

Class Change / Lockdown Configuration

MxPro



Table of Contents	Page
1 INTRODUCTION.....	3
2 WIRING THE EXTERNAL INPUT	4
2.1 EXAMPLE 1	5
2.1.1 Define the Class Change / Lockdown Input.....	5
2.1.2 Programming the Outputs	5
2.2 EXAMPLE 2	7
2.2.1 Define the Class Change / Lockdown Input.....	7
2.2.2 Programming the Outputs	7
2.3 EXAMPLE 3	9
2.3.1 Define the Class Change / Lockdown Input.....	9
2.3.2 Specify Special Situations.....	9
2.3.3 Programming the Outputs	10
2.3.4 Configure the Ringing Style	11
2.4 EXAMPLE 4	12
2.4.1 Define the Class Change / Lockdown Input.....	12
2.4.2 Programming the Outputs	13
2.5 EXAMPLE 5	15
2.5.1 Define the Class Change / Lockdown Input.....	15
2.5.2 Programming the Outputs	15
2.6 EXAMPLE 6	17
2.6.1 Define the Class Change / Lockdown Input.....	17
2.6.2 Programming the Outputs	17
3 USER NOTES.....	19

1 Introduction

In applications where the fire alarm system is to be used for class change purposes or lockdown, it is advisable that the building should have effective emergency planning or evacuation and that they are regularly tested.

This guide is intended to be used to help configure the MxPro fire alarm system to generate an emergency tone or alert the responsible person: -

- a) In an emergency/lockdown situation.
- b) Class change notification, for a non-latching audible tone used for short durations.

A common requirement is for the fire panel to turn on some sounders* or relays under control of an external non-latching input and automatically “reset” when this signal is removed.

*Where sounder/beacon type devices are used, check sounder device compatibility/limitations for further guidance.

Lockdown: A suitable risk assesment should be undertaken when using a lockdown type procedure. Incorrect response to an incident can endanger lives.

The following gives common examples for “Class Change / “Lockdown” situations.

Example 1

- The class change / Lockdown alarm signal is initiated from a clean-contact external input.
- The panel display is to indicate that a class change / lockdown signal is present.
- Sounder circuit “A” is to pulse whenever the class change / lockdown signal is present.

Example 2

- The class change / lockdown alarm signal is initiated from a key switch.
- The panel display does not change when the input is activated.
- Sounder circuit “A” is to pulse whenever the class change / lockdown signal is present.

Example 3

- The class change / lockdown alarm signal is initiated from a clean-contact external programmable timer input that closes the contact for 1-minute.
- The panel display does not change when the input is activated.
- Sounder circuit “A” is to pulse for 10-seconds whenever the class change / lockdown signal input is activated and then automatically turn off.

Example 4

- The class change / Lockdown alarm signal is initiated from a push button on the front of the display.
- The panel display is to indicate that a class change / lockdown signal is present.
- Sounder circuit “A” is to pulse whenever the class change / lockdown signal is present.

Example 5

- The class change / Lockdown alarm signal is initiated from an input within the panel.
- The panel display does not change when the input is activated.
- Sounder circuit “A” is to pulse whenever the class change / lockdown signal is present.

Example 6

- The class change / Lockdown alarm signal is initiated from an input on the loop.
- The panel display is to indicate that a class change / lockdown signal is present.
- Sounder circuit “A” is to pulse whenever the class change / lockdown signal is present.

2 Wiring the External Input

On an Mx Pro 4, the external input can be wired to either:

- a) One of the 8 programmable panel inputs. An 8-way input terminal board with built in filters is available for the Mx-4200 & Mx-4400 panels – part no MXP-014 or
- b) A switch input on any of the loops. For example, an Apollo 'switch monitor' unit, or a Hochiki SIO unit.

On an Mx Pro 5, the external input can be wired to either:

- a) One of the 8 programmable panel inputs on the back of the display card or
- b) A switch input on any of the loops. For example, an Apollo 'switch monitor' unit, or a Hochiki SIO unit or
- c) Panel input 9 on the base card.

The choice is simply dependent upon the required speed of response (e.g. panel inputs are faster than loop inputs) and convenience of wiring. The time it takes for the panel to recognize the status change on the input is shown in the table below. Take care to ensure that the type of input and the time response meet the operational requirements.

Input Type	Time to Activate (Typical)	Time to De-activate (Typical)
Panel Switch Input	< 1 second	< 1 second
Apollo Switch Monitor	8 to 16 seconds	8 to 16 seconds
Apollo Switch Monitor Plus	2 seconds	8 to 16 seconds
Hochiki Input Monitor	3 seconds	3 seconds

The examples below show a panel input being used for the class change / lockdown input. Simple zonal programming is used in these examples, but programming by individual Input Events can also be used if required.

There are many alternative forms of “Class Change” / “Lockdown” applications. Please contact Technical Support if your application has differing requirements to these examples.

2.1 Example 1

2.1.1 Define the Class Change / Lockdown Input

This is an example where the “Class change” / “Lockdown” represents an alarm condition and wants to be shown on the display.

The screenshot displays the Apollo MxPro4 2L software interface. On the left, the 'Site List' shows a tree view with 'On-Board' selected. Below it, the 'Point Details' window shows the configuration for 'Panel S/W-1'.

Property	Value
Address	Panel S/W-1
Type	Switch
Location Text	External Alert
Zone	80
Input Action	General Alarm
Incidence	Double Knock
Investigation Output Delay	<input type="checkbox"/>
Input Latched	<input type="checkbox"/>
Input Trigger	Active High
Disablement Group	0
SSM/Time Clock No	Unused

At the bottom of the Point Details window, there is a checkbox for 'Sensitivity Adjust Mode'.

On the right, the 'Device Information - On-Board (All Points)' list shows various panels and their configurations. The 'Panel S/W-1, Zone 80 "External Alert"' is highlighted in blue.

In this example:

- The “Action” of the input has been changed from “No Action” to a “General Alarm” input.
- Unlike standard fire inputs, the “Input latched” box is NOT ticked, allowing the panel to automatically reset once the signal is removed.
- “External Alert” has been entered as the device text (Use any text that is appropriate for your application). This will be displayed on the panel whenever the class change / lockdown input is activated.
- The input has been assigned to a unique zone (in this example 80, but any number that does not conflict with a fire zone can be used – text can also be assigned to this zone as required).

2.1.2 Programming the Outputs

The default for the outputs in Group-1 (i.e. sounder circuit A) is shown below.

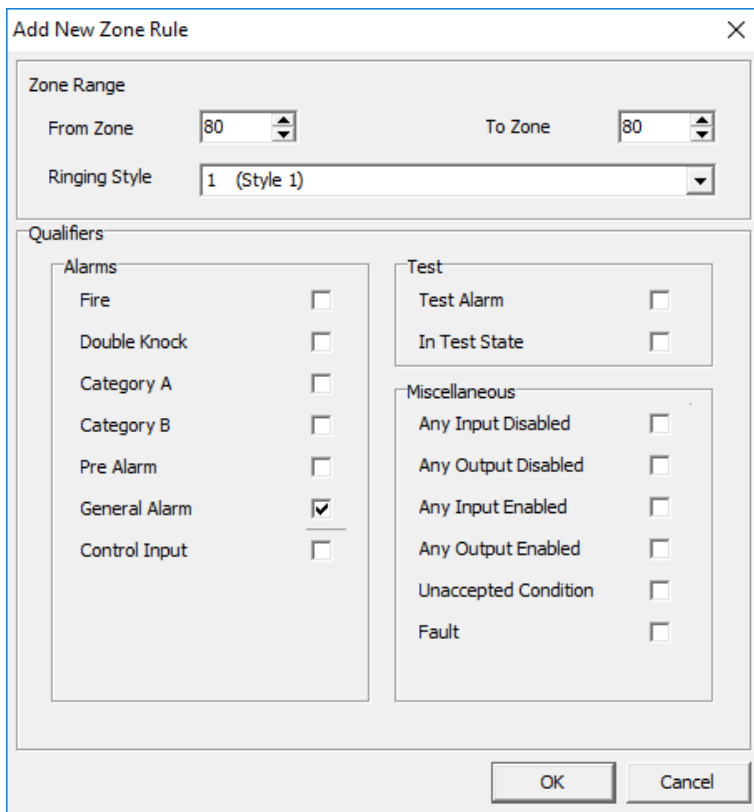
The screenshot displays the Apollo MxPro4 2L software interface. On the left, the 'Site List' shows a tree view with 'On-Board' selected. Below it, the 'Output Group Text' window shows the configuration for 'Group-1'.

Property	Value
Group No	1
Group Text	

On the right, the 'Cause And Effect Output Groups' list shows various groups and their configurations. 'Group-1' is highlighted in blue. Below it, the configuration for 'Group-1' is shown: 'Style 0 (Style 0), Zone 1 - 1000 Fire (+)'. Other groups listed include 'Group-2', 'Group-199', and 'Group-200'.

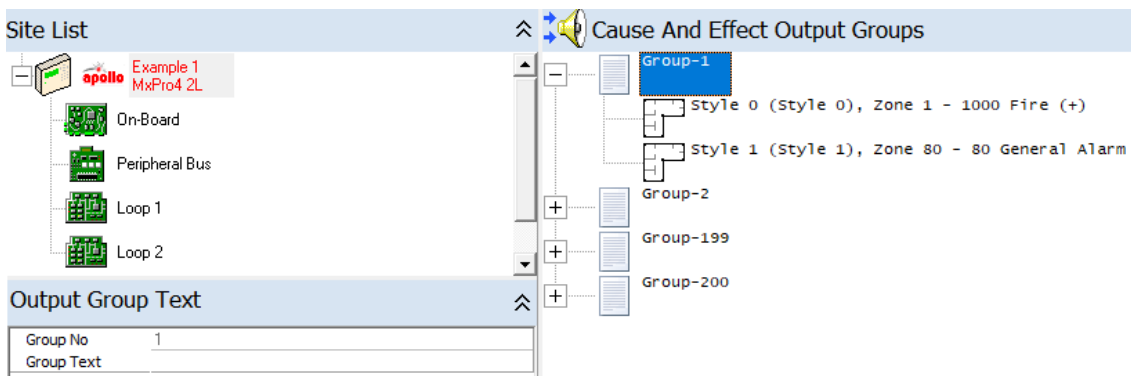
To this group we must now add the additional requirement for these outputs to turn on for the class change / lockdown alarm (In the above example, this is an alarm from zone 80).

To add the control condition, with the group highlighted, select the “Add Zone Rule” option and define the additional group settings as shown below: -



Note that the zone range has been defined just for zone 80, and the “General Alarm” has been selected as the “Cause”. In this example the ringing style has been set to 1, but any other ringing style can be used as appropriate. Select “OK”.

The total Cause and Effects List for group 1 will then show as:



2.2 Example 2

2.2.1 Define the Class Change / Lockdown Input

This is an example where the “Class change” / “Lockdown” does not represent an alarm condition and does not want to be shown on the display.

Site List

- Example 2 MxPro4 2L
 - On-Board
 - Peripheral Bus
 - Loop 1
 - Loop 2

Point Details

Address	Panel S/W-1
Type	Switch
Location Text	External Alert
Zone	80
Input Action	Control Signal
Incidence	Double Knock
Investigation Output Delay	<input type="checkbox"/>
Input Latched	<input type="checkbox"/>
Input Trigger	Active High
Disablement Group	0
SSM/Time Clock No	Unused

Device Information - On-Board (All Points)

- Panel SCC-A, Zone 200 "Sounder A", Output Group 1
- Panel SCC-B, Zone 200 "Sounder B", Output Group 2
- Panel S/W-1, Zone 80 "External Alert"**
- Panel S/W-2, Zone 200 "Panel Input 2"
- Panel S/W-3, Zone 200 "Panel Input 3"
- Panel S/W-4, Zone 200 "Panel Input 4"
- Panel S/W-5, Zone 200 "Panel Input 5"
- Panel S/W-6, Zone 200 "Panel Input 6"
- Panel S/W-7, Zone 200 "Panel Input 7"
- Panel S/W-8, Zone 200 "Panel Input 8"
- Panel REL-1, Zone 200 "Relay 1", Output Group 200
- Panel REL-2, Zone 200 "Relay 2", Output Group 199
- Panel O/C-1, Zone 200 "Output 1", Output Group 199
- Panel O/C-2, Zone 200 "Output 2", Output Group 199

In this example:

- The “Action” of the input has been changed from “No Action” to a “Control Signal” input.
- Unlike standard fire inputs, the “Input latched” box is NOT ticked, allowing the panel to automatically reset once the signal is removed.
- “External Alert” has been entered as the device text (This will only be displayed at the panel if inputs are manually selected).
- The input has been assigned to a unique zone. In this example 80, but any number that does not conflict with a fire zone can be used – text can also be assigned to this zone as required.

2.2.2 Programming the Outputs

The default for the outputs in Group-1 (i.e. sounder circuit A) is to turn on for any fire.

Site List

- Example 2 MxPro4 2L
 - On-Board
 - Peripheral Bus
 - Loop 1
 - Loop 2

Cause And Effect Output Groups

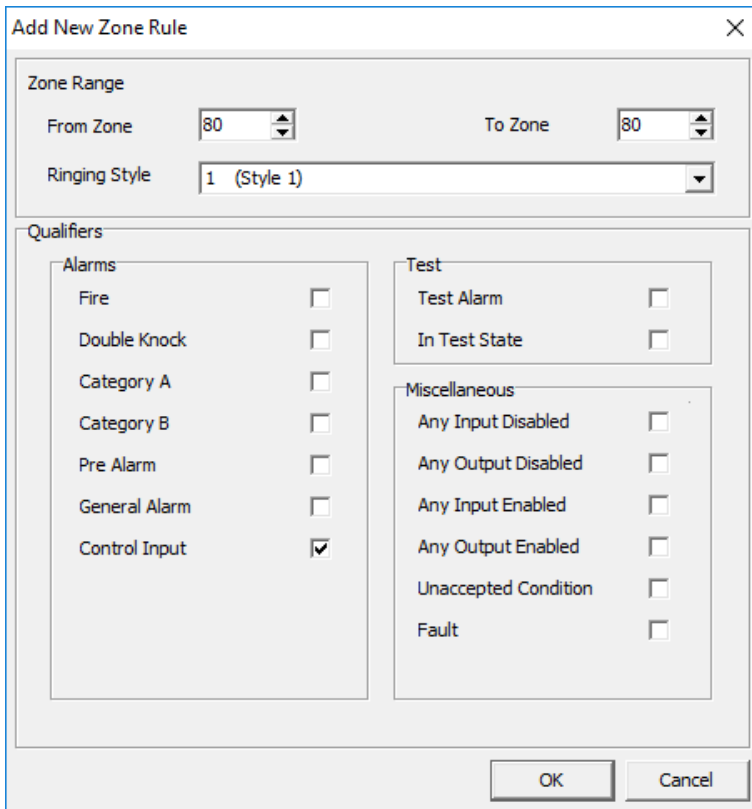
- Group-1**
 - Style 0 (Style 0), Zone 1 - 1000 Fire (+)
- Group-2
- Group-199
- Group-200

Output Group Text

Group No	1
Group Text	

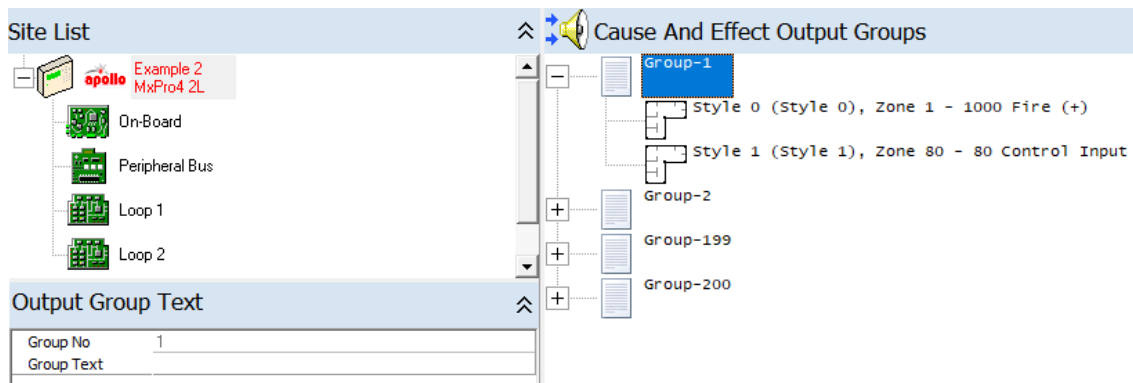
To this group we must now add the additional requirement for these outputs to turn on for the class change / lockdown signal (In this example, this is a “Control Signal” from zone 80).

To add the control condition, with the group highlighted, select the “Add Zone Rule” option and define the additional group settings as shown below: -



Note that the zone range has been defined just for zone 80, and the “Control Input” has been selected as the “Cause”. In this example the ringing style has been set to 1, but any other ringing style can be used as appropriate. Select “OK”.

The total Cause and Effects List for group 1 will then show as:



2.3 Example 3

2.3.1 Define the Class Change / Lockdown Input

This is an example where the “Class Change” / “Lockdown” does not represent an alarm condition and does not want to be shown on the display.

The screenshot displays the Apollo MxPro4 2L software interface. On the left, the 'Site List' shows a tree view for 'Example 3 MxPro4 2L' with components: On-Board, Peripheral Bus, Loop 1, and Loop 2. Below it, the 'Point Details' table shows configuration for 'Panel S/W-1':

Address	Panel S/W-1
Type	Switch
Location Text	External Alert
Zone	80
Input Action	Control Signal
Incidence	Double Knock
Investigation Output Delay	<input type="checkbox"/>
Input Latched	<input type="checkbox"/>
Input Trigger	Active High
Disablement Group	0
SSM/Time Clock No	Unused

At the bottom left, a checkbox for 'Sensitivity Adjust Mode' is checked. On the right, the 'Device Information - On-Board (All Points)' list shows various components, with 'Panel S/W-1, Zone 80 "External Alert"' highlighted in blue.

In this example:

- The “Action” of the input has been changed from the standard fire input to a “Control Signal” input.
- Unlike standard fire inputs, the “Input latched” box is NOT ticked, allowing the panel to automatically reset once the signal is removed.
- “External Alert” has been entered as the device text (This will only be displayed at the panel if inputs are manually selected).
- The input has been assigned to a unique zone. In this example 80, but any number that does not conflict with a fire zone can be used – text can also be assigned to this zone as required.

2.3.2 Specify Special Situations

To allow special ringing styles, where it is possible to program a time delay then off operation, it is necessary to select the 'Allow Special Situations' option (This only applies to Mx Pro 4).

The screenshot displays the Apollo MxPro4 2L software interface. On the left, the 'Site List' shows the same tree view as above. Below it, the 'Panel Details' table shows configuration for 'Example 3':

General	
Name	Example 3
Panel Zone	200
Log Mode	Standard
FARE Outputs	Unused
Resound Alarms	New Zone In Fire
First Loop Designation	1
Allow Special Situations	<input checked="" type="checkbox"/>
ESPA Pager Interface	<input type="checkbox"/>
Verification Method	Not Required

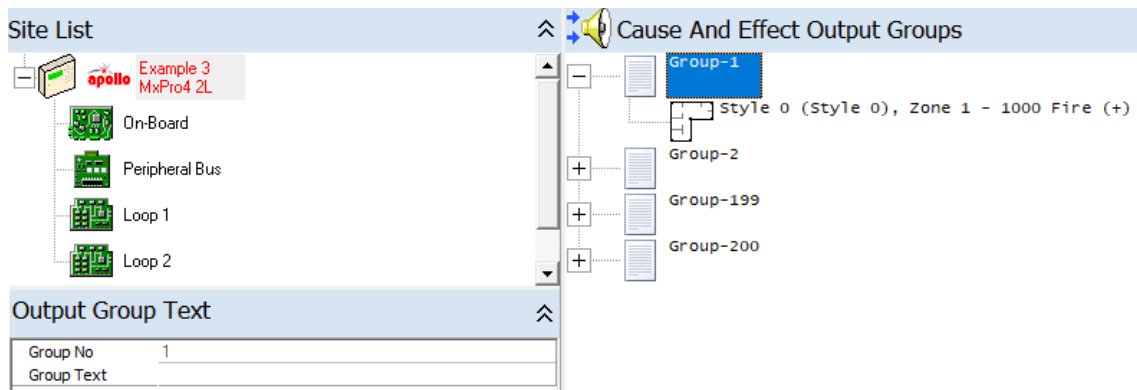
On the right, the 'Panel Summary' section shows statistics for 'Example 3, Zone 200':

- Points Used.....0/954
- Output Rule Lines Used.....5/1150
- Logic Lines Used.....0/500
- Zones Used.....2/200
- Events Used.....24/250
- Last Download.....Not Performed Yet
- Last Upload.....Not Performed Yet

Below the statistics is a 'Notes' section with a text area.

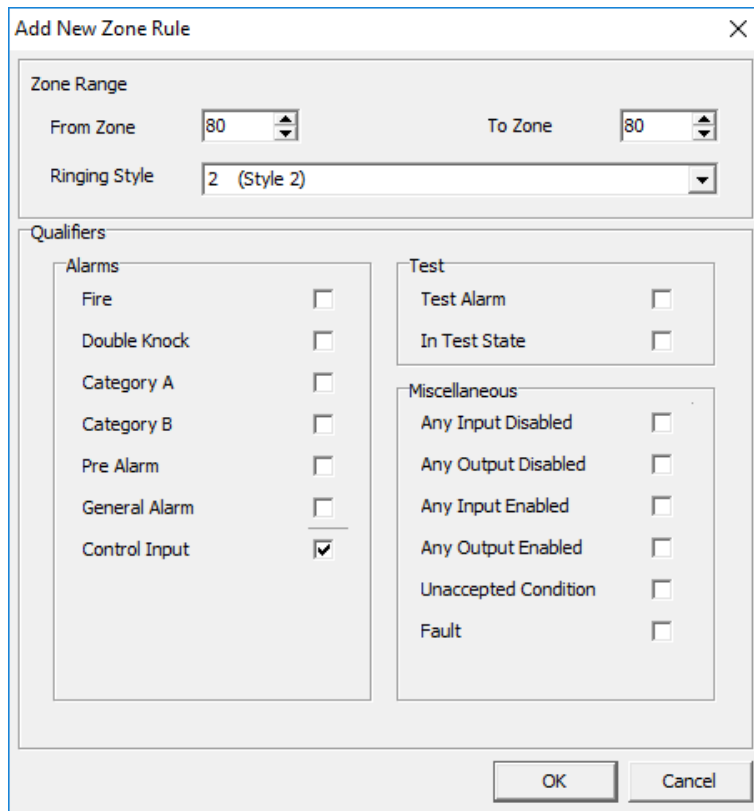
2.3.3 Programming the Outputs

The default for the outputs in group-1 (i.e. sounder circuit A) is to turn on for any fire.



To this group we must now add the additional requirement for these outputs to turn on for the class change / lockdown signal (In this example, this is a “Control Signal” from zone 80 and a special ringing style).

To add the control condition, with the group highlighted, select the “Add Zone Rule” option and define the additional group settings as shown below: -



Note that the zone range has been defined just for zone 80, and the “Control Input” has been selected as the “Cause”. In this example, ringing style number 2 has been selected but any ringing style number can be chosen that is not used elsewhere. Select “OK”.

The total Cause and Effects List for group 1 will then show as:

2.3.4 Configure the Ringing Style

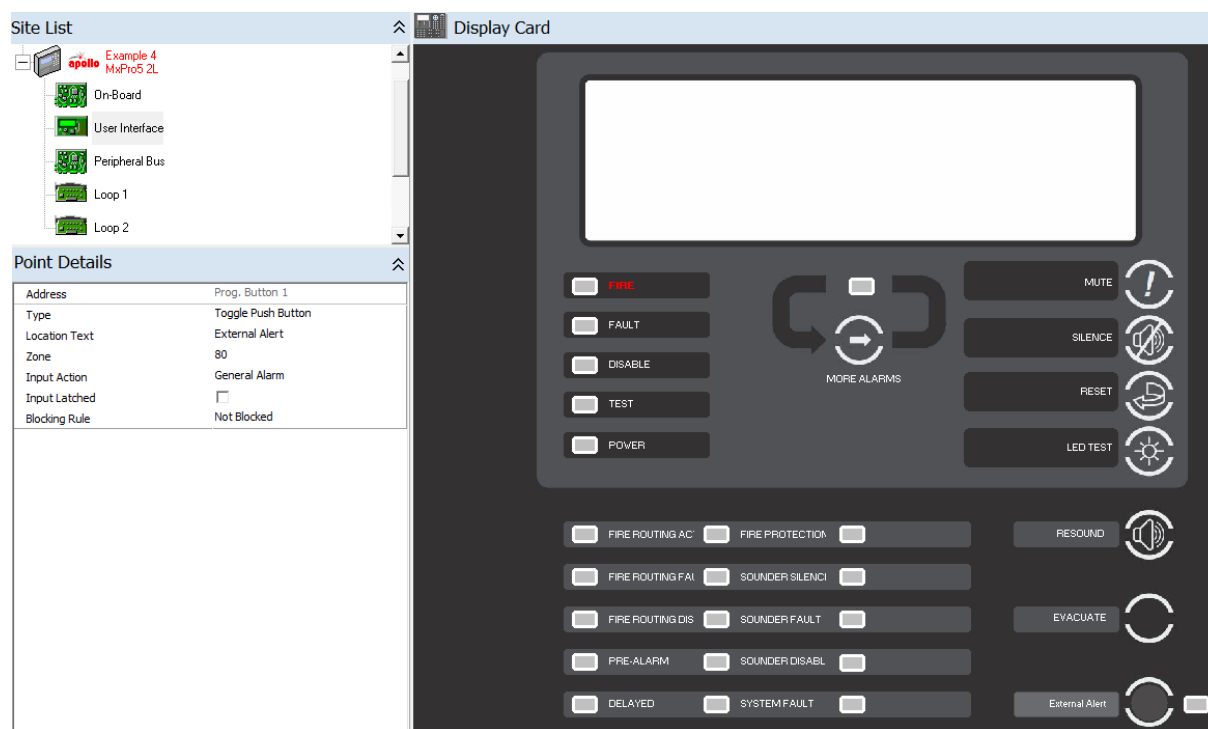
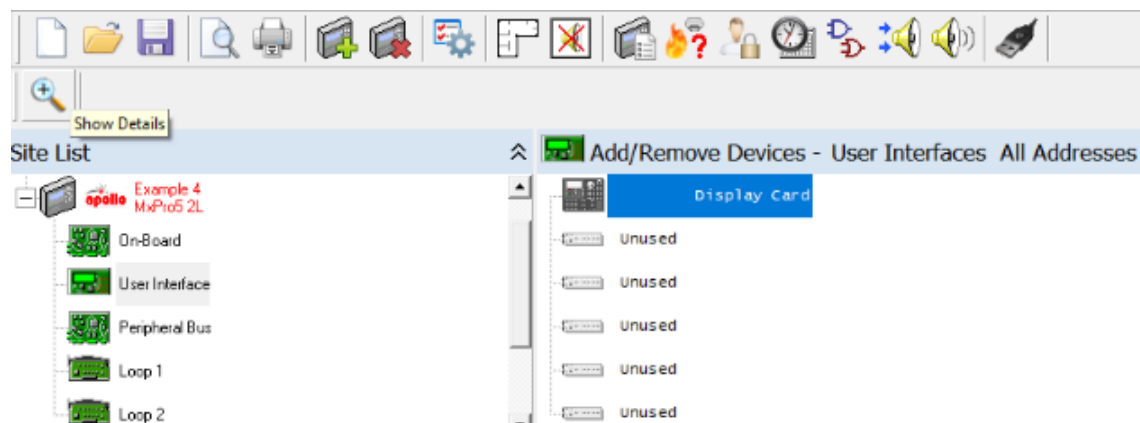
Select Ringing Style Number 2 and then configure the operation for Phases 1 and 2 as shown in the example below:

Configure the first phase to pulse immediately and then configure the second phase to turn OFF after a delay of 10-seconds.

2.4 Example 4

2.4.1 Define the Class Change / Lockdown Input

This is an example where the “Class change” / “Lockdown” represents an alarm condition and wants to be shown on the display.

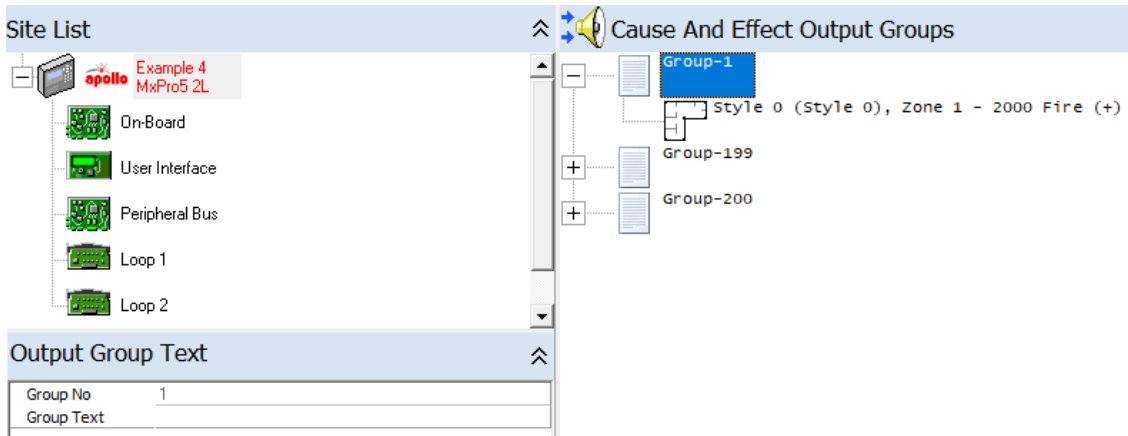


In this example:

- The “Action” of the input has been changed from “No Action” to a “General Alarm” input.
- Unlike standard fire inputs, the “Input latched” box is NOT ticked, allowing the panel to automatically reset once the signal is removed.
- “External Alert” has been entered as the device text (Use any text that is appropriate for your application). This will be displayed on the panel whenever the class change / lockdown input is activated.
- The input has been assigned to a unique zone (in this example 80, but any number that does not conflict with a fire zone can be used – text can also be assigned to this zone as required).

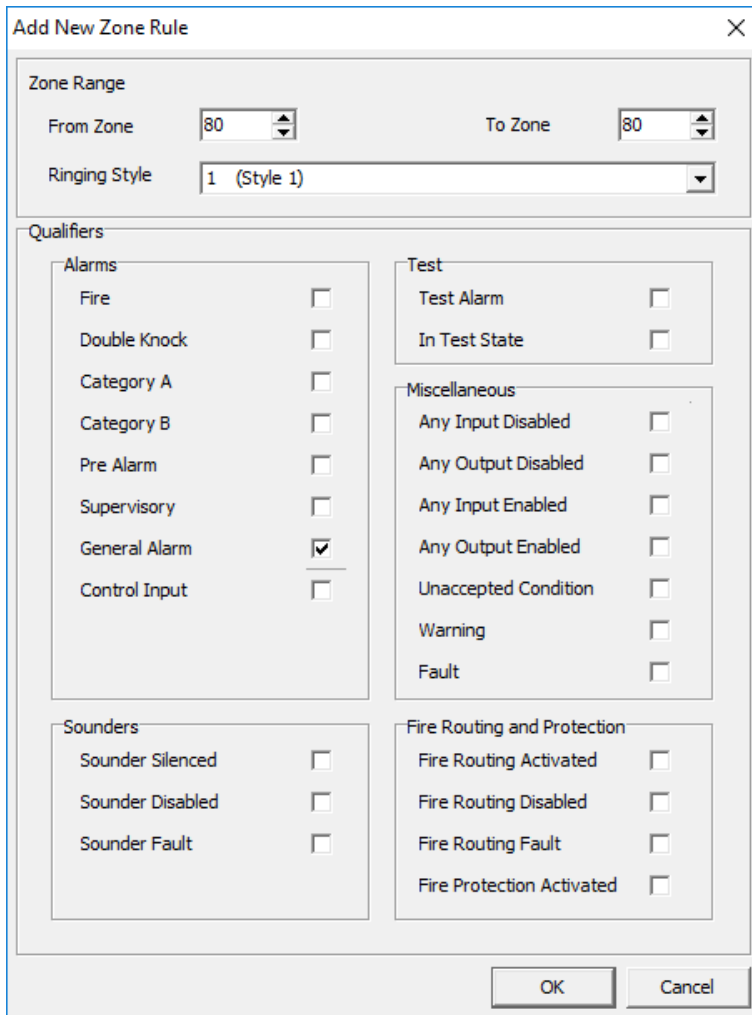
2.4.2 Programming the Outputs

The default for the outputs in Group-1 (i.e. sounder circuit A) is shown below.



To this group we must now add the additional requirement for these outputs to turn on for the class change / lockdown alarm (In the above example, this is an alarm from zone 80).

To add the control condition, with the group highlighted, select the “Add Zone Rule” option and define the additional group settings as shown below: -



Note that the zone range has been defined just for zone 80, and the “General Alarm” has been selected as the “Cause”. In this example the ringing style has been set to 1, but any other ringing style can be used as appropriate. Select “OK”.

The total Cause and Effects List for group 1 will then show as:

The screenshot displays a software interface for configuring fire alarm systems. It is divided into three main sections:

- Site List:** Located on the left, it shows a tree view of components for 'Example 4 MxPro5 2L'. The components listed are: On-Board, User Interface, Peripheral Bus, Loop 1, and Loop 2.
- Cause And Effect Output Groups:** The central panel shows a tree view of output groups. 'Group-1' is selected and highlighted in blue. Under 'Group-1', there are two sub-items: 'Style 0 (Style 0), Zone 1 - 2000 Fire (+)' and 'Style 1 (Style 1), Zone 80 - 80 General Alarm'. Below these, 'Group-199' and 'Group-200' are listed with expand/collapse icons.
- Output Group Text:** A table at the bottom for editing the text for a specific group.

Group No	Group Text
1	

2.5 Example 5

2.5.1 Define the Class Change / Lockdown Input

This is an example where the “Class change” / “Lockdown” does not represent an alarm condition and does not want to be shown on the display.

The screenshot displays the Apollo MxPro5 2L software interface. On the left, the 'Site List' shows the selected site 'Example 5 MxPro5 2L' with a tree view of components: On-Board, User Interface, Peripheral Bus, Loop 1, and Loop 2. The main area is titled 'Device Information - On-Board (All Points)' and lists various points. The point 'Panel S/W-9, Zone 80 "External Alert"' is highlighted in blue. Below this, the 'Point Details' section shows the following information:

Address	Panel S/W-9
Type	Switch
Location Text	External Alert
Zone	80
Input Action	Control Signal
Incidence	Double Knock
Input Latched	<input type="checkbox"/>
Input Trigger	Active High
Disablement Group	0
SSM/Time Clock No	Unused

At the bottom left, there is a checkbox labeled 'Sensitivity Adjust Mode'.

In this example:

- The “Action” of the input has been changed from “No Action” to a “Control Signal” input.
- Unlike standard fire inputs, the “Input latched” box is NOT ticked, allowing the panel to automatically reset once the signal is removed.
- “External Alert” has been entered as the device text (This will only be displayed at the panel if inputs are manually selected).
- The input has been assigned to a unique zone. In this example 80, but any number that does not conflict with a fire zone can be used – text can also be assigned to this zone as required.

2.5.2 Programming the Outputs

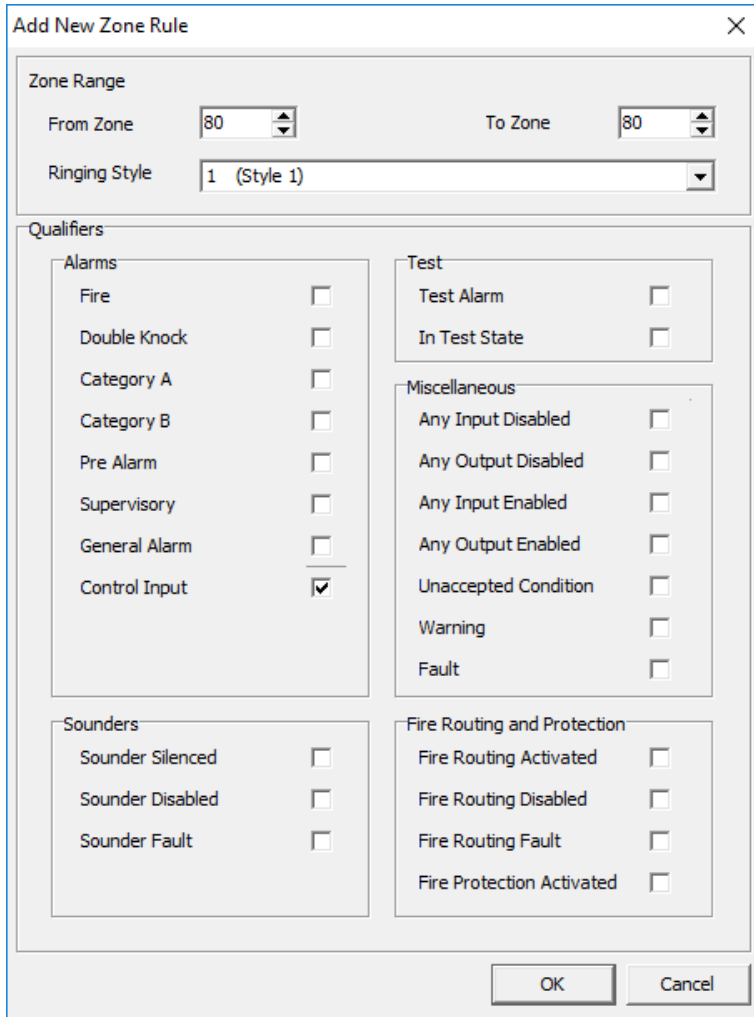
The default for the outputs in Group-1 (i.e. sounder circuit A) is to turn on for any fire.

The screenshot displays the Apollo MxPro5 2L software interface for programming outputs. The 'Site List' on the left is the same as in the previous screenshot. The main area is titled 'Cause And Effect Output Groups' and shows a tree view of output groups: Group-1, Group-199, and Group-200. Group-1 is highlighted in blue and contains a sub-entry 'Style 0 (Style 0), Zone 1 - 2000 Fire (+)'. Below this, the 'Output Group Text' section shows the following information:

Group No	1
Group Text	

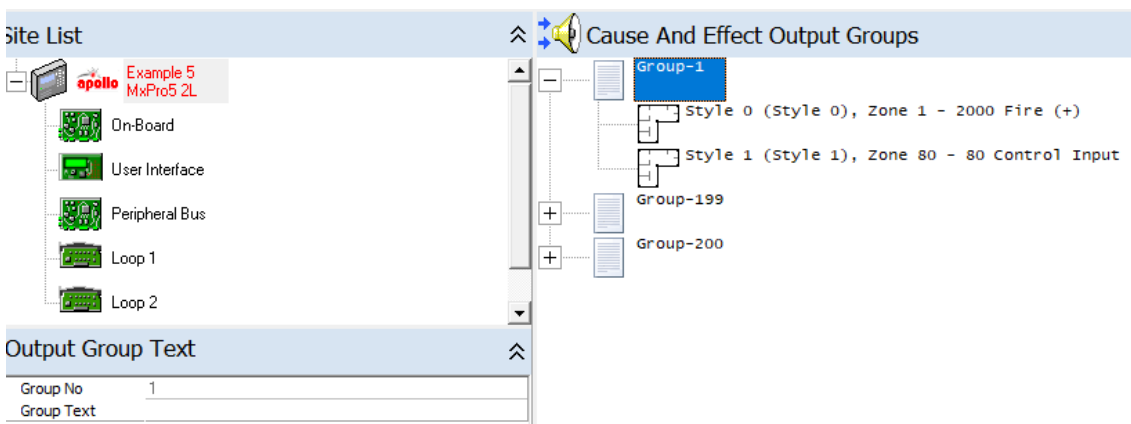
To this group we must now add the additional requirement for these outputs to turn on for the class change / lockdown signal (In this example, this is a “Control Signal” from zone 80).

To add the control condition, with the group highlighted, select the “Add Zone Rule” option and define the additional group settings as shown below: -



Note that the zone range has been defined just for zone 80, and the “Control Input” has been selected as the “Cause”. In this example the ringing style has been set to 1, but any other ringing style can be used as appropriate. Select “OK”.

The total Cause and Effects List for group 1 will then show as:



2.6 Example 6

2.6.1 Define the Class Change / Lockdown Input

This is an example where the “Class change” / “Lockdown” represents an alarm condition and wants to be shown on the display.

Site List

- apollo Example 6 MxPro5 2L
 - On-Board
 - User Interface
 - Peripheral Bus
 - Loop 1
 - Loop 2

Device Information - Loop 1 (All Points)

- 1.0, Zone 1 "External Alert"
- 1.1, Zone 1 ""
- 1.2, Zone 1 "", Output Group 199

Point Details

XP95 Input Output Unit

Address	1.0
Type	Switch
Location Text	External Alert
Zone	1
Input Action	General Alarm
Incidence	Double Knock
Input Latched	<input type="checkbox"/>
Input Trigger	Active High
Disablement Group	0
SSM/Time Clock No	Unused

Sensitivity Adjust Mode

In this example:

- The “Action” of the input has been changed from “No Action” to a “General Alarm” input.
- Unlike standard fire inputs, the “Input latched” box is NOT ticked, allowing the panel to automatically reset once the signal is removed.
- “External Alert” has been entered as the device text (This will only be displayed at the panel if inputs are manually selected).

2.6.2 Programming the Outputs

The default for the outputs in Group-1 (i.e. sounder circuit A) is to turn on for any fire.

Site List

- apollo Example 6 MxPro5 2L
 - On-Board
 - User Interface
 - Peripheral Bus
 - Loop 1
 - Loop 2

Cause And Effect Output Groups

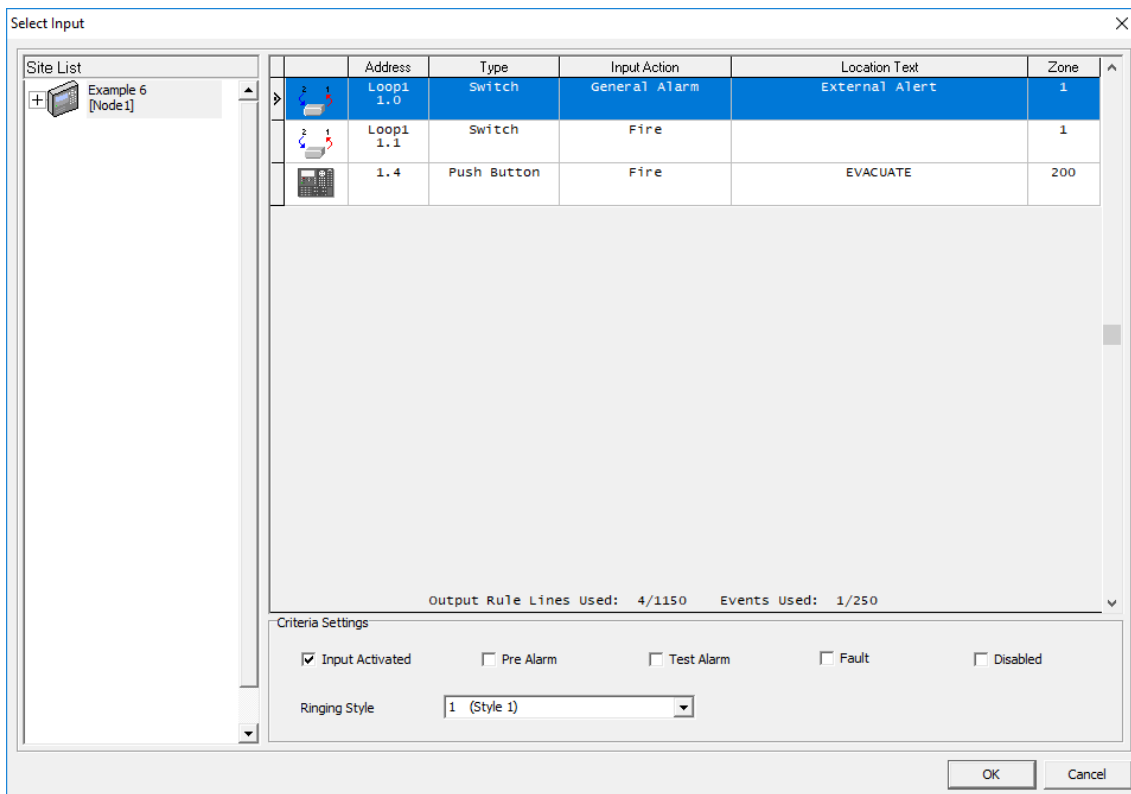
- Group-1
 - Style 0 (Style 0), Zone 1 - 2000 Fire (+)
- Group-199
- Group-200

Output Group Text

Group No	1
Group Text	

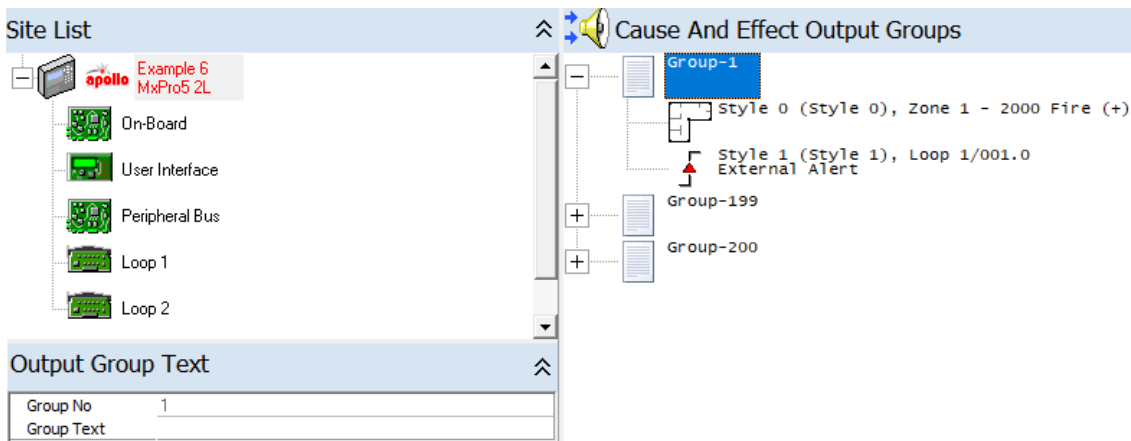
To this group we must now add the additional requirement for these outputs to turn on for the class change / lockdown signal (In this example, this is an input event from Loop 1, Address 1).

To add the control condition, with the group highlighted, select the “Add Input Event” option and define the additional group settings as shown below: -



Note that the control input has been selected as “Input Activated”. In this example the ringing style has been set to 1, but any other ringing style can be used as appropriate. Select “OK”.

The total Cause and Effects List for group 1 will then show as:



3 USER NOTES

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