# 1 Introduction

Software version 4.51 introduces single-fault tolerant network status message and control action filtering as a configurable option. This enhancement enables the network to be partitioned so that control panels and repeaters located in each geographical area (sector) respond only to events and control actions raised within the same sector; network events and control actions occurring outside this sector are 'filtered' out, i.e. ignored. This ability to impose restrictions on what panels do, or do not need to respond to, is known as network event filtering. In essence, this allows a large network, providing fire cover for a number of related but separate sites or buildings, to comprise a number of continuously-cabled but operationally autonomous sub-networks.

However, the system has the flexibility to allow control panels to be configured as 'supervisors' which allows them to have visibility of network event messages and respond to events from other sectors, in the same way that any node behaves on a non-filtered network. The selection of sectors able to be monitored by a supervisor panel is part of the network configuration process.

This addendum describes the additional configuration options for enabling network filtering operation on a single-fault tolerant network.

Filtering is not available with the Master/Slave networking option.

## 1.1 Off-line Configuration Tool

As with earlier versions of panel software, the recommended method of configuring a single-fault tolerant network is by using the Windows™ Configuration Tool (WCT) v. 2.14, or later.

If the WCT is used to download panel configurations some local editing is still required at each panel as with previous versions of panel software. This procedure has not changed with the introduction of network filtering.

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## 2 System Configuration

Panels and repeaters are assigned to a single-fault tolerant network in the same way as with earlier versions of panel software. The procedure described below addresses the changes to the configuration menu options to incorporate network event filtering. The procedure is based on the assumption that network event filtering is being implemented via each control panel's user controls and not downloading the configuration using the WCT.

### 2.1 Assigning Nodes to Sectors

The network configuration table, shown at left, includes a column for assigning nodes to network-event filtering groups, known as 'sectors'.

```
      ▼
No.  Exists   Mon This Sector  Location
  1  Panel
  2
  3
▼ 4
◀▲▼▶=select   *=edit  √=finish
```

The maximum number of sectors configurable on a single-fault tolerant network is 63. Any number of nodes can be assigned to a sector. Nodes can be allocated to any sector, in any order, and any number of nodes can be assigned.

Edit the configuration table to add panels and repeaters to the network as described in the Panel Configuration manual. If network event filtering is required the following additional steps need to be taken:

i   To assign each node to a sector, place the cursor in the Sector column of the first node to be assigned and press the '*' key. In the example illustrated here the local panel, node 2, is selected.

```
No.  Exists   Mon This Sector  Location
  1  Panel     √
  2  Panel     √   √   ██████
  3  Panel     √
▼ 4  Repeater  √
◀▲▼▶=select   *=edit  √=finish
```

```
Sector  0:
Sector Number for Node 2
(1-63; 0=Disable Sectoring): 1_
```

ii  A screen, typical of the one shown here, prompts for the entry of the node number. Enter a valid number (must be between 1 and 63) and press the 'tick' button.

**Note:** The sector default value is '0' and is shown at the top of the display. This value can be entered to disable network event filtering operation, if required.

iii In this example number '1' was entered, and all other nodes have been allocated to sector 1. Every network node is initially assigned to the same sector, but this can easily be changed by repeating these steps when editing the other nodes. Remember: this has to be done at every panel on the network.

```
No.  Exists   Mon This Sector  Location
  1  Panel     √         1
  2  Panel     √   √     1
  3  Panel     √         1
▼ 4  Repeater  √         1
◀▲▼▶=select   *=edit  √=finish
```

```
"Sector Name here              "
S  ` 1 2 3 4 5 6 7 8 9 0 - =  S  ←  ⬚  →
P                             P
A  q w e r t y u i o p [ ]    A  I ⇧ a^A
C                             C
E  a s d f g h j k l ; ` #    E  ✂ ⎘ ⎀
   \ z x c v b n m , . /         √ ⁙ ✕
```

iv  You are now prompted to enter a sector name using the panel's virtual keypad which is now displayed. Enter a name (up to 32 characters including spaces) and press the 'tick' button.

```
<<Sector Name
Save changes (✓/✗)?
```

```
<< Sector Name
Save changes (✓/✗)?
Press ✓ to confirm changes, ✗ to cancel
```

```
<< Sector Name
Save changes (✓/✗)?
Press ✓ to confirm changes, ✗ to cancel
Confirming changes. WAIT
```

```
Sector  1:
Make this a SUPERVISOR Panel?
 1:NO
 2:YES
```

```
Sector  0:
Include SECTOR information in
ALARM and PREALARM display?
 1:NO
 2:YES
```

```
No.| Exists |Mon|This|Sector|Location
   4|Repeater| ✓ |    |  1   |
   5| Panel  | ✓ |    |  1   |
   6| Panel  | ✓ |✓☼  |  1   |
▼  7| Panel  | ✓ |    |  1   |
◄▲▼►=select  *=edit  ✓=finish
```

vi After entering the sector name, press the 'tick' button twice to confirm that it is correct. If not correct, press the 'x' button to cancel and repeat the procedure, as required.

vii When programming the local panel, i.e. the panel at which the controls are currently being used, once a sector number has been assigned a further prompt is displayed to ask whether the panel is to be configured as a 'supervisor', as shown at left. This selection can only be made at each panel as part of the process of assigning it to a sector. Therefore, this prompt is displayed each time a local panel is assigned to a sector.

Select 'Yes' or 'No' as appropriate.

viii If 'Yes' is selected the 'Include SECTOR information in ALARM and PREALARM display?' prompt is displayed.

Selecting this option will add a line of text, for alarm or pre-alarm events, as follows: at the top of the middle area of the display, to identify the sector of the originating alarm event or below the zone reference for pre-alarm events. This additional line displaces the panel number and name reference down one line. The panel's navigation buttons are used to display 'hidden' information: use the 'UP' and 'DOWN' arrow buttons for 'Alarm' events and the 'LEFT' and 'RIGHT' arrow buttons to toggle the last line between zone text and device text for pre-alarm events.

Select 'Yes' or 'No' as appropriate.

ix The appearance of the symbol '☼' next to the tick in the 'This' column indicates that the panel, in this example node 6, is a supervisor. Panels can only be made a supervisor at the 'local' panel and cannot be done remotely.

**Note:** Repeaters with a network node ID can be assigned to a sector but cannot be made a supervisor.

```
Sector  1:
Make Sector 6 accessible
To this panel?
 1:NO
 2:YES
 3:ALL Sectors
```

```
No. Exists    Mon This Sector Location
  4 Repeater   √          1
  5   Panel    √          2x
  6   Panel    √   √¤     1
▼ 7   Panel    √          3
◀▲▼▶=select  *=edit  √=finish
```

x   When programming other nodes to different sectors, if the local panel was made a supervisor a further question is asked: 'Make Sector n accessible to this panel?'. There are three choices: 'No', 'Yes' and 'ALL Sectors'. If 'Yes' is selected the node currently being edited will be made visible to the local panel (the local panel is a supervisor!). Selecting the option 'No' means that the local panel will not receive any information about alarms or pre-alarms from that sector. Selecting 'ALL Sectors' enables the local panel to have visibility of every sector on the network. However, selecting this option does not mean that every sector is accessible to every other sector. This is a setting for the local panel only.

Select the appropriate option. The configuration table re-appears with a different sector number against the node that has been edited. If the sector is not accessible to this panel an 'x' appears to the right of the sector reference. In this example, nodes 5 and 7 have been assigned to sectors 2 and 3 respectively, with only sector 3 accessible to this panel.

**Note:** All nodes assigned to sector 3 will be accessible to this panel. As more nodes are assigned to this sector they are automatically accessible to this panel.

xi   Move to the next node and repeat the procedure of assigning nodes to a different sector, as applicable, until every node, not remaining in sector 1, has been re-assigned.

xii   With all nodes now assigned to sectors for this panel, move to the next panel on the network and repeat this procedure, remembering that the other panels, in each case, will need to be treated as the 'local' panel when configuring the network options.

## 2.2   Fault Messages

If the entire system is being configured from the panel menus, one at a time, then until all the panels have been configured to agree one or more instance of the following fault message will more than likely be reported:

***Sector Assignment Error, Panel n***

Where n is the number of the panel deemed to be at fault. Once a valid configuration at all nodes has taken place and each sector has been reset, these faults should stop being reported.

# 3 User Actions at Supervisor Panel

This section describes the way a supervisor panel displays filtered network events and the menu options the user is offered to respond to them.

A supervisor panel can have knowledge of sectors that are in an off-normal state other than its own. Off-normal categories include:

- Fire
- Pre-alarm
- Fault
- Evacuate

**Note:** Disablement and Test are not considered as off-normal states for filtering puposes.

## 3.1 RESET Action

Only those sectors that are accessible to the supervisor and are in an off-normal state are displayed at the panel.

```
FIRST  Fire ZONE      25      11:29 Total
LATEST Fire ZONE      51      11:30   2
  Select Sector for SYSTEM RESET
   ALL SECTORS
▼ Sector 14: West Wing
\ Fire /\User/    Mon 07-Jan-2008 11:20:07
```

```
FIRST  Fire ZONE      25      11:29 Total
LATEST Fire ZONE      51      11:30   2
  Select Sector for SYSTEM RESET
▲ Sector 14: West Wing
   Sector 15: South Wing
\ Fire /\User/    Mon 07-Jan-2008 11:21:20
```

When two or more sectors are in the off-normal state and the RESET button is pressed, a menu is displayed to prompt for selection of a specific sector or all sectors to be reset. The example illustrated shows 'All Sectors' as selected. Use the 'down' arrow to navigate to the desired sector, e.g. Sector 15, and then press the tick button to select.

```
FIRST  Fire ZONE      25      11:29 Total
LATEST Fire ZONE      51      11:30   1
  Select Sector for SYSTEM RESET
   ALL SECTORS
   Sector 14: West Wing
\ Fire /\User/    Mon 07-Jan-2008 11:20:07
```

If the selection made is *one* rather than *All,* the Reset is not performed at the supervisor panel but the selected sector reference is removed from the supervisor panel's display, resulting in a partial reset being performed. The 'Zones in Alarm' total will decrement accordingly.

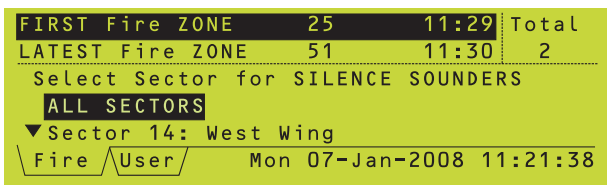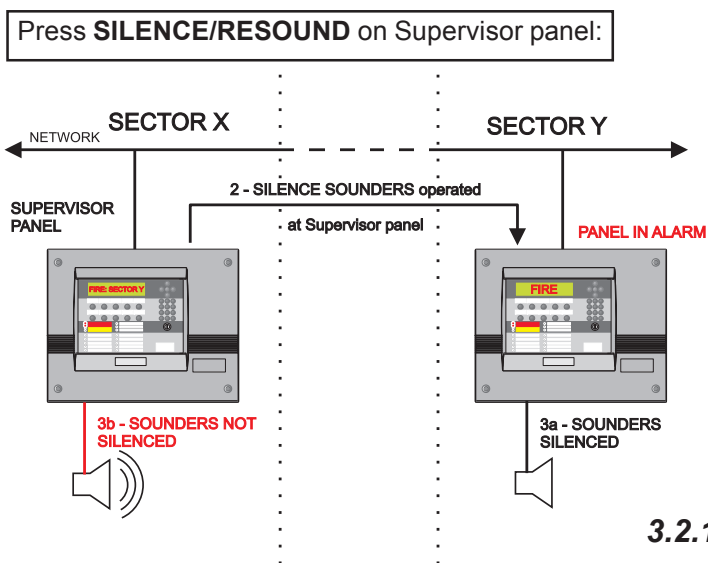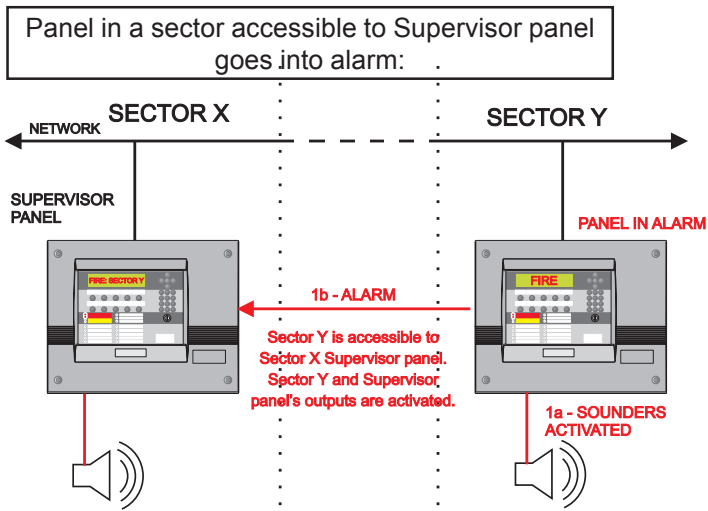This option is displayed until only the last sector remains to be reset.
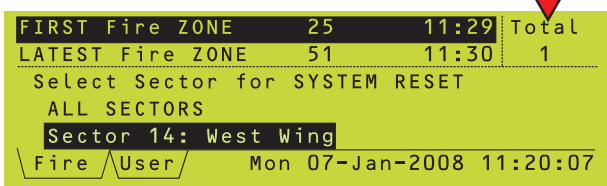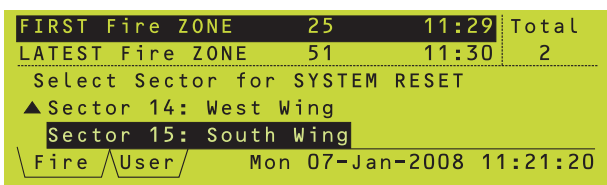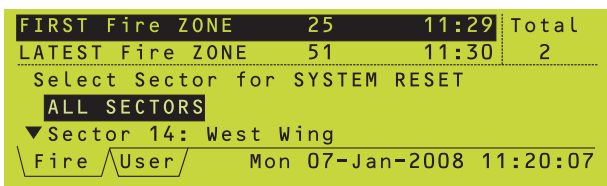
## 3.2 SILENCE SOUNDERS

**CAUTION: there is potential ambiguity in the way SILENCE SOUNDERS operates in a filtered environment.**

```
FIRST  Fire ZONE      25      11:29 Total
LATEST Fire ZONE      51      11:30   2
  Select Sector for SILENCE SOUNDERS
   ALL SECTORS
▼ Sector 14: West Wing
\ Fire /\User/    Mon 07-Jan-2008 11:21:38
```

Pressing the SILENCE/RESOUND pushbutton at a supervisor panel when two or more sectors are in the in off-normal status displays a menu typically as shown at left.

The filtering 'scope' of the SILENCE command is based on the sector where sounders are located and NOT on the sector in which the originating alarm is located. For example, if the

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Panel in a sector accessible to Supervisor panel goes into alarm:



**SECTOR X**

NETWORK

SUPERVISOR PANEL

FIRE: SECTOR Y

PANEL IN ALARM

**SECTOR Y**

FIRE

**1b - ALARM**

Sector Y is accessible to Sector X Supervisor panel. Sector Y and Supervisor panel's outputs are activated.

**1a - SOUNDERS ACTIVATED**

Press **SILENCE/RESOUND** on Supervisor panel:



**SECTOR X**

NETWORK

SUPERVISOR PANEL

FIRE: SECTOR Y

2 - SILENCE SOUNDERS operated at Supervisor panel

**SECTOR Y**

FIRE

PANEL IN ALARM

**3b - SOUNDERS NOT SILENCED**

**3a - SOUNDERS SILENCED**

```
FIRST Fire ZONE    25      11:29 Total
LATEST Fire ZONE   51      11:30   2
  1:SILENCE SOUNDERS
  2:RE-SOUND SOUNDERS

 Fire \User/     Mon 07-Jan-2008 11:22:38
```

user selects a sector which does not include the local supervisor panel (i.e. the panel at which the SILENCE/RESOUND button is being pressed) no sounders will be silenced at the local panel. This means that any active sounders attached to the supervisor panel, and activated as a result of an alarm from the sector now being silenced, will continue to sound. This is best shown in the following example:

With reference to the illustration at left, any alarm event in sector Y is visible to the supervisor panel in sector X. The sounders are activated in sectors Y and X. Pressing the SILENCE/RESOUND pushbutton on the supervisor panel in sector X, silences the sounders in sector Y but leaving its own sounders still activated.
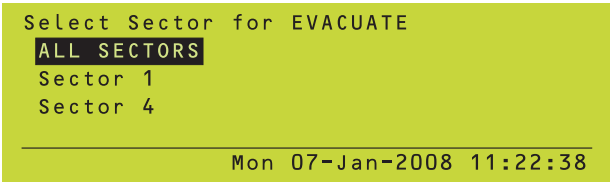
**Use caution when configuring the operation of sounders of a supervisor panel assigned to a sector other than the one in which the originating alarm occurs.**

### 3.2.1 SILENCE or RESOUND

Furthermore, after SILENCE/RESOUND has been operated in some sectors, but not all, then if SILENCE/RESOUND is pressed at a Supervisor panel there is further ambiguity because this control normally has a toggling function: SILENCE - RESOUND. In this case, the menu at left is displayed. Make the appropriate selection.

**Note:** This menu only appears if appropriate. After selection, a further sector selection menu may appear, depending on whether more than one sector is capable of being silenced or re-sounded.

```
Select Sector for EVACUATE
ALL SECTORS
 Sector 1
 Sector 4

                Mon 07-Jan-2008 11:22:38
```

```
 2 ZONES IN TEST
ZONE 24 IN TEST
 Inputs: Tested 0; Not tested 2
..........................................
 Panel 4: Third Floor
 West Corridor
\Test/ \User/     Mon 07-Jan-2008 11:20:07
```

Zone 24 currently in test. Press the '*' button to end walk test:

```
CANCEL TEST MODE: ZONE 24
 (✓/✗)?



\Test/ \User/      Mon 07-Jan-2008 11:20:07
```

Ending testing through the Zone Walk Test menu:

```
CANCEL TEST MODE: ALL ZONES
 (✓/✗)?



\Test/ \User/      Mon 07-Jan-2008 11:20:07
```

Selecting 'No' now prompts for selection of a specific zone:

```
ZONE 24 already in TEST
CANCEL TEST MODE: ZONE 24 (✓/✗)?



\Test/ \User/      Mon 07-Jan-2008 11:20:07
```

Selecting 'Yes' prompts for selection of the only zone in walk test:

```
CANCEL TEST MODE: ZONE 24
 (✓/✗)?



\Test /\User/      Mon 07-Jan-2008 11:20:07
```

## 3.3 Evacuate

Pressing the EVACUATE button at a supervisor panel all sectors available to that supervisor are listed, as in the typical example at left. Select a sector or all sectors from the list. The Evacuate tab is displayed.
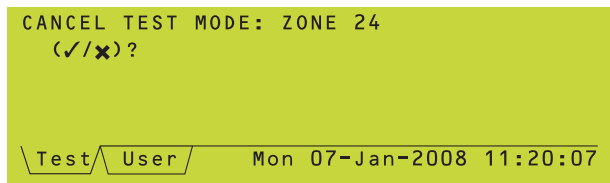
Once EVACUATE has been operated, the same sector menu operations for SILENCE will apply as in the case of ALARM, except there is no RE-SOUND option.
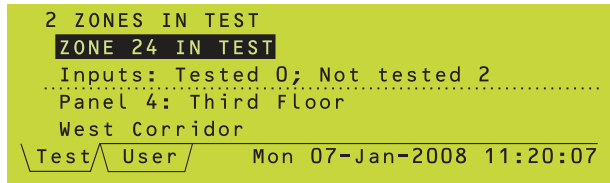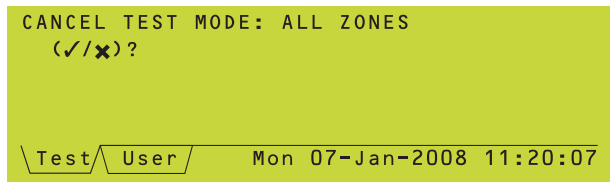
## 3.4 Zone Test

Network filtering has no effect on the way zones are selected to perform zone walk testing. However, to avoid ambiguity in network-event filtering mode walk test can either be cancelled one zone at a time or, as with previous software versions, all zones may be selected for cancellation. This change also applies to non-Supervisor panels if they are part of an event-filtered network.
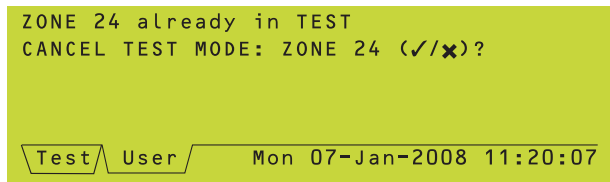
If more than one zone is in walk test and with the Test tab on top, pressing the '*' button the zone currently in test is prompted for selection. In this example, zone 24 is currently in walk test so this zone is offered for test ending. If you end walk test for one zone the other zone(s) remain in walk test.

Alternatively, selection of zones to cancel testing may be accessed through the Test/ Zone Walk Test user menu. When this option is first selected, and before any zone is selected, the 'Cancel Test Mode: All Zones' prompt is displayed, shown at left, as with previous software versions. Press the tick button to cancel the testing of all zones.

Alternatively, by not selecting all zones when more than one zone is in test a menu, typically as shown at left, is displayed after selecting the zone but not before as in previous software versions.
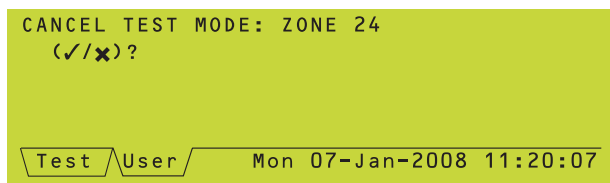
If only one zone is in test, the menu appears before selecting the zone, as in previous software versions.

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## 3.5 DISABLE ALL SOUNDERS

In a network event filtering environment using network zones there is a function where activating this option from a supervisor panel all sectors to which the supervisor has access have all their sounders disabled. The converse action initiated by pressing the '*' pushbutton with the DISABLE tab on top has the same effect and scope.

There is no menu option for filtering which sector(s) are to be silenced.

## 3.6 User Selection of Panel

There are a number of instances in the existing operation of an ID$^2$net system where a menu is offered to select a panel. At Supervisor panels only it is possible to view the sector to which any panel is assigned.

```
Panel for ZONE disable:  (▲▼▶ digit✓)
  Panel 24: Sector 14: West Wing
  Panel 25: Sector 15: South Wing
  Panel 26: Sector 15: South Wing
▼*Panel 27: Sector 16: The Oval
 User           Mon 07-Jan-2008 11:20:07
```

Where menu options prompt for a panel selection, press the right arrow pushbutton to toggle between panel text and sector information display. The typical example shown at left is offered when selecting zone disable in a network filtering environment.

**Note:** The '*' symbol indicates that this panel is a Supervisor.