected events is active. Maximum value is 14 which mean that maximum delay is 7 minutes. To change the delay value, highlight it with arrow keys and directly enter the new delay value. A new small window appears beside the last delay value. Press ENTER key after entering the new delay value. If value is accepted, it will be shown. If value is wrong, X symbol appears beside the wrong value. While entering the new delay value, press EXIT key to cancel entering a new delay value.

After finishing updates of configuration, enable key must be on to save the new values. Press ENTER key. If panel is at access level 3, new data will be saved directly. If panel is at access level 2, window appears to enter access level 3 password to proceed with saving.

```
FRI 01-May-2015
01:20 PM

            ON BOARD SOUNDERS CONFIG.
SOUNDER 1 NAME: SOUNDER 2
FIRE                [x] | EVACUATE            [x]
FAULT               [ ] | PRE-ALARM           [ ]
SILENCEABLE         [x] |
DISABLED            [ ] |
ZONE                000 | O/P DELAY           000
L U
L 2
```

3. Auxiliary power configuration

Programmable power outputs are not featured within this panel model.

4. Inputs configuration

To select this item use arrow keys to highlight it and press ENTER key or press 4 key from numeric keypad.

This menu is used to configure all panel onboard dry inputs. You can select any dry input using arrow key and press ENTER key on the highlighted key or press the key number directly from numeric keypad. All dry inputs have the same configuration. Only default settings may be different for some dry inputs.

```
FRI 01-May-2015
01:20 PM


            ON BOARD INPUTS CONFIG.


        1.INPUT1            |                  |
        2.INPUT2            |                  |
        3.INPUT3        ⊠   |                  |
                            |                  |
L U
L 2
```

X Icon in front of a dry input means that this dry input is in disabled state.

After selecting one dry input, dry inputs configuration window appears with its last saved parameter value.

First configuration is dry input name. It will be displayed on the main screen when this dry input activates. To change it, highlight it will arrow keys and press 0 key. On screen keyboard will be shown at the top right corner of the display. Working with it is exactly same as described in changing panel name section.

Second configuration is which event this dry input will trigger. There are 7 fixed events, 'Fire', 'Fault, 'Evacuate', 'Pre Alarm', 'Silence Alarm', 'Re-Sound Alarm' and 'Reset'. To select an event highlight the events field with the arrow keys and press 0 key to select one event. You can also select none value to make this dry input do nothing. Only one event can be selected for any input module. Dry inputs are latched when activated. Only fire reset action deactivates its effect. After fire reset, if dry input is still active, its event will trigger again.

Third configuration is disabled state of the dry input. It means that if the dry input will trigger its event when activated, or will do nothing whatever is activated or not. To change it, highlight it with arrow keys and press 0 key. If X symbol appears in front of it, this means that the dry input will be disabled and not working. If X symbol does not appear in front of it, this means that the dry input will be working normally. If disabled is active, after saving, general disabled LED will be on.

Fourth configuration is zone number. Zone for on board dry input is fixed to zone 0 and cannot be changed.

Fifth configuration is delay value. Delay value for inputs is fixed to 0 which mean that dry inputs will trigger immediately when activated.

After finishing updates of configuration, enable key must be on to save the new values. Press ENTER key. If panel is at access level 3, new data will be saved directly. If panel is at access level 2, window appears to enter access level 3 password to proceed with saving.

```
FRI 01-May-2015
01:20 PM

          ON BOARD INPUTS CONFIG.
INPUT 1 NAME: DC 1

ACTION: FIRE

DISABLED                [ ]
ZONE                    000  I/P DELAY              000
LV
L2
```

5. Keys configuration

To select this item use arrow keys to highlight it and press ENTER key or press 5 key from numeric keypad.

This menu is used to configure all panel onboard function keys. You can select any function key using arrow key and press ENTER key on the highlighted key or press the key number directly from numeric keypad. All function keys have the same configuration. Only default settings may be different for some function keys.

```
┌─────────────────────────────────────────────┐
│  FRI 01-May-2015                             │
│  01:20 PM                                    │
│                                              │
│            ON BOARD KEYS CONFIG.             │
│                                              │
│  ┌──────────────────────┬──────────────────┐│
│  │       1.KEY1         │                  ││
│  ├──────────────────────┼──────────────────┤│
│  │       2.KEY2      ⊠  │                  ││
│  ├──────────────────────┼──────────────────┤│
│  │                      │                  ││
│  ├──────────────────────┼──────────────────┤│
│  │                      │                  ││
│  └──────────────────────┴──────────────────┘│
│  L V                                         │
│  L 2                                         │
└─────────────────────────────────────────────┘
```

X Icon in front of a function key means that this function key is in disabled state.

After selecting one function key, function keys configuration window appears with its last saved parameter value.

First configuration is function key name. It will be displayed on the main screen when this function key is pressed. To change it, highlight it will arrow keys and press 0 key. On screen keyboard will be shown at the top right corner of the display. Working with it is exactly same as described in changing panel name section.

Second configuration is which event this function key will trigger. There are 7 fixed events, 'Fire', 'Fault, 'Evacuate', 'Pre Alarm', 'Silence Alarm', 'Re-Sound Alarm' and 'Reset'. To select an event highlight the events field with the arrow keys and press 0 key to select one event. You can also select none value to make this function key do nothing. Only one event can be selected for any input module. Function keys are latched when pressed. Only fire reset action deactivates its effect.

Third configuration is disabled state of the function key. It means that if the function key will trigger its event when pressed, or will do nothing whatever is pressed or not. To change it, highlight it with arrow keys and press 0 key. If X symbol appears in front of it, this means that the function key will be disabled and not working. If X symbol does not appear in front of it, this means that the function key will be working normally. If disabled is active, after saving, general disabled LED will be on.

Fourth configuration is zone number. Zone for on board function keys is fixed to zone 0 and cannot be changed.

Fifth configuration is delay value. Delay value for inputs is fixed to 0 which mean that function keys will trigger immediately when pressed.

After finishing updates of configuration, enable key must be on to save the new values. Press ENTER key. If panel is at access level 3, new data will be saved directly. If panel is at access level 2, window appears to enter access level 3 password to proceed with saving.

```
FRI 01-May-2015
01:20 PM

              ON BOARD KEYS CONFIG.
KEY 1 NAME: KEY 1

ACTION: EVACUATE

DISABLED              [ ]
ZONE              000  I/P DELAY          000
LV
L2
```

6.1.1.3.   Menu3: Loops configuration

This menus consists of 6 menu items

```
FRI 01-May-2015
01:20 PM

                LOOPS CONFIG.

      1.LOOPS STATUS      5.DISABLED NODES
      2.LOOPS CONFIG.     6.DISABLED ZONES
      3.NODES CONFIG.
      4.ZONES CONFIG.

LV
L2
```

1. Loops status

To select this item use arrow keys to highlight it and press ENTER key or press 1 key from numeric keypad.

This menu is used to display information about loops status and number of devices connected to it. First line displays total number of connected devices for all loops then total number of inputs devices for all loops (detectors, call point, …) then total number of output devices for all loops (output modules, loop sounders, …).

After that loops are displayed line by line. Same information for devices is displayed but for each loop only.

At the end of each loop line, if there is ! Symbol, it means that this loop has at least one loop fault. If there is X symbol, it means that this loop is disabled and not working.

You can exit this menu to the previous menu by pressing ENTER or EXIT key.

```
FRI 01-May-2015
01:20 PM

                    LOOPS INFORMATION
      NODES: 485      ,    I/Ps: 446      ,    O/Ps: 39
      LOOP1: 248      ,    I/Ps: 224      ,    O/Ps: 24
      LOOP2: 237      ,    I/Ps: 222      ,    O/Ps: 15 ▉




  L V
  L 2
```

2. Loops configuration

To select this item use arrow keys to highlight it and press ENTER key or press 2 key from numeric keypad.

This menu is used to configure all panel onboard loops. You can select any loop using arrow key and press ENTER key on the highlighted key or press the key number directly from numeric keypad. All loops have the same configuration. Only default settings may be different for some loops.

```
FRI 01-May-2015
01:20 PM

                 ON BOARD LOOPS CONFIG.


   ┌───────────────────────┐┌───────────────────────┐
   │       1.LOOP1         ││                       │
   ├───────────────────────┤├───────────────────────┤
   │       2.LOOP2       ☒ ││                       │
   ├───────────────────────┤├───────────────────────┤
   │                       ││                       │
   ├───────────────────────┤├───────────────────────┤
   │                       ││                       │
   └───────────────────────┘└───────────────────────┘
  L V
  L 2
```

X Icon in front of a loop means that this loop is in disabled state.

After selecting one loop, loop configuration window appears with its last saved parameter value.

First configuration is loop name. It is only used for loop identification and will not be shown on the display. To change it, highlight it will arrow keys and press 0 key. On screen keyboard will be shown at the top right corner of the display. Working with it is exactly same as described in changing panel name section.

Second configuration is disabled state of the loop. When loop is disabled, all its saved devices will be lost. When loop is enabled again, its default devices are zero. Auto learn must be done to define all connected devices. To change disabled state, highlight it with arrow keys and press 0 key. If X symbol appears in front of it, this means that loop is disabled. If X symbol does not appear in front of it, this means that loop is enabled. If all loops are disabled,

after saving, general disabled LED will be on. After saving, if loop status is changed from disabled to enabled. It will still be temporarily not working till auto learn is done. If loop status is changed from enabled to disabled, loop scan will be directly stopped.

Number of identified derives is shown on the right

After finishing updates of configuration, enable key must be on to save the new values. Press ENTER key. If panel is at access level 3, new data will be saved directly. If panel is at access level 2, window appears to enter access level 3 password to proceed with saving.

```
FRI 01-May-2015
01:20 PM


                          LOOP CONFIG.
LOOP 1 NAME: LOOP 1



DISABLED              [ ]   NODES                 248


LV
L2
```

3. Nodes configuration

To select this item use arrow keys to highlight it and press ENTER key or press 3 key from numeric keypad.

This menu is used to configure loop devices. After entering this menu, loop selection menu appears to select the loop holds this device. If loop is disabled, it will not be shown and device configuration cannot be done from panel. After loop selection, Devices connected to this loop will be shown in a table format. One table is 8 rows x 11 columns. So window displays only 88 devices from the loop. To display the remaining IDs, press down arrow key to show the next 88 devices. Press down arrow key again to show the remaining 74 IDs. IDs are displayed from left to right columns and from up to down rows. Connected devices ID will be written in its place in the table. IDs not connected to the loop will not be written in its place in the table. To select device use arrow keys to highlight it and press ENTER key.

```
FRI 01-May-2015
01:20 PM                                  LOOP 1 NODES

001                                                  011
012                                         020
                        027 028 029
                                                   065
              069
                                                   088 ▼
LV
L2
```

After selecting one device, device configuration window appears with its last saved parameter value.

Device type is shown near to bottom right section of the configuration window.

First configuration is device name. For input devices, it will be displayed on the main screen when this device activates. For output devices, it is only used for device identification and will not be shown on the display. To change it, highlight it will arrow keys and press 0 key. On screen keyboard will be shown at the top right corner of the display. Working with it is exactly same as described in changing panel name section.

Second configuration is events selection. For input devices, it is used to identify which event this device will trigger. There are 7 fixed events, 'Fire', 'Fault, 'Evacuate', 'Pre Alarm', 'Silence Alarm', 'Re-Sound Alarm' and 'Reset'. For output devices, it is used to identify which events will trigger this device. There are 4 fixed events, 'Fire', 'Fault, 'Evacuate' and 'Pre Alarm'.

For input devices, to select an event highlight the events field with the arrow keys and press 0 key to select one event. You can also select none value to make this device do nothing. Only one event can be selected for any device. Devices are latched when activated. Only fire reset action deactivates its effect. After fire reset, if devices is still active, its event will trigger again. For all detectors, Fire event is selected by default and cannot be changed.

For output devices, to make the device triggers or does not trigger on one event, highlight it with arrow key and press 0 key. If X symbol appears in front of the event, this means that the device will trigger on this event. If X symbol does not appear in front of the event, this means that the device will not trigger on this event. Selection of more than one event is accepted.

Third configuration is the silence state of the device. For input devices, it is not shown. For output devices, it means that if the device will deactivate when Silence Alarm key is pressed or will keep active even if Silence Alarm key is pressed. To change it, highlight it with arrow keys and press 0 key. If X symbol appears in front of it, this means that the device will deactivate with silence alarm state. If X symbol does not appear in front of the event, this means that the device will keep active with silence alarm state.

Fourth configuration is disabled state of the device. For input devices, it means that if the device will trigger its event when activated, or will do nothing whatever is activated or not. For output devices, it means that if the device will be function or not regardless of the current panel state. To change it, highlight it with arrow keys and press 0 key. If X symbol appears in front of it, this means that the device will be disabled and not working. If X symbol does not appear in front of it, this means that the device will be working normally. If disabled is active, after saving, general disabled LED will be on.

Fifth configuration is zone number. It is used to attach the device to one software zone. To change the zone number, highlight it with arrow keys and directly enter the new zone number. A new small window appears beside the last zone number. Zone range is from 0 to 250. Press ENTER key after entering the new zone number. If value is accepted, it will be shown. If value is wrong, X symbol appears beside the wrong value. While entering the new zone number, press EXIT key to cancel entering a new zone number.

Sixth configuration is delay value. For input devices, it is fixed to 0 which mean device will trigger immediately when activated. For output devices, it is used to postpone the device activation to a defined amount. The number represents number of half minutes of delay. For example, if value is 3, so the delay value is 1.5 minutes. If value is 12, so the delay value is 6 minutes. Minimum value is 0 which means that no delay for this device and it will activate directly when at least one of its selected events is active. Maximum value is 14 which mean that maximum delay is 7 minutes. To change the delay value, highlight it with arrow keys and directly enter the new delay value. A new small window appears beside the last delay value. Press ENTER key after entering the new delay value. If value is accepted, it will be shown. If value is wrong, X symbol appears beside the wrong value. While entering the new delay value, press EXIT key to cancel entering a new delay value.

After finishing updates of configuration, enable key must be on to save the new values. Press ENTER key. If panel is at access level 3, new data will be saved directly. If panel is at access level 2, window appears to enter access level 3 password to proceed with saving.

```
FRI 01-May-2015
01:20 PM


              LOOP 1 NODE 015 CONFIG.
NODE015 NAME: NODE 015


ACTION: FIRE


DISABLED              [ ] | TYPE          SMOKE DET
ZONE                  000 | I/P DELAY            000
LV
L2
```

```
FRI 01-May-2015
01:20 PM


              LOOP 1 NODE 022 CONFIG.
NODE022 NAME: NODE 022
FIRE                  [x] | EVACUATE             [x]
FAULT                 [ ] | PRE-ALARM            [ ]
SILENCEABLE           [x] |
DISABLED              [ ] | TYPE            SND MOD
ZONE                  000 | O/P DELAY            000
LV
L2
```

4. **Zones configuration**

To select this item use arrow keys to highlight it and press ENTER key or press 4 key from numeric keypad.

This menu is used to configure panel software zones. When selecting this item, small window appears to enter zone number. Enter zone number using numeric keypad and press

ENTER key. If entered number is not within panel zones range, errors message appears. You can enter directly a correct number.

Press EXIT key to cancel the complete operation.

```
FRI 01-May-2015
01:20 PM


            LOOPS CONFIG.

                       ZONES
  1.LOOP?                           D NODES
  2.LOOP?   ZONE ID: 54             D ZONES
  3.NODE?
  4.ZONES CONFIG.

LV
L2
```

After entering zone number, zone configuration window appears with its last saved parameter value.

First configuration is zone name. It is only used for zone identification and will not be shown on the display. To change it, highlight it with arrow keys and press 0 key. On screen keyboard will be shown at the top right corner of the display. Working with it is exactly same as described in changing panel name section.

Second configuration is disabled state of the zone. When zone is disabled, all devices & modules attached to this zone will be in disabled state. It will perform exactly as if it is disabled from its configuration menu.

To change disabled state, highlight it with arrow keys and press 0 key. If X symbol appears in front of it, this means that zone is disabled. If X symbol does not appear in front of it, this means that zone is enabled. If disabled is active, after saving, general disabled LED will be on.

After finishing updates of configuration, enable key must be on to save the new values. Press ENTER key. If panel is at access level 3, new data will be saved directly. If panel is at access level 2, window appears to enter access level 3 password to proceed with saving.

```
FRI 01-May-2015
01:20 PM


                ZONE CONFIG.
  ZONE009 NAME: ZONE 009




  DISABLED           [ ]   NODES            30


LV
L2
```

5. Disabled nodes

To select this item use arrow keys to highlight it and press ENTER key or press 5 key from numeric keypad.

This menu is used to show disabled loop devices. Disabled devices ID are written in a table format. One table is 8 rows x 11 columns. So window displays only 88 devices from the loop. To display the remaining IDs, press down arrow key to show the next 88 devices. Press down arrow key again to show the remaining 74 IDs. IDs are displayed from left to right columns and from up to down rows. Disabled devices will be written in its place in the table. Enabled devices will not be written in its place in the table.

Total number of disabled nodes for selected loop is written at the upper right of the window.

You can exit this menu to the previous menu by pressing ENTER or EXIT key.

```
┌─────────────────────────────────────────────┐
│ FRI 01-May-2015                              │
│ 01:20 PM              DISABLED LOOP 1 NODES: 015 │
│ ┌───┬───┬───┬───┬───┬───┬───┬───┬───┬───┐ ▲ │
│ │089│   │   │   │   │   │   │   │   │   │   │ │
│ ├───┼───┼───┼───┼───┼───┼───┼───┼───┼───┤   │
│ │   │   │   │   │   │   │   │   │   │   │   │ │
│ ├───┼───┼───┼───┼───┼───┼───┼───┼───┼───┤   │
│ │   │   │   │   │   │   │   │   │   │   │   │ │
│ ├───┼───┼───┼───┼───┼───┼───┼───┼───┼───┤   │
│ │   │   │   │   │138│   │   │   │   │   │   │ │
│ ├───┼───┼───┼───┼───┼───┼───┼───┼───┼───┤   │
│ │   │145│   │   │   │   │   │   │   │   │   │ │
│ ├───┼───┼───┼───┼───┼───┼───┼───┼───┼───┤   │
│ │   │   │   │   │   │   │   │   │   │176│ ▼ │
│ └───┴───┴───┴───┴───┴───┴───┴───┴───┴───┘   │
│ LV                                           │
│ L2                                           │
└─────────────────────────────────────────────┘
```

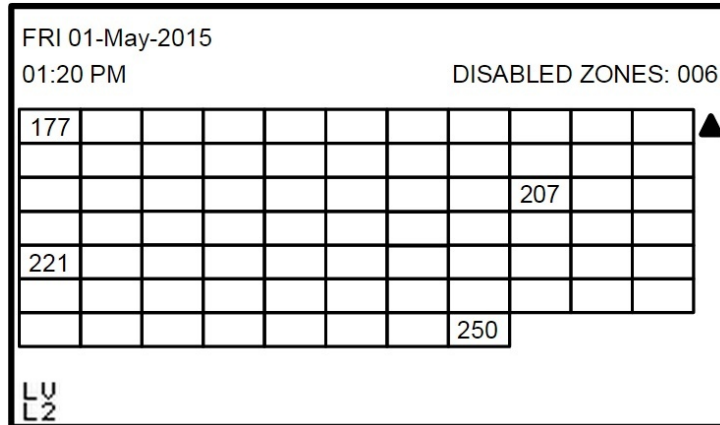### 6. Disabled zones

To select this item use arrow keys to highlight it and press ENTER key or press 6 key from numeric keypad.

This menu is used to show disabled panel zones. Disabled zones ID are written in a table format. One table is 8 rows x 11 columns. So window displays only 88 panel zones. To display the remaining IDs, press down arrow key to show the next 88 zones. Press down arrow key again to show the remaining 74 IDs. IDs are displayed from left to right columns and from up to down rows. Disabled zones will be written in its place in the table. Enabled zones will not be written in its place in the table.
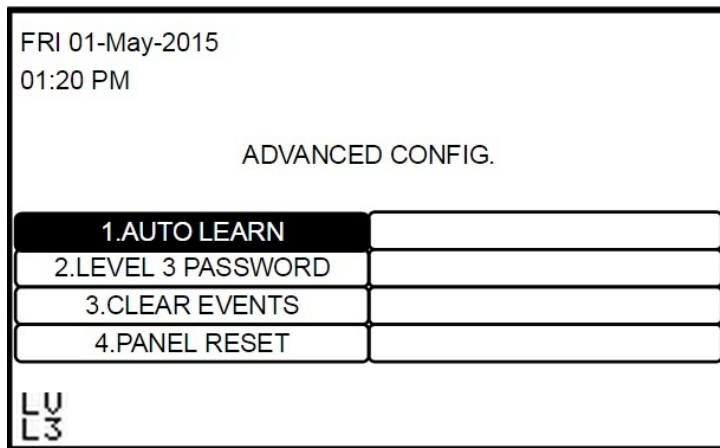
Total number of disabled zones is written at the upper right of the window.

You can exit this menu to the previous menu by pressing ENTER or EXIT key.

```
FRI 01-May-2015
01:20 PM                              DISABLED ZONES: 006

177                                                        ▲


                                       207

221


                                       250

L V
L 2
```

6.1.1.4.   Menu4: Advanced configuration

This menus consists of 4 menu items

```
FRI 01-May-2015
01:20 PM



                ADVANCED CONFIG.


         1.AUTO LEARN
         2.LEVEL 3 PASSWORD
         3.CLEAR EVENTS
         4.PANEL RESET

L V
L 3
```

1.   Auto learn

To select this item use arrow keys to highlight it and press ENTER key or press 1 key from numeric keypad.

This menu is used to scan all panel enabled loops and save all connected devices with its default settings. Current saved devices will be removed from panel memory. Press ENTER key to start scanning.

```
FRI 01-May-2015
01:20 PM



                AUTO LEARN

CONFIRM?




L V
L 3
```
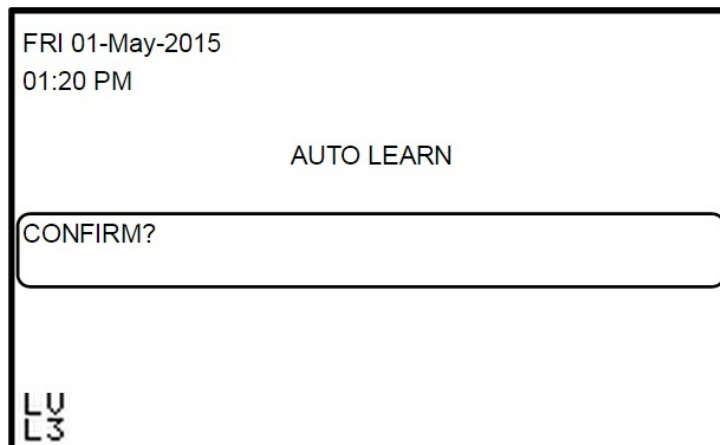
2. Level 3 password

To select this item use arrow keys to highlight it and press ENTER key or press 2 key from numeric keypad.

This menu is used to change level 3 access password. Enter new 4 digits password. Password must be entered twice for configuration. After entering 4th digit of the password enter the same password again. It will be written on a separate line on the display. Character [*] will be displayed on the screen for each digit. To save the new level 3 password, enable key must be turned on. Press ENTER key to save the new password.

```
FRI 01-May-2015
01:20 PM


              NEW LEVEL 3 PASSWORD


PASSWORD: ****
RE-TYPE :    ****




LV
L3
```

3. Clear events

To select this item use arrow keys to highlight it and press ENTER key or press 3 key from numeric keypad.

This menu is used to remove all saved log events. Press ENTER key to confirm removal.

```
FRI 01-May-2015
01:20 PM


                 CLEAR EVENTS

CONFIRM?




LV
L3
```

4. Panel reset

To select this item use arrow keys to highlight it and press ENTER key or press 4 key from numeric keypad.

This menu is used to restore all panel default configuration. All changed configuration will be lost and will not be restored again. Press ENTER key to confirm applying factory

settings. Panel will start to restore all its data and when finished it will display reset complete message on the display. Panel will wait 5 seconds and then it will restart itself.

```
FRI 01-May-2015
01:20 PM


                    PANEL RESET

CONFIRM?




L V
L 3
```

```
RESETTING PANEL --> COMPLETE
```
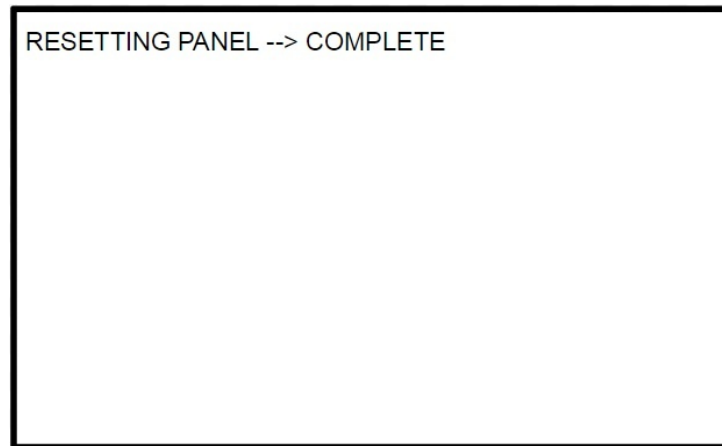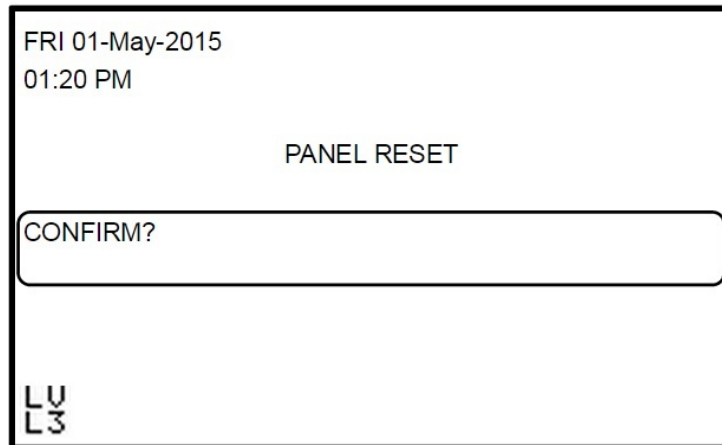
7. Appendixes

7.1. Appendix A: Panel Default Values

ID	Configuration Item	Configuration Default Value
1	Panel name	MAIN PANEL 1
2	Level 2 password	1234
3	Level 3 password	9876
4	GC1: Resound on 2nd fire in same zone	Not selected
5	GC2: Bypass output delay in 2nd fire	Not selected
6	Number of saved log events	0
7	Loop 1	Enabled, 0 devices connected
8	Loop 2	Disabled
9	Zones	Enabled, 0 devices attached
10	Relay 1	Actions: Fire, Evacuate Silence state: Selected Zone: 0 Output Delay: 0
11	Relay2	Actions: Fault Silence state: Not selected Zone: 0 Output Delay: 0
12	Relay 3	Actions: Fire, Evacuate Silence state: Selected Zone: 0 Output Delay: 0
13	Sounder line 1	Actions: Fire, Evacuate Silence state: Selected Zone: 0 Output Delay: 0
14	Sounder line 2	Actions: Fire, Evacuate Silence state: Selected Zone: 0 Output Delay: 0
15	Input 1	Name: DC 1 Actions: None Zone: 0
16	Input 2	Name: DC 2 Actions: None Zone: 0
17	Input 3	Name: DC 3 Actions: None Zone: 0
18	Key 1	Name: KEY 1 Actions: None Zone: 0
19	Key 2	Name: KEY 2 Actions: None Zone: 0

20	Input loop devices	Name: NODE xxx (xxx: Device ID) Actions: Fire Zone: 1
21	Output loop devices	Actions: Fire, Evacuate Silence state: Selected Zone: 1 Output Delay: 0