Honeywell
GENT

Commissioning Tool
V1.36 or higher
User Guide

for Analogue Addressable fire alarm systems



This is a multi brand Commissioning tool User Guide. Only the configuration features that are relevant to the respective brand are applicable.

Contents

Preface ---- 6
Associated documents ---- 6
Conventions ---- 6
Abbreviations ---- 6
Commissioning Tool ---- 7
Compatibility ---- 7
Preparation ---- 7
Commissioning tool software installation ---- 7
Commissioning using SD Card method ---- 8
Location of SD card at a Vigilon Plus panel ---- 8
Location of SD card at a Vigilon Compact Plus panel ---- 9
Commissioning using cable method ---- 10
How to connect the Comms tool to a 4/6-Loop panel using USB port. ---- 10
How to connect the Comms tool to a 2-Loop panel using USB port ---- 10
Using USB port on Main Controller for connecting to a Commissioning tool ---- 10
How to connect Comm tool to a legacy 2-Loop panel's using RS232 port ---- 11
Checks ---- 11
To configure the main controller RS232 mode, baud and addresses ---- 11
How to connect the Commissioning tool to a legacy panel ---- 12
How to connect the Commissioning tool to a legacy 8-Loop panel ---- 12
How to start the Commissioning tool software ---- 13
Commissioning tool menus ---- 13
Device compatibility ---- 14
Configuration process using SD Card method ---- 15
Configuration process using cable method ---- 17
How to find the Node and Domain addresses ---- 19
Domain address ---- 19
Node address ---- 19
How to determine the USB Comm. port number ---- 20
Licence Form - *File Menu* ---- *21*
Options - *File menu* ---- *22*
Import from SD card - *File menu* ---- 23
(SD card method) ---- 23
Retrieve Configuration - *Comms. menu* ---- 24
Site information - *Configuration menu* ---- *25*
Export for SD card - *File menu* ---- 26
Transmit Config. - *Comms. menu* ---- 27
Create Simulation file - *File menu* ---- *28*

Load Configuration - *File menu* ---- 29
Save Configuration - *File menu* ---- 30
Save Configuration As - *File menu* ---- 31
Clear Configuration- *File menu* ---- 32
New Configuration - *File menu* ---- 32
Print - *File menu* ---- 33
Print setup - *File menu* ---- 34
Device Configuration - *Config. menu* ---- 35
Sound Patterns - *Config. menu* ---- 38
Zone/Group config. - *Config. menu* ---- 39
Master Groups - *Config. menu* ---- 40
Sector Link - *Config. menu* ---- 41
Master Sectors - *Config. menu* ---- 42
Master Sector Links - *Config. menu* ---- 43
Auxiliary Relay - *Configuration menu* ---- 44
Delay Blocks - *Configration menu* ---- 45
Delay block Links - *Config. menu* ---- 46
Labels - *Configration menu* ---- 47
Time Slots - *Config. menu* ---- 51
Command Builds - *Config. menu* ---- 52
Message Routing - *Config. menu* ---- 53
Sound Alarms - *Config. menu* ---- 54
S3 Mark I config. - *Configuration menu* ---- 55
Micro DAU - Config. menu ---- 57
Audio Control Unit - Config. menu ---- 61
Mains Powered DAU - *Config. menu* ---- 63
How to Send Config. to a Mains Powered DAU ---- 66
S4, S4T & S3 Mark 2 or higher-*Config. menu* ---- 67
Repeat routing... - *Config. menu* ---- 70
S4 LV Interface Unit - *Config. menu* ---- 71
S4 Mains Switching Interface - *Config. menu* ---- 74
S4 Mains Powered Interface - *Config. menu* ---- 85
Beam config. - Config. menu ---- 97
Make SAFE address - Config. menu ---- 98

Alarm management - Config. menu ---- 99
SAFE 2 button switch system configuration ---- 100
SAFE 1 button switch system configuration ---- 101
View Conflicts - *Tool menu* ---- *102*
Check Database - *Tool menu* ---- *102*
Help Topics - *Help menu* ---- *102*

Appendix A

Labels ---- 103
What can be labelled? ---- 103
How are long labels created? ---- 104
Sector Links ---- 105
Default Fireplan ---- 105
What can be sectored? ---- 105
What are Sector actions? ---- 106
Operation with Sound, Silence and Reset ---- 106
Sector Functions ---- 107
Delay blocks ---- 108
Default configuration ---- 108
What are the limits of delay blocks? ---- 108
What triggers a delay block? ---- 108
Application of delay blocks ---- 108
Delay block Functions ---- 110
Resound Delay mode function ---- 111
Sound and Resound alarms options ---- 112
Time Blocks and Time Slots ---- 113
Time slots ---- 114
Time blocks ---- 114
Time slot and Time block functions ---- 115
Zones ---- 116
Default configuration ---- 116
What are the common zone functions? ---- 116
What can zones be used for? ---- 117
What are the choices of label displayed? ---- 117
How to use a zone for co-incidence fire detection? ---- 117
Zone Tasks (EN system) ---- 118
Groups ---- 119
Default configuration ---- 119
What are the common group functions? ---- 119
Which system devices can be assigned to groups? ---- 119
What can Groups be used for? ---- 120

How are labels displayed? ---- 120
How to use a group for co-incidence fire detection ---- 120
Group Tasks functions ---- 121
Alarm Management ---- 122
Type B functionality timing ---- 122
SAFE2 and SAFE1 functionality Post Event timing ---- 123
SAFE2 button functionality Test and Pre Event timing ---- 124
Sound Patterns ---- 125
Frequency ---- 125
Timing ---- 125
Auxiliary relays ---- 126
Application ---- 126
Master Groups ---- 127
Master Sectors ---- 129
What are the uses of Master Sectors? ---- 129
Master Sector Functions ---- 130
Command Builds ---- 131
Command Build Labels ---- 131
Triggering Command Builds ---- 132
Command Build Actions ---- 132
Command Build Functions ---- 133

PREFACE

This eleventh issue of the Commissioning tool user guide covers the release of version 1.34 or higher software. The tool now includes Alarm Management features. Previously added was the SD card method of commissioning a system for Vigilon Plus panels. This method allows off site commissioning of a system using Loop simulators connected to panel.

ASSOCIATED DOCUMENTS

Data and Installation instructions
Vigilon Plus 4/6 Loop panels (4188-1100)
Vigilon Compact Plus panel (4188-1098)
EN Vigilon 4/6 Loop panels (4188-1024)
EN Vigilon Compact panels (4188-1026)
EN Vigilon Compact VA panels (4188-1028)
SenTRI 2 Loop panel (4188-1037)
SenTRI 4 Loop panel (4188-1035)
CP2 panel (4188-940)
CP4 panel (4188-924)

CONVENTIONS

This symbol precedes a note that highlight important information that is normally hidden in the main text.

This symbol precedes information that warns of danger that may result in serious injury or death, also used as a caution to prevent damage to the equipment.

This symbol precedes information about compliance with standard(s).

SYMBOL KEYS

What you will see
What you will hear

ABBREVIATIONS

ACC	Audio control card
ACU	Audio control unit
ASD	Aspirating smoke detector
CH	channel
CO	Carbon monoxide
DAU	Distributed Amplifier Unit
DEV	Device
DIL	Dual in line
EEPROM	Electrically Erasable Programmable Read Only Memory
EOL	End of line
FAAST	Fire Alarm Aspiration SensingTechnology®
FAB	First action byte
FARE	Fire Alarm Routing Equipment
FPE	Fire Protection Equipment
IO or I/O	Input Output (generally interface channel)
LED	Light emitting diode
LPC	Loop processor card
LPCB	Loss prevention council certification board
LRT	Loop Radio Transceiver
LV	Low voltage (in relation to interface unit)
MCB	Master control board (CARD 0)
MCC	Main control card (CARD 0)
MCP	Manual call point
NVM	Non Volatile Memory (CARD14)
O/C or OC	Open circuit
PA	Public Address
PCB	Printed circuit board
PSU	Power supply unit
Rx	Receiver or Receive
S/C or SC	Short circuit
SAB	Second action byte
SAFE	Software addressed firmware encoded
Tx	Transmitter or Transmit
USB	Universal serial bus
VA	Voice Alarm
VAD	Visual Alarm Device

Commissioning Tool

The Commissioning tool is used to configure an analogue addressable system. This user guide covers all the features of the Commissioning tool software version 1.34.

The tool allows retrieval of system data from an analogue addressable fire panel for the purpose of configuration. Once configured the data is transmitted back to the panel from the tool to allow the system to operate to site specific requirements.

COMPATIBILITY

The Commissioning tool V1.36 or higher is compatible with most current and legacy analogue addressable EN and BS Control panel based fire detection and alarm systems.

Using this tool you can configure a:

- Vigilon Compact Plus panel
- Vigilon Plus (4/6-loop) panels
- Vigilon Compact (networkable) panel EN (V4)
- Vigilon Compact VA (networkable) panel EN (V4)
- Vigilon (4/6-loop) panels EN (V4) and BS (V3+)
- System 34000 BS (V3) and BS (V3+)
- System 3400 BS (V3) and BS (V3+)
- SenTRI 2 Loop panel EN (V4)
- SenTRI 4 Loop panel EN (V4)
- Senator Advance system EN (V4)
- CP2 panel EN (V4)
- CP4 panel EN (V4)

PREPARATION

It is essential to have the following to facilitate commissioning of a fire alarm system:

- Commissioning tool installed on your laptop
- suitable SD card reader if commissioning using this method
- leads to connect the Commissioning tool to the control panel, printer and mains supply.
  - Printer is used to print labels and configuration data for reference
- as fitted wiring drawings - showing devices associated with loop circuits
- customer agreed labels to identify areas in the protected premises
- customer agreed operation of fire alarms
- configuration information - customer agreed site specific fire plan

> ! Before connecting the Commissioning tool to the fire control panel to retrieve the system configuration, it is important to ensure all loops have been fully allocated and there are no faults present on the loop circuits.

COMMISSIONING TOOL SOFTWARE INSTALLATION

The Commissioning tool software and associated USB driver can be downloaded from the respective website www.gentexpert.co.uk or www.smstoolbox.co.uk, which is accessible to registered users.

The Commissioning tool and USB driver must be installed on your laptop before you can retrieve, configure and transmit the system configuration back to the control panel.

If however there is an existing Commissioning tool already installed on your laptop then this must first be removed using uninstall feature located under Windows -> Control panel -> Programs and Features.

This tool is supported on Windows 10, Windows 8 Business Edition, Windows 7 Business Edition & Windows XP Professional.

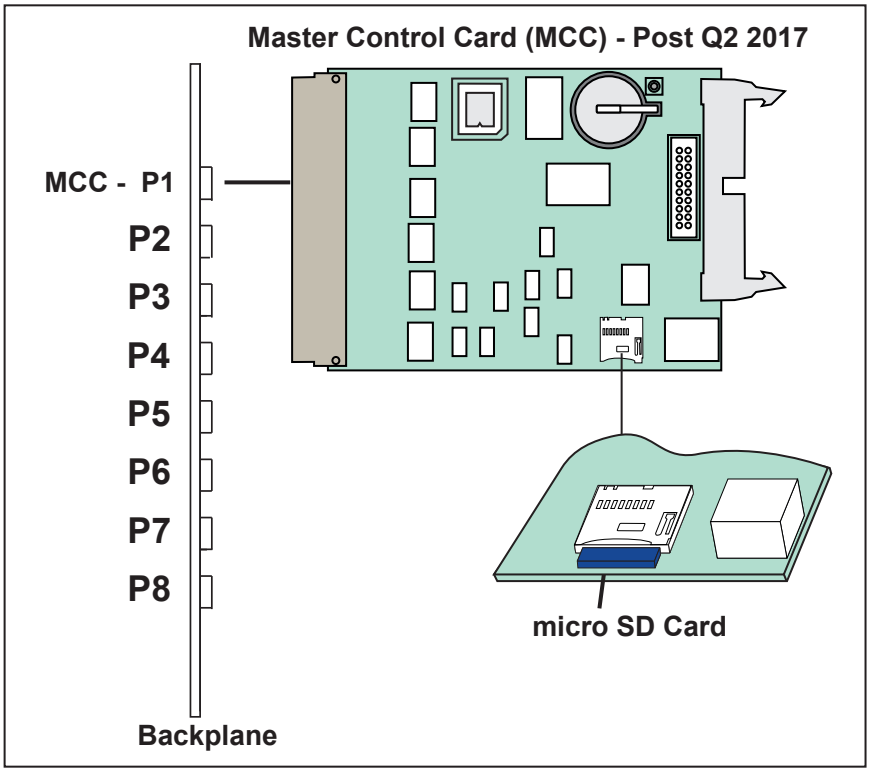
Once the Commissioning tool setup file is downloaded and unzipped, dependant on your operating system select the 32 bit or 64 bit folder then click on the setup files to install.

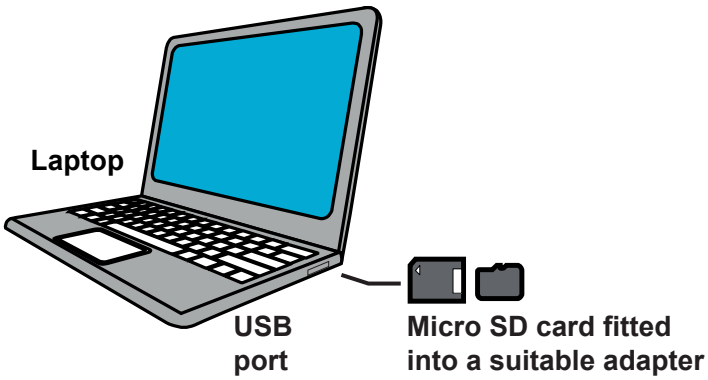
Commissioning using SD Card method

A Vigilon plus system may be commissioned using the SD card method. This requires the initial Vigilon system configuration to be saved to the SD card at a Vigilon Plus panel. The SD card is then plugged into a card reader connected to the Commissioning tool. The system is then configured using the tool and the worked file is restored at the panel, for the system to work to site specific requirements.

LOCATION OF SD CARD AT A VIGILON PLUS PANEL

Vigilon Plus panel (4/6 loop)





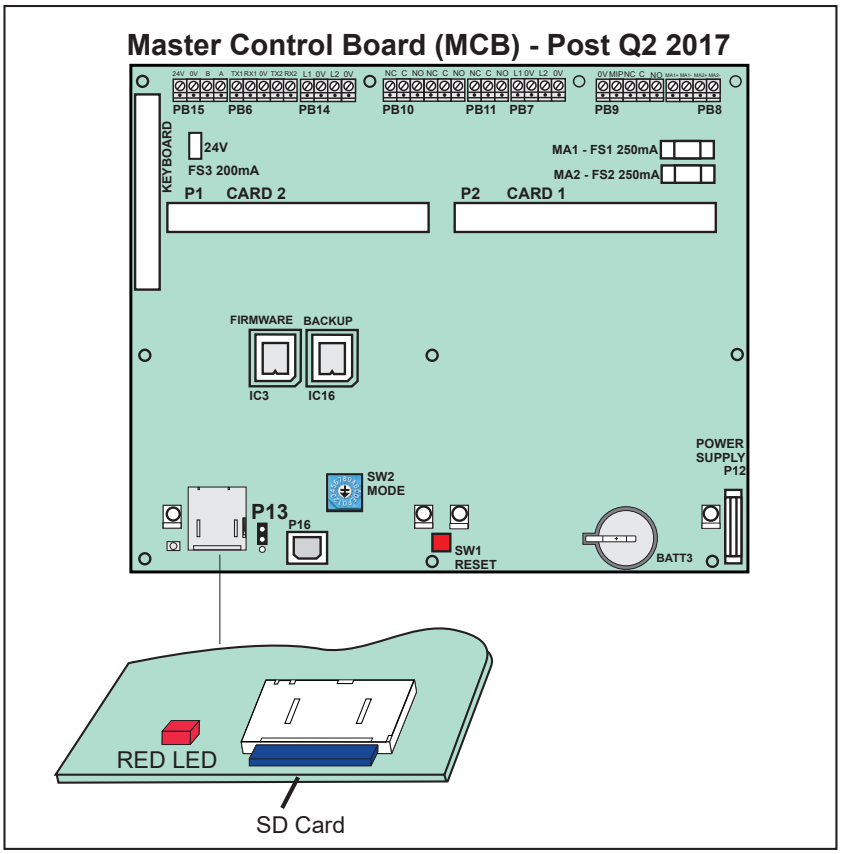
① The initial system configuration file (the system set up) is backed up at the control panel to a micro SD Card inserted in SD socket on MCC.

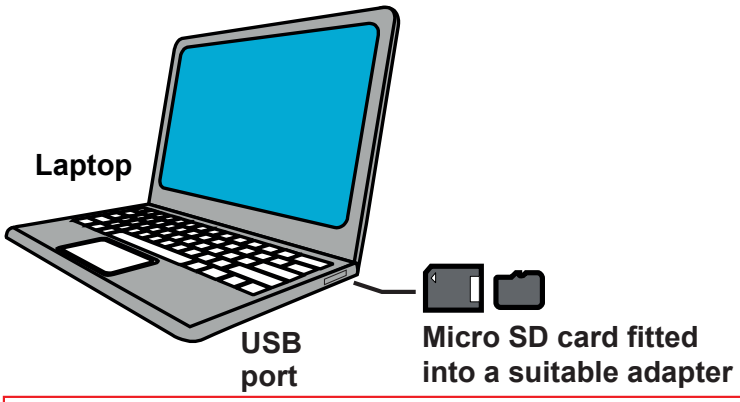
② The configuration file is then imported into the Commissioning tool via micro SD card fitted to a card reader. The system is then configured to site requirements and exported back onto the micro SD Card.

③ The configuration file on the micro SD card is then recovered at the panel.

LOCATION OF SD CARD AT A VIGILON COMPACT PLUS PANEL

Vigilon Plus panel (4/6 loop)





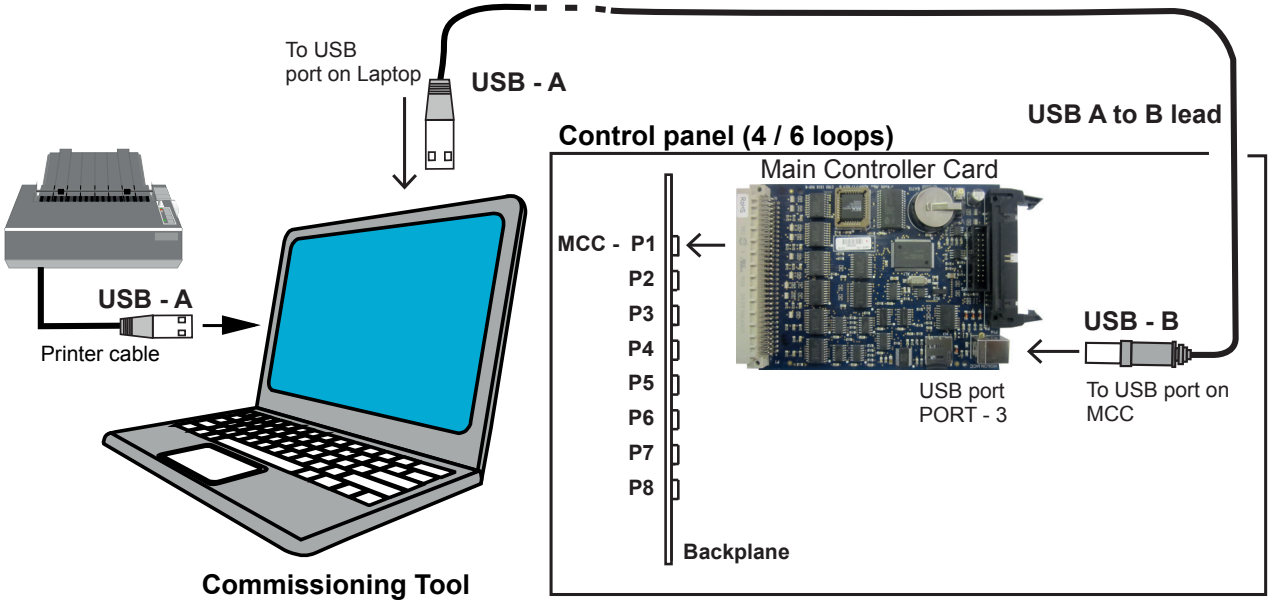
①The initial system configuration file (the system set up) is backed up at the control panel to a micro SD Card inserted in SD socket on MCB.

②The configuration file is then imported into the Commissioning tool via micro SD card fitted to a card reader. The system is then configured to site requirements and exported back onto the micro SD Card.

③The configuration file on the micro SD card is then recovered at the panel.

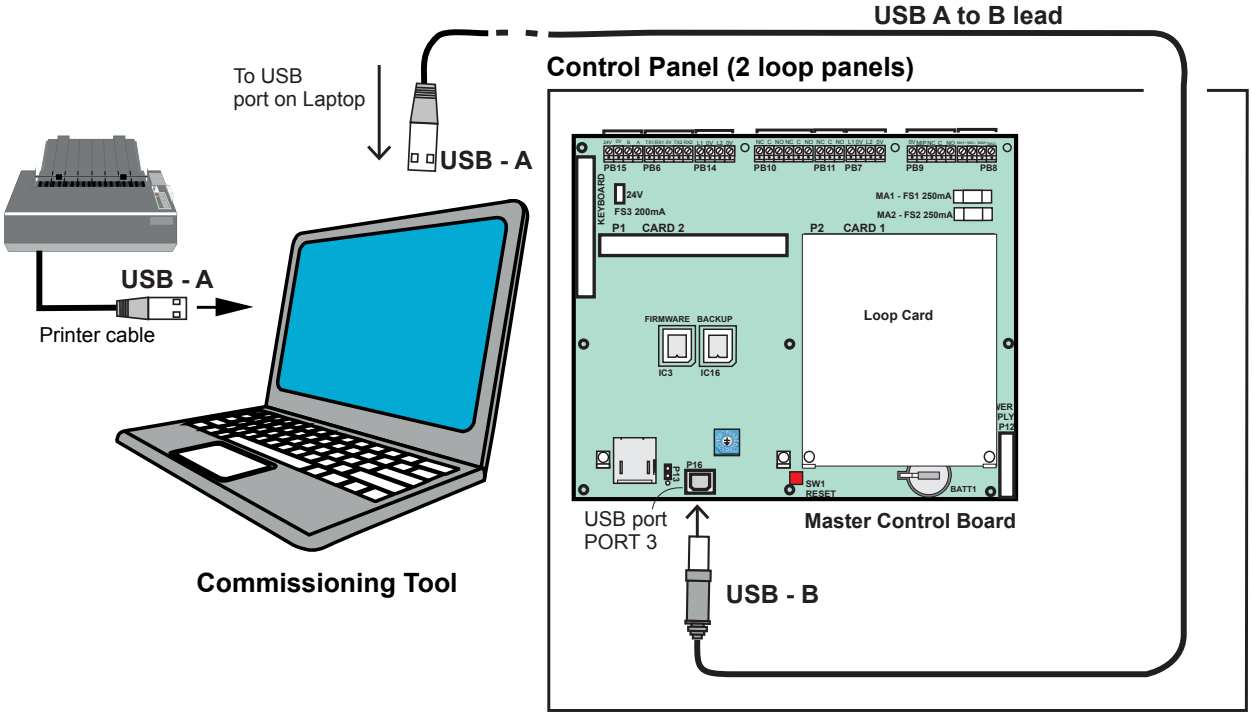
Commissioning using cable method

HOW TO CONNECT THE COMMS TOOL TO A 4/6-LOOP PANEL USING USB PORT.



HOW TO CONNECT THE COMMS TOOL TO A 2-LOOP PANEL USING USB PORT

Here is the connection to a Vigilon Compact Plus, Vigilon Compact (VA) 2-Loop, SenTRI 2-Loop or CP2 panel only.



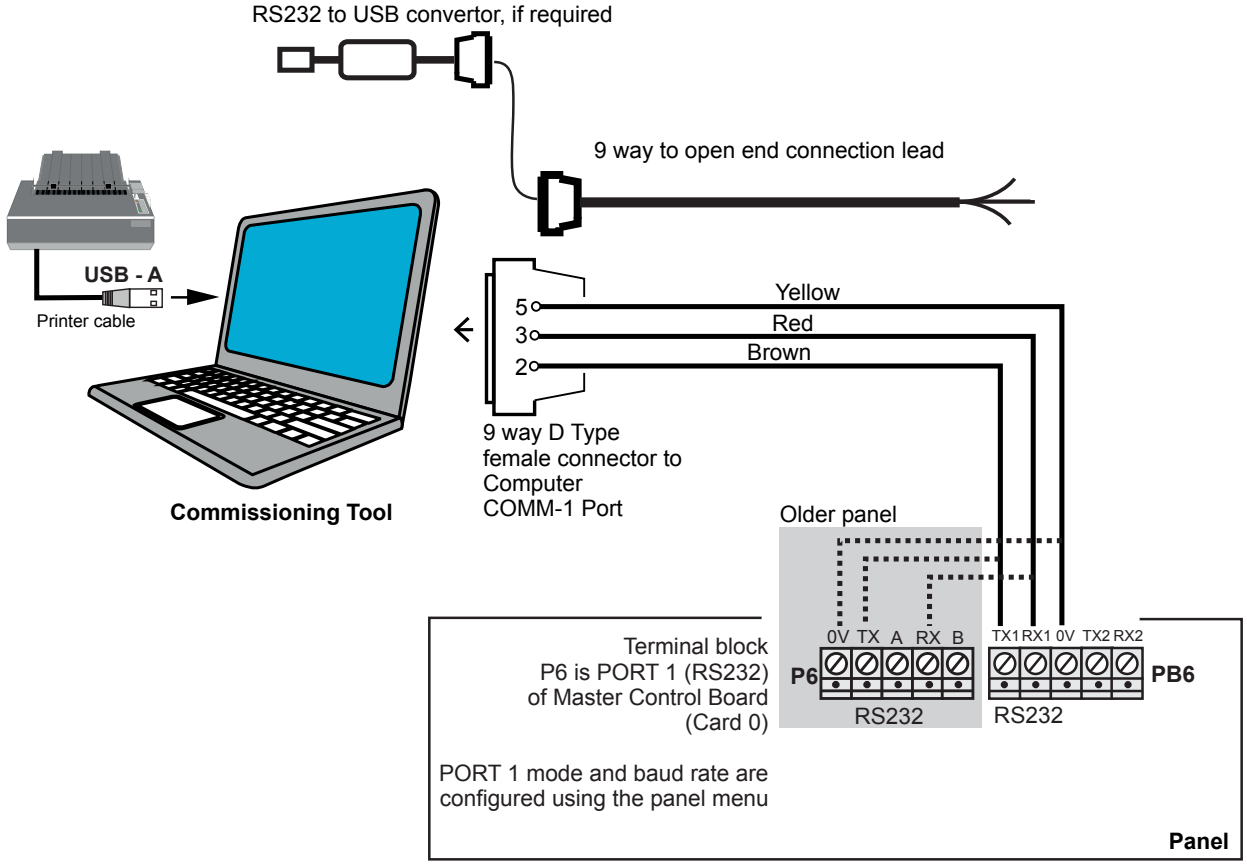
USING USB PORT ON MAIN CONTROLLER FOR CONNECTING TO A COMMISSIONING TOOL

The USB port on the Main Controller Card / Main Controller Board is used to connect the Commissioning tool to a panel.

You can check the Main Controller Card/Board status of Card 0 to confirm panel addresses. The default panel address is 1. The default domain address is 1 for EN panel and 0 for legacy BS panel.

HOW TO CONNECT COMM TOOL TO A LEGACY 2-LOOP PANEL'S USING RS232 PORT

Here is the connection to a legacy Vigilon Compact (&VA) 2-Loop, SenTRI 2-Loop or CP2 panel only



Set the RS232 Port 1 at the control panel to Standard mode and for faster communication the baud rate to 19200.

CHECKS

It is important to ensure the baud rate and domain address settings on the DKC of a 4/6 loop panel are kept the same as the baud and domain settings made using the [Test/Eng] menu at the panel.

TO CONFIGURE THE MAIN CONTROLLER RS232 MODE, BAUD AND ADDRESSES

Using the menus at the control panel you can check and set the mode, panel address and domain address to allow communication between panel and Commissioning tool:

Press the Menu On/Off button followed by [Test/Eng] and <etc>, then select [Config], <etc>, <etc> and then select [Comms], now:

- to set the mode:
  Select [Card] and enter number 0 and then select Port 1 followed by [Mode], using [Next] / [Previous] select Standard mode. The default Mode for Port 1 is Standard.

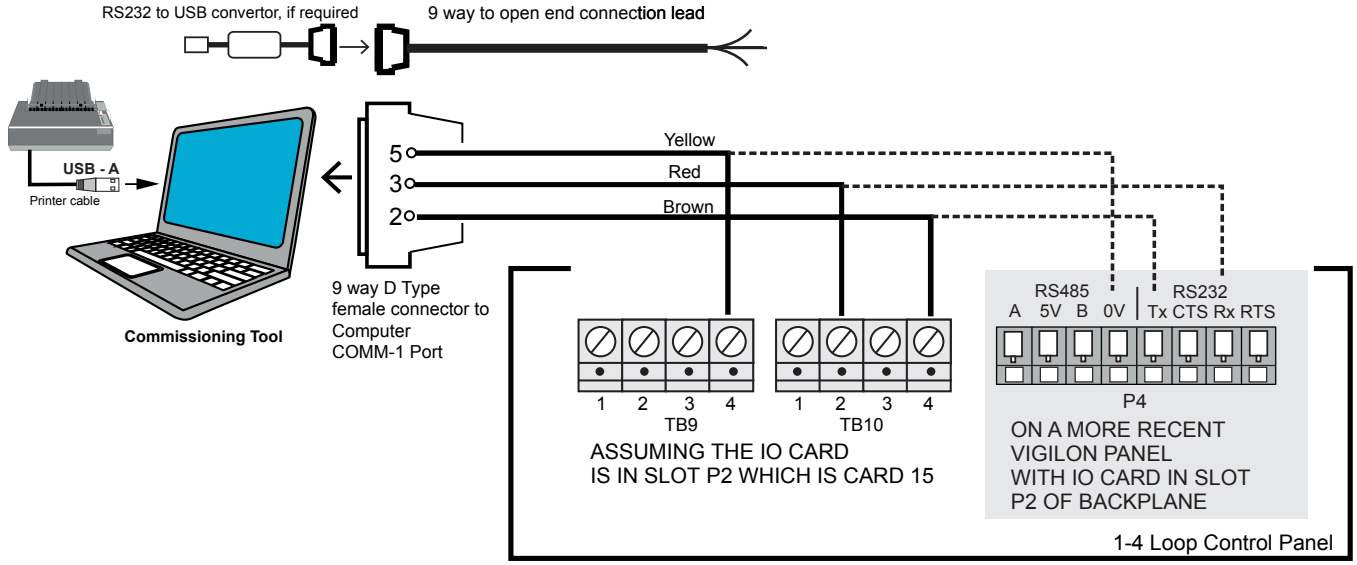
- to set the baud:
  Select [Card] and enter number 0 and then select Port 1 followed by [Baud], using [Next] / [Previous] and select 19200 baud. The factory default baud rate is 1200.

- to set the node/panel address:
  Select [Address] and then enter the panel address. The default panel address is address 1.

- to set the domain address:
  Select [Domain] and enter the domain address. The default domain is address 1 for EN panel.

HOW TO CONNECT THE COMMISSIONING TOOL TO A LEGACY PANEL

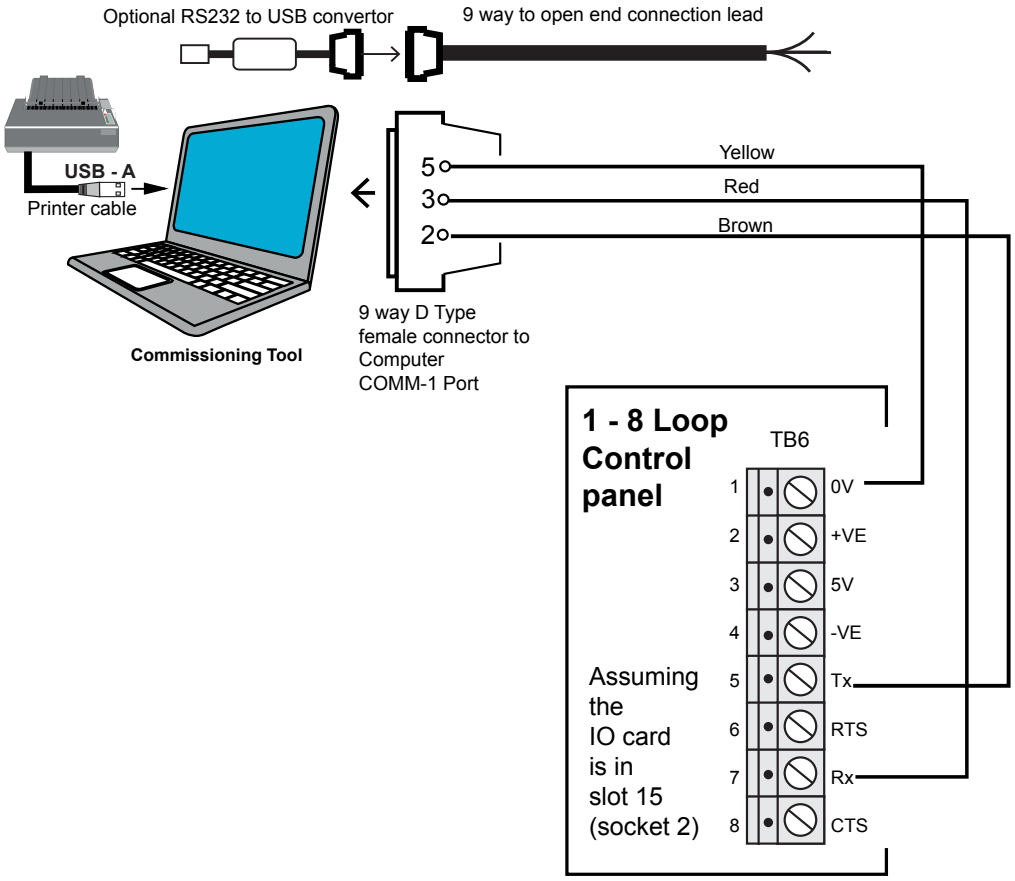
Here is the connection to a legacy BS or legacy EN Vigilon or 3404 panel only.



Configure the switches on the DKC of an EN54 panel or the switches on IO card in other legacy panels to set address and baud rate, see instructions supplied with the IO card or see the System Commissioning Instructions.

HOW TO CONNECT THE COMMISSIONING TOOL TO A LEGACY 8-LOOP PANEL

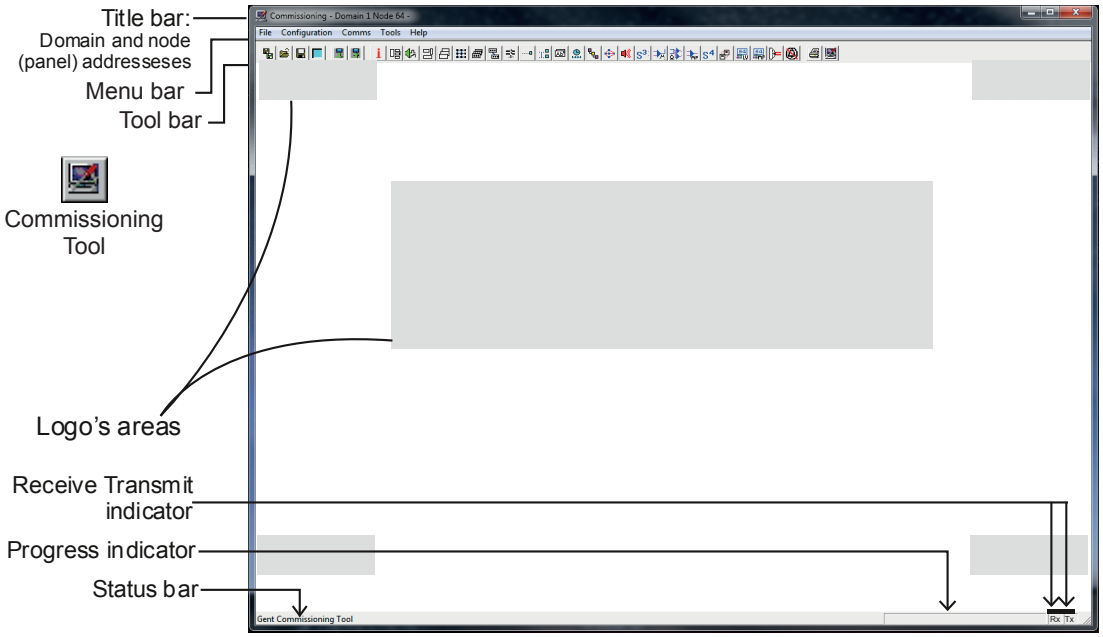
Here is the connection to a legacy 3408 panel only



Configure the switches on the IO card in the panel to set the required panel address and baud rate.

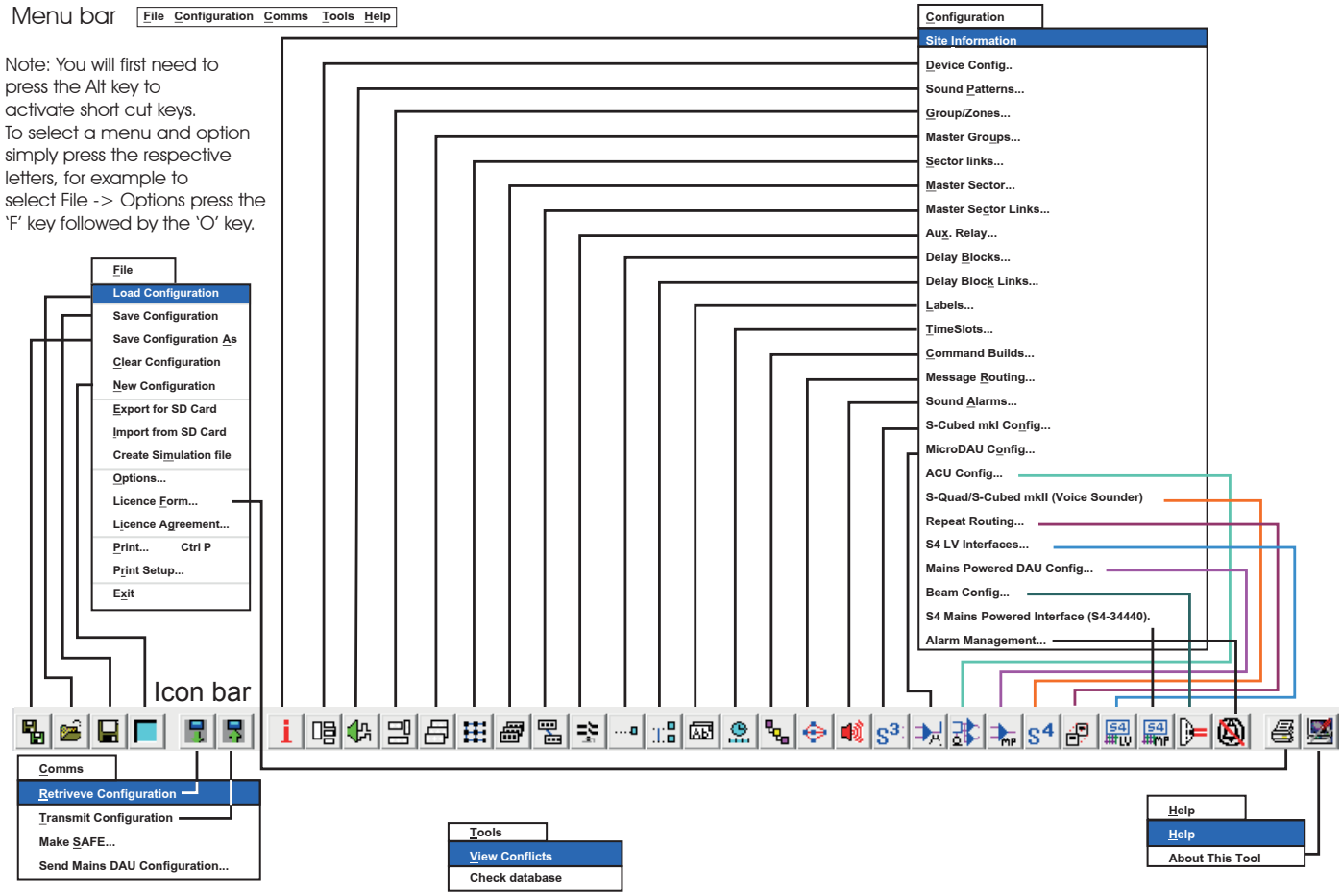
How to start the Commissioning tool software

Select the Commissioning tool icon to start the tool and to open the following top page.



COMMISSIONING TOOL MENUS

There are five drop-down menus available from the menu bar: File, Configuration, Comms, Tools and Help.



Restricted use of functions & de-vices

The description of fire panel functions are described in Appendix A. The functions listed below have restricted use dependant on panel firmware:

- Alarm management functionality is applicable for system with control panel card: MCC/MCB at V4.57 or greater
- Commissioning using SD card import / export features in the tool is used to transfer configuration file. There is also a Simulation file feature that creates file for simulator connected to the panel. Requires control panel card: MCC/MCB at V4.54 or greater
- Fire Alarm Routing Equipment (FARE) and Fire Protection Equipment (FPE) functions are applicable for a system with the control panel card: MCC/MCB at V4.53 or greater & LPC at V4.49 or greater.
- D1 Interfacing capability with control panel cards:
  MCC/MCB at V4.53 or greater
- Repeat panel routing function is applicable for a system with control panel card: LPC at V4.32/ V3.91 or greater.
- Long label function is a
  pre and post LCC at V4.10/V3.70. (Some BANK 2 labels were not available on pre LCC V4.10/ V3.70)
- SAFE address and Command Build functions is applicable for a system with control panel card: LCC at V4.00/V3.40 or greater
- Master Groups function is applicable for a systems with control panel card:
  LCC at V4.00/V3.00 or greater
- Groups and Zones functions are applicable for a system with control panel cards:
  LCC at V4.00 or greater (for Zones) or V3.00 or greater (for Groups)
  Zone/Group coincidence mode is selectable with MCC at V4.32/V3.92 or greater.

DEVICE COMPATIBILITY

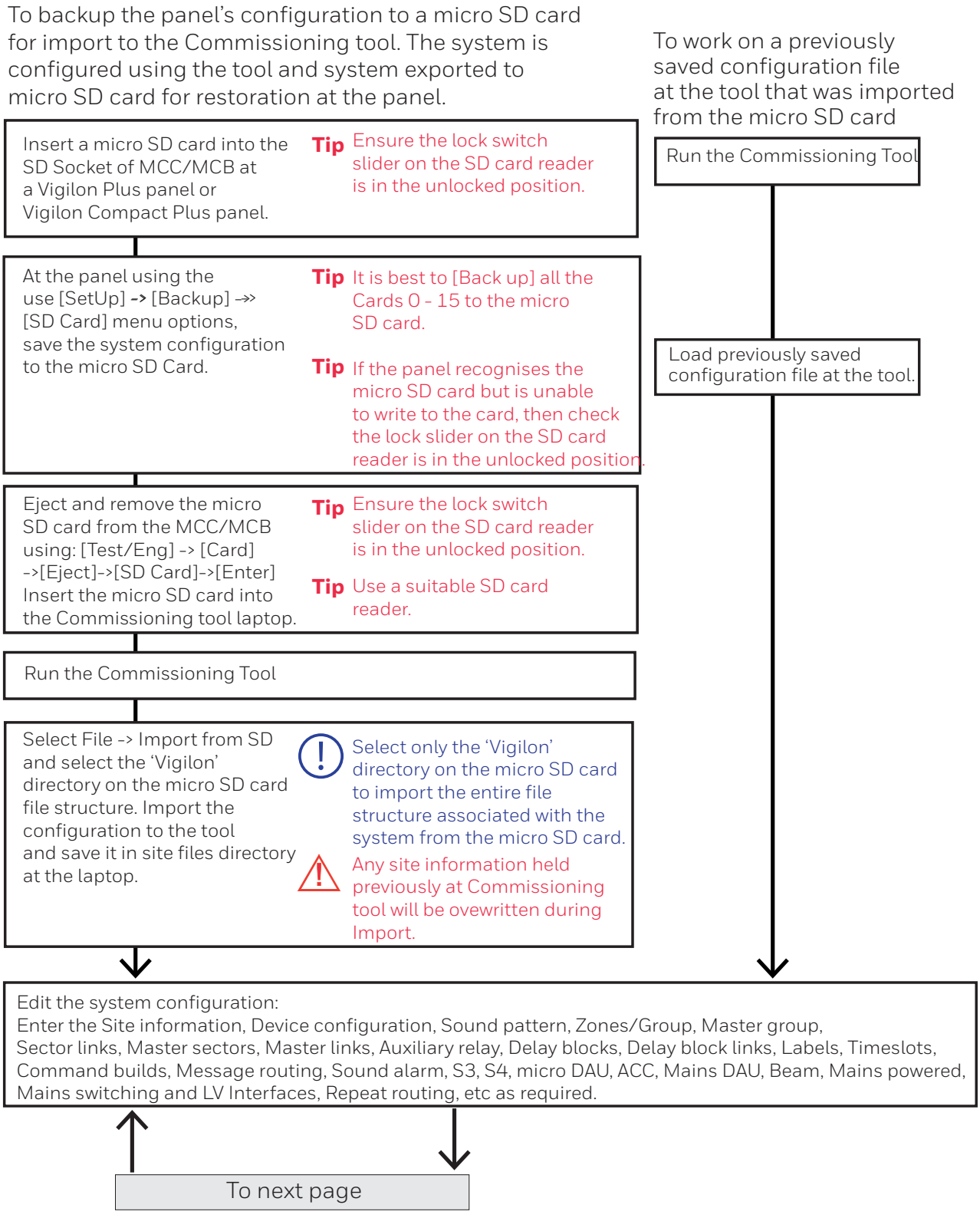
- S4T devices with control panel cards:
  MCC/MCB at ≥ 4.61r and LPC at V4.54 or greater.
- ASD interface unit with control panel cards:
  MCC/MCB at V4.53 or greater and LPC at V4.48 or greater.
- S3 Mark 3 Part 23 compliant and S-Quad Part 23 compliant devices are compatible with control panel cards:
  MCC/MCB at V4.52 or greater and LPC at V4.48 or greater.
- Radio devices (Plexus devices) are compatible with control panel cards: MCC/MCB at V4.47 or greater and LPC at V4.45 or greater.
- Mains Switching Interface units are compatible with control panel cards: MCC/MCB at V4.43/V3.97 or greater and LPC at V4.43/V3.97 or greater.
- Mains Powered Interface units are compatible with control panel cards:
  MCC/MCB at V4.43/ V3.97 or greater and LPC at V4.41 / V3.97 or greater.
  For Door holder applications
  MCC/MCB V4.48 or greater and LPC V4.41 or greater
- Mains Powered DAUs are compatible with control panel cards: MCC/MCB at V4.41 or greater and LPC at V4.39 or greater.
- Beam sensors are compatible with control panel cards:
  MCC/MCB at V4.41/ V3.96 or greater and LPC at V4.39 / V3.96 or greater.
- LV interfaces are compatible with control panel cards:
  MCC/MCB at V4.37/ V3.94 or greater and LPC at V4.35 / V3.93 or greater.
- micro DAUs are compatible with VA control panel cards:
  MCB at V4.22 or greater and LPC at V4.20 or greater.
- S3 Mark 2 and S-Quad devices are compatible with control panel cards:
  MCC V4.30 /V3.90, MCB V4.30 and LPC V4.30 / V3.90
  The above minimum recommendations supersede the historical minimum: MCC at V4.21/V3.90 or greater (MCB at V4.19 or greater) and LPC (short card only) at V4.19/V3.90 or greater
- S3 Mark 1 devices are compatible with control panel cards: MCC/LCC at V4.10/V3.70 or greater and LPC at 4.11/V3.81 or greater
- 34000 devices are compatible with control panel cards: V4.00 / V3.40 or greater

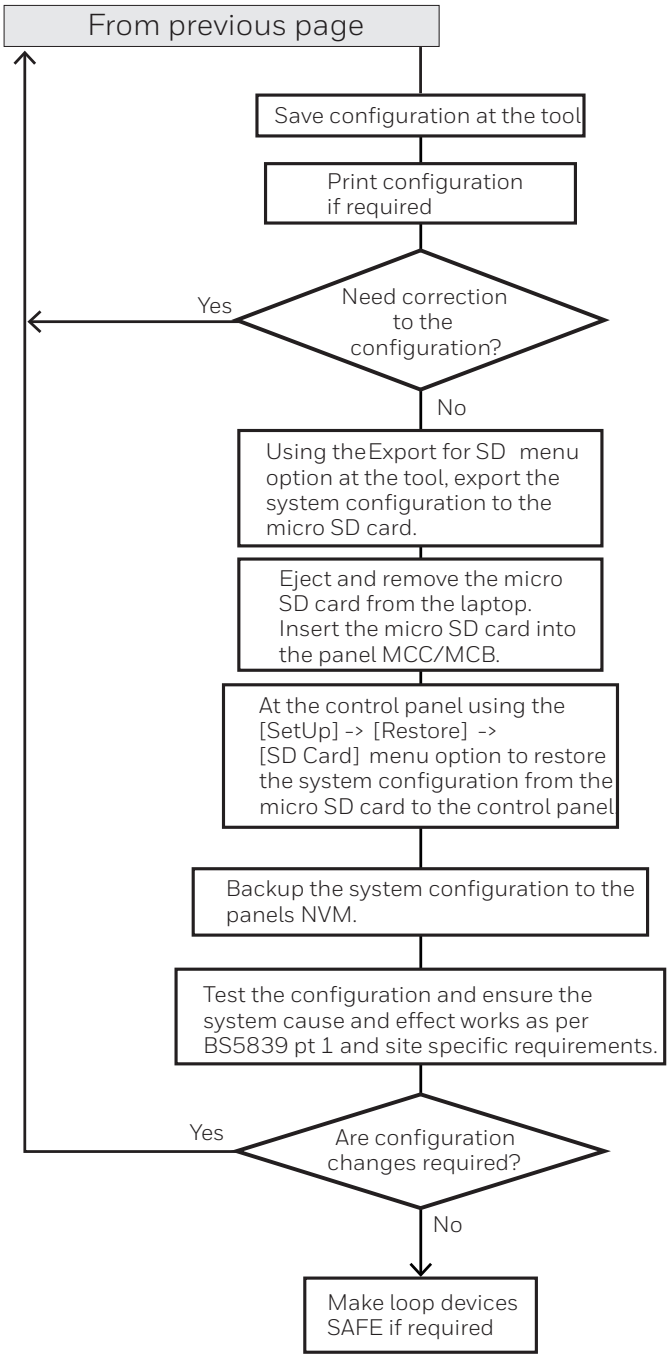
> ! The interface unit part number AS-1171 is designed for use with the AS-2000 system and is not for use in a Vigilon systems.

Configuration process using SD Card method

This SD card method of configuring a fire system is only applicable for panel based system having MCC and MCB at V4.54 or higher with SD Card feature. This method is used instead of having a physical cable connection between panel and Commissioning tool to transfer data.

The flowchart below gives an overview process to save the configuration at the panel to an SD card. The file is then opened at the tool and the cause and effect is configured to meet the recommendations of BS5839 Part 1 and site specific requirements. The Config file is exported to the SD card for restoration at the panel.



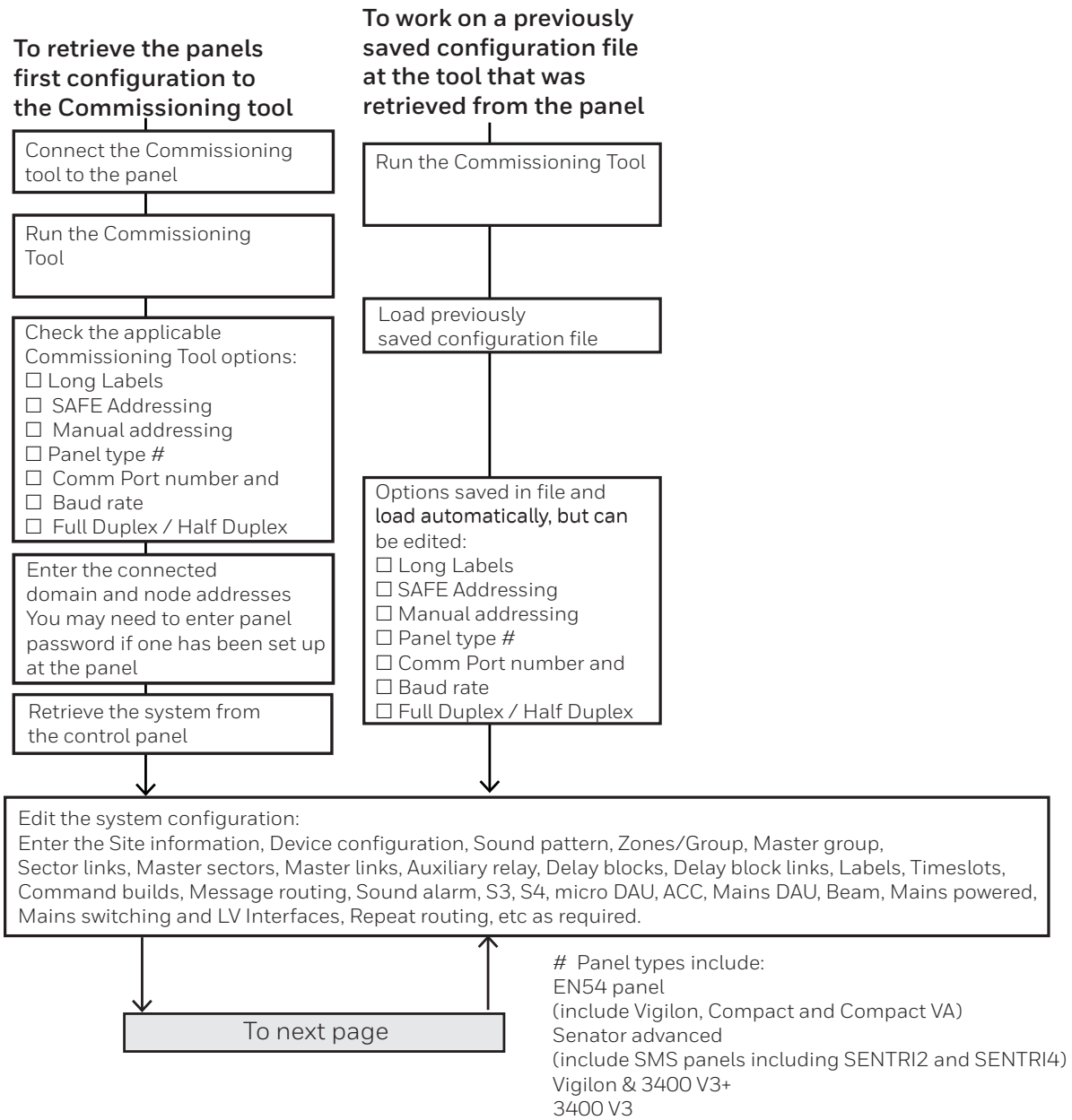

From previous page
Save configuration at the tool
Print configuration if required
Need correction to the configuration?
Yes
No
Using the Export for SD menu option at the tool, export the system configuration to the micro SD card.
Eject and remove the micro SD card from the laptop. Insert the micro SD card into the panel MCC/MCB.
At the control panel using the [SetUp] -> [Restore] -> [SD Card] menu option to restore the system configuration from the micro SD card to the control panel
Backup the system configuration to the panels NVM.
Test the configuration and ensure the system cause and effect works as per BS5839 pt 1 and site specific requirements.
Are configuration changes required?
Yes
No
Make loop devices SAFE if required

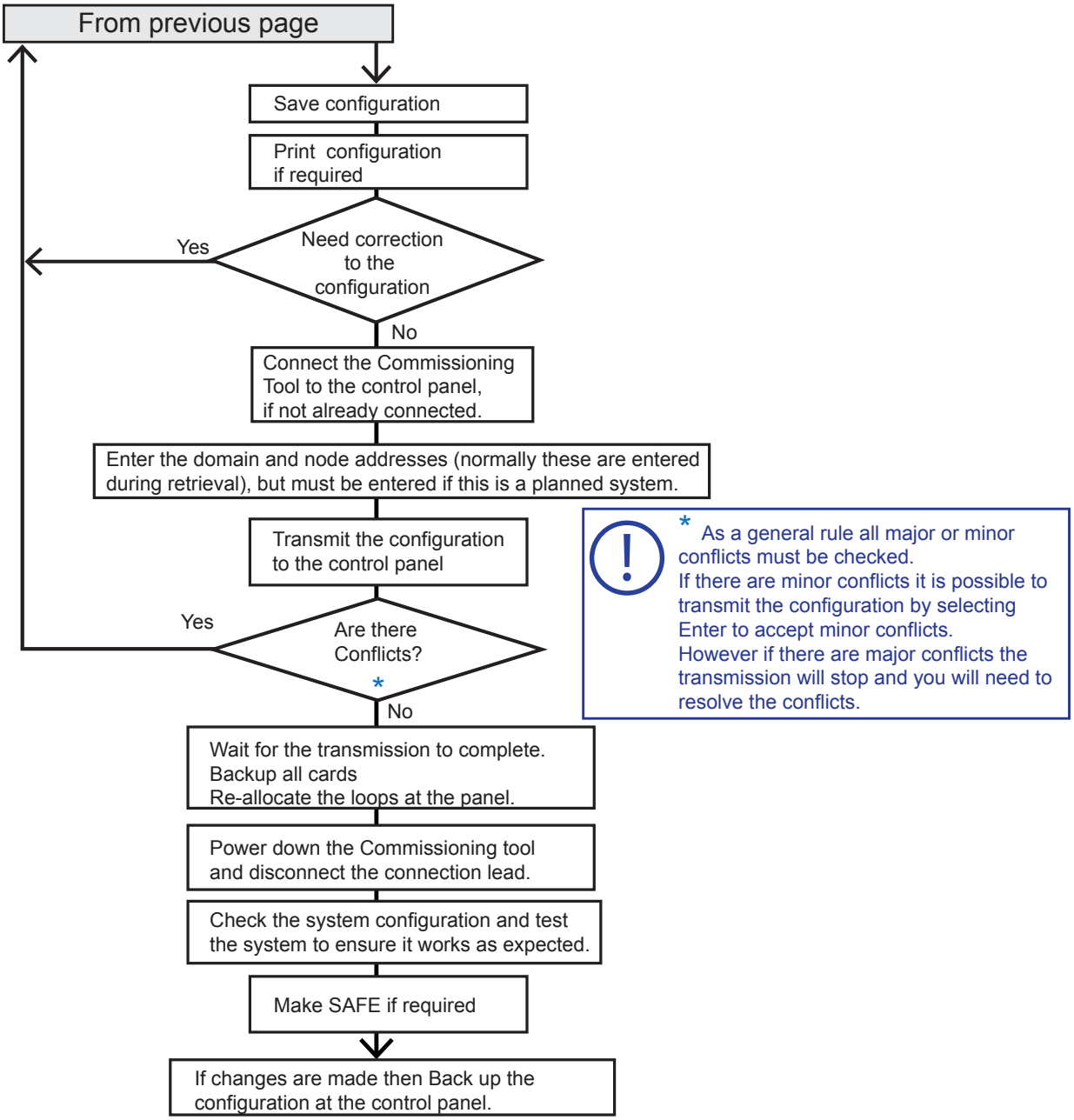
Configuration process using cable method

The cable method of configuring a system involves making a physical connection between the commissioning tool and panel using a cable. This method is also applicable to Plus range of panels.

The flowchart below gives an overview of the process to retrieve the fire system data from the control panel for configuration at the commissioning tool. The configuration is retrieved from the control panel by cable method and once the system is configured it is transmitted back to the control panel.

A fire detection and alarm system must be configured to recommendations of BS5839 Part 1 and site specific requirements.

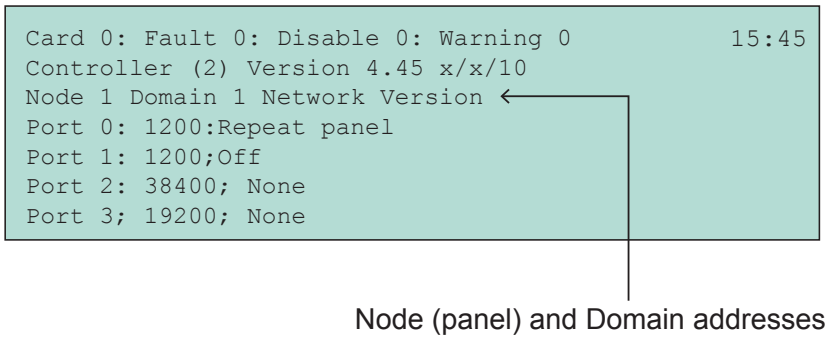



From previous page
Save configuration
Print configuration if required
Need correction to the configuration
Yes
No
Connect the Commissioning Tool to the control panel, if not already connected.
Enter the domain and node addresses (normally these are entered during retrieval), but must be entered if this is a planned system.
Transmit the configuration to the control panel
Are there Conflicts?
*
Yes
No
Wait for the transmission to complete.
Backup all cards
Re-allocate the loops at the panel.
Power down the Commissioning tool and disconnect the connection lead.
Check the system configuration and test the system to ensure it works as expected.
Make SAFE if required
If changes are made then Back up the configuration at the control panel.
* As a general rule all major or minor conflicts must be checked.
If there are minor conflicts it is possible to transmit the configuration by selecting Enter to accept minor conflicts.
However if there are major conflicts the transmission will stop and you will need to resolve the conflicts.

How to find the Node and Domain addresses

Before the first retrieval of system data from the control panel you need to enter at the Commissioning tool the panel node and domain addresses.

You can find the node and domain addresses set at the control panel by viewing the card status of the Main Controller card. At the control panel:
Press Menu On/Off button -> [Info] -> <etc> -> [Usercode] -> [Status] -> [Card] -> enter '0' to view the status of the Main Controller Card, the display will show:



It is important to check and ensure the domain and nodes addresses that are set using the switches are consistent with those displayed at the panel.

DOMAIN ADDRESS

By switches:
A bridged network has the Domain Address set via DIL switch on the Domain Bridge IO card installed in the Control panel or Network (Terminal) node on the network. At an EN54 4/6 loop panel the domain address is set using the dual-in-line switch pack on the DKC, located on the inside of the inner door. These switches at a legacy BS 4-Loop panel set the node address.

By panel menus:
The control panel has its Domain address set via menu options and is held on the Master Controller, Card 0.

NODE ADDRESS

By switches:
The Node address is the address of the Control panel or Network node (Terminal node), which defaults to 1 and can be adjusted to another setting at the network card.

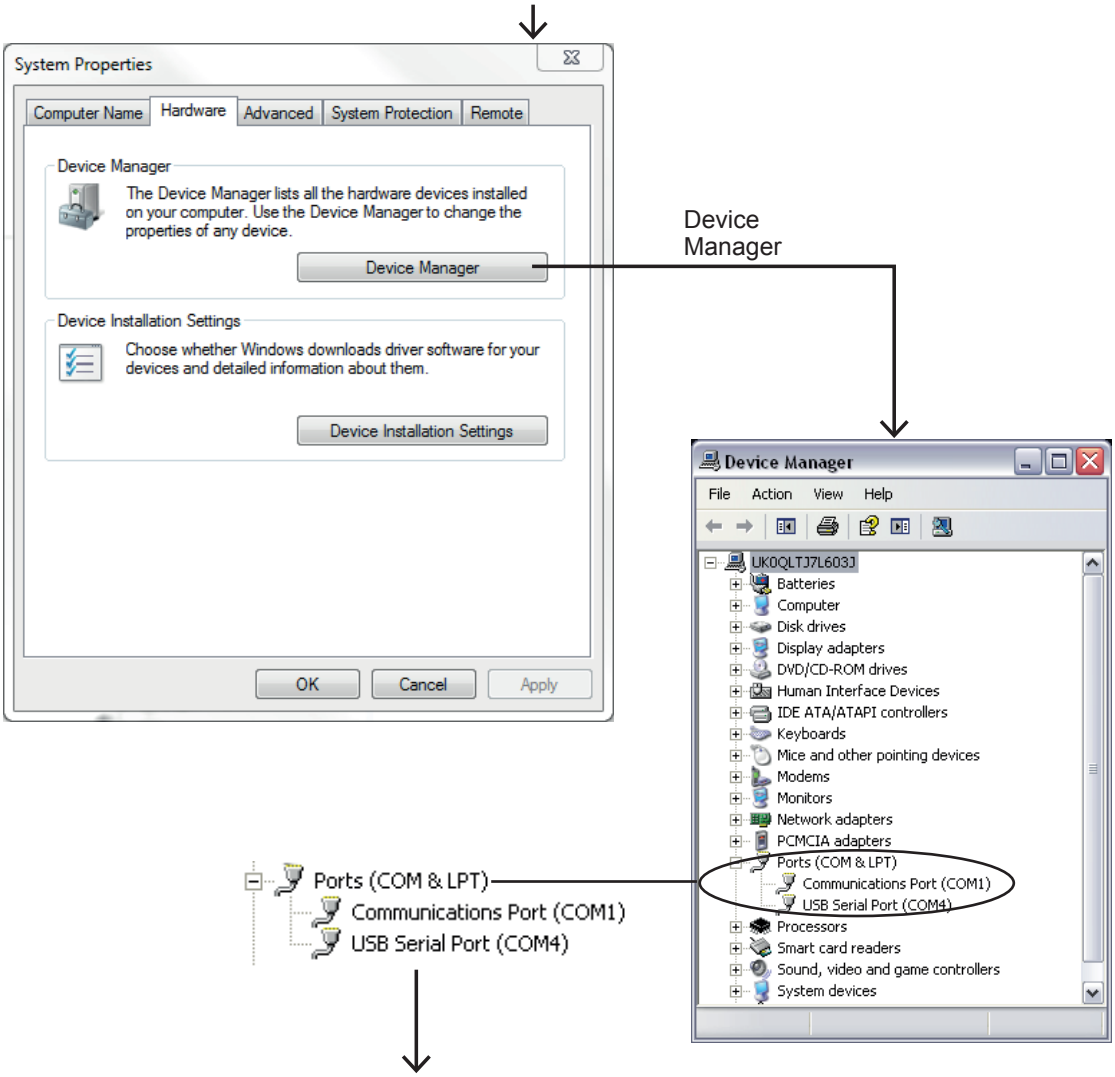
By panel menus:
The node address can be set using the menu options at a panel. The node address is stored on the Main Controller.

HOW TO DETERMINE THE USB COMM. PORT NUMBER

The Commissioning tool will need to know the port address being used by the laptop to communicate with the control panel. It is assumed the USB driver is already installed on the laptop. The USB driver is available to install after installation of Commissioning tool. The Commissioning tool can be downloaded from www.gentexpert.co.uk or www.smstoolbox.co.uk websites.

To find the port address being used:

At your computer from Windows START ->
Control panel -> System -> Change Settings ->Hardware tab



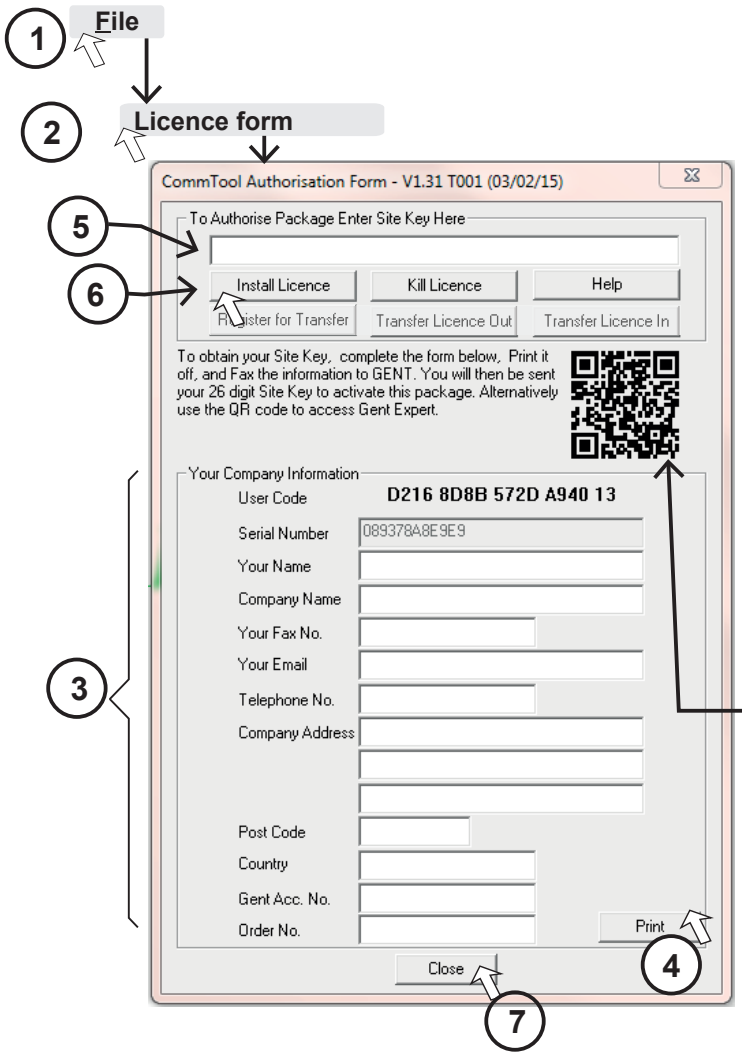
This example shows the USB port being used is COM4.
You will need to find the USB port used on your Commissioning tool

Licence Form - *File Menu*

Menu option	you can use this option to...	notes
Licence form	...to obtain a licence. Take a note of the User Code. Go to the respective web site to obtain a site key: www.gentexpert.co.uk or www.smstoolbox.co.uk Site key can also be obtained by phone call to Technical Support in the event internet access is not available. Alternatively you can fill in the fields of the licence form ③. Print the form ④ and email it to technical Support. Technical Support will provide your 26 digit 'site key'. Enter the 26 digit site key into the field ⑤ and select **Install Licence** ⑥.	You will need a licence to allow Commissioning tool to communicate with the fire alarm panel. Before you proceed ensure you read the licence agreement located under the menu: **File -> Licence Agreement**.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).

Menu selection



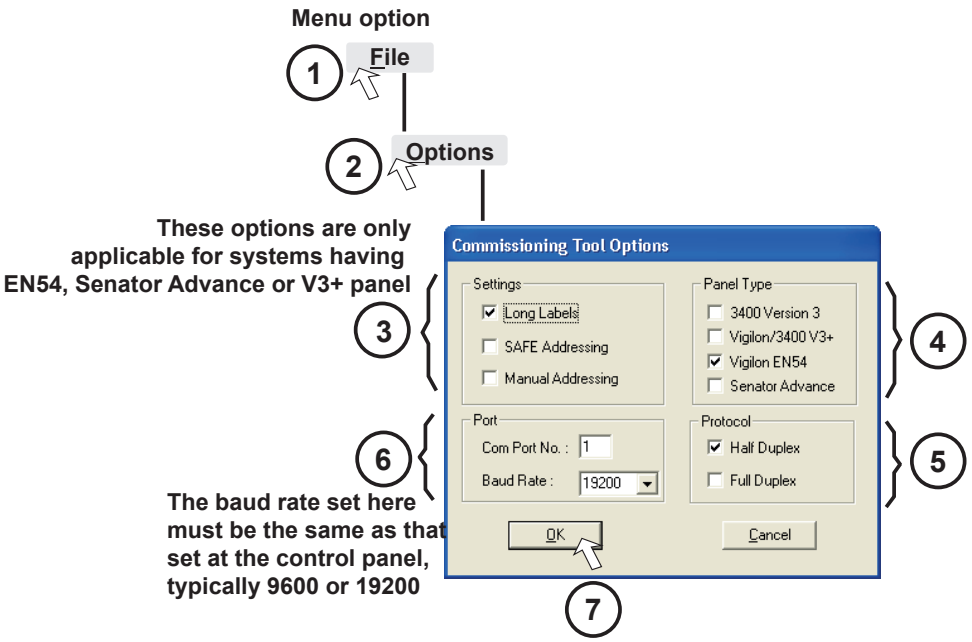
NOTE: The Licence Transfer feature is no longer available with Commissioning tool V1.33 or greater.

Scan this QR code using a reader on a smart mobile phone to get to Gent Expert or SMS toolbox website.

Options - *File menu*

Menu option	you can use this option to..	notes
Options The 'Options' settings are only necessary for system configuration using the wired method of transferring configuration between Commissioning tool and panel.	... tell the Commissioning tool about the **Panel type** if you are using **Long labels** and SAFE addressing ③. The **Port** settings ⑥ allows data communication between the Commissioning tool and the Control panel. Select **Control panel type**: ◘ Vigilon panel EN54 (make this selection for Vigilon Plus, Compact Plus, Vigilon, Compact and Vigilon Compact VA ◘ Vigilon/3400 V3+ (select this check box if a legacy BS panel is being commissioned (later 3400's, 34000, Vigilon(BS) ◘ 3400 (V3) ◘ Senator Advance, SenTRI ◘ 2-loop, SenTRI 4-loop, (CP2 and CP4 panels).	Use the [Info] menu at the control panel to check if long labels and safe addressing are being used. Check also the baud rate settings. This information is found by viewing the status of Card 0. The baud rate is set using the [Test/Eng] menu. On an older panel the baud rate is set at the IO Card, by configuring the switches. **Long label**s ③ : Long Labels are applicable for all except 'V3' - 3400 panel type. **SAFE addressing** ③ : SAFE addressing is only applicable for BS-'V3+', EN-'V4' and 'Senator Advance' panels. This box must be selected ONLY if panel has been SAFE addressed. **SAFE addressing** when selected allows the user to manually set addresses given to devices, no attempt is made to allocate addresses automatically. **Comm Port number** ⑥ : Communication port number is the socket at the Commissioning laptop to which the control panel is connected. Baud rate should be the same as that set at the control panel. **Panel type** ④ The connected 'control panel type'. **Protocol** ⑤ : Protocol is set to match the panel. Generally BS-'V3' and BS-'V3+' panels are half duplex and EN-'V4' and Senator Advance panels are full duplex. By changing the domain address to a whole number the communications become full duplex.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).

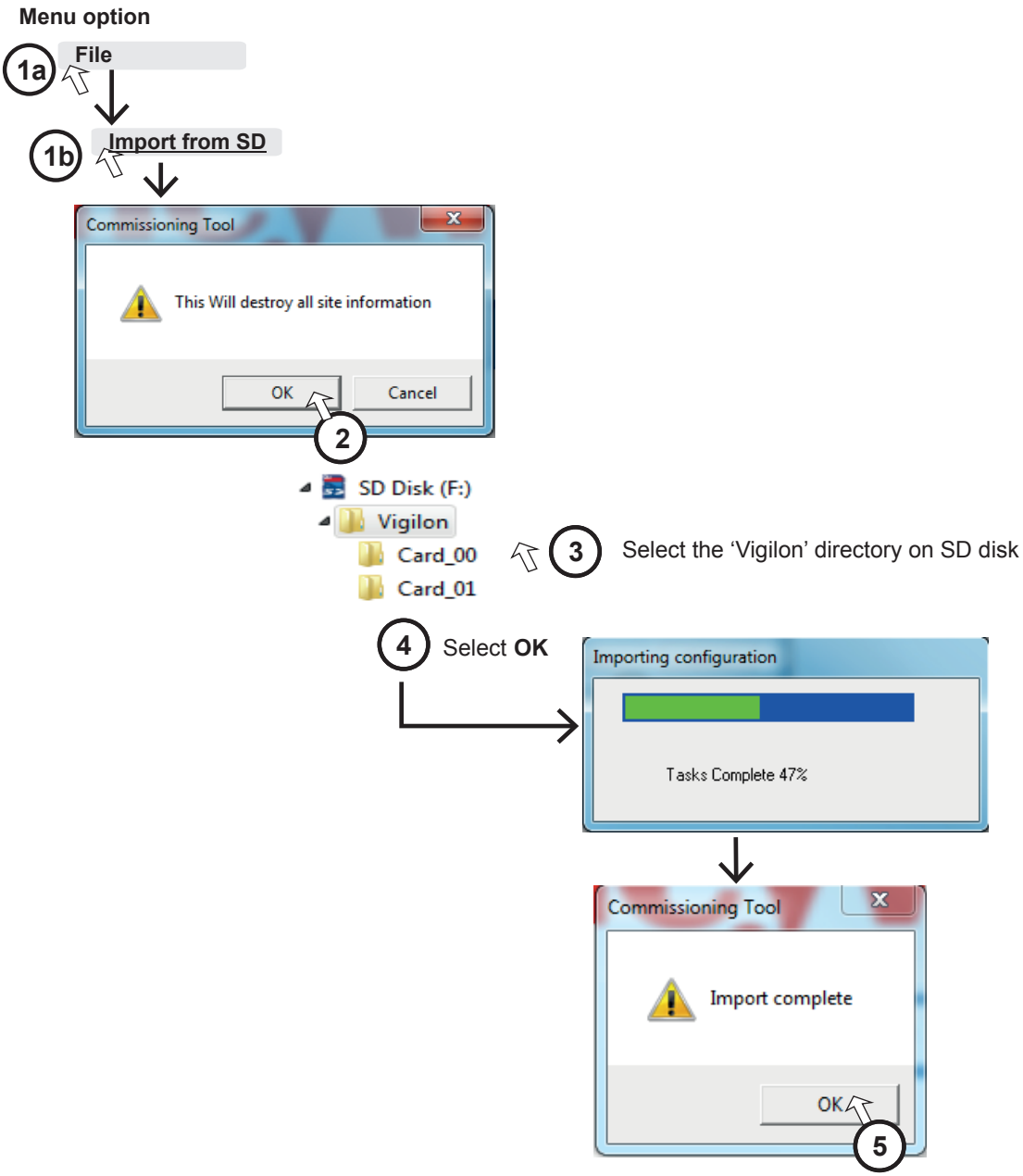


Import from SD card - *File menu*

(SD card method)

Menu option	you can use this option to..	notes
Import from SD	... lets you select the 'Vigilon' ③ directory on the SD card that holds the site information for import to the tool ④. **Tip** Ensure the lock switch slider on the SD card reader is in the unlocked position before use.	On selecting the Import from SD card option it will destroy all existing Site information at the tool and the site information held on the micro SD card will be imported into the Tool.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).



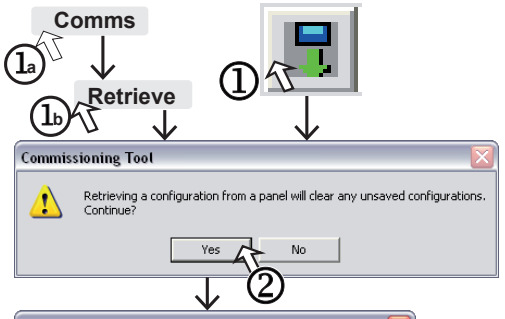
Retrieve Configuration - *Comms. menu*

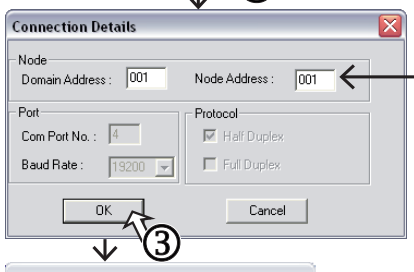
(Wired method)

Menu option	you can use this option to..	notes
Retrieve Configuration	... retrieve the system configuration from the control panel. The retrieval will bring the loop device addresses and system configurations to the Commissioning tool. Before retrieval of site information to the Commissioning tool, ensure the tool is connected to the control panel and the 'Options' are set: i.e. panel type, port, baud, SAFE and Long labels.	It is important to ensure all loop circuits have been fully allocated and that there is no fault indication given at the control panel. In general the default Domain address is 0 for a legacy BS system and 1 for an EN system. Also the Node address defaults to 1. Both addresses are set at the control panel.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).

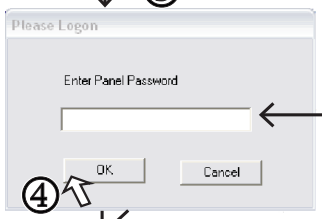
Menu option





The default addresses are:
- for an EN system Domain = 1 and Node = 1
- for a BS system the Domain = 0 and Node = 1

Always check the status of MCB/MCC of the panel, where this information is displayed.



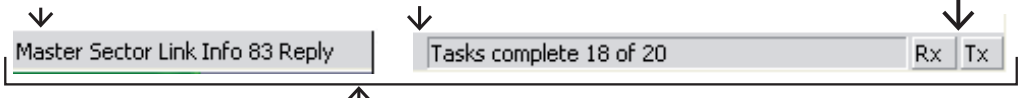
A password entry is only needed if a password is set up at the panel. Simple check is to select Test/Eng at the panel and see if commands under user code requires a password entry.

Control panel display shows:

```
Time:13:45.44  Fri  23 July 2010
Master polling
```



As the retrieval takes place you will see Tx and Rx busy. There are 20 tasks and these will be displayed as the tasks are done. To the bottom left of the display you will see what data is being retrieved. **Note this can take several minutes.**



On completion the Control panel's display reads:

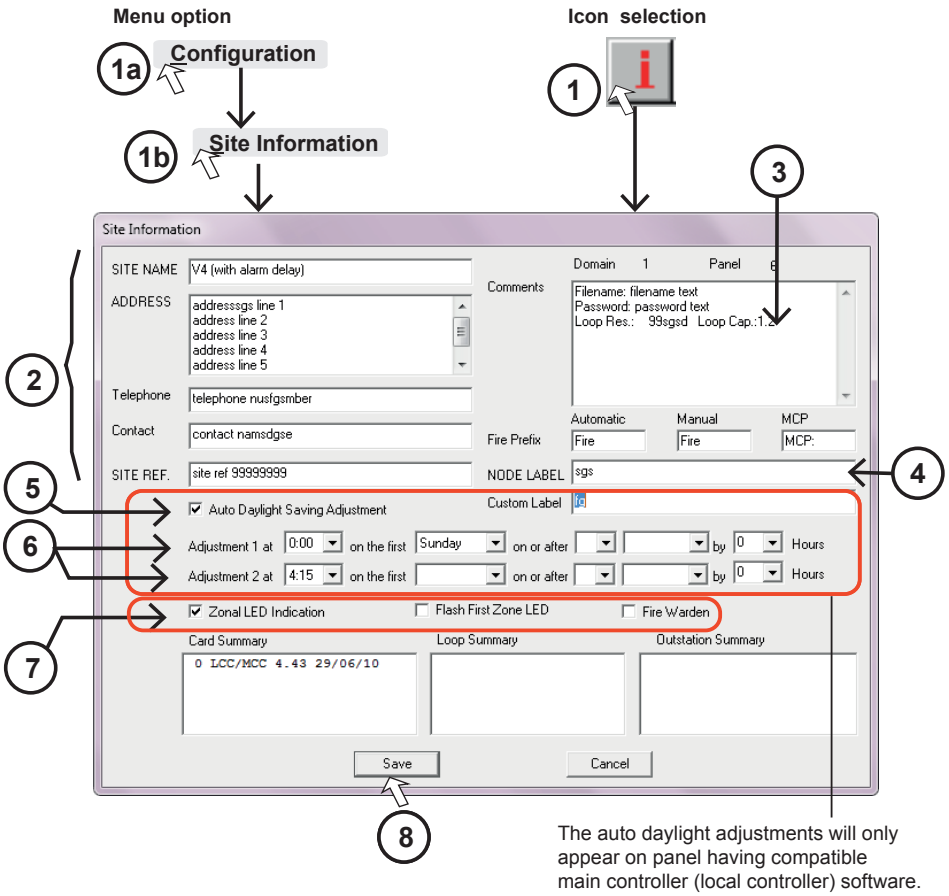
```
Time:13:48.44  Fri  23 July 2010
Communication stopped
```

The tool will show 'Stopped Panel communication' in the bottom left of the Status window

Site information - *Configuration menu*

Menu option	you can use this option to..	notes
Site Information	… to enter Site information. The site information box include fields for entry of: Site name, Address, Telephone number, contact, Site reference, ③ Textual comments and ④ Node label. In countries where daylight saving time adjustment is required, you will need to check the box labelled Auto Daylight Saving Adjustment⑤ and fill in Adjustments 1 and 2 ⑥. Note this option is only displayed if the panel software version is high enough. Adjustments 1 and 2 can be set forward / backward to accommodate daylight saving requirements. Check boxes ⑦. The zone indicators are not used on a Network node so uncheck the **Zone indicator** box. The first zone in fire can be set to flash by checking the **First zone** check box. With **Warden** checked it will cause the panel to not go into fire alarm but instead display a 'not reset properly' message when smoke has not cleared from sensor. Unchecked, it will cause the fire system to operate EN54 mode. Supported with MCC/MCB at versions 3.98 / 4.57 and above and comes into effect when a device is re-enabled.	The comments field ③ can be used to enter information like filename, password and notes about the site. This data is for engineer reference only and is not sent to the panel. The 'summary' provides information on Cards, Loops and Devices. The essential fields such as site name, address, site reference and node label must be entered, otherwise you cannot progress further.

Operation (The numbers ①②③④….show an order in which to enter data or make selections).

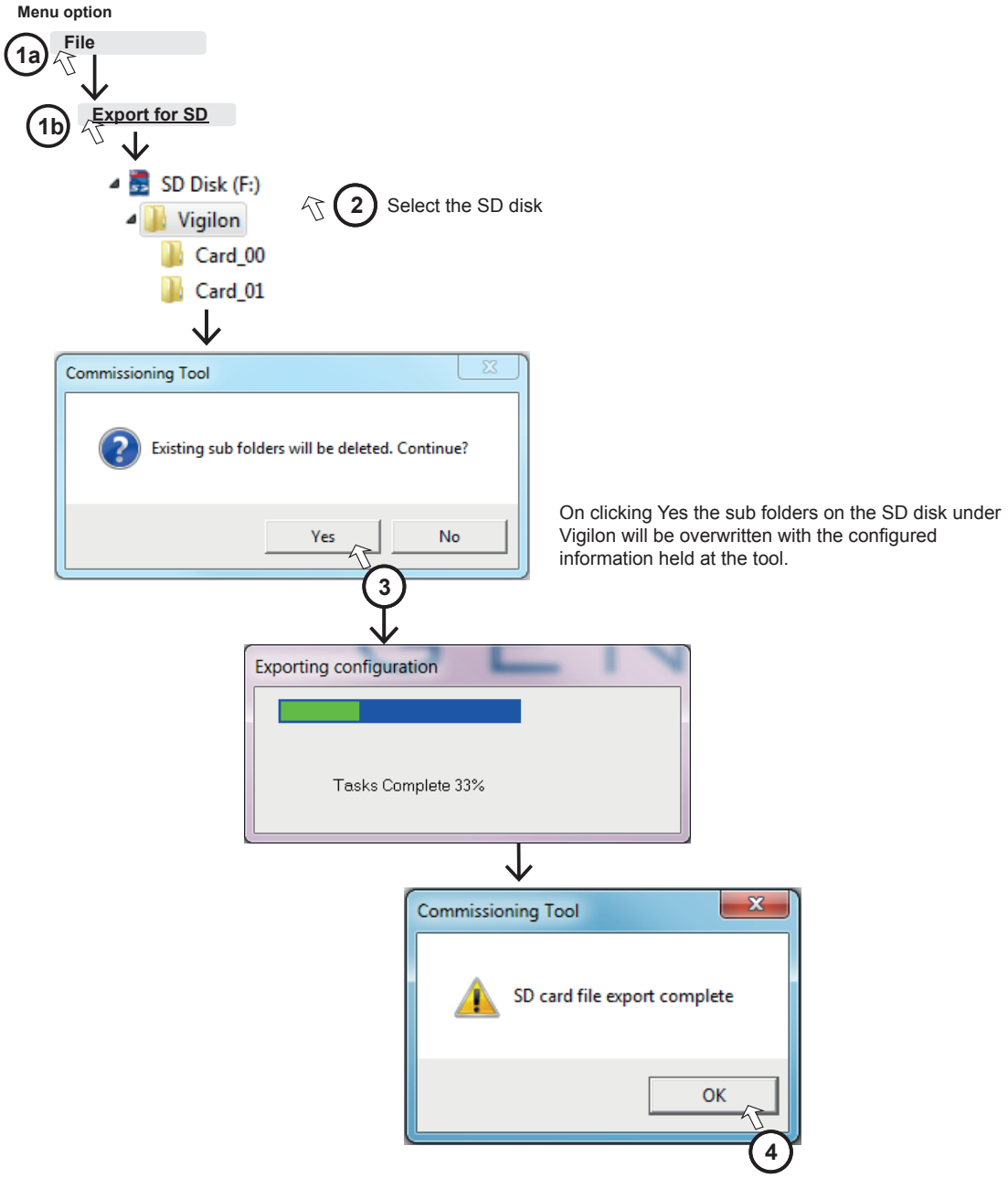


Export for SD card - *File menu*

(SD Card method)

Menu option	you can use this option to..	notes
Export for SD	... lets you export the site information held at the Commissioning tool to the micro SD card ②. **Tip** Ensure the lock switch slider on the SD card reader is in the unlocked position before inserting it into a suitable card reader connected to the tool.	On completion of this process take the micro SD card to the control panel and insert it into the SD slot on the MCC/ MCB at the panel. The configured site information is restored to the panel by following the panels restoration procedure [Setup] -> [Restore].

Operation (The numbers ①②③④....show an order in which to enter data or make selections).

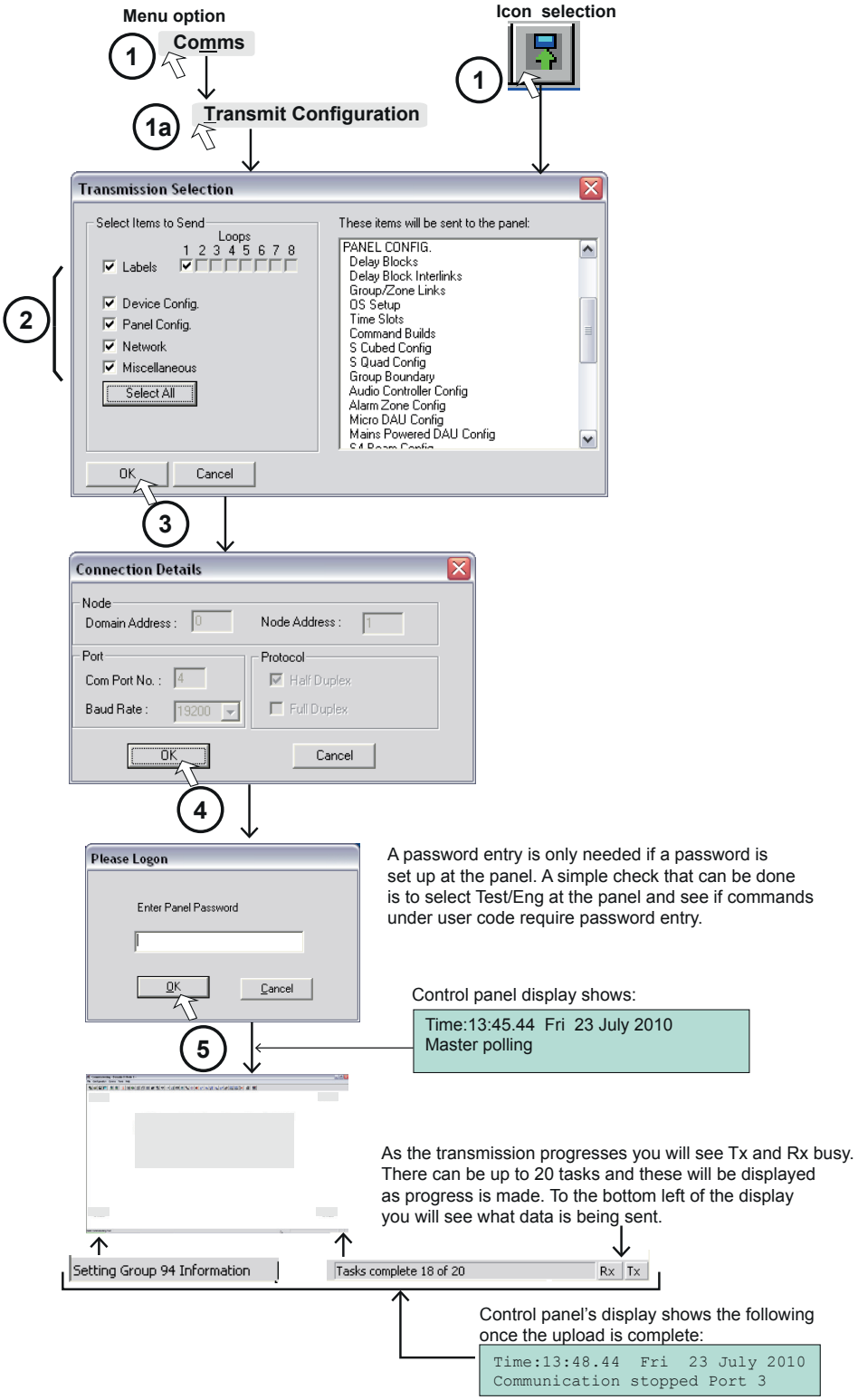


Transmit Config. - *Comms. menu*

(Wired method)

Menu option	you can use this option to..	notes
Transmit Configuration	… .. transmit the configuration held at the Commissioning tool to the control panel. Before you transmit ensure the panel is connected to the Commissioning tool.	The transmission items can be selected on a loop by loop basis ② with further selection to individually transmit only the labels, device configuration, panel configurations, network configurations and/or miscellaneous configuration. Alternatively you can select all items, which is recommended.

Operation (The numbers ①②③④….show an order in which to enter data or make selections).

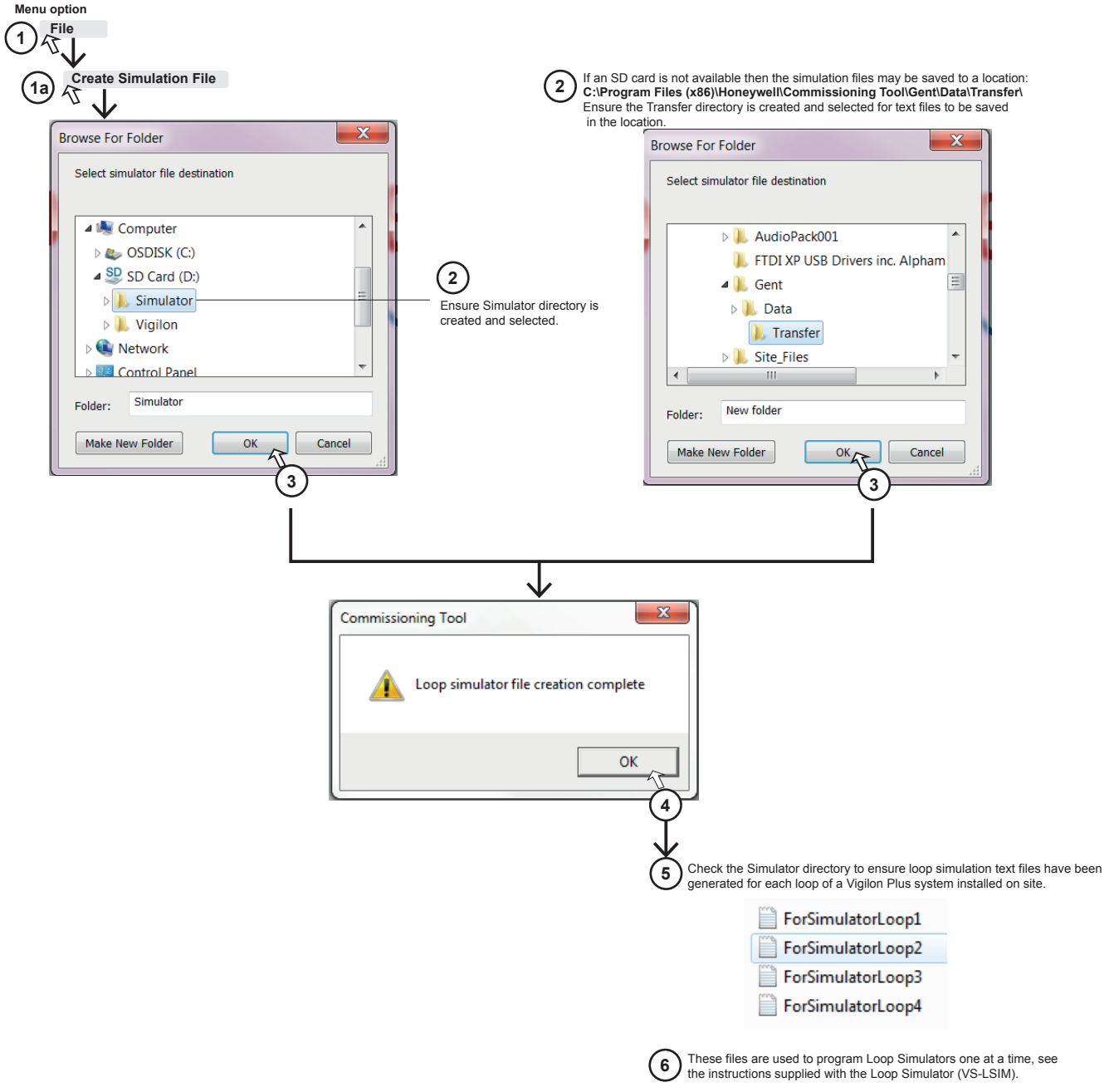


Create Simulation file - *File menu*

Menu option	you can use this option to..	notes
Create Simulation file	..create simulation files for Loop Simulators. Note this process generates simulation text files (.txt).	The simulation text files (.txt) are created for each loop and saved to the SD card location: **Simulator** Loop Simulators are connected to loops of an off site Vigilon plus panel. A loop's text file is renamed to autoload.txt for programming a Loop Simulator (VS-LSIM). The SD card is then fitted to a Loop Simulator PCB. Follow the instructions supplied with the Loop Simulator to program it to simulate a site loop a the off site panel.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).

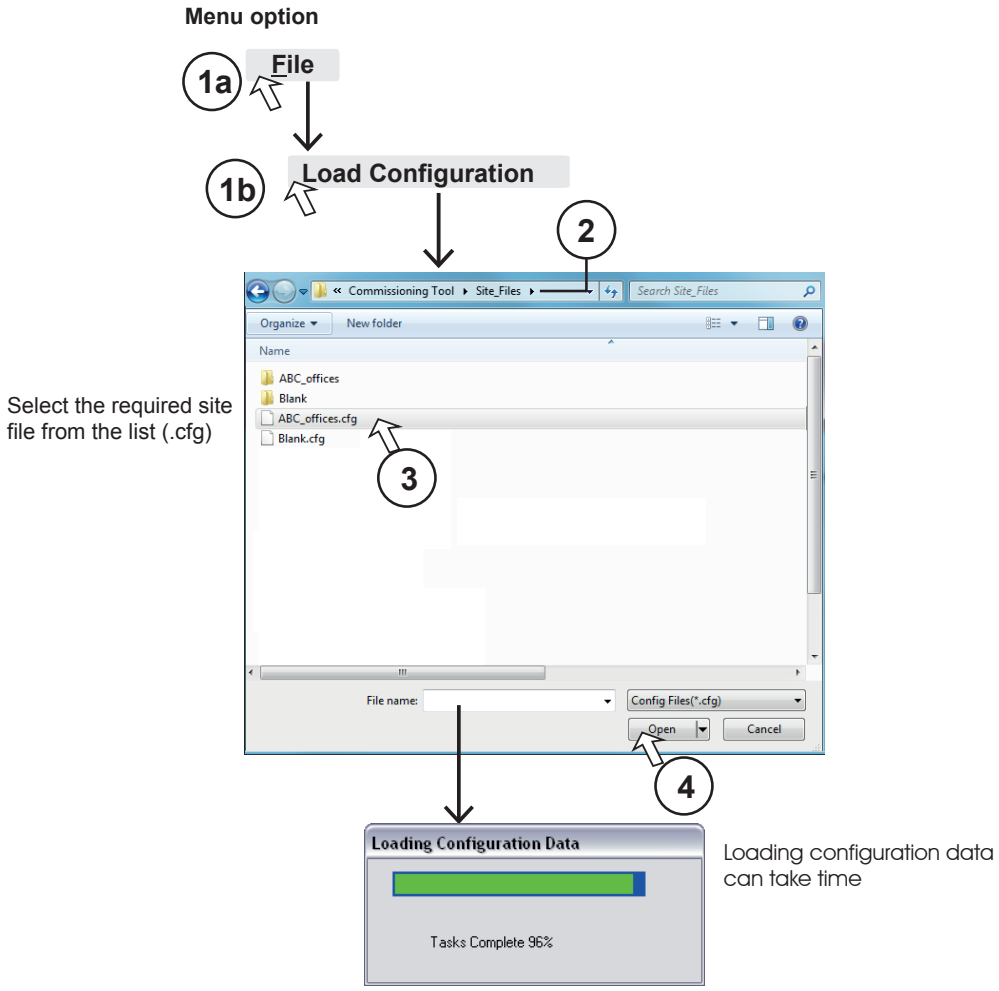
Note: These procedures assume a site configuration is loaded on the Commissioning tool



Load Configuration – *File menu*

Menu option	you can use this option to..	notes
Load Configuration	..load an existing site file (.cfg) held on the laptop on which Commissioning tool is installed.	The site file ③ to be loaded must have previously been saved to the 'Site-files' directory. The file may have been saved elsewhere in which case go to the required directory and open the required file. Generally configuration files are held in location shown below, but they can be anywhere: C:\Program Files\Honeywell\ Commissioning tool\Site_files ②.

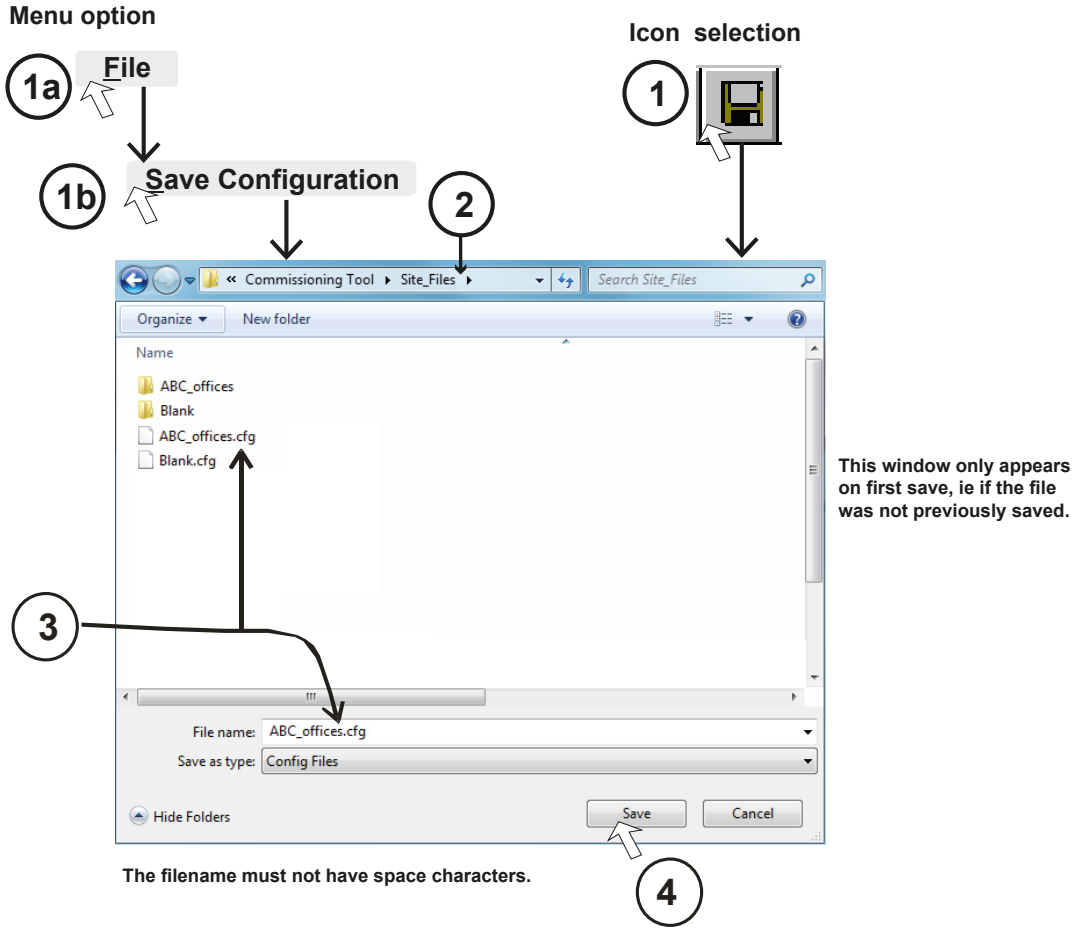
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Save Configuration - *File menu*

Menu option	you can use this option to..	notes
Save Configuration	..save the configuration to a file in the Site_Files folder located in the Commissioning tool directory.	It is a good idea to save any work done to the file every 15 - 30 minutes. In general a filename must not contain spaces and should be such that it can easily identify the site.

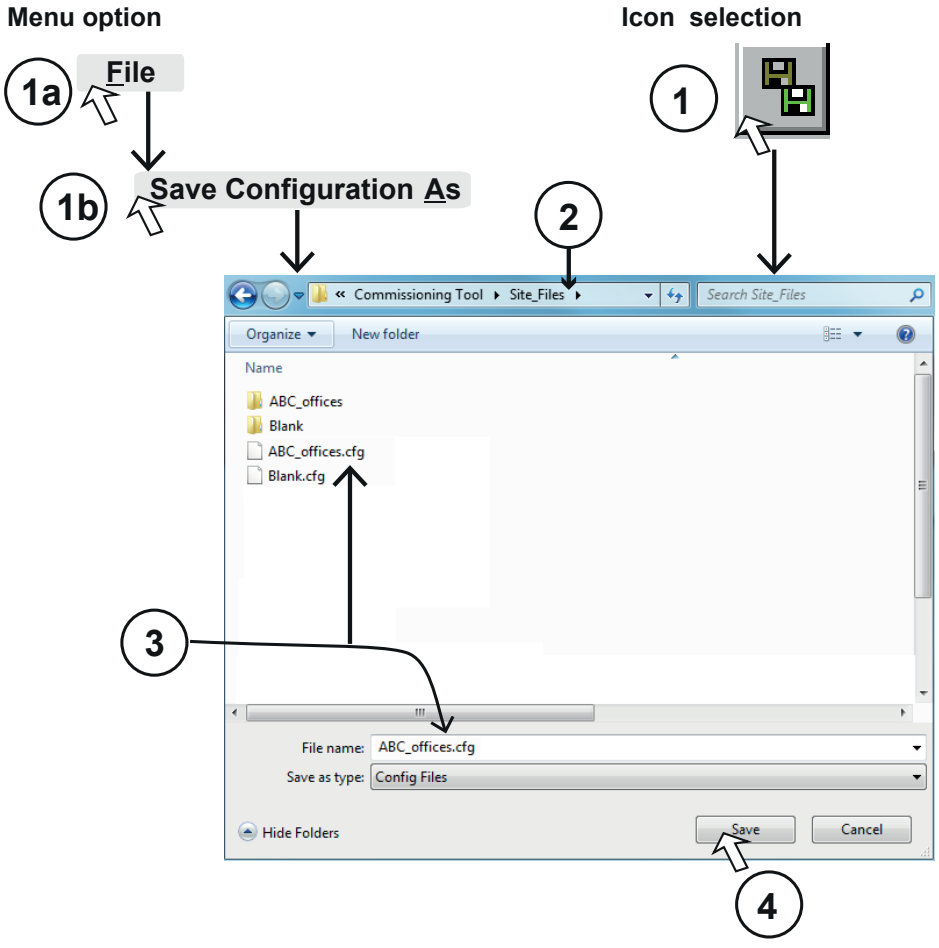
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Save Configuration As - *File menu*

Menu option	you can use this option to..	notes
Save Configuration As	.. save the configuration file under another name.	On retrieval of the system configuration it is important to save the configuration to a site file on the laptop. A suitable filename should be given to identify the site. To avoid original data being lost ensure you carry out a Save As and create another work in progress file, to avoid losing the original data. In general a filename must not contain spaces. Generally configuration files are held in location shown below, but they can be anywhere: C:\Program Files\Honeywell\ Commissioning tool\Site_files ②.

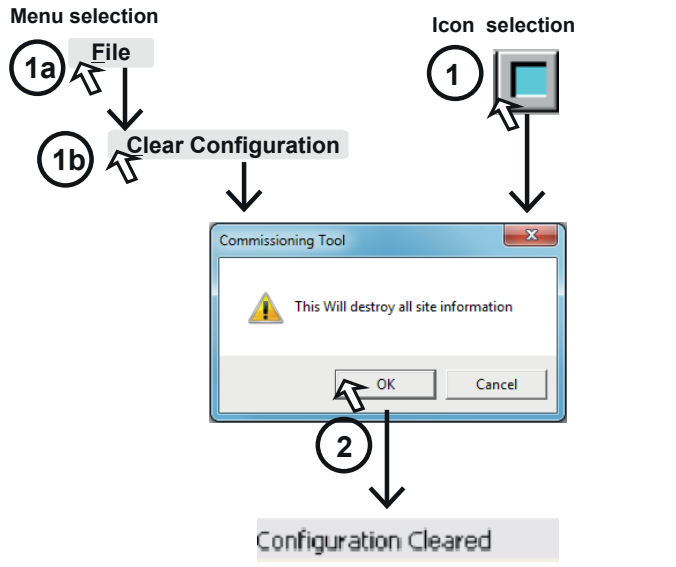
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Clear Configuration- *File menu*

Menu option	you can use this option to..	notes
Clear configuration	.. clear all the configuration data held in a configuration file but leave the addresses and label data intact.	If for any reason the configuration entered is incorrect and starting again would make sense, then use this menu option. Note this does not return the panel to its default state it ERASEs all the configuration.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).

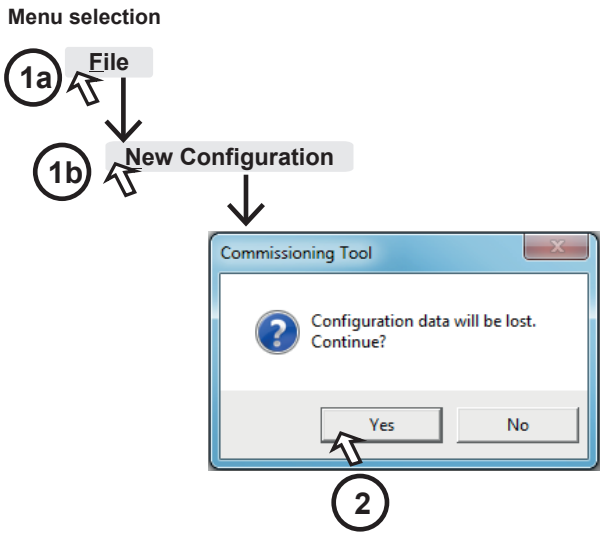


Wait until the configuration is cleared

New Configuration - *File menu*

Menu option	you can use this option to..	notes
New Configuration	.. completely delete all configuration data including labels and addresses.	This menu option should be used before starting fresh work to ensure any existing entries are removed. ⚠ Selecting 'New Configuration' will delete all entries made earlier.

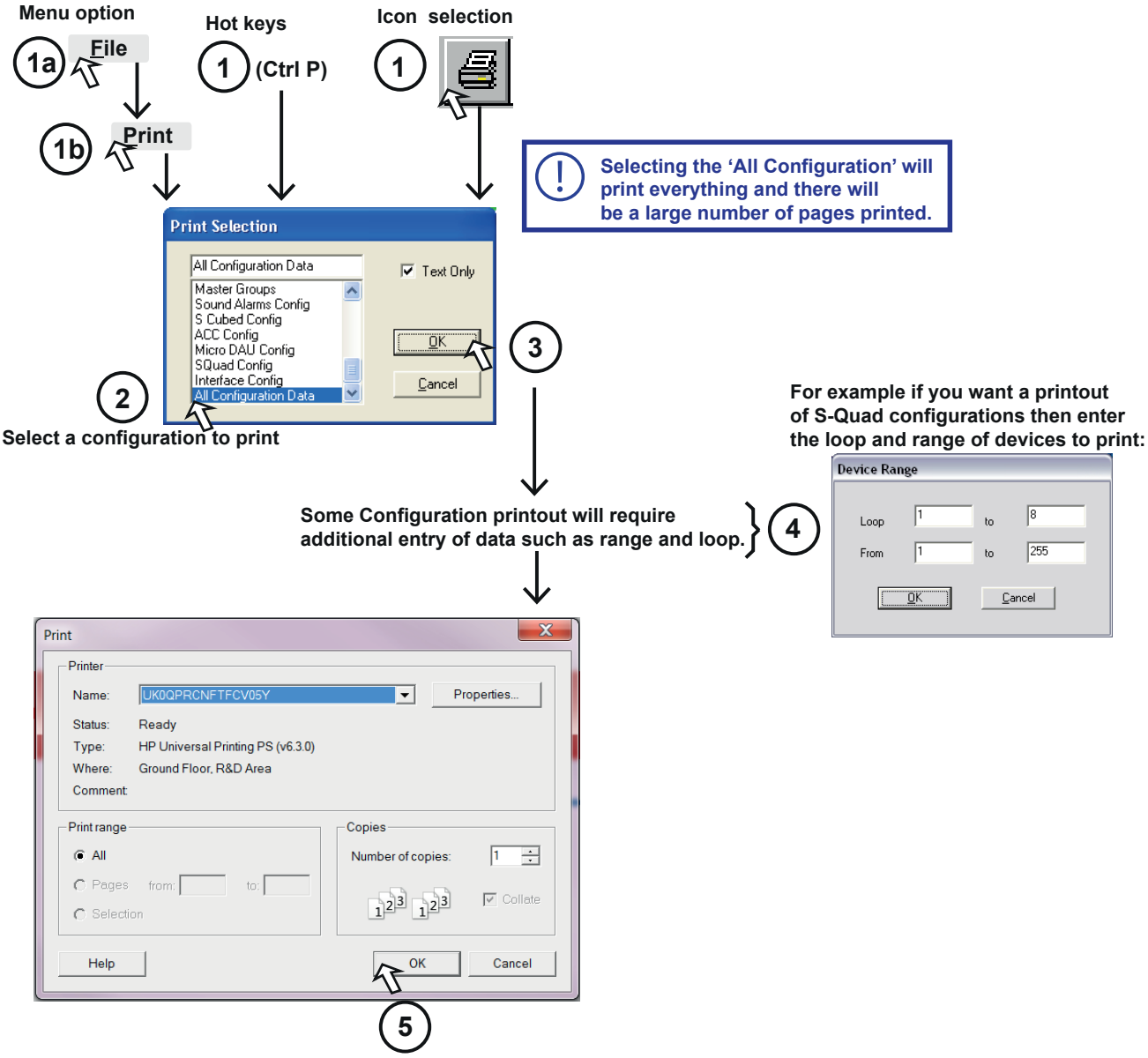
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Print - *File menu*

Menu option	you can use this option to..	notes
Load Configuration	..selectively print the site configuration data ② to the connected printer. The required printout can be of ④ device configurations, groups/ zones, Command build labels, sectors, auxiliary relays and timeslots, etc.	Ensure the printer is connected and has been set up correctly. If the Text only check box is checked then the printout will not show lines and boxes.

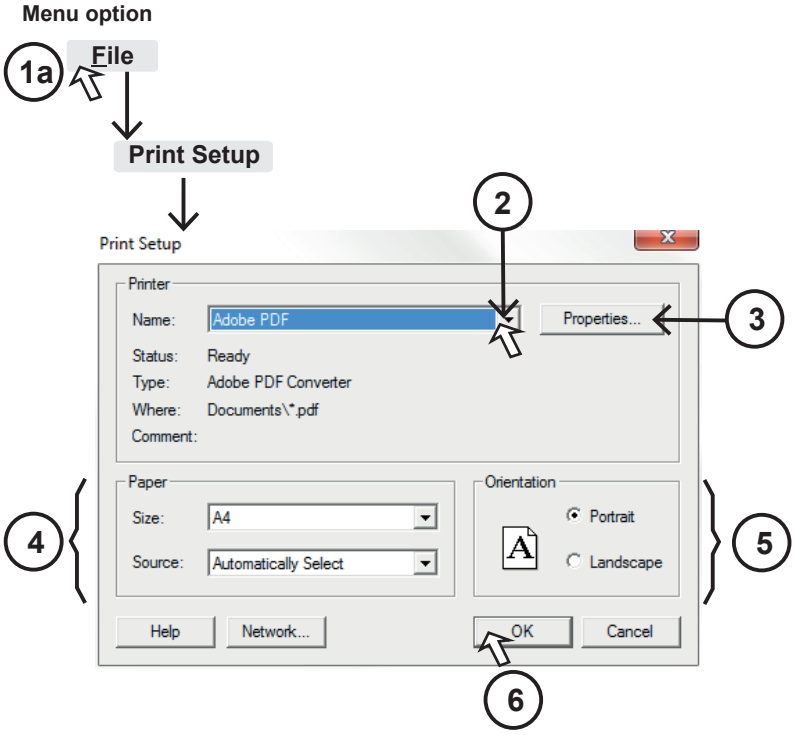
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Print setup - *File menu*

Menu option	you can use this option to..	notes
Print Setup	.. set up the Commissioning tool to print to a connected printer.	Check the printer name k is correct and its properties l are correctly set up.

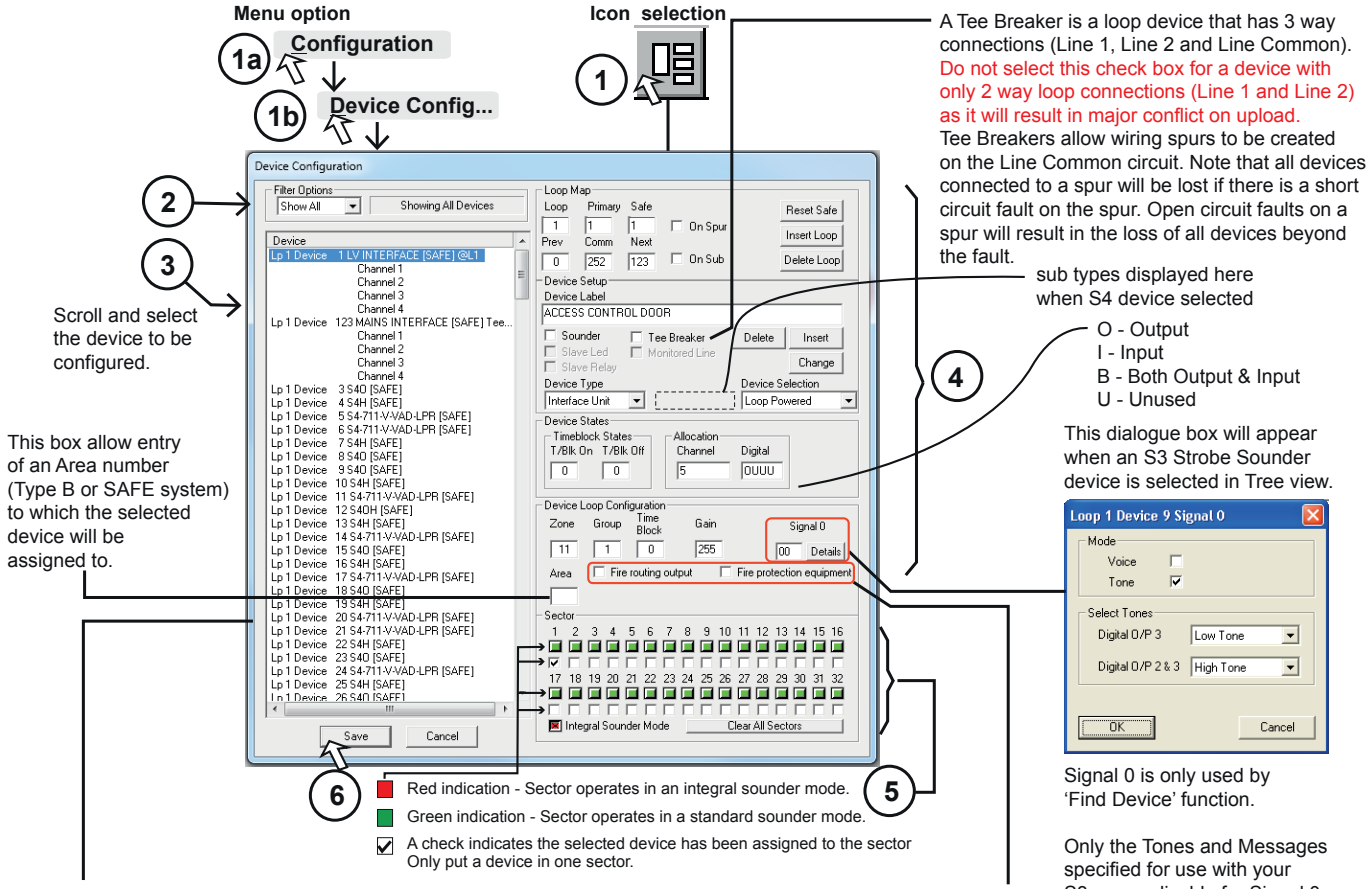
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



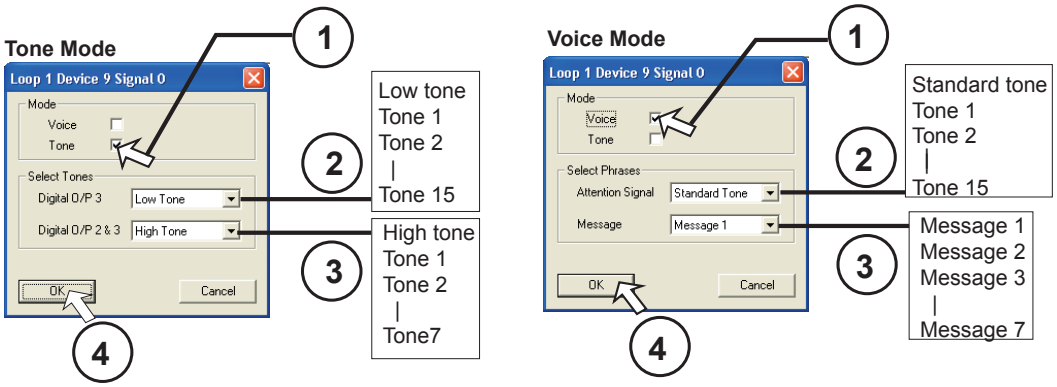
Device Configuration - *Config. menu*

Menu option	you can use this option to..	notes
Device Configuration	..display and edit the configuration of a device, like S-Quad (Sentri) fire sensor (and their sub category), MCP, S3 alarm device and interface units ③ that are installed on a loop circuit, including Wireless devices working off LRT. A device can be given a label and configured to operate in a Sector, Group/Zone and with Timeblock ④. Sectors can be configured to operate in integral mode ⑤. Devices can be edited, see notes.	Each zone has a common label to meet LPCB requirement of a compliant system. A zone has number of devices. The zone label is displayed in the event of a fire from any device in that zone. Ensure devices are physically inserted or removed. Then these devices are manually inserted or removed at the Commissioning tool. This ensures we have matching loops at both control panel and tool, which allow upload of configuration without conflict. The process is the same when more Plexus Devices are associated or disassociated with an LRT using the Plexus tool.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).



	Any standard interface unit can be configured as a Fire Alarm Output also known as Fire Alarm Routing Equipment (FARE), by selecting the FARE check box. There can be only one Interface in a system configured as FARE.	Not applicable for SMS. FARE Interface can be any of the following: S4-34420, S4-34450, S4-34401, S4-34404, S4-34440-02, S4-34440-12. The optional confirmation input is advised, however is not part of this compliance certification.
	Any standard interface unit can be configured as a Fire Protection Equipment (FPE) by selecting FPE check box.	FPE Interface can be any output interface, including S4-34411, S4-34415, S4-34420, S4-34440-02, S4-34440-12, S4-34401 and S4-34404, plus equivalent SMS interfaces

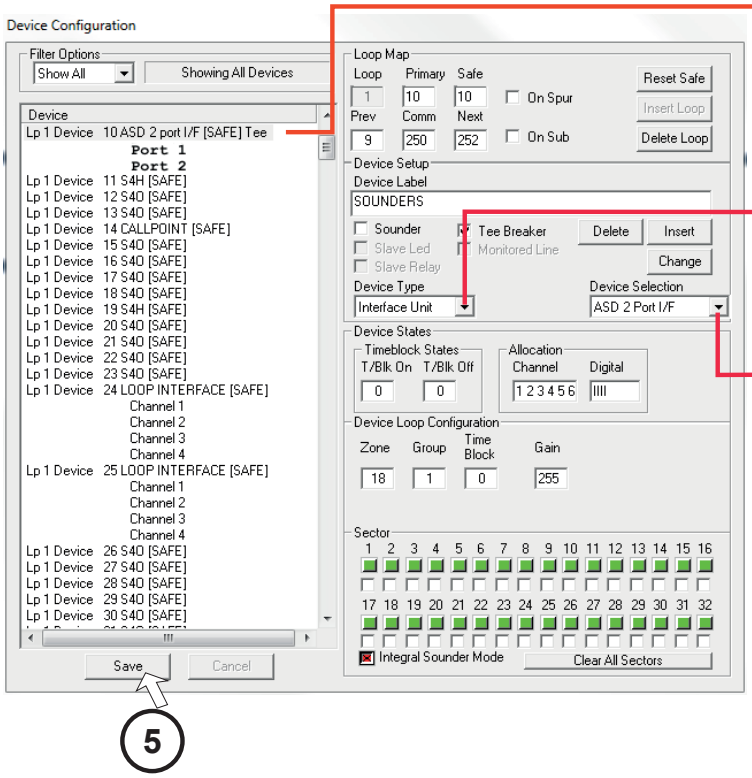


Only configure the tones (Tone n) and voice messages (Message n) specified for the S3 device, see the instructions supplied with the product.

	Tone mode In the Tone mode ① you can set the digital output 3 and digital outputs 2&3. The digital outputs can be set to operate the standard ② low/③high tone which are held at the panel or a complex tone Tone n held in the voice chip of the S3. Only use the tones which are specified in the instructions supplied with the S3 device. Voice mode In the Voice mode ① you can select the attention tone which can be either a standard tone ② or a complex tone Tone n followed by a voice message from a range of messages, Message n ③. Only use the messages specified in the instructions supplied with the S3 device.	Only select the Tones and messages applicable to your S3 device, see the instruction leaflet supplied with the product. The output settings configured for the Digital Outputs 2 & 3 will be activated when 'Find Device' is performed on S3 device, additionally the tone signal given will be pulsed 1s On and 1s Off.

Port configuration of ASD Interface Unit

When configuring an ASD interface unit that is connected to a FAAST unit ensure the required Port setting is selected. Ensure the channels used at a FAAST unit are set correctly in the commissioning tool, ie select the required FAAST interface setting: 'ASD 1 Port I/F' or 'ASD? 2 Port I/F' for FAAST LT units or 'ASD 8100E' for a FAAST 8100E unit.



1 **From the Device tree select the required ASD Interface to be configured.**

2 ***Device Type ensure 'Interface Unit' is selected.***

3 **Configure Device Selector to:**
'ASD 1 Port I/F' or
'ASD 2 Port I/F' or
'ASD 8100E'

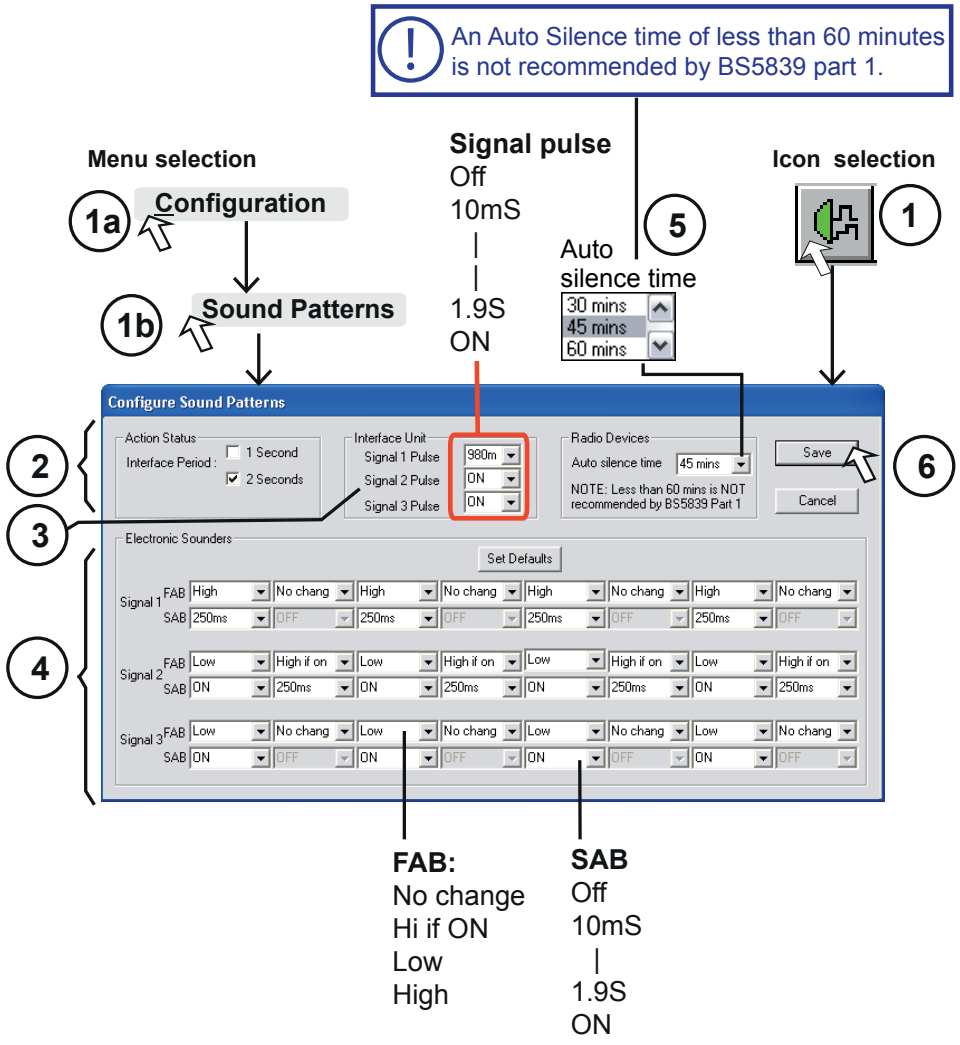
FAAST LT
FL111E-VIG-INT select 'ASD 1 Port I/F'
FL112E-VIG-INT select 'ASD 1 Port I/F'
FL122E-VIG-INT select 'ASD 2 Port I/F'

FAAST 8100
8100-VIG-INT select 'ASD 8100E'

Sound Patterns - *Config. menu*

Menu option	you can use this option to..	notes
Sound Patterns	..set up the sound outputs of signals 1, 2 and 3. The FAB/SAB settings can be made for each signal ④ and also interface output pulse signals can be set here ③.	These settings affect all interface outputs and system alarms to include legacy micro DAU and Mains Powered DAU in the local fire system.
	Where there are Plexus devices in the system then it is important to configure the 'Auto silence' ⑤ of Radio Sounder/Strobe devices to prevent locked alarm devices that would otherwise continue to sound.	These settings also affect all the Plexus devices that gives an output, such as sounders and strobes. Changes to the sound pattern however will have no effect on Plexus sounders.

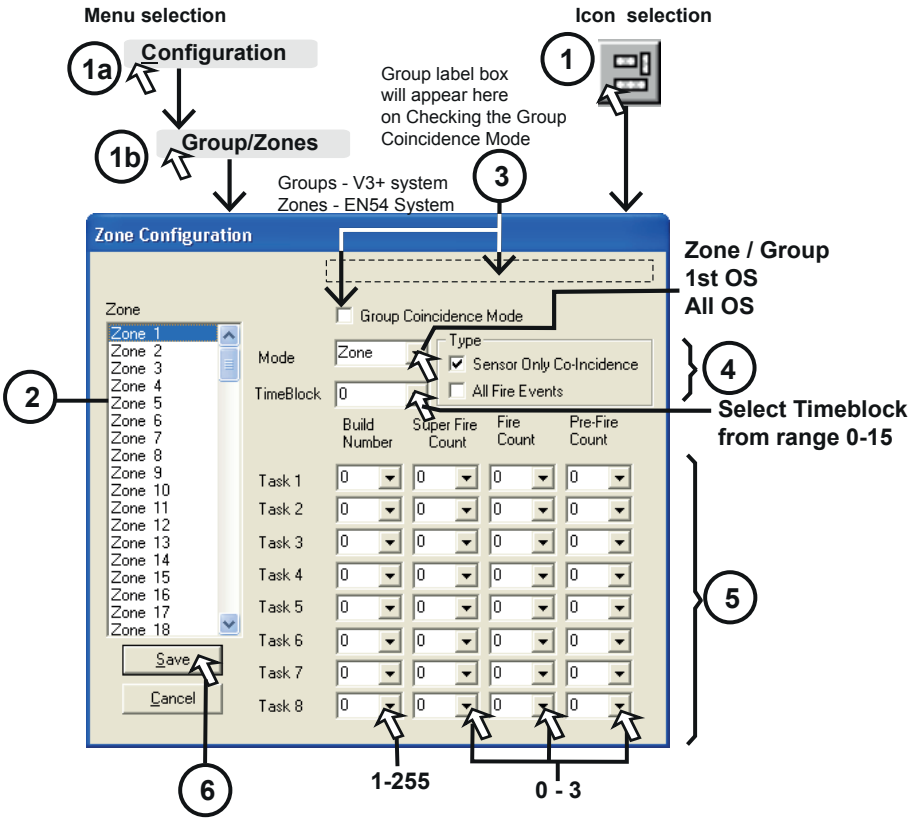
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Zone/Group config. - *Config. menu*

Menu option	you can use this option to..	notes
Zone/Group (EN 'V4' - Zone) (BS 'V3+' - Group)	.. set up 128 Zones/Groups ② per panel. Each Group can be given a label ③. Each Group/Zone can have a number of devices. The Zone label is edited in the label editor. A Zone or Group can be configured to have up to 8 permutations of fire detection via tasks ⑤ that can be used to trigger Command Builds, which can additionally work with Timeblocks. The permutation of fire detection can be used for coincidence detection ④. A Group can be used to route messages for display in the local system, at repeat/mimic panels. Via a Master group the messages are routed for display at other panels in the networked system. For a Group function across a network select 'net group', otherwise select 'local group'.	The Group and Zone menu options are applicable for BS (V3+) and EN (V4) panel based system respectively. Note the Groups/Zones in the range 1-64 operate locally in the local system, while Groups/Zones in the range 65-128 operate across a network. The default range stated can be changed.

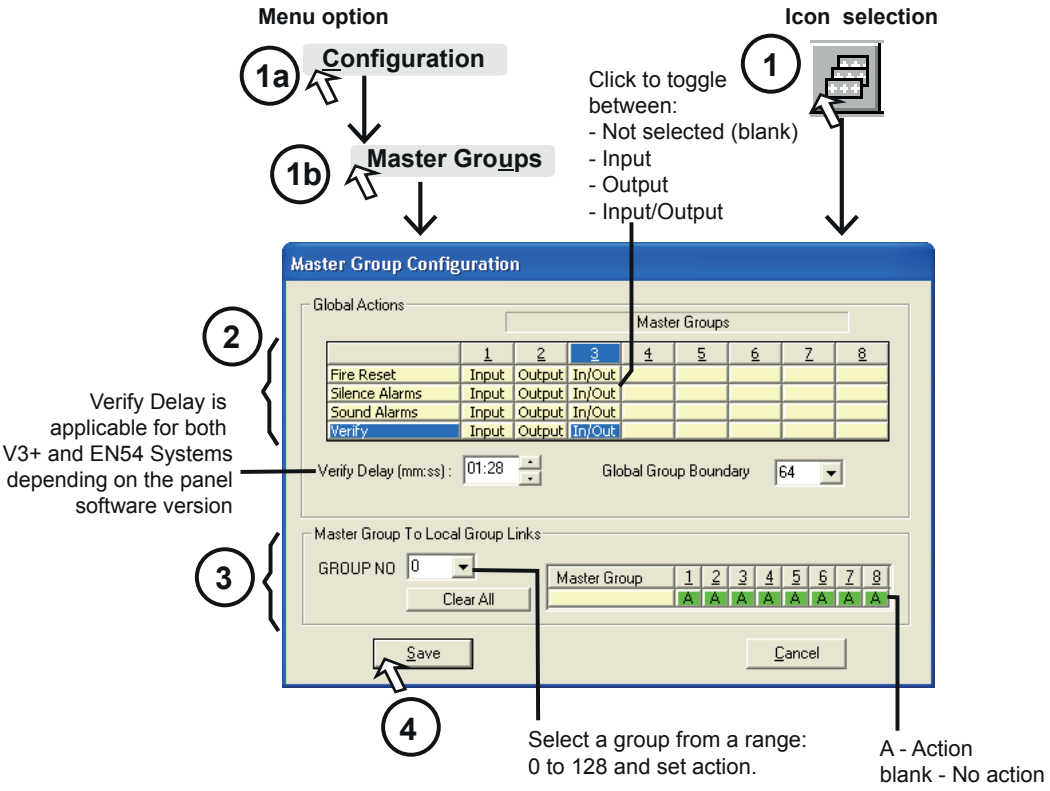
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Master Groups - *Config. menu*

Menu option	you can use this option to..	notes
Master Groups	..set up to 8 Master groups. Global actions of Silence alarms, Sound alarms, Reset and Verify commands k can be configured for output to and input from the network. The verify delay time and global group boundary can also be defined here. The Master group link to local group l can be configured here and as default all Groups will action all Master groups.	This menu option is only applicable for BS-'V3+' and EN-'V4' systems. You can change the global boundary of groups however the default shown in the example below is 64. ⚠ If Verify delay time is greater than 10 minutes then this will contravene EN54 Part 2 requirements.

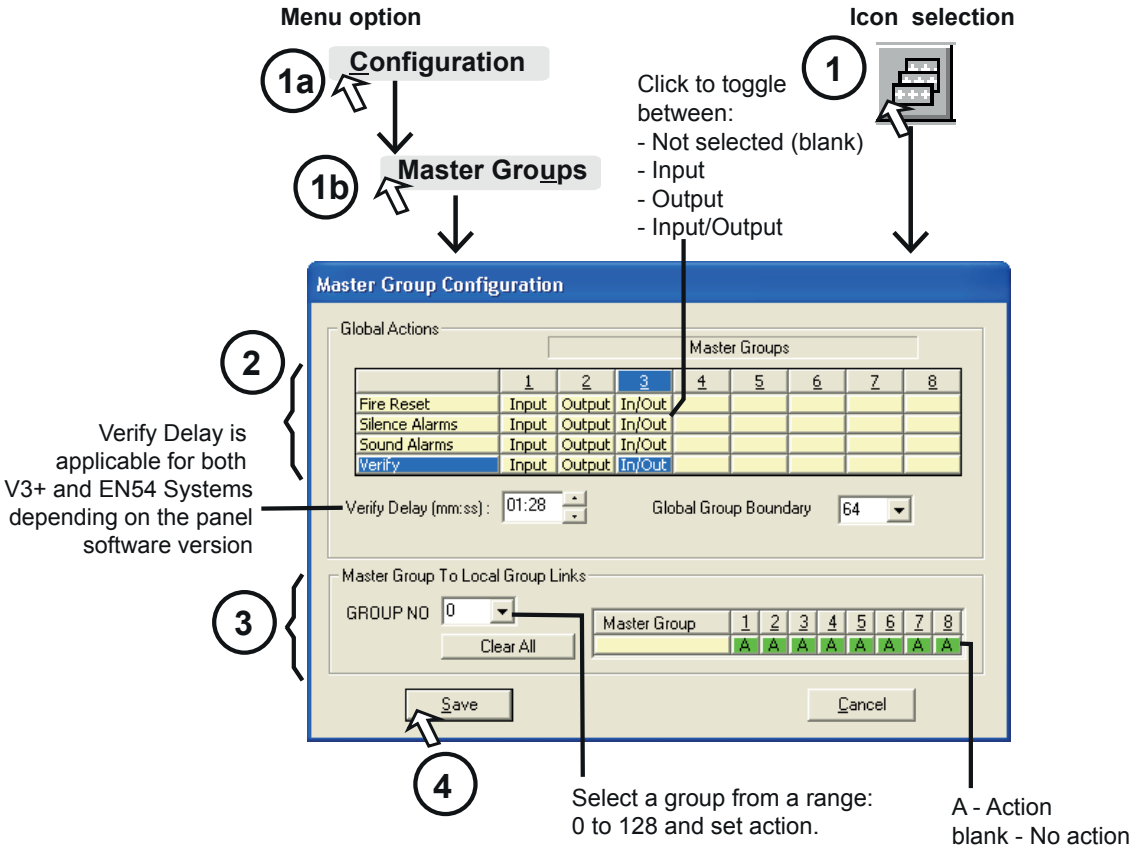
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Sector Link - *Config. menu*

Menu option	you can use this option to..	notes
Sector Link	..set up the trigger action of Sectors on loop circuits to action Signal 1, 2 or 3 on the initiating Sector as well as on other Sectors of the local system. You can select from 4-preconfigured templates of Sector actions. The default is for Sectors 1-28 of any loop to action signal 2. A custom configuration of Sector action is manually entered and applied by a click on the cell to toggle between Off, Signal 1, Signal 2 and Signal 3. Sector linking can be applied to a local system. Sectors of other panels in a network can be linked together using Master Sectors.	**Sector 'trigger loop' actions on 'output loops' :** ◘ **Template 1** - When a device in sector 1 is in alarm there will be an output of signal 2 in sector 1-28. When any device in sectors 2-32 is in alarm there will be an output signal 2 to sector 1 only. ◘ **Template 2** - When any sector is in alarm there will be an output signal 2 in the alarmed sector and remaining sectors in the range 1-28 will output Signal 1. ◘ **Template 3** - The sector in alarm plus numerically adjacent sectors will output signal 2 and remaining sectors in the range 1-28 will output Signal 1. ◘ **Template 4** - All sectors 1-28 to output signal 1 when any device in any sector is in alarm. ⓘ The output sectors 29-32 are not template configured.

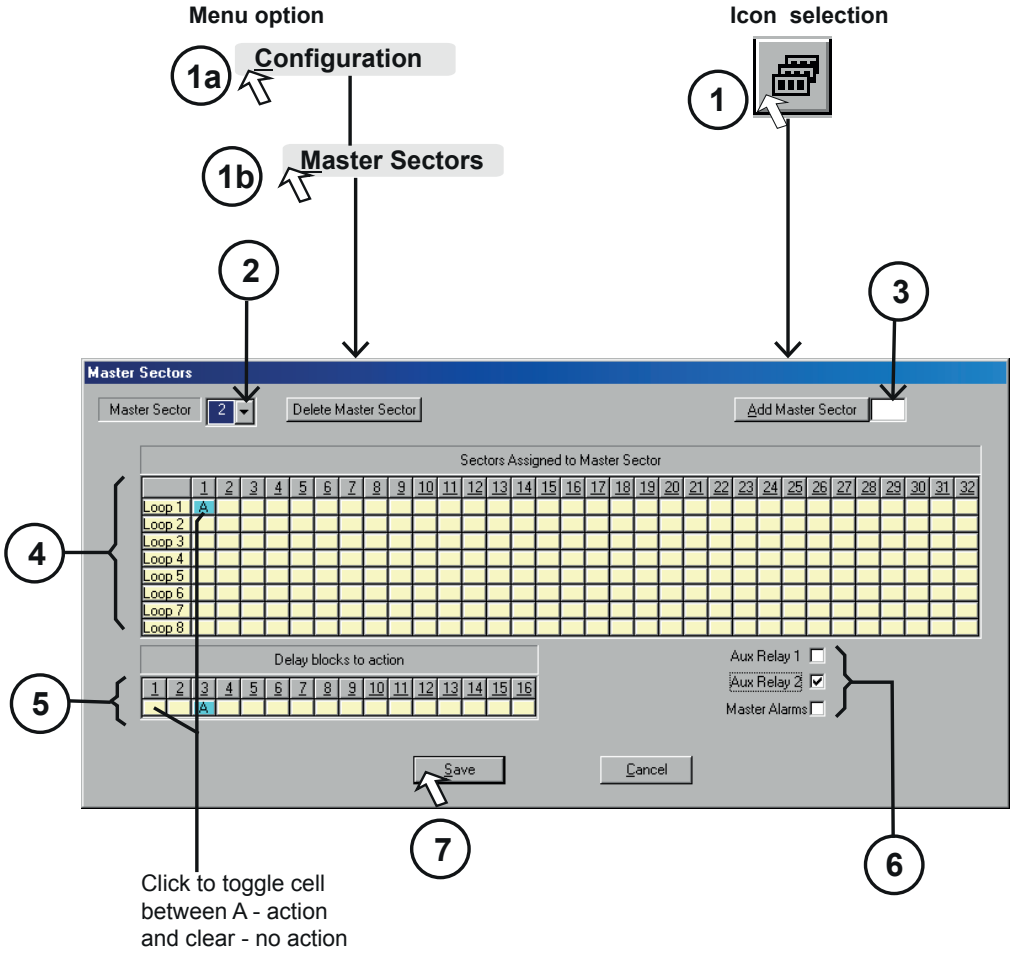
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Master Sectors - *Config. menu*

Menu option	you can use this option to..	notes
Master Sectors	..set up the 64 Master sectors per panel (255 per network). You can add Master sectors to the local panel ③ and delete previously added Master Sector ②. You can assign Master Sector action by configuring Sector actions ④, Delay Blocks actions ⑥, Master Alarms activation and Auxiliary Relays activations †. Any local sector on any local loop can be configured to be actioned by a Master sector, see also Master sector links. A Sector should only be assigned to one Master Sector. Master Sectors are actioned by sectors. Master Sector having the same number at other panels in a network will activate their locally configured actions if turned ON or made active by Command Build.	The local assignment will operate in the following manner: Sectors if actioned will output: Signal 1, 2, 3 or OFF. Delay block if selected will be activated Master alarms if selected will be activated Auxiliary relays if selected will be activated. ! A Master Sector can also be triggered by a Command build, see command build section for further information.

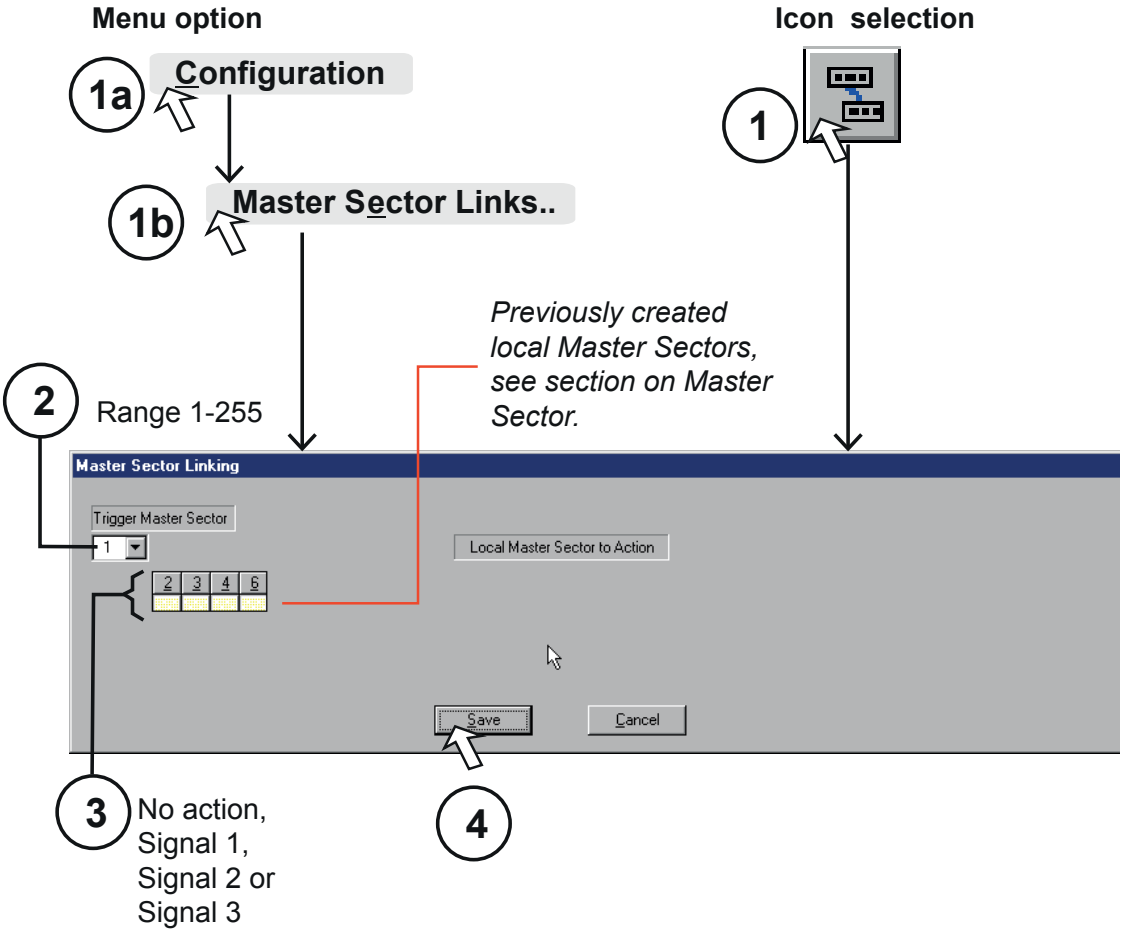
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Master Sector Links - *Config. menu*

Menu option	you can use this option to..	notes
Master Sector Links	..set up Master Sector local actions. On selecting a trigger Master sector ② you can set the local Master Sector action to Signal 1, 2, 3 or No Action ③. For example, on selecting a trigger Master sector 1 you can action a signal output on another Master sector if configured.	Each panel has its own local Master Sector action. You can only set up Master sector links if Master sectors were previously configured in the system, see Master sector - Configuration menu.

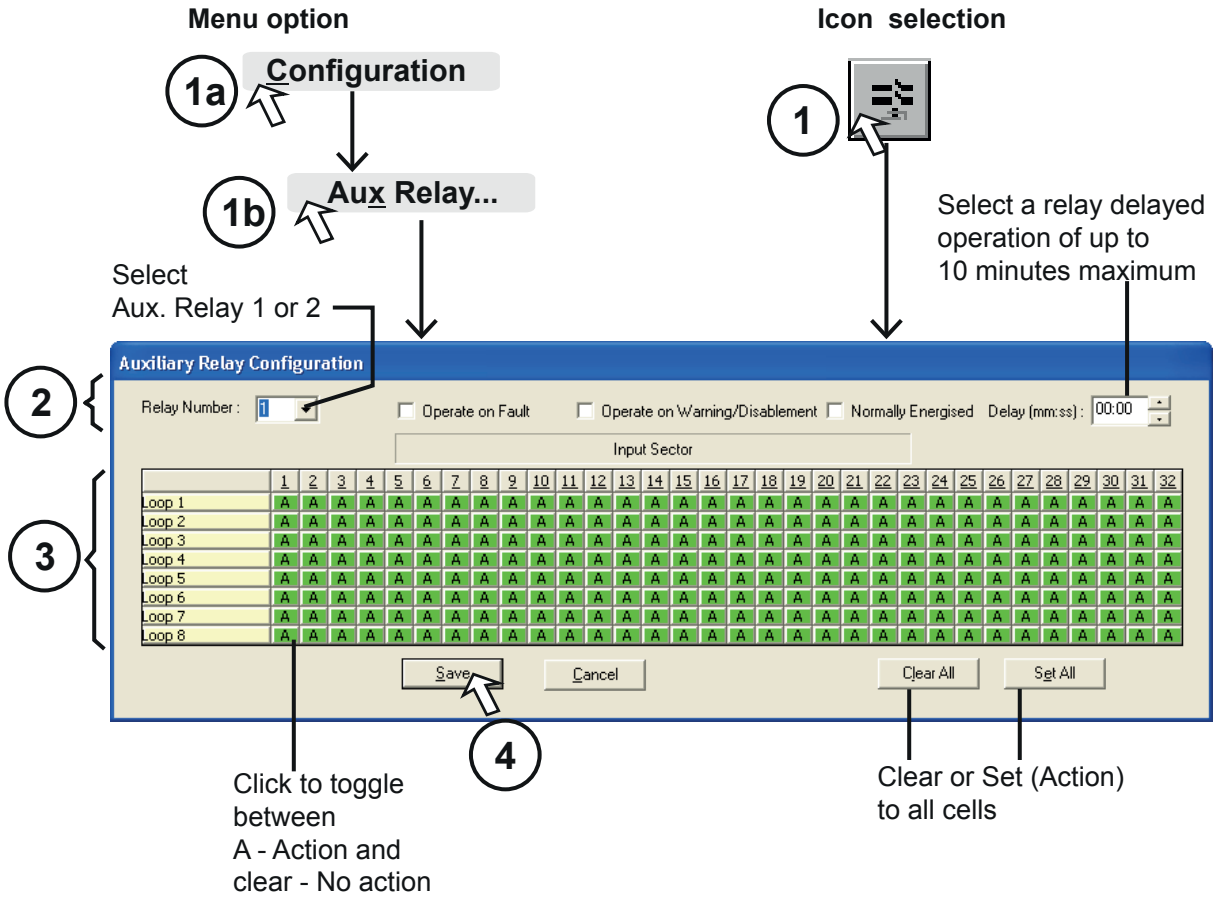
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Auxiliary Relay - *Configuration menu*

Menu option	you can use this option to..	notes
Auxiliary Relay	..set up the operation of the two Auxiliary relays. Each relay can be actioned by any sector, fault event and/or warning / disablement event. The operation of the relay can be delayed by up to 10 minutes. The relay can be configured to be normally On (energised) or Off (de-energised).	Each Auxiliary relay can be individually set up. The default settings are: **Aux relay 1** is actioned with a fire event in any sector. This relay is normally de-energised. The relay will energise when sector is switched on. The relay will deactivate when the affected Sector is switched off. **Aux relay 2** is actioned by a fault event and is normally energised. To meet the requirements of Loss Prevention Certification Board LPCB, the Auxiliary relays 1 and 2 of a BS5839 (V3+) panel must be used for manned centre application. The auxiliary relay 1 MUST be configured to operate with Sectored fire events only (This is the factory set configuration).

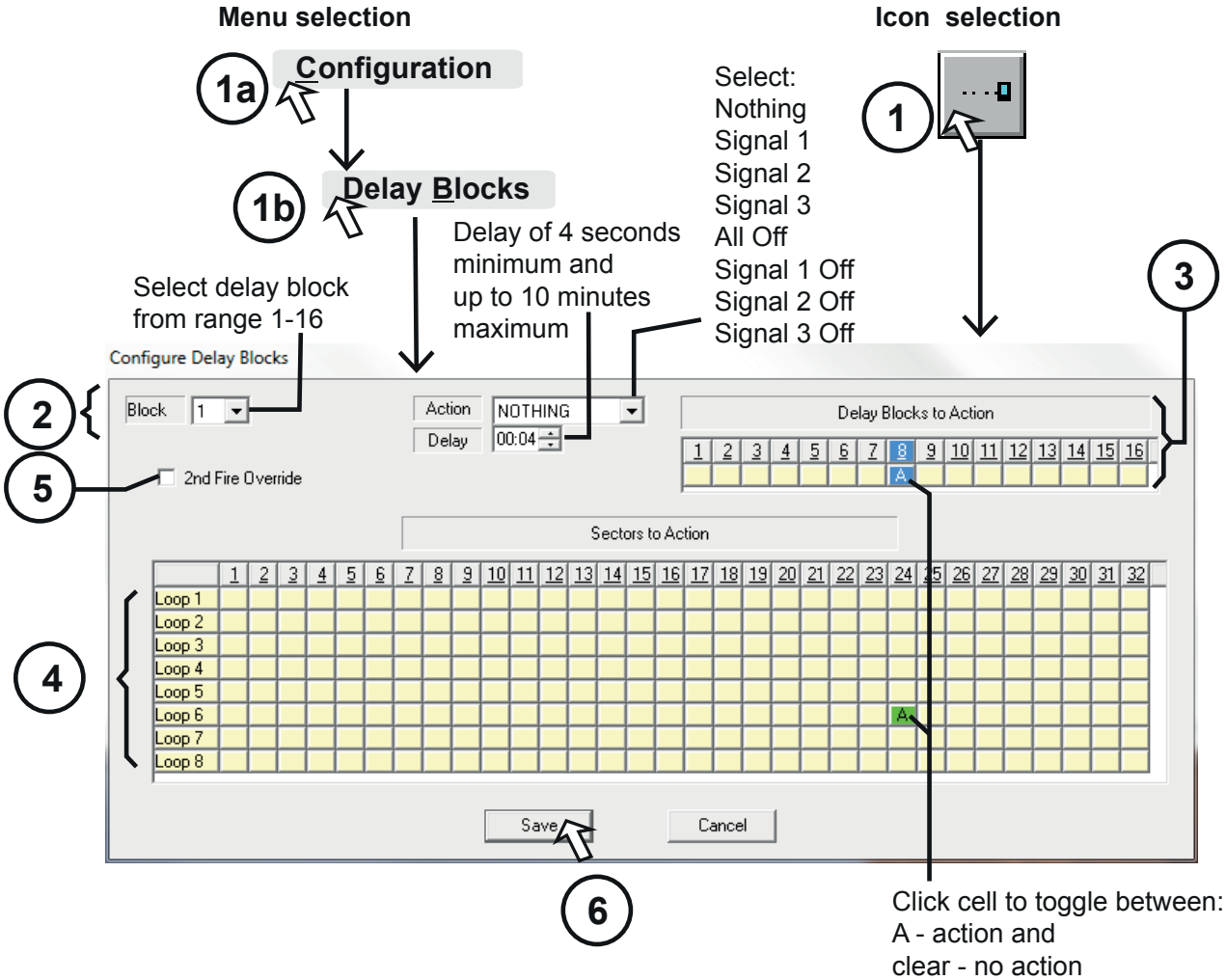
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Delay Blocks - *Configration menu*

Menu option	you can use this option to..	notes
Delay Blocks	.. set up the action of up to 16-Delay Blocks. A Delay Block can action Sector(s) to output signals - 1,2,3, All OFF or No action, Signal 1 OFF, Signal 2 OFF or Signal 3 OFF, with delays of up to 10 minutes. A Delay block can directly action Sectors ④ or other Delay block ③ of the panel. You can override the delay within a delay block on occurrence of 2nd fire by setting the check box ⑤.	! It is possible to set up a delay of up to 17 minutes, however any delay settings above 10 minutes contravenes the EN54 : Part 2 requirements.

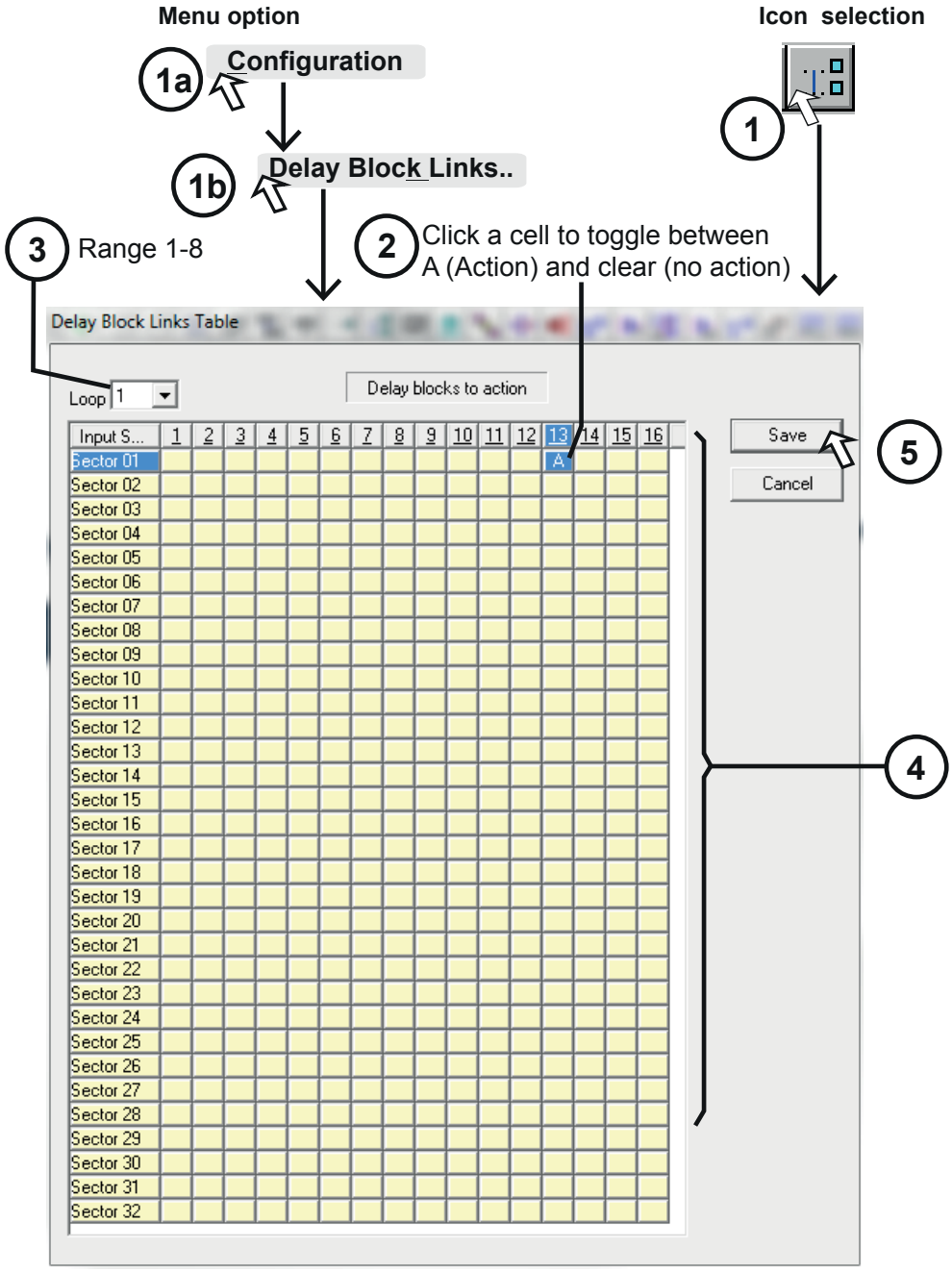
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



DELAY BLOCK LINKS - *CONFIG. MENU*

Menu option	you can use this option to..	notes
Delay block Links	.. set up Delay block linked action on sectors ④ on a loop by loop basis ③. ! A delay setting of more than 10 minutes will contravene the requirements of EN54: Part 2.	This link(s) set here are what triggers the Delay Block to start count down. In the example below Delay Block 13 is triggered by a fire in Sector 1 loop 1.

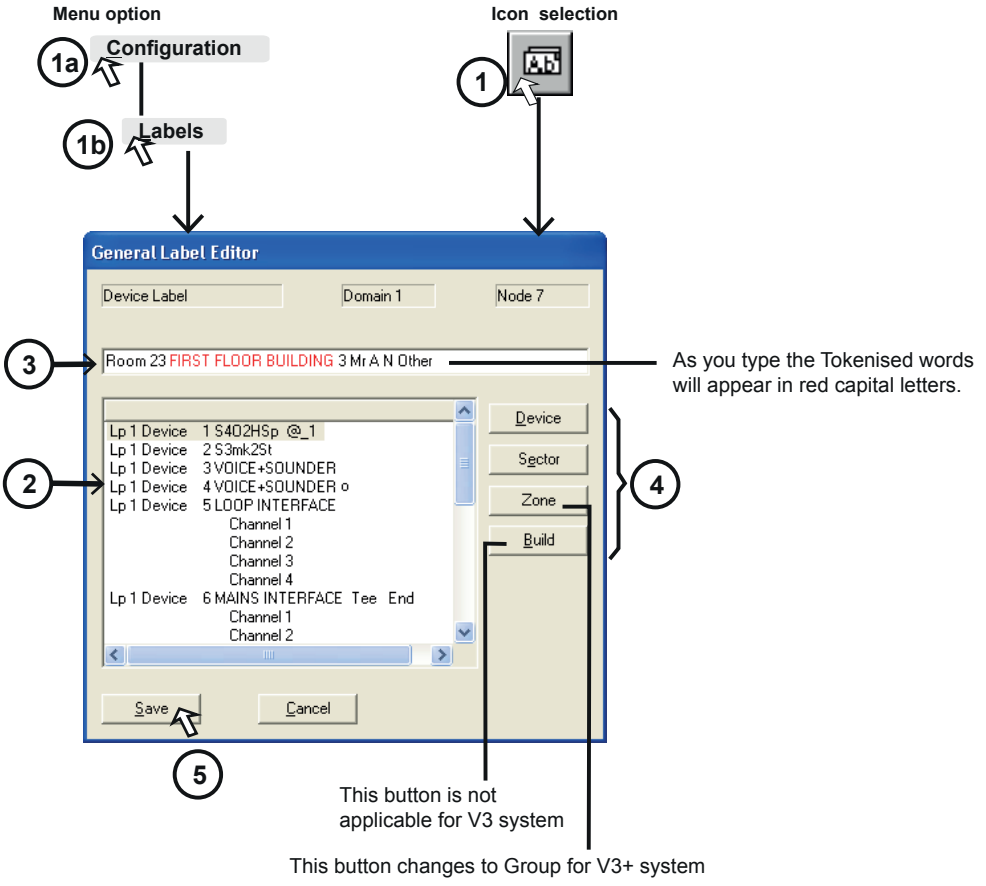
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Labels - *Configration menu*

Menu option	you can use this option to..	notes
Labels	.. set up labels given to devices, zones, command builds and sectors ④. ! The sectors can be labelled here for information only, they are not transmitted to the control panel.	The 64 character tokenised Long labels are applicable for EN-'V4' and BS-'V3+' systems. All tokenised labels are displayed in Upper case ③..

Operation (The numbers ①②③④....show an order in which to enter data or make selections).



LONG LABELS

Long labels having up to 64 characters can be given to devices, zones and command builds. This is achieved by replacement of commonly used words with token values (special codes). Tokenised labels: When tokens are decoded, a trailing space is automatically added to the decoded word. Likewise when a label is being tokenised, the word must have a space following it, or be at the end of a line. Therefore a token word cannot be followed with a comma, dash or other such character.



A word or part of a word becomes tokenised and is displayed in Upper case.

Banks 0, 1 and 2 show the list of tokens used to reduce the character label to 32 characters or less.

BANK 0

General Building Features			
AREA	ANNEXE	BLOCK	BUILDING
CORE	CORRIDOR	DOOR	DUCT
ENTRANCE	ESCALATOR	EXIT	EXTENSION
FLAT	HALL	HOUSE	LIFT
LOBBY	RISER	ROOM	ROUTE
STAIRS	TOWER	UNIT	VENTILATION
VOID	ZONE		
Vertical Location			
LEVEL	MEZZANINE	FLOOR	BASEMENT
GROUND	FIRST	SECOND	THIRD
FOURTH	CEILING	ROOF	ATRIUM
Geographic Location			
NORTH	SOUTH	EAST	WEST
NEAR	OUTSIDE	ABOVE	UPPER
CENTRE	LOWER	LEFT	RIGHT
FRONT	REAR		
Building Usage			
ACCOMMODATION	ADMIN	BEDROOM	BOILER
CENTRAL	CHANGING	COMPUTER	CONTROL
CUPBOARD	ELECTRICAL	ENGINEERING	EXTERNAL
GALLERY	GARAGE	GENERAL	HOUSING
KITCHEN	LAUNDRY	LOUNGE	OFFICE
PLANT	RECEPTION	RESTAURANT	SERVICE
SERVICES	SHOP	STAFF	STORE
STORES	SWITCH	SYSTEM	TOILET
WORKSHOP	WARD	WAREHOUSE	
Airport Tokens			
AIR SIDE	ARRIVALS	BAGGAGE	BRIDGE
BUREAU DE CHANGE	CUSTOMS	CONCOURSE	DEPARTURES
DUTY FREE	EXCHANGE	GATE	HANDLING
IMMIGRATION	LANDSIDE	LUGGAGE	MALL
PASSENGER	RETAIL	SECURITY	STATION
TERMINAL	TRANSFER		
Medical Tokens			
MEDICAL	THEATRE	X-RAY	CLINIC

PATIENT	PHYSIOTHERAPY	GERIATRICS	PAEDIATRICS
RECORDS	HEALTH		
Components of the Fire System			
SOUNDER	DETECTOR	OPTICAL	IONISATION
HEAT	INTERFACE	BEAM	REPEAT
SPRINKLER			

BANK 1

General Building Features			
CHAMBER	FOYER	SHAFT	STAIRCASE
STAIRWELL			
Vertical Location			
FIFTH	SIXTH	ATTIC	BALCONY
LANDING	PASSAGE	SUBWAY	TUNNEL
Positions			
ADJACENT	BOTTOM		
Building Usage			
CATERING	COLLEGE	CONFERENCE	DEPARTMENT
DISPATCH	EMERGENCY	EQUIPMENT	ESCAPE
MANAGER	MEETING	PACKING	PHYSICS
POINT	PREPARATION	SHOPPING	SITING
STATIONERY	SUITE	SUPPLY	TELEPHONE
TRANSFORMER			
Airport Tokens			
AIRLINES	BONDED	CHECK-IN	CALORIFIER
CONVEYOR	CUL-DE-SAC	DOMESTIC	FORECOURT
INFORMATION	INTERCONNECTOR	INTERNATIONAL	RECLAIM
SCREENING	SECRET SIGN	TRAVOLATOR	TRUCKING
Medical Tokens			
DISPENSARY			
Components of the Fire System			
ASPIRATING	INPUT	OUTPUT	PRESSURE
SHUTTER			

BANK 2

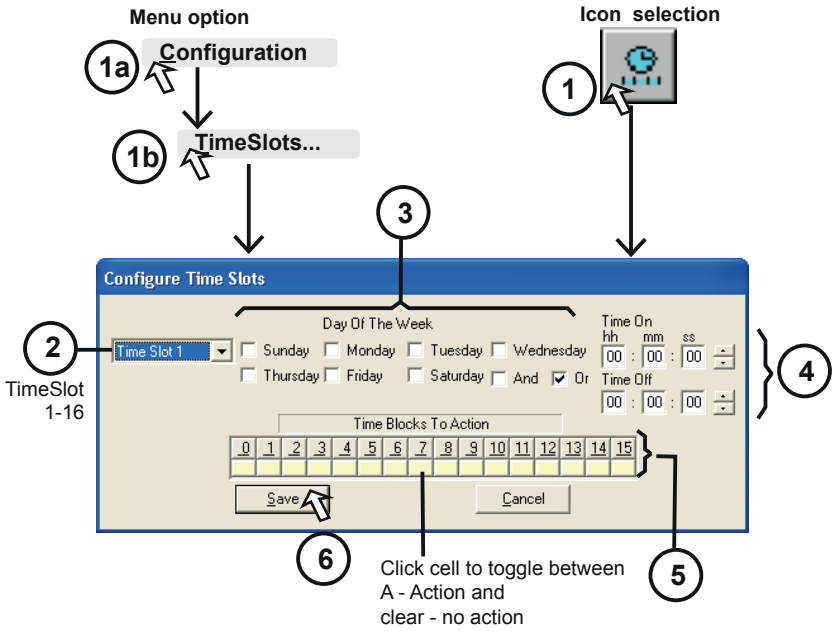
General Building Features			
BLOWER	CHUTE	DOORS	HOIST
ROLLER	SLUICE		
Position			
BEHIND	BELOW	UNDER	MIDDLE
Building usage			
BISTRO	BUSINESS	CANTEEN	CHILLER
CLASS	CLASSROOM	CLEANERS	DISABLED
ELECTRONICS	FACTORY	FEMALE	LIBRARY
LOCKER	MAINTENANCE	MOTOR	MUSIC
NURSERY	PHASE	QUIET	SEATING
SHOWER	STORAGE	TENANT	VEHICLE

VOLTAGE	WALKWAY		
Airport token			
APRON	AUTOWALK	BOARDING	CABIN
CONNECTOR	CRAFT	DEPARTURE	FLIGHT
STAND	TOUCHDOWN		
Components of the Fire System - These tokenised labels were added in January 2003			
They are only available on panel having LCC V3.70 / 4.10 or higher			
SHUTDOWN	SPEAKERS	BATTERY	CHANNEL
EXTRACT	PRINTER	RELEASE	ACCESS
CLOSER	DOMAIN	ALARM	PANEL
RELAY	SHORT	SMOKE	

Time Slots - *Config. menu*

Menu option	you can use this option to..	notes
Time Slots	..set up to 16 Time slots ②. You can configure a Time slot to have an 'On' (enabled) and 'Off' (disabled) times, which are defined times ④ on selected days of the week ③. One or more Time Slots can be applied to a timeblock ⑤. Time Blocks are used to work with sensors to allow automatic STATE change, see also the section on 'device configuration'. A Time Block can also be applied to switch background music, see section on 'ACU configuration'. A Time Block can also trigger a Command Build.	Each Time slot must be ANDed / ORed to the days of the week. When a Time slot is ANDed with selected days it will only operate on those selected days. When a Time slot is ORed with selected days it will be enabled during selected time and throughout the days selected. The Plexus detector devices do not have multiple STATE's and therefore STATE change is not applicable these devices. **See the Generic Commissioning Instructions manual for information on STATEs.**

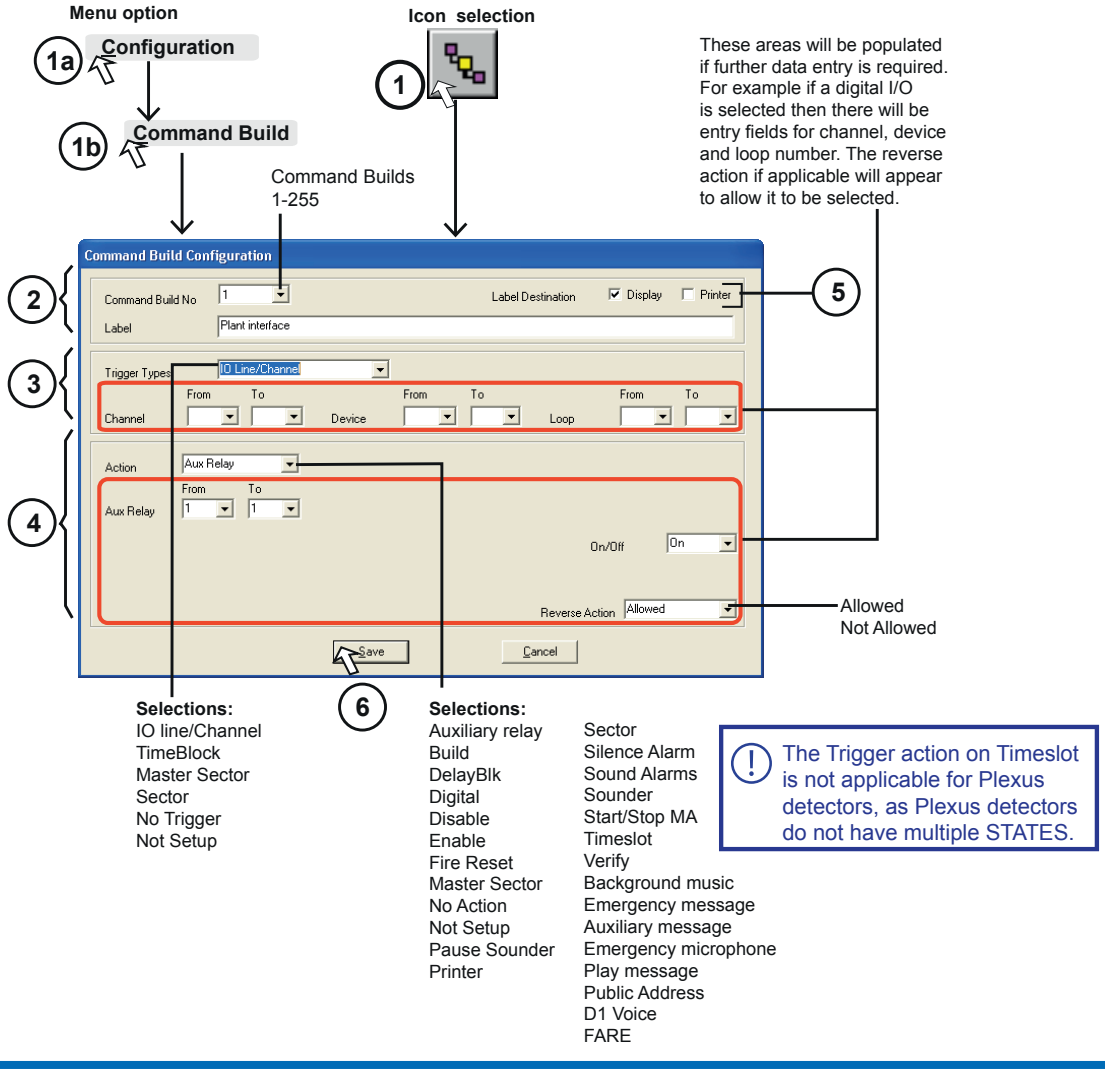
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Command Builds - *Config. menu*

Menu option	you can use this option to..	notes
Command Builds	..set up 255 Command Builds ②. A Command build can be given a 40 character label or a tokenised 64 character label for display or print purpose. A Command build can be triggered by ③ Interface Input channel, Timeblock, Master Sector, Sector or can be set up without a trigger. The action ④ of a Command build can be set up to switch the [Control] functions that are available at the panel or perform no action or an action need not be set up. A Command build label if entered can be displayed or printed ⑤.	Two Command build numbers are allocated to the LEDs and buttons on a panel. Post Quarter 1 2015 panel : These LEDs changed use to Fire alarm routing application indications: Output Active (red LED) FAULT / DISABLE (amber LED) Pre 2015 panel LED CB253 actioned by Command build 253 LED CB254 is actioned by Command build 254 The 'U' buttons on panels can be configured to trigger Command builds: U1 triggers Command build 251 U2 triggers Command build 252 U3 triggers Command build 253# U4 triggers Command build 254# Buttons marked # are not applicable for on pre Q4 2016 Vigilon Compact, SenTRI 2 or CP2 panel. A Monitored input is available on Vigilon Compact & Plus, legacy Vigilon Compact (&VA), SenTRI2 and CP2 panel range only, this input triggers Command build 250.

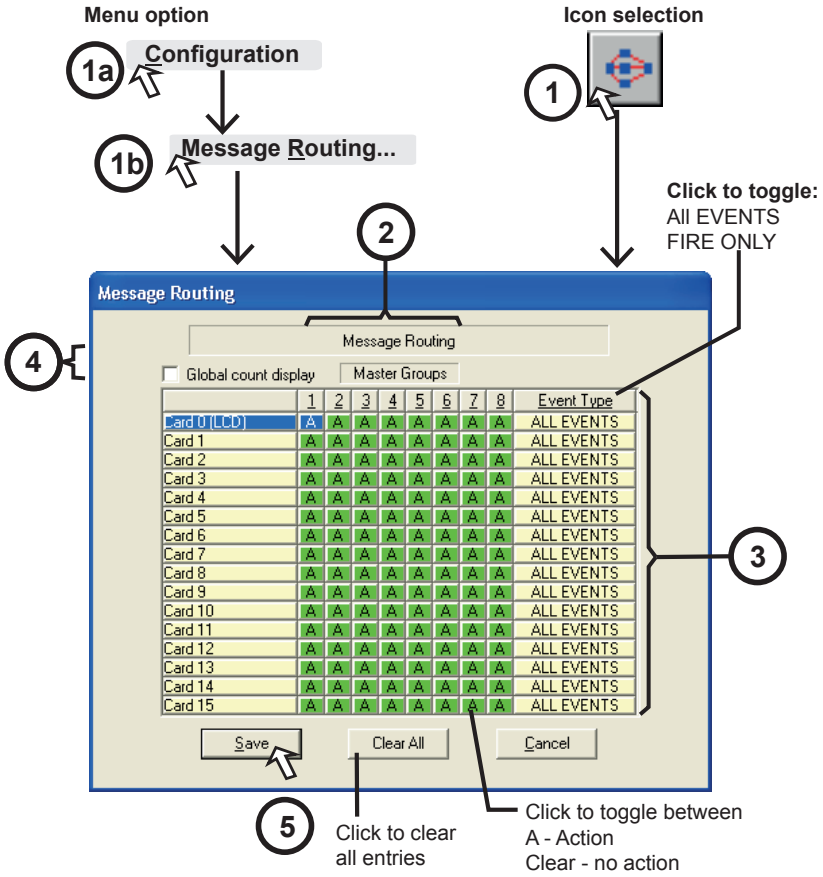
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Message Routing - *Config. menu*

Menu option	you can use this option to..	notes
Message Routing	.. set up to 8 Master groups. A Master group can be configured to route selective Fire Event or All Event messages ③ on a card by card basis within a control panel and around a network, by putting the panel's network card in the respective Master group. Events may be routed for display or print at other panels in a network by putting the main controller (local controller) card/board (Card 0) in the respective Master group. In older system this was done by placing the IO Card (Card 15) in the respective Master group④. The Global count display check box allows the total number of events to be displayed at the control panels in a networked system.	For example if all the cards of two networked control panels are assigned to 'Master group 1' for message routing ALL EVENTS, then the events of both systems are displayed and printed at both panels. ! To comply with EN54 Part 3 the minimum volume of the sounders should be greater than 65dBA which equates to 16% of maximum volume of S3 device.

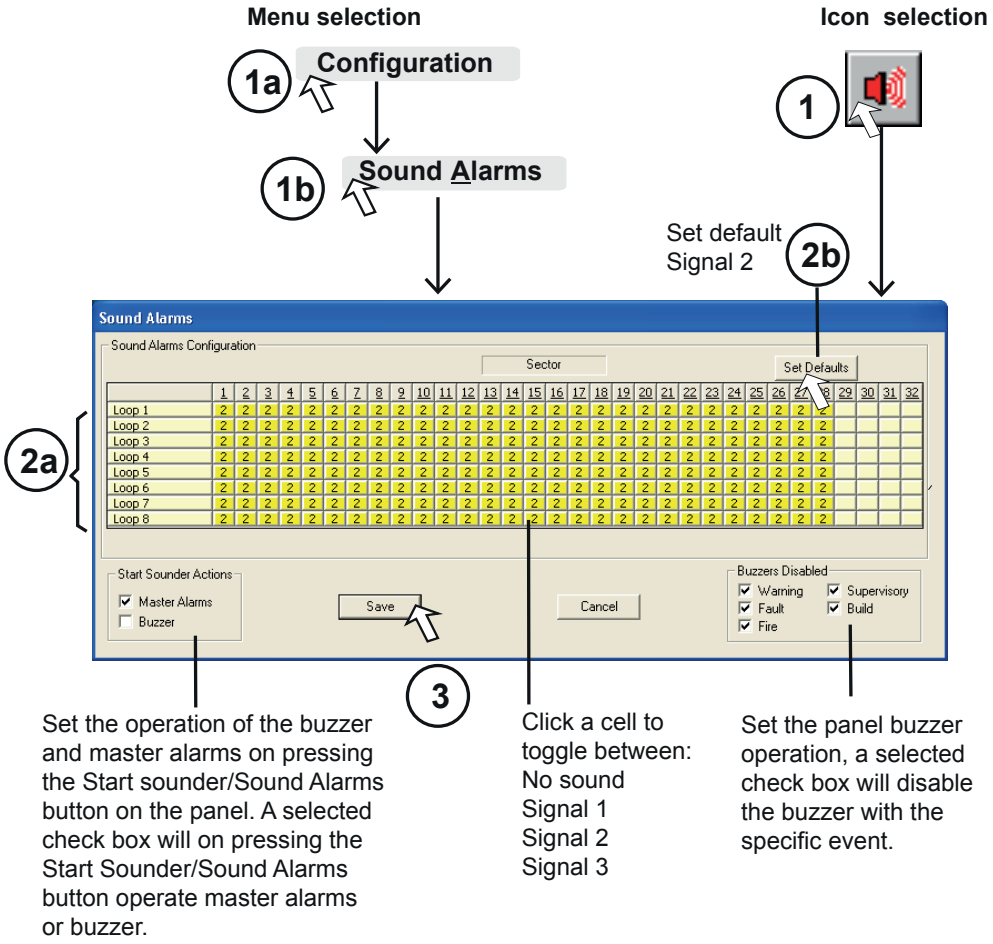
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Sound Alarms - *Config. menu*

Menu option	you can use this option to..	notes
Sound Alarms	.. set up Sound alarms configuration for sectors. As default the sectors 1-28 on all the loops will sound signal 2 when the Sound alarms is activated. It is possible to change the sector signals to no signal, signal 1, signal 2 or signal 3 ②. Sound alarms can optionally activate master alarms and internal buzzer, which is the factory default setting. The buzzer can be further configured to sound with warning, fault, fire and / or supervisory events (the factory setting has the warning buzzer disabled)	The Set Defaults button configures sectors 1-28 on all the loops to sound signal 2. The Sound alarms configuration also shows the sectors that will be stopped when Silence Alarms is pressed. Therefore plant equipment is usually placed in the range Sectors 29 - 32.

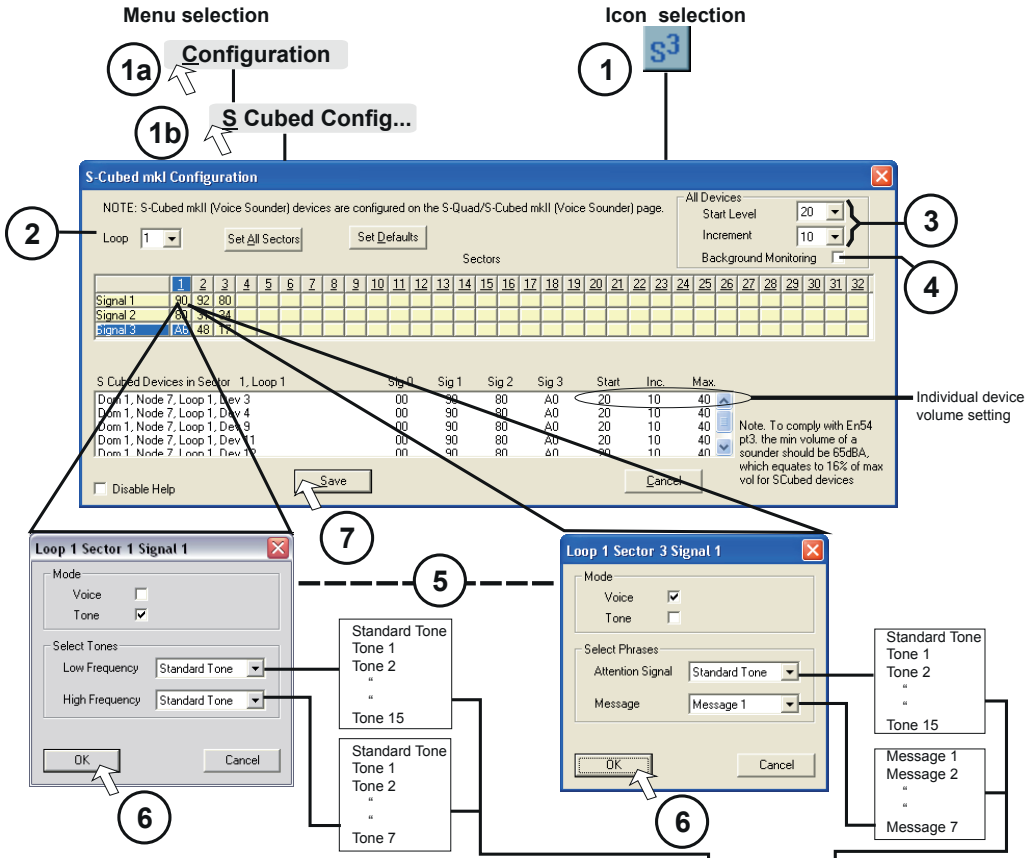
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



S3 Mark I config. - *Configuration menu*

Menu option	you can use this option to..	notes
S-Cubed Mk 1 Configuration	..set up sector wide S3 device configuration. The S3 devices in each sector can be configured to output signal 1, 2 or 3. Each signal can operate in either tone or voice mode. When '??' is displayed to indicate an illegal entry, then the entry must be corrected. This also shows if devices within the sector have different settings from each other.	All the S3 devices in a sector must be configured for same activation. For example it is not possible to independently configure devices in the same sector to operate in tone mode and voice mode. ! To comply with EN54 Part 3 the minimum volume of the sounders should be greater than 65dBA which equates to 16% of maximum volume of S3 device.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).



How FAB/SAB settings at the panel interact with the high and low frequency tones selected in the S3 configuration

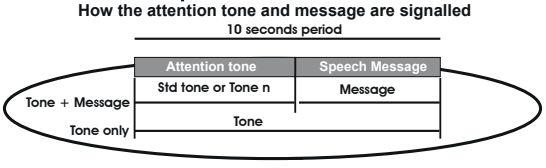
The Action command FAB determines the **tone selected**

0 - no output
2 - High frequency tone
4 - On/Off control On - being Low frequency tone
6 - High frequency tone

The action command SAB determines the action duration

0 - Off
1 - 10mS
2 - 40mS
3 - 90mS
4 - 160mS
5 - 250mS
6 - 350mS
7 - 480mS
8 - 630mS
9 - 800mS
A - 980mS
B - 1.2S
C - 1.4S
D - 1.6S
E - 1.9S
F - On

How the attention tone and message are signalled

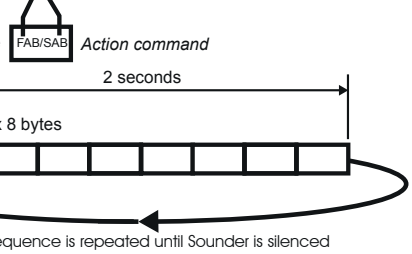


The sequence repeated until S-Cubed is silenced

NOTE: The panel FAB/SAB operate system wide

Signal 1 (Alert)	65	00	65	00	65	00	65	00
Signal 2 (Evacuate)	4F	25	4F	25	4F	25	4F	25
Signal 3 (Continuous)	4F	00	4F	00	4F	00	4F	00

FAB - First action byte
SAB - Second action byte



The sequence is repeated until Sounder is silenced

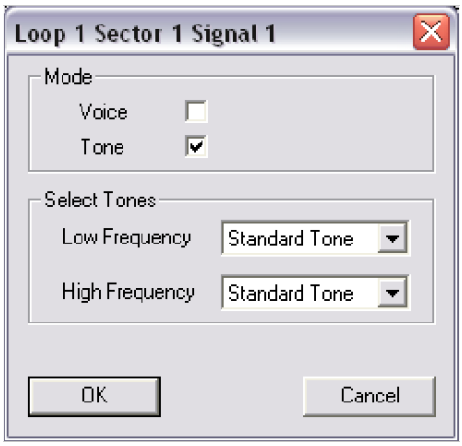
..set the soft start feature ③ of S3 devices in the system. The **start volume level** is a percentage of the maximum volume. The volume is stepped up every 0.25 seconds by the incremental value.



Background monitoring:
Not ticked = no background monitoring
Full black tick = monitored every 1 hour

Grey tick = monitored every 4 hours.

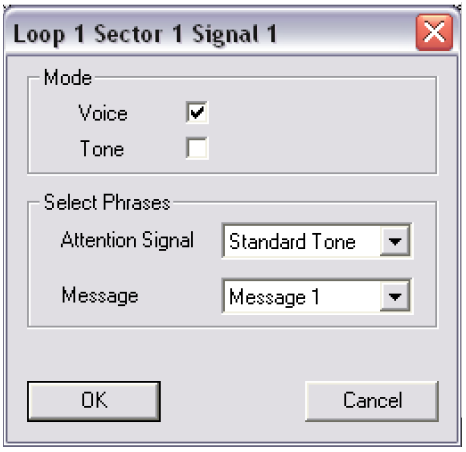
Background monitoring is performed every hour for a short duration, which causes an almost inaudible tone output from each voice S3 device. To disable the monitoring you must remove the check from the background monitoring box ④. By default the monitoring is enabled, checked.



Each sector Signal 1, 2 and 3 can be configured to be in Tone or Voice mode ⑤.

In the **Tone mode** you can select from a range of **high and low frequency tones**, these can be the panel defined standard tones or the complex tones held in the voice chip at the device. The duration of the high and low frequency tones are determined by the FAB/SAB settings at the panel.

In the **Voice mode** you can select the required **attention tone and the voice message**. The attention tone can be the panel defined standard tone or a complex tone held in the voice chip at the device. The voice chip inside the S3 device carries the voice messages.

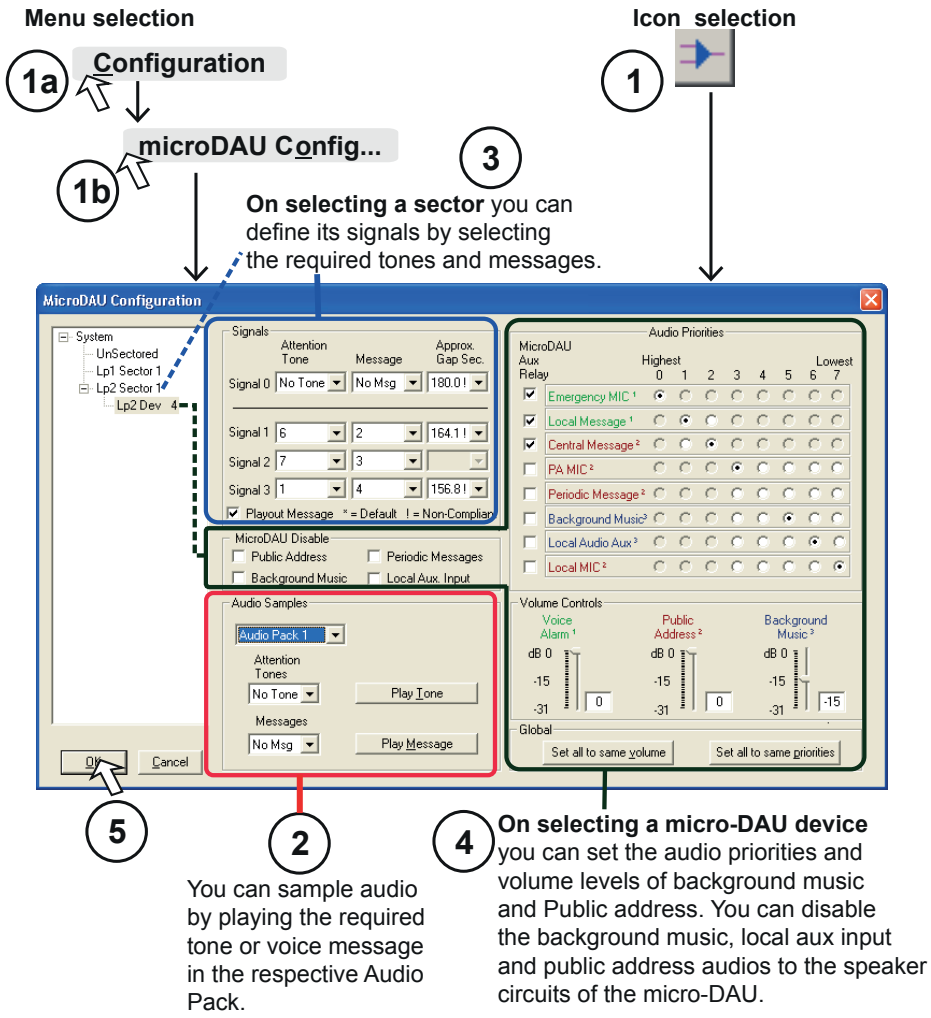


Example
If a customer wants sector 1 signal 1 to output an intermittent **bell** attention tone followed by an **alert message**, then you should right click on Sector 1 Signal 1 box, configure it for Voice mode and select the Attention tone - Tone 1 (which is a bell tone) and message - Message 2 (which is the alert message). The above example assumes there is a standard voice chip 2202-001 fitted in the S3 device.

Micro DAU - Config. menu

Menu option	you can use this option to..	notes
Micro DAU Config... (Not applicable for SMS)	...configure a micro Distributed Amplifier Unit connected to a loop.	The micro DAU needs to know the local tones and messages to output to speaker circuits when it receives the appropriate command from the control panel. The configuration data also include audio priorities and audio volume level for output to speaker circuits for voice alarm, public address and background music. **Note: The periodic messages feature is a future option.**

Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Signals	On selecting a **sector** having a micro DAU in the system tree you can configure the sector's attention-tones and messages associated with its **signals 0, 1, 2 and 3**. The default tone and message for each signal is marked with an asterisk * and those which are non compliant are marked with an exclamation !. The duration of **silence gaps** before and after a message can be set to site requirements. The exception is the gap for Evacuate messages which are fixed to meet the requirements of standards and therefore cannot be adjusted. A **play out** feature can be enabled by a check box which allows an audio message to finish properly and therefore prevent an abrupt ending of an announcement.	The tones and messages available with audio pack are listed, see Audio Pack 1 table. **Audio sampler** ② can be used to listen to the tones and messages to assist with their selection.
Audio Priorities	Upon selecting a **micro-DAU** device in the system tree you can **prioritise the audio** output to speaker circuits. The **auxiliary relay** inside a micro-DAU can be re-configured to operate with the activation of any combination of audios. The factory default is for the auxiliary relay to operate with Emergency microphone and central messages.	An example of how audio priorities work: If background music is active and a fire event should occur then the music will stop and instead there will be fire announcements. When the fire event is reset the background music will resume. With the exception of emergency microphone all other audio priorities can be changed to site specific requirement.
micro-DAU disable	The **public address, background music** and **auxiliary input** at each micro-DAU can be individually disabled.	A customer may want certain audios to be permanently disabled in a specific area covered by speaker circuits of a micro-DAU.
Volume level	The **volume levels** of voice alarm, public address and background music can be preset. As default the VA and PA are set to maximum 0dB and background music is set at -15dB.	A customer may want volume levels to be adjusted for each audio type. For example the background music volume level may need to be set at a higher level in areas where there is noise, such as in a workshop. On the other hand in an office environment the volume level will need to be lower. It is recommended that the volume level of VA remain set at maximum level 0dBA, this is to ensure the alarm sound can be heard in all areas.
Global	You can make the setting of volume levels and priorities at one micro-DAU and then apply it **globally** to all the micro-DAUs in the single system.	After a common setting is applied to all the micro-DAUs the minor adjustment to each micro-DAU may be made to site specific requirements.

AUDIO PACK 0

A message card is fitted in the Compact Voice Alarm Panel and in each Distributed Amplifier Unit, it contains the messages and tones of the Audio Pack. During commissioning it is possible to re-configure the factory set messages by selection of alternative centralised and distributed messages and pre tones for Alert, Evacuate, Bomb and Auxiliary 1, 2 and 3 controls.

No.	Type of message	Voice	Message
1	DAU Test	Male	The voice alarm volumes are being adjusted there is no need to take any action.
2	Alert (default - Emergency 1)	Female	An incident has been reported in this building please await further instructions.
3	Evacuate (default - Emergency 2)	Male	This is a fire alarm please leave the building immediately by the nearest available exit.
4	Bomb (default - Emergency 3)	Female	Attention please this is an emergency please leave the building by the nearest available exit.
5*	Alert (alternative)	Female	Your attention please, the fire alarm has been activated in another area, please remain where you are and await further instructions..
6*	Evacuate(alternative)	Male	Attention please, attention please, this is an emergency, please leave the building by the nearest available exit. Do not use the lifts or escalator.
7	Gas Carbon Monoxide	Male	May I have your attention please, may I have your attention please, excessive carbon monoxide levels have been detected, please leave the area immediately by the nearest available exit.
8	Gas Fixed Extinguishant	Male	May I have your attention please, may I have your attention please, extinguishant gas release imminent, please evacuate the area immediately by the nearest available exit.
9#	Fire alarm test (default - Auxiliary 1)	Female	Attention please, attention please, this is the test of the fire and voice alarm system, there is no need to take any action.
10#	Fire alarm test end (default Auxiliary 2)	Female	The test of the fire and voice alarm system has now been completed.
11#	Coded message	Female	Would Mr Sands please report to reception.
12#	Class change	Female	Class change
13#	Not used		
14#	Stand down (default - Auxiliary 3)	Female	May I have your attention please, the cause of the alarm has been investigated and the system reset. There is no cause for concern. Thank you.
15#	Navy radiological attack	-	Beep beep beep (950Hz 80ms beep every 420mS)
16#	Navy bandit attack	-	Beep beep beep (950Hz 50ms beep every 80mS)
17	Nursery Rhyme 1		Boys & Girls
18	Bomb Alert 2	Female	May I have your attention please, an incident has been reported in the area, as a precaution please move away from the windows, I repeat please move away from all windows.
19	Factory test	-	Frequency sweep (300Hz to 10KHz in 3s)

Attention tone

No	Description of tone	No	Description of tone
1	Nee Naw x 8	6	Pulse
2#	Two tone (Bing bong)	7	Continuous
3#	Four bing tones - ascending	8	Bong
4	Four bing tones - descending	9	Chopin
5	Bell	10	Jingle of bells

These messages are stored at the Vigilon Compact VA panel only, all other messages and tone are stored at both Vigilon Compact VA panel and DAUs.

* These are legacy default Evacuate and Alert messages of Audio Pack 1.

AUDIO PACK 1

The legacy build of Vigilon Compact VA panel has Audio Pack 1 fitted as standard and as from mid 2010 the panel will be fitted with Audio Pack 0 as standard. The Audio Pack 1 has the following messages for No.: 2, 3, 5, 6 and 13 in place of the ones stated for Audio pack 0 in the previous table.

No.	Type of message	Voice	Message
2	Alert (default - Emergency 1)	Female	Your attention please, the fire alarm has been activated in another area, please remain where you are and await further instructions.
3	Evacuate (default - Emergency 2)	Male	Attention please, attention please, this is an emergency, please leave the building by the nearest available exit. Do not use the lifts or escalator.
5	Alert (alternative)	Female	May I have your attention please, may I have your attention please, an incident has been reported in the building, whilst this report is being investigated, please remain at your workplace.
6	Evacuate(alternative)	Male	Ladies and gentlemen, due to unforeseen circumstances we are required to evacuate the building, please leave the building immediately by the nearest available exit.
13#	Gent Limited advertisement	Female	Ladies and gentlemen this speech message is produced by Gent Limited's Vigilon Compact Voice Alarm system. This product integrates voice alarm functions into an analogue fire alarm system ideal for small to medium sized buildings.

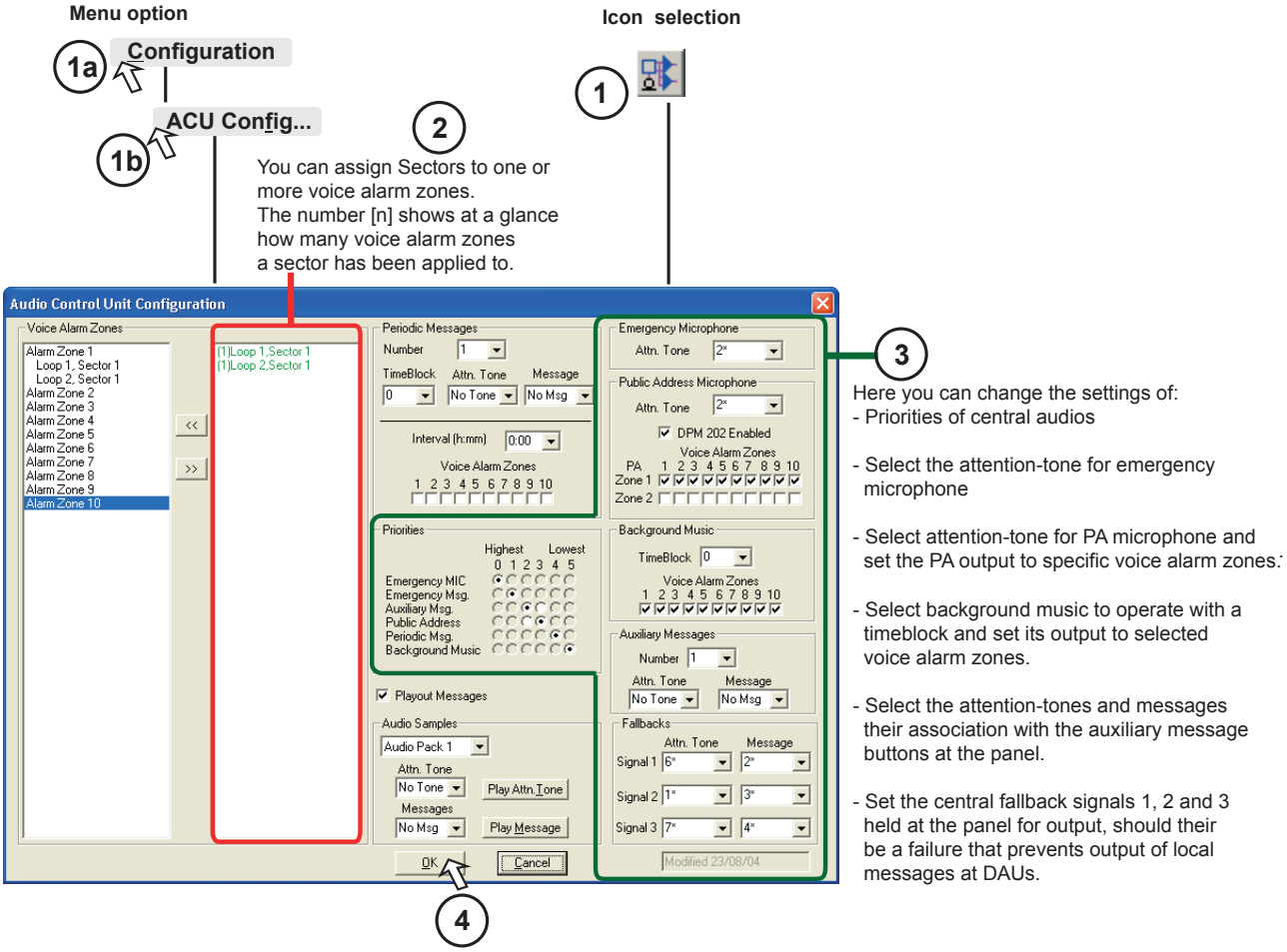


If there is a mix of legacy Vigilon Compact VA panel and DAUs in the system then consideration must be given to ensure correct messages are programmed during commissioning of the system. The best solution to avoid confusion is to ensure Audio Packs are consistent throughout the system.

Audio Control Unit – Config. menu

Menu option	you can use this option to..	notes
ACC Config... (Not applicable for SMS)	.. configure the Audio Control Unit, this refers to the Audio Control Card installed in a Vigilon Compact VA panel.	The Audio Control Card ACC needs to know what attention tones are to be applied when the emergency microphone and PA microphone is used. Also to which voice alarm zones to output background music and PA messages. A timeblock feature can be applied to background music such that it becomes enabled at a specific time for a specified duration on selected days of the week. The fallback settings allow centrally held Alert, Evacuate and Bomb signals to output audio to speaker circuits should there be loop allocation and loop start issues or similar failure. It is important to ensure the Audio Packs used throughout the system are the same, which ensures the output signals remains consistent throughout the system. **Note: The periodic messages feature is a future option.**

Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Here you can change the settings of:
- Priorities of central audios

- Select the attention-tone for emergency microphone

- Select attention-tone for PA microphone and set the PA output to specific voice alarm zones.

- Select background music to operate with a timeblock and set its output to selected voice alarm zones.

- Select the attention-tones and messages their association with the auxiliary message buttons at the panel.

- Set the central fallback signals 1, 2 and 3 held at the panel for output, should their be a failure that prevents output of local messages at DAUs.

Setting	you can use this setting to..	notes
Audio Priorities	.. change the audio **priority** given to auxiliary messages and PA microphone. All the other audio priorities are fixed and cannot be changed.	
Audio Sample	**Audio sampler** can be used to listen to the tones and messages to assist with their selection. You can select and play a tone or message associated with the appropriate audio pack.	
Emergency microphone	You can select the attention tone that sounds on pressing the Press to Talk on the **emergency microphone.**	The default attention tone number is the one marked with an asterisk *. For further information on tones see the section on Audio pack and you can use the audio sampler to listen to each tone.
Public Address (PA) microphone	You can select the attention tone that sounds on pressing the Press to Talk on the **PA microphone**. The **PA microphone** can be configured for output to selected voice alarm zones.	The default attention tone number is the one marked with an asterisk *. For further information on tones see the section on Audio pack and you can use the audio sampler to listen to each tone.
Background music	The **background music** can be configured for output to selected voice alarm zones and additionally configured to operate with a timeblock.	The **timeblock** feature is a clock that operates over a 7 day period and holds the data of specified times and durations over which the background music is enabled.
Auxiliary messages	The **Auxiliary message** buttons 1, 2 and 3 on the main panel can be configured to output specific attention tones and messages set here.	The default message and tone numbers are the ones marked with an asterisk *. For further information on tones and messages see the section on Audio pack and you can use the audio sampler to listen to message.
Play out	A **play out** feature can be enabled by a check box to allow an audio message to finish properly and therefore prevent an abrupt ending of central announcement.	
Fallbacks	A failure of loop to allocate or start will activate the **fallback** tones and messages for signals 1, 2 and 3 that are set here.	The default message and tone numbers are the ones marked with an asterisk *. For further information on tones and messages see the section on Audio pack and use the audio sampler to listen to the messages and tones.

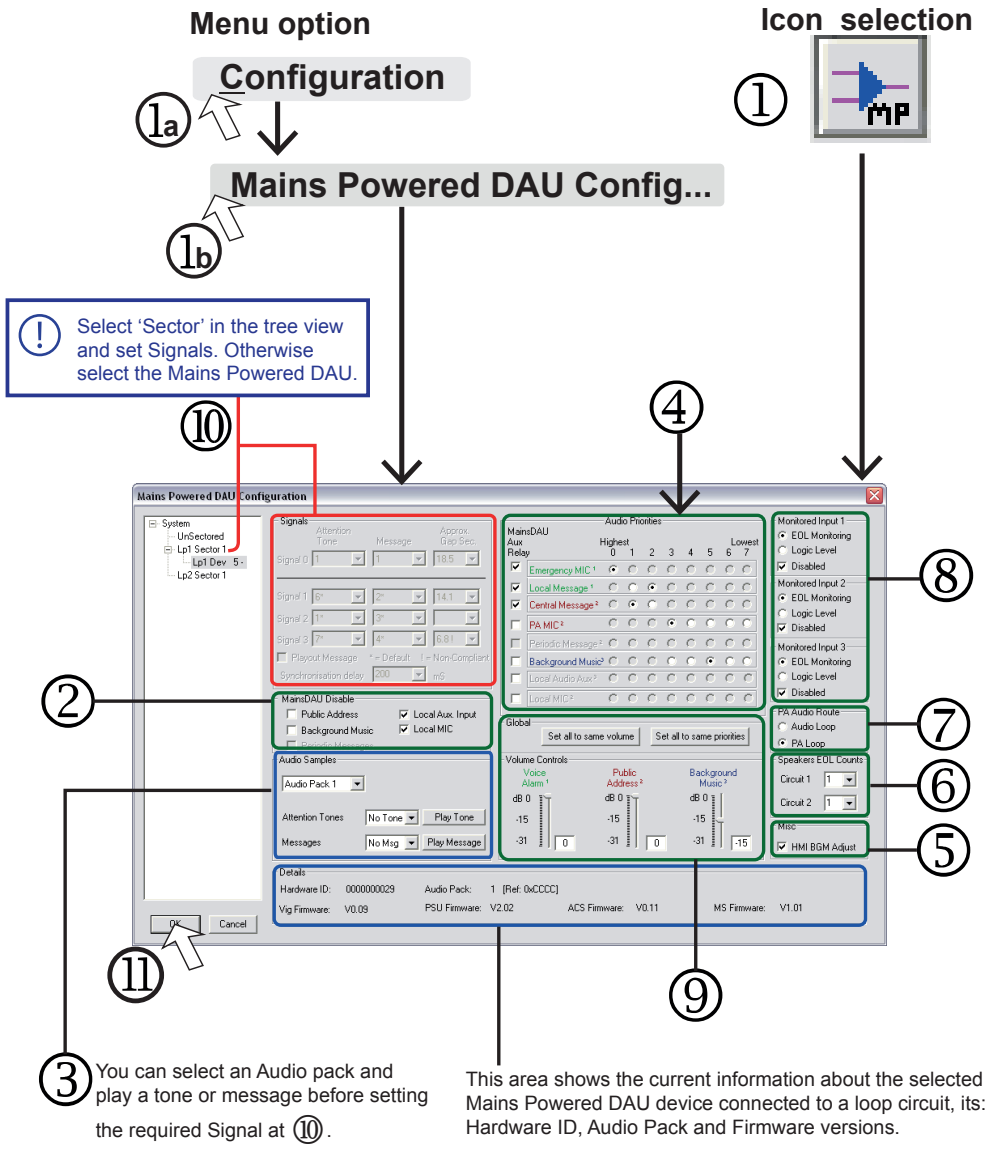
Mains Powered DAU - *Config. menu*

This feature is applicable for Vigilon Compact VA panel based system ONLY.(Not applicable for SMS).

Menu option	you can use this option to..	notes
Message Routing	.. to configure a Mains Powered DAU in a Vigilon Compact VA system and make the necessary settings, you will need to connect the Commissioning tool to the Vigilon Compact VA panel. The Mains Powered DAU are connected to the device and audio loop circuits of the Vigilon Compact VA panel.	! The keyswitch mode and periodic messages features are future options.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).

① Open the Mains Powered DAU configuration window in the Commissioning tool.

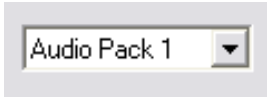


②



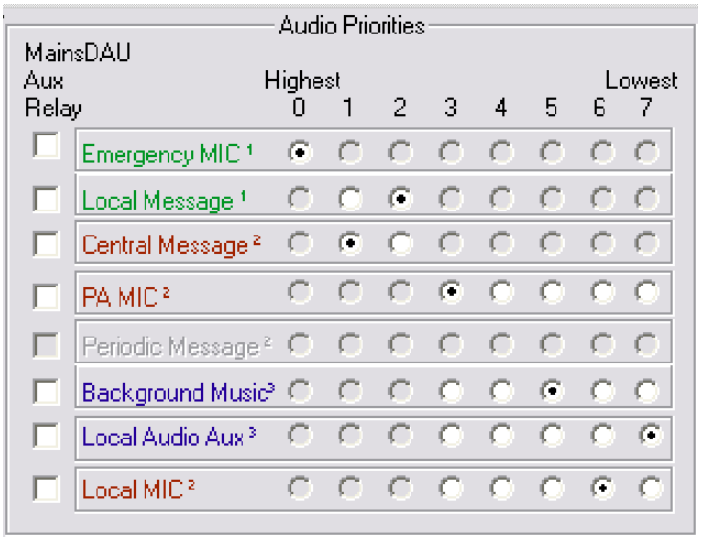
Uncheck the appropriate box if Public Address, Background Music, Local Audio input and Local Microphone are being used.

③



Select the required Audio Pack from this list, the default Audio Pack 1. Ensure the 'Audio Pack' selected here is the same across the entire system.

④



Configure the required Audio priorities for Local message, Central message, PA microphone, Background Music, Local Audio and Local microphone. Note it is not possible to set the same priority for more than one Audio. Upon selecting a Mains Powered DAU device in the system tree you can prioritise the audio output to speaker circuits. The auxiliary relay inside the Mains Powered DAU can be re-configured to activate with the operation of any combination of audios.

⑤



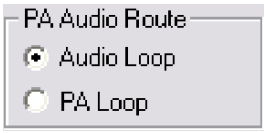
Check the 'HMI BGM Adjust' box to disable the volume control buttons on the Mains Powered DAU door.

⑥



Select from the drop down list a number that correspond with the number of End-of Lines fitted to each speaker circuit. Ensure for each of the two speaker circuits of a Mains Powered DAU there is at least 1 End-of Line (EOL) 10KW resistor for correct monitoring. A maximum of up to 4 EOLs can be fitted to a speaker circuit. Normally there is only 1 EOL required at the end of a speaker circuit. If there are spur circuits or there is a requirement to monitor partial break on a speaker wiring, then there could be up to 4 EOLs fitted to a speaker circuit.

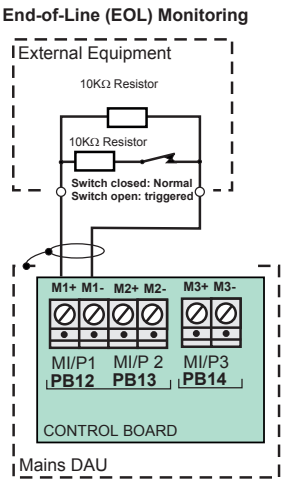
⑦

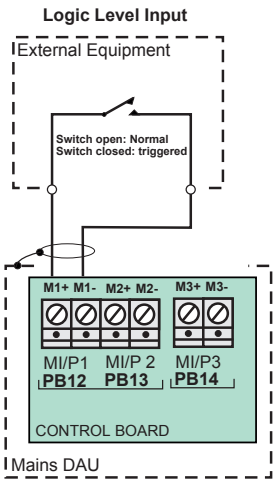


Select the routing of PA audio to be via the 'Audio Loop', note however the routing of audio via 'PA Loop' is for future use.

⑧

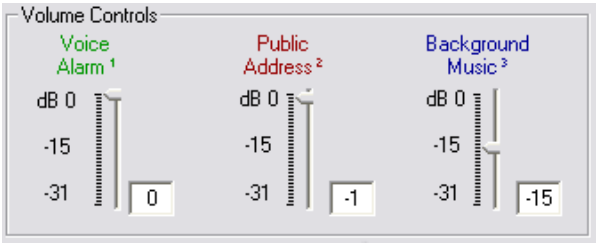






Any of the 3 monitored Inputs (MI/Ps) can be enabled by deselecting the respective checkbox. Normally the box is checked to signify the respective Monitored Input is not used and is disabled. Each enabled monitored input must have either EOL monitoring or Logic level input. The EOL monitoring method allow wiring to external equipment to be monitored for open or short circuit fault. Each monitored input relates to the respective device channel, for example MI/P 1 to MI/P 3 relates to Main Powered DAU Device Channels 1 to 3. Each device channel can be configured to trigger a command build action in the Vigilon Compact VA system.

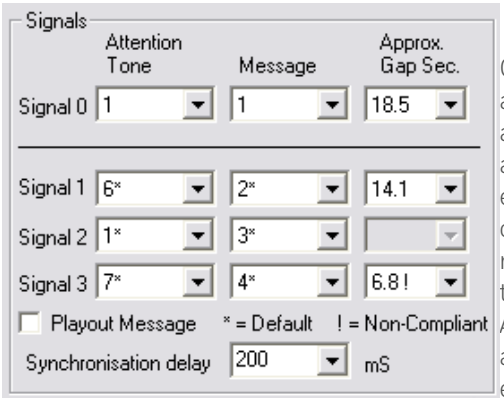
⑨



The volume levels of voice alarm, public address and background music can be preset. As default the VA and PA are set to maximum and background music is set at -15dB. A customer may want the volume level adjusted for each audio. For example the background music volume level will need to be set at a higher level in areas where there is noise, such as in a workshop. On the other hand in an office environment the volume level will need to be lower.

It is recommended that the volume level of VA remain set at maximum level 0dBA, this is to ensure the alarm sound can be heard in all areas.

⑩



On selecting a sector in the system tree you can configure the sector attention-tones and messages associated with Sector Signals 0, 1, 2 and 3. The default tone and message for each signal is marked with an asterisk * and those which are non compliant are marked with an exclamation '!'. The duration of silence gaps before and after a message can be set to site requirements. The exception is the gap for Evacuate messages which is fixed to meet the requirements of standards and therefore cannot be adjusted.
A 'Playout Message' feature can be enabled by a check box which allows an audio message to finish properly and therefore prevent an abrupt ending of an announcement.

Once the Mains Powered DAU is fully configured select the Save button and then move on and configure the next Mains Powered DAU on the loop. On completion of all configuration work transmit the configuration data to the panel and then backup the configuration data at the panel.

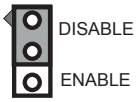
HOW TO SEND CONFIG. TO A MAINS POWERED DAU

Usually the entire system configuration is sent from the Commissioning tool to all the Mains Powered DAUs via Vigilon Compact VA panel.

However if you want to send the configuration to a Mains Powered DAU in a Vigilon Compact VA system then follow these procedures. First ensure the ACS Config link on MCB is configured to ENABLE.

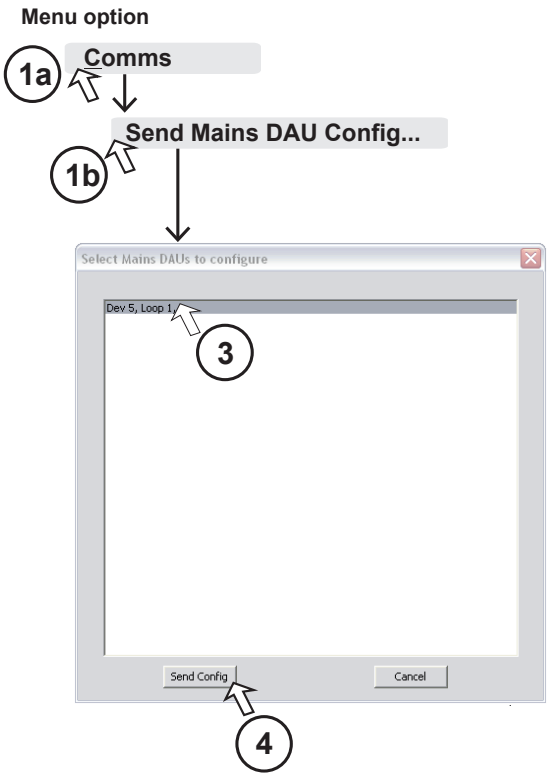
Configure link on MCB at the Control panel

ACS CONFIG



P6

The link ACS CONFIG P6 must be in the ENABLE position before any Mains Powered DAU configuration is received from the Commissioning tool.

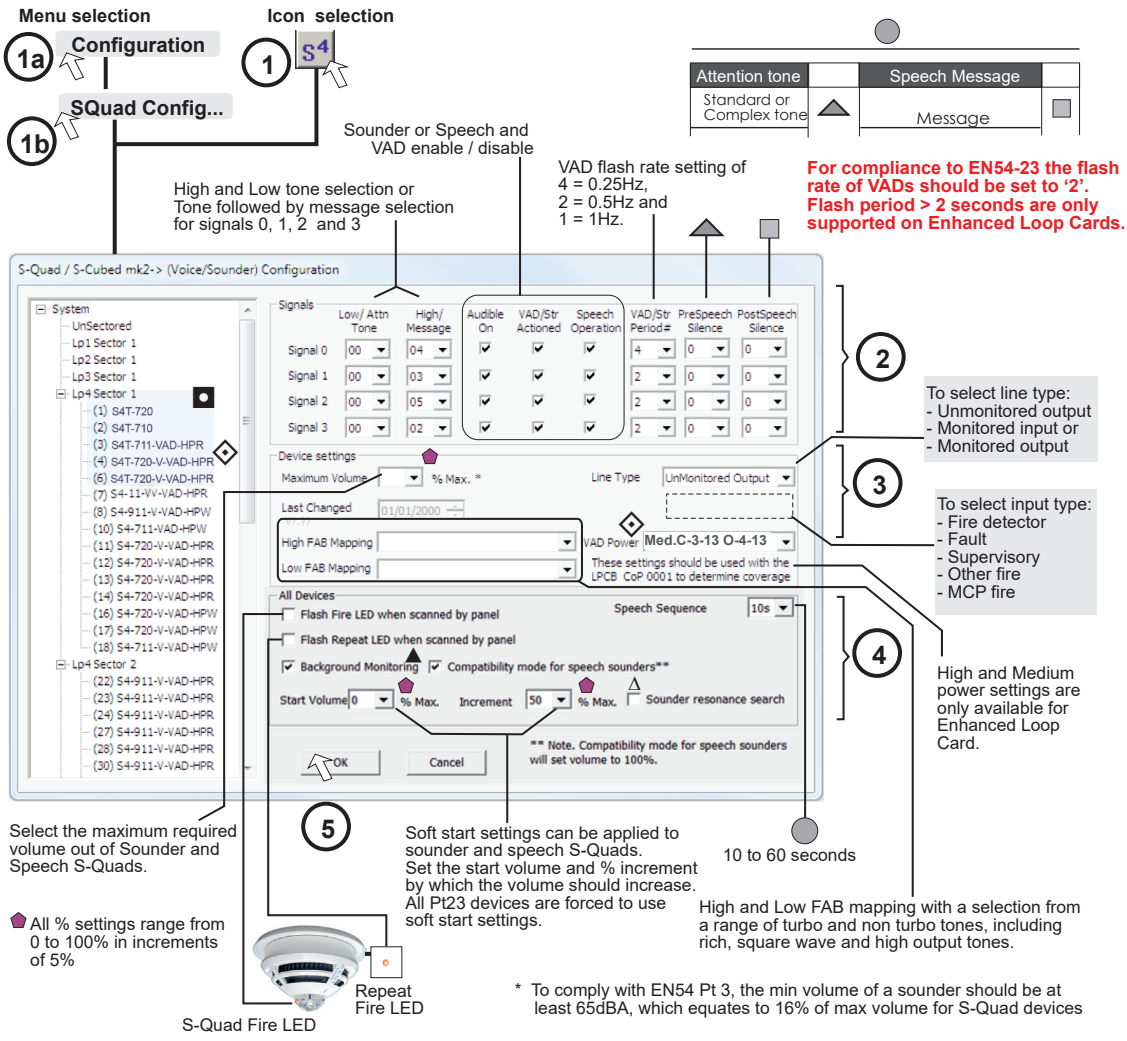


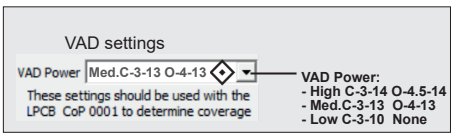
S4, S4T & S3 Mark 2 or higher-*Config. menu*

This feature is applicable for Vigilon Compact VA panel based system ONLY.

Menu option	you can use this option to..	notes
S4, S4T and S-Cubed Mk2 / 3 or higher Config...	..configure the S4, S4T, (SENTRI#) Sensor/ Alarm devices, S-Cubed mark 2 / 3 voice sounder with VAD devices installed in the System. Coverage selection for each VAD device is calculated during the system design stage. The coverage data for entry into the device page must be acquired from the system designer. #- excludes self test	Each S-Quad (SENTRI) to include part 23 compliant device or S-Cubed Mark 2 / 3 device needs to know what attention tone and message to output when commanded by the control panel. The configuration also includes settings of soft start volume output at all these devices. Individual device settings include FAB/SAB mapping and setting for monitored line input or output.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).





* To comply with EN54 Pt 3, the min volume of a sounder should be at least 65dBA, which equates to 16% of max volume for S-Quad devices

◈ Selected VAD device can have *high, medium and low* power setting. This setting is selectable using this drop down menu. Refer to the product data sheet for further information on VAD power settings.

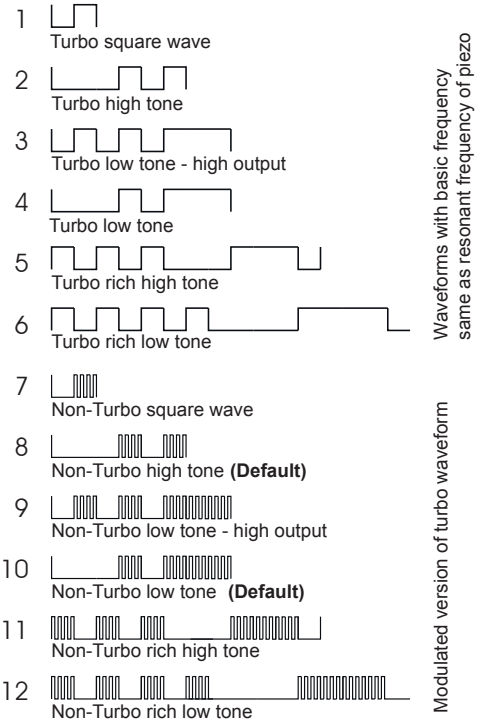
Category 'O'	
Old reference	New reference
O-4.5-14	Cylinder volume: Height - 4.5m, Diameter - 14m
O-4-13	Cylinder volume: Height - 4m, Diameter - 13m

△ With this box checked the S-Quad sounder devices installed in the system that are manufactured post April 2014 automatically check that the components used to produce the sound output are working at their resonant frequency.

▲ Background monitoring on New device / Old device
(A new device can be an S-Cubed Mark 3 or an S-Quad Mark 2/3)
No tick - Off, **Grey tick** - every 6 hours (for New device like a Pt 23 device) / every 1 hour (for Old devices) and **Black tick** - every 24 hours

■ S4T Devices with Self Test functionality.

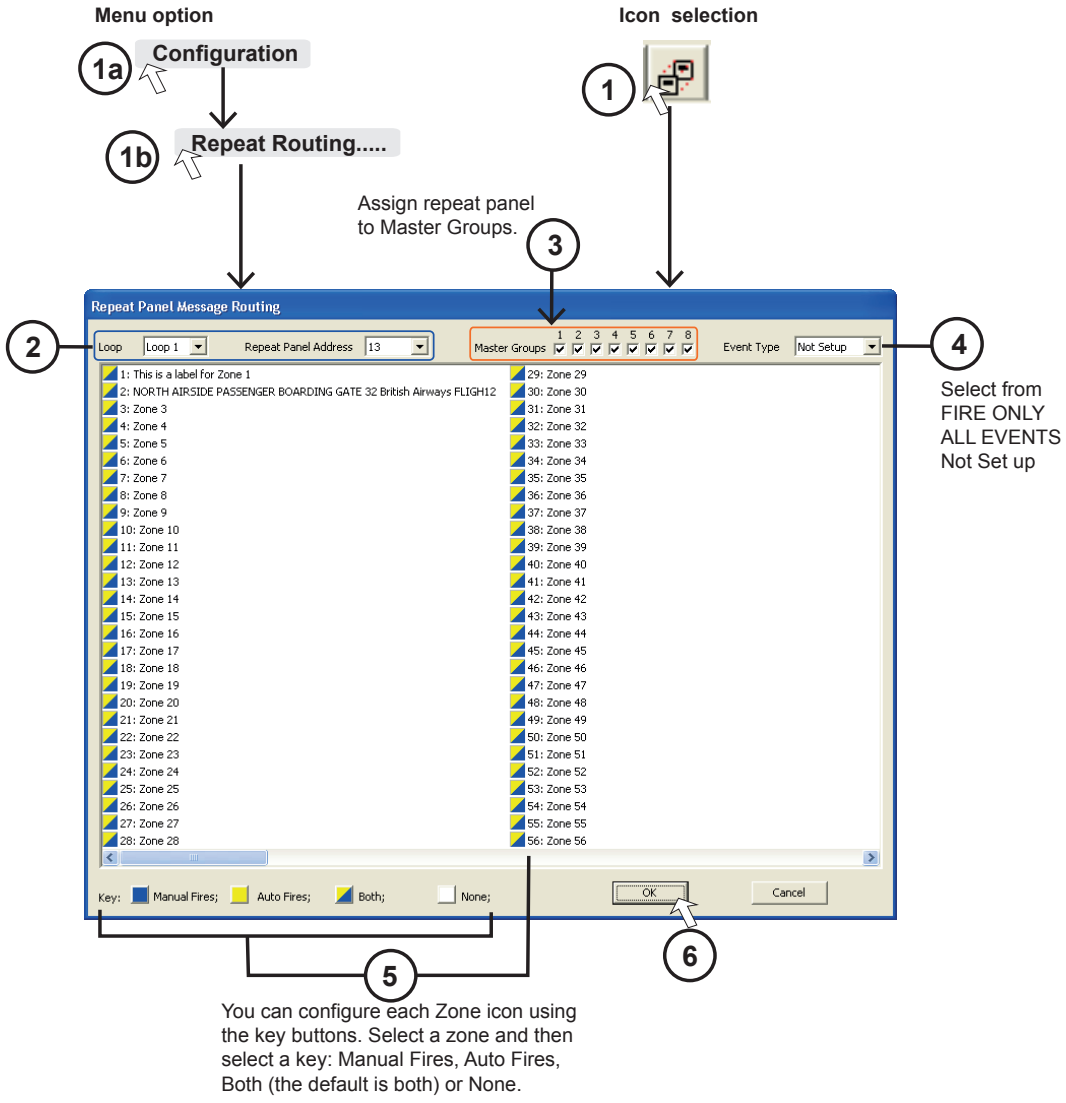
All Devices	On selecting **System** in the System tree you can configure signals and apply common settings to all the S-Quad (SENTRI) with VAD (pt23) and S-Cubed mark 2 / 3 devices in the system: The **local and remote Repeat fire LEDs** of the S-Quad (SENTRI) can be configured to provide a flashing indication when it is scanned by the control panel. The **Background monitoring** on New device / Old device (A new device can be an S-Cubed Mark 3 or an S-Quad Mark 2/3) occurs with No tick - Off, Grey tick - every 6 hours (for New device like a Pt 23 device) / every 1 hour (for Old devices) and Black tick - every 24 hours. The **Soft start** is facilitated by entry of start volume level and % increment by which the volume is to increase. By selecting the Non-**EN54-3 Attn**. checkbox it is possible to obtain a louder non compliant attention tone from the sounder. The **Sounder resonance** search apply to sounder part of S-Quad (SENTRI) with VAD (pt23) and S-Cubed mark 2 / 3 devices manufactured post April 2014 installed in a system it can automatically check components used to produce the sound output are working at their resonant frequency, this is the optimum point where the sound output is at its loudest for the lowest power consumption. During a resonance search the sounders will slowly change the tone frequency to confirm the resonant point. This change in tone frequency will be heard as a slight tone shift that lasts for about 1 minute. The **Speech sequence period** is the attention tone plus speech message and gaps of silence before and after the message. The period can be changed from 10 up to 60 seconds. The silence after the message will increase with duration of period. Normally this is left as default, except where a custom voice message may have a different duration than the default setting.	These settings are globally applied to all the S-Quad (SENTRI) with VAD (pt23) and S-Cubed mark 2 / 3 devices in the system.
Signals	On selecting **a sector** in the System tree you can configure sounder **Low and High tone** settings for each signal by mapping high and low FAB. If the sector has speech devices then you can select the required central **Attention tone and message** for each signal. The Sounder, Speech and Strobe (VAD) signal settings allow you to disable the visual or audible element of S-Quad (SENTRI) in a sector, however you will not be able to disable both elements. The Strobe flash rate can be changed from 1 flash per second to 2 flashes per second. The VAD flash rate set to 4 flashes per second. The duration of silences before and after a speech message for each signal can be individually set to 0, 1, 2 or 3 seconds.	 It is important not to install a mix of sounder and speech S-Quad (SENTRI) and S-Cubed in the same sector, this is because one alarm will mask the others, resulting in un-intelligible message output.

Device settings	On selecting a S-Quad (SENTRI) device in the system tree you can set the maximum volume of its audible function. The line type can be set to monitored input or monitored output. If set to monitored input you must further select the input type: Fire, Fault, Supervisory, other fire or MCP fire. The maximum volume setting can be range from 0 to 100%, see note on EN54-3 compliance. The high and low FAB mappings are used to change the tone output of the S-Quad (SENTRI) sounder. When the panel commands a low or high tone the S-Quad (SENTRI) with VAD (pt23) or S-Cubed mark 2 / 3 will substitute them with the configured non turbo tones, see graphical representation of tone 1 to 12. Tones applicable for the device are selectable. The VAD power for each device can be low, medium or high.	Tone mapping Graphical representation of turbo and non turbo waveforms. 

Repeat routing... - *Config. menu*

Menu option	you can use this option to..	notes
Repeat Routing...	..select a repeat panel on a loop circuit ② and assign it to one or more Master Groups ③ from a range 1 to 8. The repeat panel can be set up to receive Fire only or All Event types ④ from selected zones. As default both automatic and manual zone fire events from a range 1 - 128 are routed to the repeat panel. Each zone can be configured for routing to repeat panel on occurrence of manual fire, automatic fire or both. The repeat routing from selected zone can also be 'not set up'.	You can change to an iconised display by right click on the mouse button in the white space of the window and then select 'Icon'. To change back to list display you right click in the white space and select 'List'. A zone can be selected and the receive action can be changed by clicking on the **key** buttons.

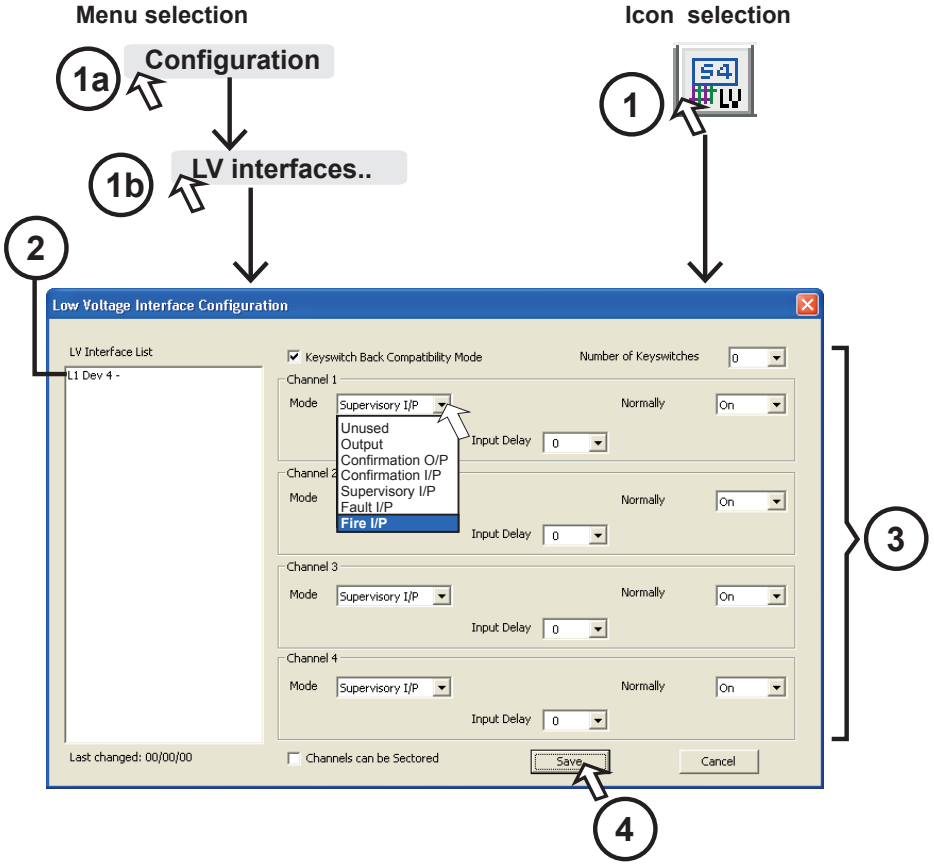
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



S4 LV Interface Unit - *Config. menu*

Menu option	you can use this option to..	notes
S4 LV Interface...	...configure the 4-Input/Output interfaces (like S4-34450 / SEN-INT-4IO), 1-Input interface (like S4-34410 / SEN-INT-INPUT) and 1-Output 1-input interface (like S4-34420 / SEN-INT-OUTPUT).	The keyswitch mode feature is a future option, so ensure the 'Number of keyswitches' option is set to '0'. Ensure only the applicable channel is configured when configuring the S4-34410 / SEN-INT-INPUT or S4-34420 / SEN-INT-OUTPUT type interfaces.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).

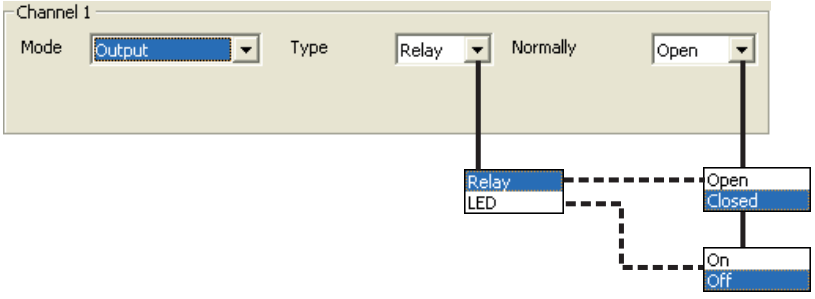


UNUSED

This option sets the channel as not used.

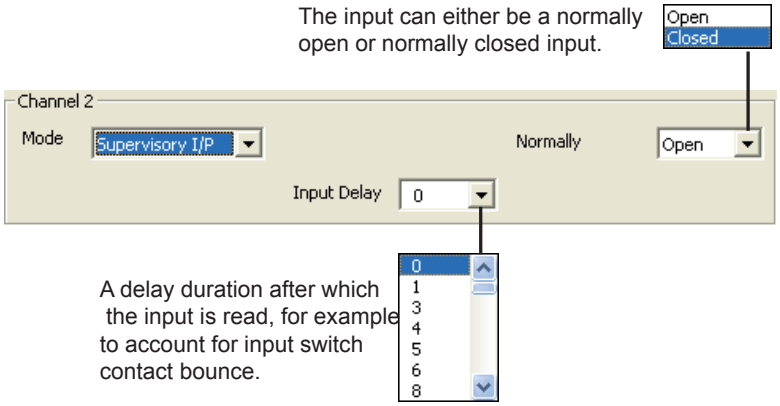
OUTPUT

This option sets the channel for either relay or LED output. As a relay output it provides a set of normally open or normally closed contacts. As an LED output it can be set to normally On (lit) or normally Off (not lit) drive for an LED load.



SUPERVISORY I/P

This option sets the channel as a 'non fire' Supervisory input for general switching. The acceptance of the input signal can be delayed until it has remained active for a set period of time. Settings for Supervisory,



FAULT I/P

This option sets the channel as a fault input. The acceptance of the input signal can be delayed until it has remained active for a set period of time.

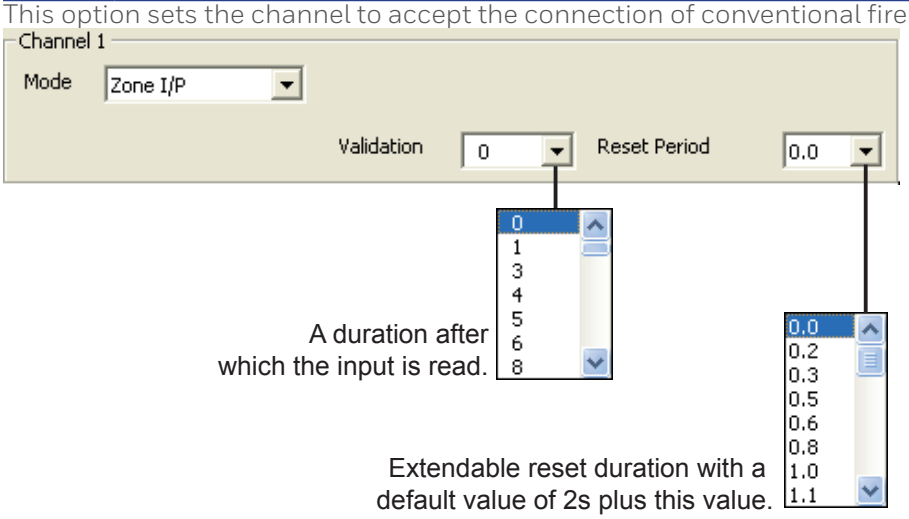
FIRE I/P

This option sets the channel as a fire input. The acceptance of the input signal can be delayed until it has remained active for a set period of time.

ZONE I/P

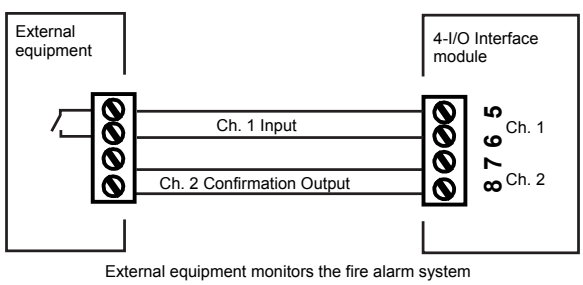
> The Zone I/P is only applicable for Channel 1 of S4-34410 / SEN-INT-INPUT and S4-34450 / SEN-INT-4IO.

This option sets the channel to accept the connection of conventional fire detectors and manual call points.



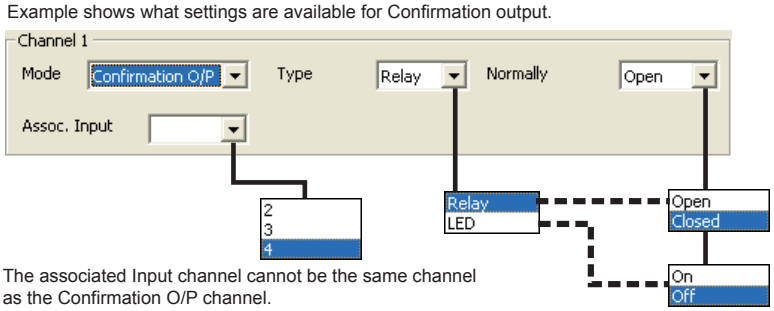
CONFIRMATION O/P

This option sets two channels, one as an input and another as a confirmation output. This facility allows external equipment to monitor the fire alarm system.



External equipment monitors the fire alarm system

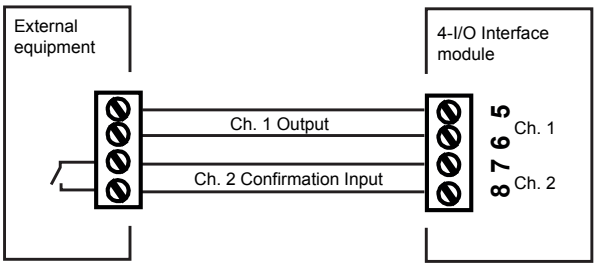
Example shows what settings are available for Confirmation output.



The associated Input channel cannot be the same channel as the Confirmation O/P channel.

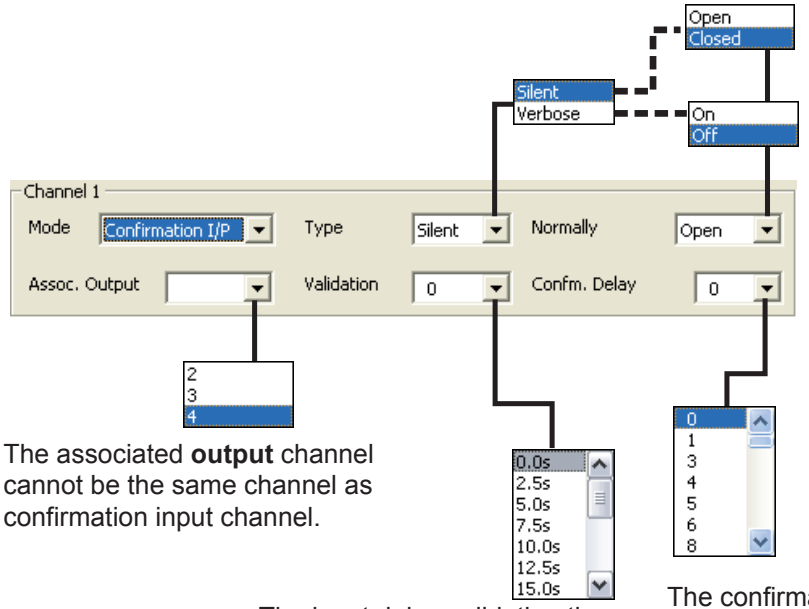
CONFIRMATION I/P

This option sets two channels, one as an output and another as a confirmation input. Here the fire alarm system monitors the external equipment. The confirmation input can be configured such that it can be received within a predefined time called 'confirmation time'.



Fire alarm system monitors the external equipment

The acceptance of an active input signal can be delayed until it has remained active for a set period of time. Additionally a verbose or silent (non verbose) setting is available. The verbose setting allows supervisory message indication on change of input state and a timeout fault, given if a change of state has not occurred within the confirmation time duration. The silent setting will only give a timeout fault.



The associated **output** channel cannot be the same channel as confirmation input channel.

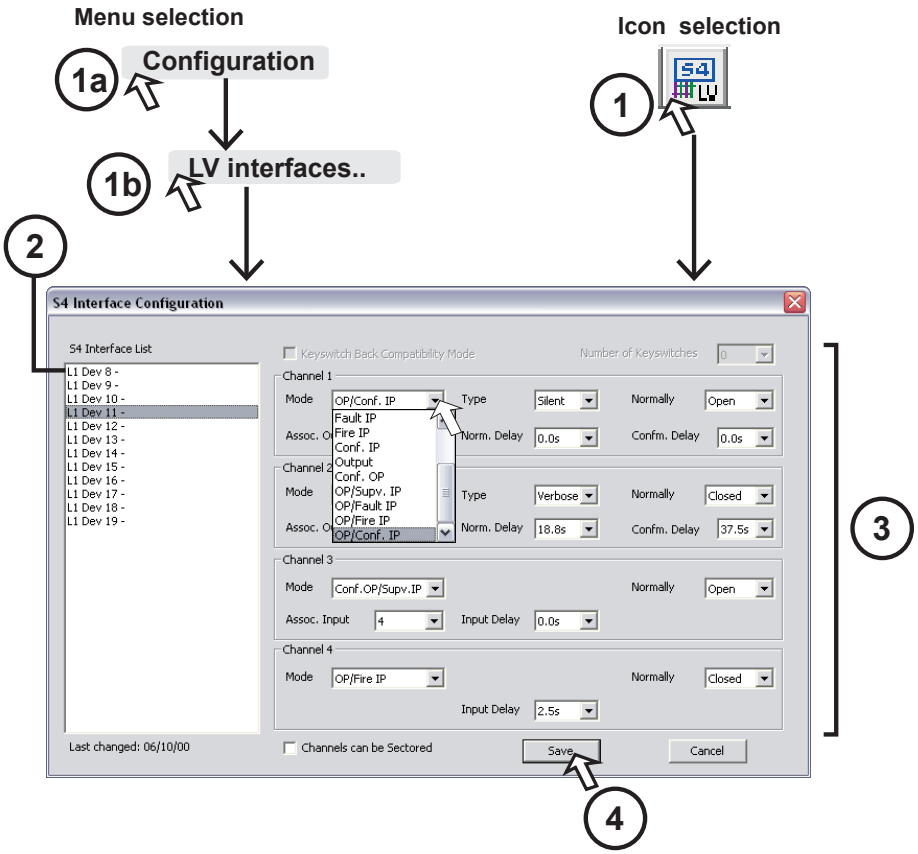
The input delay validation time takes account of any contact bounce.

The confirmation delay is the time by which a confirmation must be given.

S4 Mains Switching Interface - *Config. menu*

Menu option	you can use this option to..	notes
S4 Mains Switching Interface...	...to configure the S4-34401 / SEN-INT-IOAC 1-channel & S4-34404 / SEN-INT-4IOC 4-channel mains switching interface units.	! Only the channels that are applicable for a Mains switching interface unit are displayed for configuration.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).

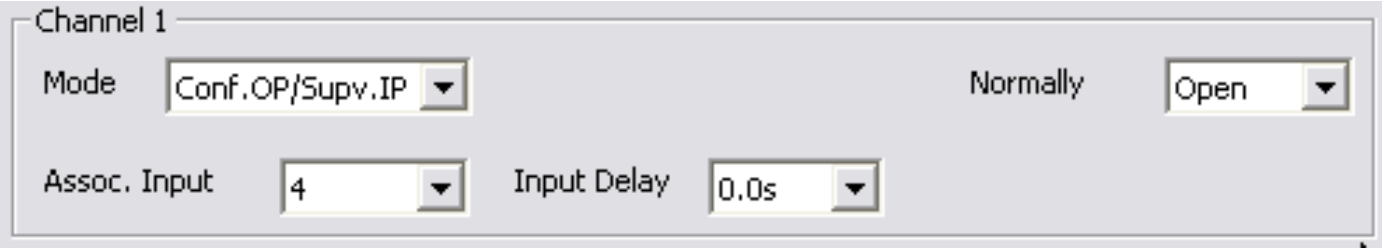


UNUSED MODE

When a channel is not being used it must be setup as an unused channel.

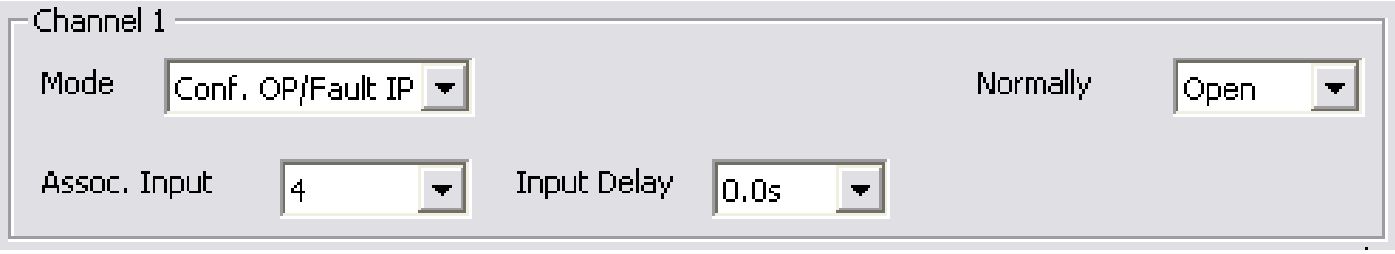
Mode	settings	notes
Unused		Set the channel mode to unused if it is not required.

CONFIRMATION OUTPUT WITH SUPERVISORY INPUT MODE



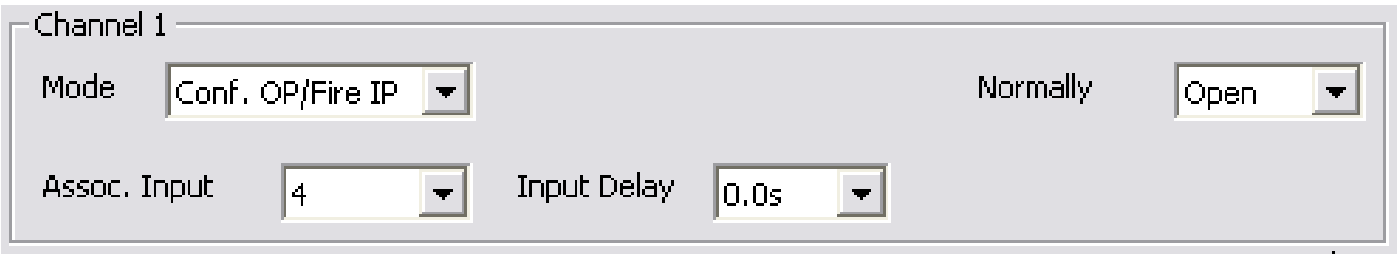
Mode	settings	notes
Confirmation Output with Supervisory input mode	Associated Input 1 2 3 4	Here the selected Supervisory input channel is the one associated with the confirmation output channel.
	Input Delay 0.0s 2.5s 5.0s 7.5s 10.0s 12.5s 15.0s	The Input Delay is the time before the Supervisory input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”.
	Normally Open Closed	The input channel can be configured to operate with normally open or normally closed contacts. Note a normally closed operation should be selected if fail safe contact monitoring is required.

CONFIRMATION OUTPUT WITH FAULT INPUT MODE



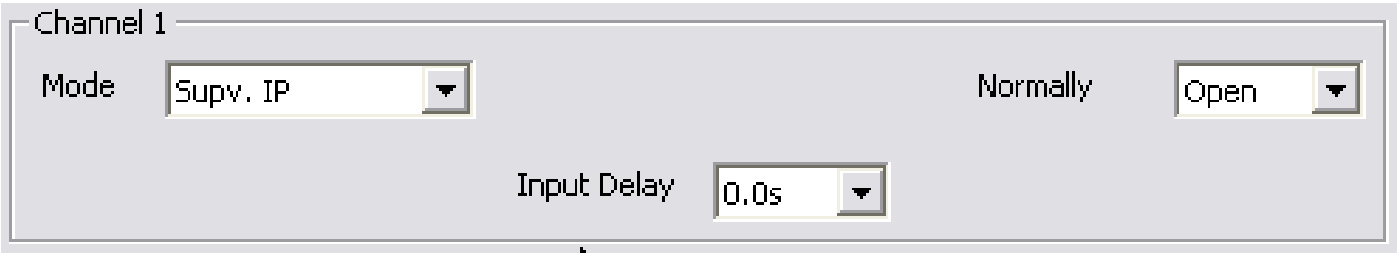
Mode	settings	notes
Confirmation Output with Supervisory input mode	Associated Input 1 2 3 4	The selected Fault input channel is associated with the confirmation output channel.
	Input Delay 0.0s 2.5s 5.0s 7.5s 10.0s 12.5s 15.0s	The Input Delay is the time before the Fault input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”.
	Normally Open Closed	The input channel can be configured to operate with normally open or normally closed contacts. Note a normally closed operation should be selected if fail safe contact monitoring is required.

CONFIRMATION OUTPUT WITH FIRE INPUT MODE



Mode	settings	notes
Confirmation Output with Fire Input mode	Associated Input 1 2 3 4	The selected Fire input channel is associated with the confirmation output channel.
	Input Delay 0.0s 2.5s 5.0s 7.5s 10.0s 12.5s	The Input Delay is the time before the Fire input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”.
	Normally Open Closed	The input channel can be configured to operate with normally open or normally closed contacts. Note a normally closed operation should be selected if fail safe contact monitoring is required.

SUPERVISORY INPUT MODE

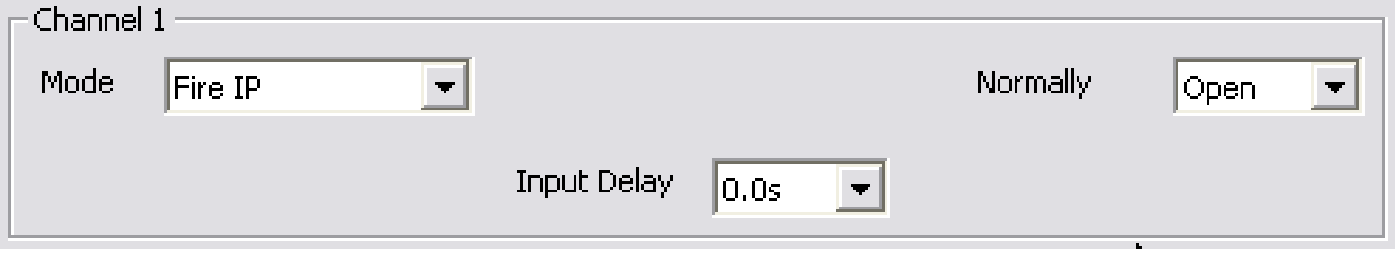


Mode	settings	notes
Supervisory Input mode	Input Delay 0.0s 2.5s 5.0s 7.5s 10.0s 12.5s 15.0s	The Input Delay is the time before the Supervisory input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”.
	Normally Open Closed	The input channel can be configured to operate with normally open or normally closed contacts. Note a normally closed operation should be selected if fail safe contact monitoring is required.

FAULT INPUT MODE

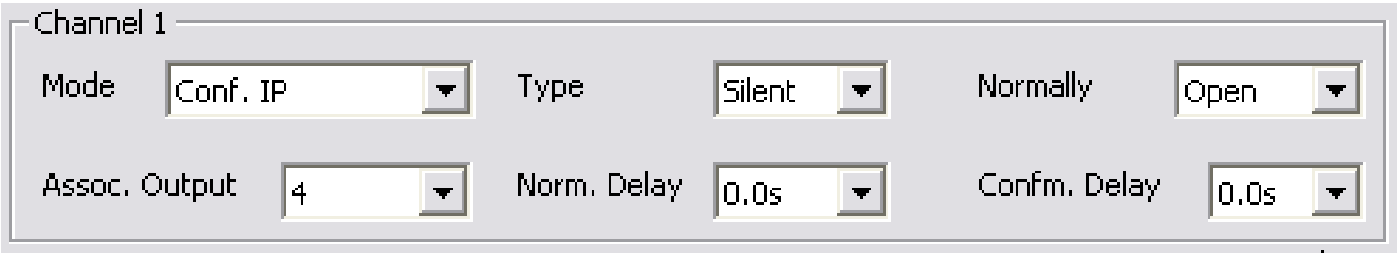
Mode	settings	notes
Supervisory Input mode	Input Delay 0.0s 2.5s 5.0s 7.5s 10.0s 12.5s 15.0s	The Input Delay is the time before the Fault input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”.
	Normally Open Closed	The input channel can be configured to operate with normally open or normally closed contacts. Note a normally closed operation should be selected if fail safe contact monitoring is required.

FIRE INPUT MODE



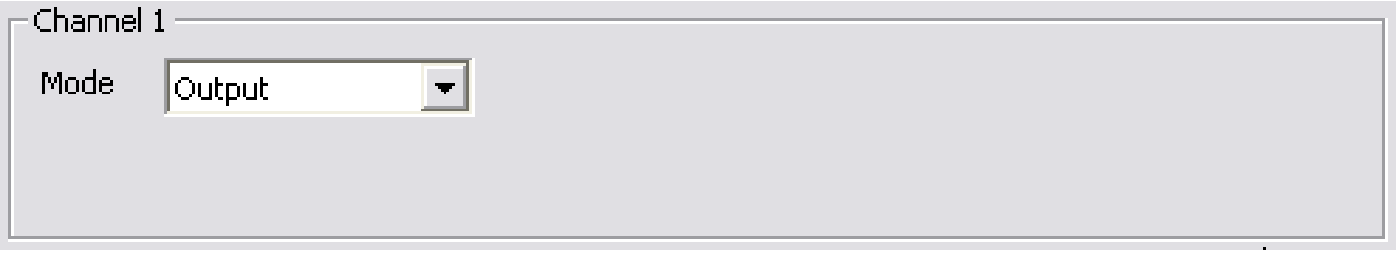
Mode	settings	notes
Fire Input mode	Input Delay 0.0s 2.5s 5.0s 7.5s 10.0s 12.5s 15.0s	The Input Delay is the time before the Fire input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”.
	Normally Open Closed	The input channel can be configured to operate with normally open or normally closed contacts. Note a normally closed operation should be selected if fail safe contact monitoring is required.

CONFIRMATION INPUT MODE



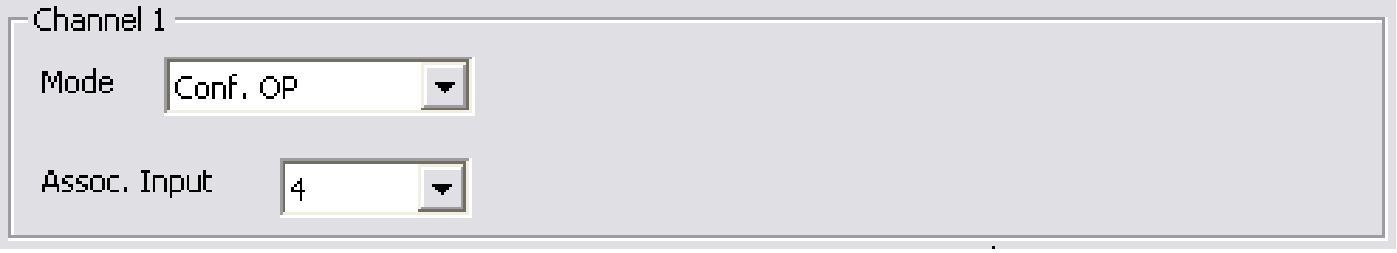
Mode	settings	notes
Confirmation Input mode	Associated with Output 2 3 4	The selected output channel is associated with the confirmation input channel. Note channel 1 cannot in this instance be selected for associated output.
	Type Silent Verbose	The verbose setting will generate true/false supervisory messages whenever the input changes state, as well as generate timeout fault if the change does not occur before the delay has elapsed. The silent setting will only give a timeout fault.
	Normal Delay 0.0s 1.3s 2.5s 3.8s 5.0s 6.3s 7.5s	The normal delay is the time before a confirmation input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”.
	Normally: Open Closed	The input channel can be configured to operate with normally open or normally closed contacts. Note a normally closed operation should be selected if fail safe contact monitoring is required.
	Confirmation Delay 0.0s 2.5s 5.0s 7.5s 10.0s 12.5s 15.0s 17.5s	This is the delay time before a confirmation input is accepted by the interface and is how long the interface waits for a confirmation signal before it brings up a fault message.

OUTPUT MODE



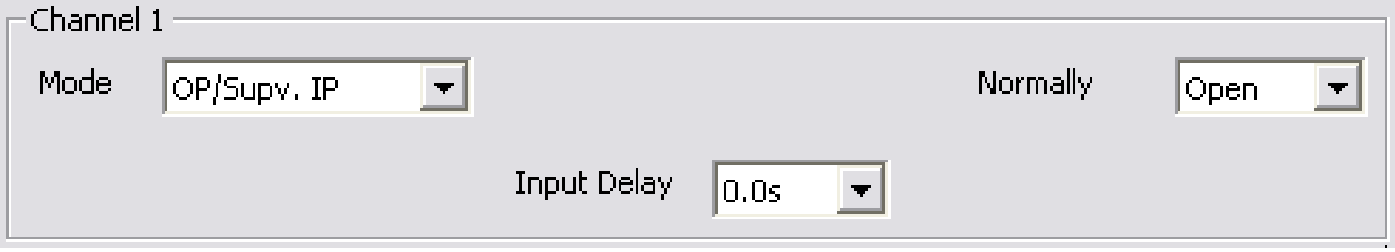
Mode	settings	notes
Output mode	None required	This option sets the channel as an output only.

CONFIRMATION OUTPUT MODE



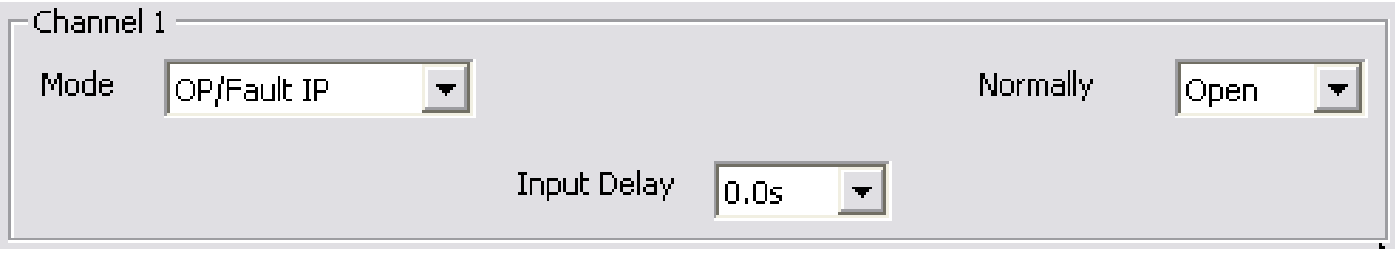
Mode	settings	notes
Confirmation Output mode	Associated Input 2 3 4	The confirmation output channel is associated with a selected input channel.

OUTPUT WITH SUPERVISORY INPUT MODE



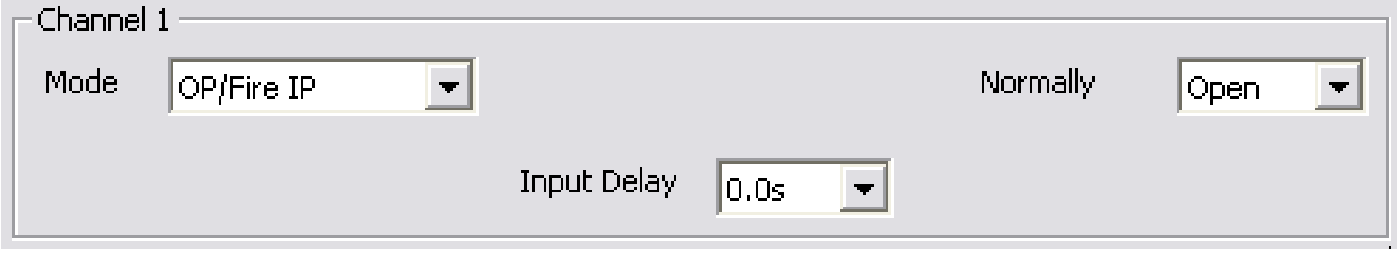
Mode	settings	notes
Output with Supervisory Input mode	Input Delay 0.0s 2.5s 5.0s 7.5s 10.0s 12.5s 15.0s	The Input Delay is the time before the Supervisory input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”
	Normally Open Closed	The input channel can be configured to operate with normally open or normally closed contacts. Note a normally closed operation should be selected if fail safe contact monitoring is required.

OUTPUT WITH FAULT INPUT MODE



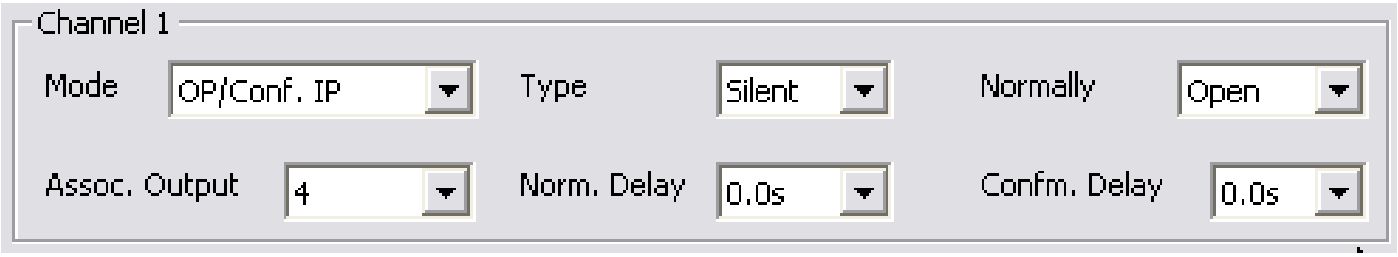
Mode	settings	notes
Output with Fault Input mode	Input Delay 0.0s 2.5s 5.0s 7.5s 10.0s 12.5s 15.0s	The Input Delay is the time before the Fault input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”.
	Normally Open Closed	The input channel can be configured to operate with normally open or normally closed contacts. Note a normally closed operation should be selected if fail safe contact monitoring is required.

OUTPUT WITH FIRE INPUT MODE



Mode	settings	notes
Output with Fire Input mode	Input Delay 0.0s 2.5s 5.0s 7.5s 10.0s 12.5s 15.0s	The Input Delay is the time before the Fire input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”.
	Normally Open Closed	The input channel can be configured to operate with normally open or normally closed contacts. Note a normally closed operation should be selected if fail safe contact monitoring is required.

OUTPUT WITH CONFIRMATION INPUT MODE



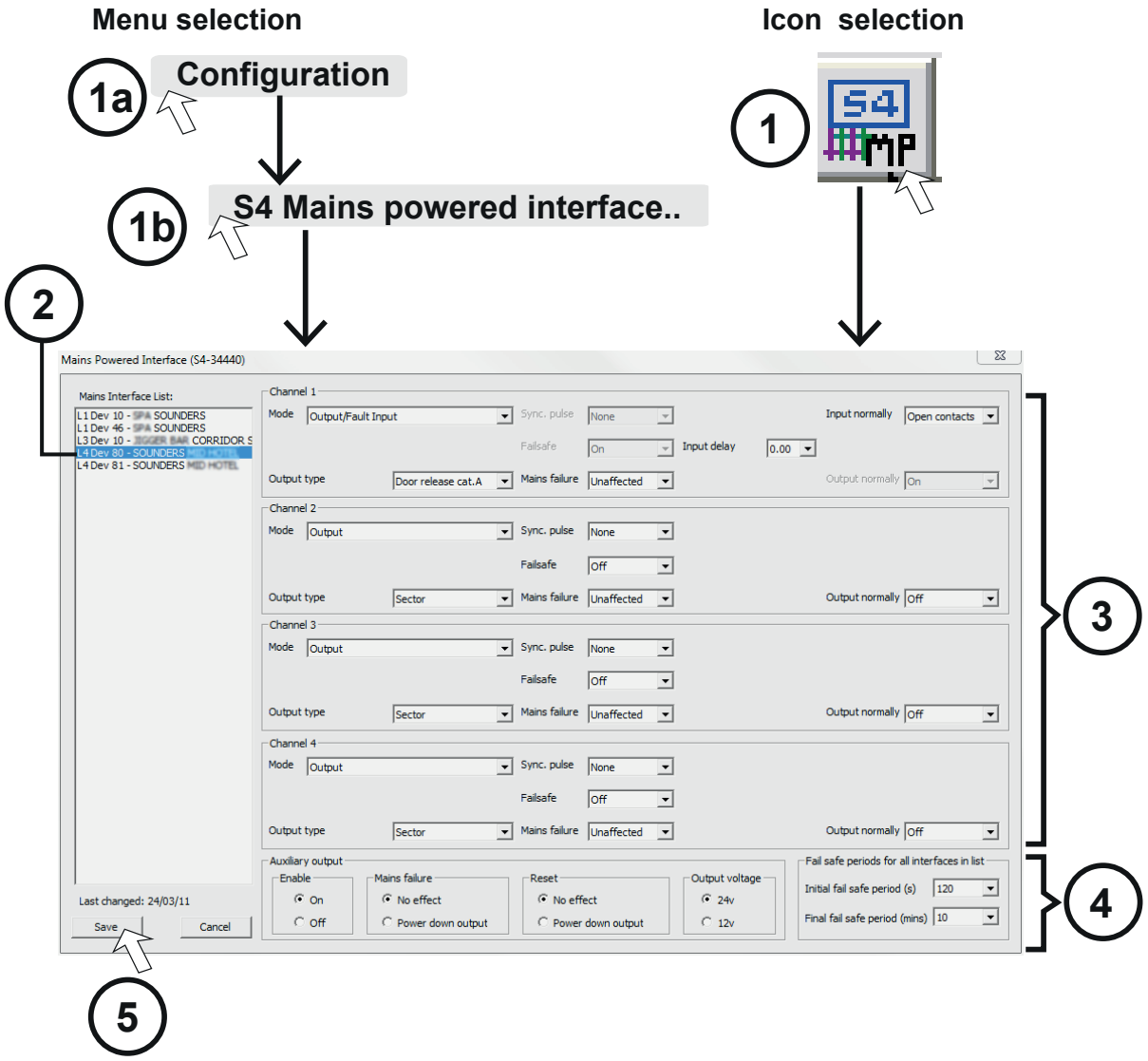
Mode	settings	notes
Output with Confirmation Input mode	Associated Output 2 3 4	The selected output channel is associated with the confirmation input channel.
	Type Silent Verbose	The verbose setting will generate true/false supervisory messages whenever the input changes state, as well as generate timeout fault if the change does not occur before the delay has elapsed. The silent setting will only give a timeout fault.
	Normal Delay 0.0s 1.3s 2.5s 3.8s 5.0s 6.3s 7.5s	The normal delay is the time before a confirmation input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”. This time is the debounce period.
	Normally: Open Closed	The input channel can be configured to operate with normally open or normally closed contacts. Note a normally closed operation should be selected if fail safe contact monitoring is required.
	Confirmation Delay 0.0s 2.5s 5.0s 7.5s 10.0s 12.5s 15.0s 17.5s	The confirmation delay is the time allowed for the input to be received to allow for any processing time at external system.

S4 Mains Powered Interface - *Config. menu*

Menu option	you can use this option to..	notes
S4 Mains Powered Interface...	...to configure the S4-34440-02 / 78302-02NM and S4-34440-12 Mains powered interface units.	The S4-34440-ASD Interface unit does not appear on this page. The settings associated with S4-34440-ASD are available on the Device config. page.

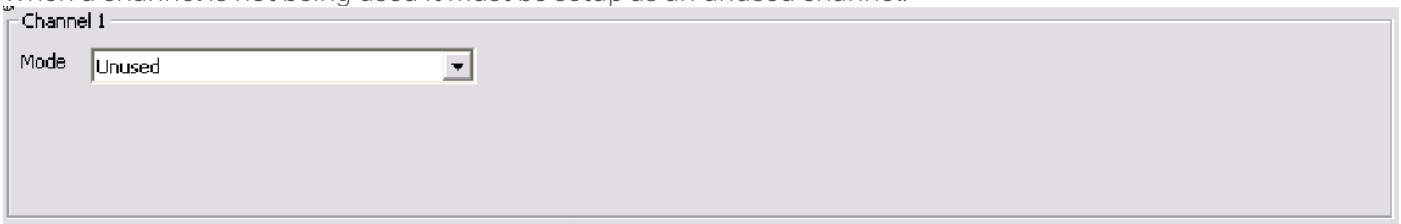
Operation (The numbers ①②③④....show an order in which to enter data or make selections).

After opening the Mains Interface configuration window select the required interface from the system tree for configuration.



UNUSED MODE

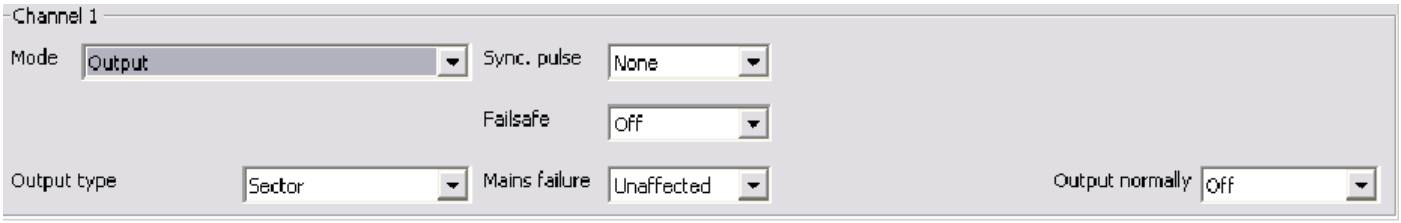
When a channel is not being used it must be setup as an unused channel.



Mode	settings	notes
Unused		Set the channel mode to unused if it is not required.

OUTPUT MODE

This is when a channel is configured as an output and the channels input terminals are not used.



Mode	settings	notes
Output	Output type Sector LED UnMonitored Sector Door release cat.A Door release cat.B	The **Sectored output** is used to power a wide range of alarm products such as sounders, bells, door holders and relay. Some loads may require a Suppression diode. The **LED output** drive of 1.5mA is available. The **Unmonitored sector** output has no end-of-line resistor or series diode. Unmonitored sector lines will have no associated analogue channels. The **Door release category A** option is used for controlling door release mechanisms that need to meet the requirement of BS7273 Part 4. With Category A the outputs are operated (doors released) from fire, **fault and disablement** events. The **Door release category B** option is used for controlling door release mechanisms that need to meet the requirement of BS7273 Part 4. With Category B the outputs are operated (doors released) from fire events.
	Sync. pulse None 10ms 20ms 30ms	The outputs sends a **synchronisation pulse** every 10s, the output is turned off for a short duration. The duration can be programmed to be approximately 10, 20 or 30ms for compatibility with a wide range of annunciation devices that require synchronisation such as strobes (VADs), sounders and voice sounders.
	Failsafe Off On	When 'On' it allows the setting of **Fail safe periods** for all Mains powered interface outputs, for example where outputs are used for fire doors control applications. When set to 'On' the Initial fail **safe period** defaults to 120s and the **Final fail safe period** defaults to disabled. See page page 96.
	Mains failure Unaffected TurnOff	To preserve battery capacity for essential functions it is possible to configure individual outputs to deactivate 'Turn Off' during a **mains power failure**.
	Output normally Off On	This is when a sectored output is configured to work in an inverse manner. An 'On' setting will cause the output to turn 'OFF'. Note that in this mode sector wiring is effectively unmonitored, it is only monitored when the output is de-energised. This feature may be used with equipment such as magnetic door holders to ensure the fire door will release once a fire has been detected, this however would be non BS7273 Part 4 Category A door holder.

ZONE INPUT MODE

This example shows how to set a channel as a Zone input.



Mode	settings	notes
Zone Input	Zone Input Type Gent IS Esser Sensor Apollo/Nittan	The **Zone Input Type** monitors 'conventional' detectors and call points, with manual call points having 470 ohms resistor in series with Normally Open contacts. When a Gent detector operate it will draw a constant current of 30mA. A standard end-of-line capacitor must be fitted across the Z+ and Z- terminals. Each zone input can have up to 20 standard detectors connected with the diode base option. A Zone Input Type can accommodate a range of different products to operate at different zone input thresholds: Gent (**Type 0**) IS Esser Sensor (**Type 1**) Apollo/Nittan (**Type 2**) Tanlentum Flame (**Type 3**) Det-tronics Flame (**Type 4**) S/C Fire (**Type 5**)
	Validation Delay 0.00 2.40 4.80 7.20 9.60 12.00 14.40	The purpose of the alarm **Validation Delay** is to minimise false alarms. The alarm validation timeout can be a value in the range 0 (off) to 37.5 seconds. During alarm validation delay timeout period the interface will suppress fire event by applying a reset to the zone circuit and then wait for a second confirming fire signal.
	Reset Period 1.90 2.54 3.18 3.82 4.46 5.10 5.74 6.38	Other detector types may need a specific **Reset period** which can be set here in seconds.

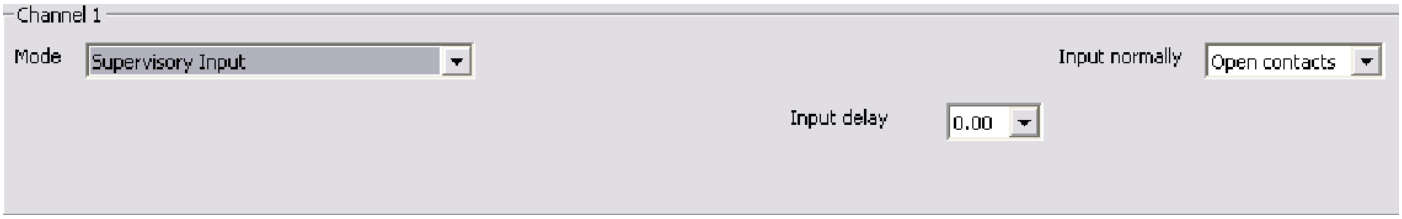
SUPERVISORY INPUT MODE



Mode	settings	notes
Supervisory input	Input Delay 0.00 2.40 4.80 7.20 9.60 12.00 14.40	The **Input Delay** is the time before the input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”. This time is the debounce period. The input delay timeout can be a value in the range 0 to 37.5s.
	Input normally Open contacts Closed contacts	The input channel can be configured to operate with normally open or normally closed contacts. Note normally closed operation should be selected if fail safe contact monitoring is required.

FAULT INPUT MODE

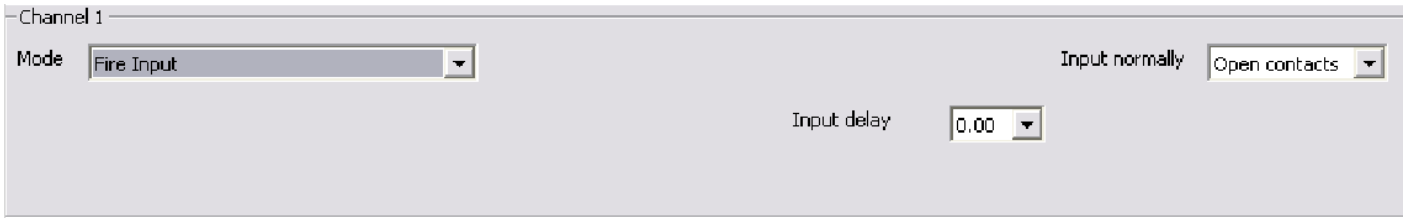
This example shows how to set a channel as a Fault input. In this mode use a 470ohms end-of-line resistor with another 470ohms resistor being switched in parallel across the Z+ and Z- terminals to provide the feedback signal.



Mode	settings	notes
Fault input	Input delay	As described for Supervisory input.
	Input normally	As described for Supervisory input.

FIRE INPUT MODE

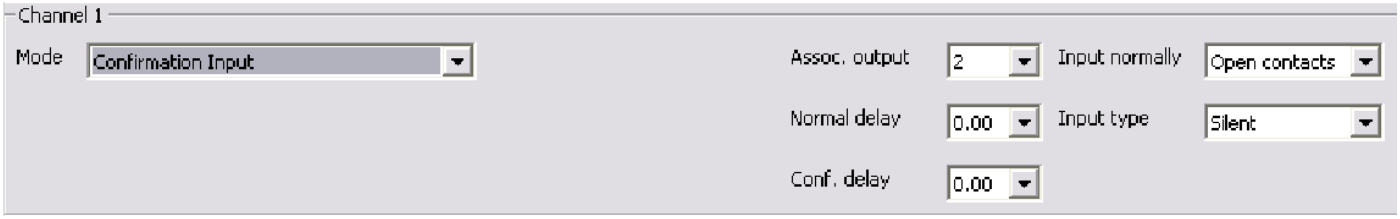
This example shows how to set a channel as a Fire input.



Mode	settings	notes
Fire Input	Input delay	As described for Supervisory input, but with range 0 to 12.5s)
	Input normally	As described for Supervisory input.

CONFIRMATION INPUT MODE

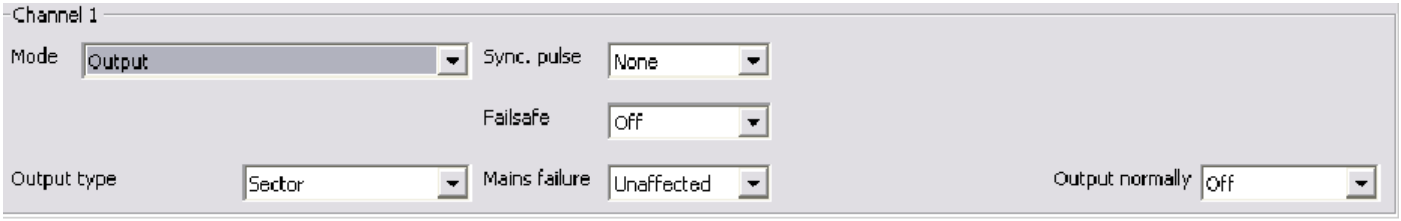
The purpose of a **Confirmation Input** is to allow the system to monitor the correct operation of an output, which relies on external equipment sending back the correct signal. In this mode use a 470ohms end-of-line resistor with another 470ohms resistor being switched in parallel across the Z+ and Z- terminals to provide the feedback signal.



Mode	settings	notes
Confirmation Input	Associated Output 2 3 4	The selected output channel is associated with the confirmation input channel. Note channel 1 cannot be selected for associated output as it is already being used as an input, however this would be possible if the channel was configured as a combined input/output channel.
	Normal delay 0.00 1.20 2.40 3.60 4.80 6.00 7.20	The **Normal delay** is the time before a confirmation input is accepted by the interface, this will filter any noise or spurious signals, commonly know as “bounce”. This time is the debounce period.
	Confirmation delay 0.0s 1.3s 2.5s 3.8s 5.0s 6.3s 7.5s	This is the delay time before a confirmation input is accepted by the interface and is how long the interface waits for a confirmation signal before it brings up a fault message.
	Input normally:	See page 88.
	Input type Silent Verbose	The **verbose** setting will generate true/false supervisory messages whenever the input changes state, as well as generate timeout fault if the change does not occur before the delay has elapsed.

CONFIRMATION OUTPUT MODE

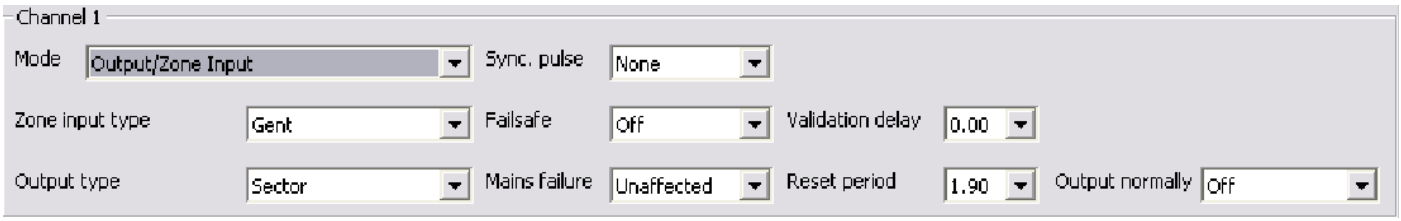
A channel is configured as a confirmation output and is associated with an input at another channel, but not its own channel.



Mode	settings	notes
Output	Output type Sector LED UnMonitored Sector	See page 86 .
	Fail safe	See page 86.
	Mains Failure	See page 86 .
	Associated Input 2 3 4	The selected input channel is associated with the confirmation output channel. Note channel 1 cannot be selected for associated input as it is already being used as an output.
	Output Normally	See page 86 .

OUTPUT WITH ZONE INPUT MODE

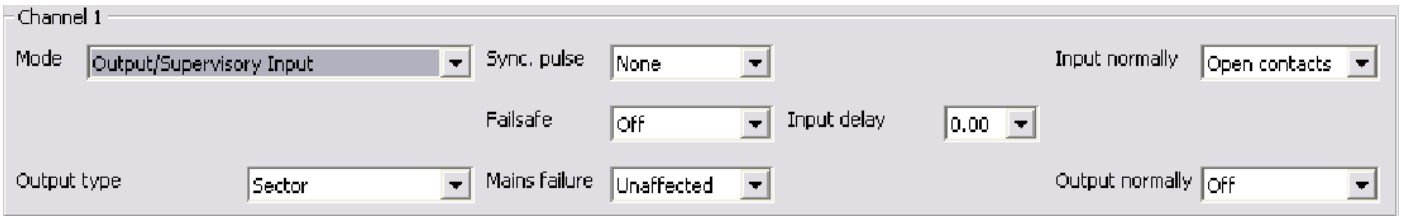
This is when a channel is configured as an output and the channels input terminals are Zone Input.



Mode	settings	notes
Output / Zone input	Zone input type	See page 87 .
	Output type	See page 86 .
	Sync. pulse	See page 86 .
	Failsafe	See page 86 .
	Mains failure	See page 86 .
	Validation delay	See page 86 .
	Reset period	See page 86 .
	Output normally	See page 86 .

OUTPUT WITH SUPERVISORY INPUT MODE

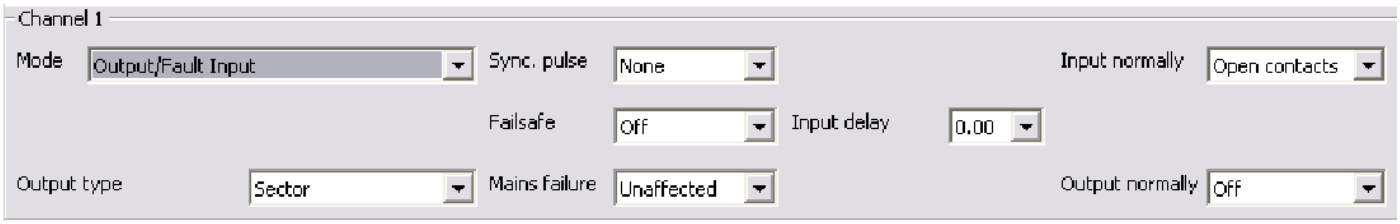
This is when a channel is configured as an output and the channel's input terminals are Supervisory Input.



Mode	settings	notes
Output / Supervisory input	Output Type	See page 86 .
	Sync. pulse	See page 86 .
	Failsafe	See page 86 .
	Mains Failure	See page 86 .
	Input Delay	See page 88 .
	Input normally	See page 88 .
	Output normally	See page 86 .

OUTPUT WITH FAULT INPUT MODE

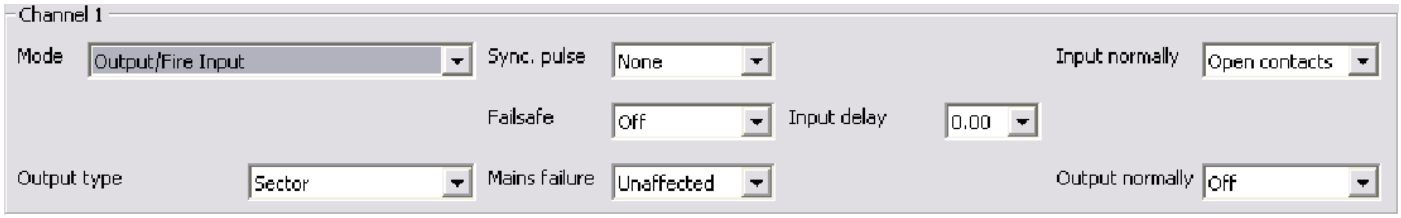
This is when a channel is configured as an output and the channel's input terminals are Fault Input.



Mode	settings	notes
Output / Fault input	Output Type	See page 86 .
	Sync. pulse	See page 86 .
	Failsafe	See page 86 .
	Mains failure	See page 86 .
	Input Delay	See page 88 .
	Output normally	See page 86 .

OUTPUT WITH FIRE INPUT MODE

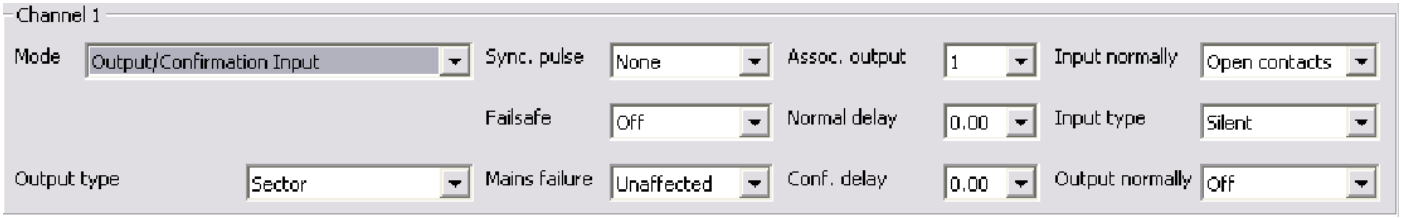
This is when a channel is configured as an output and the channel's input terminals are Fire Input.



Mode	settings	notes
Output / Fire input	Output Type	See page 86 .
	Sync. pulse	See page 86 .
	Failsafe	See page 86 .
	Mains failure	See page 88 .
	Input Delay	See page 88 .
	Output normally	See page 86 .

OUTPUT / CONFIRMATION INPUT MODE

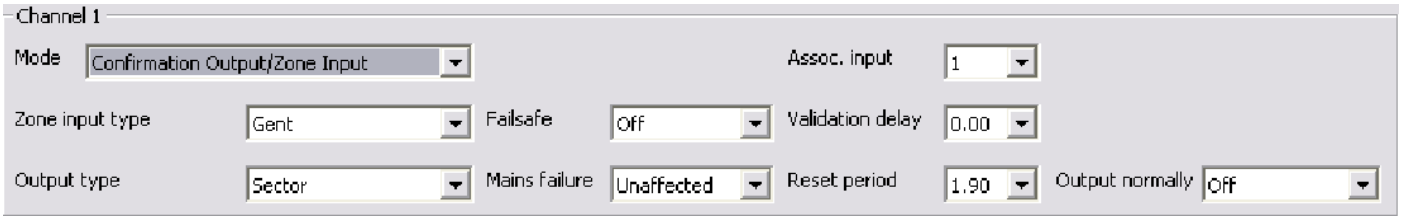
This is when a channel is configured as an output and the channel's input terminals are Confirmation Input.



Mode	settings	notes
Output / Confirmation input	Output Type	See page 86 .
	Sync. pulse	See page 86 .
	Failsafe	See page 86 .
	Mains failure	See page 86 .
	Associated output	See page 89 .
	Normal delay	See page 89 .
	Conf. delay	See page 89 .
	Input normally	See page 88 .
	Input type	See page 89 .
	Output normally	See page 86 .

CONFIRMATION OUTPUT WITH ZONE INPUT MODE

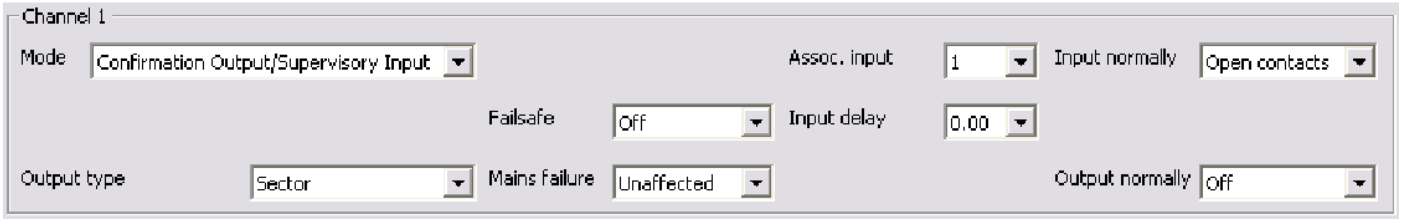
This example shows how to set a confirmation output when there is a state change on the associated Zone input.



Mode	settings	notes
Confirmation Output/Fault Input	Zone Input Type	See page 87.
	Output Type: Sector LED UnMonitored Sector	See page 86 .
	Failsafe	See page 86 .
	Mains failure	See page 86 .
	Output normally	See page 86 .
	Associated Input	See page 90 .
	Validation Delay	See page 87 .
	Reset Period	See page 87 .
	Output Normally	See page 86 .

CONFIRMATION OUTPUT WITH SUPERVISORY INPUT MODE

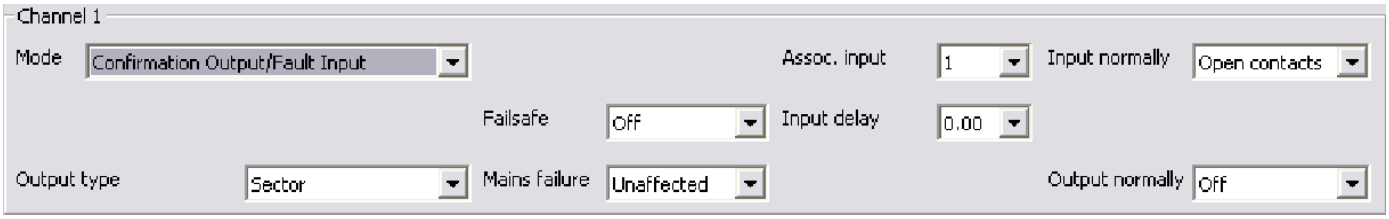
This example shows how to set a confirmation output when there is a state change on the associated **Supervisory input**.



Mode	settings	notes
Confirmation Output/ Supervisory Input	Output Type: Sector LED UnMonitored Sector	See page 87 .
	Failsafe	See page 86 .
	Mains failure	See page 86 .
	Output normally	See page 86 .
	Associated Input: 1 2 3 4	The selected input channel is associated with the confirmation output channel.
	Input delay	See page 88 .
	Input normally	See page 88 .
	Output Normally	See page 88 .

CONFIRMATION OUTPUT WITH FAULT INPUT MODE

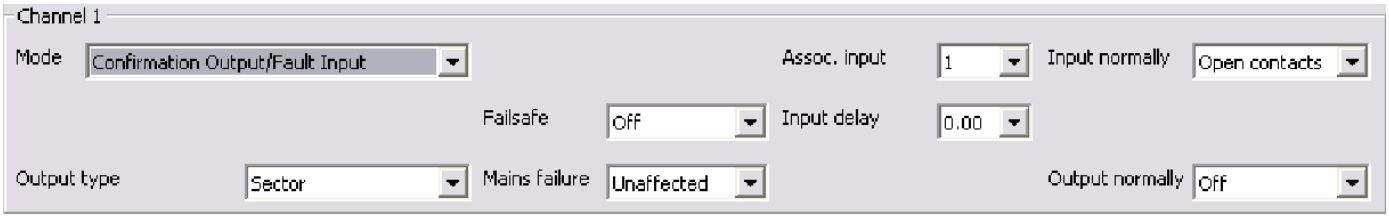
This example shows how to set a confirmation output when there is a state change on the associated **fault input**.



Mode	settings	notes
Confirmation Output/Fault Input	Output Type: Sector LED UnMonitored Sector	See page 86 .
	Failsafe	See page 86 .
	Mains failure	See page 86 .
	Output normally	See page 86 .
	Associated Input:	See page 90 .
	Input delay	See page 88 .
	Input normally	See page 88 .

CONFIRMATION OUTPUT WITH FIRE INPUT MODE

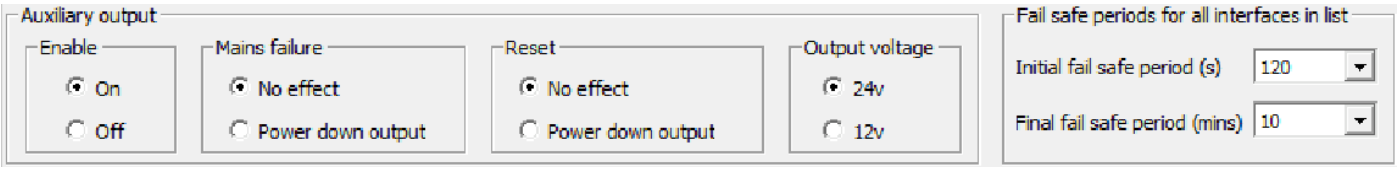
This example shows how to set a confirmation output when there is a state change on the associated fire input.

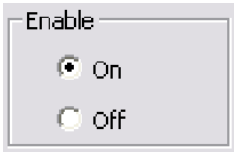
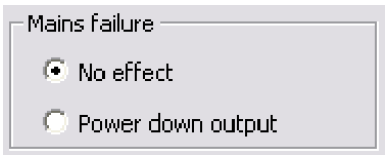
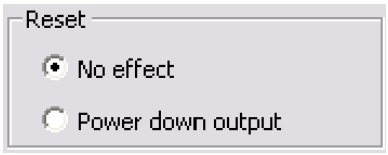


Mode	settings	notes
Confirmation Output/Fault Input	Output Type: Sector LED UnMonitored Sector	See page 86 .
	Failsafe	See page 86 .
	Mains failure	See page 86 .
	Output normally	See page 86 .
	Associated Input:	See page 90 .
	Input delay	See page 88 .
	Input normally	See page 88 .
	Output normally	See page 88 .

AUXILIARY OUTPUT

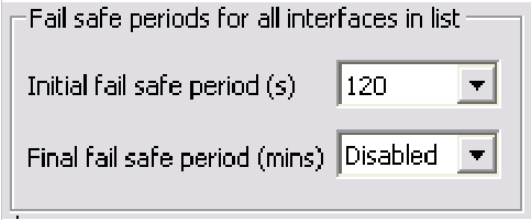
The interface has an auxiliary output rated at 1A max. The output voltage can be programmed as unregulated 24V (+/-3V) on the S4-34440-02 / 78302-02NM or regulated 12V/24V (+/-0.5V) on the S4-34440-12.

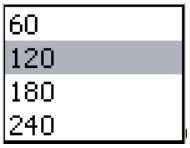
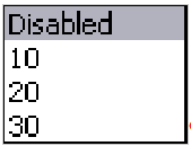


Mode	settings	notes
Auxiliary output		When 'On' the auxiliary output is enabled and is disabled when set to 'Off'. The "Off" setting should be selected when the auxiliary output is unused to maximise the battery standby period.
		If there is a mains failure then the auxiliary output can be switched off to preserve battery supply for essential inputs and outputs.
		Option for any equipment that needs a reset pulse to remove a latched condition, such as a conventional beam that is powered from the auxiliary terminal and signals a fire condition with relay contacts connected to a line configured as a switch input.
		Select the required output voltage. The 12V option is for S4-34440-12 Interface unit only.

FAIL SAFE PERIOD SETTINGS

The fail safe periods are associated with the all the Mains powered interface units in a standalone system where Outputs are configured for Door release Category A applications ONLY, see page 86 .

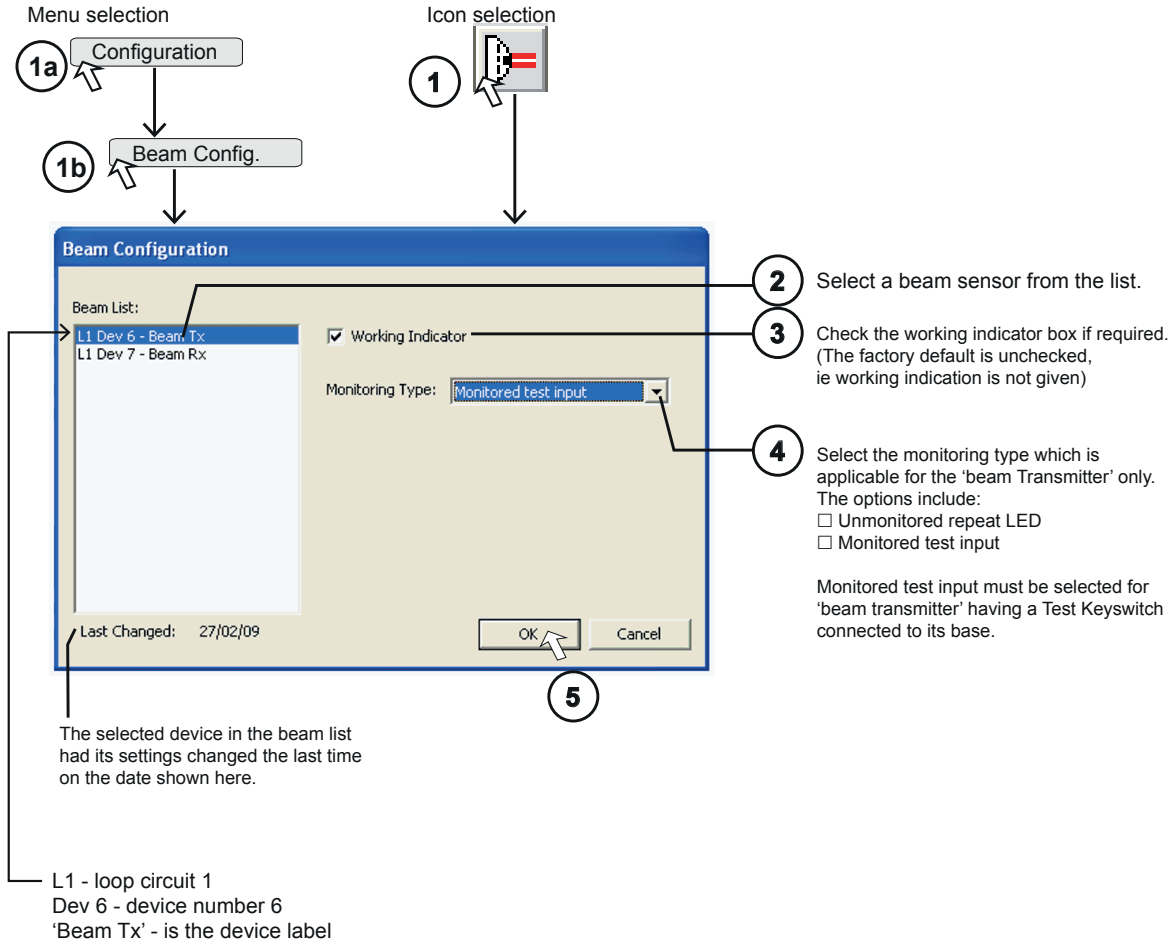


Mode	settings	notes
Initial fail safe period (seconds)		If there is a fault preventing detection of fire, disablement of fire detection or other conditions preventing fire detection operation, like supply failure, then the Outputs will turn 'On' (ie doors released) after an initial **fail safe period** of 120s (default).
Final fail safe period (minutes)		If there are three **fail safe** conditions that occur within a period set here then the Outputs are latched 'On' (i.e. doors released) and can only be reset by powering down the interface and then powering it up again. This **final fail safe period** can be disabled by selecting the 'Disabled' setting, which is a default setting.

Beam config. - Config. menu

Each S4 Beam sensor pair can be configured for the 'working indicator' operation and 'monitoring type'.

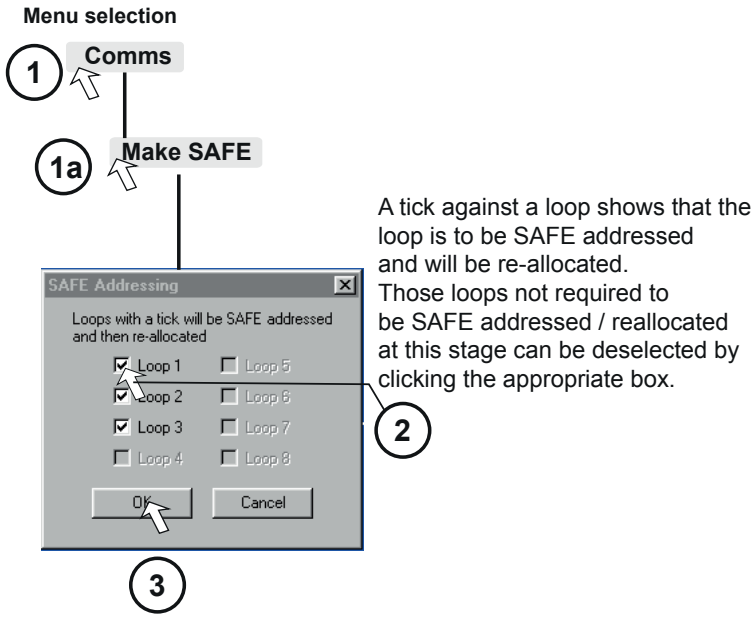
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



Make SAFE address - Config. menu

Menu option	you can use this option to..	notes
Make SAFE	...select the loops to which SAFE addressing is to be applied. If changes are made to SAFE addresses given to devices at the Commissioning tool then this command sends the changed SAFE addresses to the control panel. Important When devices have been SAFE addressed you must then send the configuration to the panel. This is because some of the configuration data including sector associations is linked to the device address. The sequence should be: 1. SAFE address the devices using 'Make SAFE', note the loops will automatically be re-allocated at the panel. 2. Send the configuration to the panel.	⚠ The insertion or deletion of devices is not permitted using the Commissioning tool where a loop has one or more 'sub loop' off a 'main loop' circuit. One way to achieve this is to ensure the devices are physically inserted or removed from the loop circuit and made SAFE at the control panel. Another way is to 'Manual Address' device. Note also Plexus Devices are associated or disassociated with an LRT using the Plexus tool. For both 'sub loop' and Plexus devices the loop will need reallocating before the Commissioning tool is used to retrieve the changed system. ⓘ Prior to using the 'Make SAFE' command ensure the Commissioning tool is connected to the control panel. Where SAFE addresses given to devices have changed at the Commissioning tool, the transmission of configuration and labels can only take place following Make SAFE. This is done to ensure the loop map in the Commissioning tool is identical to that on the control panel.

Operation (The numbers ①②③④....show an order in which to enter data or make selections).

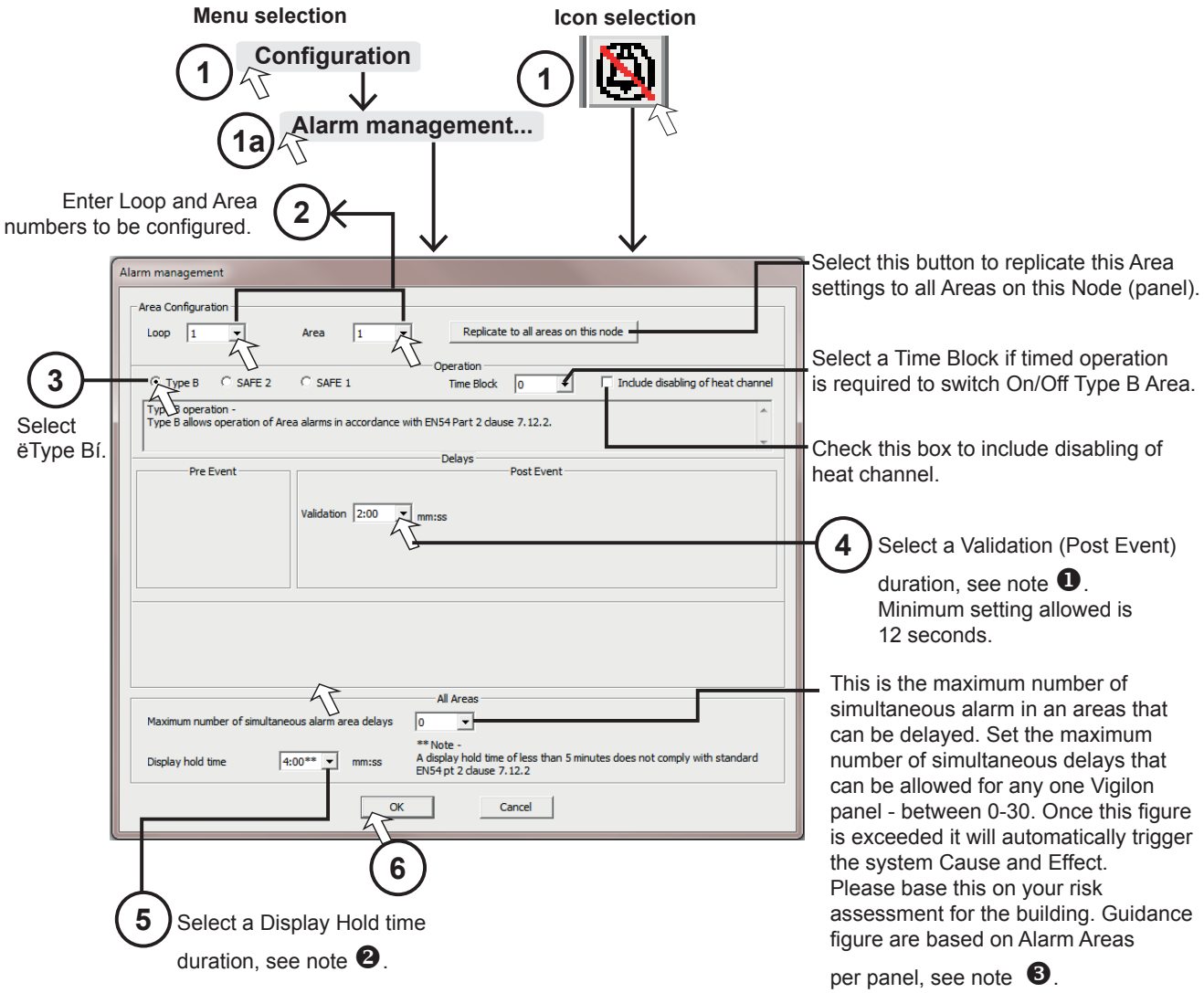


Alarm management - Config. menu

The Type B and SAFE System functionality allow management of alarms in Areas of buildings.

Menu option	you can use this option to..	notes
Alarm Management	..to select and configure Area Type B functionality which allows operation of Area Alarms in accordance with EN54 Part 2 Clause 7.12.2.	❶ A Post Event 'Validation' is a duration after 1st event detection in an Area over which the Area alarms remain Off. Note a Post Event duration of more than 4 minutes does not comply with standard EN54 Part 2 clause 7.12.2. ❷ A Display Hold time is a duration over which the panel display is held in Confirmation state. A Display Hold time of less than 5 minutes does not comply with standard EN54 Part 2 clause 7.12.2. ❸ From / To / Upper limit 400+ / 300 / 30 300 / 200 / 24 200 / 100 / 14 100 / 50 / 8 50 / 0 / 4

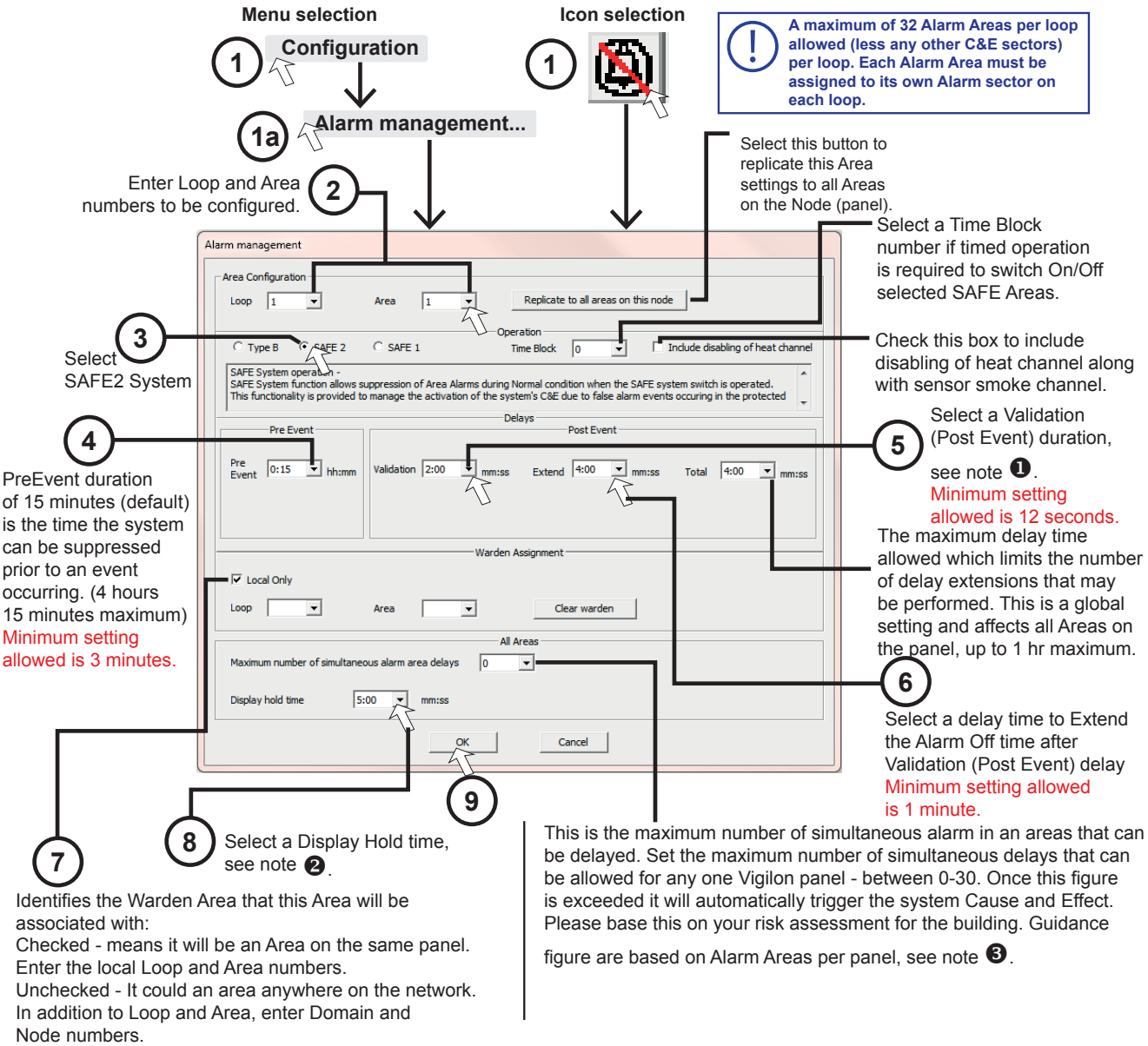
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



SAFE 2 BUTTON SWITCH SYSTEM CONFIGURATION

Menu option	you can use this option to..	notes
Alarm Management	..to select and configure SAFE2 Double button System functionality. SAFE System function allows suppression of **Area Alarms** during Normal condition when the SAFE system switch is operated. This functionality is provided to manage the activation of the system's C&E due to false alarm events occurring in the protected Area.	❶ A Post Event 'Validation' is a duration after 1st event detection in an Area over which the Area alarms remain Off. Note a Post Event duration of more than 4 minutes does not comply with standard EN54 Part 2 clause 7.12.2. ❷ A Display Hold time is a duration over which the panel display is held in Confirmation state. A Display Hold time of less than 5 minutes does not comply with standard EN54 Part 2 clause 7.12.2. ❸ From / To / Upper limit 400+ / 300 / 30 300 / 200 / 24 200 / 100 / 14 100 / 50 / 8 50 / 0 / 4

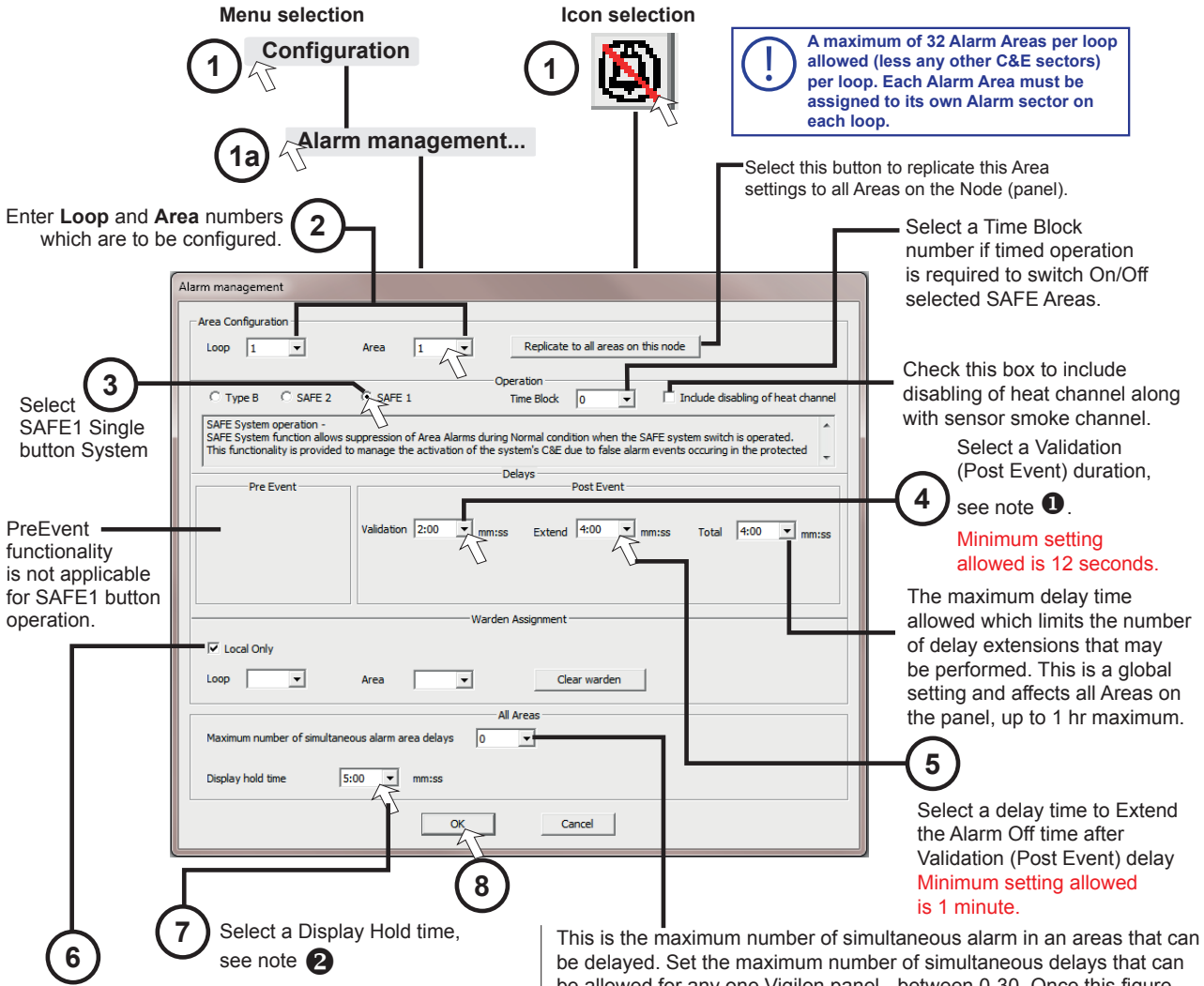
Operation (The numbers ①②③④....show an order in which to enter data or make selections).



SAFE 1 BUTTON SWITCH SYSTEM CONFIGURATION

Menu option	you can use this option to..	notes
Alarm Management	..to select and configure SAFE1 Single button System functionality. SAFE System function allows suppression of **Area Alarms** during Normal condition when the SAFE system switch is operated. This functionality is provided to manage the activation of the system's C&E due to false alarm events occurring in the protected **Area**.	❶ A Post Event 'Validation' is a duration after 1st event detection in an Area over which the Area alarms remain Off. Note a Post Event duration of more than 4 minutes does not comply with standard EN54 Part 2 clause 7.12.2. ❷ A Display Hold time is a duration over which the panel display is held in Confirmation state. A Display Hold time of less than 5 minutes does not comply with standard EN54 Part 2 clause 7.12.2. ❸ **From / To / Upper limit** 400+ / 300 / 30 300 / 200 / 24 200 / 100 / 14 100 / 50 / 8 50 / 0 / 4

Operation (The numbers ①②③④....show an order in which to enter data or make selections).



View Conflicts - *Tool menu*

'View Conflicts' is only applicable for configuration transfer between Commissioning tool and Panel using the wired method.

Menu option	you can use this option to..	notes
View Conflicts	..to see if there were any conflicts discovered during transmission of the system configuration. If there are any a pop up box appears, so this menu is only to see what the conflicts are, rather than to find if there are any.	The conflicts are displayed in Notepad, conflicts like: OS Count Conflict on Loop 3 Card Version Conflict at Card 1 Card Issue Conflict at Card 1

Check Database - *Tool menu*

This feature is applicable for Vigilon Compact VA panel based system ONLY.

Menu option	you can use this option to..	notes
Check Database	..a process that checks database.	This used to be an automatic check at the end of a Transmission and Retrieval process. It has now been separated and is a manual function, which is used if necessary.

Help Topics - *Help menu*

This feature is applicable for Vigilon Compact VA panel based system ONLY.

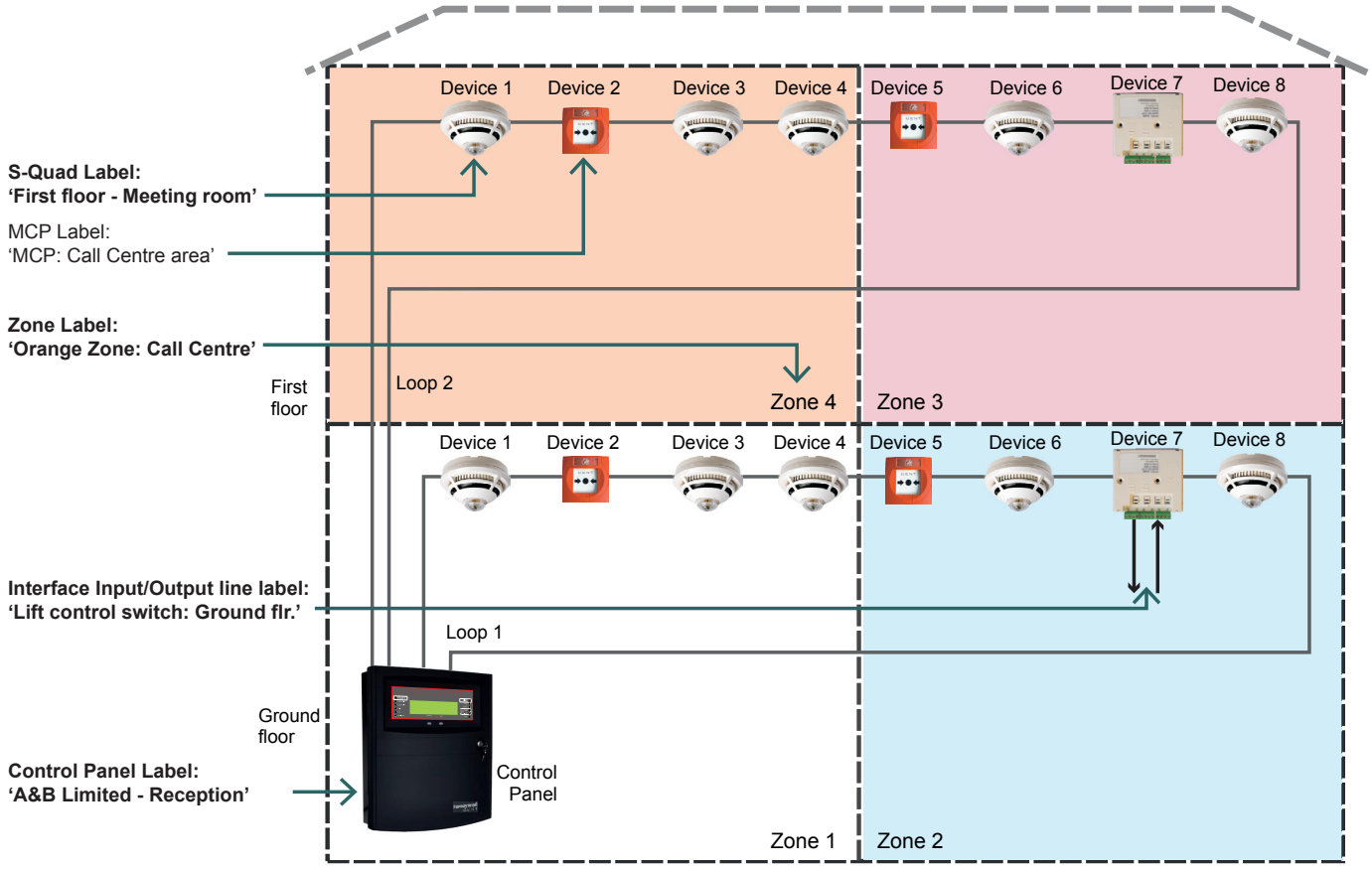
Menu option	you can use this option to..	notes
Help Topics	...to find out more information about the menu options.	-
About Commissioning tool	..find out the Commissioning tool software release number.	-

Appendix A

This Appendix is written to describe concepts of how functions of Vigilon behaves.

Labels

Labels are primarily used to describe the location of installed system products or a collection of system products for display at the control and indicating equipment.
This function allows descriptive location of a fire or event to be displayed at the control and indicating equipment.



WHAT CAN BE LABELLED?

A label may be given to each of the following products or functions of the fire alarm system, a maximum of up to 64 characters tokenised label can be given to devices on a loop circuit:

- **Fire Sensor** such as an S-Quad (SENTRI) with VAD pt23 device that is used for automatic detection of fire can be given a location label of up to 32 characters in length.

- **Manual call point** which is a break glass unit used for manual activation of fire can given a location label of up to 28 character in length, with an automatic prefix 'MCP;' inserted before the label.

- Each **Input/Output channel** of a **fire interface unit** having conventional detectors or switched input can be given a location label of up to 32 characters in length. An Interface input channel that has MCPs attached should only have a label of up to 28 characters in length.

- **Alarm device** such as an addressable S-Cubed device can be given a location label of up to 32 characters in length.

- Control panel which is the main control and indicating equipment can be given a location label of up to 32 characters in length. The panel label is used for display of events on a Central monitoring system.

- Zone is primarily used in an EN54 system and is a sub division of the protected building as defined in EN standards that can be given a location label of up to 32 characters in length. Fires generated by MCPs in the zone will have an automatic prefixed 'MCP', which limits the length of label to 28 characters only.

- Group is primarily used in a BS system and is a sub division of a protected building that can have a location label of up to 32 characters in length. A fire generated by a MCP in the group will have an automatic prefixed ‘MCP;’, which limits the label length to 28 characters only.

- Command build is a function that controls the system in an event condition. A command build can be given a label of up to 40 characters length.

> Up to 270 labels may be assigned to each loop, which allows for extra labels needed by interface units input and output lines.

HOW ARE LONG LABELS CREATED?

The long label function allows device, zone, group, command build and panel labels to be extended to 64 characters. A 64 character label is achieved by the software which automatically replaces commonly used words with a token. The label is then expanded just prior to printing or display at the panel to give the full 64 character label.

> A word or part of a word becomes tokenised and is displayed in Upper case.

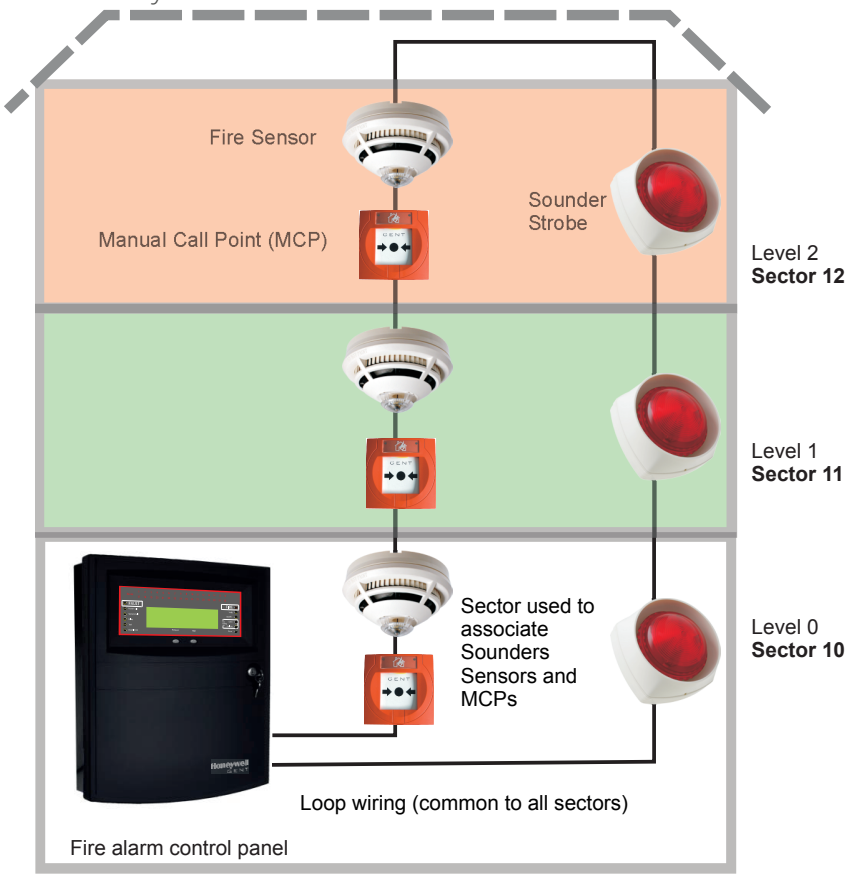
If a label is entered that is 32 characters (40 characters for command builds) or less these are also tokenised automatically.

> To enable tokenisation to take place, the words to be tokenised must finish with a space. Inserting a comma or other punctuation mark after the word will result in the software being unable to find the word in the token list.

The list of tokens is used by the software to reduce the label to 32 characters. There are three lists, Bank 0, Bank 1 and Bank 2. The tokens in Bank 0 only use 1-special character per token, whilst the tokens in Banks 1 and 2 uses 2-special characters.

Sector Links

A sector is a collection of fire sensors and alarm devices that are associated with each other, such that an event of fire detected by one of the fire sensors will cause the associated sounders to sound.



DEFAULT FIREPLAN

- A default fire plan is automatically configured on power-up of the control panel and is known as **'one out all out'.** This is where all the devices are assigned to Sector 1. Any fire will operate all the interface outputs and speech/sounder/strobe (VAD) devices, that is all the alarms sound on the occurrence of a fire event from anywhere in a building.

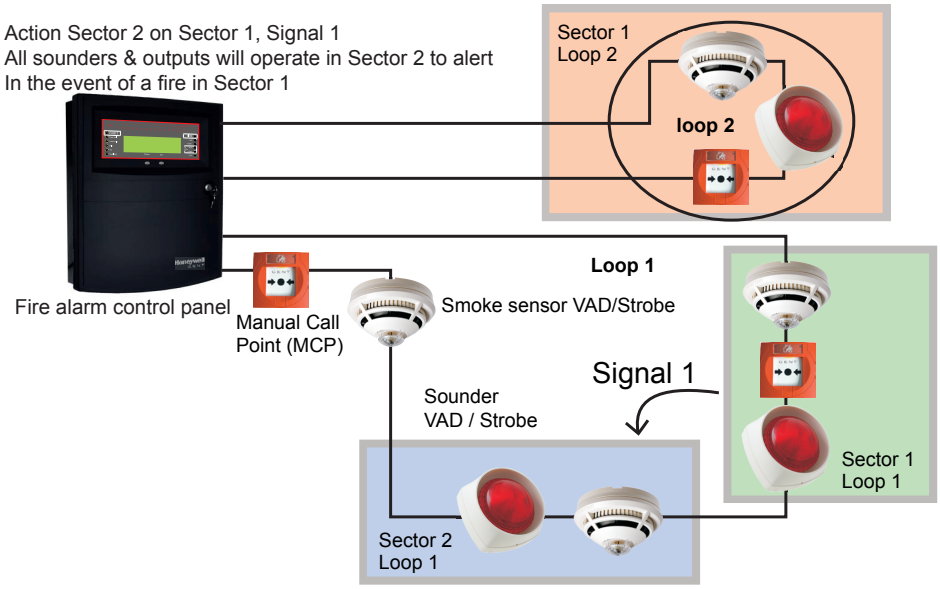
WHAT CAN BE SECTORED?

- There can be a maximum of 32 sectors per loop.
- An input device such as a Sensor, MCP and Input channel of an Interface unit may be assigned to one Sector. An S-Quad (SENTRI) device having combined sensor and sounder may only be assigned to one Sector.
- An Output device such as Speech/Sounder/Strobe (VAD) unit or output channel off an Interface unit may be assigned to one Sector ONLY.
- Generally a loop powered interface unit should be assigned to a sector as a device only, that is individual inputs and outputs of the interface cannot be separately assigned to different sectors.

WHAT ARE SECTOR ACTIONS?

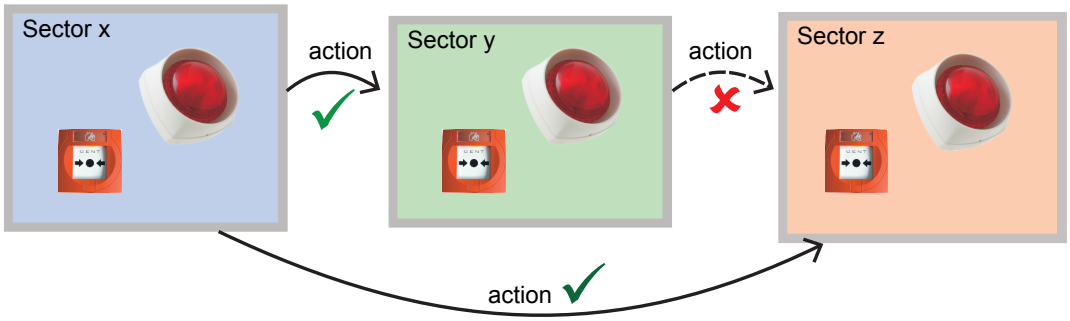
- A sector that is actioned ON will activate its alarm devices, such as Interface outputs, Speech, Sounder and VAD / Strobe devices.

- A sector can be configured to give one of 3 signals:
  - Signal 1 Alert (Priority 3)
  - Signal 2 Evacuate (Priority 2)
  - Signal 3 Continuous (Priority 1)



- Sectors of the same number, but on different loops, operate independently of each other, that is Sector 1 Loop 1 has nothing to do with Sector 1 Loop 2

- Sector linking cannot be 'daisy chained'.



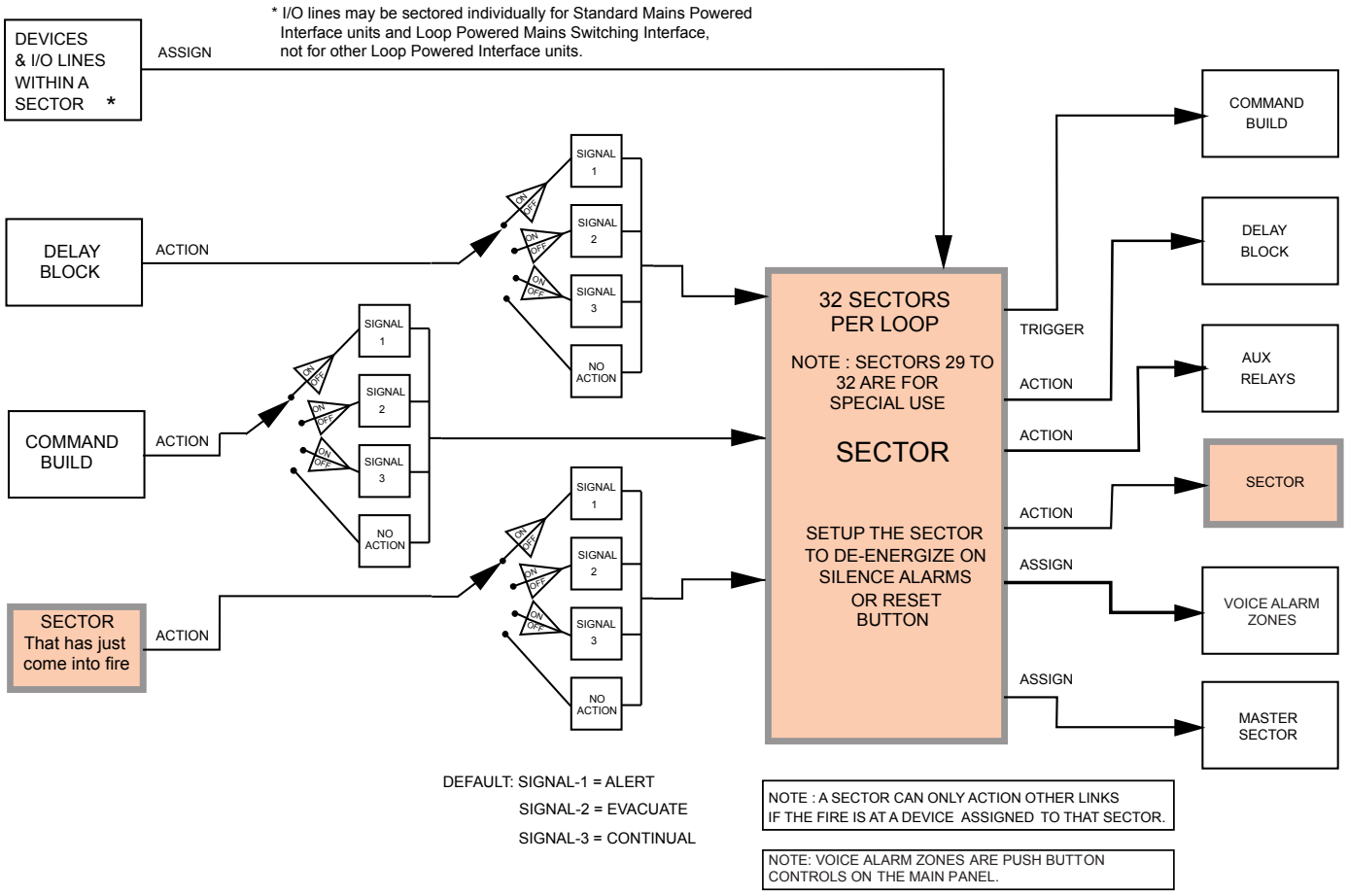
OPERATION WITH SOUND, SILENCE AND RESET

- Sectors 1-28 operate automatically with the Sound Alarms and Silence Alarms buttons.

- Sectors 29-32 are independent of the Sound Alarms button at the control panel and are primarily used for control of plant equipment. The sector 29-32 can be configured for normal operation like sectors 1-28 .

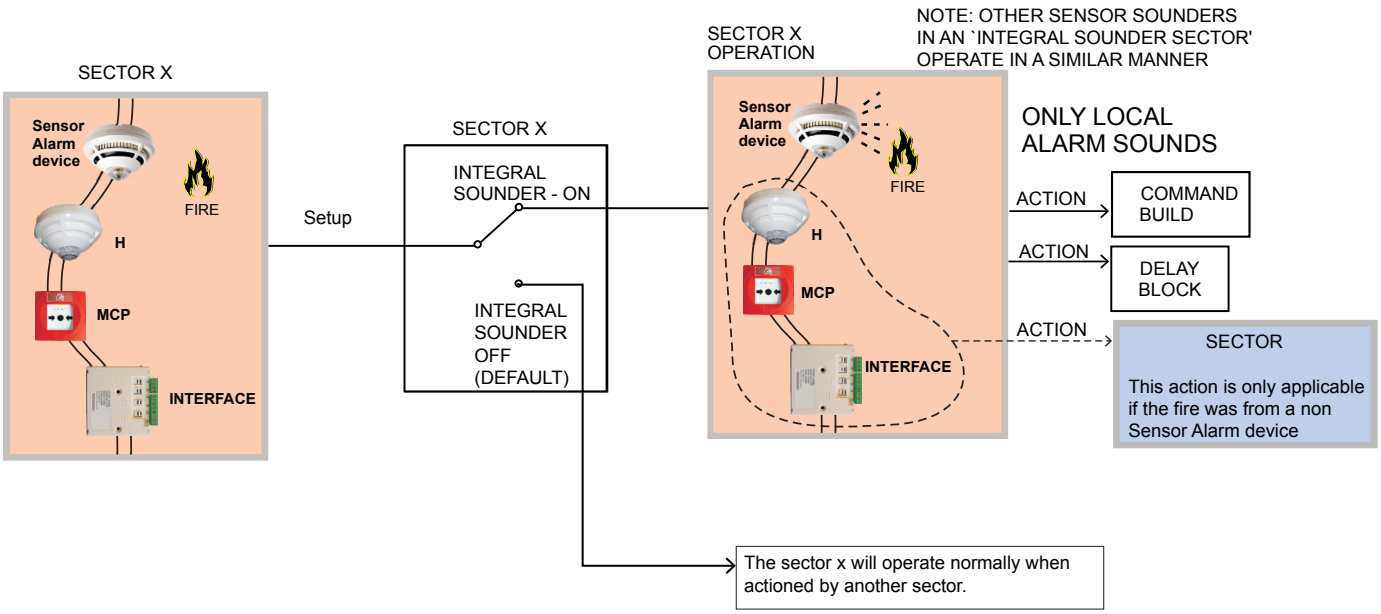
- Sectors 1-32 may be configured for ACTION or NO ACTION on 'Sound Alarms' button being pressed at the control panel. If a sector is configured for NO ACTION it will be silenced on pressing the 'Reset' button at the control panel.

Sector Functions



Integral sounder sector functions

- When a sector is configured for 'integral sounder mode' sometimes referred to as 'flag set sector', then a fire event from a sensor sounder in the sector will cause only the integral sounder to operate.
- Linked sector are not actioned when sensor/sounder type device is triggered from sector configured for 'integral operation mode', only its local sounder operates and fire is reported at the panel.
- Delay Blocks can be configured to action other sectors from sector operating in an integral sounder mode.
- Sectors configured for integral sounder operation can be setup to action command builds.



Delay blocks

The delay function allow alarms to be delayed from sounding to provide time for investigation of the cause of event before sounding alarm. The delay function may be used in conjunction with sectors, such that there is a delay introduced before sector activation. Additionally sectors may be configured such that the activation of one sector will cause the activation of another sector and a delay may be introduced between the activation of the two sectors.

EN54

Where delay blocks are linked together to produce a delay of longer than 10 minutes then the panel will no longer meet the requirements of EN54-2 1997.

DEFAULT CONFIGURATION

By default NO delay blocks are set up at all, which means there is no delay to alarm operation.

WHAT ARE THE LIMITS OF DELAY BLOCKS?

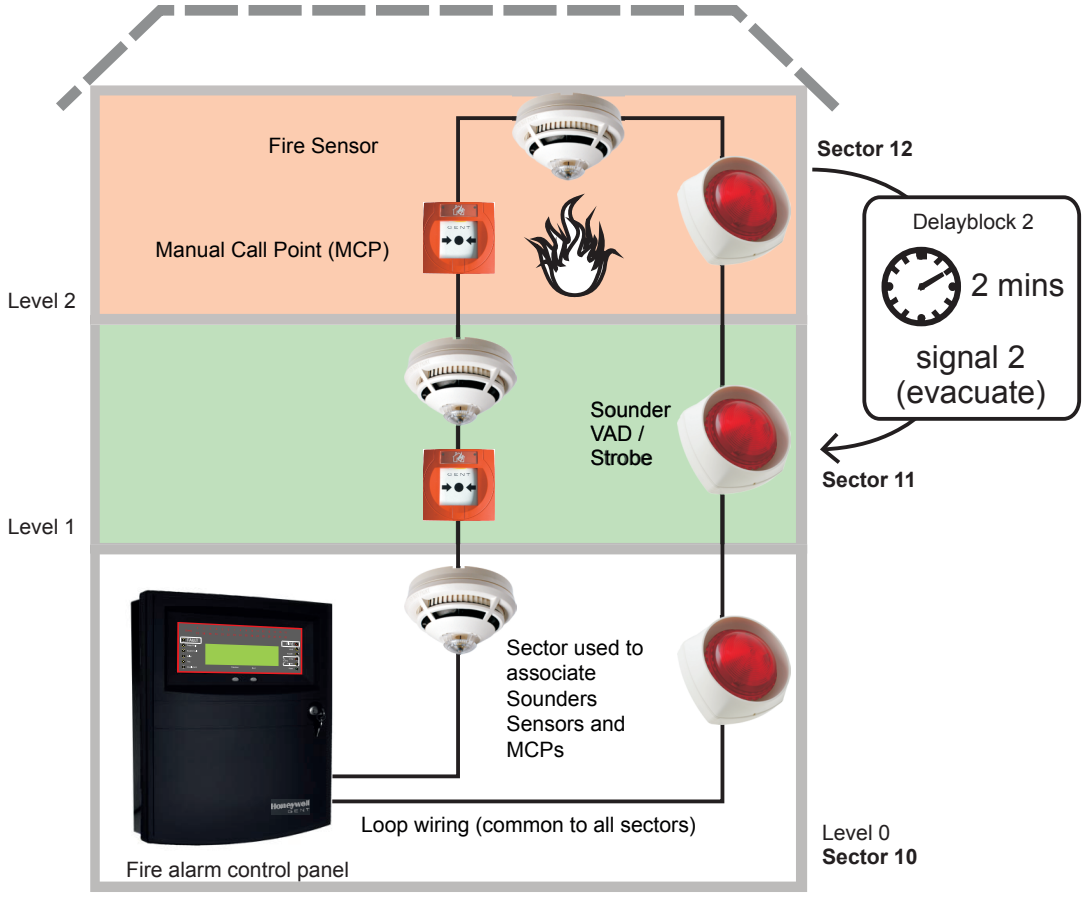
- A maximum of 16 delay blocks are allowed per panel.
- Delay time can be set between 4 seconds to 10 minutes, in 4 second intervals.

WHAT TRIGGERS A DELAY BLOCK?

A delay block may be triggered by :

- or more sector on the local control panel.
- or more master sectors (triggered by other control panels)
- Another delay block
- Command build

APPLICATION OF DELAY BLOCKS



Actioning from delay blocks

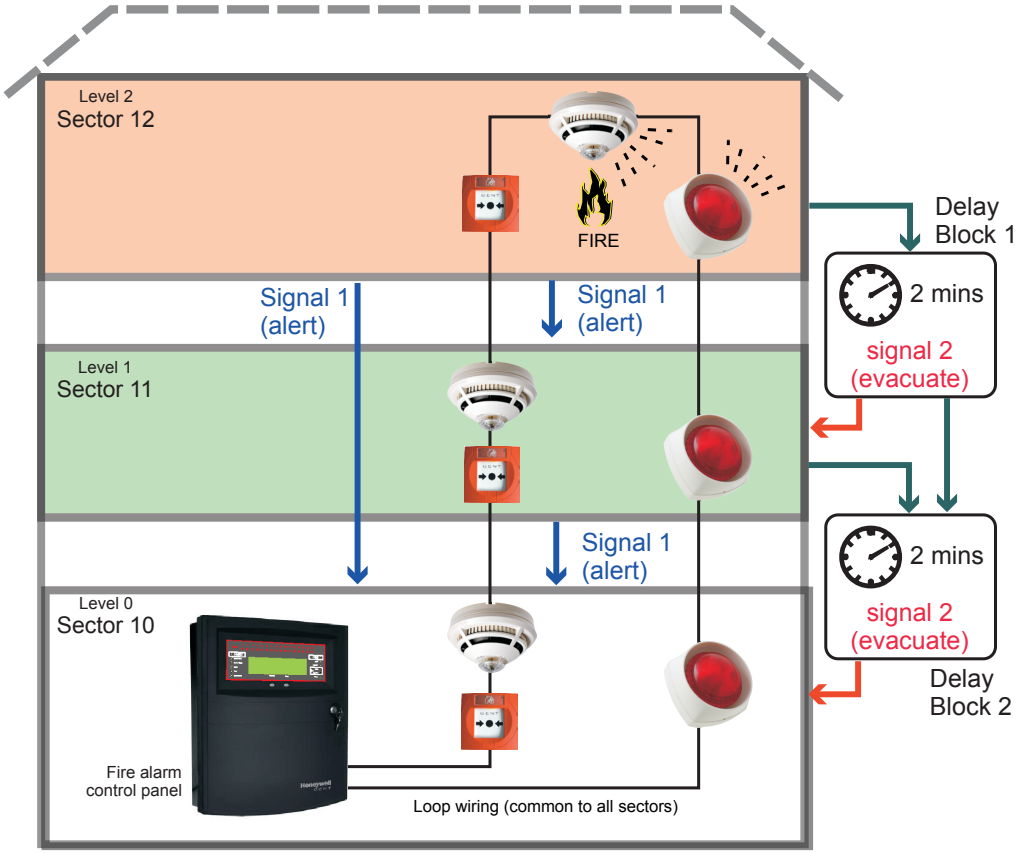
- A delay block can action one or more sectors on the local control panel. Once the delay block is triggered and timed-out, all the sectors that are configured to it will activate.

- Each delay block must have a signal associated with it. When the delay block times-out, ALL the sectors will be activated with this signal. In general most common signals are:
  _ Signal 1 Alert (priority 3).
  - Signal 2 Evacuate (priority 2).
  - Signal 3 Continuous (priority 1).

If a sector is already activated when the delay block times-out, the higher priority signal takes effect.

- A delay block can also action another delay block to create a 'daisy chain' effect.

The following configuration allow levels 2 and 1 to change from alert to evacuate before level 0 change from alert to evacuate.



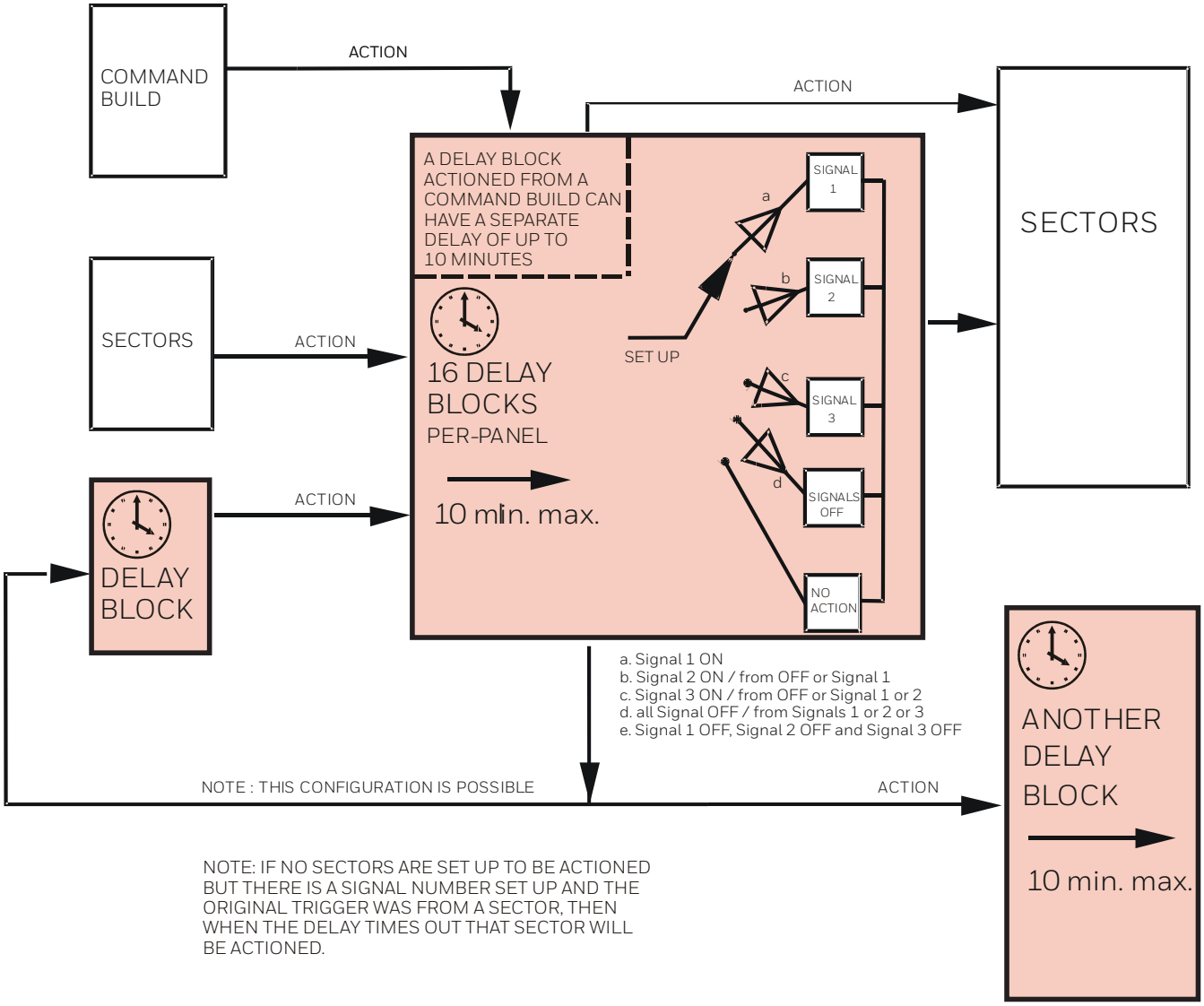
Operation with Sound Alarms
The 'Sound Alarms' function will completely stop any triggered delay blocks.

Operation with Verify

- If there are any delay blocks running when the Verify key is pressed, then the delay blocks time period will be replaced (if applicable) to that set for the Verify function by a maximum of 10 minutes.

- If there are no delay blocks running when the Verify key is pressed, then the Verify function will have no effect other than to generate the 'Alarms Verified' message

DELAY BLOCK FUNCTIONS

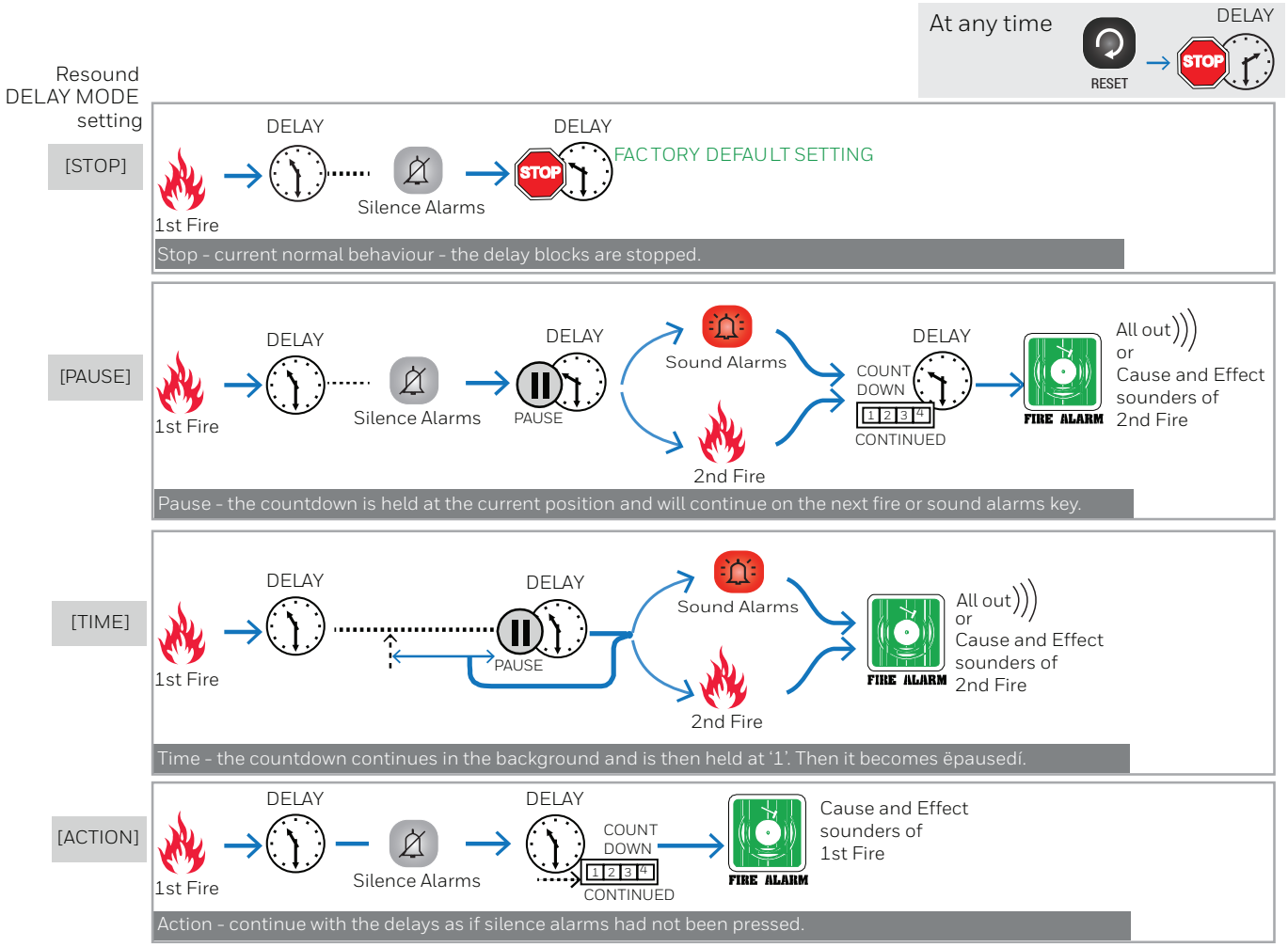


NOTE: IF NO SECTORS ARE SET UP TO BE ACTIONED BUT THERE IS A SIGNAL NUMBER SET UP AND THE ORIGINAL TRIGGER WAS FROM A SECTOR, THEN WHEN THE DELAY TIMES OUT THAT SECTOR WILL BE ACTIONED.

Resound Delay mode function

At the time of writing this issue of the user guide the Resound delay mode was configurable at the panel only.

There are 4 control settings for Delay mode under [Resound]. These settings control what happens to the delay blocks when the Silence Alarms button is pressed.

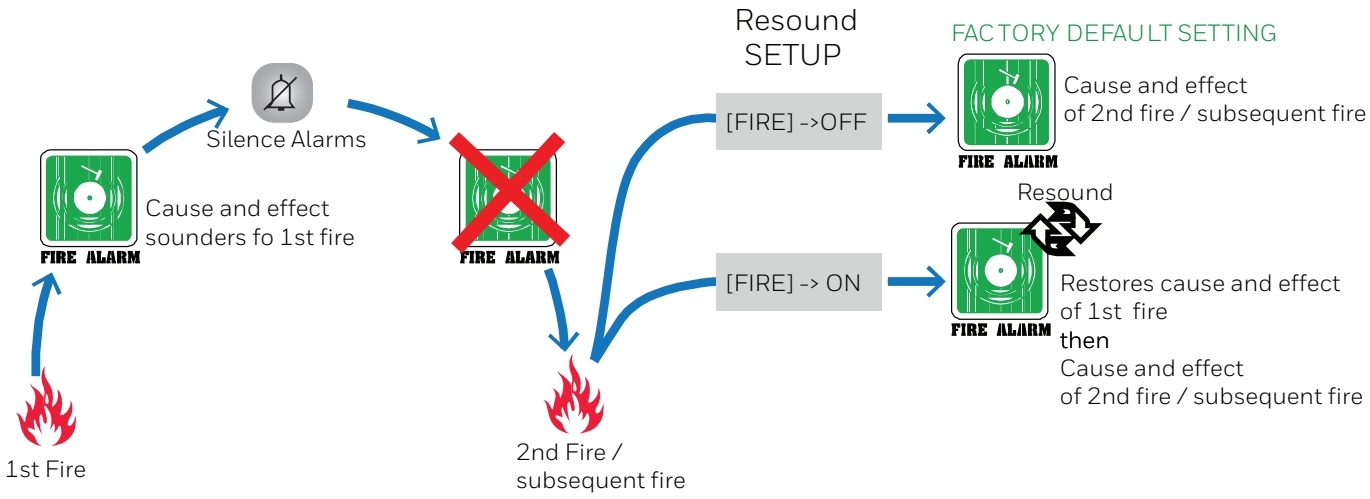


Sound and Resound alarms options

At the time of writing this issue of the user guide the Resound Fire and Sound controls were configurable at the panel only.

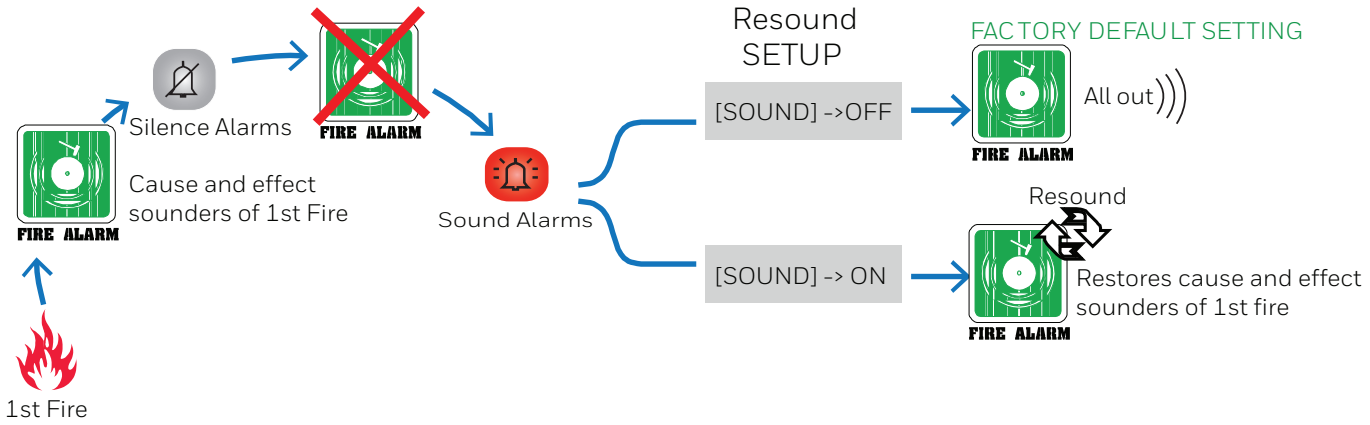
Resound [FIRE] -> ON / OFF setting

The FIRE ON/OFF setting under [Resound] controls the way sounders operate when a 2nd or subsequent fire occurs after the alarms have been silenced following 1st fire.



Resound [SOUND] -> ON / OFF setting

The SOUND ON/OFF setting located under [Resound] controls the way sounders operate on 1st press of the Sound Alarms button during a fire condition after the alarms have been silenced. When set to ON the sounders will resound and when set to OFF the sounders will perform the standard action of all-out alarms.



Time Blocks and Time Slots

The time slots and time blocks are timer functions of the panel, that operate like a central heating timer. They are primarily used to change fire sensor STATES at programmed times of the day.

> The Plexus sensor devices do not have sensor STATES and the use of time blocks and time slots is not applicable for these wireless devices.

What can it do?

Time slots and time blocks can be used to:

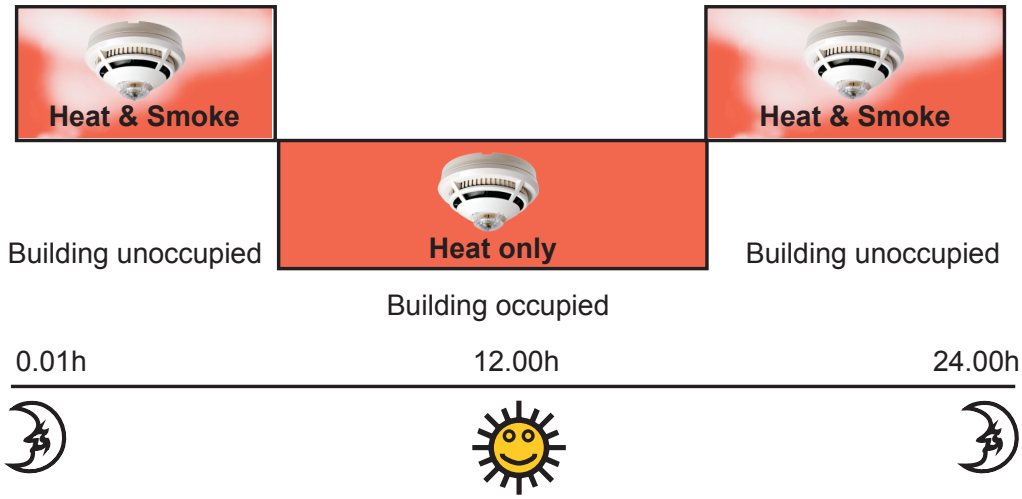
- Change fire sensor states (e.g. from Optical Heat sensing to Heat only sensing)
- Disable Zone (EN system) or Group (BS system)
- Trigger Command builds

Using time blocks and time slots it is possible to change sensor states over time.

Default configuration

By default all loop devices are assigned to function in their default sensor state '0' continuously 24 hours a day, 7 days a week.

TYPICAL FIRE APPLICATIONS



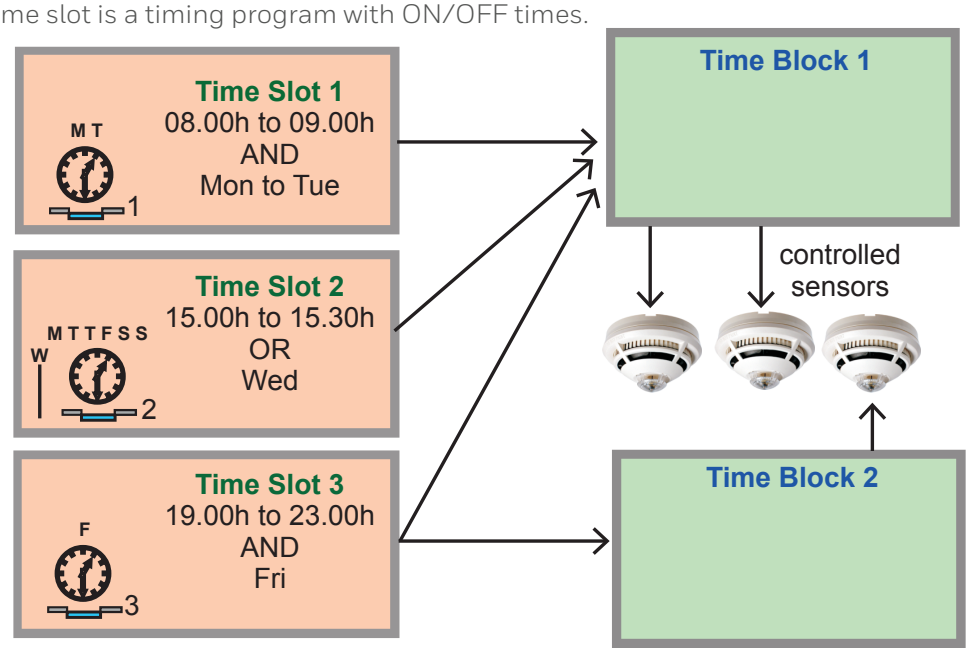
- Kitchen areas inside a building normally generate smoke. In this situation the detection can be switched to heat detection only whilst in use and to full detection at all other times.
- Theatre where artificial smoke is in use for artistic effects during performance or rehearsal time. Here again the heat detection only can be applied during occupied time and full detection at all other times.
- Experiment room in schools making use of apparatus that can generate smoke during practical experiment, such as from a Bunsen burners. During school hours the sensors can be switched to heat detection only and to full detection at all other times.
- Warehouse in which fork lift trucks are in operation there is fumes from exhaust, such areas can be protected by Heat detection whilst the area is in use and full detection at all other times.

TYPICAL NON FIRE APPLICATIONS

School Class change alarm that operate alarms for short duration to inform students to change class.

TIME SLOTS

A time slot is a timing program with ON/OFF times.



- It comprises a start 'enable' time and finish 'disable' time and a set of days. The times and days may be logically related using AND or OR operators.
- When TRUE it is in the ON 'enable' state
- It may be manually switched ON 'enable' and OFF 'disable' or by Command builds.
- There can be a maximum of 16 time slots per control panel and a time slot may be shared by any number of time blocks.

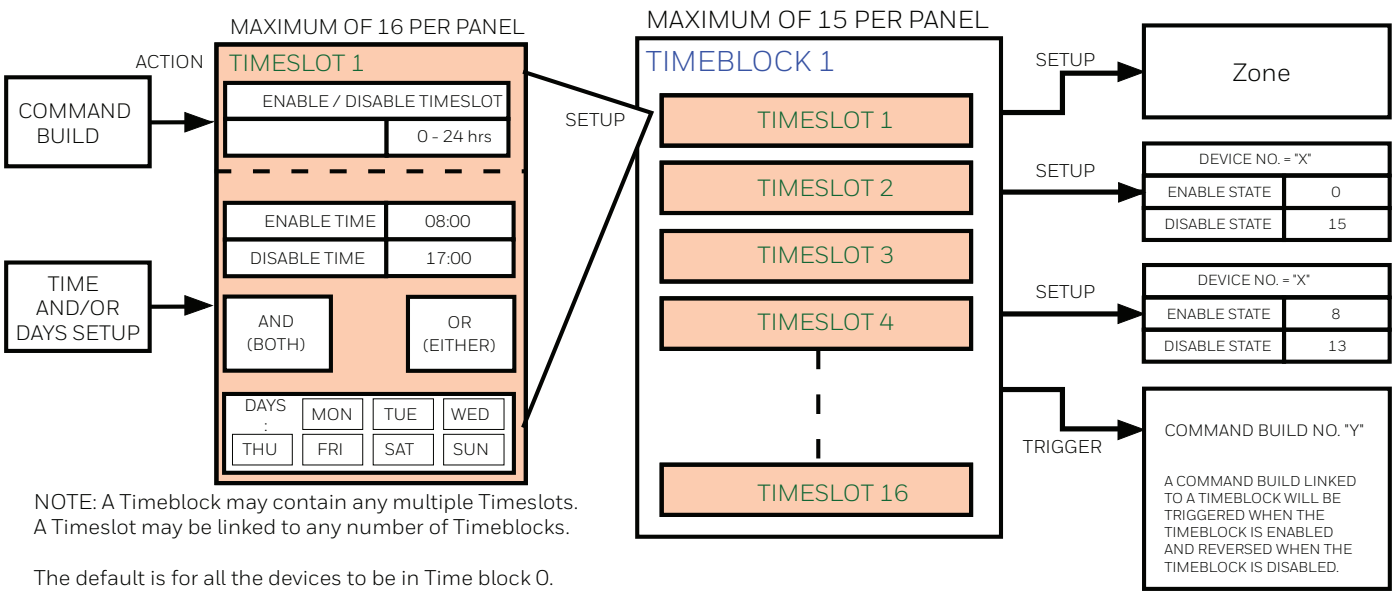
> When the control panel is in a FIRE condition and a timeslot is switched ON, then the timeslots (or timeblocks) will NOT operate. They will operate once the fire has been RESET.

TIME BLOCKS

A time block is used to perform switching actions on the system.

- Each time block can be made from a combination of up to 16 time slots
- A time block is enabled if any of its time slots are ON 'enabled'.
- Each time block may control any number of sensors. Each sensor may only be controlled by one time block
- When ENABLED
  - Any assigned devices will be in their ENABLE STATE (which could be any one of the 15 potential states for that device).
  - Any linked Command builds will be TRIGGERED.
- When DISABLED
  - Any linked Zone task (EN system) or Group task (BS system) will be DISABLED.
  - Any assigned devices will be in their DISABLE STATE (which could be any one of the 15 potential states for that device).
- Maximum of 15 time blocks per control panel (the 16th, TIME BLOCK 0, is continuously ENABLED).
- Time block 0 is the default setting that is preconfigured for all devices.

TIME SLOT AND TIME BLOCK FUNCTIONS



NOTE: A Timeblock may contain any multiple Timeslots.
A Timeslot may be linked to any number of Timeblocks.

The default is for all the devices to be in Time block 0.
A Timeblock is enabled if any one of the Timeslots within it is in the enable state.

Zones

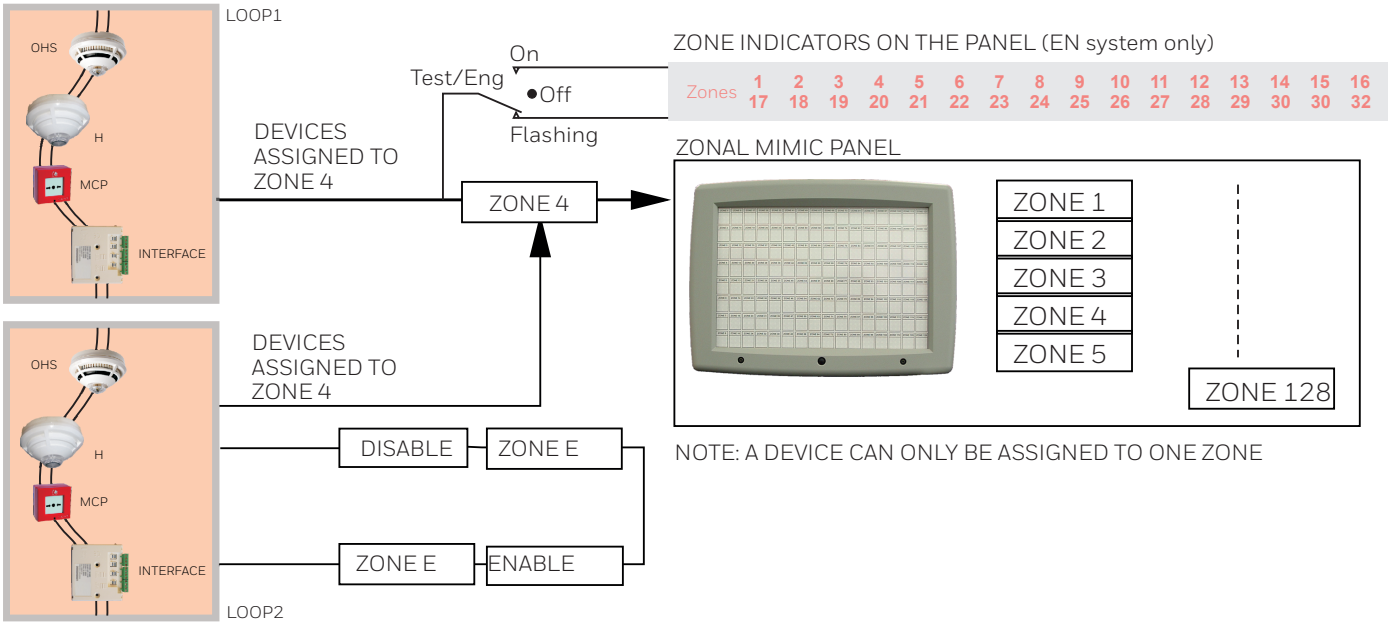
A Zone is a collection of input devices such as sensors, manual call points and interface inputs that are combined together for use in an EN system for common indication at control and indicating equipment.

DEFAULT CONFIGURATION

- All devices are assigned to Zone 1 in an EN54 system
- Nothing is assigned to Zones by default in a BS system.

WHAT ARE THE COMMON ZONE FUNCTIONS?

- A maximum of 128 zones are allowed per panel
- they are used to send FIRE information to repeat and zonal mimic panels
- also used to send FIRE and FAULT information to central monitoring system
- can be used to Disable sensors in a zone
- give local zonal indication (ONLY applicable for EN54 system)



WHICH SYSTEM DEVICES CAN BE ASSIGNED TO ZONES?

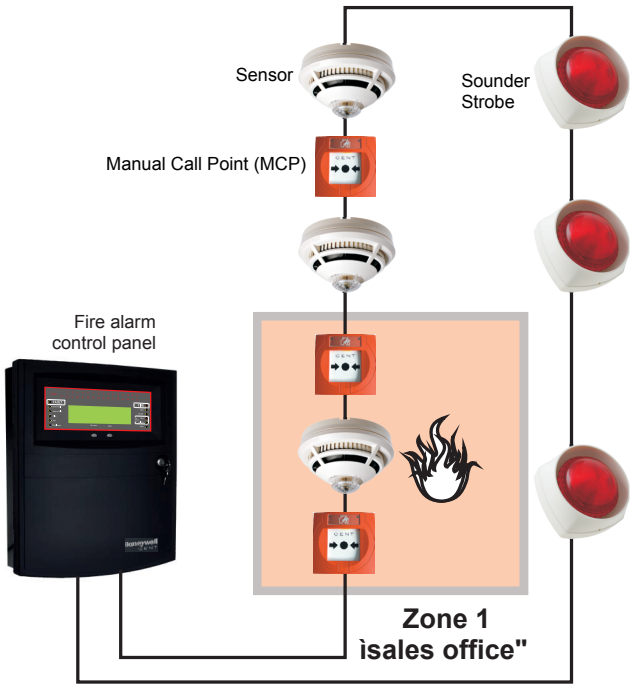
- Zones may include the following devices:
  - Sensors, Manual call points and Interface unit inputs

> Individual interface channels MAY NOT be assigned separately to different zones.

- A zone may include any combination of these devices, irrespective of which loop they are attached to, as long as they are all connected to the same control panel.
- Any device may only be associated with a single zone.
- A zone is limited to the local control panel but may include devices from any loop of that panel.

WHAT CAN ZONES BE USED FOR?

- To display a common label for a collection of input devices.
- In an EN system zones are used to perform 'Co-incidence detection', that is responding to different combinations of 'fires', 'pre-fires' and 'super-fires' (see Co-incidence detection).



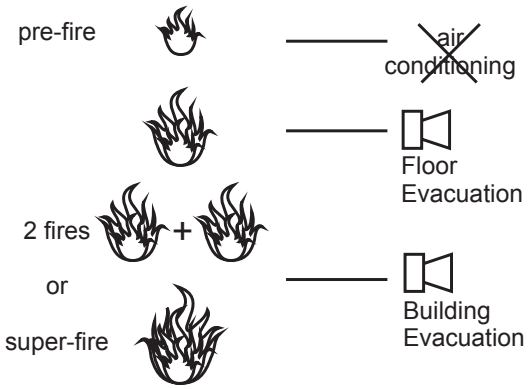
WHAT ARE THE CHOICES OF LABEL DISPLAYED?

A Zone label is displayed with the respective FIRE messages when a device from the zone goes into a fire condition. However the display of label is determined by what mode is selected. The mode can be:

- Display only the zone label (factory default on EN panel)
- Display the individual label of the first device to trigger a fire event
- Display all individual device labels.

> A zone label may be up to 32 characters (64 if long labels is selected). However when an MCP initiates a fire the zone label displayed will be prefixed by 'MCP;', which will reduce the label to 28 characters in length.

HOW TO USE A ZONE FOR CO-INCIDENCE FIRE DETECTION?



Under normal circumstances a sensor will trigger an alarm if it detects a 'fire'. The zone facility recognises three sensor sensitivities: 'pre-fire', 'fire' and 'super-fire'. The sensors within a zone may be configured to trigger an alarm condition on a combination of different numbers of sensors responding to different combinations of sensitivity.

What are zone tasks?

Zone tasks are used as inputs to trigger one command build. Each individual zone may be configured to initiate up to 8 individual tasks. Each task can be configured to be triggered depending on the number of each type of fire (pre-fire, fire or super-fire) that is detected, the number may be 1, 2, 3 or ignore.



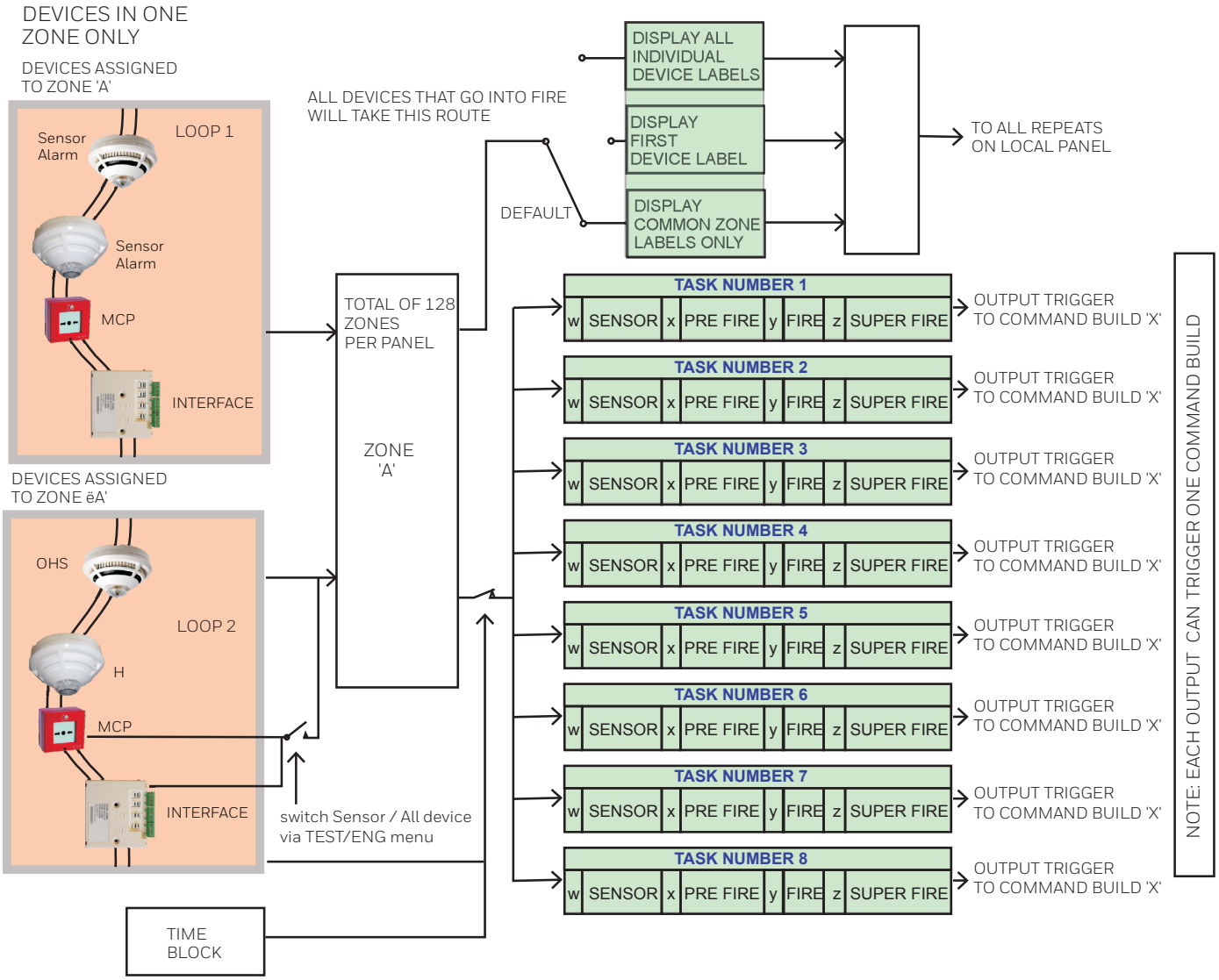
Assign devices to a zone

	W sensors	X pre-fires	Y fires	Z super-fires	
Zone task 1	1	1	0	0	=> CB1 => A/C off
Zone task 2	1	0	1	0	=> CB2 =>
Zone task 3	2	0	2	0	=> CB3 =>

Maximum 8 tasks per zone
maximum value of W (sensors) = 2 normally but can be 3 to give triple knock

ZONE TASKS (EN SYSTEM)

The Zone tasks are primarily used in an EN system. They are used to perform local action, such as to send a control signal within the system or to external equipment via an interface unit, for example to stop the operation of plant during a fire event.



Groups

A Group is a collection of input devices such as sensors, manual call points and interface inputs that are combined together for common indication at control and indicating equipment. They are also used with command builds primarily to perform tasks in the local BS system. EN System by default make use of Zones to perform such tasks in a similar manner. Groups when linked with Master groups allow display of event messages across a fire system network.

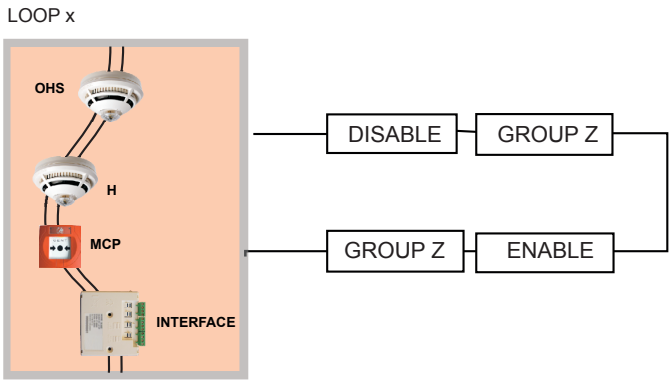
DEFAULT CONFIGURATION

All devices default to Group 1 in a EN system.

All devices default to Group 0 in a BS system

WHAT ARE THE COMMON GROUP FUNCTIONS?

- A maximum of 128 groups are allowed per panel.
- a group event is displayed via a master group across a network of panels and is applicable for both BS and EN systems
- can be used in a BS system to Disable sensors by groups



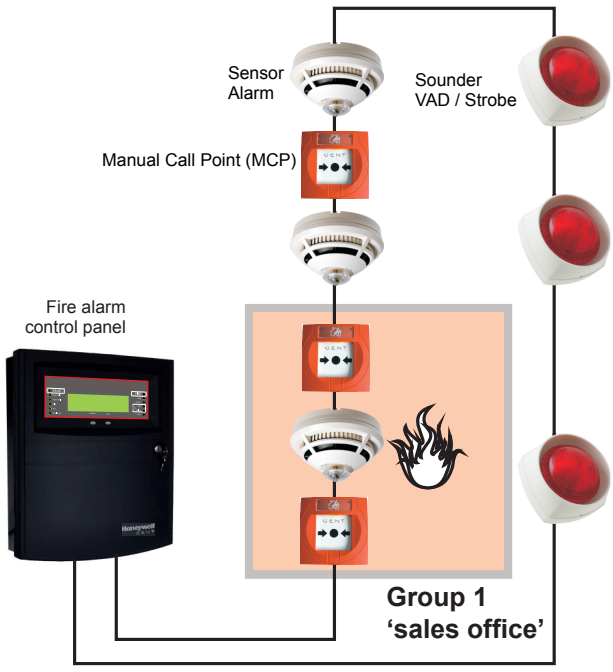
NOTE: A DEVICE CAN ONLY BE ASSIGNED TO ONE GROUP

WHICH SYSTEM DEVICES CAN BE ASSIGNED TO GROUPS?

- Groups may include the following devices:
  - Sensors, Manual call points and Interface unit inputs

> Individual interface channels MAY NOT be assigned separately to different groups.

- A group may include any combination of these devices, irrespective of which loop they are attached to, as long as they are all connected to the same control panel.
- Any device may only be associated with a single group.
- A group is limited to the local control panel but may include devices from any loop of that panel.



WHAT CAN GROUPS BE USED FOR?

- In a BS system groups can be used to perform 'Co-incidence detection' that is responding to different combinations of 'fires', 'pre-fires' and 'super-fires' (see Co-incidence detection).

HOW ARE LABELS DISPLAYED?

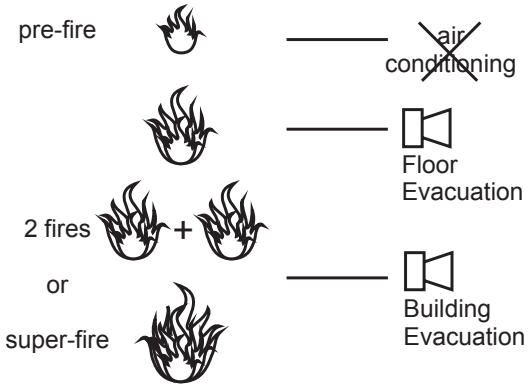
A group label is displayed along with FIRE message when a device in the group is in a fire condition. However the display of label is determined by what mode is selected:

- Display only the group label
- Display the individual label of the first device to trigger a fire event
- Display all individual device labels, which is a default selection for BS System.

> A group label may be up to 32 characters (64 if long labels selected). However when an MCP initiates a fire in a group then the label will be prefixed by 'MCP;', which will reduce the label to 28 characters.

HOW TO USE A GROUP FOR CO-INCIDENCE FIRE DETECTION

Under normal circumstances a sensor will trigger an alarm if it detects a 'fire'. The group facility recognises three sensor sensitivities: 'pre-fire', 'fire' and 'super-fire'. The sensors within a group may be configured to trigger an alarm condition on a combination of different numbers of sensors responding to different combinations of sensitivity.



Group tasks are used as inputs to trigger a command build. Each individual group may be configured to initiate up to 8 individual tasks. Each task can be configured to be triggered depending on the number of each type of fire (pre-fire, fire or super-fire) that is detected, the number may be 1, 2, 3 or ignore.



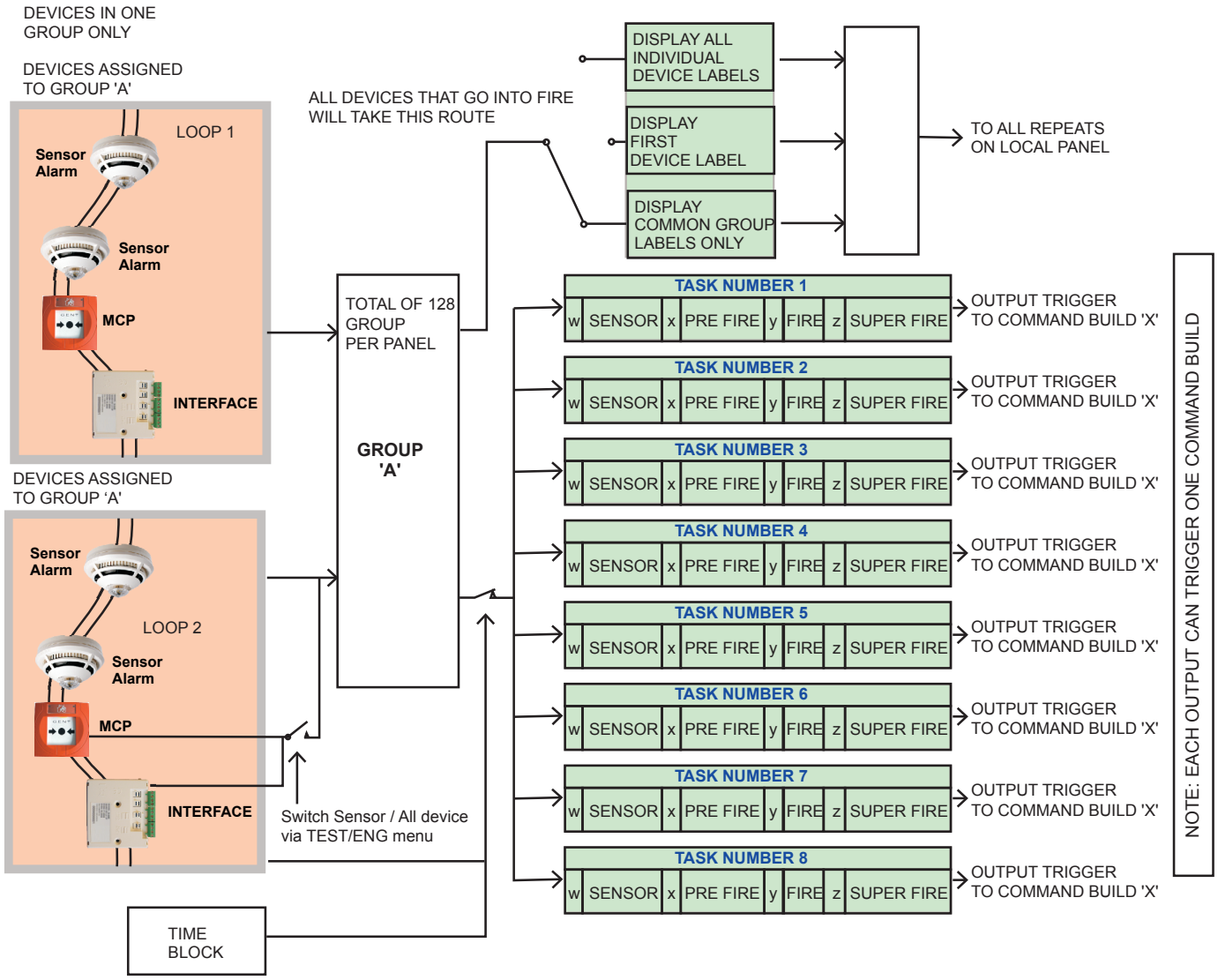
Assign devices to a group

	W sensors	X pre-fires	Y fires	Z super-fires	
Group task 1	1	1	0	0	=> CB1 => A/C off
Group task 2	1	0	1	0	=> CB2 =>
Group task 3	2	0	2	0	=> CB3 =>

maximum 8 tasks per group
maximum value of W (sensors) = 2

GROUP TASKS FUNCTIONS

Group tasks are primarily used in a BS system, but can also be used in EN system where it is not possible to implement zones task for co-incidence detection. They are used to perform a local action, such as to send a control signal within the system or to external equipment via an interface unit to stop the operation of plant during a fire event.



Alarm Management
TYPE B FUNCTIONALITY TIMING

Type B Area event operation only

Activities at Area Devices

1 **1st Event detected** in an AREA

Smoke

2 AREA alarm switches On Alert Signal 1.

32s

3a **If Smoke remains present from 1st Event detection and Validation (Post Event) period has expired then the System goes into site wide Cause and Effect Evacuate alarms.**

3b If the 1st Event has cleared then the Area Alarms are automatically silenced.

If the Smoke re appears and is detected in the same **Area** after expiry of Validation (Post Event) period, then this sequence restarts from 1.

Validation (Post Event) period
Factory set to 2 min (default) configurable# up to 17 minutes

#

1 min | 2 min | 3 min | 4 min | 5 min | 6 min

If a **2nd Event is detected** in the AREA with **1st Event** still present or **1st Event** is detected in more than a number of allowable Areas (configurable#) or an MCP has triggered then there is a site wide **Cause and Effect fire alarms.**

A Validation (Post Event) period of more than 4 minutes does not comply with standard EN54 Part 2 clause 7.12.2.

Panel Display

Display Hold period Factory set to 5min
(configurable# up to 10 minutes)

A Display Hold time of less than 5 minutes does not comply with standard EN54 Part 2 clause 7.12.2.

4 If Smoke was cleared at 3b then the panel resets and the Display returns to Normal condition.

Fire
Zones -n-

Display shows the location, time and date of **Area** Fire detection.

```
Fire 1  : 01:59                    15:45
1stCONF :Zone 1

First Fire occurred at:
Time: 14:43.10  Sat  4 May 2019
```

Panel buzzer — CANCEL BUZZER — Panel buzzer

- Configurable but based on risk assessment, observe warnings.

Disabling of Heat sensing is not recommended but is possible based on #

SAFE2 AND SAFE1 FUNCTIONALITY POST EVENT TIMING

SAFE2 Double button or SAFE1 Single button operation under Event condition

This illustration shows what happens when using the SAFE switch with factory settings with default time.

Activities at Area Devices and Timing

1 **1st Event detected** in an AREA

Smoke

2 AREA alarm switches On Alert Signal 1.

Validation (Post Event) period 2 mins (default) (configurable#) up to 17 min.

As 3 32s

During the final 32 seconds a warning Alert Signal 1 is outputted.

3

Red LED

Press and hold the **Silence Fire Alarms** button for 5s or until the red LED is lit, then let go of the button.

The AREA alarms will be switched OFF and Delay restarts for **'Validation'** or **'Extend'** period.

Start of **'Extend'** period

4a **If 1st Event remains in an Area and the Validation time has expired then the System goes into full Cause and Effect Fire Condition, with Evacuate alarm Signal 2.**

4b If the 1st Event has cleared then the Area Alarms are automatically silenced.

'Extend' period is 4 min (default) (Configurable# up to 10 minutes)

As 3 32s

During the final 32 seconds a warning Alert Signal 1 is outputted. **Reactivation of 'Extend' duration is only possible with a longer custom 'Total' duration.**

If the Event re appears and is detected in the same Area after the **'Total'** period then the sequence restarts from 1.

'Total' factory default is 4 minutes, configurable # up to 60 minutes maximum.

Recommendation & 2nd Fire

1 min 2 min 3 min 4 min 5 min 6 min

Our recommendation is NOT to increase the Validation (Post Event) plus Extend delays and Total for SAFE system period or beyond 4 mins, however, you can increase these periods based on your risk assessment of Alarm Area.

If a **2nd Event is detected** in the AREA with **1st Event** still present or **1st Event** is detected in more than a number of allowable **Areas** (configurable) or an MCP was triggered then there is **site wide Cause and Effect fire alarms.**

Display Hold period is factory set to 5 min (Configurable# up to 10 minutes)

Our recommendation is not to have a Display Hold time of less than 5 mins, however, you can reduce this period based on your risk assessment of Alarm Area.

Panel Display

Fire

Zones - n -

Display shows the location, time and date of an Area Fire

```
Fire 1 01:59                    15:45
1stCONF::Zone 1

First Fire occurred at:
Time: 14:43.10  Sat  4 May 2019
```

Panel buzzer → CANCEL BUZZER → Panel buzzer

5 At the end of Display hold and assuming smoke has cleared an automatic **Panel Reset** is performed to return panel to a Normal condition.

The responsible person may have chosen to do a prior manual **Panel Reset** to return to Normal condition providing 1st smoke detected was cleared.

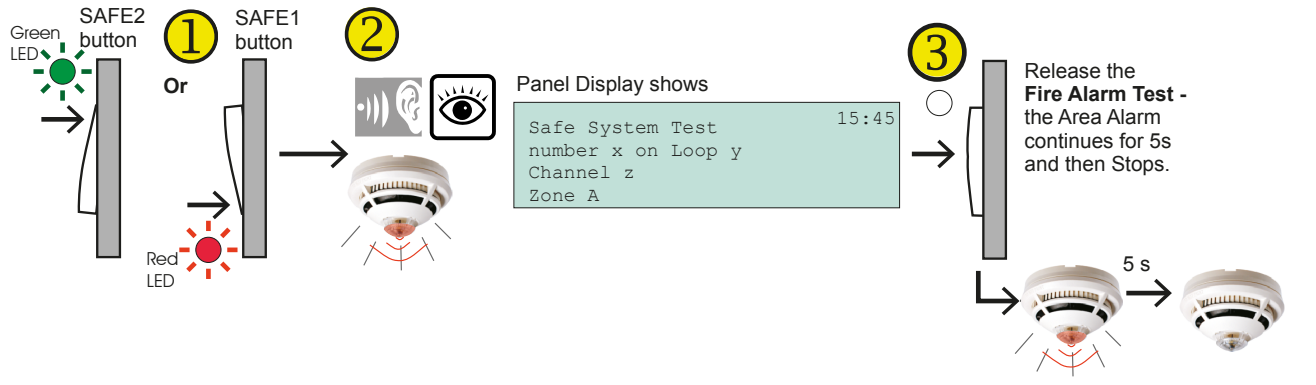
- Configurable based on risk assessment, observe warnings

Disabling of Heat sensing is not recommended but is possible based on #

SAFE2 BUTTON FUNCTIONALITY TEST AND PRE EVENT TIMING

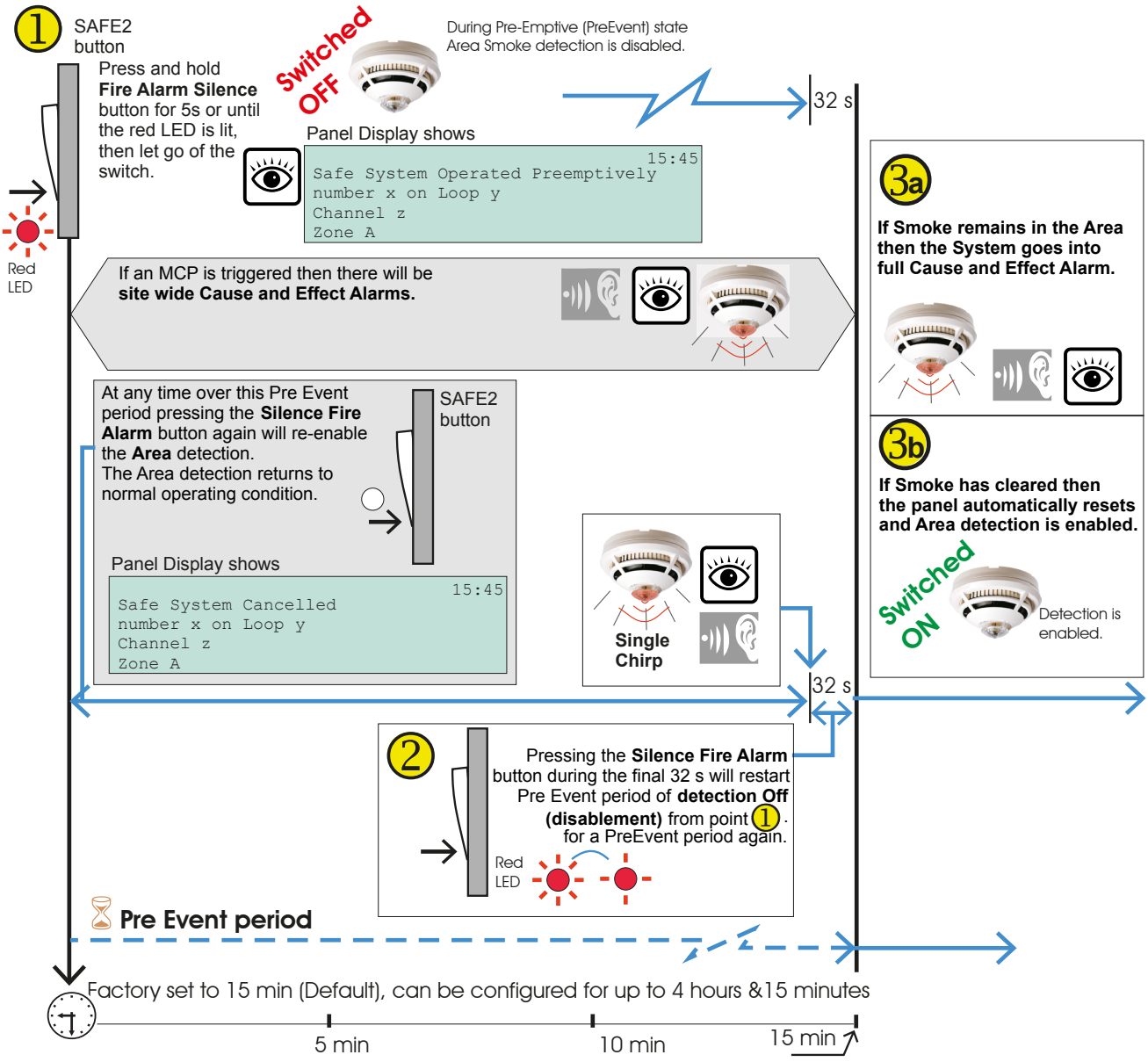
SAFE2 Double button and SAFE 1 Single button Test operation under normal non Event condition

Activities at Area Devices



SAFE2 Double button Area Disablement operation under normal non Event condition

Activities at Area Devices



Sound Patterns

The audible outputs of alarm devices in a system are preconfigured with three different signals and these are applicable to all loops of control panel.

- alert (Signal 1)
- evacuate (Signal 2)
- continuous (Signal 3)
- (and OFF)

Any of these three sound outputs may be redefined. Each sound output pattern is defined in terms of frequency and timing.

Most applications will use standard alarm outputs that are preset in the panel. Under exceptional circumstances the output will require re configuration.

> Most applications will use standard alarm outputs that are preset in the panel. Under exceptional circumstances the output will require re configuration.

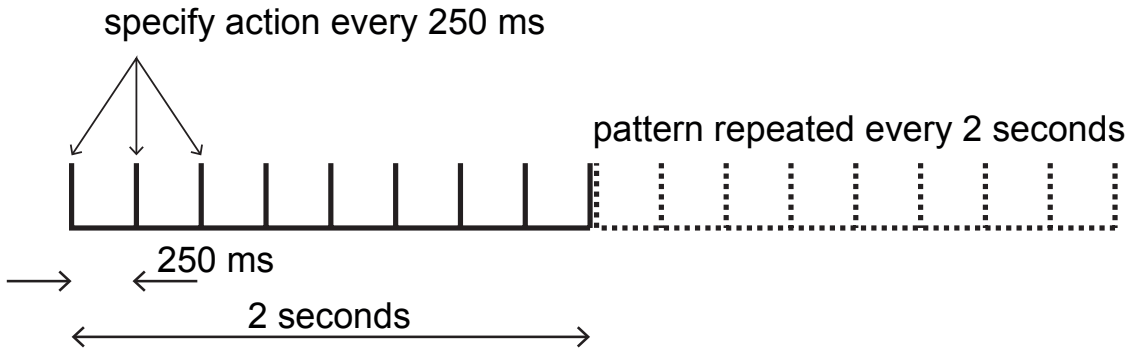
FREQUENCY

The sounders are driven at one of two frequencies:

- high - 970Hz ±10%
- low -730Hz ±10%
- (and OFF)

TIMING

The sound pattern is repeated every 2 seconds. The pattern is defined by specifying an action every 250 ms through the pattern.



The action can specify:

- Switch ON high
- Switch ON low
- (No change)

An action can last for:

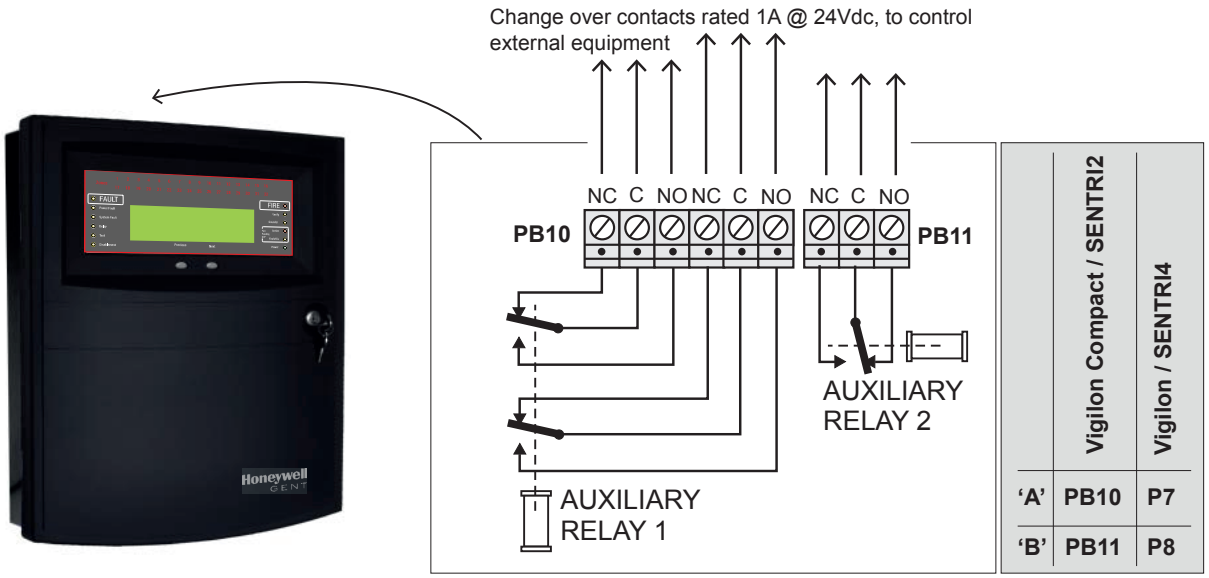
- 10 ms, 40 ms, 90 ms, 160 ms, 250 ms, 350 ms, 480 ms, 630 ms, 800 ms, 980 ms, 1.2 s, 1.4 s, 1.6 s, or 1.9 s

Auxiliary relays

The two auxiliary relays within a control panel may be individually configured. Each auxiliary relay may be configured to operate by any of the following:

- Sector Fire
- Fault
- Disablement EN panel / Warning BS panel
- Any combination of the above

The relays may be configured to be either normally energised or normally de-energised. The normally energised option is used to provide a fail-safe configuration.



Factory default:
Aux relay 1 is normally de-energised and operates with a fire event without delay.
Aux relay 2 is normally energised and operates with fault event without delay.

DELAY

The auxiliary relay operation may be delayed by up to 10 minutes in the event of a sector fire.

APPLICATION

The auxiliary relay contacts can be used to control external equipment, such as an automatic dialler that makes the call for fire fighting action.

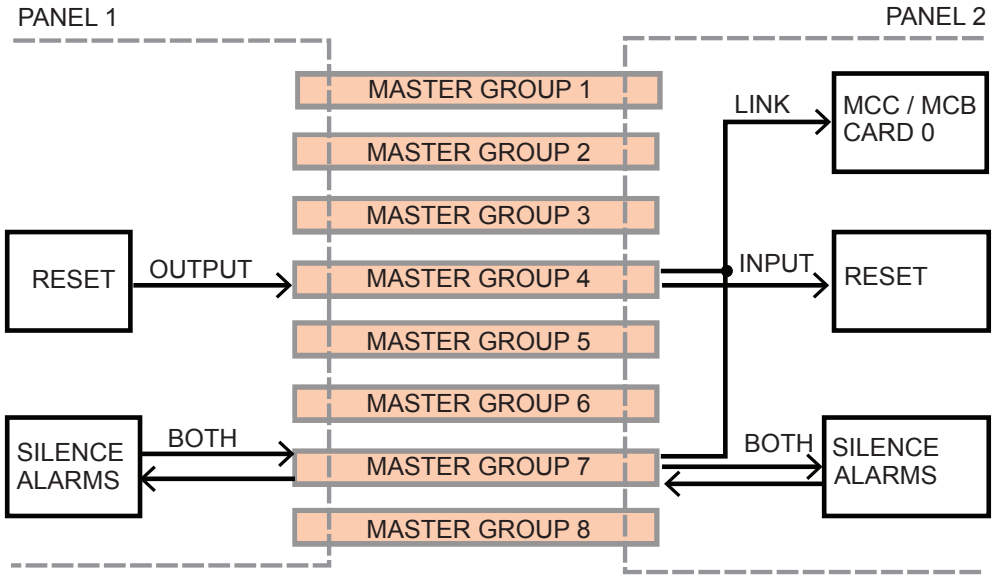
> The contacts should be powered from an independent power supply, where required.

Master Groups

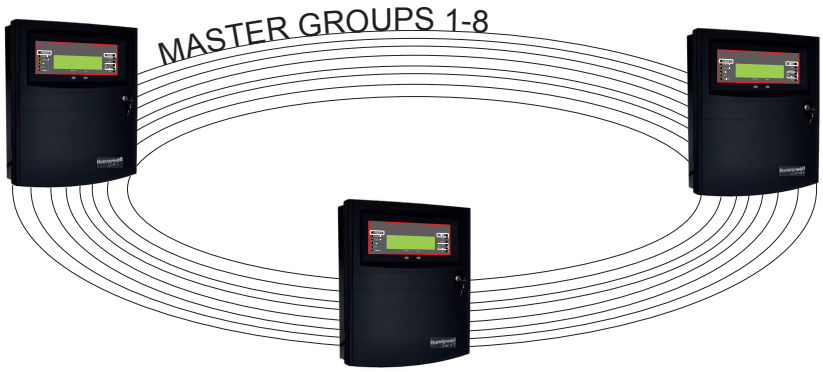
Master Groups allow messages to be passed around a network between control panels, terminal nodes, repeat panels and mimic panels.

- There can be a maximum of up to 8 Master Groups per network
- Messages can be routed to individual loops (Loop card)
- Can also be routed to the displays of control and indicating equipment (LCD)
- and to the installed printers which are connected to the control and indicating equipment

Typical application of controls across a network of two panels:



The 8 Master Groups may be used individually to establish sub-groups of control panels within the network.



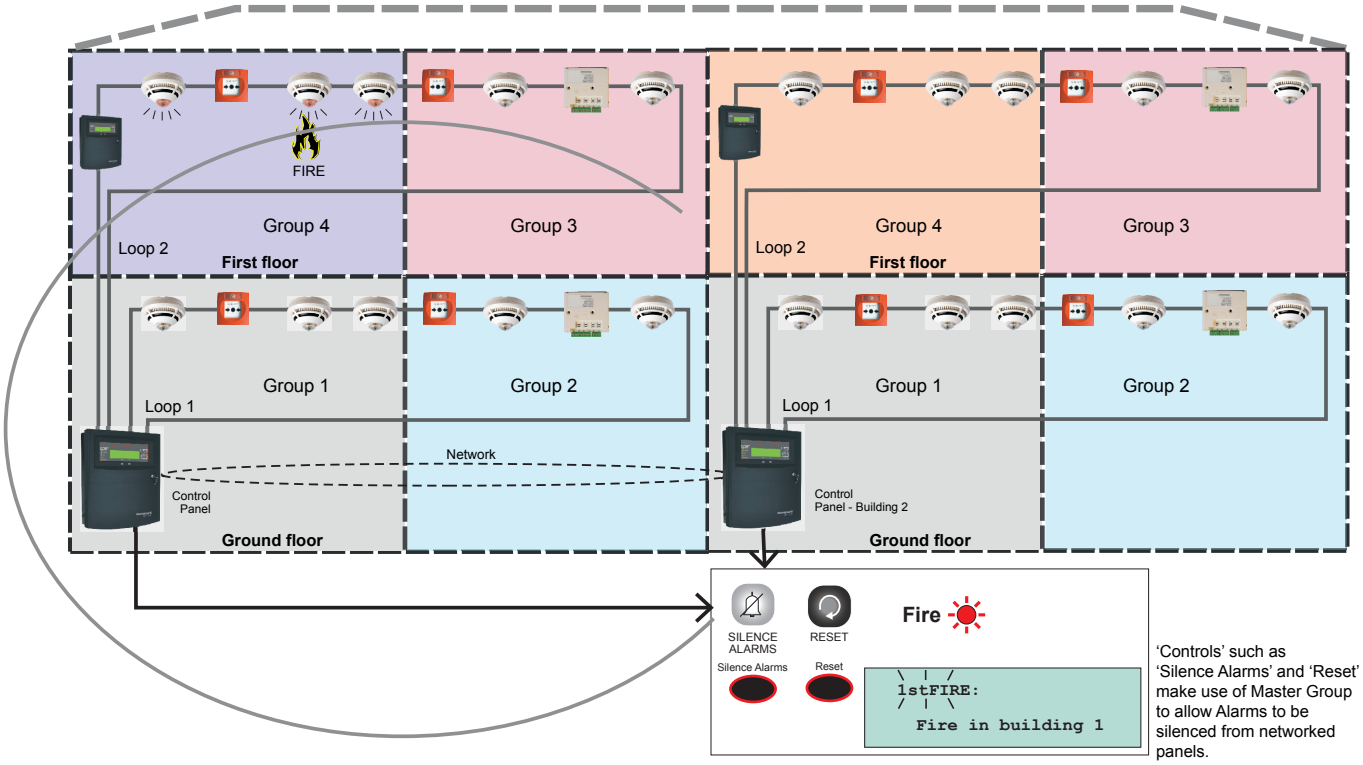
FIRE MESSAGES

Each card can be set to display or print Fire only information from each Master Group individually.

System messages
Each card can be set to display or print all system event information (including fires) from each Master Group individually.

GLOBAL CONTROLS (SOUND ALARMS, SILENCE, RESET, VERIFY)

Each control panel and terminal node may be individually set to operate and/or respond to global controls on each Master Group individually.



'Controls' such as 'Silence Alarms' and 'Reset' make use of Master Group to allow Alarms to be silenced from networked panels.

Repeat Panels - All repeat panels wired to the same loop will display and print the same information.

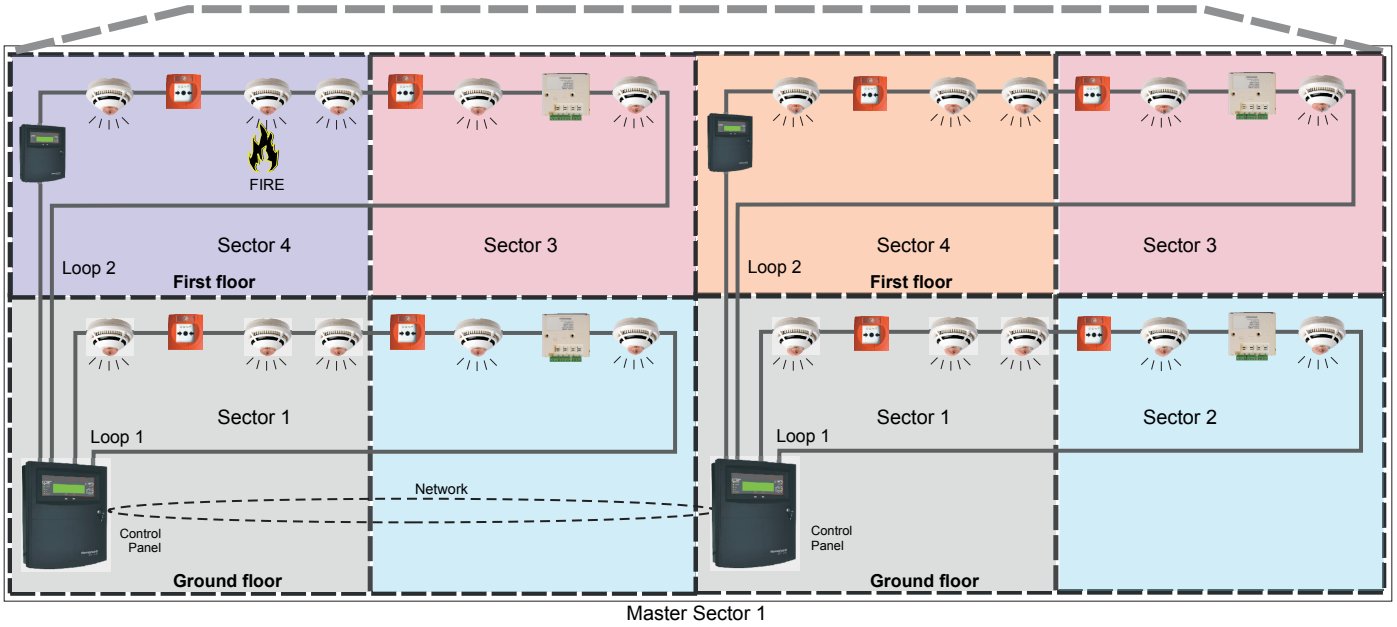
Mimic Panels and Repeat panels - All mimic repeat panels can be configured to display different information irrespective of whether or not they are wired to the same loop.

Control Panels and Network Nodes (also called Terminal nodes) - All can access fault and disablement information from any other panel.

Master Sectors

Master Sectors are used to provide global alarm actions across a network of Panels. Master Sectors are therefore a collection of one or more Sectors, Delay Blocks, Master Alarms and Auxiliary Relays from one or more Panels.

One of many application of Master Sectors is illustrated below where all sectors across a network of two systems will action alarm in the event of an alarm in any sector.



Master Sector 1

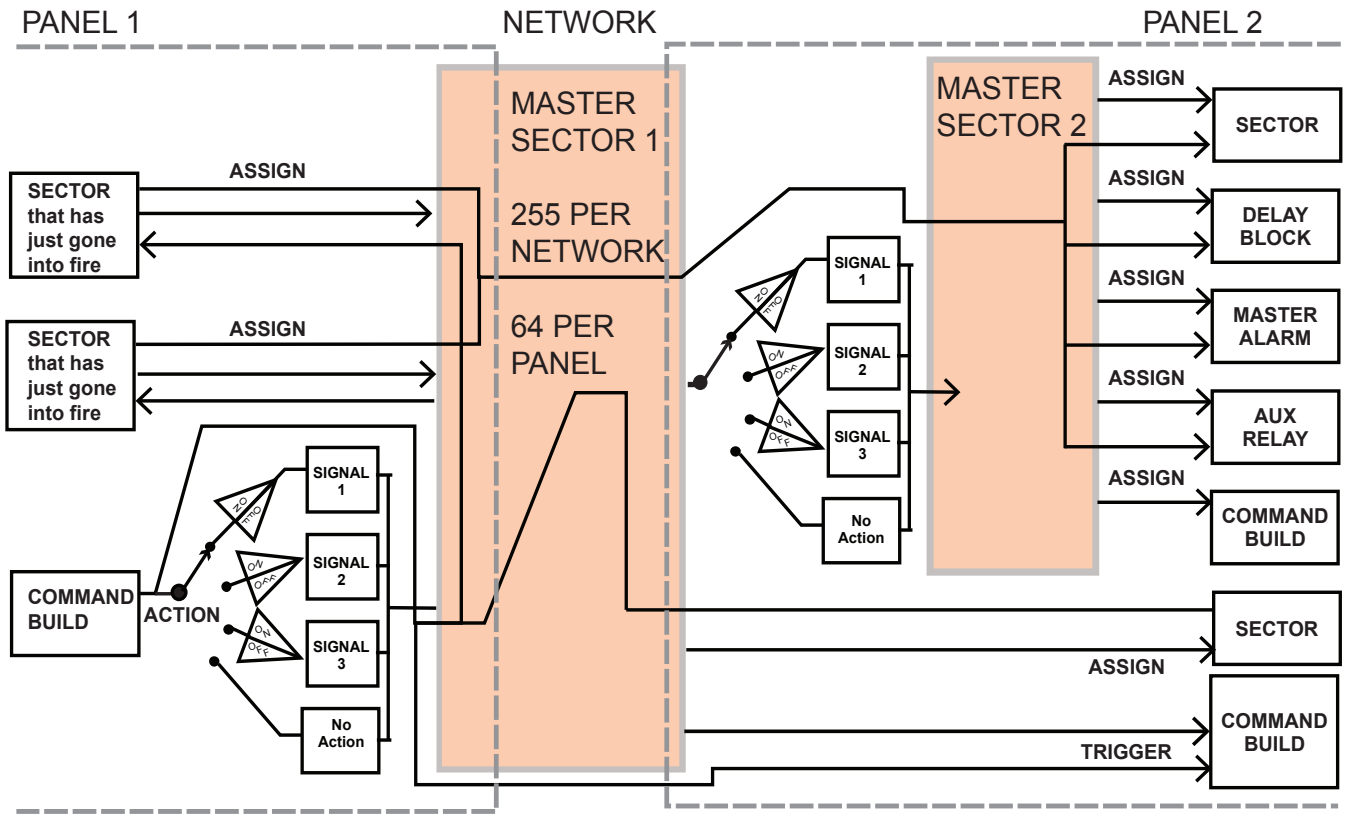
There can be up to 64 Master Sectors available per Panel with a total of 255 Master Sectors available across a networked system.

Master Sectors can only be triggered by a sectored fire event. Once triggered, a Master Sector can then action a Sector, another Master Sector, Command Build (not locally), Delay Block, Master Alarm or Auxiliary Relay.

WHAT ARE THE USES OF MASTER SECTORS?

- Automatic alarm sounding across panels in the event of a fire, to provide a phased evacuation for a single building application, or a timed warning signal for other buildings on a distributed site.
- Manually initiated alarm activation via I/O device, to provide a 'sectored' bomb alert, or manual evacuation, as a result of the growth of a fire to other areas of a site
- Automatically switch Virtual Output Points 1 to 255 in the D1 system with Vigilon Master Sectors 1 to 255.

MASTER SECTOR FUNCTIONS

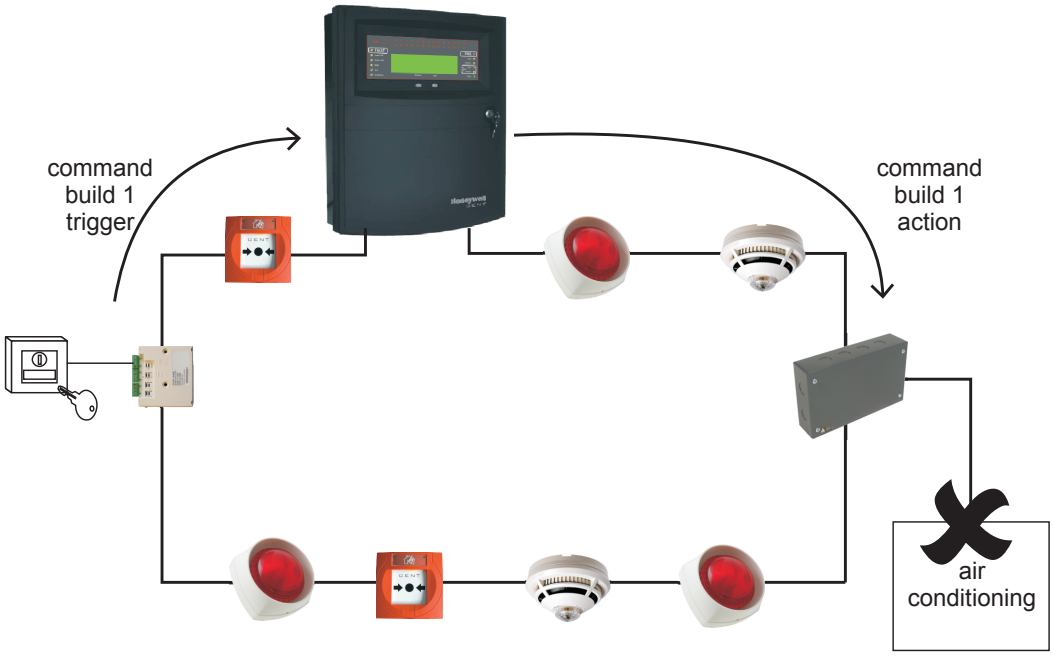


Command Builds

Command Builds provide a general purpose link for use in configuring the control panel. They are primarily used for NON-FIRE actions, but may also be used during a fire.

Each command build has a Trigger and an Action. The action is usually performed immediately upon receipt of the Trigger.

- There can be a maximum of up to 255 Command builds per panel.



COMMAND BUILD LABELS

Each command build can be given a label of up to 40 (64 if long labels are enabled) characters. This label can be used in one of 3 ways:

- Display only when command build is triggered.
- Display and print when command build is triggered (and printer is on).
- Not display or print.

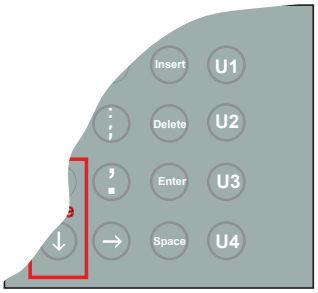
If the label is displayed, the control panel's buzzer is also activated at the same time.

Command builds are logged with an On/Off time, but only if they have been given a label.

User defined buttons U1 - U4

Pressing the keyboard buttons U1, U2, U3 or U4 will action command builds 251 -254 respectively.

The following example is for Vigilon panel which has the four U buttons.

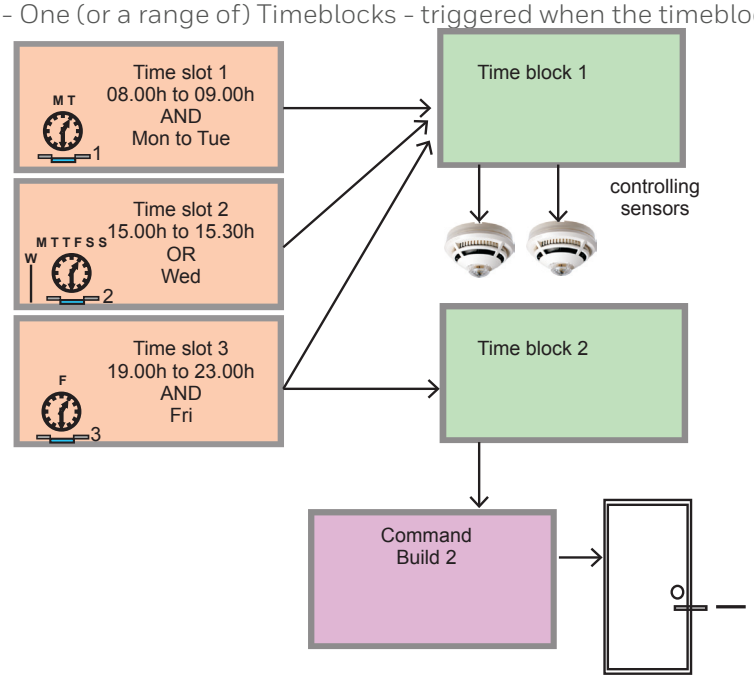


Part of the panel Keyboard showing the U keys

A Compact panel will only have U1 and U2 buttons

TRIGGERING COMMAND BUILDS

- A command build can be triggered by:
  - One (or a range of) Timeblocks - triggered when the timeblock is ENABLED



- One (or a range of) Input lines on one (or a range of) Interfaces - this can be used to provide non-fire actions if a Loop Powered Interface is used, with the input set as 'supervisory'.

- One (or a range of) Sectors - triggered when a fire is detected in that sector.

One (or a range of) Master Sectors (from other panels on a network) - triggered when a fire is detected in that master sector.

- A command build can ALSO be actioned by any number of other command builds.

- A command build can ALSO be triggered by any number of Zone (Group on V3+) Tasks - triggered when all of the conditions for that task are true.

COMMAND BUILD ACTIONS

- Each command build has ONE action only.

- A command build can perform automatically any of the actions that can be performed manually in the 'Control' menu of the panel (see the functional diagram for a detailed list of these actions).

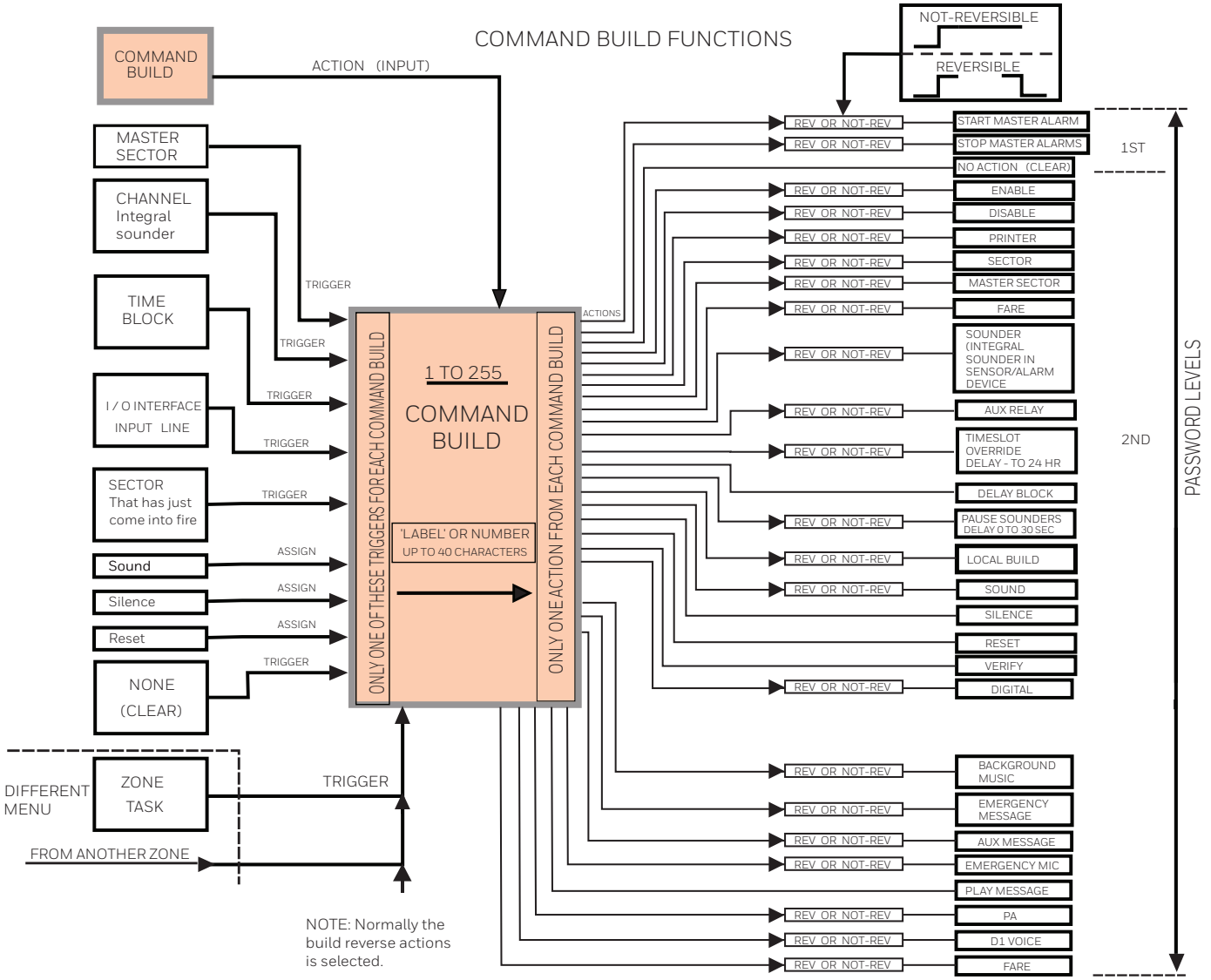
- Most ACTIONS are either Reversible or Non-Reversible .
  - REVERSIBLE means that the action reverses when the trigger condition is removed (e.g.. the sector is re-enabled, when the keyswitch is turned back).

  - NOT REVERSIBLE means that the action continues even when the trigger condition is removed (e.g. the sector stays disabled until it is manually re-enabled).

- FIRES take priority over command builds

> Command builds are processed sequentially, ie number 1 is first and 255 is last.

COMMAND BUILD FUNCTIONS



Index

A

Alarm management 14
ASD 1 Port I/F 37
ASD 2 Port I/F' 37
ASD interface unit 14
Attention tone and message 68
Auxiliary Relay 44

B

Background monitoring 68
Beam config. 97
Beam sensor 14

C

Cable method 17
Clear Configuration 32
Co-incidence fire detection 117
Command Builds 5, 39, 52, 131, 132

D

D1 Interfacing 14
Delay block Links 46
Delay Blocks 45
Device Configuration 35
Domain address 19
Door release category A 86
Door release category B 86

E

Export for SD 26

F

FAAST 37
FAB 69
FARE 14, 133
FPE 14

G

Groups 119

I

Import from SD card 23

L

Labels 103
Licence Form 21
Load Configuration 29
Long label 14
LV interface 14

M

Mains Powered DAU 14, 63
Make SAFE 98
Master Groups 127
Master Sector Links 43
Master Sectors 129
micro DAU 14

N

New Configuration 32
Node address 19

O

Options 22

P

Print 33
Print setup 34

R

Radio devices 14
Repeat fire LEDs 68
Repeat routing 70
Resound Delay 111
Resound [FIRE] 112
Resound [SOUND] 112

S

S3 Mark 2 14
S3 Mark 3 Part 23 14
S4 LV Interface Unit 71
S4 Mains Powered Interface 85
S4 Mains Switching Interface 74
SAFE 1 101
SAFE 2 button 100
SAFE address 14
SAFE System 99
Save Configuration 30
Save Configuration As 31
SD Card method 15
Sector Link 41, 105
Simulation file 28
Site information 25
Sound Alarms 54
Sounder resonance 68
Sound Patterns 125
Speech sequence period 68
S-Quad and S-Cubed Mk2 / 3 67

T

Time Blocks 113
Time Slots 113
Transmit Config 27
Type B 99

V

View Conflicts 102

Z

Zone/Group config 39
Zones 116

At the end of their useful life, the packaging, product and batteries should be disposed of via a suitable recycling centre and in accordance with national or local legislation.

WEEE Directive:
At the end of their useful life, the packaging, product and batteries should be disposed of via a suitable recycling centre.
Do not dispose of with your normal household waste.
Do not burn.

Honeywell Gent reserves the right to revise this publication from time to time and make changes to the content hereof without obligation to notify any person of such revisions of changes.

Honeywell GENT

Gent by Honeywell (Novar Systems Limited), Building 5 Carlton Park, King Edward Avenue, Narborough, Leicester, LE19 0AL, UK

Telephone: +44 (0) 203 409 1779

Tech. Support: www.gentexpert.co.uk

Website: www.gent.co.uk