Manual

Configuration Software



The operation and functions described in this manual are available from Software Version Mx5000-050-02 onwards.

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1 Introduction

1.1 Cautions and Warnings

Before commencing with installation or operation of this module, please read this manual carefully. If you are unclear on any point, DO NOT proceed. Contact the manufacturer or supplier for clarification and guidance.

Trained service personnel must only undertake the Installation and Programming Procedures, as described in this document.

1.2 Minimum Requirements

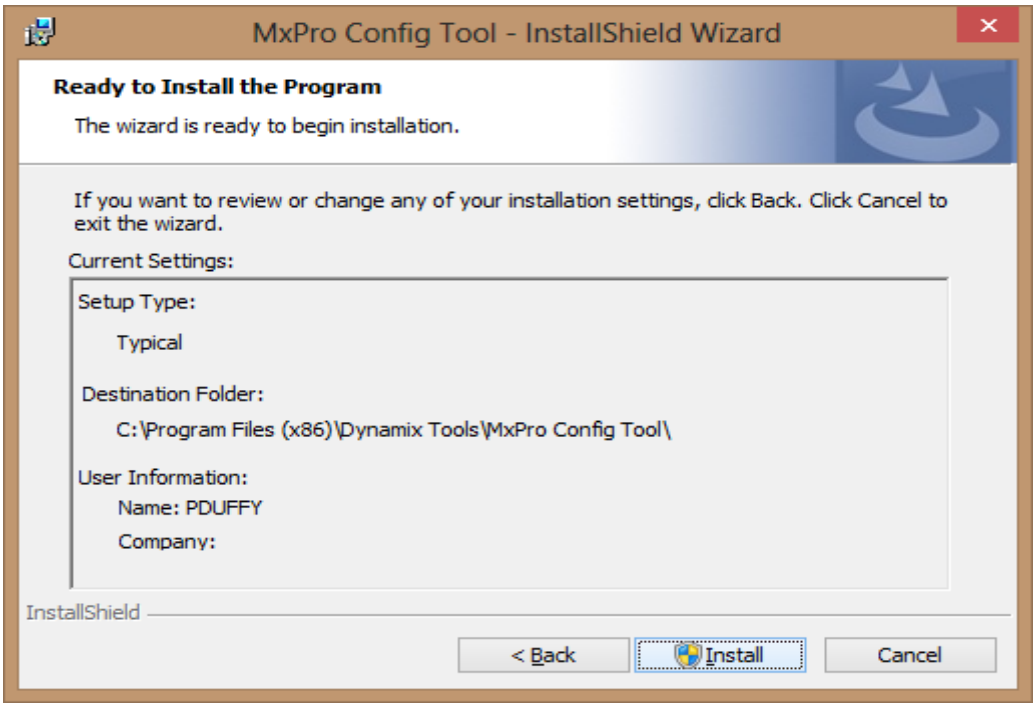
Processor:	Intel Core i3, 32Bit or 64Bit
RAM:	2G RAM
Hard Disk:	20Mbyte Free Disk Space
Operating System:	Windows Vista, Windows 7 & 8
Display:	Minimum 32-bit colour, 1024x768 recommended.

1.3 Installing the Program

Uninstall any previous version prior to installation.

To install the program, insert the supplied CD-ROM/Flash Device into the drive. The install program should automatically launch and guide you through the installation process.

Follow the on-screen instructions. InstallSheild Wizard will default the installation into the Programme Files Folder\ Dynamix Tools directory.



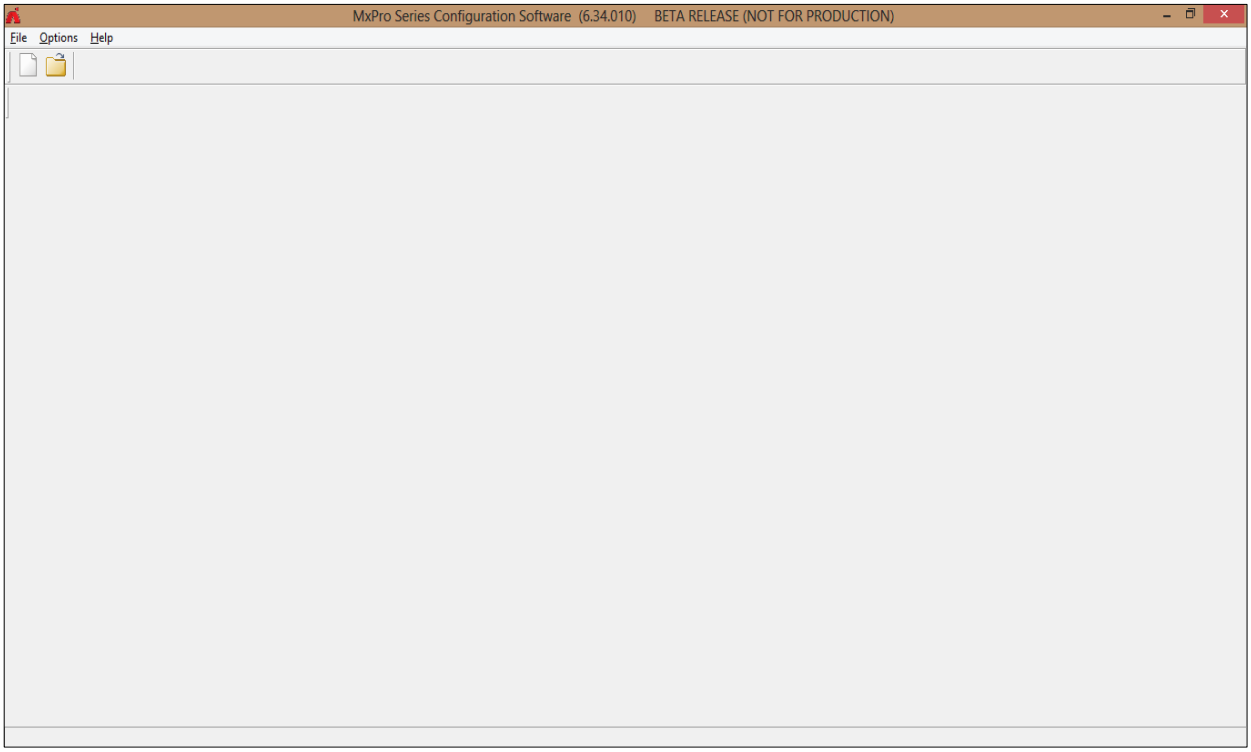
If 'Auto run' is not enabled on the PC and the install program does not automatically run, press START and type D:\setup.exe, where 'D' is the letter of the CD/DVD/Flash drive.

2 General Operation

2.1 Running the Program for the first time

To run the program, navigate to the ‘Dynamix Tools\Config Tool' program group and select 'ConfigTool' Alternatively, use Windows ™ Explorer to locate the required configuration data file and double click on the file name to automatically launch the program and open the selected file.

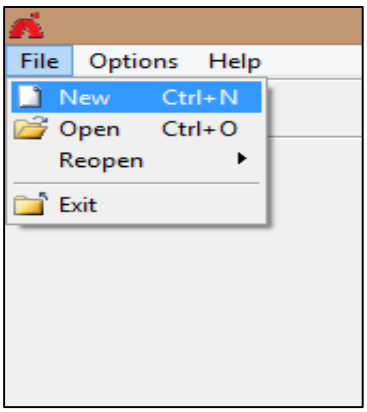
Once the program has completed loading, a new window is opened on the screen as shown opposite. To continue, either choose to create a new configuraton file or to open an existing configuration file. These options are described in the following sections.

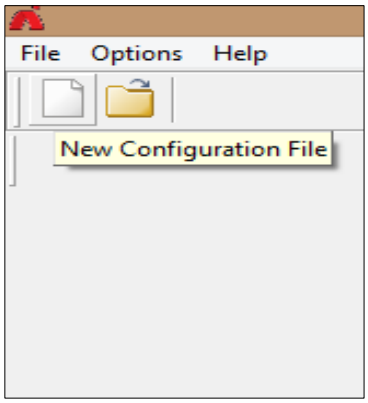


2.2 Creating a new config file

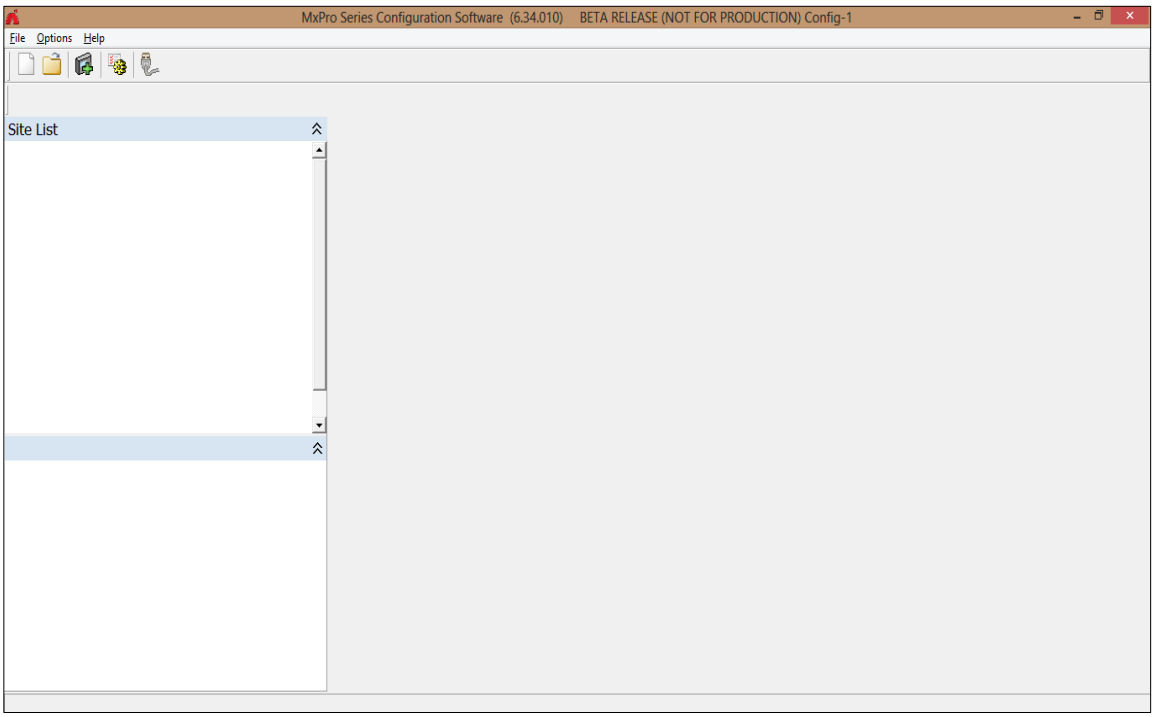
To create a new configuration, click on the WHITE PAGE icon or click on FILE and then select NEW from the drop-down menu.

Refer to the pictures opposite





The screen will now similar to below.

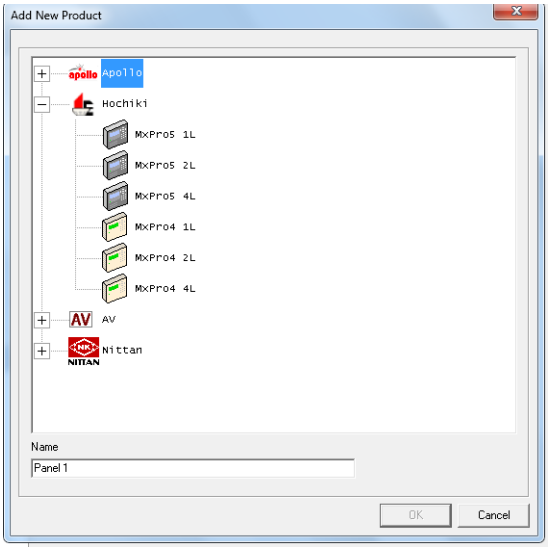


There are 3 ways to add a product to the site list:

(1) Clicking the 'Add New Product' button to select and add a new product with default configuration settings.
(2) Selecting ‘File | Import’ from the menu bar to read in a ‘*.NCF’ file created with an older version of the configuration tool.

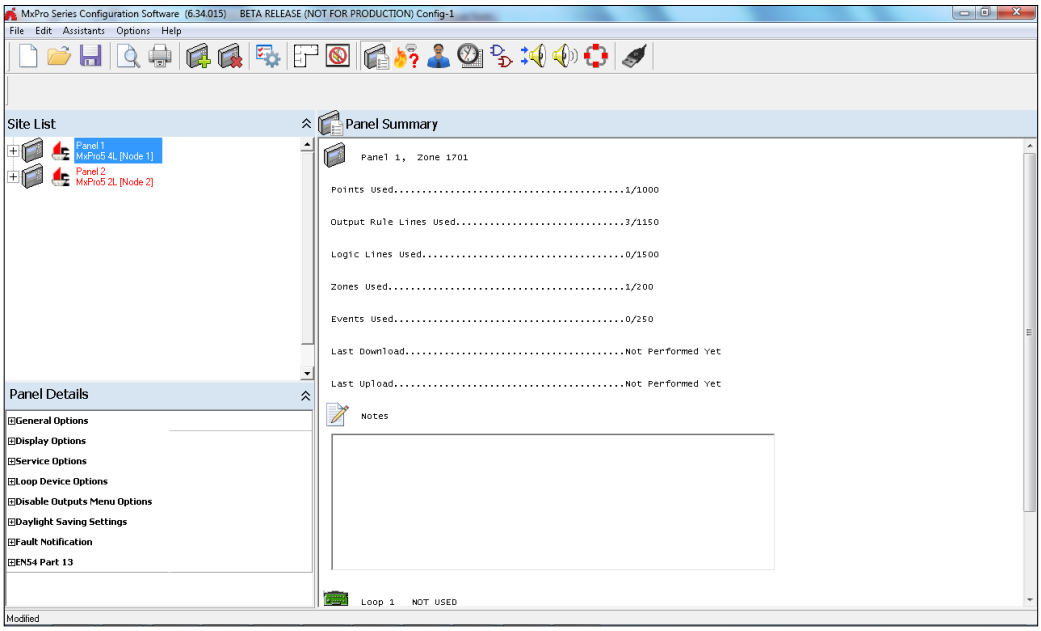
(3) Transferring the product configuration data to the PC using the communications port.

In this section we will be concerned with the first method. The other methods will be covered in later sections.
Click the ‘Add Product’ tool button to add a product to the site list. A similar screen as shown opposite will appear displaying a list of available protocols and products.
The ‘Name’ field can be up to 32 characters and must be unique for each product added to the site list. The name is especially helpful in distinguishing between individual products in a network design. Usually a name is chosen which reflects the physical location of product on the site. The first panel to be added to the design is always allocated to Node 1 (this can be changed later if required)
For network designs, repeat this sequence to add more products to the site list as required.



If a duplicate name or node is encountered, then the ‘OK’ button will remain disabled and an appropriate warning message displayed. Finally, when everything is correct, the ‘OK’ button will be enabled. Click the ‘OK’ button to complete the operation.

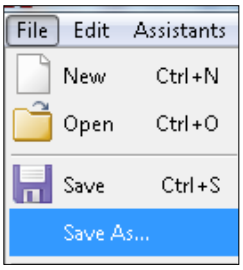
The screen will now similar to below.



2.3 Save the file

To save a new design, click on the DISKETTE icon or select ‘File | Save As’ from the menu. Refer to the pictures opposite.





A window will be shown prompting you for the location of where to store the file.

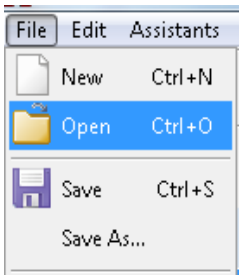
The default file name is 'Config-1'. This can be changed to a more meaningful description, i.e. the name of the site.

Browse the system drives and folders to find the location where you want the design to be saved. Create a new folder if necessary.

At this stage you may also decide to use a different file name.
Note: There is no need to enter a file extension when entering a different file name. The program automatically adds the ‘.NCF’ extension.

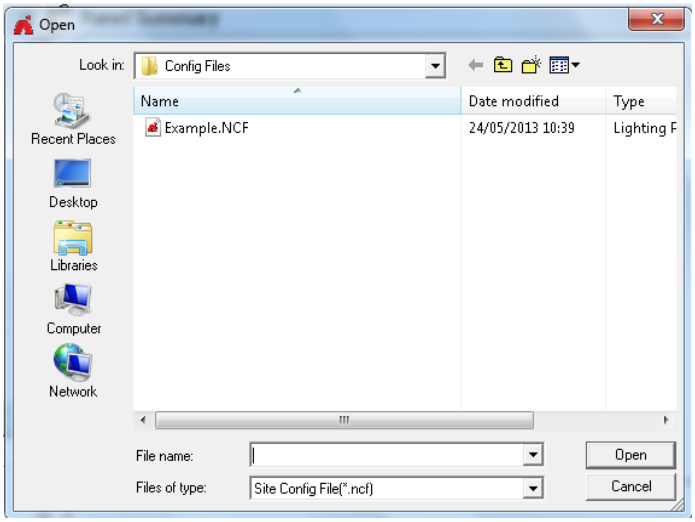
2.4 Open an existing file

To open an existing design file, click the YELLOW FOLDER icon as shown above or select ‘File | Open’ from the menu. Alternatively, select the file from the list of most recently used files in the sub-menu. Refer to the pictures opposite



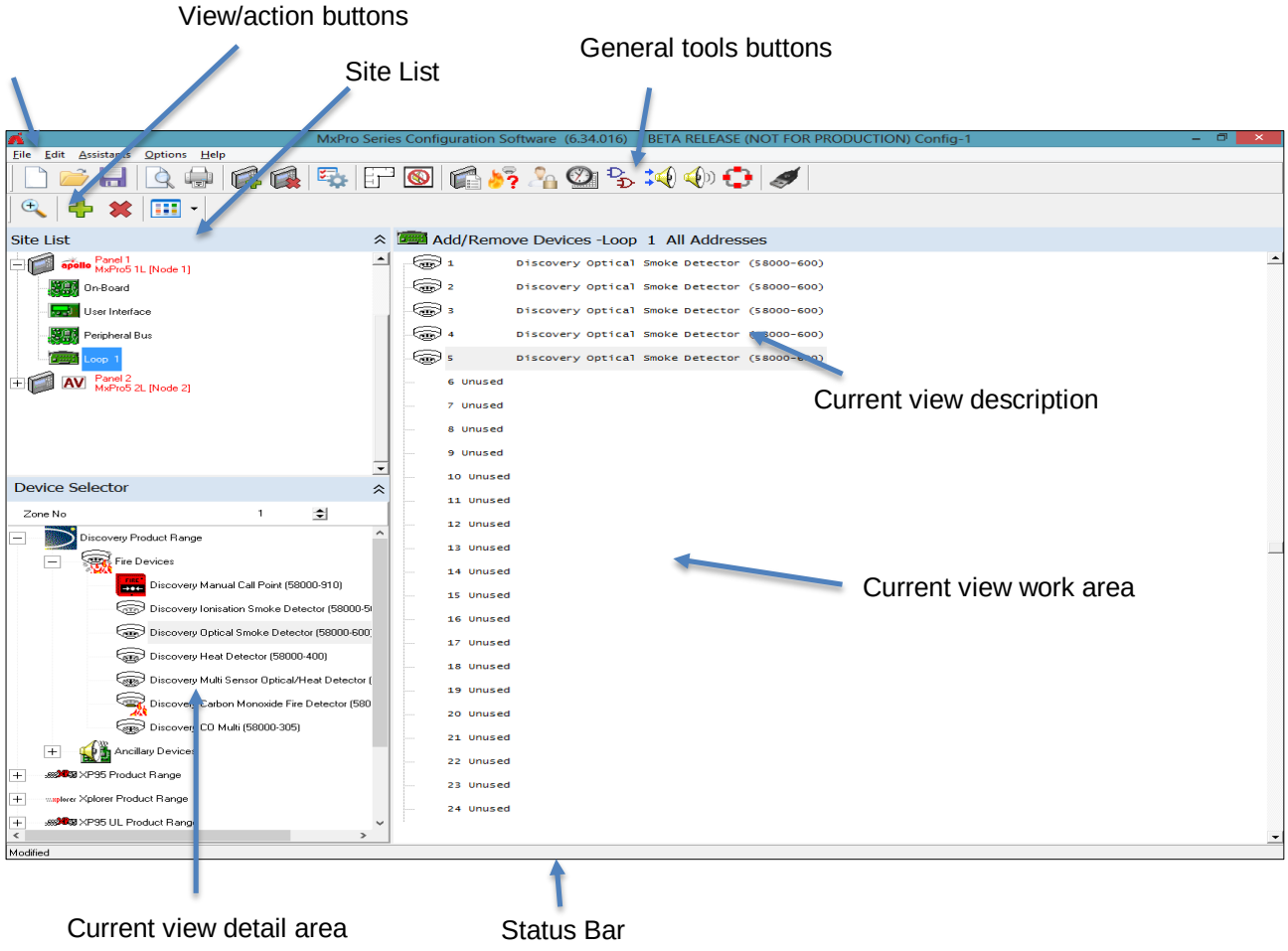
Use the standard Windows Explorer functions to locate and select the design file to be opened.

Note: configuration files are stored using the extension NCF



3 Screen layout

The basic screen layout is shown below. The main elements of the display are indicated and explained in the following sections.



3.1 Menu bar

This provides access to the familiar items found in most Windows applications (e.g. File, View, Options, etc) along with other specific items. Click on an item on the menu bar and a drop down sub-menu will appear from which to make a selection.
Some of the menu bar items and their sub-menus are context sensitive, i.e. their content will depend upon the current view and operations being performed.

The items that may appear on the menu bar are listed below.

File - provides access to all file and printing operations.
Edit - the sub-menu items shown here are context sensitive and depend upon the current selected view.
Assistant - helps the user to perform certain actions e.g. convert products from on type to another, program sounder volumes or check the integrity of the design.
Options - used to select communication settings.
View - sets the current area of detail to view and configure.
Help - Help - provides access to help documentation.

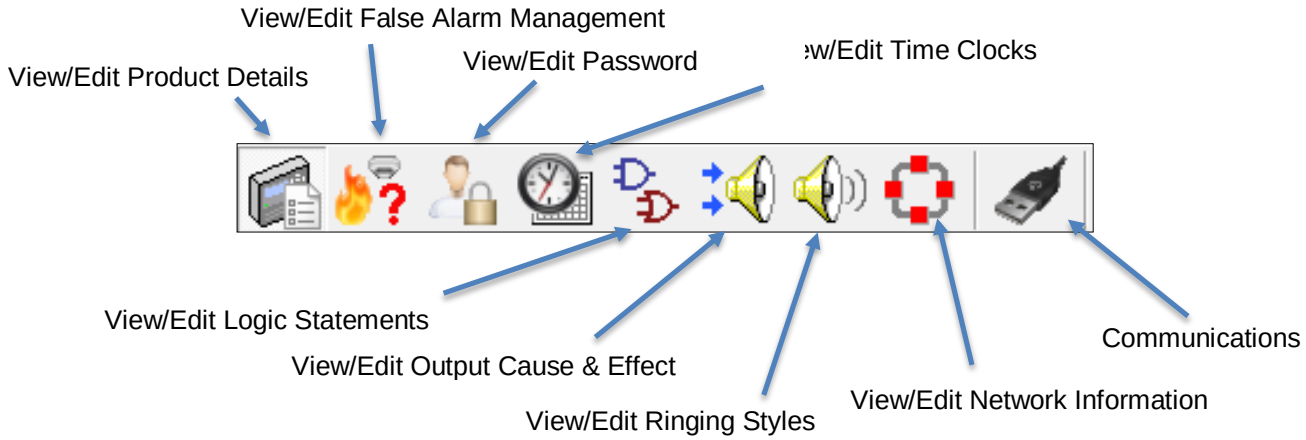
3.2 General tool button

These buttons provide access to the most commonly used functions. These functions are also accessible via the menu bar but are provided here for easier and faster access.

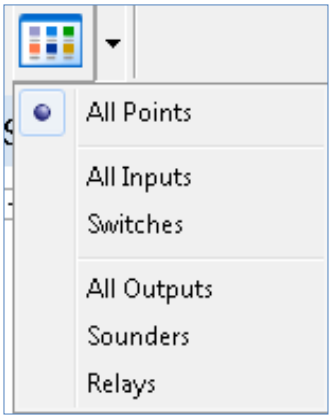
3.3 View/Action tool buttons

The view buttons are displayed on the top row of the toolbar, the action buttons are displayed on the bottom row of the tool bar .

The buttons are context sensitive and their visibility depends upon the current node selected in the site list.
Clicking on a view button lets you select a particular part of the configuration detail to work on.
Shown below are the buttons that are visible when a product image is selected in the site list of a 'Fire' config file. These buttons are related to general product items, e.g. zone text, time clocks, passwords etc.
The functions of the buttons, from left to right, are as shown:



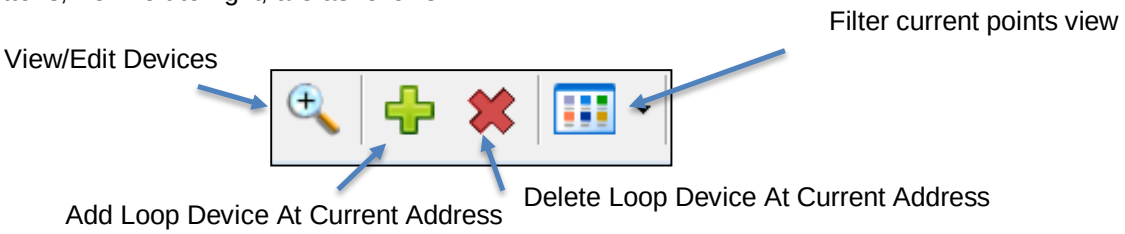
Shown below are the buttons visible when the on-board circuit node is selected in the site list.
These buttons are all related to items associated with the internal on-board circuit, e.g. i/p switches, sounders, and relays
The functions of the buttons, from left to right, are as follows :



Point view filter. Each time the button is pressed the filter is toggled as follows :
➔ All Points ➔ I/P Points ➔ O/P Points ➔
↑ ↓
←←←←←←←←←←←←←←←←←←←←
Alternatively pressing the arrow to expand the list allows selection of the required filter.

Shown below are the buttons visible when a loop circuit node is selected in the site list.

The buttons visible are all related to working with the selected loop.
The functions of the buttons, from left to right, are as follows:



3.3.1 Current View Description

This area of the screen provides a text description of the current selected view. The icon at the extreme right side corresponds to the icon seen on the selected 'View' button.

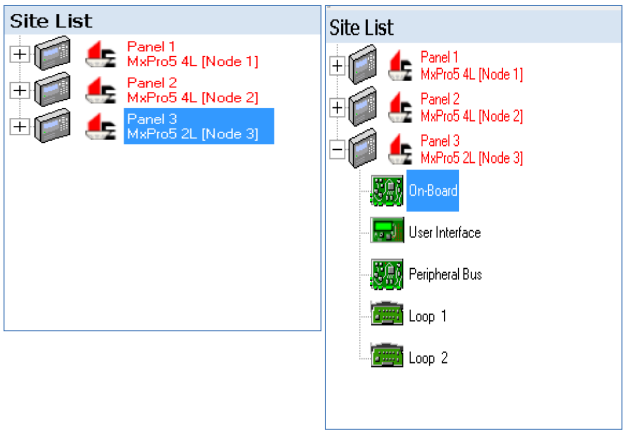
3.3.2 Current View Work Area

The contents of this area is context sensitive, the information displayed is relative to the current selected view. It is here that changes to configuration details take place.

3.3.3 Site List

The following pictures show views of the site list. The left hand picture shows that this networked site has 3 fire panels. As highlighted in the picture, the panel at node 3 is currently selected.

The pictures opposite show two different views of the site list screen area.
To the right of each product image is assigned a name and node address.



Click on a product image in the site list to make it the current product to view or work on. All changes and editing operations are made relative to the current selection.

The  tag at the left side of each product indicates that it can be expanded to show more detail. Click on it to expand the view and make the on-board and loop circuit nodes visible.

The symbol then changes to a  indicating that the view can be collapsed to show less detail.

The right hand picture shows an expanded view with the on-board circuit selected. This is the current circuit.

As the current product and circuit change, the available control buttons may also change along with the details shown in other parts of the screen. All editing operations are performed on the current product and the current circuit (if expanded).

Note: The colour of the name and node text to the right of the product image reflects its ‘modified’ status. Normally black, it changes to red when modified. Perform a save operation and the colour will return to black.

3.3.4 Status Bar

This area of the screen provides context sensitive statistics for the currently selected product. It indicates the percentage of resources used (and if a loop circuit is selected, the quiescent and active loop currents). A ‘Modified’ flag indicates if any changes have been made in the design since it was last saved.

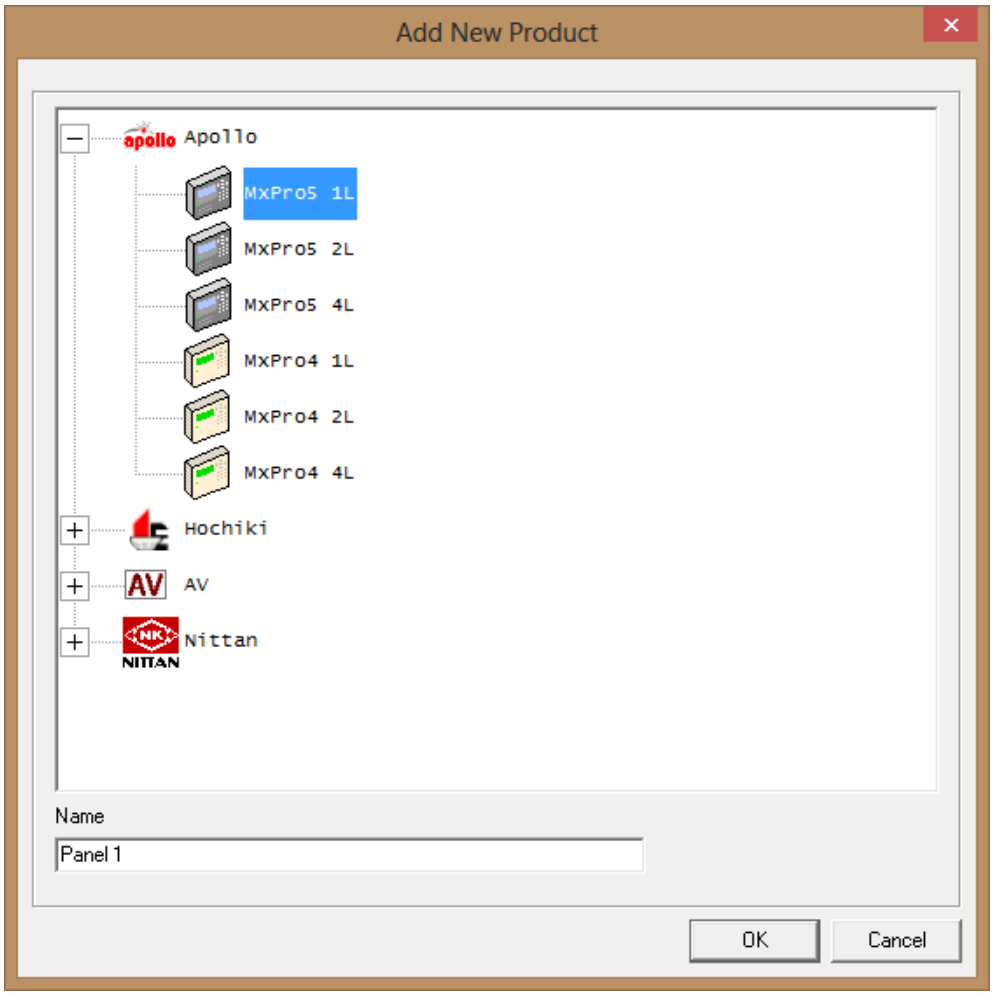
4 Functions

4.1Adding/Removing Control Equipment

4.1.1 Add Product



This option allows the user to add control panel(s) from the available list shown below. Select the required product, enter a name and click OK

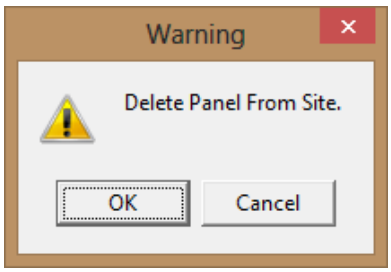


A control panel will now be shown in the ‘Site List’ for configuration.

4.1.2 Delete/Remove Product



This option allows the user to remove the control panel(s) from the site list. Select the required product, and click the ‘Delete Product’ Icon. A warning dialog will be presented and click OK to confirm the delete.

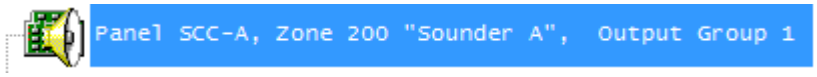


4.2 On-Board Control Equipment

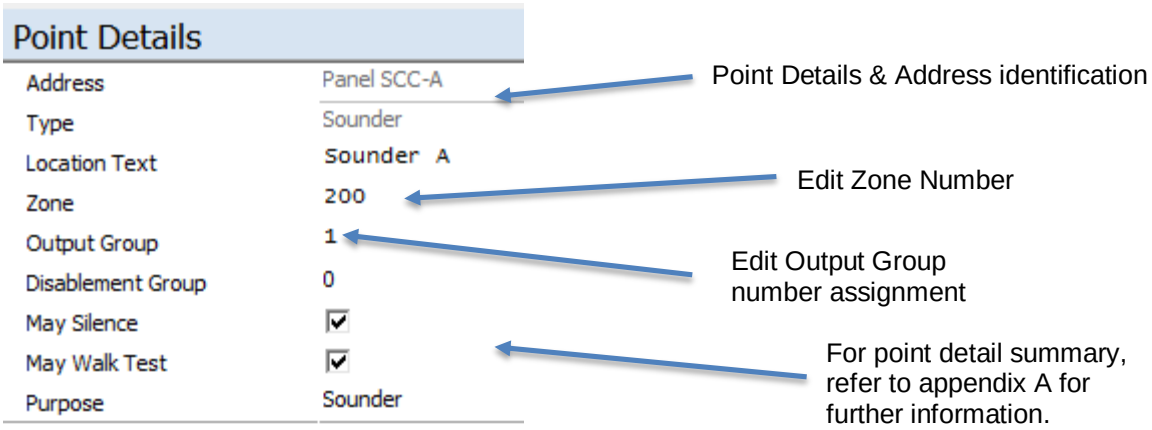
This option allows the user to configure the control panel on board sounder circuits, switch inputs and programmable relays. Detailed point information can be view/edited in the bottom left corner of the main screen. The number of items shown in the 'Detail Inspector' will change according to the type of the current selection. So the user will only see items which can be changed

4.2.1 Sounder Circuits

This option allows the user to configure the control panels on board sounder output circuits. Select the required circuit in the device information section



The parameters of this circuit can now be changed in the point details section.

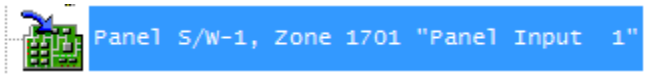


Each Sounder circuit will default to Output Group 1,

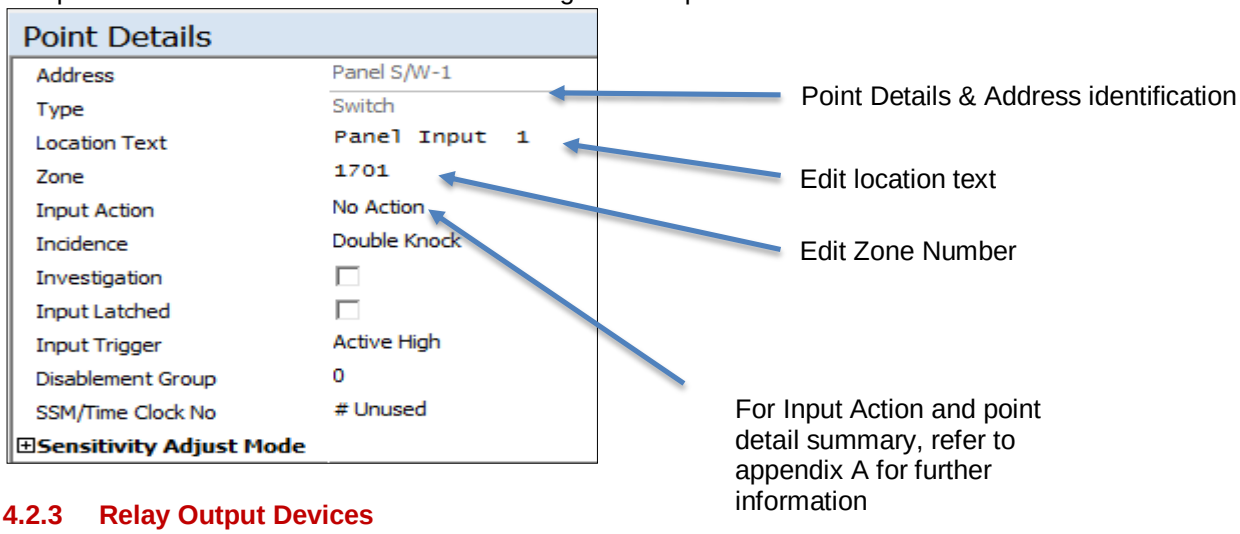
4.2.2 Panel Switch Input Devices

This option allows the user to configure the panels on board switch inputs.

Select the required switch in the device information section.

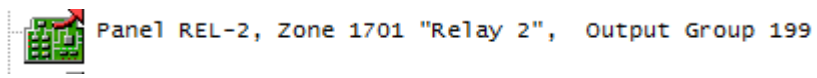


The parameters of this switch can now be changed in the point details section.

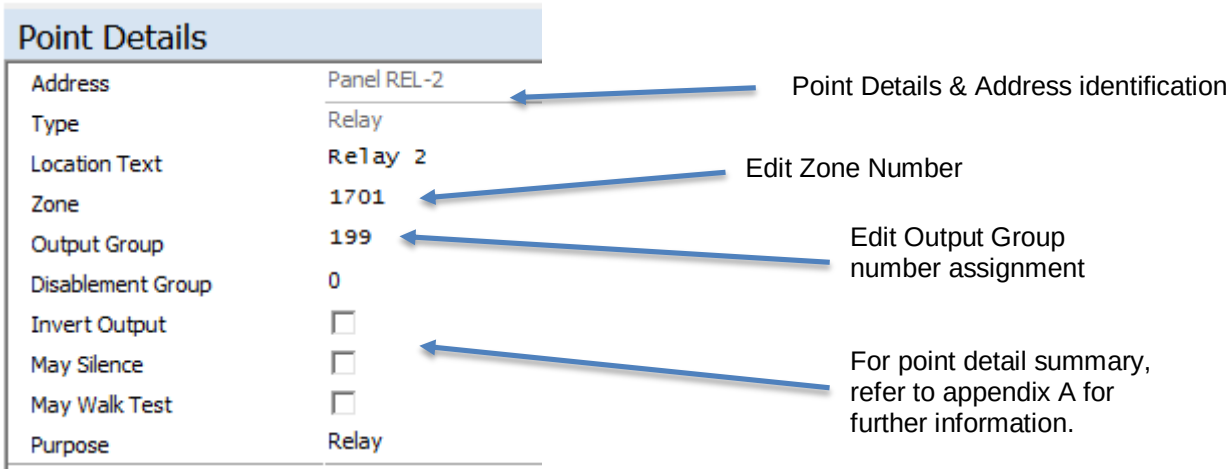


4.2.3 Relay Output Devices

This option allows the user to configure the panels on board relays. Select the required relay switch in the device information section.



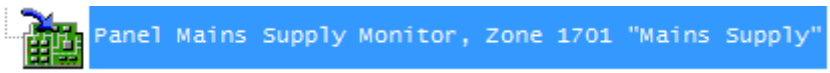
The parameters of this relay can now be changed in the point details section.



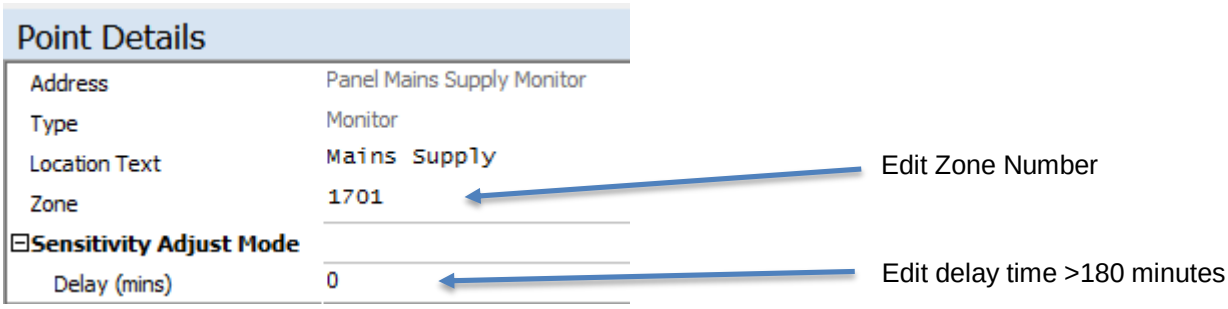
4.2.4 Panel Mains Supply Monitor

This option allows the user to configure the Panel Mains Supply Monitor.This option allows the user to adjust the sensitivity of the panel's mains supply monitoring.

Select the mains supply monitor in the device information section.



The parameters of mains supply monitor can now be changed in the point details section.

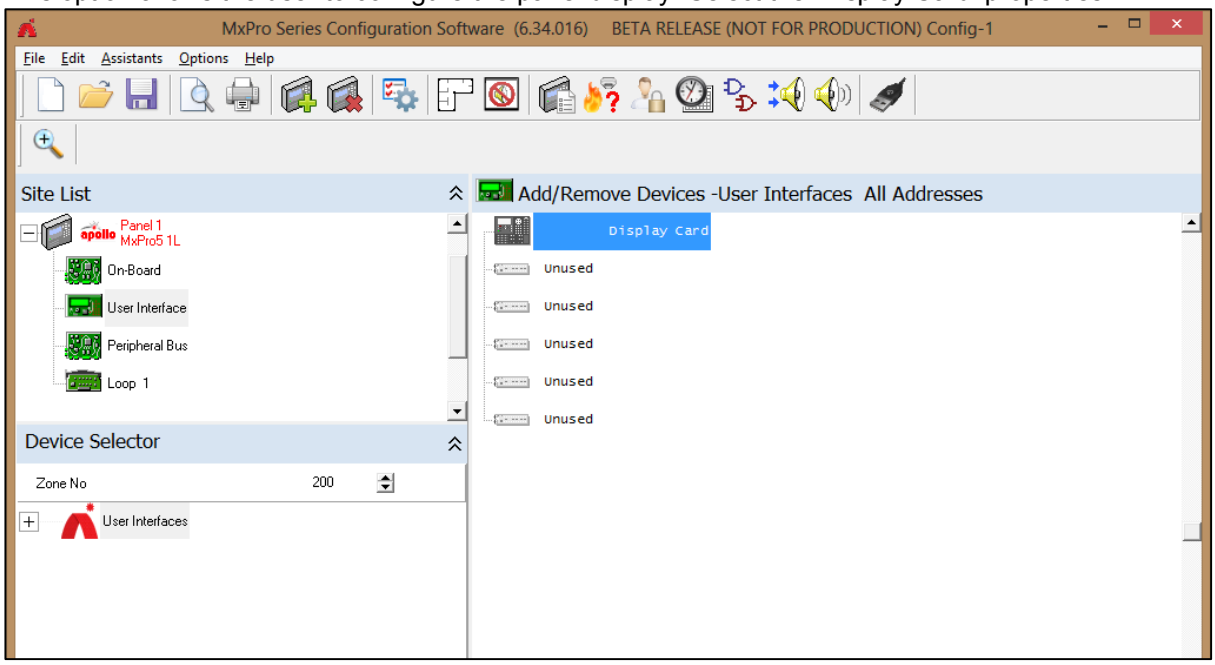


Sensitivity Adjust Mode will permit a delay of fault notification up 180 minutes.

4.3 User Interface

4.3.1 Display Card

This option allows the user to configure the panel display. Select the ‘Display Card’ properties



By clicking on the  ‘show details’ icon a virtual display will be presented for configuration.

4.3.2 Virtual Display

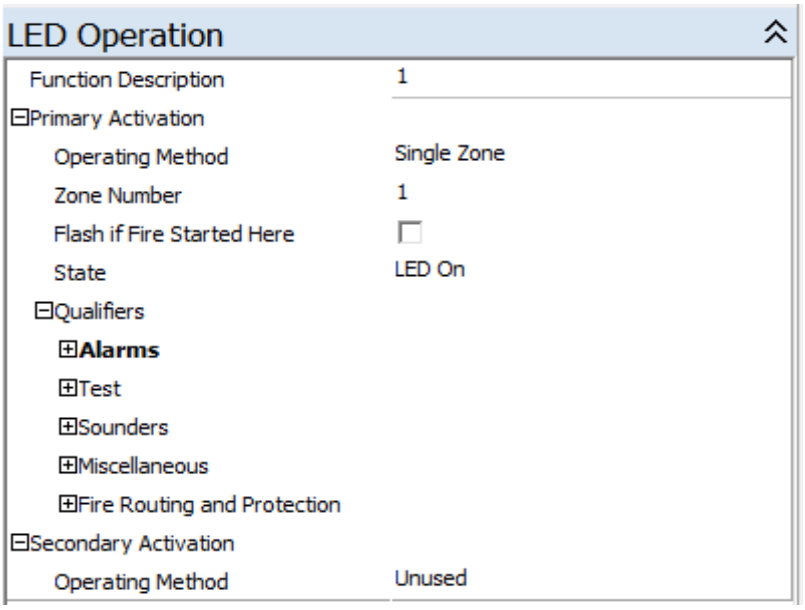
This option allows the user to configure the programming of the programmable push buttons and LED’s, function LED’s and the on board 20 Zone LED card.



Each programmable button or LED can be selected here and programmed with an action or operation in the point details section.

4.3.3 LED Indication

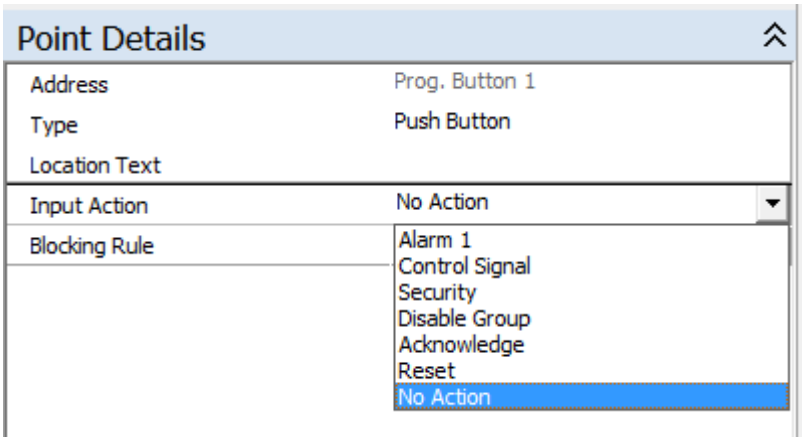
These LED’s  will operate as default upon their resident zone going into Fire. The LED Operation option allows further programming options.



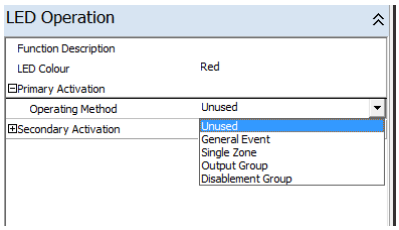
LED's can be associated with zones, given various qualifiers and also a Secondary Activation option. Refer to Appendix A for Output Qualifiers

4.3.4 Programmable Push Buttons

This option allows the user to configure the panels 4 programmable push buttons  . The button can be assigned text and an input action in the point details section once the button has been selected by clicking on the button itself.



For details an all input actions refer to appendix A in this manual.

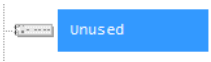


The LED's  will default to unused. In order for the LED to operate a Primary activation is required by either of the following actions.

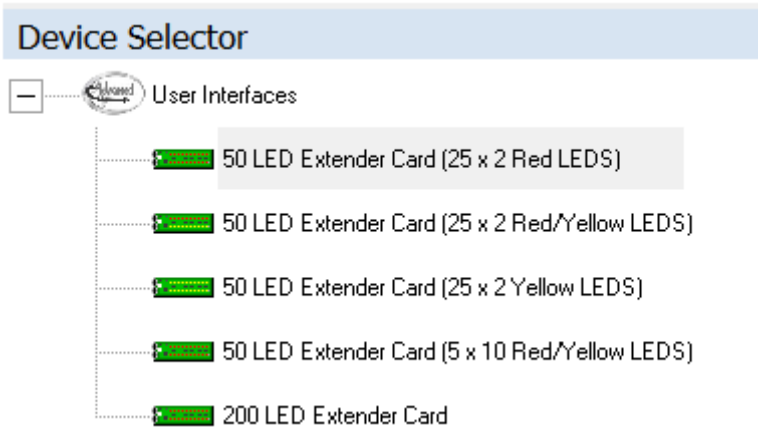
a) General Event
b) Single Zone
c) Output Group
d) Disablement Group

A secondary activation method can also be assigned to the same LED.

4.3.5 LED Expansion Cards

This option allows the user to fit further zonal indication if needed. The cards are added by selecting an unused slot 

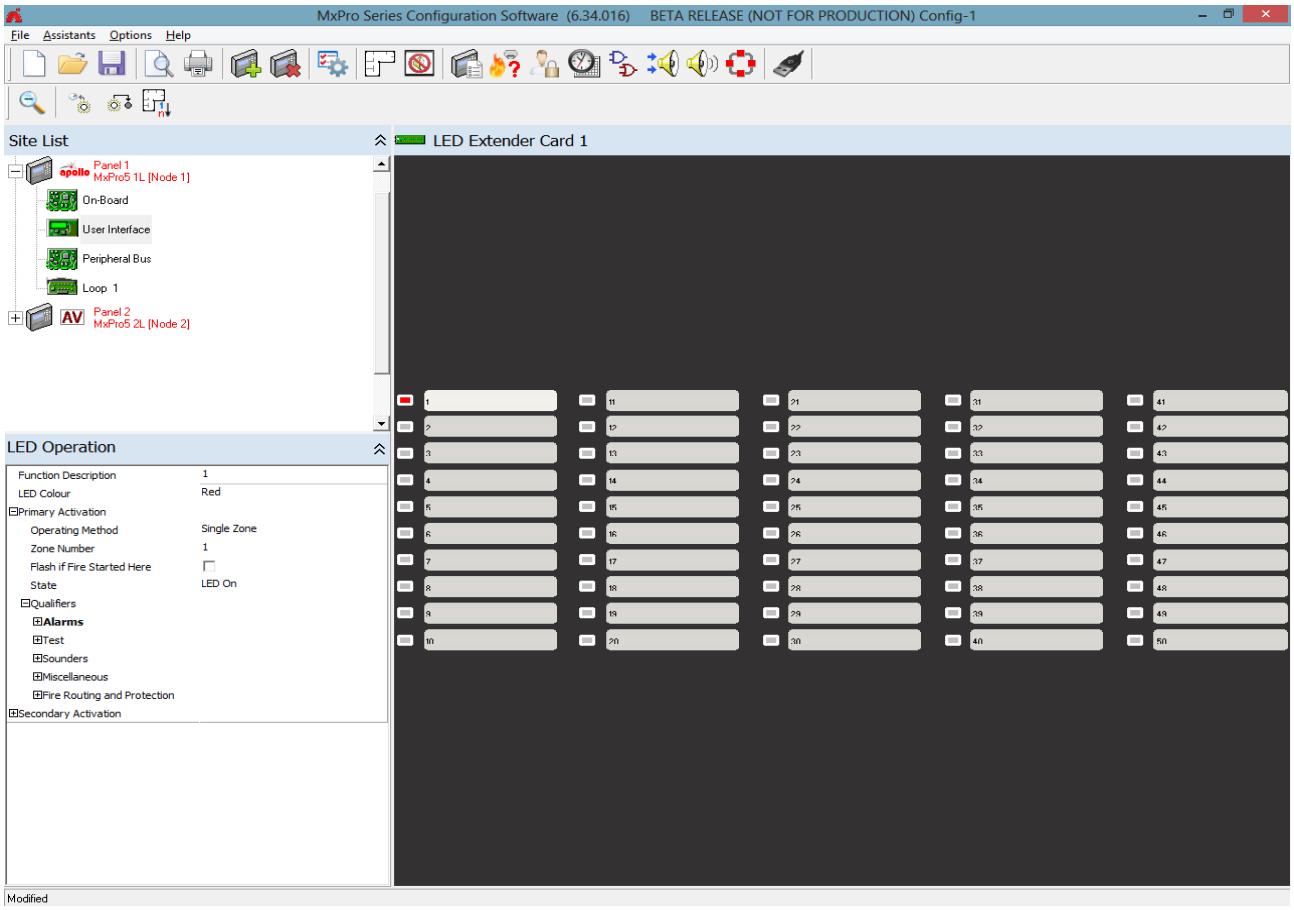
then selecting which card you wish to add from the Device Selector option.



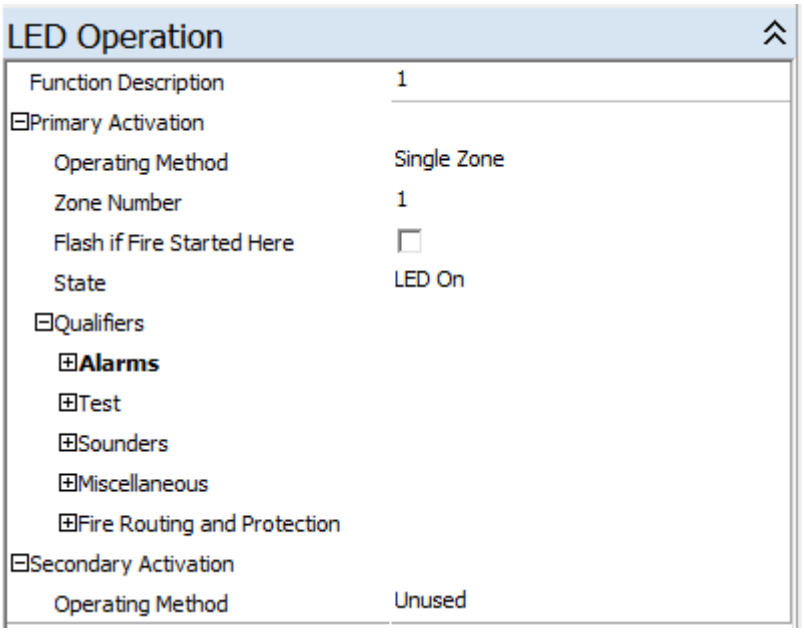
The cards are then added by clicking on the  add device button.

Each LED Card be programmed can be programmed by Primary and Secondary Activation.

Example Screen Shot below



These LED's  will operate as default upon their resident zone going into Fire. The LED Operation option allows further programming options.



LED's can be associated with zones, given various qualifiers and also a Secondary Activation option. Refer to Appendix A for Output Qualifiers.

4.4 Peripheral Bus (P-Bus) Interface

This option allows the user to add/remove devices from the selected RS485 P-bus circuit.Select the required product and loop circuit in the site list, then click the 'Add/Remove Loop Device' button.

4.4.1 Device Selection and Addition

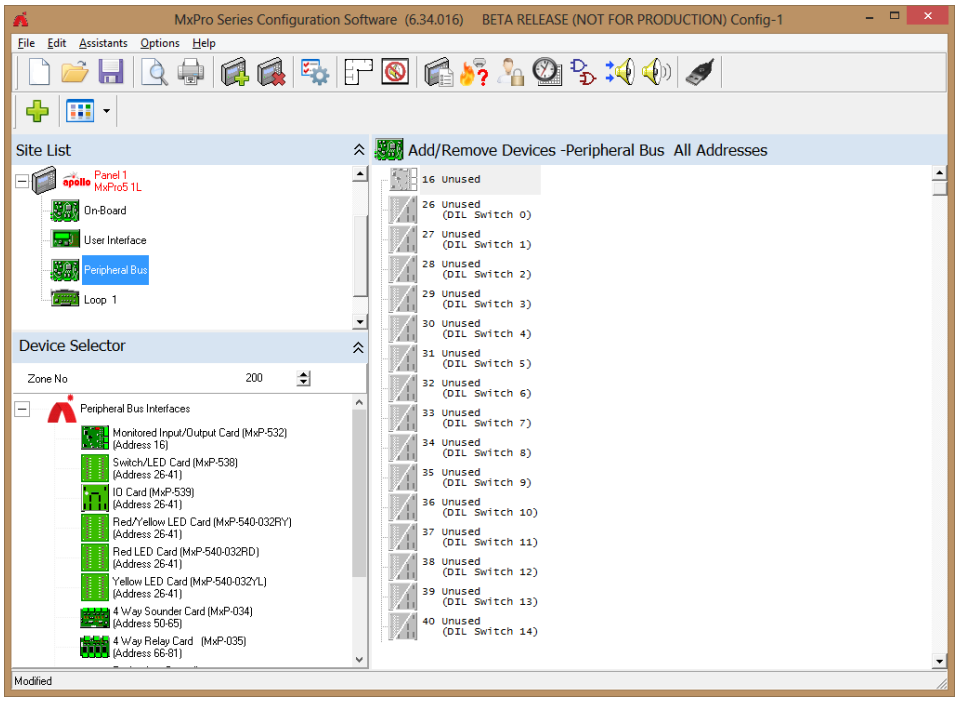
The screen should now appear as shown below. The current work area is now the selected peripheral bus circuit. All of the device addresses available (for the selected product) are shown.

Select the required device from the 'Device Selector' in the bottom left corner of the screen

Click on an unused address and then press the + button.

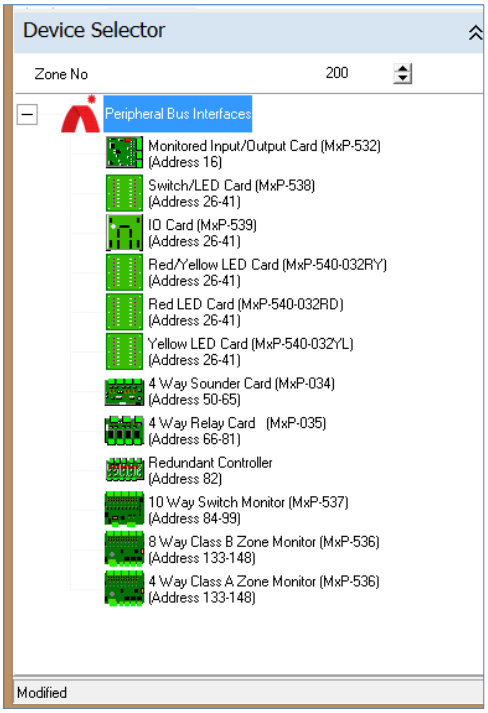
Alternatively, right click on the required device address and select 'Add Device' from the pop up menu.

To Add devices to multiple address hold down the 'CTRL' key while clicking on the required addresses. Right click and select 'Add Device' from the pop up menu. Select the required device from the list as before.



'Double clicking' on an address will add the current selection to the selected address.

4.4.2 Device selector



The device picker lets the user choose a loop device to add from those available under the selected loop protocol.

Devices are grouped by category, e.g. fire devices, ancillary, etc.

Click on the  and  tags to expand or collapse the category view.

Use the scroll bar on the right hand side to view further devices that are currently hidden at the top or the bottom of the window.

Click on the required device to highlight it. For example, the Monitored I/O is selected in the picture opposite.

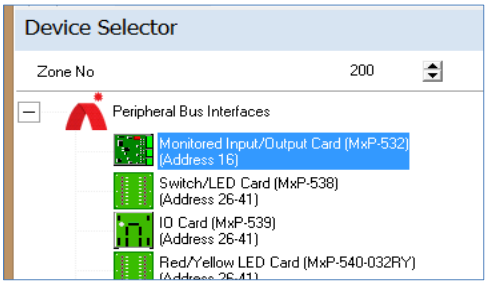
If required, adjust the zone number in which this device is to be located. (Note: This can also be adjusted later).

Press the OK button or 'Double click' on the device icon to confirm the selection and add the device at the chosen address.

The last device selected from the 'Device Selector' becomes the current device, this is highlighted in the device selector.

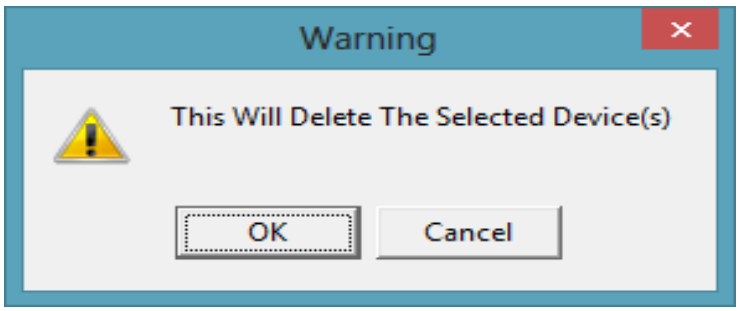
The current device can now be easily added to further addresses. To do this, ensure the address required is visible on the screen and then Double Click anywhere in the device row.

4.4.3 Delete a Device



To delete a peripheral bus device, click on the address of the device and then press the 'Delete' key on the PC keyboard or click on the  button.

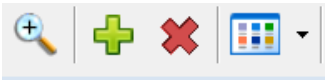
The user must then confirm this action on the message dialog before the device will be deleted.



4.5 Peripheral Bus - View / Edit Devices

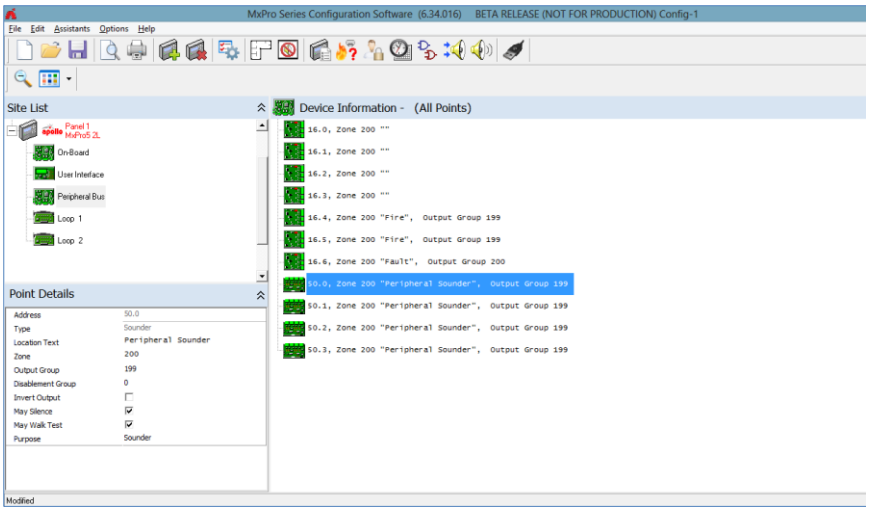


This option allows the detailed configuration of peripheral devices. Select the required product and peripheral bus circuit in the site list, then click the 'Show details' icon/button



4.5.1 Point Information

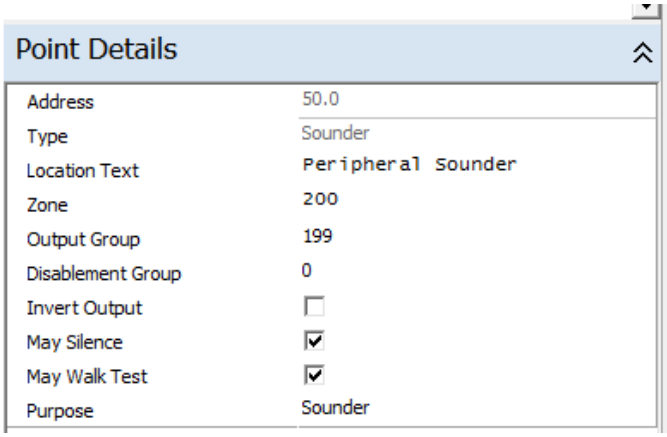
A typical display is shown in the picture opposite. Notice that in the address field, each address has a '.' symbol followed by a number. This denotes the sub-address.
Some devices have multiple input and outputs circuits. Each circuit element is given an individually programmable sub-address. For example, the sounder circuit device assigned to address location 50, will be presented with the addresses 50.0, 50.1,50.2 & 50.3.



4.5.1.1 Detailed Information

Detailed point information can be view/edited in the bottom left corner of the main screen.

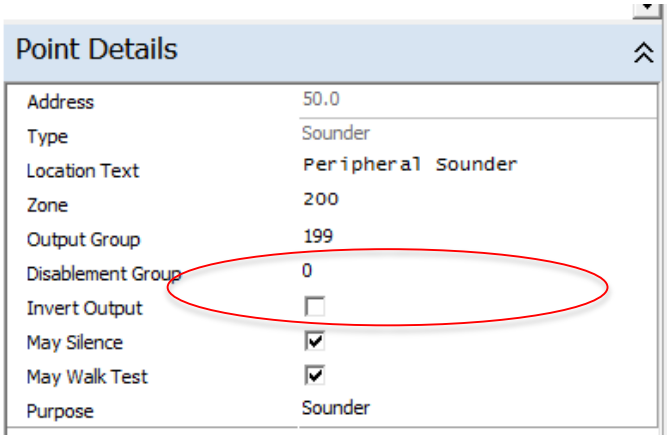
The number of items shown in the 'Detail Inspector' will change according to the type of the current selection. So the user will only see items which can be changed.



4.5.1.2 Location Text

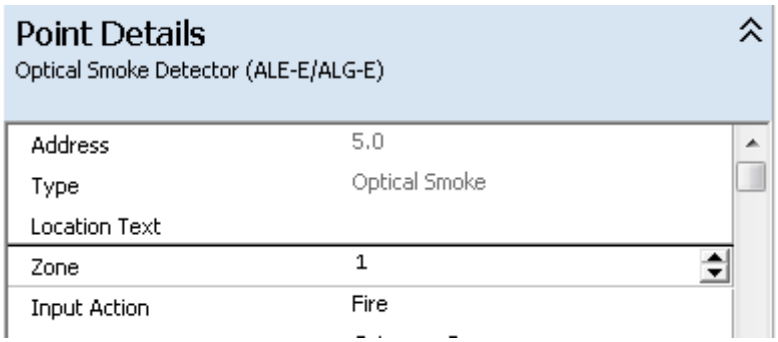
To change the text assigned to a device point click within the text field to place the cursor and then delete or insert characters as required.

The text may be up to 26 characters in length including spaces. To view the remaining devices use the scroll bar to the right of the display area.



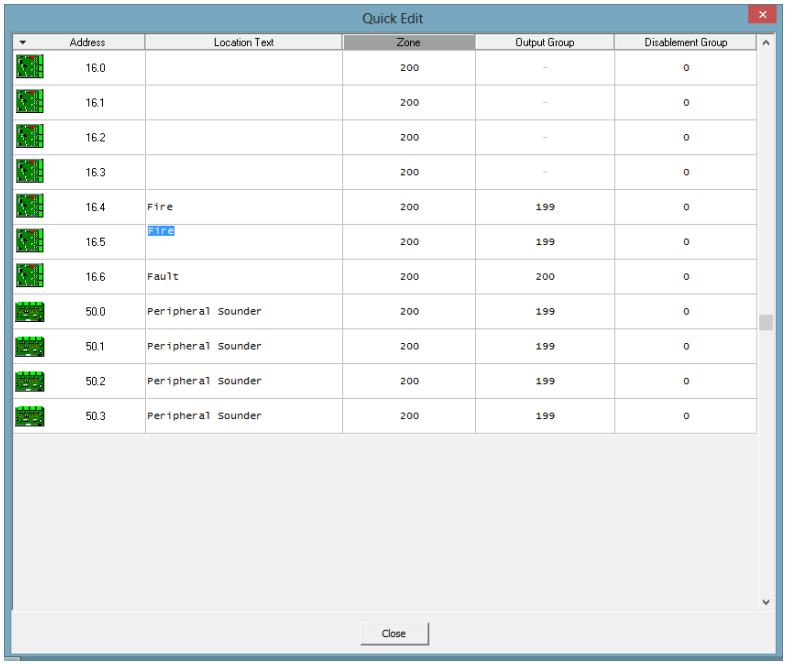
4.5.1.3 Zone Number

To change the zone number, click within the zone number field to highlight the current value. Overwrite with the required zone number using the number keys or the up/down arrows.



To assign multiple devices to the same zone, hold down 'CTRL' whilst selecting the devices. Then simply 'right click' with the mouse, select 'Assign To Same Zone' from the pop up menu, and set the required zone number.

Alternatively to quickly change the location text and zone number on a number of devices. Right click and select the 'quick edit' item enables users to quickly enter zone and location text for points on the system. To select this option right click and select ‘quick edit’.



4.5.2 Input Devices

4.5.2.1 Input Action

This parameter determines the type of action that will be performed when the input becomes active. The following actions are possible:

Fire; Pre-Alarm; Fault; Security; Record; Alarm1; Alarm2; Alarm3; No Action; Silence, Re-Sound, Mute, Key Lock, Disable Group, Control Signal, Fire Evacuate, Reset, Acknowledge & LED Test.

Smoke and Temperature detectors can only be assigned to Fire input action.

Action	Description
Fire Signal[1]	A Fire Alarm Condition will be generated whenever the input is active.
Pre-Alarm	A Pre-Alarm Condition will be generated whenever the input is active.
Fault Signal	A Fault Condition will be generated whenever the input is active.
Security	A Security Alert Condition will be generated whenever the input is active.
Record	A Record Entry will be stored in the Log whenever the input is active. This will be hidden from the panel status display.
Create Alarm 1	An “Alarm 1” condition will be generated whenever this input is active.
Create Alarm 2	An “Alarm 2” condition will be generated whenever this input is active.
Create Alarm 3	An “Alarm 3” condition will be generated whenever this input is active.
Key Lock	Enables / Inhibits front panel controls (Disable, Mute, Reset etc.)
-	No Action is assigned to the input.
Control Signal	Allows control of Outputs without displaying “Fault” or “Fire” or sounding buzzer
Acknowledge	Activation of the input acknowledges a Stage 1 Investigation Delay and invokes the Stage 2 Timer
LED Test	Activation invokes a test of the panel LED Indicators.
Disable Group	Control a group of devices to allow rapid Isolation
Fire Routing Confirmed	An activation input to confirm the signal has been received by the Fire Routing Equipment.
Fire Protection Confirmed	An activation input to confirm the signal has been received by the Fire Protection Equipment.
Door Open	Logs an event on door being opened
Tamper	Generates a tamper fault
Reset	Perform a system reset
Mute	Allows the panel buzzer to be silenced
Resound	Re-activate any silenced sounders or outputs
Silence	Silence any 'Silenceable' output
Fire Evacuate	A non-latching fire alarm input



The Acknowledge, LED Test, Reset, Mute and Silence / Resound options operate directly on control panels. These should only be used in special circumstances that demand remote control facilities.



Set any unused inputs on multiple input modules/devices to "No Action"

[1] Fire Alarm Conditions are latched. By default, all other conditions are non-latching. The action for smoke and certain other detectors is always fire and cannot be changed.

4.5.2.2 SSM / Clock Number

Up to ten* different time schedules can be entered in the panel defining day and night periods for every day of the week. The number entered in this field references one of these time schedules and can be in the range 1 to 10*. If a time schedule is not to be used for this device, select the UNUSED option.
*Mx4100 has three SSM Clocks, Mx4200 & Mx4400 and all MxPro5 has ten SSM Clocks.

4.5.2.3 Sensitivity Adjust Mode / Special Sensitivity Mode Options (SAM/SSM)

These options determine the response of the panel to signal values from input devices. Many options are available for switch inputs (low, high etc.) A 'Delay Time' option is available for all switch type inputs.

SAM settings are applied to the input device when the time clock (if selected) is in its OFF period.

SSM settings are applied to the input device when the specified time clock is in its ON period.
The SAM/SSM button is enabled when an SSM/Clock is selected. This option allows the setting of the sensitivity values for both SAM & SSM mode. Click the SAM / SSM button to switch between the SAM and SSM values.



Any changes made to the SSM settings are also applied to ALL devices with the same measurement type for the same SSM / Clock Number.

4.5.2.4 Delay Time

The value in this field defines the alarm verification delay. The normal value and the allowed range depend on device type and are as follows.

Mxp-538: 16/48 Way I/O	No delay allowed
Mxp-537: 10 Way Input Card	Range 1 999 seconds, Normal = 0 seconds.
Mxp-536: 8 Way Zone Card	Range 0 30 seconds, Normal = 0 seconds.
Other Inputs	Range 0 999 seconds, Normal = 0 seconds.



Take care when introducing delays. Call-Point type inputs used to monitor a sprinkler may need a delay of 20 seconds but a break glass Call-Points should NOT be delayed (when using zone monitor circuit).

4.5.2.5 Allow Investigation

If the parameter is ticked, a high alarm from this device will invoke the Stage 1 timer and delay the operation of any outputs whilst the cause is investigated.
If the parameter is not ticked, a high alarm will cause an immediate fire alarm condition and the panel will turn on the outputs as programmed.
Normally, Smoke and Temperature detectors are set to allow investigation whilst Manual Call Points are set to immediately generate a confirmed fire alarm condition.

4.5.2.6 Trigger Mode

This parameter determines how the panel will respond to the signal from a non-analogue input device. Options are Active Low or Active High. The normal setting is Active High.
For example, an active low input effectively inverts the input to make a fault input activate when a closed input is broken.

4.5.2.7 Input Latched

This parameter determines whether the input is latched or unlatched by the panel. If the signal is latched, then a reset must be performed to clear the condition, even if the condition is no longer in existence.
If the signal is unlatched, then as soon as the input condition is no longer in existence the panel will automatically clear its warning. Fire Inputs are always latched.

4.5.2.8 Disablement Group

A group disablement (activated by an input whose action has been set to 'Disable Group') will apply a disablement to all devices assigned with the same disablement group number. A disabled input will cause the control panel to ignore its input signal and fault status. This parameter determines to which disablement group a device belongs.

4.5.2.9 Incidence

This input parameter can affect outputs programmed to operate on double knock zonal fire. The available selections are 'Double Knock' and 'Single' incidence.
Selecting 'Double Knock' causes the control panel to behave as if two devices in the same zone had been activated when the input goes into alarm. Any outputs programmed for zonal double-knock fire (and whose zone range includes this input) will be activated when this input goes into fire.

4.5.2.10 Category A

Selecting this option assigns the device to 'Fire Category A' for use with cause & effect O/P programming. As default MCP's are assigned to this category.

4.5.2.11 Category B

Selecting this option assigns the device to 'Fire Category B' for use with cause & effect O/P programming. As default ALL Fire input devices other than MCP's are assigned to this category.

4.5.3 Output Devices

4.5.3.1 Can Silence

This parameter determines whether the output is turned off / on when the Silence / Resound button is pressed on the panel.By default, this parameter is checked for sounders and un-checked for relays.

4.5.3.2 Inverted Output

This parameter determines if an output is normally on and turns off, or is normally off and turns on (default value), when a qualifying condition is present.

4.5.3.3 Allow Walk Test

This parameter determines whether the output turns on when a walk test with 'ring the bells' option enabled. If the parameter is enabled then the output will turn on if the 'ring bells option' is chosen. If the parameter is turned off, then the output will never turn on when a walk test alarm is generated. By default, sounders may turn on during walk test mode whilst relays do not.

4.5.3.4 Allow Investigation Delays

Check this parameter to allow the output to be delayed by the stage 1/2 investigation delays.
Un-check this parameter for the output to operate immediately as programmed.

4.5.3.5 Disablement Group

A group disablement (activated by an input whose action has been set to 'Disable Group') will apply a disablement to all devices assigned with the same disablement group number. Any disabled output will return to its non-activated state and the control panel will ignore its fault status. This parameter determines the disablement group number to which the device belongs.

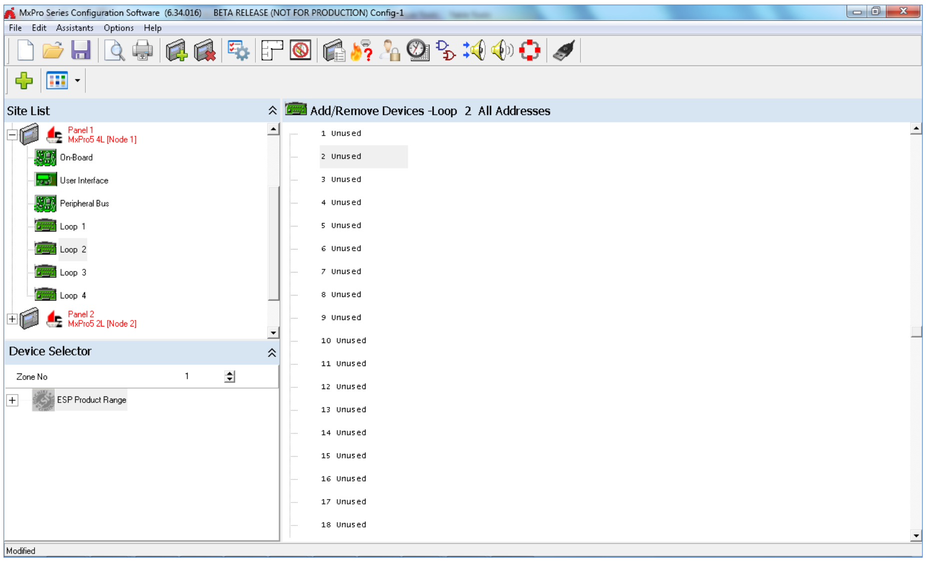
4.6 Loop -Adding/Removing Devices



This option allows the user to add/remove devices from the selected loop circuit.
Select the required product and loop circuit in the site list, then click the 'Add/Remove Loop Device' button.

4.6.1 Device Selection and Addition

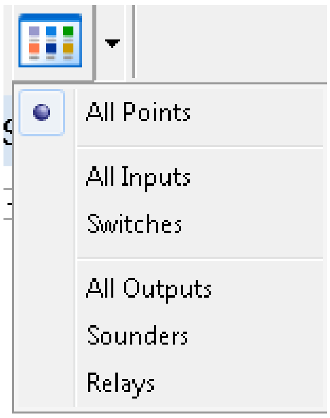
The screen should now appear as shown opposite. The current work area is now the selected loop circuit. All of the device addresses available (for the selected protocol) are shown.
Select the required device from the 'Device Selector' in the bottom left corner of the screen



Click on an unused address and then press the  button.
Alternatively, right click on the required device address and select 'Add Device' from the pop up menu.

To Add devices to multiple address hold down the 'CTRL' key while clicking on the required addresses. Right click and select 'Add Device' from the pop up menu. Select the required device from the list as before.

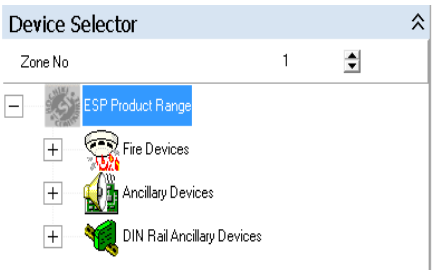
Note 'Double clicking' on an address will add the current selection to selected address



Device view filter
Each time the button is pressed the filter is toggled as follows :
➔ All addresses ➔ Used addresses ➔ Unused addresses ➔
↑ ↓
←←←←←←←←←←←←←←←←←←←←←←←

Alternatively pressing the arrow to expand the list allows selection of the required filter.

4.6.2 Device selector

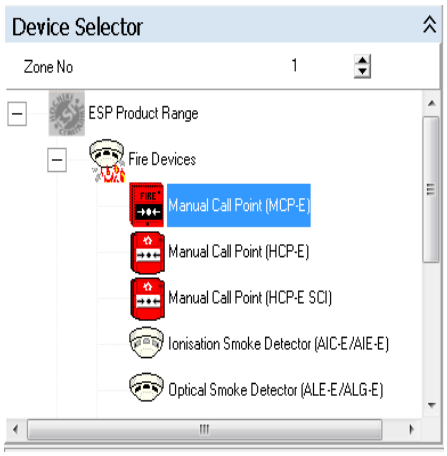


The device picker lets the user choose a loop device to add from those available under the selected loop protocol. Devices are grouped by category, e.g. fire devices, ancillary, etc.

Click on the  and  tags to expand or collapse the category view. Use the scroll bar on the right hand side to view further devices that are currently hidden at the top or the bottom of the window.

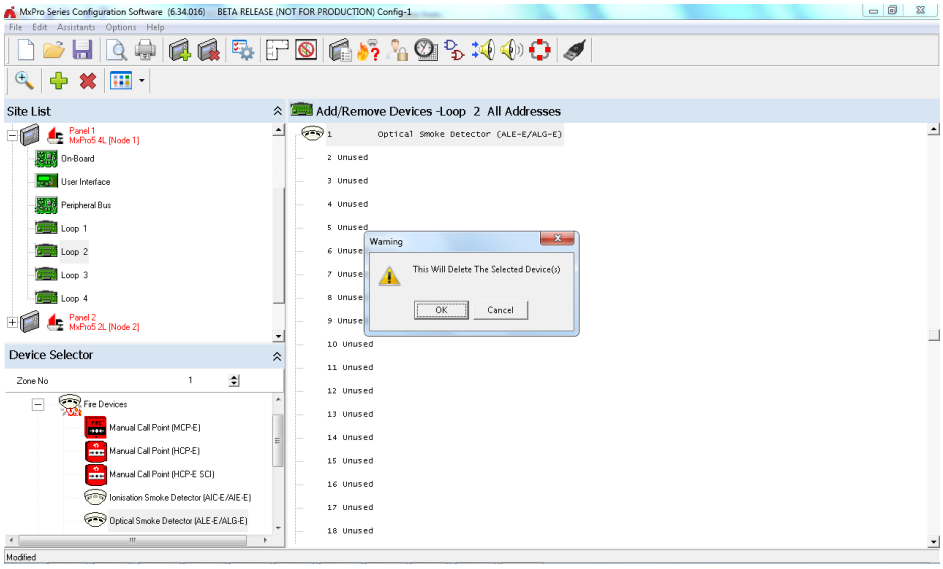
Click on the required device to highlight it. For example, the Optical Smoke is selected in the picture opposite.

If required, adjust the zone number in which this device is to be located. (Note: This can also be adjusted later).
Press the OK button or 'Double click' on the device icon to confirm the selection and add the device at the chosen address.



4.6.3 Change/Delete Loop Device

The last device selected from the 'Device Selector' becomes the current device, this is highlighted in the device selector. The current device can now be easily added to further addresses. To do this, ensure the address required is visible on the screen and then Double Click anywhere in the device row.



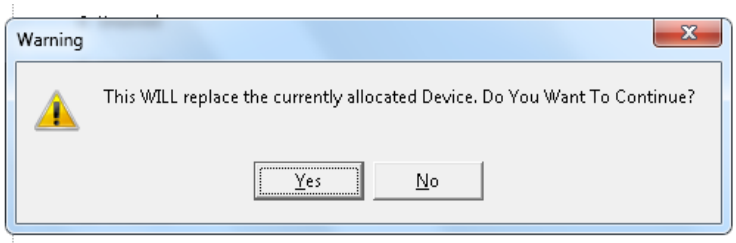
Delete Devices

To delete a loop device, click on the address of the device and then press the 'Delete' key on the PC keyboard or click on the  button.
The user must then confirm this action on the message dialog before the device will be deleted.

Change Devices

If a device already exists at a selected address and the  button is pressed, or if the address is double clicked, a pop up window will be shown to confirm that the device should be changed. To confirm the change press YES.

Pressing the  button causes the 'Device Picker' to be displayed, whereas 'Double Clicking' on the address causes the device to be replaced by the 'Current Loop Device'



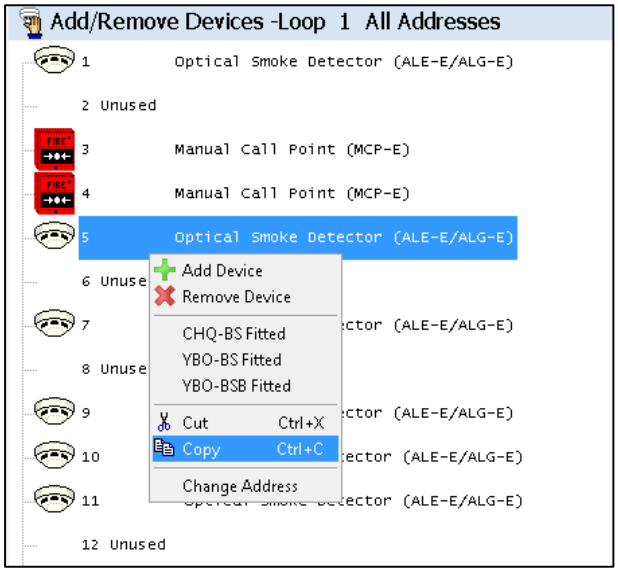
4.7 Loop - View / Edit Loop Devices

This option allows the detailed configuration of loop devices. Select the required product and loop circuit in the site list, then click the 'View/Edit Loop Device' button. Two levels of configuration detail are available to the user – basic and extended detail. To toggle between the two levels of detail, click on the 'Show/Hide Extended Point Information' button. This is the button at the extreme right hand side of the picture shown opposite.



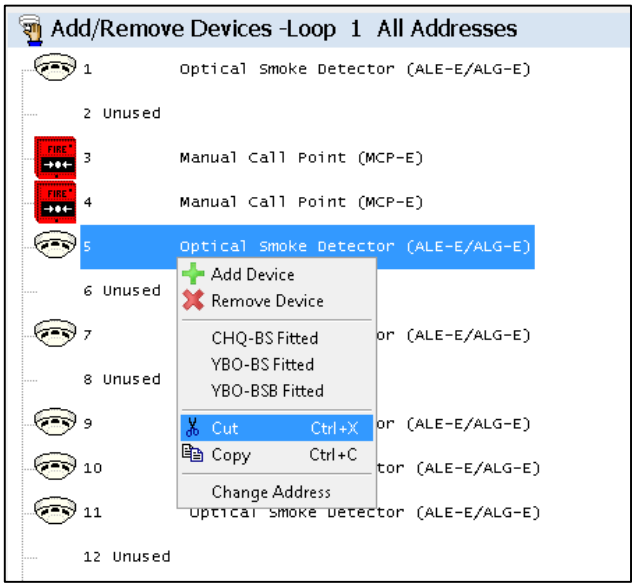
4.7.1 Copying Devices

To 'Copy' a device, first select the device from the list. To 'Copy' the device either:
Select Copy from the 'Edit' menu.
Right click & select Copy from the pop up menu
Press 'CTRL + C'
The screen shot opposite shows an example of copying a device.
To copy multiple devices hold down 'CTRL' whilst selecting the required devices.



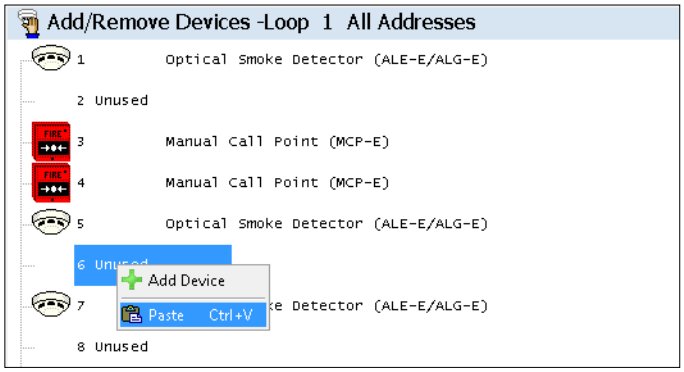
4.7.2 Cutting Devices

To 'Cut' a device, first select the device from the list. To 'Cut' the device either:
Select Cut from the 'Edit' menu.
Right click & select Cut from the pop up menu
Press 'CTRL + X'
The screen shot opposite shows an example of cutting a device.
Cutting is similar to copy except the original is removed prior to copying.
To cut multiple devices hold down 'CTRL' whilst selecting the required devices.



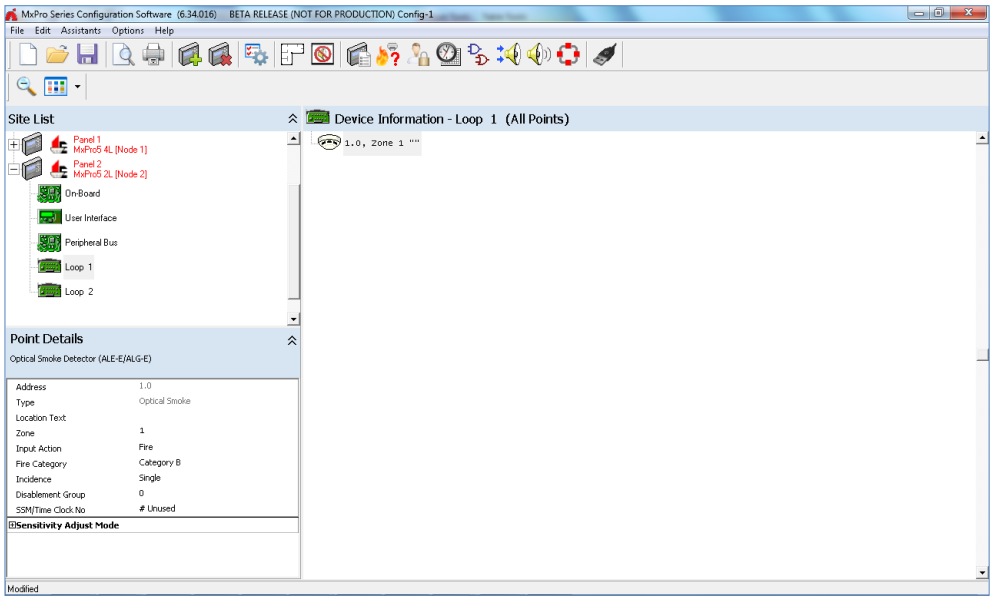
4.7.3 Pasting Devices

To 'Paste' a device, first select the desired address from the list. To 'Paste' the device either:
Select 'Paste' from the 'Edit' menu.
Right click & select 'Paste' from the pop up menu
Press 'CTRL + V'
The screen shot opposite shows an example of pasting a device.
To paste to multiple addresses, hold down 'CTRL' whilst selecting the addresses to paste to.



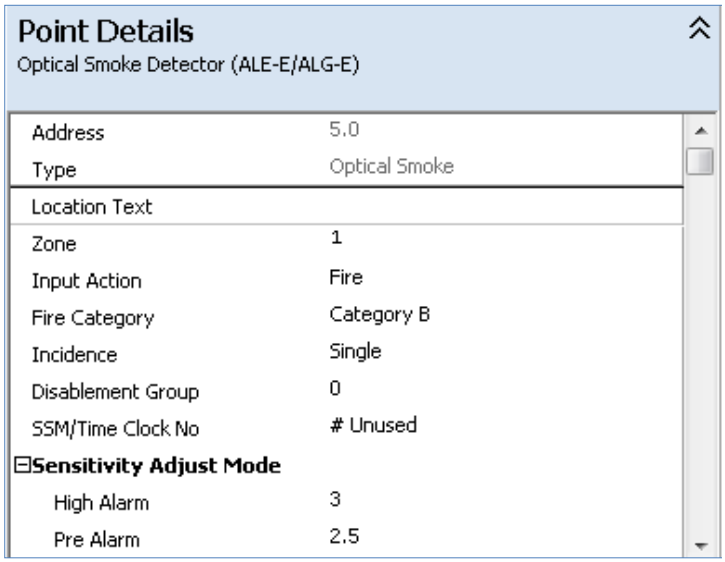
4.7.4 Point Information

A typical display is shown in the picture opposite. Notice that in the address field, each address has a '.' symbol followed by a number. This denotes the sub-address.
Some loop devices have multiple input and outputs circuits. Each circuit element is given an individually programmable sub-address. For example, the Hochiki dual switch device assigned to address location 10, will be presented with the addresses 10.0, 10.1 & 10.2.



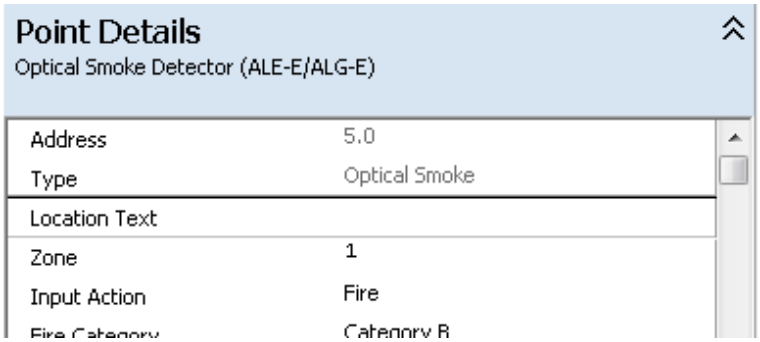
4.7.4.1 Detailed Information

Detailed point information can be view/edited in the bottom left corner of the main screen.
The number of items shown in the 'Detail Inspector' will change according to the type of the current selection. So the user will only see items which can be changed.



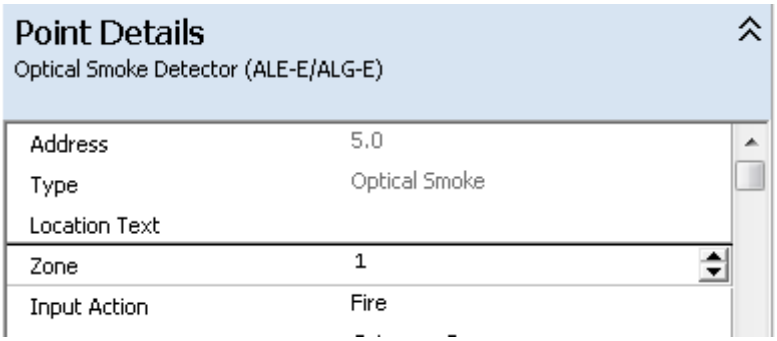
4.7.4.2 Location Text

To change the text assigned to a device point
click within the text field to place the cursor and then delete or insert characters as required. The text may be up to 26 characters in length including spaces. To view the remaining devices
use the scroll bar to the right of the display area.

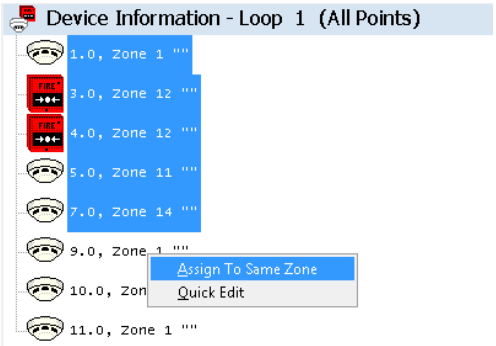


4.7.4.3 Zone Number

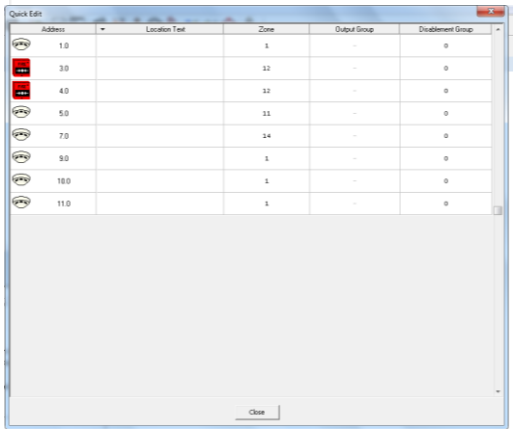
To change the zone number, click within the zone number field to highlight the current value. Overwrite with the required zone number using the number keys or the up/down arrows.



To assign multiple devices to the same zone, hold down 'CTRL' whilst selecting the devices. Then simply 'right click' with the mouse, select 'Assign To Same Zone' from the pop up menu, and set the required zone number.



Alternatively to quickly change the location text and zone number on a number of devices. Right click and select the 'quick edit' item enables users to quickly enter zone and location text for points on the system. To select this option right click and select ‘quick edit’.



4.7.5 Input Devices

4.7.5.1 Input Action

This parameter determines the type of action that will be performed when the input becomes active. The following actions are possible:

Action	Description
Fire Signal[2]	A Fire Alarm Condition will be generated whenever the input is active.
Pre-Alarm	A Pre-Alarm Condition will be generated whenever the input is active.
Fault Signal	A Fault Condition will be generated whenever the input is active.
Security	A Security Alert Condition will be generated whenever the input is active.
Record	A Record Entry will be stored in the Log whenever the input is active. This will be hidden from the panel status display.
Create Alarm 1	An “Alarm 1” condition will be generated whenever this input is active.
Create Alarm 2	An “Alarm 2” condition will be generated whenever this input is active.
Create Alarm 3	An “Alarm 3” condition will be generated whenever this input is active.
Key Lock	Enables / Inhibits front panel controls (Disable, Mute, Reset etc.)
-	No Action is assigned to the input.
Control Signal	Allows control of Outputs without displaying “Fault” or “Fire” or sounding buzzer
Acknowledge	Activation of the input acknowledges a Stage 1 Investigation Delay and invokes the Stage 2 Timer
LED Test	Activation invokes a test of the panel LED Indicators.
Disable Group	Control a group of devices to allow rapid Isolation
Fire Routing Confirmed	An activation input to confirm the signal has been received by the Fire Routing Equipment.
Fire Protection Confirmed	An activation input to confirm the signal has been received by the Fire Protection Equipment.
Door Open	Logs an event on door being opened
Tamper	Generates a tamper fault
Reset	Perform a system reset
Mute	Allows the panel buzzer to be silenced
Resound	Re-activate any silenced sounders or outputs
Silence	Silence any 'Silenceable' output
Fire Evacuate	A non-latching fire alarm input





The Acknowledge, LED Test, Reset, Mute and Silence / Resound options operate directly on control panels. These should only be used in special circumstances that demand remote control facilities.

Set any unused inputs on multiple input modules/devices to "No Action"

[2] Fire Alarm Conditions are latched. By default, all other conditions are non-latching. The action for smoke and certain other detectors is always fire and cannot be changed.

4.7.5.2 Flash LED on Poll

This parameter determines whether the LED for this device will flash when polled by the panel (if the device supports this option). If the device type does not support blinking of its LED then this field is shaded out and cannot be changed. This only applies if the general Blink LED option is set to 'Individual'. If the general Blink LED option is set to 'All' or 'None', then any settings made here have no effect.

4.7.5.3 SSM / Clock Number

Up to ten* different time schedules can be entered in the panel defining day and night periods for every day of the week. The number entered in this field references one of these time schedules and can be in the range 1 to 10*. If a time schedule is not to be used for this device, select the UNUSED option.
*Mx4100 has three SSM Clocks, Mx4200 & Mx4400 has ten SSM Clocks.

4.7.5.4 Sensitivity Adjust Mode / Special Sensitivity Mode Options (SAM/SSM)

These options determine the response of the panel to signal values from input devices. Many options are available for analogue devices (smoke, heat etc.) whereas only the 'Delay Time' option is available for call point or switch type inputs.
SAM settings are applied to the input device when the time clock (if selected) is in its OFF period.
SSM settings are applied to the input device when the specified time clock is in its ON period.
The SAM/SSM button is enabled when an SSM/Clock is selected. This option allows the setting of the sensitivity values for both SAM & SSM mode. Click the SAM / SSM button to switch between the SAM and SSM values.
For multi-sensor type devices, the SAM/SSM settings can be used to switch modes (e.g. smoke/heat).



Any changes made to the SSM settings are also applied to ALL devices with the same measurement type for the same SSM / Clock Number.

4.7.5.5 Alarm / Pre-Alarm

These values determine the analogue levels at which the panel will enter a fire alarm or pre-alarm condition. If the device is a Discovery device, then it is not possible to change the fire alarm level - change the sensitivity band (mode option) instead.

4.7.5.6 Minimum Value

This parameter determines the analogue value returned by the device below which the panel will enter a fault warning condition.

4.7.5.7 Mode

This parameter changes the operating mode that will be used by the device. Refer to manufacturers literature for information on the operational and sensitivity characteristics of the device for each mode/band.

4.7.5.8 Delay Time

The value in this field defines the alarm verification delay. The normal value and the allowed range depend on device type and are as follows.

Smoke / Temperature/ Ion	Range 1 10 seconds,	Normal = 5 seconds. (Apollo)
Smoke / Temperature/ Ion	Range 1 20 seconds,	Normal = 10 seconds. (Hochiki)
Call Points	Range 0 30 seconds,	Normal = 0 seconds.
Other Inputs	Range 0 999 seconds,	Normal = 0 seconds.



Take care when introducing delays. Call-Point type inputs used to monitor a sprinkler may need a delay of 20 seconds but a break glass Call-Points should NOT be delayed.

4.7.5.9 Allow Investigation

If the parameter is ticked, a high alarm from this device will invoke the Stage 1 timer and delay the operation of any outputs whilst the cause is investigated.
If the parameter is not ticked, a high alarm will cause an immediate fire alarm condition and the panel will turn on the outputs as programmed.
Normally, Smoke and Temperature detectors are set to allow investigation whilst Manual Call Points are set to immediately generate a confirmed fire alarm condition.

4.7.5.10 Trigger Mode

This parameter determines how the panel will respond to the signal from a non-analogue input device. Options are Active Low or Active High. The normal setting is Active High.
For example, an active low input effectively inverts the input to make a fault input activate when a closed input is broken.

4.7.5.11 Input Latched

This parameter determines whether the input is latched or unlatched by the panel. If the signal is latched, then a reset must be performed to clear the condition, even if the condition is no longer in existence.
If the signal is unlatched, then as soon as the input condition is no longer in existence the panel will automatically clear its warning. Fire Inputs are always latched.

4.7.5.12 Disablement Group

A group disablement (activated by an input whose action has been set to ‘Disable Group’) will apply a disablement to all devices assigned with the same disablement group number. A disabled input will cause the control panel to ignore its input signal and fault status.
This parameter determines to which disablement group a device belongs.

4.7.5.13 Incidence

This input parameter can affect outputs programmed to operate on double knock zonal fire. The available selections are 'Double Knock' and 'Single' incidence.
Selecting 'Double Knock' causes the control panel to behave as if two devices in the same zone had been activated when the input goes into alarm. Any outputs programmed for zonal double-knock fire (and whose zone range includes this input) will be activated when this input goes into fire.

4.7.5.14 Category A

Selecting this option assigns the device to ‘Fire Category A’ for use with cause & effect O/P programming. As default MCP’s are assigned to this category.

4.7.5.15 Category B

Selecting this option assigns the device to ‘Fire Category B’ for use with cause & effect O/P programming. As default ALL Fire input devices other than MCP’s are assigned to this category.

4.7.16 Confirmation Filter

This option is designed to assist in the elimination of false alarms. It has up to 3 options (depending on the point type). Not Required, 2 Detectors and Multi Sense. With the setting on not required the panel responds to the fire signals as normal. With 2 detectors selected, if the device generates a fire signal this will cause the panel to enter a 'confirmation period'. If another device enters a fire condition within the confirmation time then a fire condition is acknowledged by the panel. Otherwise the device generating the fire condition is automatically reset after the confirmation period time has elapsed. Th final option is only available on multi sensor devices. During the confirmation period the device will switch to an alternate mode to confirm the fire signal. i.e. the device will switch from smoke to heat mode. This option is enabled under the 'Panel Details' view.

4.7.6 Output Devices

4.7.6.1 Can Silence

This parameter determines whether the output is turned off / on when the Silence / Resound button is pressed on the panel. By default, this parameter is checked for sounders and un-checked for relays.

4.7.6.2 Inverted Output

This parameter determines if an output is normally on and turns off, or is normally off and turns on (default value), when a qualifying condition is present

4.7.6.3 Allow Walk Test

This parameter determines whether the output turns on when a walk test with ‘ring the bells’ option enabled. If the parameter is enabled then the output will turn on if the ‘ring bells option’ is chosen. If the parameter is turned off, then the output will never turn on when a walk test alarm is generated. By default, sounders may turn on during walk test mode whilst relays do not.

4.7.6.4 Allow Investigation Delays

Check this parameter to allow the output to be delayed by the stage 1/2 investigation delays. Un-check this parameter for the output to operate immediately as programmed.

4.7.6.5 Disablement Group

A group disablement (activated by an input whose action has been set to ‘Disable Group’) will apply a disablement to all devices assigned with the same disablement group number. Any disabled output will return to its non-activated state and the control panel will ignore its fault status. This parameter determines the disablement group number to which the device belongs.

4.7.6.6 Volume

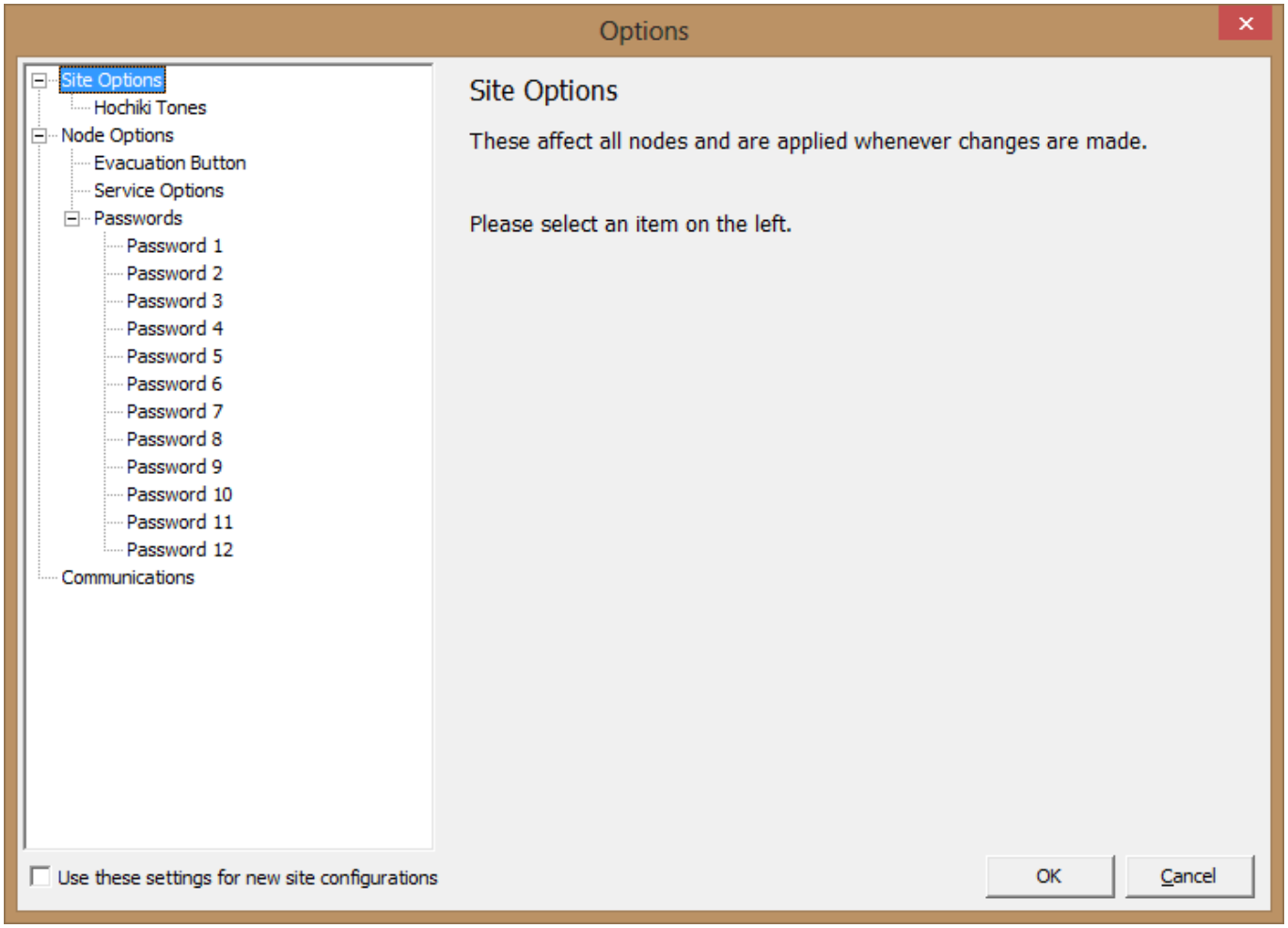
This option set the desired output level from the sounder, it is only available with the Hochiki loop powered sounders.

4.7.6.7 Activate On Attached Device In Alarm

This option is only available with Apollo ancillary base sounders or devices with 'Remote Indicators'. When the option is checked the base sounder/remote indicator will activate when the attached device goes into an alarm state.

4.8 Global Settings

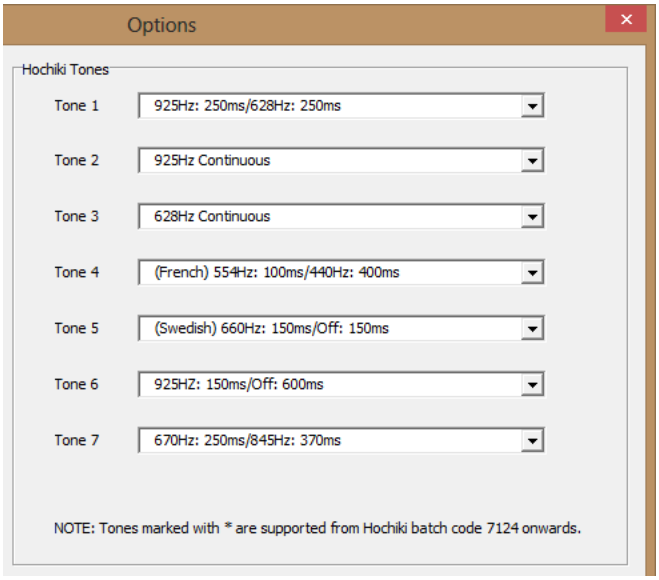
This option allows the user to configure the default global setting to control panel and other nodes configured within the ecxisting and and future designs. By selecting this option a screen prompt will be displayed with parameters to be configured as show below.



4.8.1 Site Options

Selecting the 'Site Options' tree provides a list of Hochiki tones to be used when programming the sounder outputs.

Up to 7 Tones can be selected from a possible 52 Tones via a drop down list.

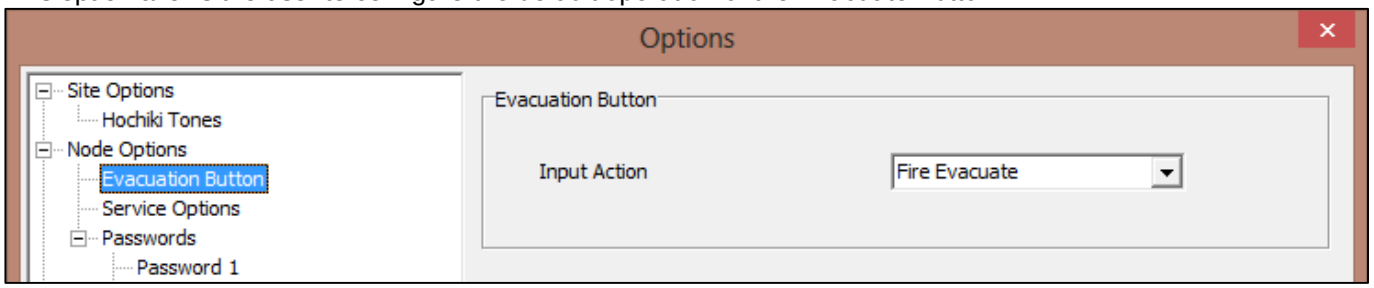


Hochiki sounder tone selection are supported from batch 7124 onwards.

4.8.2 Node options

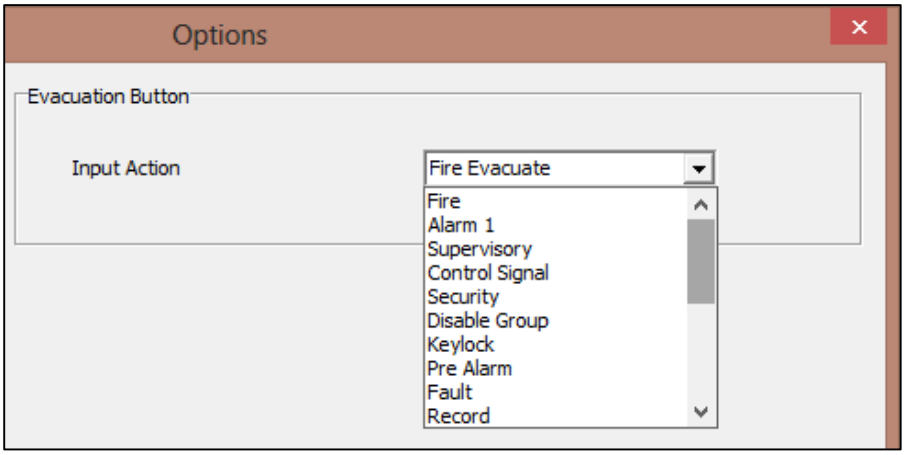
4.8.2.1 Evacuate Button

This option allows the user to configure the default operation of the Evacuate Button'.



This is intended only for fire system professionals to configure when authorized to do so by the local fire officer or on site responsible person.

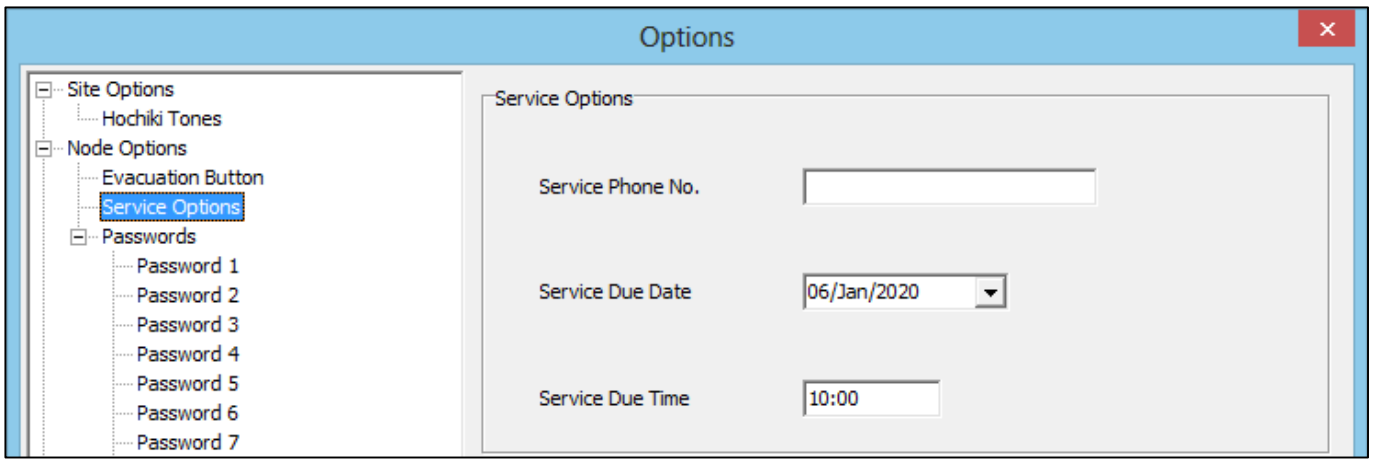
A list of all input action types can be selected from the drop down list as shown. For Input Action descriptions refer to Appendix A for further information.



4.8.2.2 Service Options

This option allows the user to configure the default Service details of the company responsible for service and maintenance of the fire alarm system.

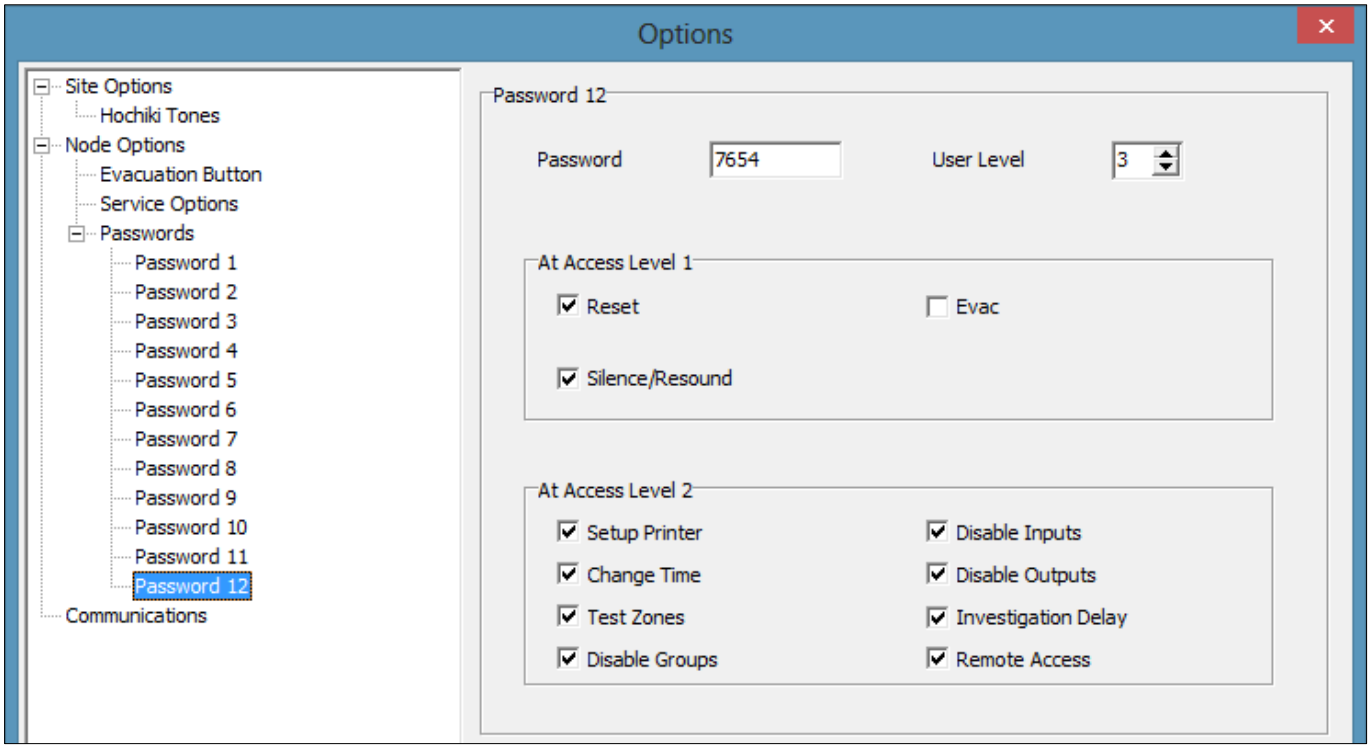
A telephone number, service due date and approximate time of service information to de display should be entered. During time of elapse, a panel fault will be generated until the service due date is renewed.



4.8.2.3 Passwords

This option allows the user to configure the user and engineer login password required for operation of the system.

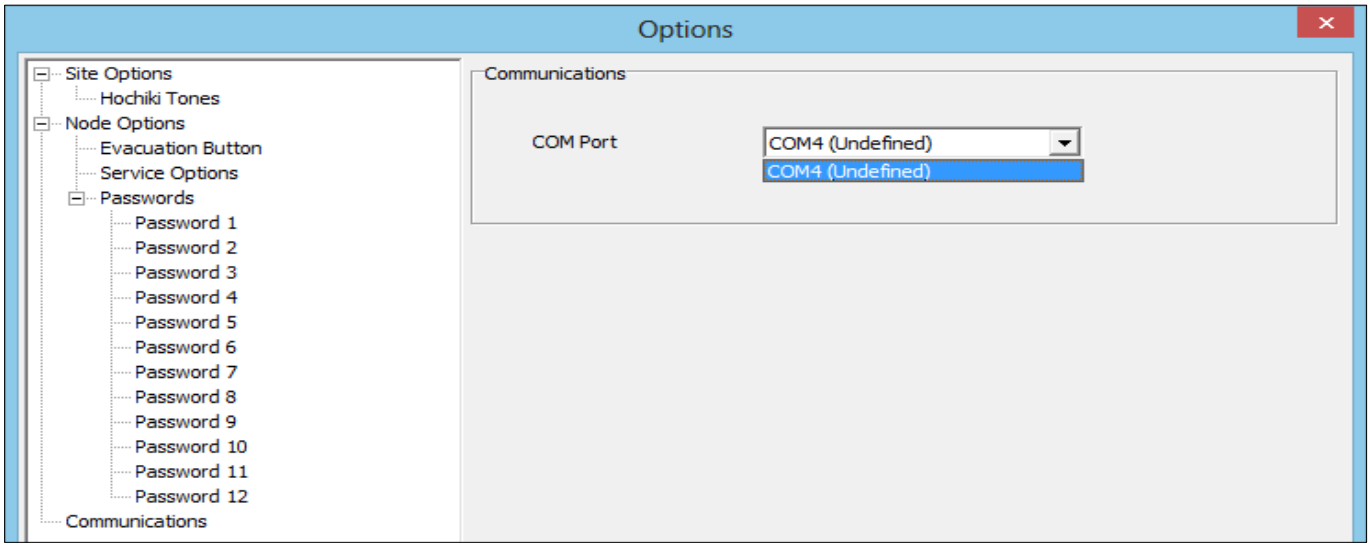
Level 1 and Level 2 parameters can be assign to 1 of 12 unique passwords in order to give or permit restriction of a certain level of functionality. By de selecting, the parameter will require a password for authorised use of the feature.



Refer to section 4.13 Passwords for further information.

4.8.3 Communications

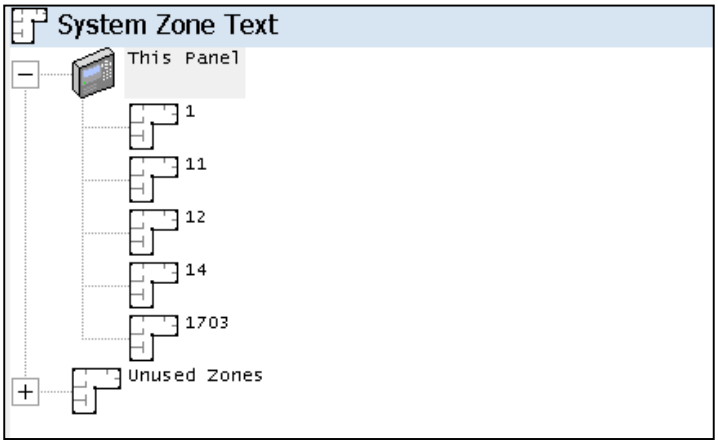
This option allows the user to configure the default communications port used on the PC from transferring data to and from the control and indicating equipment. The communications port will present a list of coms port available on the installed PC/Laptop.



4.9 Zone Text

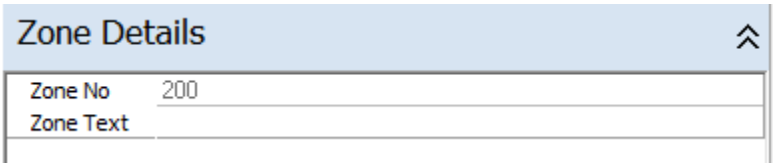


Click on the ‘View/Edit Zone Text’ button to select the zone text programming screen.



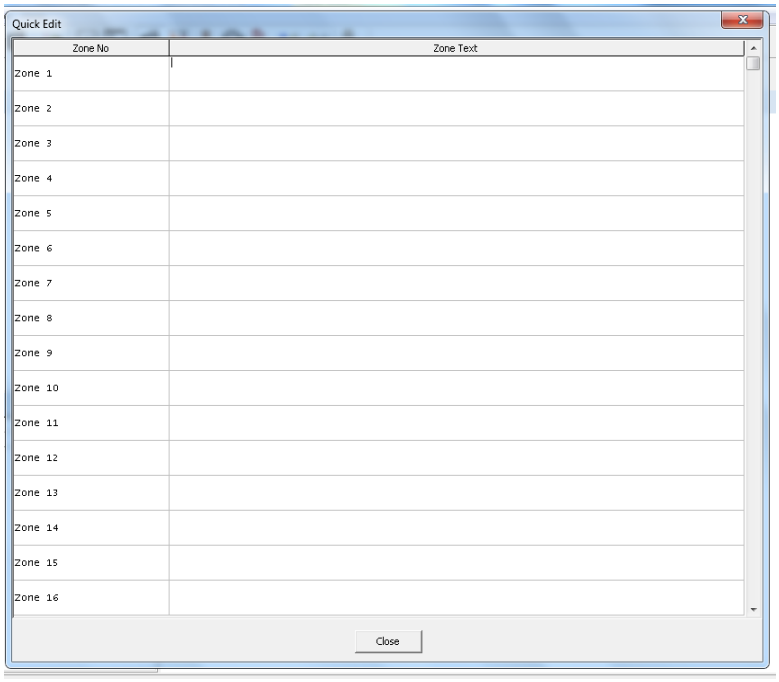
An example is shown opposite. To change the text assigned to a zone, click within the text field to place the cursor and then delete or insert characters as required.

The text may be up to 32 characters in length.
Zones are group by panel, Unused Zones/Other Nodes for ease



To change the zone text select the zone text item in the 'Detail Inspector' and enter the required text.

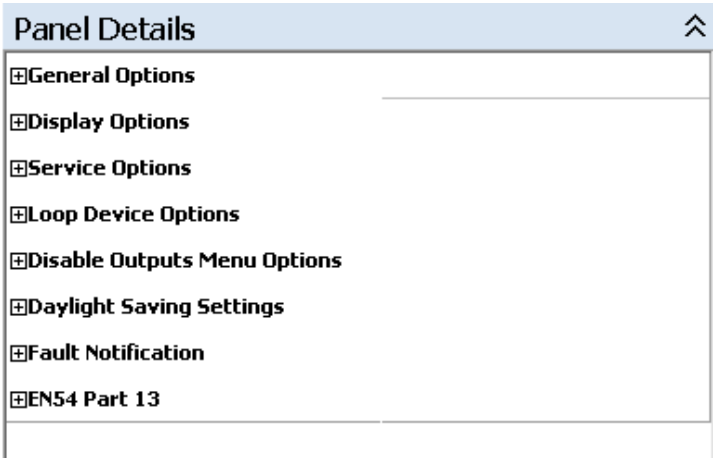
Alternatively if there is a large number of zones to allocate text to. Right click and select 'Quick Edit' from the pop-up-menu. This gives the user a quicker method of inputting a lot of zone information.



4.10 Panel Details

The panel details programming screen is shown opposite and provides up to five 'Tab' pages of options (dependent on product type). These are listed below:
General Options
Service Information
Investigation Delays
Loop Device Options
Function LED's
Daylight saving settings

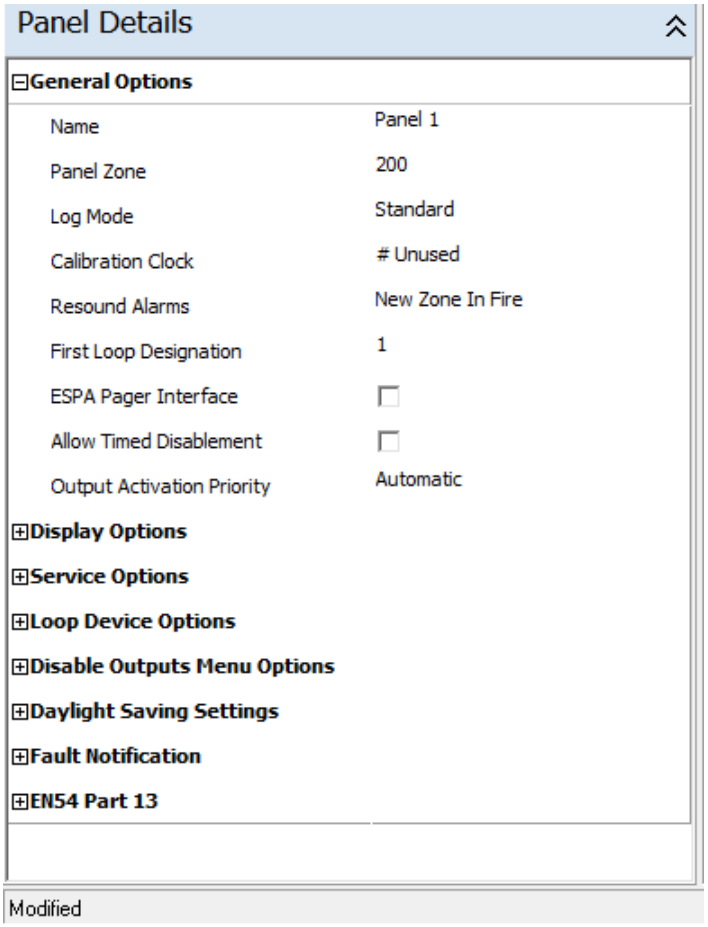
The function of each of these pages is described in the following sections.



4.10.1General Options

4.10.1.1 Name

Each product, when first added to the design, is given a name that appears to the right of the product image in the site list. The name is unique (up to 32 characters in length) and usually denotes where the panel is installed, e.g. 'Hospital Maternity Wing'
To change the name, click the change button and enter a new name in the dialog box.



4.10.1.2 Panel Zone

Each product, when first added to the design is given a default zone number. To change the zone number, click the change button and enter a new value in the dialog box.

4.10.1.3 Log Mode

This is used to identify whether the panel will store basic information in the log or will store, in addition, more detailed information to aid in diagnosing problems. To change the setting, select the required option from the drop-down list. Available options are Standard, Standard + and Diagnostic.

4.10.1.4 Calibration Clock

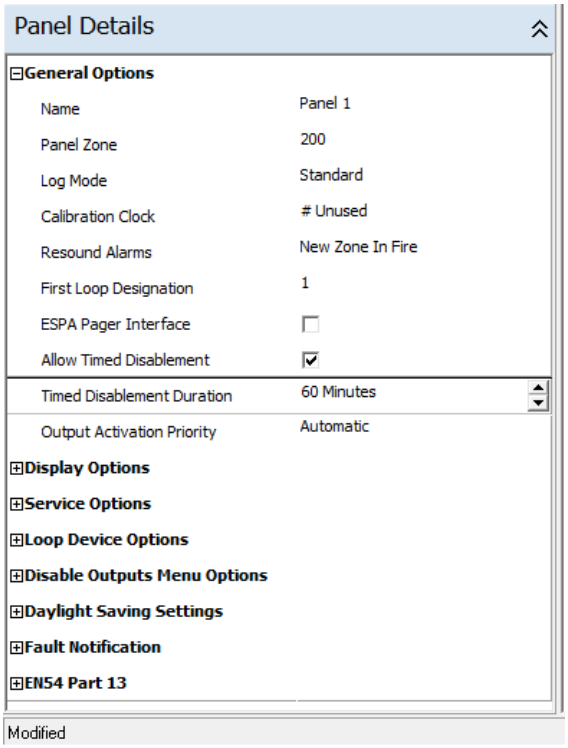
This option uses the time period(s) defined by the selected clock, to re-calibrate the loop devices. When a clock is selected, clicking the adjacent button will change the display to show the clock's settings. Loop device calibration begins on the clocks OFF to ON transition. If you choose to use this option, set the calibration clock to turn ON/OFF once per week at a clean time of day.

4.10.1.5 Re-Sound Alarms On

This option allows the user to determine under what new fire event the alarms will re-sound. Available options are either 'New Zone In Fire' or 'New Device In Fire' (Not EN54 compliant) or 'Never' . The default is 'New Zone In Fire' (EN54 compliant).

4.10.1.6 1st Loop Number

This option allows a different starting number to be set, for the first loop in the panel. It gives the user the ability to set sequential loop numbering for a big panel enclosure
i.e. Mx5800:
Top panel node 1,
1st Loop No = 1 (loops 1-4).
Lower panel node 2,
1st Loop No = 5 (loops 5-8).



4.10.1.7 ESPA Pager Interface

Indicates whether or not the panel has a 'Pager' interface card fitted. This card is for use with ESPA 4.4.4 compliant radio paging equipment.

4.10.1.8 Allowed Timed Disablement

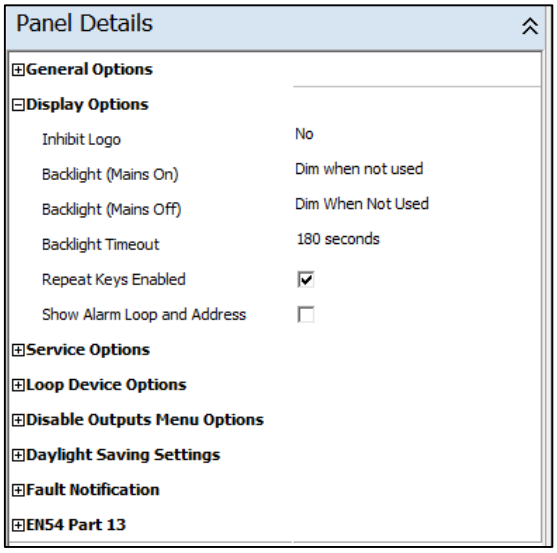
The allows a maximum timed duration of disablement for up to 300 Mins prior to the devices re enabling them selves automaticly.

4.10.1.9 Output Activation Priority

Automatic setting of this feature will apply ringing style ‘0’ (ON) as the highest priority for all rining styles applied in Output Group programming.

Manual setting allows the ringing styles to configured with its own priority rating. (1 Highest 10 lowest)
See section 4.17 for further details.

4.10.2 Display Options



4.10.2.1 Inhibit Logo

This options selects whether the normal operational display on the panel shows the customer’s Logo in the upper left-hand corner of the LCD.
To change the setting, select the required option from the drop-down list. YES/NO.

4.10.2.2 Backlight (Mains ON/OFF)

This determines the LCD backlight being ‘Always ON’ or to ‘Dim when not used’ This is selectable via a dopdown list.

4.10.2.3 Backlight Timeout

This determines the LCD backlight timeout to dim after a pre determined time. Max 600 second timeout.

4.10.2.4 Repeat keys enabled

This enables single press as a scroll/repeat function rather than an individual press of the same key.

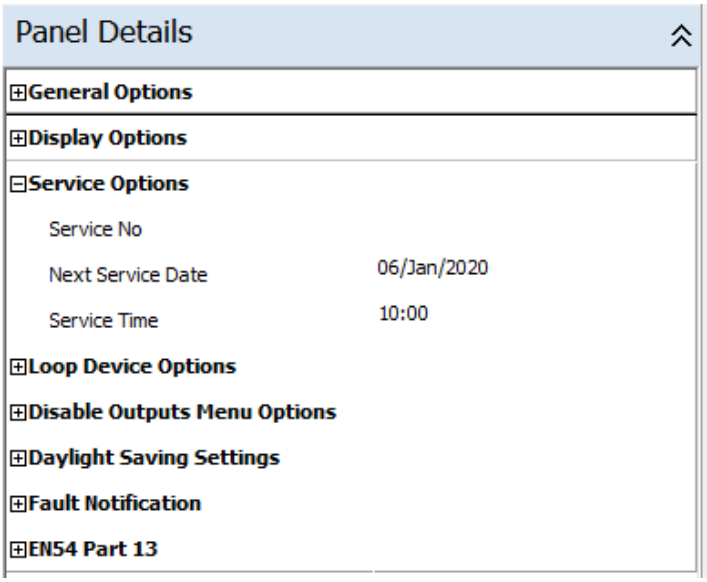
4.10.2.5 Show Alarm Loop and Address

Upon activation of an alarm, the loop number and address number will be visible in the top right hand side of the display.

4.10.3 Service Information

4.10.3.1 Service Phone Number

The phone number programmed in this field will be shown on the panel display whenever the panel is in a fault condition. The phone number can be up to 20 characters in length. To change or enter the phone number, click in the field and enter the required number using the number keys.



4.10.3.2 Service Due Date & Service Due Time

This is used to program the panel to generate a 'Warning' condition when the specified date/time is reached. The panel will remain in this warning state until it is serviced and the service date / time is set to a future value.

To change the date, click in the field to highlight either the day, month or year element. Enter the required date using the number keys. The date is presented in the format dd/mm/yyyy.
Alternatively, click on the down arrow to the right of the field and a calendar will appear. Use the scroll arrows to select the month and year and then click on the required day in the chosen month. The chosen date will be automatically entered into the field. To change the time, click in the field to highlight either the hours or minutes element. Enter the require time using the number keys.

4.10.4 Loop Device LED Options

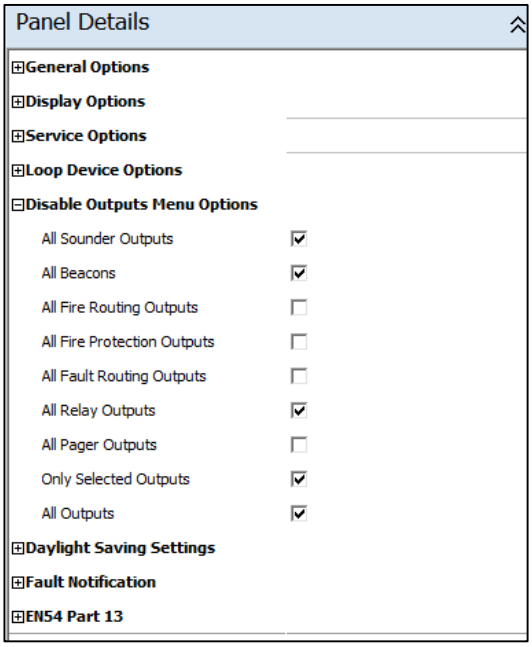
4.10.4.1 Max LED's ON (per Loop)

This option determines the maximum number of Sensor / Call Point LED indicators that can be illuminated during a fire alarm condition. The figure entered is valid for each loop. The maximum number allowed is 10.
To change the number, use the up and down arrows to increment or decrement the value. Alternatively, double click in the field to highlight the number and then overwrite using the number keys.

4.10.4.2 Blinking Scheme

This option determines whether the loop devices shall flash their LED indicator whenever the panel polls the device (if the device supports this option).
To change the parameter, click on the arrow button to the right of the field and a drop down box will appear showing the options. Click on the required option to highlight and select it.

The option can be set to All, None, Individually. If 'Individually' is selected, each loop device can be programmed to flash or not as required (if the device supports this option). Refer to the 'Input Device' section.



4.10.5 Disable Outputs Menu Options

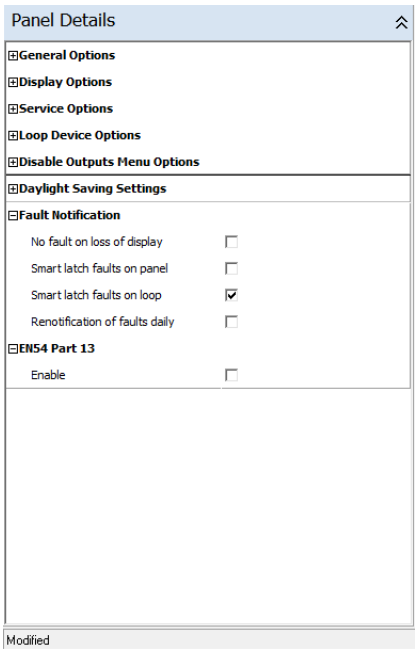
This option allows the user to set the disable menu options shown on the graphical LCD display.This enables the required output devices to be shown in a list from the panels DISABLE> OUTPUTS window. Disable outputs options available are show in the adjacent list.

4.10.6 Daylight Saving

This option allows the user to set the day when the daylight saving changes start and finish. This enables the panel's internal clock to automatically adjust the time

4.10.7 Fault Notification

This options allows the user to configure fault notification, select smart latch faults and configure are notification of faults on a daily basis.



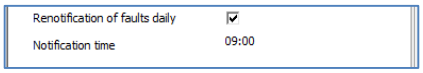
4.10.7.1. No fault on loss of display

This allows the user to select the monitoring of the display pcb. Enabling this option allows the removal of the display PCB without indicating a fault warning.

4.10.7.2 Smart latch

Faults can be selected to be latched from panel or loop wiring/device faults. Smart latch fault types will require a RESET.

4.10.7.3 Re-notification of faults



This allows the user to configure a renotification time period (24hr clock) in order for the fault buzzer to be re enabled when the buzzer has been muted. The example above shows a default time stamp of 09:00 in which the buzzer will re enable.

4.10.8 EN54 Part 13

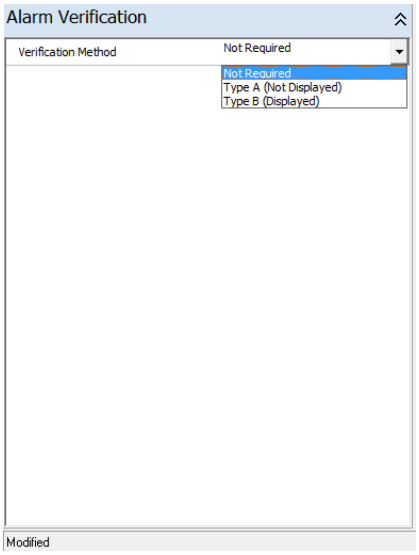
This enables the EN54-13 standard for system performance. It I specified in the installation standards or codes of practice for many countries to provide evidence that the complete system will function as intended under all expected operating conditions.

Refer to Advanced Electronics application note 680-212.

4.12 False Alarm Management

This is intended only for fire system professionals who are already experienced in the selection and positioning of fire detectors. Whenever you apply any False Alarm Management technique, always take the time to think through the system design to ensure that genuine fires will still give the required response.

4.12.1 Alarm Verification (Confirmation)





Alarm Verification can be configured by selecting the “False Alarm Management” icon from the MxPro configuration software.Pleasure ensure your panels are running 051-02, or higher, firmware before using this feature.

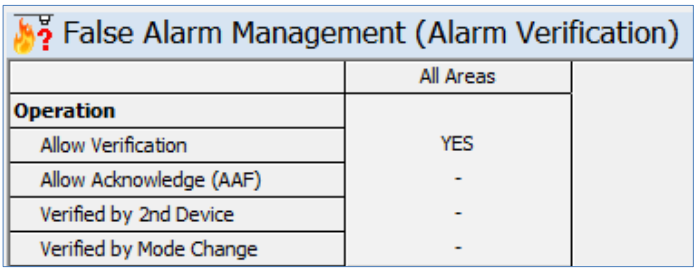
Verification Method – Type A (Not Displayed)
With this method the panel allows any qualifying detector to go briefly into alarm for up to 60s without it causing a fire. The panel display will show normal providing the detector clears within this period.

Verification Method – Type B (Displayed)
This method offers greater flexibility and can also allow individual detectors to go into alarm for longer periods before determining that a fire has occurred.

In order for the user to programmer this feature select the ‘alarm verification requirement as shown opposite
Before attempting to use the False Alarm Mamnagement feature Refer to Advanced Electronics application note ‘False Alarm Management’.

4.12.1.1 Alarm Verification Setup

The Configuration program first shows a default setting that will apply to all areas of the building covered by the selected panel. NB: The verification setup option allows a user to configure the confirmation of the fire by detector mode change, or by a second detector. The general operation has a YES/NO setup



Allow Verification

Yes – The selected “Verification Inputs” will enter verification before a fire is confirmed
N o - All detection devices in the area go immediately into fire alarm.

Allow Acknowledge
Yes - Alarms requiring extended time to clear or investigate can be acknowledged by occupants in the area, or from the control panel.
No – Alarm acknowledgment facility not used in this area.

Verified by 2nd Device
Yes – A fire alarm is confirmed immediately when a 2nd detector in the area signals an alarm.
No – More than one device can signal an alarm while the panel is still within the verification time.

Verified by Mode Change
Yes – Multimode detectors have the option to change their mode to the specified “Verification mode” during the verification process. If the alarm signal is also received from the detector once it has changed mode, a fire is immediately confirmed.

4.12.1.2 Verification by Building Area

The Configuration program first shows a default setting that will apply to all areas of the building covered by the selected panel.

False Alarm Management (Alarm Verification)

	All Areas
Operation	
Allow Verification	YES
Allow Acknowledge (AAF)	-
Verified by 2nd Device	-
Verified by Mode Change	-
Verification Inputs	
Heat Detectors	-
Smoke Detectors	ALL
Multi Sensors	-
Other	-
Verification Outputs	
Sounders	-
Beacons	-
Relays	-

Edit Output Group number assignment

Not Used

Verifications inputs are grouped by 'ALL' selected device types or by 'PER POINT'.

Areas can be added from the "Add Building Area" icon 

	Other Areas	10	15	20	27
Operation					
Allow Verification	YES	-	-	-	-
Allow Acknowledge (AAF)	-				
Verified by 2nd Device	-				
Verified by Mode Change	-				
Verification Inputs					
Heat Detectors	-				
Smoke Detectors	ALL				
Multi Sensors	ALL				
Other	-				
Verification Outputs					
Sounders	ALL				
Beacons	ALL				
Relays	-				

If more flexibility is required the definition of building area can be adjusted using the "Extended Building Area Settings" option.  . Deselecting the "Use zone number for point building area" allows detection points to be assigned to any required area.

4.12.1.3 Alarm Verification by Point

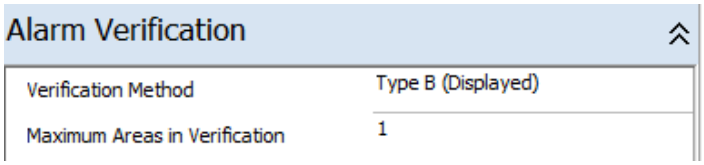
If the Extended Building Area Settings are not used, the Building Area for a device will automatically be set to the zone number. If Extended Building Area Settings are used, the Building Area can be assigned from the Point Details view as shown opposite.

Point Details

AV Opto (LV100)

Address	2.0
Type	Optical Smoke
Location Text	
Zone	1
Building Area	1

An area can contain just a single or multiple detectors by assigning each point to the same building area.



Setting “Maximum Areas in Verification” to 1 will mean that a fire will be deemed to occur if more than a single Building Area is in alarm at any instant in time.

Setting “Maximum Areas in Verification” to 20 will allow 20 different Building Areas to be simultaneously in verification. The maximum amount of building areas is 200.

4.12.1.3.1 Day And Night Settings

In some situations the verification requirements may differ according to time of day, or an area being occupied / unoccupied. The “Time Clock” option allows any one of the 10 programmable time clocks to be used for this purpose. Each Building Area then has independent “Day” and “Night” settings :-

Sensitivity Adjust Mode	(used when time clock is off)
Pre Alarm	80%
Delay (s)	5
Mode (Normal)	Multi - Med-High Sensitivity
Mode (When Verifying)	Multi - High Sensitivity
Special Sensitivity Mode	(used when time clock is on)
Pre Alarm	80%
Delay (s)	0
Mode (Normal)	Multi - Low Sensitivity
Mode (When Verifying)	Multi - Low-Med Sensitivity

In addition to these settings, certain types of detector also have the ability to change modes.

For these detectors the “Mode (When Verifying)” can also be set differently during the daytime and night time on the Loop/Show Details “Point Details” screen as shown above.

4.12.1.3.2 Verification Inputs

Verification Inputs
Heat Detectors
Smoke Detectors
Multi Sensors

The types of detector that are allowed to be used for verification can be readily defined for each area. These can be set for Heat, Smoke and Multi-sense detectors.

The options available are :-

“All”	All detectors of the specified type will be verified.
“ _ “	None of the specified type of device will be verified
“Per Point”	Detection points are individually set to verify or not verify.

Heat Detectors	PER POINT
Smoke Detectors	ALL
Multi Sensors	-
Other	-

4.12.1.3.3 Verification Outputs

The types of output that can automatically activate during verification are sounders, beacons and relay type devices

The options available for each type of output are :-

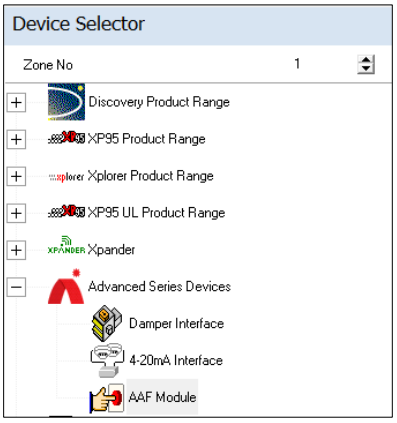
“All”	All of the specified type of outputs in the area will activate during verification.
“ _ “	None of the specified type of outputs will activate.
“Per Point”	Only individually selected outputs of the specified type will activate.

Verification Outputs	
Sounders	ALL
Beacons	PER POINT
Relays	-

4.12.2 Alarm Calm

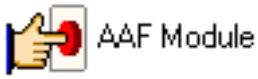
The Alarm Calm/AAF modules are loop powered devices and can be placed at any required address on the loop.

Placing an AAF pushbutton in each *Building Area* allows the occupants in that area to acknowledge a potential false alarm without effecting occupants in other areas.



4.12.2.1 Adding the Alarm Calm module

From the Device Selector, the user can select 'Advanced Series Devices' in the same manner as adding a loop driven input.
The user can check the default Zone number corresponds with the required Building Area, and then click on the AAF pushbutton icon .

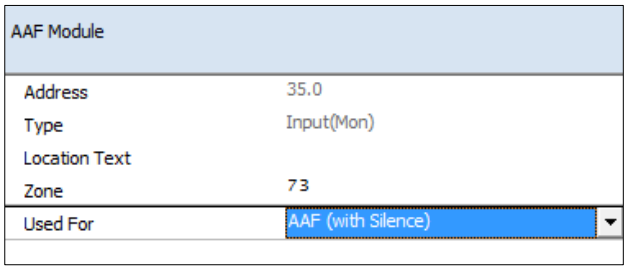


Point Details then show how the device is being used.

The user can then select the show details icon  and select the 'Used For' option to configure the module.

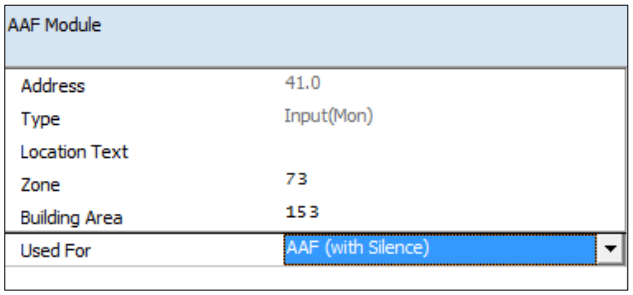
4.12.2.2 Alarm Calm by Zone

In the example shown oppositethe AAF button acknowledges detectors and silences verification outputs in zone 73.



4.12.2.3 Alarm Calm by Building Area

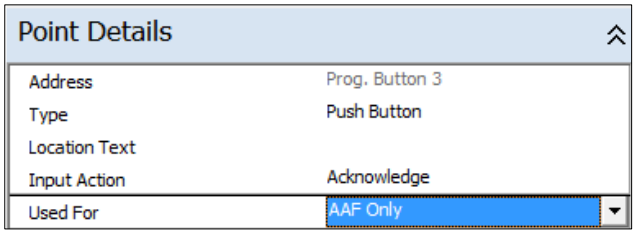
Alternatively, if Building Area is being kept separate to the zone number, the example below acknowledges detectors and silences the verification outputs in *Building Area* 153.



4.12.2.4 Alarm Calm Global Acknowledgement

It possible to configure panel inputs with an Alarm Acknowledgement Facility (AAF) regardless of the Building Area in verification.

To do this, the user can define the "Input Action" as "Acknowledge" as shown opposite.

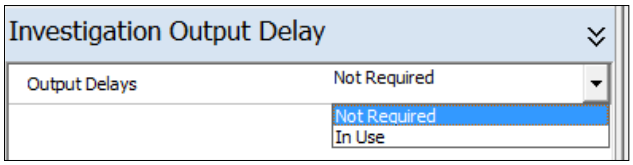


'Used For' provides the user on eof the following Alarm Calm/AAF Options :-

AAF Only	Verification alarm in any Building Area is acknowledged without any effect on the verification outputs.
AAF (with Silence)	Verification alarm in any Building Area is acknowledged and verification outputs are turned off.
Delaying Outputs / AAF	Dual function button. Acknowledges both Investigation Delay-To-Outputs (Post Fire Alarm investigation) and verification alarms.

4.12.3 Alarm Investigation Delay

This option allows the user to setup and programe the investigation delay with stage 1 and stage 2 investigation timers. Each user can minimise false alarms by selecting the False Alarm Management icon within this menu options. By selecting the 'Delays to Outputs' icon allows the user to define if this feature is 'in use'.



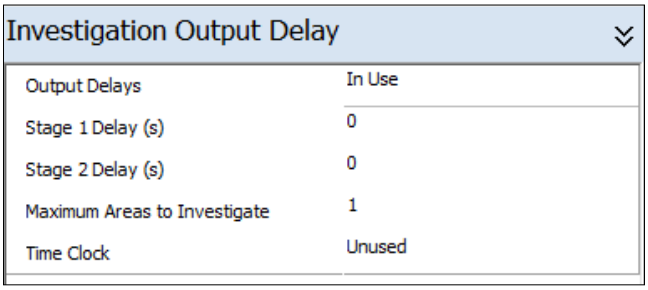
4.12.3.1 Stage 1 and 2 Timers

The times required can be entered into stage 1 and stage 2 respectively.

Stage 1 delay = Max 300 seconds

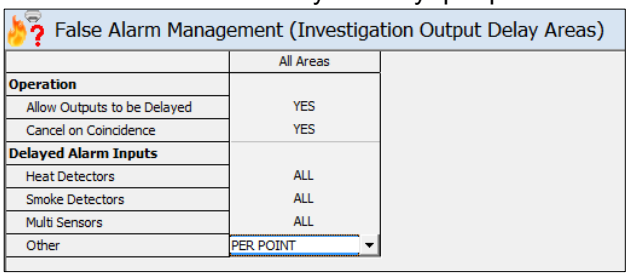
Stage 2 delay = Max 300 seconds

The total maxium duration of delay is 600 seconds (10Minutes). With stage 1 set to 300, the maximum value of stage 2 is also 300.

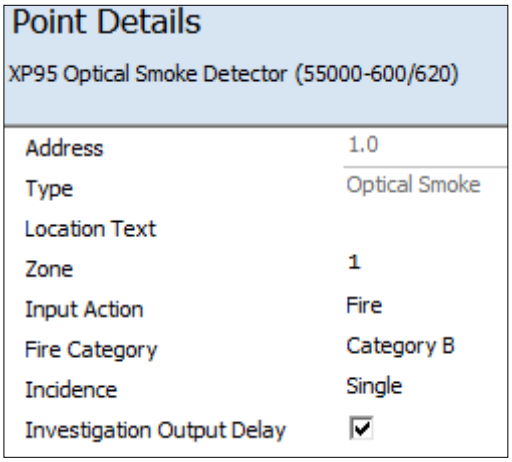


4.12.3.2 Areas to Investigate

Devices can be selected by all or by "per point" as well as building area.



This allows the user to select individual input devices to be selected for the investigation delay, the user must select "investigation output delay" tick box as shown opposite in order for the device to start the investigation.



The outputs are linked to the investigation delay via the ringing styles used in cause and effect.

If the user requires outputs to be delayed "suspend during investigation" must be ticked on the selected ringing style. If outputs are requiring immediate evacuation, the outputs must be assigned with a different output group allocation and must be assigned with a different ringing style not "suspend during investigation".

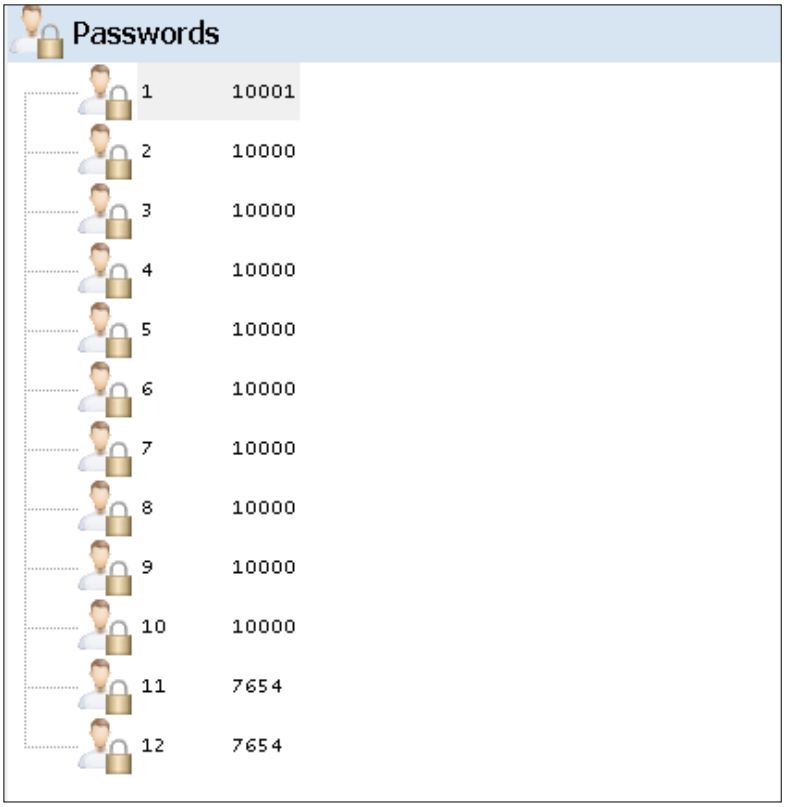
4.12.3.3 Timeclocks and Investigation delay

A timeclock can be allocated to the delay in order to have the investigation delay active during specific times of the day. Refer to time clock section 4.14

4.13 Passwords

This option allows customisation for each of the twelve User ID's*. User Id's 1-10 are defined for Level 2 use, as default. User ID's 11&12 are defined for level 3 use, as default Password number 10 is defined for remote (modem) level 2 access. Passwords 11 and 12 provide local and remote (modem) level 3 access, respectively.

User Id's 1-10 are defined for Level 2 use, as default. User ID's 11&12 are defined for level 3 use, as default Password number 10 is defined for remote (modem) level 2 access. Passwords 11 and 12 provide local and remote (modem) level 3 access, respectively.

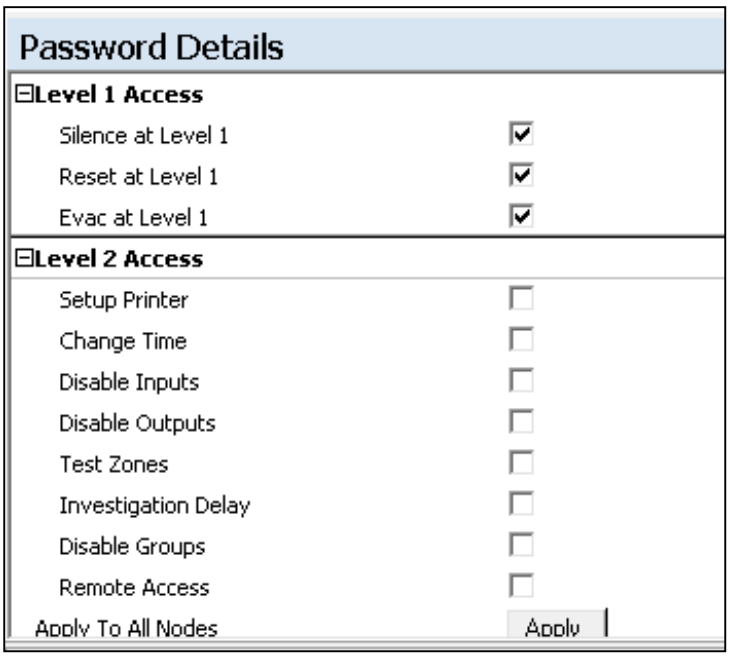


To change a password, click in the password field enter the required number.

For a network design, the currently selected panel's passwords and user settings can be applied to ALL panels in the design by clicking the 'Apply' button.
* Only the password can be changed for User ID 11.

Level 2 Timeout allows the user to select time period for the 'Level 2 User' timeout. After no keypad activity, at 'Level 2' for the set period, the panel reverts back to a 'Level 1' status. This ensures that the panel is not inadvertently left in an undesirable state.

To edit the password and user level access settings select the item from the 'Password Detail' in the bottom left corner of the screen.



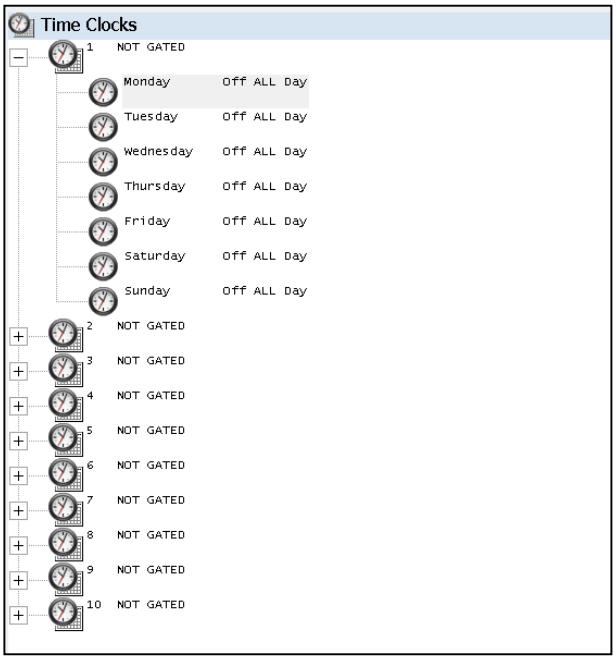
4.14 View / Edit Time Clocks 

Each time clock is also associated with a SSM (special sensitivity mode). When an input device is programmed to use a SSM/clock, this in effect means that the SSM settings are used for the clock's ON phase and the SAM settings used in the OFF phase.

In general time clocks are used to provide the following functions:
Automatically switch the sensitivity mode (SAM/SSM) for input devices.
Provide automatic calibration times (for Hochiki loop devices).
Provide time periods when staged 1 and 2 investigation delays are enabled.
In addition, time clocks may be optionally 'gated' (usually with a switch input). A gated time clock will operate as normal when the switch input is active, but forced to the 'OFF' state when the switch input is inactive.

The on/off period of time clocks can be used as follows:
- Switch the sensitivity/mode of loop input devices.
- Define when calibration is to be performed for supported devices
- Define when investigation delays are enabled.
- Use with output cause and effects
- Use in logic statements.

The MxPro5/MxPro4 have ten time clocks while the Mx4100 has three.



The treeview is used to select the different time clocks. To edit a particular time, use the 'Detail Inspector' in the bottom left corner of the screen.

4.14.1 Time Clock Command Buttons

Time Clock

ON All Day - This option sets the selected time clock to be active for the whole day (same as 00:00 - 23:59)
OFF All Day - This option sets the selected time clock to inactive for the selected day of the week (same as 00:00 - 00:00)
Custom - This option allows the user to set up to two custom time periods for each day when the time clock is active.

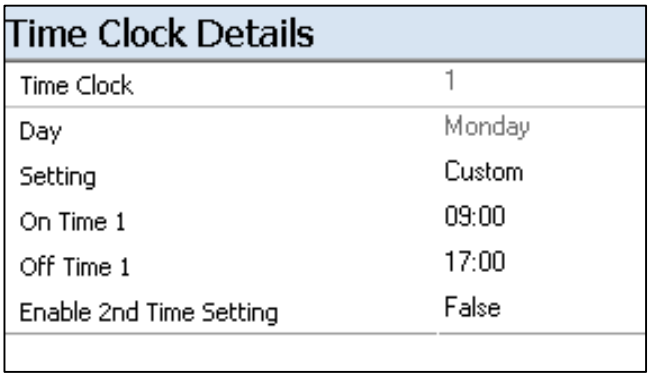
Time Clock Gate

 This allows the user to select an input device to be used as an enablement gate for the time clock. When the switch (or gate) is active, the time clock is enabled to run as programmed. When the switch is inactive, the clock is forced to the OFF state.

 Deletes the current Time Clock Gate.

4.14.2 Custom Time Clock Settings

This view shows the custom settings option. It allows the user to define up to two separate periods during the day when the time clock is ON and the associated SSM device settings are active. Setting the Enable 2nd time setting, gives the allows two time periods to be defined for the sensitivity settings.



Each device can be assigned to a specific time clock if required. The device then uses the special sensitivity settings, described below, during the SSM periods.

Time clock settings can also be copied from one day to another using the pop up menu. Simply select the required day, 'right click' and select 'Copy SSM Times'. Select the day you want the settings copying to, right click and select 'Paste SSM Times' from the pop up menu. SSM Times can be copied between different time clocks and also across different products (if it's a network design).

4.15 Logic Statements

This section describes how to define 'Logic Statements' to be used with 'Cause & Effect' settings.

The next section on ‘Output Programming’ describes how logic statements are used.

4.15.1 Logic Command Buttons

The picture below shows the groups of buttons available to define and edit logic statements. The button groups are:



 New - Define a new logic statement

 Delete - Delete the currently selected logic statement

 Add a new Zone Range logic term to the currently selected logic statement.

 Add a new Double Zone Range logic term to the currently selected logic statement.

 Add a new Time clock logic term to the currently selected logic statement.

 Add a new Input event logic term to the currently selected logic statement.

 Add a new Input event logic term to the currently selected logic statement.

 Add a new general event logic term to the currently selected logic statement.

 Set new term as 'AND' logic.

 Set new term as 'OR' logic

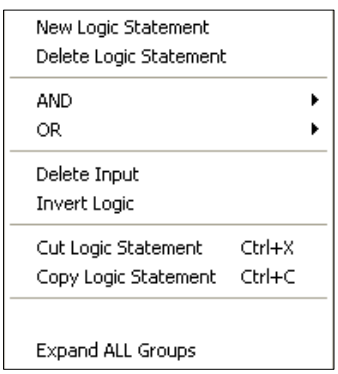
Inverting Logic

This button will become enabled when a logic input node is selected. It inverts the polarity of the input event.

Inverting an input device event will make it's input term active when the input device is inactive. The input term description will be preceded with the word 'NOT'.
Inverting a time clock event will make it's input term active when the clock is in the OFF state.
Inverting a general event will make it's input term active when the state is not present.

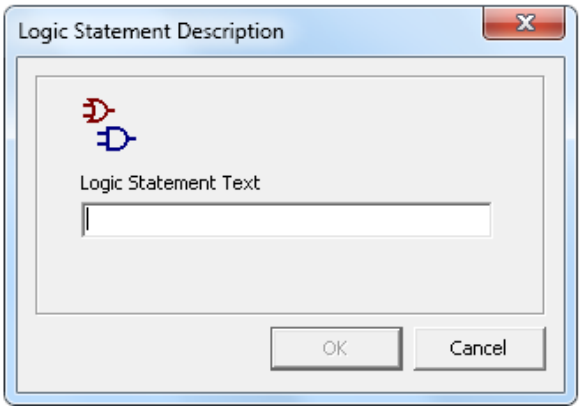
4.15.1.1 Logic PopUp Menu

'Right Clicking' on the 'Logic Treeview' displays the 'Popup Menu'.(shown opposite)
This gives the user another method of adding, editing and deleting logic statements. Providing access to all same functions as the 'Command Buttons'.
It also allows the user to 'Cut, Copy & Paste' logic statements.



4.15.2Creating A New Logic Statement

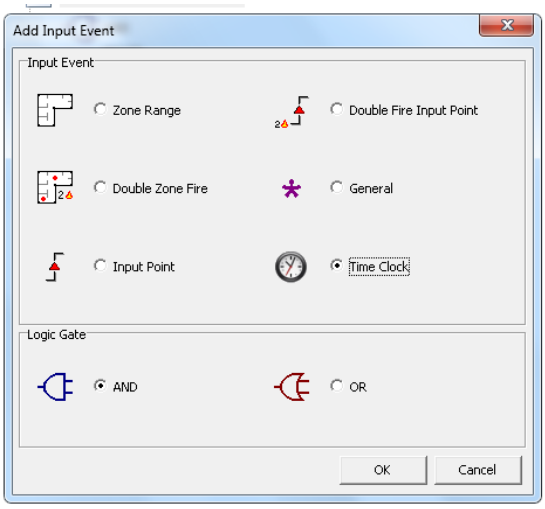
To create a new Logic Statement, either click on the 'New' statement button or right click in the Tree View area and select 'New Logic Statement' from the pop up menu. This brings up a dialog, which prompts the user to enter a description for the logic statement. The 'Ok' button is only enabled if the description entered does not already exist.



4.15.3 Select Logic Gate & Event Type

After entering a valid description the user is then prompted to select the type of event to be used for the first term of the logic statement.

The logic gate allows the user to select whether terms are to be 'AND' or 'OR' statements.

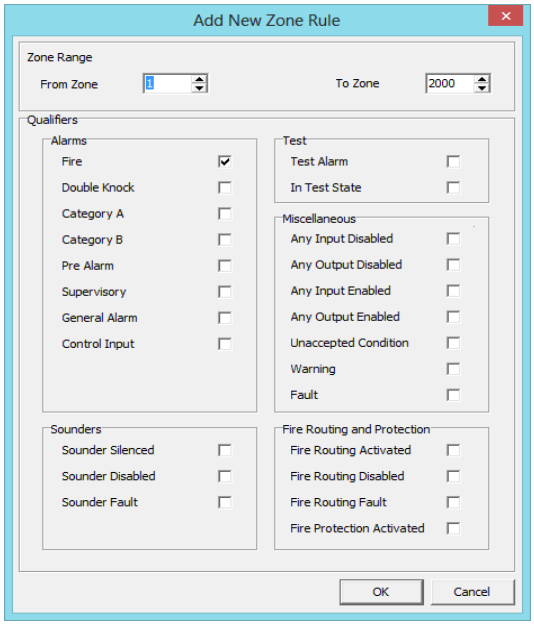


4.15.3.1 Zone Range Event

This option allows the user to select any zone range as an input to the logic gate. The zone range can be selected from any qualified state (with a valid input action*).

The logic term input becomes active when the zonal rule becomes active.

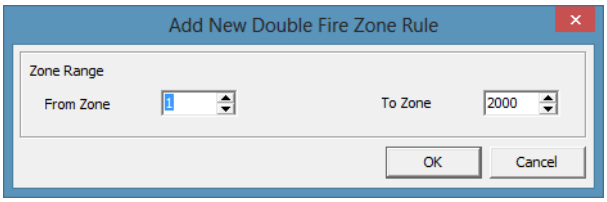
The zonal qualifers with logic statements are MxPro5 compatible only.



4.15.3.2 Double Zone Fire Event

This option allows the user to select a zone range as an input trigger to the logic gate. The zone range can be selected from any qualified zone range(with a valid Fire input action*).

The logic term input becomes active when two zones within the zonal rule becomes active.

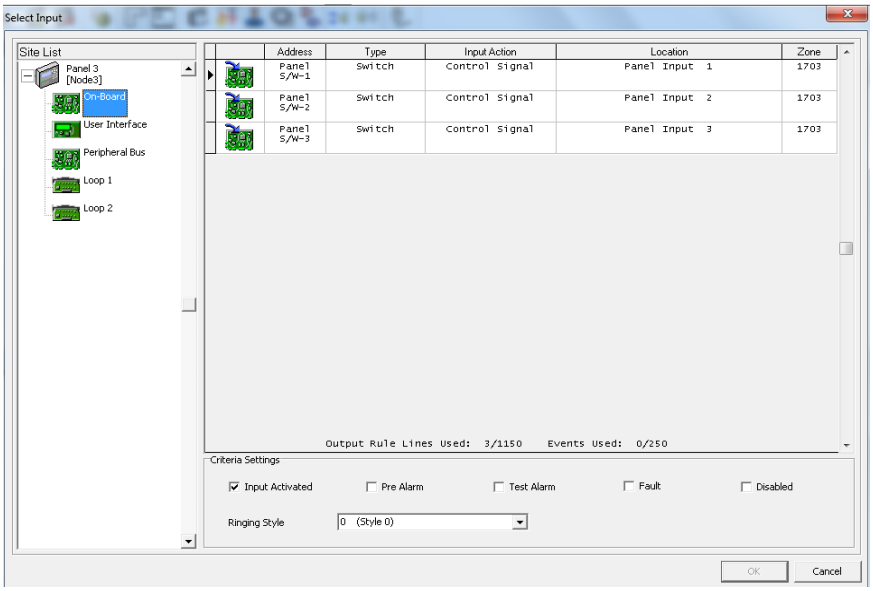


The zonal qualifers with logic statements are MxPro5 compatible only.

4.15.3.3 Input Device Event

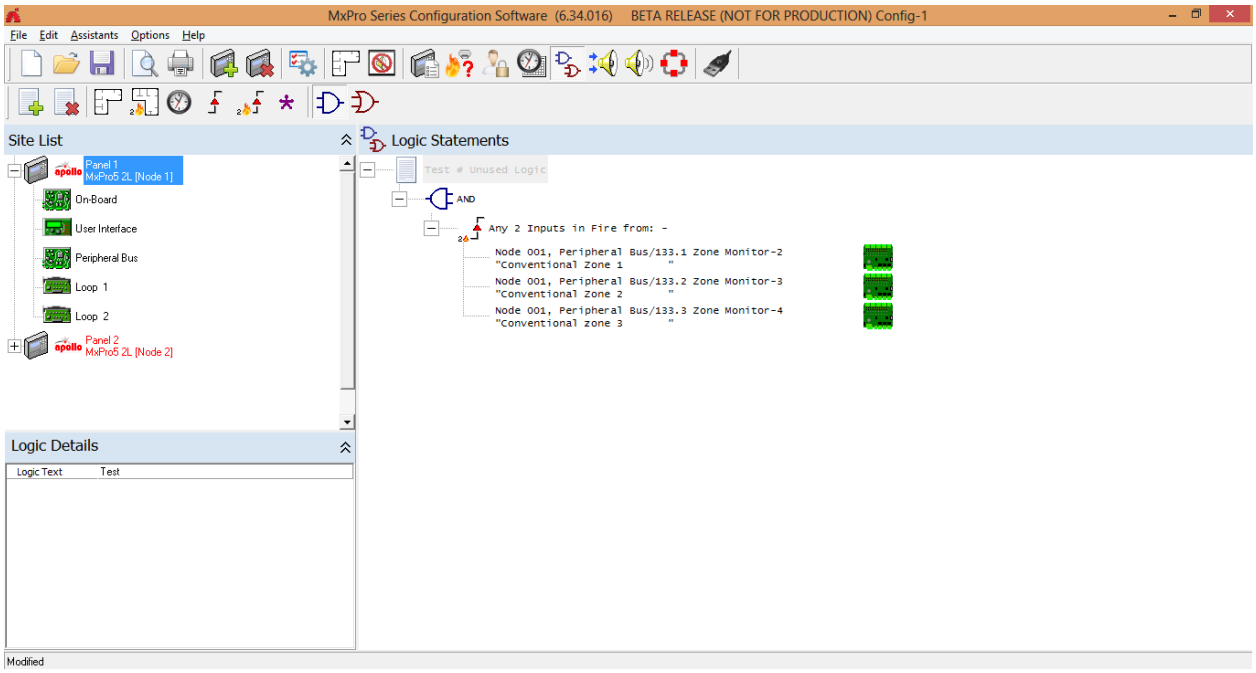
This option allows the user to select any input device as an input to the logic gate. The input device can be selected from any product in the site list (with a valid input action*). The logic term input becomes active when the input device becomes active.

*Valid Input Actions : - Fire, Pre-Alarm, Control, Alarm1, Alarm2 or Alarm 3.



4.15.3.4 Double Input Device Event

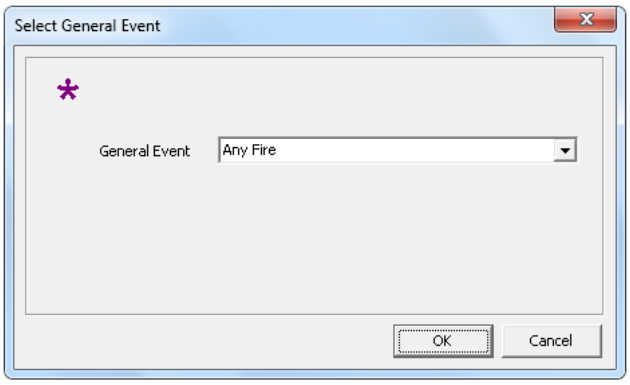
Based on the Input Device Event previously shown, This option allows the user to select multiple input device's as an input to the logic gate. The input device can be selected from any product in the site list (with a valid input action*).
The logic term input becomes active when any 2 of the input device's becomes active.
Example logic statement shown below



4.15.3.5 General Event

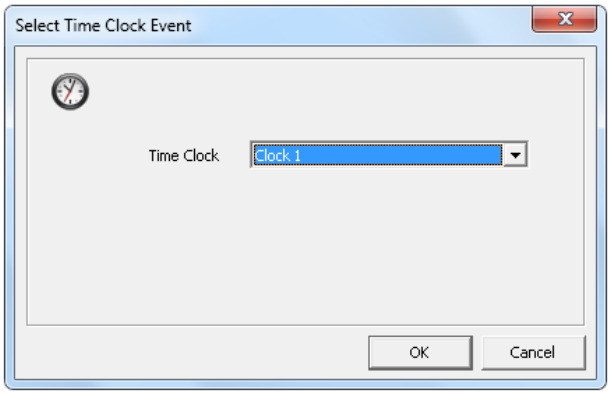
This option allows the user to select a general status event as an input to the logic gate. The logic term input becomes active when the general state exists.

Refer to appendix 9 for General Event Type and action state.



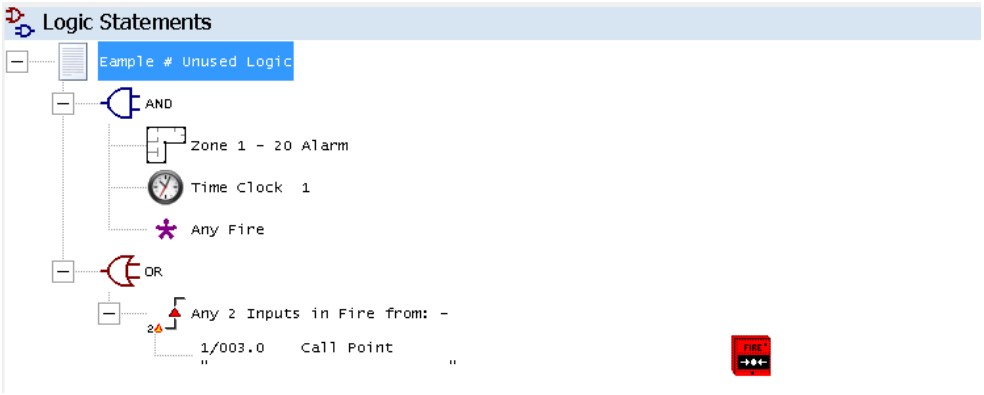
4.15.3.6 Time clock Event

This option allows the user to select a time clock's active period to be used as an input to the logic gate. The logic term input becomes active when the clock is in the ON state.



4.15.3.7 General Status Event

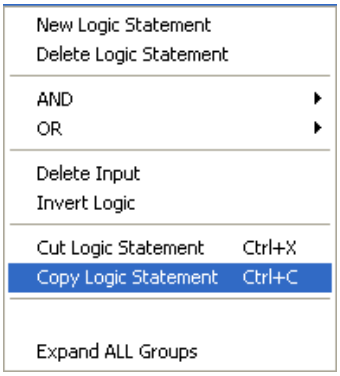
Below is an example screen shot of a logic statement. The logic statement becomes valid when either the 'AND' qualifiers or the 'OR' qualifiers are satisfied.



4.15.3.8 Copy Logic Statement

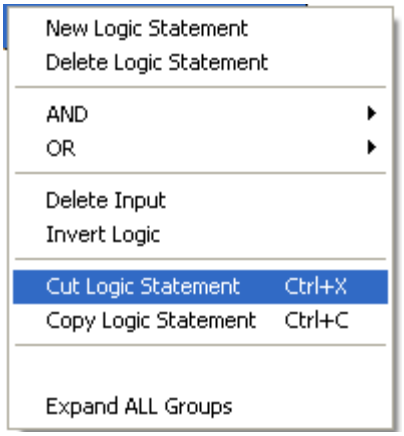
To 'Copy' a Logic Statement , first select the required statement. Right click on the Logic Treeview, this brings up the popup menu, then select Copy Logic Statement.
Alternatively press CTRL + C to copy the selected Logic Statement

See example screen shot opposite.



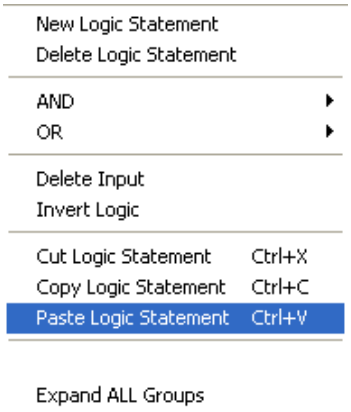
4.15.3.9 Cut Logic Statement

To 'Cut' a Logic Statement , first select the required statement. Right click on the Logic Treeview, this brings up the popup menu, then select Cut Logic Statement.
Alternatively press CTRL + X to cut the selected Logic Statement
See example screen shot opposite.
This is similar to the 'Copy' option but removes the source Logic Statement after copying it.



4.15.3.10 Paste Logic Statement

To 'Paste' a Logic Statement right click on the Logic Treeview, this brings up the popup menu, then select Paste Logic Statement.
Alternatively press CTRL + V to paste the selected Logic Statement
See example screen shot opposite.



4.16 Output Programming

This section describes the main functions related to how outputs react to input events.

Cause and effect programming can be defined as a schedule of input actions/events (cause) that will turn on one or more outputs (effect).

4.16.1 Output Groups

To simplify the output programming, one or more outputs that will act alike when the same set of input events occurs can be grouped together. This association of outputs is called an 'output group'.
Each panel can support up to 200 of these output groups.
Each group may be made up of many input lines and each line represents a rule that can activate the output.
Each output group line is assigned with a ringing style.

4.16.2 Style

The way in which an output turns on in response to a particular input event can be programmed. For example, an output may turn on immediately, it may turn on after a delay or it may pulse for a set time and then turn on. This method of operation is called a 'style'. A style may have up to three different phases of operation. For example, Delay → Mode, Delay → Mode, Delay → Mode.
Style 0 is fixed to turn on immediately an input event occurs.
The remaining styles are fully programmable.

4.16.3 Inputs Events

There are seven basic types of input events that can be used to drive the cause & effect of an output group :-

Zone Range: This allows the user to define a range of zones and qualifiers as an input line.

Double Zone Fire Event: This allows the user to define a range of zones and qualifiers as an input line. Two or more zones must qualify to operate the ouput group.

Input Device Event: This option allows the user to select any input device (with a valid input action*) as an input line. The device can be selected from any panel in the site list.
* Valid Input Actions : - Fire, Pre-Alarm, Control, Alarm1, Alarm2 or Alarm 3.

Double Input Device Event: This option is as above 'Input Device Event' but two or more input points need to qualify to operate the output group.

General Status Event This option allows the user to select a 'general status' event from the drop down list as an input line. For general event types refer to Appendix 9.3

Time Clock: This option allows the user to select a time clock's active period for the input line.

Logic Statement: This option allows the user to select a logic statement as the input line.

4.16.4 Cause & Effect

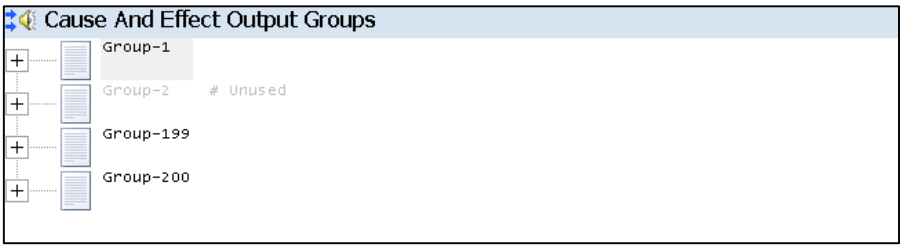
4.16.4.1 Default Settings

When a new product is added to the design, all on-board outputs are assigned to specific output groups and will turn on immediately upon a single fire alarm occurs in any zone (any fault condition for the fault relay). The user is free to edit and keep these groups or delete them and create new ones. The default assignments for fire panels are as follows:

Output Device	Output Group	Cause and Effect
On-board Sounder A	1	Any fire or test fire in any zone
On-board Sounder B	1	Any fire or test fire in any zone
On-board Sounder C	1	Any fire or test fire in any zone
On-board Sounder D	1	Any fire or test fire in any zone
On-board Relay 1	200	Any fault in any zone
On-board Relay 2	199	Any fire or test fire in any zone
On-board Open Collector 1	199	Any fire or test fire in any zone
On-board Open Collector 2	199	Any fire or test fire in any zone
On-board Open Collector	199	Any fire or test fire in any zone
All Loop Output Relay Devices	199	Any fire or test fire in any zone
All Loop Output Sounder Devices	198	Any fire or test fire in any zone
All Loop Output Beacon Devices	197	Any fire or test fire in any zone

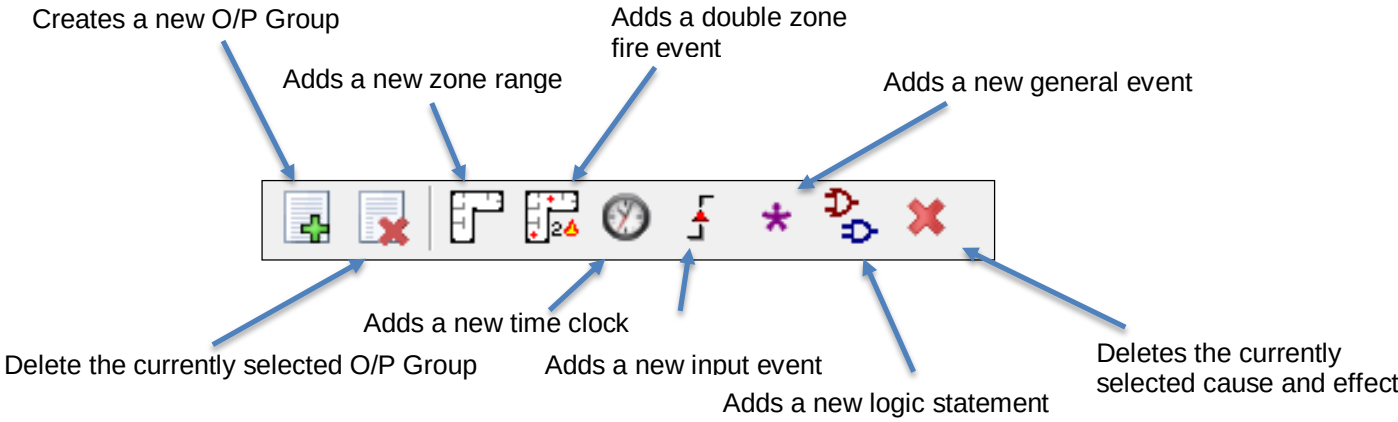
4.16.4.2 Output Group Tree View

The basic default Mx4400 cause and effect view opposite shows that there are six zone based output groups defined. These are output groups 1, 2, 3, 4, 199 and 200.

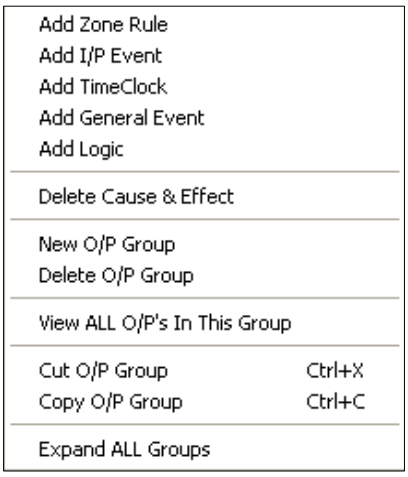


If an Output Group is defined but it is not assigned to any output then the output group description is highlighted in red with the word ‘Unused’ appended to it.

4.16.4.3 Cause & Effect Command Buttons

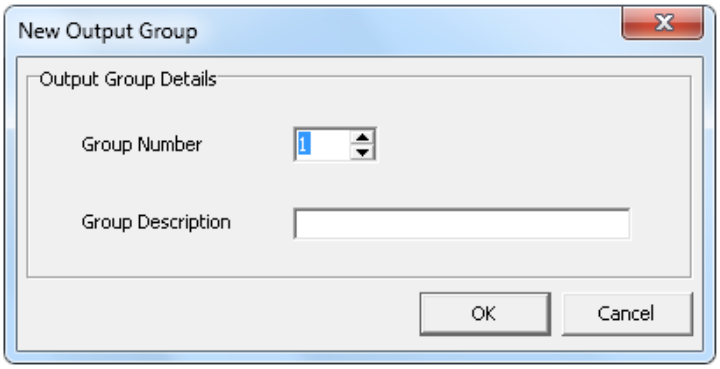


4.16.4.4 Output Group PopUp Menu



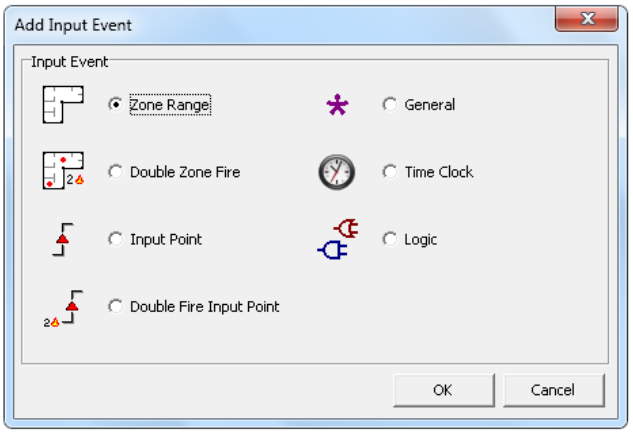
'Right Clicking' on the 'Output Group Treeview' displays the 'Popup Menu'.(shown opposite)
This gives the user another method of adding, editing and deleting logic statements. Providing access to all same functions as the 'Command Buttons'.
It allows the user to 'Cut, Copy, Paste' Output Groups and also lets the user view all the O/P's which are currently assigned to the selected group.

4.16.4.5 Creating a New Output Group



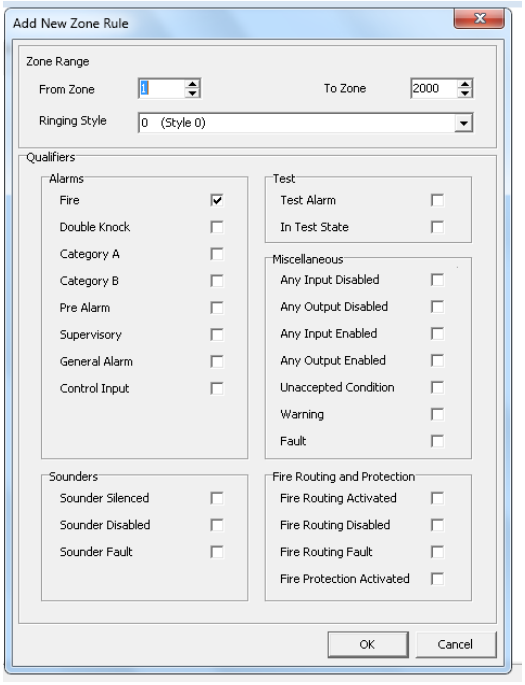
Click on the 'New group' tool button in. A pop-up window is shown as opposite.
Enter the required output group number and description.
The group description is optional but useful in keeping track of and identifying different output groups. Choose a name that is meaningful to the application.
Click on the OK button to proceed.

4.16.4.6 Define Cause & Effect



A new pop-up window will then be shown to prompt you to define the first line of the cause & effect for this new output group.
Make a selection and press the 'OK' button to proceed.
The meaning of each of these options is given below.

4.16.4.6 Zone Range



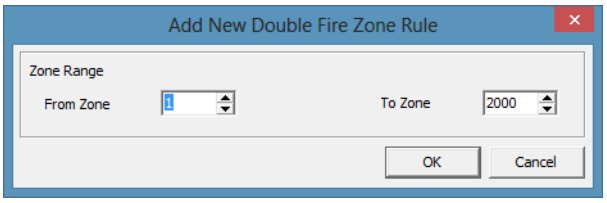
Allows the user to define a rule that is qualified when any of the selected causes (alarms, sounder events, test, misc.or fire routing events) occur within the defined zone range.

The rule uses a selected ringing style.

Any causes occurring outside the zone range will not trigger any outputs assigned to this output group.

Click the 'OK' button to add this line to the output group.

4.16.4.7 Double Zone Fire Event

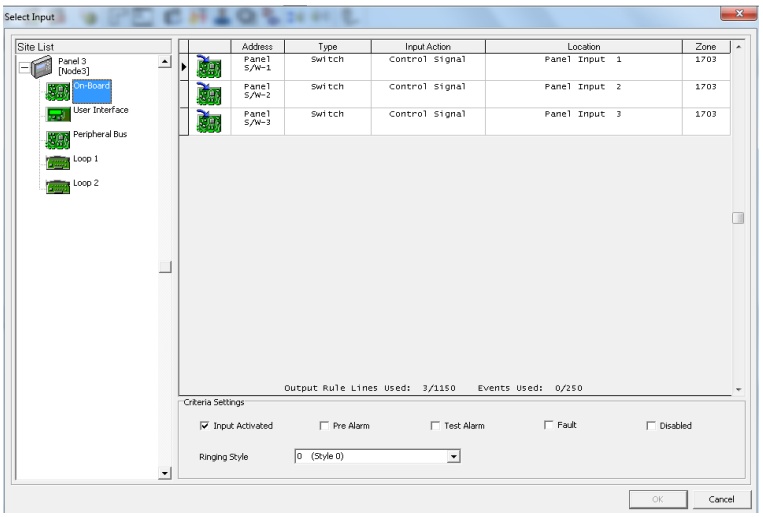


This option allows the user to select a zone range as an input trigger to the logic gate. The zone range can be selected from any qualified zone range(with a valid Fire input action*).

The logic term input becomes active when two zones within the zonal rule becomes active.

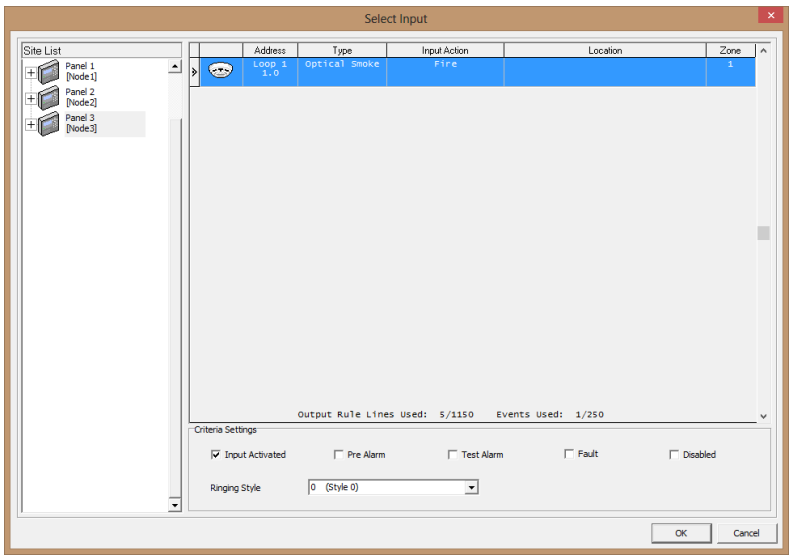
The zonal qualifers with logic statements are MxPro5 compatible only.

4.16.4.8 Input Event



Allows the user to define a rule that is qualified when a single input device is activated.
Pressing the 'OK' button then brings up another dialog as shown below.
Only valid inputs are displayed i.e. fire, pre-alarm, control, alarm1, alarm2 or alarm3
Once the currently selection of items reaches the I/P Event limit then no more items can be selected.

4.16.4.9 Input Event Settings

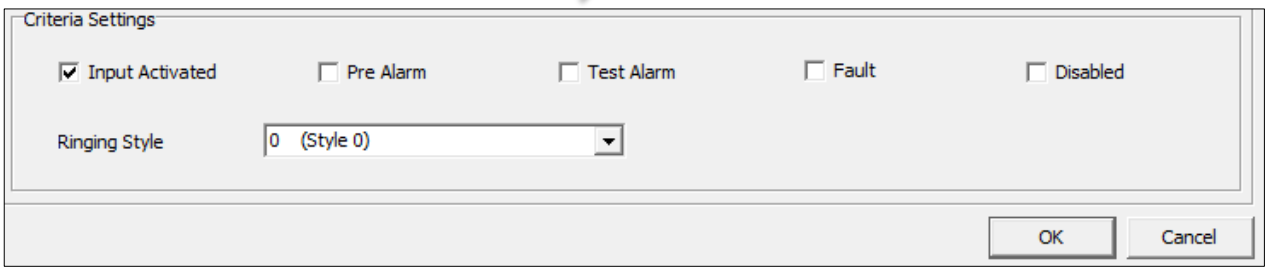


Once the input device has been selected, the default settings of the selection are shown along with a ringing style.

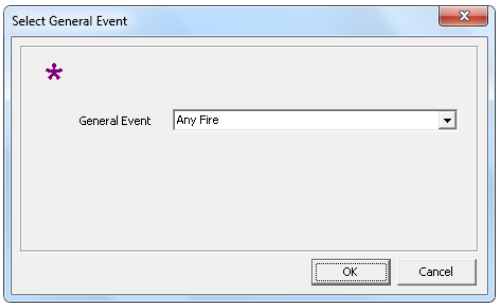
Event options allows the user to customise the conditions under which the selected I/P will activate it's O/P Group.

Custom allows the user to specify required options.
Available options are: Input Activated, Pre Alarm, Test, Fault and Disabled.

Once the required settings have been defined, press the ‘OK’ button to add this line to the output group.



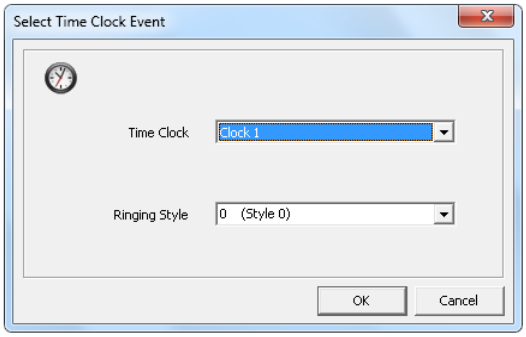
4.16.4.10 General Status Event



Allows the user to define a rule that is qualified when the panel detects a specific general event.
Use the drop down lists to select the general event and ringing style.
The general events defined are:
Any fire
Any 2 x devices in fire
Any 2 zones in fire
Recent reset
Panel silenced
Stage 1 timer active
Stage 2 timer active
Investigation Delay
Level 3 Access.(Refer to Apendix 9 for further general event types

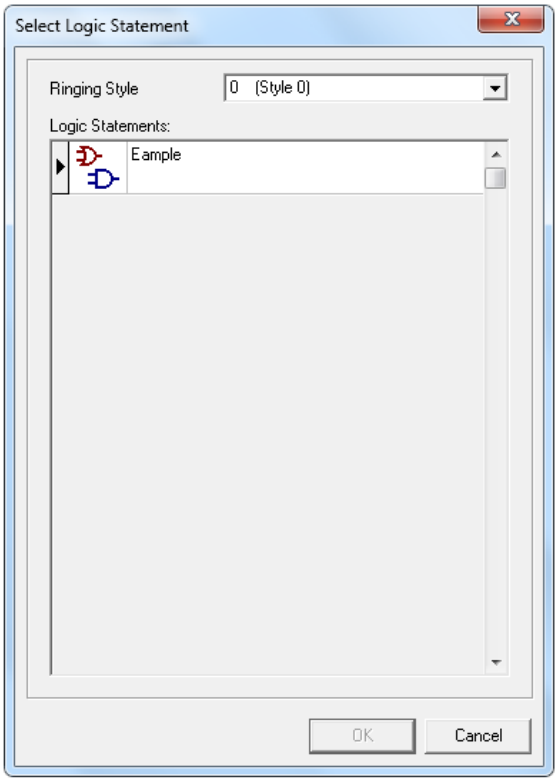
Click the 'OK' button to add this line to the output group.

4.16.4.11 Time Clock



Allows the user to define a rule that is qualified on a time clock's ON period.
Use the drop down lists to select the required time clock and ringing style.
Click the 'OK' button to add this line to the output group.

4.16.4.12 Logic Statement



Allows the user to define a rule that is qualified on a logic statement becoming qualified.
Make a selection from the list of previously defined logic statements and click on the 'OK' button. (see section 4.15 Logic statements)

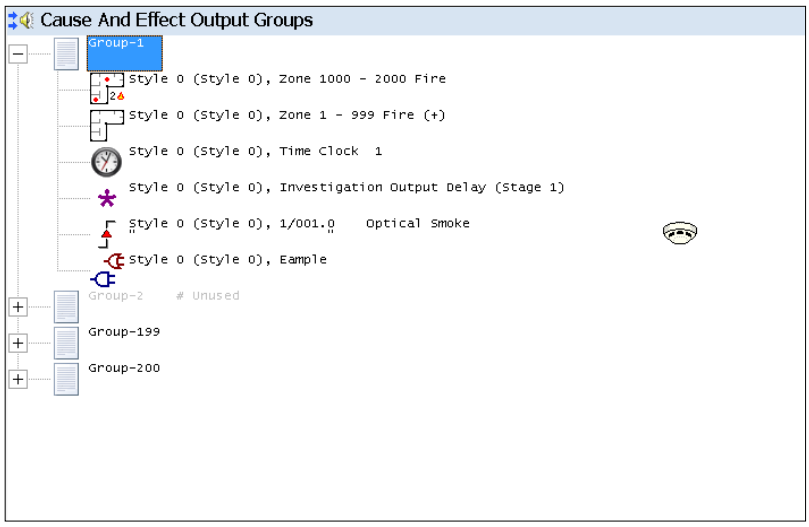
Finally select the ringing style then click the 'OK' button to add this line to the output group.

4.16.4.13 Multiple Cause & Effect Group Entries

The display opposite shows an example of an output group with multiple entries (one of each type of line).
As many lines as are needed may be added to the same output group.
Each line is effectively OR'ed together and the effect is that the output group becomes qualified when any one line is qualified.

Each line of the output group has it's own ringing style.

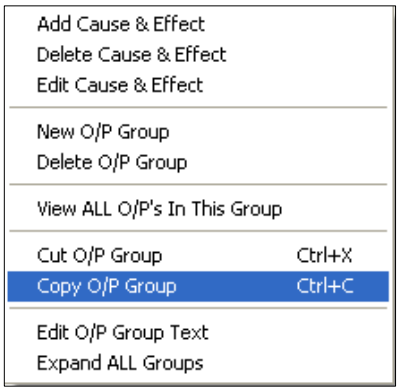
When multiple lines of an output group become qualified at the same time, then the overall effect will be that the panel will prioritise the sound, e.g. off, pulse and on are lowest to highest priority respectively.
As the user selects different cause & effect terms in the Tree View.



4.16.4.14 Copy Output Group

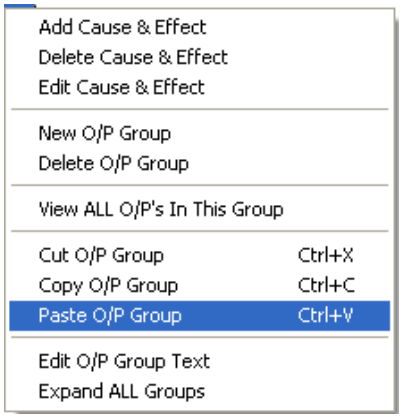
To 'Copy' an Output Group, first select the required O/P Group. Right click on the Output Group Treeview, this brings up the popup menu, then select Copy O/P Group.
Alternatively press CTRL + C to copy the selected O/P Group

See example screen shot opposite.



4.16.4.15 Paste Output Group

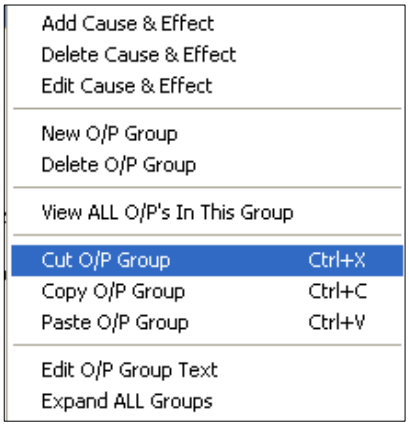
To 'Paste' an Output Group right click on the Output Group Treeview. This brings up the popup menu, then select Paste O/P Group.
Alternatively press CTRL + V to paste the O/P Group.
See example screen shot opposite.
The user is then prompted to enter a number & description for the O/P Group, as if creating a 'New' O/P Group.
N.B. Copying O/P Groups between products in a 'Network Design'
If the O/P Group contains 'Logic Statements', these will need to be re-added, manually, to the O/P Group, after the 'Logic Statement' has also been copied.



4.16.4.16 Cut Output Group

To 'Cut' an Output Group, first select the required O/P Group. Right click on the Output Group Treeview, this brings up the popup menu, then select Cut O/P Group. Alternatively press CTRL + X to cut the O/P Group

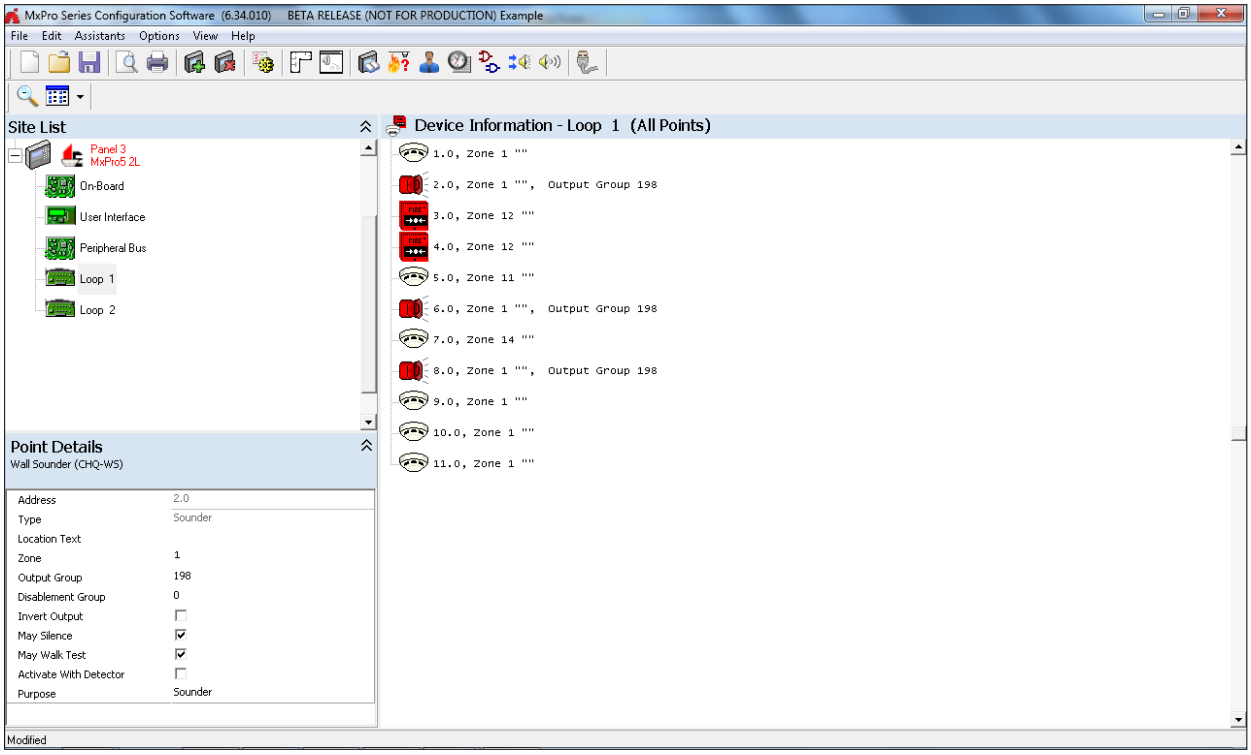
This is similar to the 'Copy' option but removes the source O/P Group after copying it.



Take care to ensure that the zone ranges do not overlap across multiple entry records of the Output Group.

4.16.5View / Edit Outputs

Select O/P Points from the point view filter options.
Here, all outputs can be viewed and programmed on a single screen.
An example of the screen display is shown below. If the selected output is double clicked in the



symbol, address or type field, the display will automatically switch to the 'cause and effect' programming page to show the associated ‘Output Group’ rule.

If an output is assigned to an undefined ‘Output Group’ then it has the text (Undefined) append to its description for easy identification.

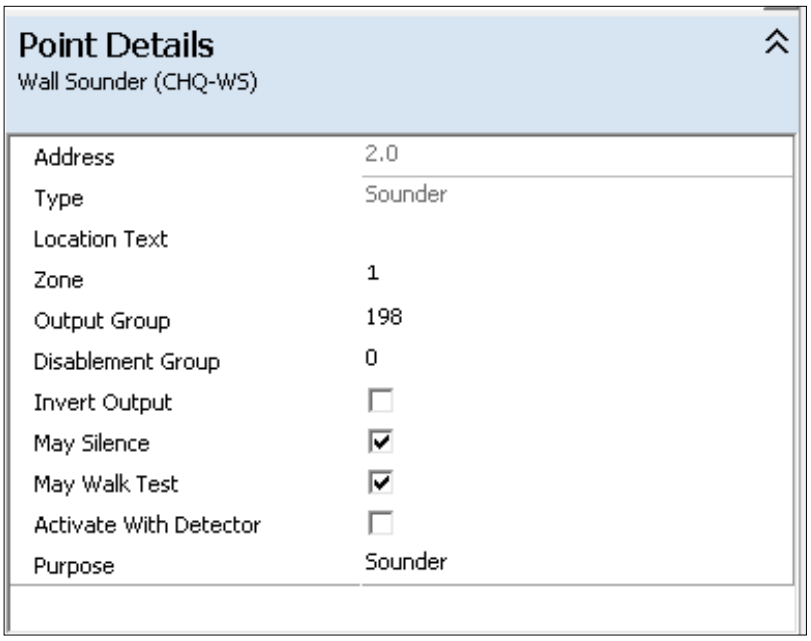
If this output is now double clicked, the display will automatically switch to a pop-up window from which the new Output Group can be defined.

The above display is similar to that described earlier on the ‘View/Edit’ devices page except only outputs are available here.

4.16.5.1 Output Group Details

To change the ‘Output Group’ assigned to the selected output device, click in the ‘Output Group' settings, highlight the number and then enter the required group number using the number keys or use the up/down arrows.

To assign multiple outputs to the same 'Zone' , hold down 'CTRL' whilst selecting the outputs. Then simply 'right click' with the mouse, select 'Assign To Same Zone'



Device Location Text: This is the location text assigned to the output. This is normally defined in the View/Edit Devices View but can also be changed here.

Can Silence:This is the same as described in the Section on 'Output Devices' . The value may be changed here or in the 'Device Details' view.

Inverted Output: This is the same as described in the section on 'Output Devices' . The value may be changed here or in the 'Device Details' view.

Allow Walk Test: This is the same as described in the section on 'Output Devices' . The value may be changed here or in the 'Device Details' view.

Volume: This option is only available when the supported protocol is selected and the selected devices are compatible.

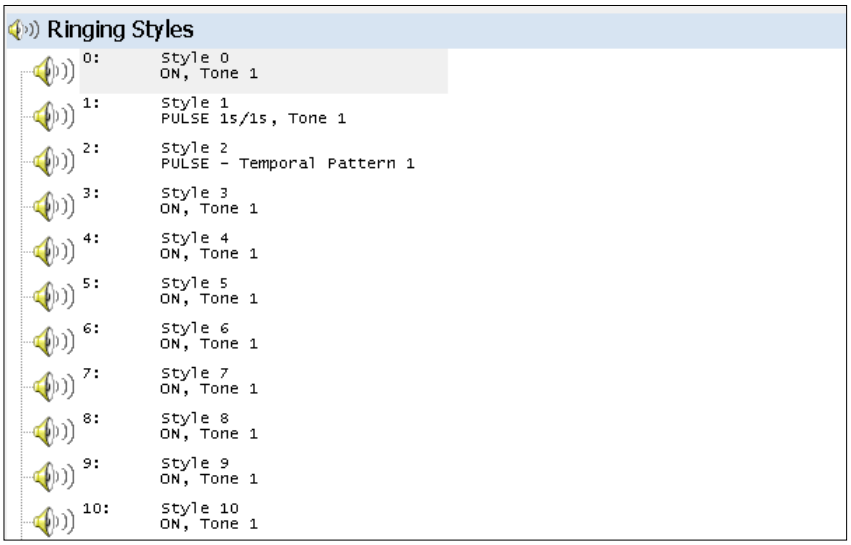
O/P Group Text: This shows the text description for the output group if one has been entered.

Activate On Attached Device In Alarm: This is the same as described in the section on 'Output Devices' . The value may be changed here or in the 'Device Details' view.

Purpose: This option allows you to categorise the purpose of the output device by Fire/Faultrouting, sounder, relay, beacon or pager.

4.17 View/Edit Ringing Styles

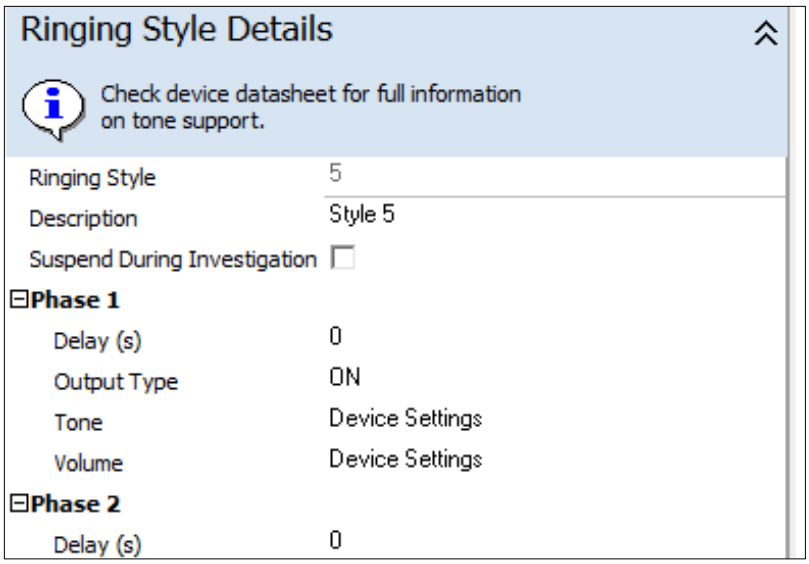
When the 'Ringing Styles' option is selected, the display presents a list of ringing styles with their current programming.



The view opposite shows the default settings where all ringing styles will turn the outputs on or pulse immediately.

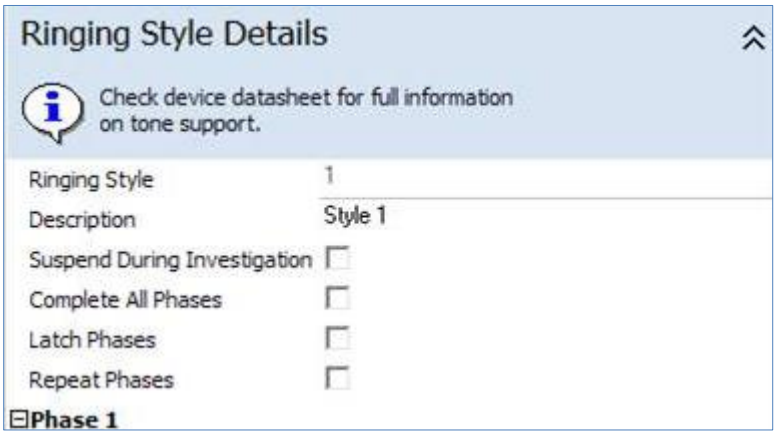
Style 0 is fixed and cannot be changed. All other styles are programmable.

To change a particular style, click on the required field. The field is highlighted and the lower hand side of the screen 'Ringing Style Details can be edited as shown below.



There are a maximum of 40 ringing styles available, each with 3 independant phase of operation.

4.17.1 Basic Ringing Style Options



Click on this button and a pop-up window appears to define the programming. The following are example ringing styles. When pulse or temporal pattern mode is selected, additional options are presented.

Description: This allows a text entry to be inserted into ringing style with an additional text description. The text field is limited to 25 characters.

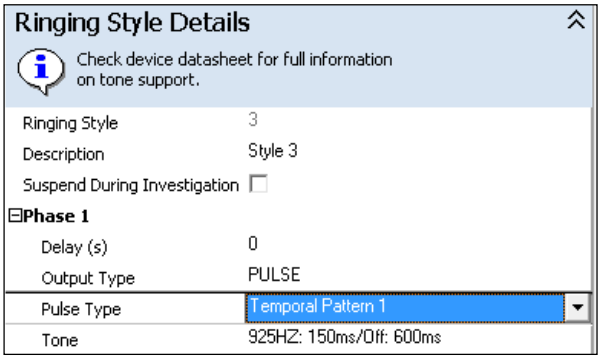
Suspend during investigation delay: This allows the user to hold off output devices until the investigation period has elapsed. Refer to section 4.12 False Alarm Management for further information

Complete All Phases: Do all phases if cause/effect still qualified (or latch phases is ticked).

Latch phases: Requires reset and removal of cause/effect stimulus to stop ringing.

Repeat phases: Go back to the first phase if the last phase completes.

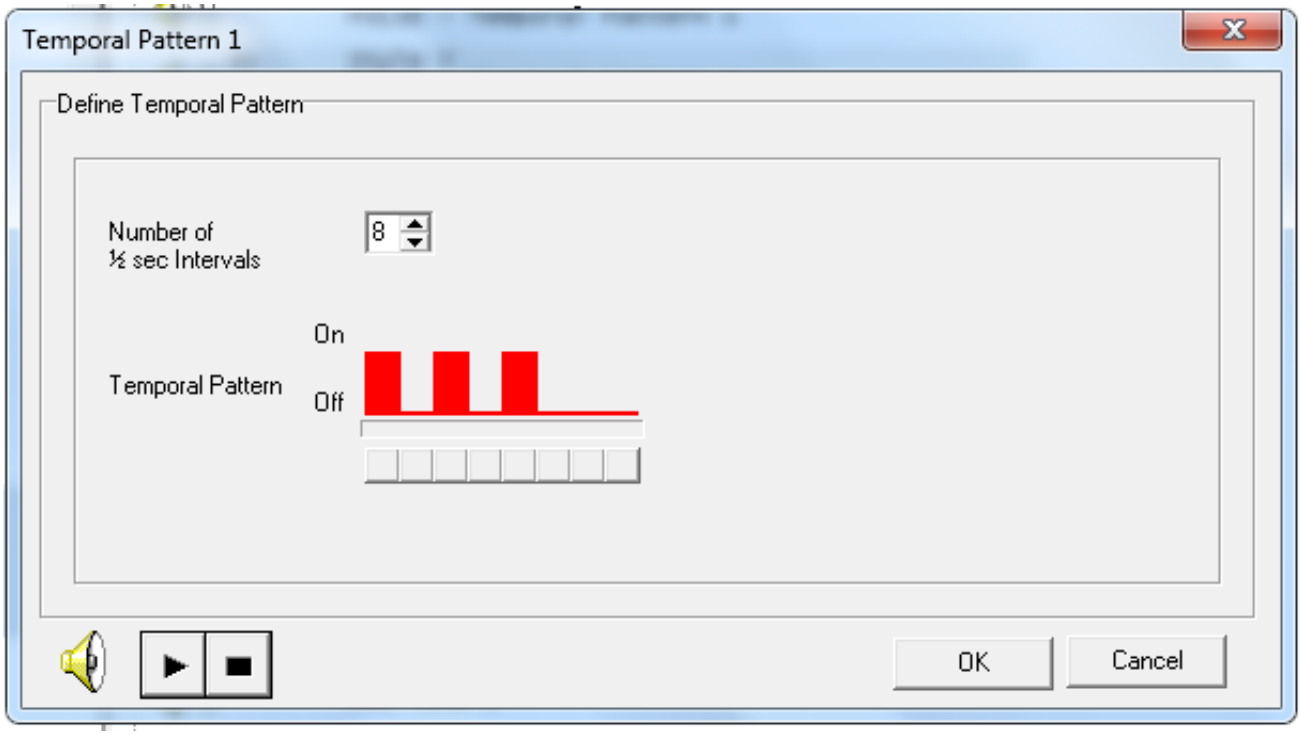
4.17.2 Advanced Ringing Style Options



This allows the user to define/customise 5 'Temporal' ringing patterns for the 'Onboard' sounders or 'Peripheral Bus' sounders. Up to 24 (½ second) intervals can be defined for each temporal pattern.

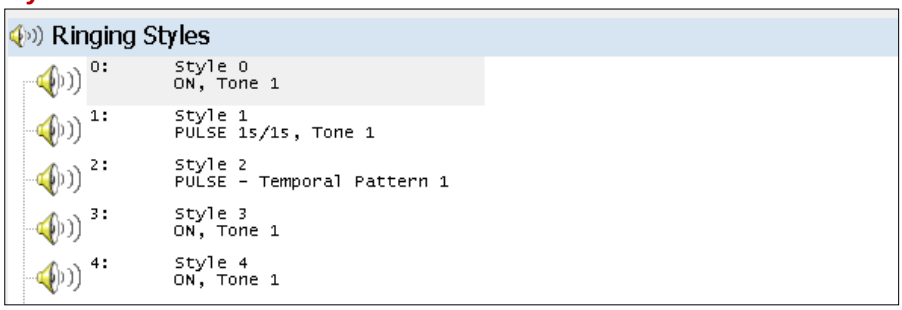
Right clicking on the Temporal pattern will bring up the 'Temporal pattern' editor as shown below. This allows the user to define/preview the temporal patterns as shown below.

Tones: This is the default tone setting in line with the device manufacturers recomeneded settings. Refer to sounder type installation sheet for supported tones.



4.17.3 Multi Phase Ringing Styles

The basic ringing style output actions are 'ON' and 'PULSE'. The picture to the right shows examples of ringing styles. These are described as follows.



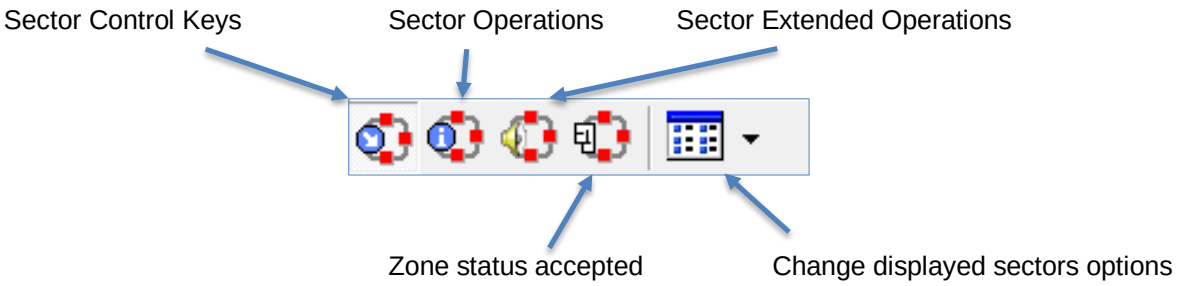
Style 0 is a fixed style where the output will turn on immediately.
Style 1 will cause the outputs to turn on immediately in a pulse mode with 4s on, 1s off.
Style 2 will cause the outputs to be delayed for 30 seconds and then turn on.
Style 3 will cause the outputs to turn on immediately in a pulse mode with 1s on, 1s off. After a further 30 seconds, the outputs will turn on continuously.
Style 4 will cause the outputs to be delayed for 20 seconds and then pulse with 1s on, 1s off. After 120 seconds, the outputs will turn on. After a further 30 seconds, outputs will pulse 1s on, 1s off.

Note : Special Situations option (see Panel Details for MxPro4) also provides an 'OFF' function if enabled. Use this optional feature with care.

4.18 Network Options 

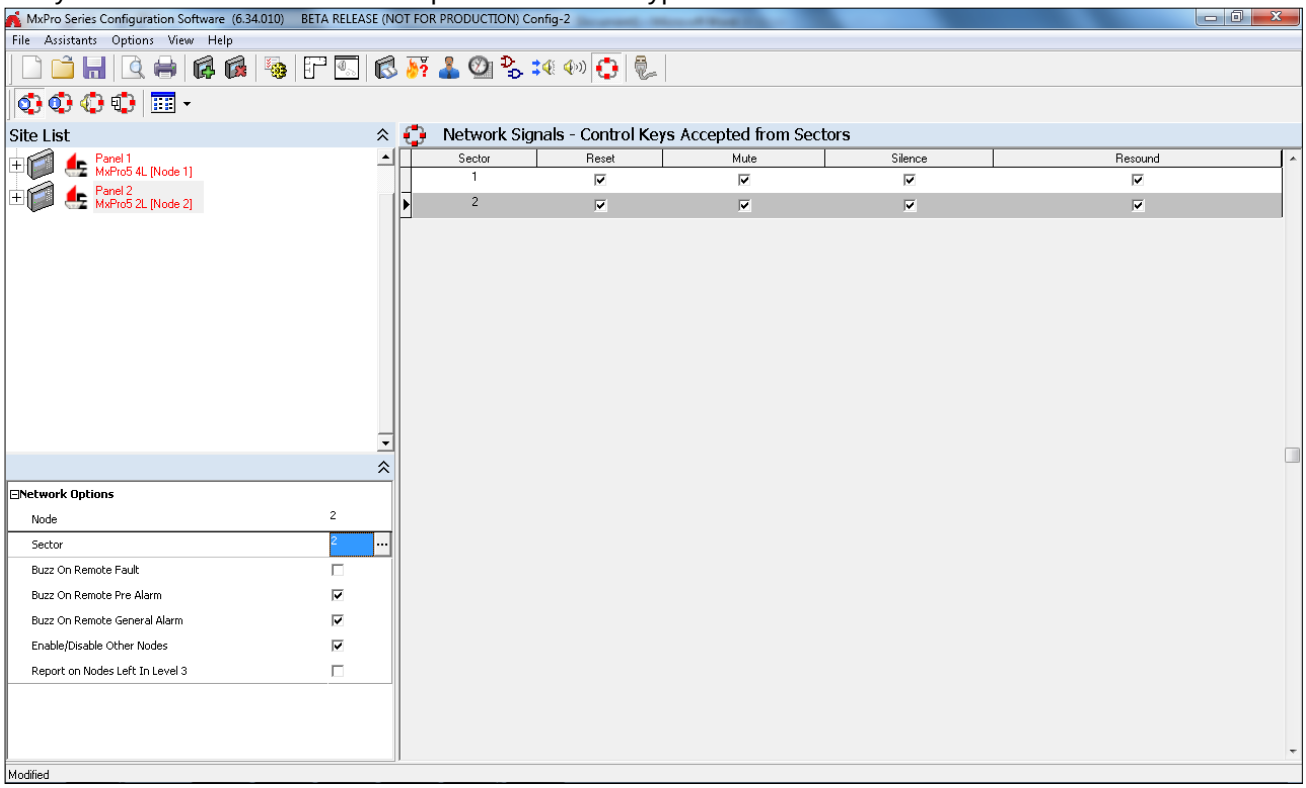
The Network Options programming screen is shown opposite and is only available for network designs.

It has up to five available toolbuttons relating to:



The function of each of the pages is described in the following sections.

* only visible when Zone status accepted is selected. Typical screen shot below.



4.18.1 Network Details

Network Node

This is used to identify the unique address of this panel within a network system.
To change the network node address, click on the up / down arrows to the right of the field to increment or decrement the number. Alternatively, click within the field to highlight the number and then enter the require address using the number keys.

Sector Number
This option allows the user to set the sector number where the selected product resides. The default sector is 1.

Each panel is assigned to a sector and many panels may reside within the same sector. The concept of a sector is used to describe how different panels may operate and interact together.

For example, a control panel in one part of a site may not wish to respond to control key actions from a second panel in another part of the site. But both panels may however want to respond to control key actions from a third panel (say in a control room). Assigning each panel to a sector allows the required interaction to be achieved.

Buzz On Remote Fault
This option specifies whether or not the selected product will sound its internal buzzer if a fault is detected elsewhere on the network. This option is not set as default.

Buzz On Remote Pre Alarm
This option specifies whether or not the selected product will sound its internal buzzer if a 'Pre Alarm' is detected elsewhere on the network. This option is set as default.
Remote Send Enable/Disable

Buzz On Remote General Alarm
This option specifies whether or not the selected product will sound its internal buzzer if a 'Plant Alarm' is detected elsewhere on the network. This option is set as default.
A ‘General Alarm’ is categorised as being from any input device assigned with the input action ‘Alarm1’, ‘Alarm2’ or ‘Alarm3’.

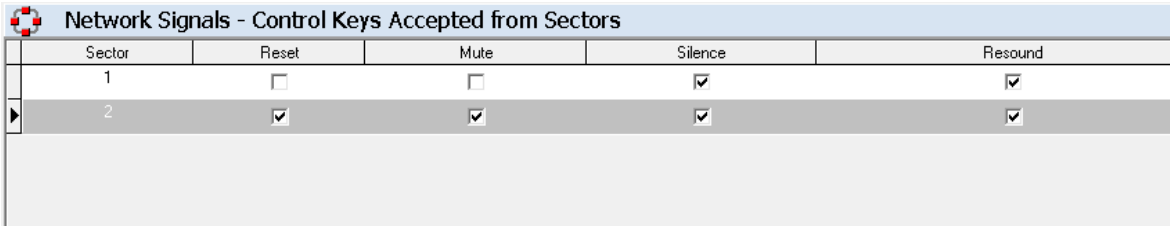
Enable/Disable Other Nodes
Each panel on a networked site can, on its LCD display, view the status of all system zones and devices on the site and (conditionally) change their disablement state.
This option specifies whether or not the selected product can perform remote enable/disable of zones or devices used by other panels. This option is set as default.

Level 3 Access
This option allows the current node to accept 'Level 3 Access' events from other nodes on the network.

4.18.2 Sector Control Keys

This option is used to define which control key actions will be accepted by the selected product over the network. These operations are defined on a sector-by-sector basis.
The screen shot below shows example settings.

The sector to which the current product belongs is highlighted. Un-checking an option will prevent the current product from responding to control keys operated in that sector.
e.g. in this example the current product will not accept a reset from any product in 'Sector 2

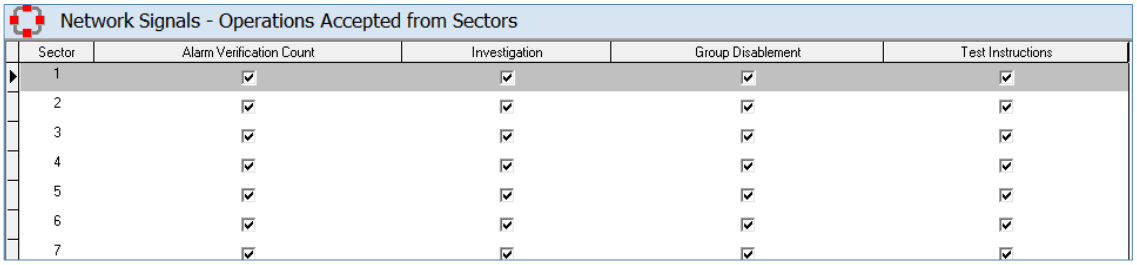


Note: Items in the products own (highlighted) sector cannot be changed, i.e. all products in the same sector will always respond to each other's control keys.

4.18.3 Sectors Operations

This option is used to define which operations the selected product will accept over the network. These are defined on a sector-by-sector basis.

The screen shot below shows the example settings for Sector Operations.
Un-checking an option will prevent the current product from responding to that operation from any product in that sector.



Note: Items in the products own (highlighted) sector cannot be changed, i.e. all products in the same sector will always accept each other's operation requests.

Alarm Verification Count
Each panel can be programmed with its own alarm verification…

Investigations
This field relates to all control panels that are programmed to use stage 1/2 investigation delays. See the control panel user manual document 680-015 for a detailed description of how the panel responds to these delays. A control panel whose investigation delays are enabled, will, after an input device is activated (and whose 'allow investigation delay' option is set), trigger the investigation delay sequence. The fact that this control panel has started an investigation delay is placed on the network along with its sector details. Other panels on the network in different sectors that are programmed to accept 'Investigations' from this sector will also start their investigation delay sequence. Similarly, subsequent user key actions to extend the delay into stage 2 will also be shared over the network and all panels programmed to accept this will enter stage 2 delay together. Although all panels would typically be programmed with the same stage 1/ stage 2 delay times, this is not strictly necessary and any stage with a shorter delay time that expires will act independently and drive it's outputs as programmed. Note: Any output with the 'allow investigation delays' option not set, will operate immediately as programmed. This is useful to drive (say) a beacon or sounder to indicate that a fire investigation is under way.

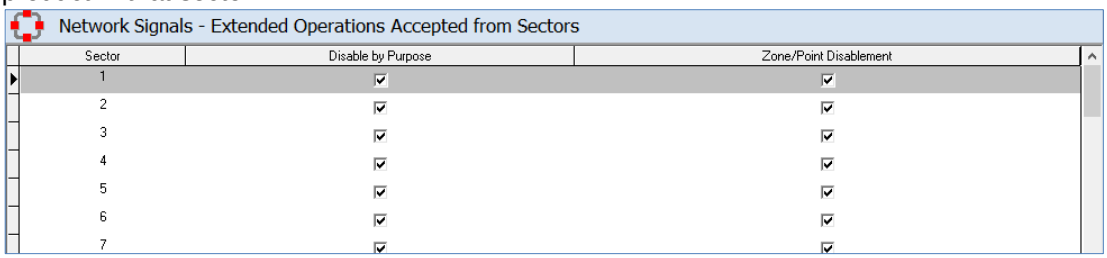
Group Disablement
Each input or output device can be assigned to belong to group for disablement purposes. The fact that a group disablement has occurred is announced on the network. Any control panel programmed to accept a group disablement from particular sectors will apply the disablement to any devices belonging to that group.

Test Instructions
Each panel can be programmed to accept zonal walk test instructions from panels in other sectors. The test details (zones, sector etc.) is placed on the network and any panels programmed to accept test instructions from this sector will apply the test to it's own devices (in the specified zones).

4.18.4Sector Extended Operations

This option allows the user to accept network isolations by ‘Purpose’ or by Zone/Point disablement.

The screen shot below shows the example settings for sector operations.
Un-checking an option will prevent the current product from responding to that operation from any product in that sector.

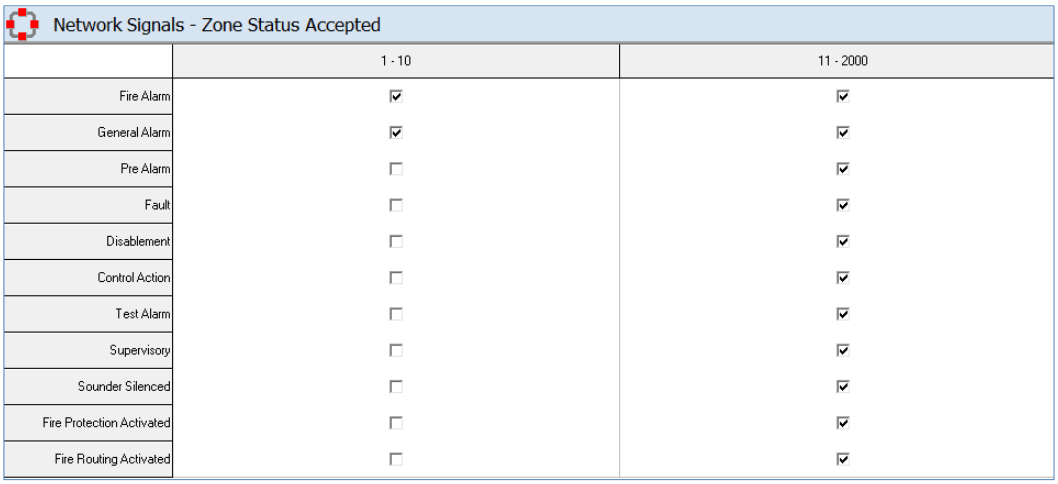

Network Signals - Extended Operations Accepted from Sectors

Sector	Disable by Purpose	Zone/Point Disablement
1	☑	☑
2	☑	☑
3	☑	☑
4	☑	☑
5	☑	☑
6	☑	☑
7	☑	☑

4.18.5 Zone Qualifiers

Each control panel will always indicate alarm and fault conditions when generated by devices directly connected to it.
For large networked sites, the amount of fault and alarm information that could possibly be displayed to the user will become very large. There may be no requirement to display information on the LCD of one panel that is related to remote zones covered by a panel at another part of the site.
The zone qualifiers option (shown below) allows each panel on a networked site to be selective as to what information is displayed on a zonal basis.
NOTE: If the zone information is not shown then the relevant conditions will not be effective in the cause and effect programming at this panel.

The screen shot below shows an example of defining the zones (1>10 and 11>2000), fires and alarms of interest. The items in the selected row can be set or cleared using the buttons, or a new zone range defined.


Network Signals - Zone Status Accepted

	1 - 10	11 - 2000
Fire Alarm	☑	☑
General Alarm	☑	☑
Pre Alarm	☐	☑
Fault	☐	☑
Disablement	☐	☑
Control Action	☐	☑
Test Alarm	☐	☑
Supervisory	☐	☑
Sounder Silenced	☐	☑
Fire Protection Activated	☐	☑
Fire Routing Activated	☐	☑

Command Buttons :
Set Row - Check all items for the current zone range
Clear Row - Clears all items for the current range
Range - Define a new zone range

4.18.6 Change Sector Display

This option allows the user to view ‘Used sectors’ only, which is by default or change to view all sectors.

Maximum sectors that can be used/viewed is 200.

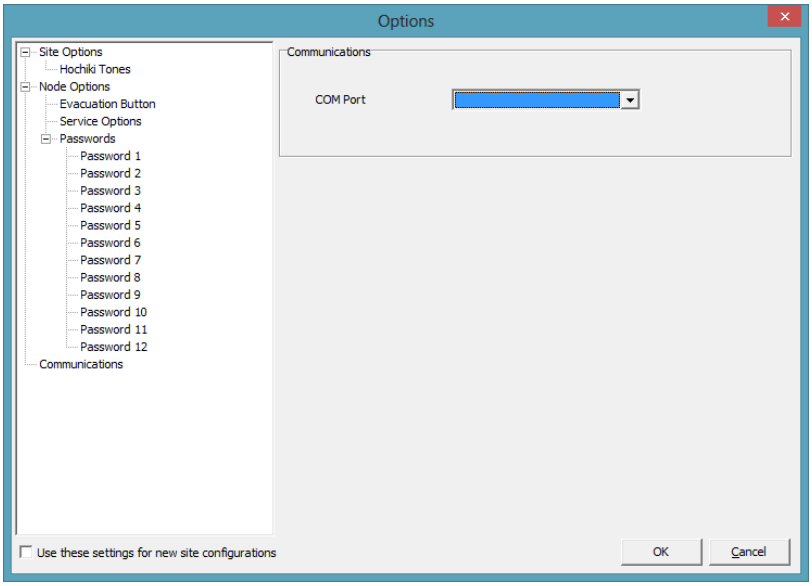
4.19 Com Port Setup

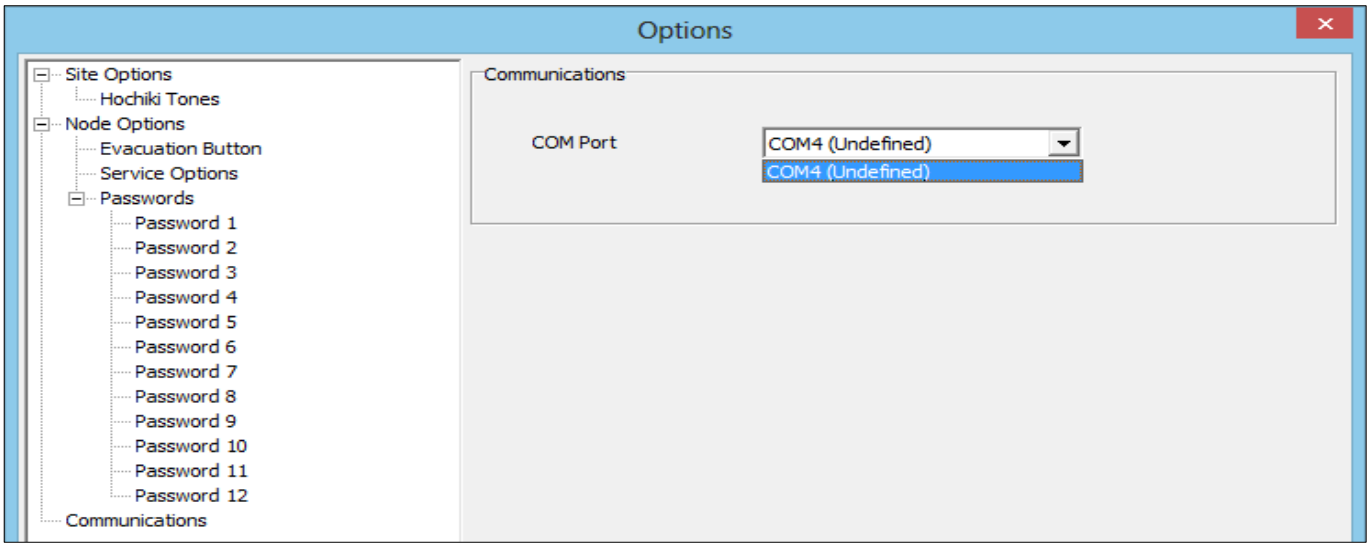
If the PC Communications Port COM1 is not available (default), the program can be configured to use a different port.

To change the COM Port, click on 'Options' and then select 'System Set-up from the drop down list. The display then shows a pop-up window as opposite.

Communications

This option allows the user to configure the default communications port used on the PC from transferring data to and from the control and indicating equipment. The communications port will present a list of coms port available on the installed PC/Laptop.





Click on the arrow button to the right of the Communications Port field and select the appropriate COM Port from the drop down list. The program will indicate the available use of COM1 to COM8 channels if these are installed in the PC. When complete, click on OK to confirm the change.

4.20 PC to Panel Communications

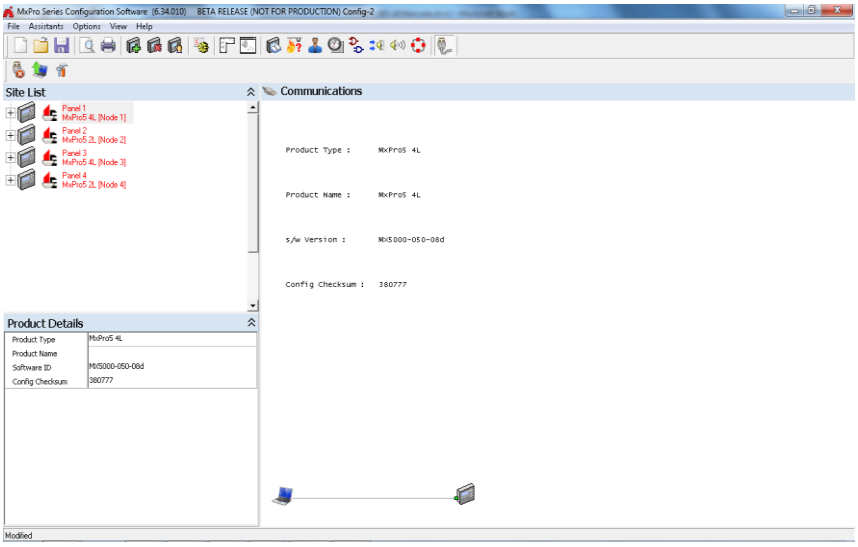


To communicate with the panel you will need to connect it to the PC using the Cable (AEL-101).
Two methods of communicating with the panel are possible.

- Click the 'Launch Mx Terminal' button to provide a virtual terminal display or transfer the event log.
- Click the 'Communications' button to allow transfer of configuration details.

When the Communications Option is selected, the PC automatically attempts to connect to the Panel. The screen shows the basic PC to Panel Details View.

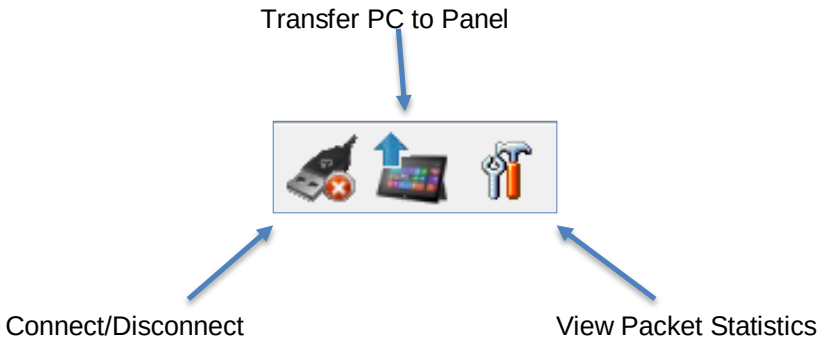
If the PC establishes successful communications with the panel, the details of the panel are shown on the screen.
The information presented includes:
- Product Type, i.e.FIREline4
- Panel Name
- Software Identification and - Version Number
- Configuration Data Checksum



At the bottom of the screen is a 'communication' status indicator. When the connection between the Panel & the PC is active the green 'indicator' moves back and forth between the two. If the connection is broken then the indicator stops moving.

4.20.1 Command Buttons

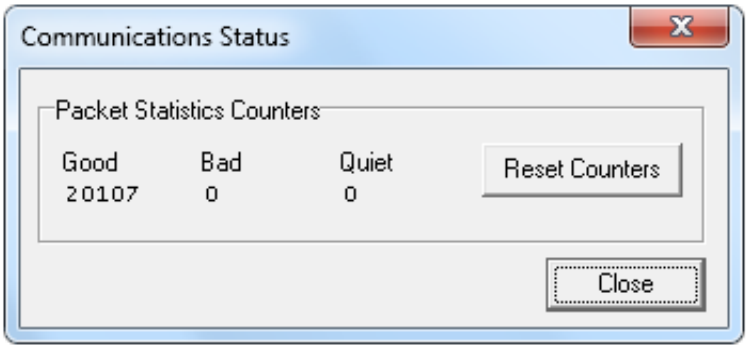
The functions of the buttons, from left to right, are as follows
:



Connect / Disconnect
Pressing the Connect / Disconnect Button makes or breaks the link between the PC and the Panel.

Transfer From PC To Panel.
This allows the user to 'upload' the configuration data to the control panel.

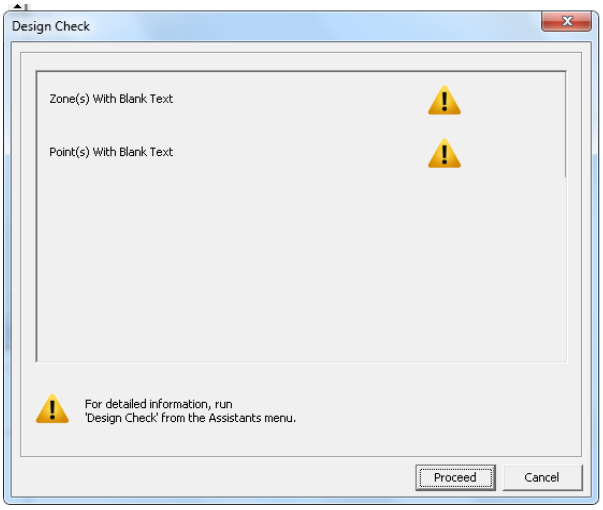
View Packet Statistics
When view Packet Statistics Button is pressed, a pop-up window is displayed on the screen as shown below. This Engineering View shows the communication packet statistics, Good, Bad & Quiet
When this view is no longer required, press the 'Close' Button to close the window and return to the configuration tool displays.



4.20.2 Receiving Configuration Data

Select 'Transfer From Panel-PC' from the File menu to extract the current configuration data from the panel. This can then be viewed, modified and saved to disk if required.

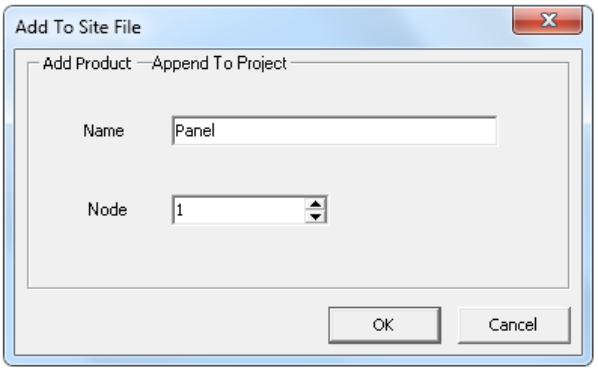
A pop-up window is shown requesting confirmation. Press the Proceed button to Continue or press Cancel.



4.20.2.1Append Product To Design

Continuing will present the user with one of the following dialogs.

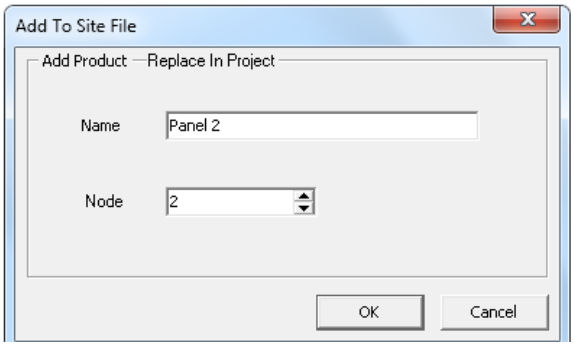
If the product name and node ar unique then it will be appended t the design.



4.20.2.2 Replace Product In Design

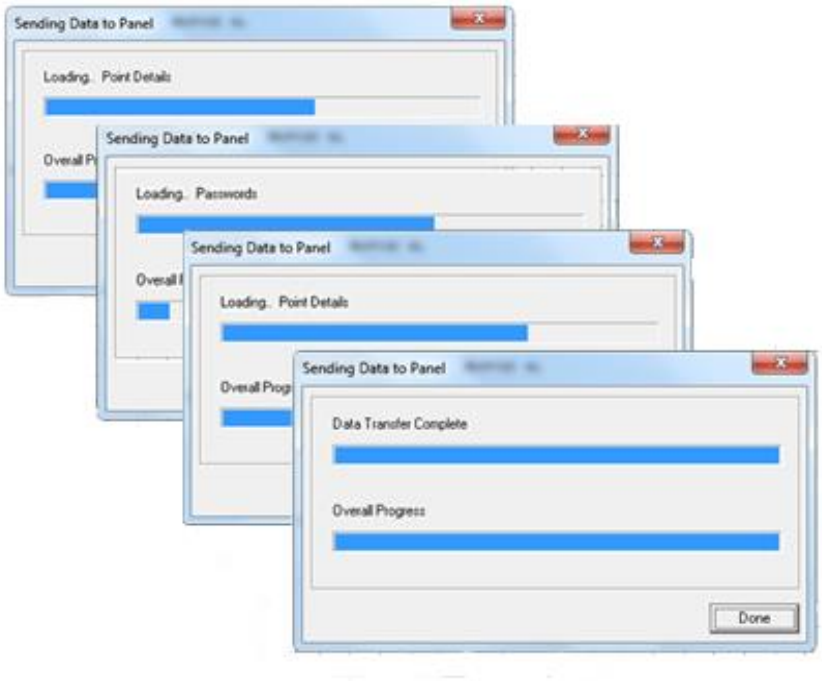
If the product name and node is the same, then it will replace the existing product in the design.

If there is a conflict with any existing product in the design then the user will be given a warning of either 'Duplicate Address' and/or 'Duplicate Name'.



4.20.2.3 Progress Bars

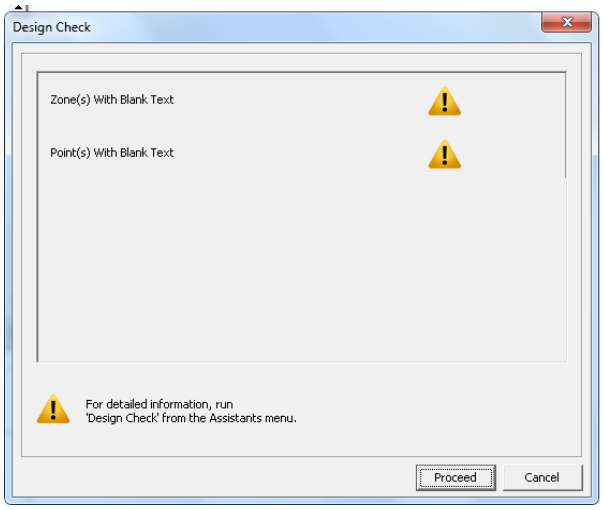
As the communications is progressing, a series of status information windows is shown detailing the information that is currently being transferred and its progress. For example, the screens opposite are a selection of possible screen views.
When all of the configuration data has been transferred, the final window shows that the Data Transfer has been 'Completed'. Press the 'Done' button to continue. The display reverts to the basic PC ⇔ Panel Connection view.
It is now possible to save, view and modify the data received.

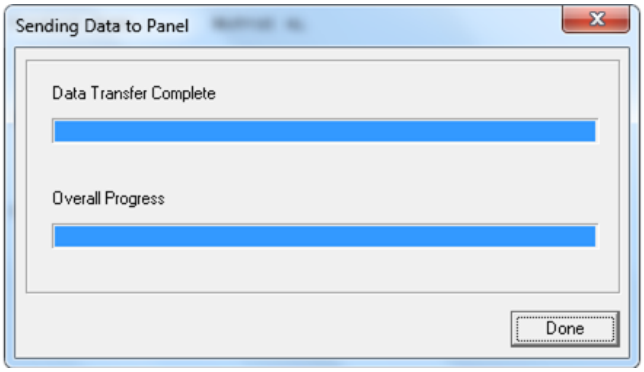


4.20.3Send Configuration Data

Press the 'Transfer Configuration Data From PC to Panel' Button to transmit the configuration data, in the PC, to the Panel.

When the button is pressed the design file is checked for errors before upload (see Check Design section for further details) . A summary is then displayed to the user. If there are any serious warnings i.e. loop current limit exceeded or unsupported devices, the upload cannot proceed until these have been resolved. The image shown to the left is an example of a 'Design Check' summary.
If the design check shows no serious warnings then the 'Proceed' button is enabled, allowing the user to upload the config data to the panel
When the Proceed button is pressed, a pop-up window is shown requesting confirmation. Press the Yes button to Continue or press the No button to Cancel.
To receive information, the panel must be in PC-CONFIG mode and the Memory Lock must be Open. If the panel is not in the correct mode, a pop-up window is shown to indicate the error. Press OK to abort this transfer session. Correct the problem and then try again.
Refer to the Panel Manual 680-014 (Fire) or 680-069 (Lighting) for further information.
Whilst the transfer is taking place, a series of status information windows is shown detailing the information that is currently being transferred and its progress similar to the Receive from Panel operation.
The final pop-up window shows that the transfer has been completed as opposite.
Press the 'Done' button to continue. The display reverts to the basic PC ⇔ Panel Connection view.

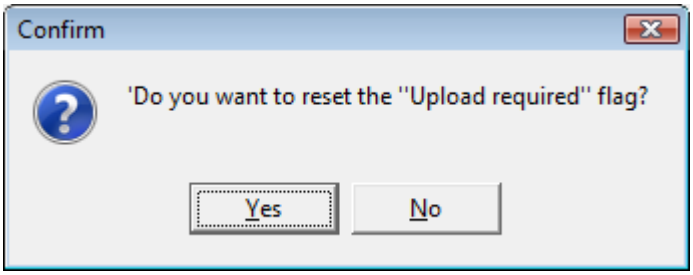




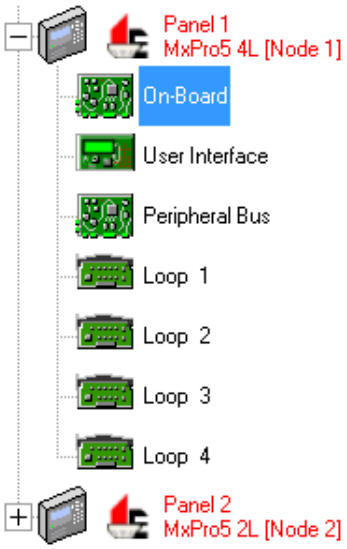
After the transfer from panel to PC the upload date is saved , this can be found under the ‘Panel details’ view.
Any changes which are then made to the config data are indicated in the tree view. i.e. new devices added to the loop etc...
The icon in the site tree will show a warning triangle. A message is also displayed in the panel details section. Ths informs the user that the config data has changed and requires uploading to updated the panel panel’s config data.

Site tree indicates config has changed and an upload is required to update the panel.

After the transfer the user is then prompted to reset the upload warning flag.



Resetting this will return panel status in the site tree view as normal again. Any subsequent changes will cause the icon in the site tree to show a warning triangle again, indicating an upload is required.



Site tree indicates panel status has not changed since the last upload.

5.0 Reports / Printing

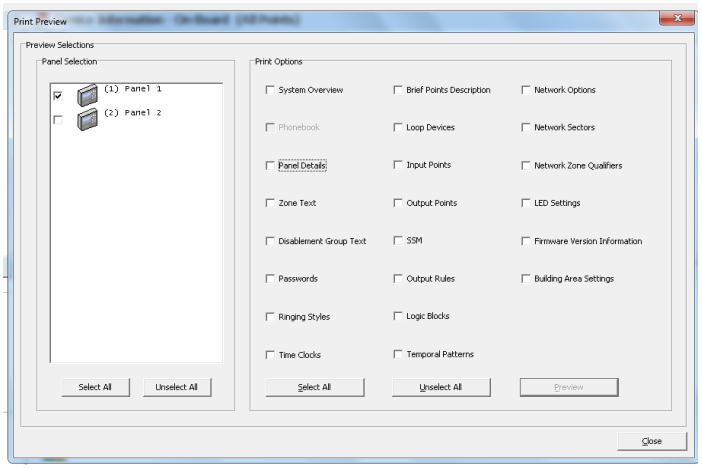
5.1 Print Preview

The configuration data can be viewed or printed as a set of formatted reports using the 'Print Preview' or 'Print' buttons shown opposite.
When either button is pressed a new window is shown from which to select the required reports.



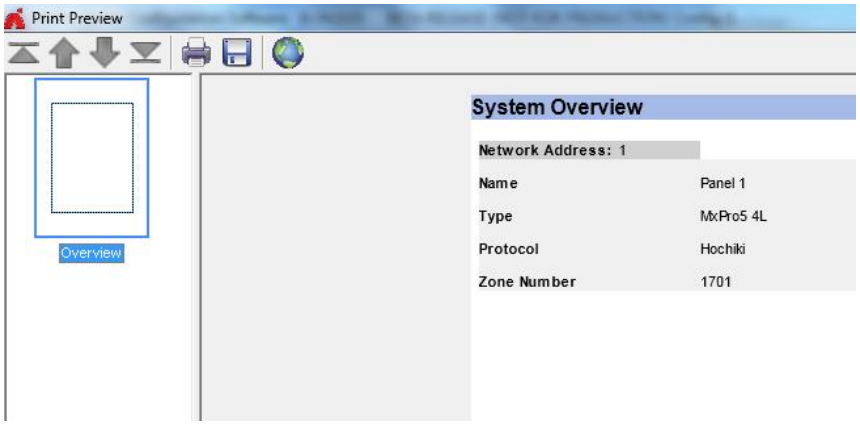
When 'Print Preview' is selected, the new window is as shown opposite.
By default, no Report Options are checked for 'Print Preview'. Select the required Report by checking the box to the left of the Report Name and then click on the 'Preview' button to view the report on the screen.
Command Buttons :

- All Products - Selects ALL products in the design for previewing.
- All Items - Selects ALL items for previewing.



In the 'Print Preview' screen, there are the following command buttons (shown from left to right in the picture):
View Options:

- Zoom to Fit
- 100%
- Zoom to Width
- Navigation:
- First Page
- Previous Page
- Next Page
- Last Page
- Printer Options:
- Printer Set-up
- Print

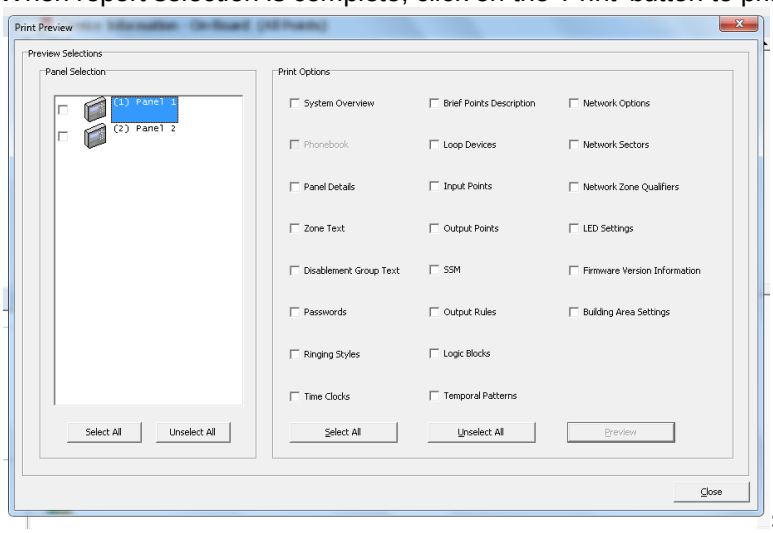


Report File Options:
- Save Report to File (The reports can be saved to disk as Quick Report (.QRP) file formats for use by future reference).
- Load Existing Report File
- Close: Return to the normal configuration tool display.

5.2 Printing

By default, no Report Options are checked when the 'Print' option is selected. 'Check' the Print Options as required.
Command Buttons :
- All Products - Selects ALL products in the design for printing.
- All Items - Selects ALL items for printing.

When report selection is complete, click on the 'Print' button to print the report



s.

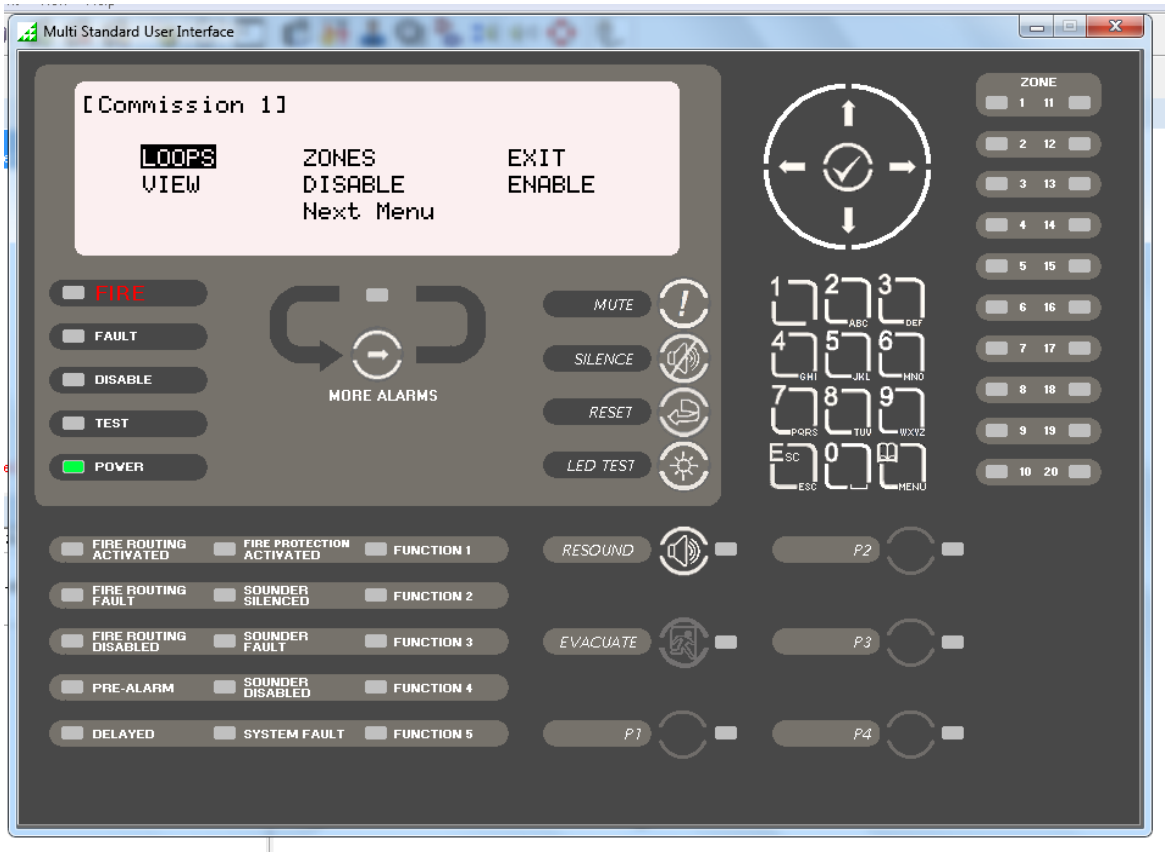
61 Mx Local Terminal 

Click the ‘Launch Mx Terminal’ button to execute the program. The display below will then be show an interactive virtual front panel display.

6.2 Virtual Panel Display

The Liquid Crystal Display and LED Indicators will operate and show information as though this screen window was physically attached to the panel. The buttons can be pressed (use the mouse to point to the required button and click the left mouse button to simulate the pressing of the button) and the panel will respond as though the buttons had been pressed on the panel.

This picture below shows the screen when the virtual panel is selected.



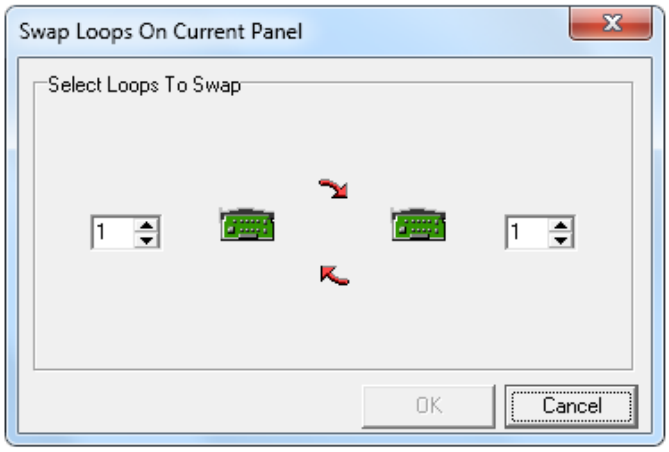
7.0 Assistants Menu

The ‘Assistant’ provides help in performing useful tasks that would normally be difficult or tedious to do manually.

7.1 Swap Loop

Select the ‘Assistant’ from the menu bar and choose the required tasks to be performed. The items displayed in the drop-down menu are context sensitive and depend upon the current selection in the site list.
Each of the tasks are described in detail in the following sub-sections.
Swap Loops

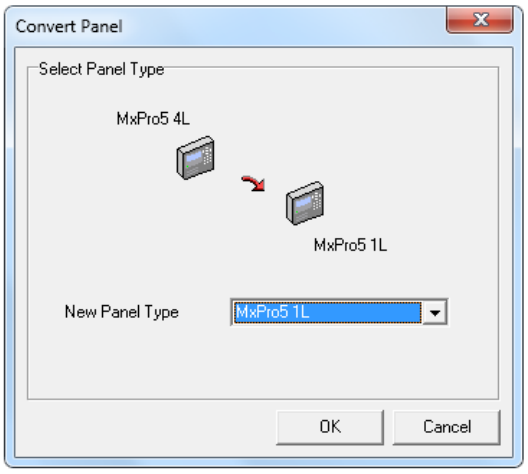
This option allows the devices assigned to 2 loops to be swapped over.
Select the 2 loops to be swapped and click the ‘OK’ button.



7.2 Convert Panel Type

This option allows the user to convert the currently selected panel to a different type.

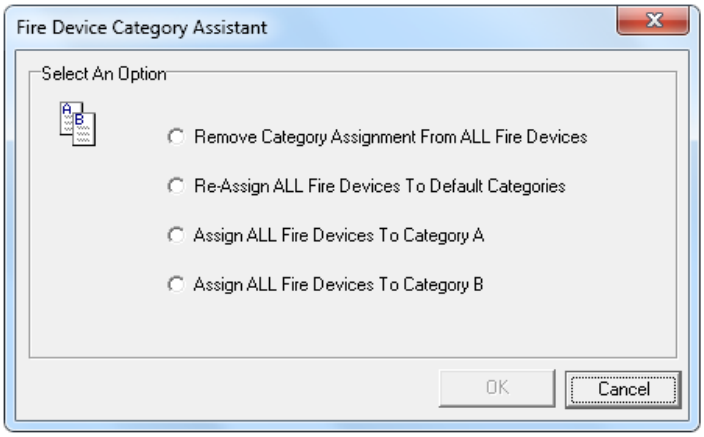
The screen shot opposite shows an example of converting an Mx5400 to an Mx5100.



The detailed configuration of loop devices and text assigned to zones will always be preserved in this operation. When converting to a panel with more loops, the configuration details of logic statements, output group rules and ringing styles are preserved. When converting to a panel with fewer loops, logic statements and output group rules are deleted. When converting to an Mx4100, any devices assigned to zone numbers greater than 250 will be clamped to zone 250.

7.3 Assign Device Category

This option allows the user to define the ‘Fire Category’ setting all fire input devices on the selected panel. The screen shot below shows the available options.



- Remove Category Assignment From ALL Fire Devices	This option clears the category assignment from all fire input device* on the selected panel.
- Re Assign ALL Fire Devices To Default Categories	This options sets all the fire input devices back to their default settings i.e. MCP's assign to 'Category A' all other fire input devices* are assigned to 'Category B'
- Assign ALL Fire Devices To Category A	This option will assign ALL the fire input devices* on the selected panel to Category A
- Assign ALL Fire Devices To Category B	This option will assign ALL the fire input devices* on the selected panel to Category B

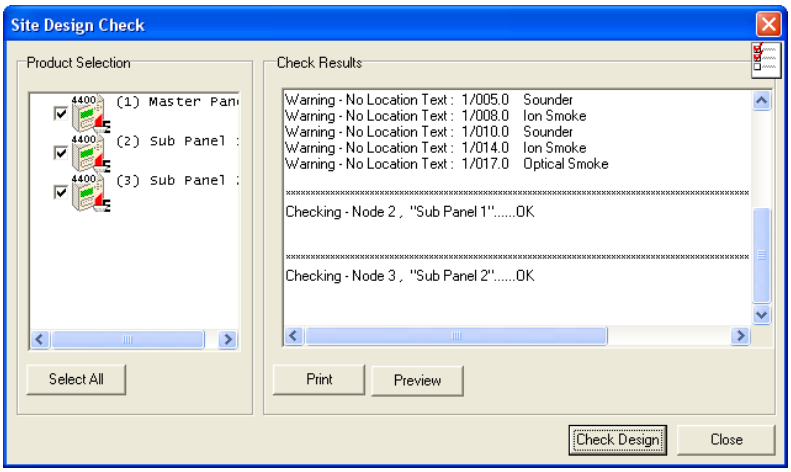
* Fire input device is any input device whose input action is set to 'Fire' or 'Fire Evacuate'

7.4 Check Design

When a configuration is deemed to be complete, it would be tedious (especially on a network design) to validate all of the details manually. The ‘Check Design’ assistant helps to validate the design for you.
Select ‘Assistant | Check Design’ from the menu bar to activate the display as shown below.
The following items will be checked for the site and specific panels:

- Used zone with no text
- Unused zone with text
- Input or output device with no text
- Duplicate zone usage (across 2 or more panels)
- Input/Output device assigned to duplicate zone
- Output with undefined output rule
- Output rule unused
- Logic statement unused
- Invalid event input action
- Invalid input event
- Loop driver current overload (when loop powered devices are activated)

The 'Treeview' allows the user to select the products to be checked.
Warnings are listed in the right hand window.

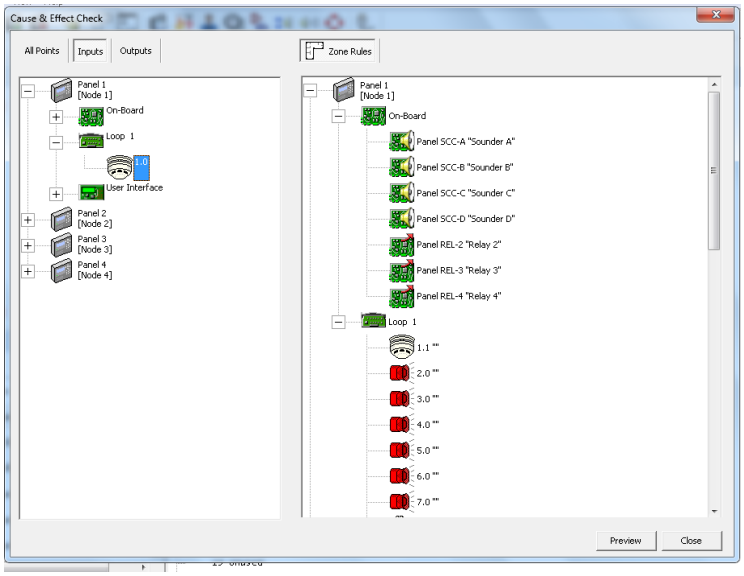


Command Buttons :
Select All - Selects all the products in the tree list. De-select a product by clicking its image in the tree list.
Print - Print the results of the design check operation
Preview - View the results of the design check operation
Check Design - Run the design checker
Close - Closes the dialog after use.

7.5 Cause & Effect Check

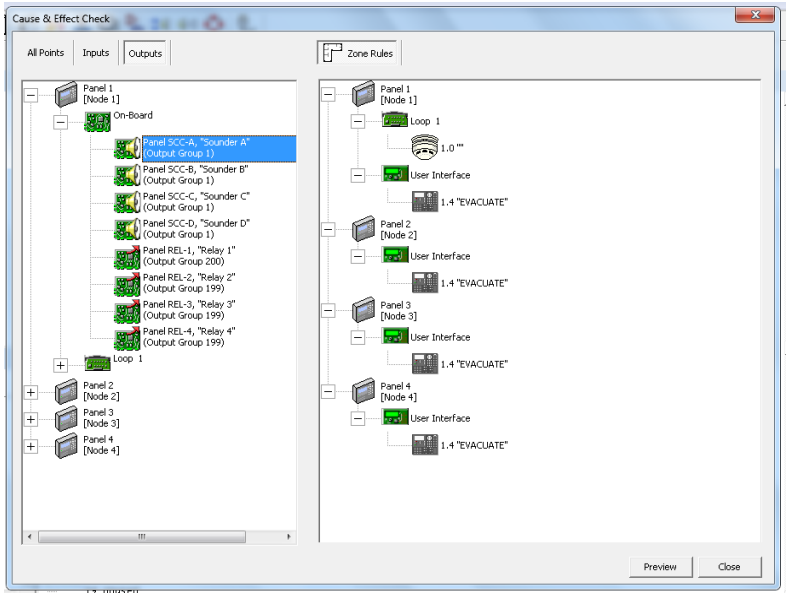
7.5.1 Outputs Driven by Inputs

This allows the user to select an I/P point on the system in the left hand window and then in the right hand window see which outputs that I/P will affect. At the right hand side is an icon which represents how the I/P affects the O/P i.e. by a Zonal rule, I/P event or by a logic statement. The example screen shot below shows that 'Panel s/w-1' will cause:-
Sounder A to activate via a zonal rule
Sounder B to activate via logic
Sounder C to activate via an I/P event



7.5.2 Inputs Driving Outputs

This allows the user to select a particular O/P point on the system and see which I/P points are responsible for activating it. The example below shows Sounder A selected in the left hand window. In the right hand window there is a list of I/P points which will cause the O/P to turn on. Again there is an icon(s) against each point to indicate whether it is part of a Zonal rule, logic statement or an I/P event.



8 Frequently Asked Questions (FAQs)

8.1 General FAQs

Q) How do I take a download or transfer data from panel to PC?
A) Enter Level 3 on the control panel and select the “Pc Config” menu. Using the Pc-Net-003 now create a new file, click on the communications icon, select the ‘File’ option in the upper left hand corner then select “transfer from panel to pc”.

Q) Can you pulse loop driven sounders?
A) There are several methods available in order to pulse loop driven sounders, the PC software is provided with ‘ringing styles’ which can be used to determine the pulse rate of the sounder. Loop driven sounder outputs can only be pulsed 1 second ON, 1 second OFF. This is protocol dependant in which the latest electronic sounders now have several different ringing tones, which can be used for alert purposes.

Q) Can I create a class change or non latching alarm condition
A) Each input can be programmed with its own dedicated input action. Control input is used for output operation with ‘No display’ on the fire alarm system, Alarm 1 is used to for output operatin and provides an Alarm indication both of which can be configured as ‘non latching’ if required. Please refer to application note 680-039 for further information.

Q) What do the modes of operation refer too on Apollo Multi-sensor type devices?
A) Each Discovery Multi sensor has the ability to change mode of operation. See below the response mode settings*.

Mode	Smoke Sensitivity (grey smoke) %/m	dB/m	Temperature Sensitivity	Response Type	Minimum Time to Alarm (seconds)
1	1.1	0.05	>15°C increase	Multisensor	20
2	2.1	0.09	Not set to heat response	Optical	30
3	2.8	0.12	>21°C increase	Multisensor	20
4	4.2	0.19	>15°C increase	Multisensor	20
5	No response to smoke		See mode 5 opposite	Heat A1R	15

*The latest mode chart is available in the discovery product engineering guide.

Q) Will I lose any of my configuration files when I upgrade the software?
A) No, all configuration data files are stored in your harddrive under a separate root directory named Advanced Data/Config Files.

Q) Is the software backwards compatible with older control panels?
A) Yes all software is designed to be fully backwards compatible.

Q) What are the latest changes in PC software?
A) All software features and changes are published on our website. If unable to locate please contact Technical Support.

8.2 False Alarm Management FAQs

Q) Once configured and in use on site, how do I know if verification has been used?
A) All verification alarms from detectors will be recorded in the panel event log.

Q) I want to configure a multi sensor to change into a heat only mode while verifying, but I can't get the Point Details to show it's "Mode (when verifying)".
A) The configuration program will only display this information if it is relevant, so it is likely that the device has not been set to verify alarms for that area of the building, or for that category of device.

For the area in question, ensure that the following have been set:
Allow Verification - YES
Verified by Mode Change - YES
Multi Sensors - ALL (or per point)

False Alarm Management (Alarm Verification Areas)

	All Areas
Operation	
Allow Verification	YES
Allow Acknowledge (AAF)	-
Verified by 2nd Device	-
Verified by Mode Change	YES
Verification Inputs	
Heat Detectors	-
Smoke Detectors	ALL
Multi Sensors	ALL
Other	-

9.0 Appendix

9.1 Input Actions

This parameter determines the type of action that will be performed when the input becomes active. The following actions are possible:

Input Action	Description
Fire Signal[3]	A Fire Alarm Condition will be generated whenever the input is active.
Pre-Alarm	A Pre-Alarm Condition will be generated whenever the input is active.
Fault Signal	A Fault Condition will be generated whenever the input is active.
Security	A Security Alert Condition will be generated whenever the input is active.
Record	A Record Entry will be stored in the Log whenever the input is active. This will be hidden from the panel status display.
Create Alarm 1	An “Alarm 1” condition will be generated whenever this input is active.
Create Alarm 2	An “Alarm 2” condition will be generated whenever this input is active.
Create Alarm 3	An “Alarm 3” condition will be generated whenever this input is active.
Key Lock	Enables / Inhibits front panel controls (Disable, Mute, Reset etc.)
-	No Action is assigned to the input.
Control Signal	Allows control of Outputs without displaying “Fault” or “Fire” or sounding buzzer.
Acknowledge	Activation of the input acknowledges a Stage 1 Investigation Delay and invokes the Stage 2 Timer
LED Test	Activation invokes a test of the panel LED Indicators.
Disable Group	Control a group of devices to allow rapid Isolation
Fire Routing Confirmed	An activation input to confirm the signal has been received by the Fire Routing Equipment.
Fire Protection Confirmed	An activation input to confirm the signal has been received by the Fire Protection Equipment.
Door Open	Logs an event on door being opened
Tamper	Generates a tamper fault
Reset	Perform a system reset
Mute	Allows the panel buzzer to be silenced
Resound	Re-activate any silenced sounders or outputs
Silence	Silence any 'Silenceable' output
Fire Evacuate	A non-latching fire alarm input

[3] Fire Alarm Conditions are latched. By default, all other conditions are non-latching. The action for smoke and certain other detectors is always fire and cannot be changed.

9.2 Output Qualifiers

Zone Rule Action	Description
Alarms	
Fire	Any fire condition detected within the selected zone range.
Double Knock	Any 2 'single incidence' fire conditions detected in the same zone within the selected zone range.
Category A	Any fire condition detected from a Category A device within the selected zone range.
Category B	Any fire condition detected from a Category B device within the selected zone range.
Pre Alarm	Any Pre Alarm condition detected within the selected zone range.
Supervisory	Any Supervisory alarm warning signal detected within the selected zone range.
General Alarm	Any Alarms (Alarm 1 ,2 or 3) condition detected within the selected zone range
Control Input	Any Control Input detected within the selected zone range.
Sounders	
Sounder Silenced	Any Sounder device silenced within the selected zone range
Sounder Disabled	Any Sounder device disabled within the selected zone range
Sounder Fault	Any Sounder device in a fault condition within the selected zone range
Test	
Test Alarm	
In a test state	Any device put into a test state within the selected zone range
Miscellaneous	
Any Input Disabled	Any input disabled within the selected zone range
Any Output Disabled	Any output disabled within the selected zone range
Any Input Enabled	Any enabled input within the selected zone range
Any Output Enabled	Any enabled output within the selected zone range
Unaccepted Condition	Any condition on the system that has not been accepted within the selected zone range
Warning	Any warning condition present within the selected zone range
Fault	Any fault condition present within the selected zone range
Fire Routing and Protection	
Fire Routing Activated	Any Fire routing condition active within the selected zone range
Fire Routing Fault	Any fault on the system associated with the transmission path of a fire routing circuit within the selected zone range
Fire Routing Disabled	Any Fire routing output disabled on the system within the selected zone range
Fire Protection Activated	Any Fire Protection active condition on the system within the selected zone range

9.3 General Events options

Gneral Event Action	Description
Alarms	
Any Fire	Any known fire on the system.
Any 2 Device Fires	Any 2 known fires on the system
Any Pre Alarm	Any known pre alarm on the system.
Any General Alarm	
Any Supervisory	Any known supervisory alarm on the system.
Any Disabled Device in Fire	Any device disabled and in fire on the system.
Any Unacknowledged Fire	Any known fire on the system that has not been acknowledged.
Any Unacknowledged Pre Alarm	Any known pre-alarm on the system that has not been acknowledged.
Any Unacknowledged General Alarm	
Any Unacknowledged Supervisory	Any known supervisory alarm on the system that has not been acknowledged.
Fire Routing and Fire Protection	
Fire Routing Activated	Any Fire routing active condition on the system. Note this can depend on whether a confirmation input is used or not.
Fire Routing Fault	Any fault on the system associated with the transmission path of a fire routing circuit.
Fire Routing Disabled	Any Fire routing output disabled on the system.
Fire Protection Activated	Any Fire Protection active condition on the system. Note this can depend on whether a confirmation input is used or not.
Alarm Verification	
Alarm Verification (Stage 1)	Any device in verification – prior to the Alarm Acknowledge Function (AAF) being operated.
Alarm Verification (Stage 2)	Any device in verification – following the Alarm Acknowledge Function (AAF) being operated.
Investigation Output Delay	
Investigation Output Delay Effective	Investigation delays are enabled on the system (either manually or via a time-clock).
Investigation Output Delay (Stage 1)	The stage-1 investigation timer is counting down (fire not yet acknowledged).
Investigation Output Delay (Stage 2)	The stage-2 investigation timer is counting down (fire acknowledged).
Faults	
Any Fault	Any fault on the system
Panel Failure	A system fault has been registered on the system. This could be due to component, loop driver failure; Display failure etc
Mains Power Failure	A mains power failure has been detected at a node on the system.
Any Unacknowledged Fault	Any fault on the system which has not been acknowledged (Mute function)
Disablements	
Any Disablement	Any disablement on the system
Sounders	
Sounder Silenced	Any sounders silenced on the system.
Sounder Fault	Any sounders in fault on the system.
Sounder Disabled	Any sounders disabled on the system.
User Access	
Access Level 1	Local node is in access level-1
Access Level 2	Local node is in access level-2
Access Level 3	Local node is in access level-3
Miscellaneous	
Always	Always active regardless of system state
Any Zone in Test	Any zone on the system is in test mode (zone test)

Any Warning	Any warning condition is active on the system. A device has started to become contaminated – but not yet affecting performance.
Recent Reset	A reset control has been issued within the output will turn ON for a typical 30 second duration +/-10 seconds for polling.
Unrestricted node on Network	A restricted node has detected an unrestricted node on the same system (Mx-5 only)

10.0: User Notes

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