Loop Explorer 2 User Guide

Version 1.00 | June 2021 | MAN-701

CONTENTS

Contents **2**

Introduction **14**

Technical Support 14

Getting Started **15**

Overview 16

System Requirements 17

PC Requirements 17

Requirements 18

Installation **19**

Updating LE2 22

User Interface **24**

GUI Overview 25

Using the Network Tree 26

Network Site Details 26

Panel Options 26

Loop Options 27

Module Options 27

Device Options 28

Tabs 29

File Tab 29

Configure Tab 30

Tools Tab 32

Help Tab 34

File Tab **35**
File Commands 36
Import 37
Export Graphix / Guide Data 38
Generate Reports 39
Print Network Configuration 40
I/O Configuration 41
Network Configuration 41
Loops 42
Cause and Effects 42
User Accounts 42
Function Buttons 43
Network Notes 43
Cause and Effect Only 44
Devices Grouped by Zone 45
Devices set for General Alarm 46
Battery and Cable Length Calculator 47
Device Labels 47
Export CS (Central Station) Data 48
Configure Tab **50**
Network 51
New Panel Wizard 52
New I/O Module 55
New Device 56

System Manager 57
Function Buttons 58
Feature Group 59
User Menu Option Buttons 60
User Accounts 62
Quick Config 63
Zone Manager 64
Sensitivity Mgr 65
COMING SOON - Group Manager 67
Loop Manager 68
Cause and Effect 69
Use Case 70
Cause and Effect Wizard 71
Action Operator 71
Output Type 72
Output Delay Override 72
Action 72
Start Delay 73
Disable 73
Test Mode 74
Test Type 74
Cause & Effect Wizard Walkthrough 74
Notes 77
Action Messages 78

Templates Mgr 79

Tools Tab **80**

Dial Modem 81

Transfer Configuration 82

USB Transfer 83

USB-A Port Configuration 83

Transfer Configuration from a Control Unit to LE2 using a USB-A Flash Drive 83

Transfer Configuration from LE2 to a Control Unit using a USB-A Flash Drive 83

USB Transfer using a Cable 83

Import to LE2 83

Export to Control Unit 84

Serial Transfer 84

Transfer Quiescent Screen 85

XML Import 87

XML Export 88

Panel Event Log 89

Loop Analog Values 90

Update Panel Firmware 91

FireNET / FireNET + / Elite / Elite RS 91

Virtual Panel 93

FireNET / FireNET + / Elite / Elite RS 93

Monitor Mode 94

Battery Calculator 95

Edit Preferences 96

General Tab 96
Display Options 97
Updates Tab 98
License 99
Loopback Test 100
Help Tab 101
View Application Errors 102
View Communication Logs 103
Company Name 104
About 105
Panel Configuration 106
Panels 107
FireNET L@titude, VES L@titude, Compas 107
Panel Data Tab 107
Times Tab 112
Network Interface Tab 115
GLOBAL CLASS B NETWORK NODE ADDRESSES 117
Loop Data Tab 118
Misc Tab 120
Delay Exceptions Tab 122
Elite, Elite RS, eLAN RS, FireNET, FireNET+, FireNET LCD Network Annunciator 123
Panel Data Tab 123
Times Tab 129
Network Interface Tab 132

FireNET Vision, L@titude Vision, Compas Vision 133
Panel Data Tab 133
Network Interface Tab 135
Misc Tab 136
Panel I/O Configuration 137
Inputs 137
Outputs 137
NACs 137
Other Outputs 138
Function Button Configuration 139
Module Configuration 140
L@titude and Compas Modules 141
4 Channel NAC Module 141
NAC Module Properties 141
Channel Properties 141
8 Channel Conventional Zone Module 145
Module Properties 145
Input Configuration 145
8 Channel Relay Module 147
Module Properties 147
Output Configuration 147
16 Channel I/O Board and Panel Module 148
Module Configuration 148
Channel Properties 149

For channels set as Outputs 149
For channels set as Inputs 150
Media Gateway Panel Module 151
Dialer Tab 151
Accounts Tab 152
LAN Tab 153
Graphics / Third Party Tab 153
Advanced Configuration Tab 154
Legacy Panel Modules 155
eView Serial Annunciator / FireNET LCD-S 155
16 Channel I/O Board 156
Dialer 157
Dialer Tab 157
Accounts Tab 158
eMatrix / Mimic 159
Zone Properties 159
eMatrix / Mimic 16 Way Card Expansion Kit 161
Zone Properties 161
XT+ Module 162
Times Tab 162
Disablements Tab 163
Settings Tab 164
Device Configuration 167
Device Settings / Input Actions 168

Hochiki Protocol 171
Audio Visual 171
YBO-BSB2 Base 171
Call Point 172
HCP-E 172
Modules 172
CHQ-POM 172
Output Properties 173
Input Properties 174
CLIM / VF6056-00, CLIM2 / VF6057-00 175
CZM / VF2011-00, DIMM / VF6007-00, FRCMA / VF6020-00, FRCMA-I / VF6021-00, FRCMA-P / VF6022-00, FRCMA-PI / VF6023-00, FRCME / VF6024-00 176
MIOMH 177
Input Properties 177
Output Properties 178
MIOML 179
Input Properties 179
Output Properties 180
R2M / VF6005-00, R2MH / VF6054-00, R2MH-I / VF6055-00, R2ML / VF6052-00, R2ML-I / VF6053-00 181
Channel Configuration 181
SOM / VF6004-00 182
Channel Configuration 182
SOM-A / VF6040-00, SOM-AI / VF6041-00 183
Channel Configuration 183

SRM 184
Pull Stations 184
AMS Pull Stations / VF3029-10 184
Sensors 185
ACA-V / VF2008-00, ACC-V / VF2012-00 185
Input Properties 185
Sensor Properties 185
ACD-V / VF2014-00 186
Input Properties 186
Sensor Properties 186
AIE-EA / VF2001-00 188
Input Properties 188
Sensor Properties 188
ALG-V / VF2002-00 189
Input Properties 189
Sensor Properties 189
ALK-V / VF2005-00 190
Input Properties 190
Sensor Properties 190
ALN-V / VF2011-00 191
Input Properties 191
Sensor Properties 191
ATG-EA / VF2003-00 192
Input Properties 192

Sensor Properties 192

192

ATJ-EA / VF2010 193

Input Properties 193

Sensor Properties 193

DH99A, DH99AR / VF5013, VF5014 194

Input Properties 194

Sensor Properties 194

Output Properties 195

Disablements Properties 195

Sounders 196

ASB / VF7008,ASBL / VF7005 196

Output Properties 196

Disablements Properties 196

Apollo Protocol 197

Audio Visual 197

VF5651-10 - XP95A Sounder Beacon Base 197

VF5652-30 - Discovery Open Area Sounder Beacon 198

Output Properties 198

VF5656-00 - CO Sounder Base 199

Input Properties 199

Sensor Properties 199

Modules 200

VF5604 - Loop Powered Beam Detector 200

Input Properties 200
Sensor Properties 200
VF5608 - Mini Monitor Module, VF5660 - XP95A Priority Mini Switch Monitor Module, VF5661 - Mini Switch Monitor Module, VF5662 - Standard Input Module, VF5663 - Priority Input ModuleVF5664 - Dual Priority Switch Monitor ModuleVF5680 - Switch Monitor Unit - DIN Rail 201
Input Properties 201
VF5665 - Input / Output Monitor Module, VF5682 - Input / Output Module DIN-Rail 202
Input Properties 202
Output Properties 203
VF5666 - Supervised Output Module, VF5681 - Switch Sounder Control Unit DIN-Rail 204
VF5667 - Relay Output Module 205
Output Properties 205
Pull Stations 206
VF3033-10 - Addressable Manual Pull Station 206
Input Properties 206
VF5683 - Call Point 207
Sensors 208
VF5600 - Ionization Smoke Sensor Head, VF5601 - Photoelectric Smoke Sensor Head, VF5602 - Heat Sensor Head, VF5603 - Multisensor Sensor Head, VF5606 - Carbon Monoxide Detector Head 208
Input Properties 208
Sensor Properties 208
VF5668 - Heat Sensor, VF5669 - Ionization Smoke Sensor, VF5670 - Photoelectric Smoke Sensor, VF5671 - Multisensor Sensor 209
Input Properties 209
Sensor Properties 209

Common Procedures **210**
Adding Panels / Devices to a Network 211
Add a Panel (without the Wizard) 211
Add an SLC Device 212
Add Favorites 213
Add Multiple Devices of the Same Type 214
Open Network File 215
Create New File 215
General Tab 216
Display Options Tab 216
Create a New File from an Existing File 217
Connect to a Panel 218
Alarm Verification 219
Bridge Networking 221
Index **223**
Glossary **224**

INTRODUCTION

Technical Support

For Hochiki America technical support, contact Hochiki America at 800.845.6692 or technicalsupport@hochiki.com. Hochiki technical support is available Monday through Friday, 6:00AM to 4:00PM, PST.

For VES Fire Detection Systems technical support, contact VES at 800.274.9514 or e-mail techsupport@ves-network.com. VES technical support is available Monday through Friday, 9:00 AM to 6:00 PM, EST.

Prior to contacting technical support, have the following information available:

- LE2 Version
- LE2 Database (Refer to the Help Tab for information on locating this information.)
- Panel firmware version
- Copy of NLE file
- Current function of the product
- Expected function of the product

GETTING STARTED

Overview **16**

System Requirements **17**

Overview

Loop Explorer 2 (LE2) is a software program that allows a user to use a computer to program supported hardware manufactured by Hochiki America or VES Fire Detection Systems.

This software is intended for use by trained and qualified personnel only. Always perform system testing in accordance with NFPA requirements after making any programming changes using Loop Explorer 2.

System Requirements

IMPORTANT! An internet connection is required to download updates to Loop Explorer 2. Either Google Chrome, Internet Explorer, or Microsoft Edge are required to view the WebHelp.

PC Requirements

	Minimum	Recommended
Operating System	Windows 10 (32 or 64 bit), including all required updates	
Processor	CPU Intel® Core™ i3	CPU Intel® Core™ i5 64 bit
RAM	512 MB	2 GB
Available Disk Space	125 MB, plus additional storage space for configuration files	
Ports	USB 2.0 Port	
I / O Devices	Keyboard, Mouse, Monitor	
Internet Connection	Internet connectivity is necessary to perform updates and to take advantage of some features.	

Requirements

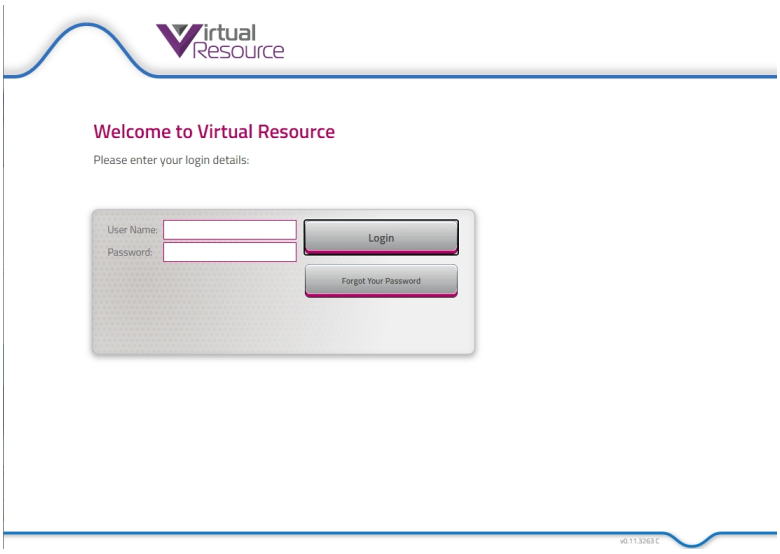
FACP	Cable Type	Photo
FireNET, FireNET Plus Elite, Elite RS	Serial Programming Cable (VES: VF1591-00) (Hochiki: X187 or S187)	
	Serial to USB	
	Keyspan Adapter (Model USA-19HS)	
L@titude, Compas	USB Type A to USB Type B OR USB Flash Drive	 OR

INSTALLATION

Before beginning installation, contact the assigned system administrator to obtain a login and temporary password.

NOTE Internet connection required to download LE2.

1. Navigate and log in to the Virtual Resource website at https://www.virtualresource.global/. After logging into Virtual Resource for the first time, a new password prompt will appear.

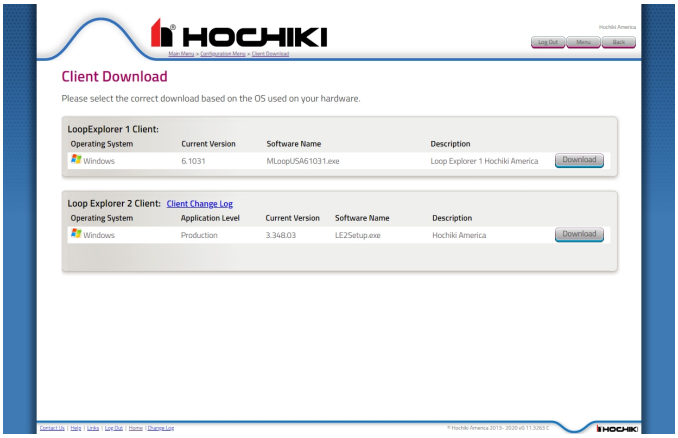


2. Once logged in, select the desired options in the following windows to download an appropriate version of Loop Explorer 2.

Select the desired LE2 Option: **Site Configuration** or **Account Administration**.

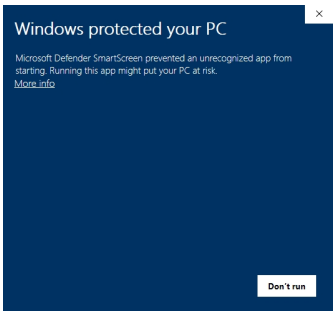
Selected the desired option from the available buttons.

Download the desired version of LE2 from the choices presented.



3. Locate the LE2Setup.exe and double-click to run it.

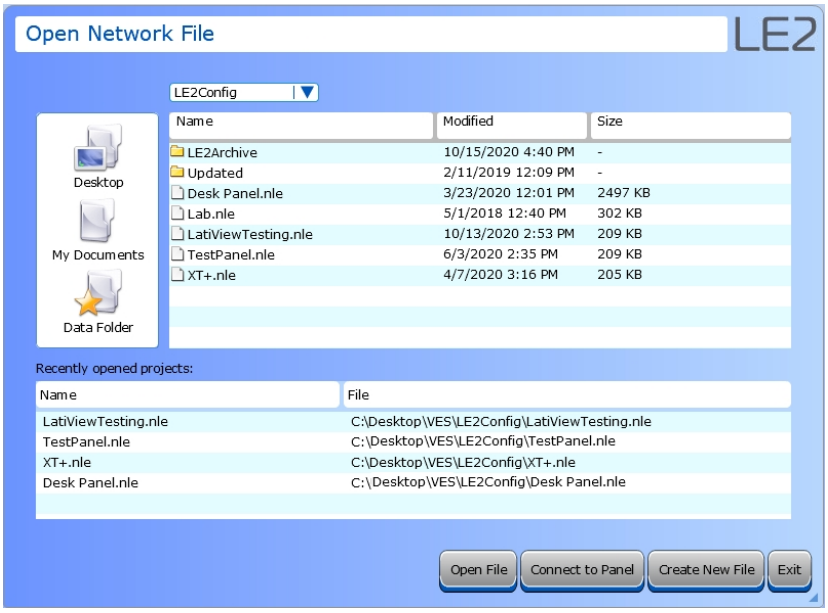
NOTE Depending on the configuration, Windows may give a warning about installing an unrecognized app. Click **More info** and **Run anyway** to continue installation.



4. Follow the instructions on each window to complete the installation and accept the user agreement.

IMPORTANT! Depending on any installed virus protection software, there may be additional windows or steps that must be taken to complete installation.

5. Launch LE2. This can take up to a minute.
6. When LE2 opens, it will prompt an update if the current version is not the latest. Otherwise, the **Open Network File** window will appear.

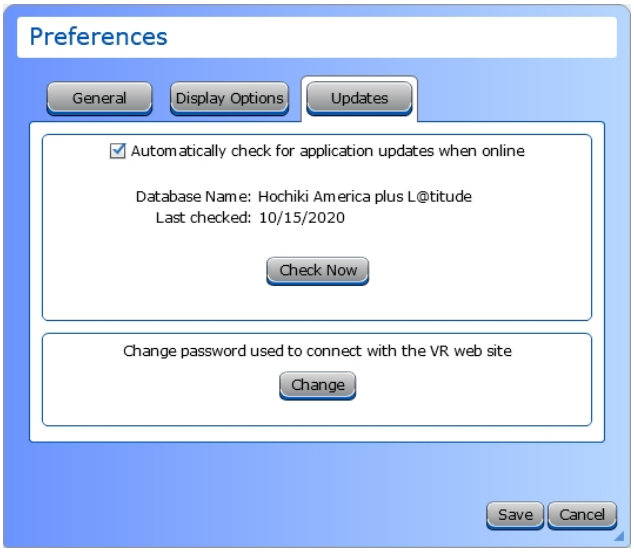


7. Click **Create New File** to start creating a configuration file.

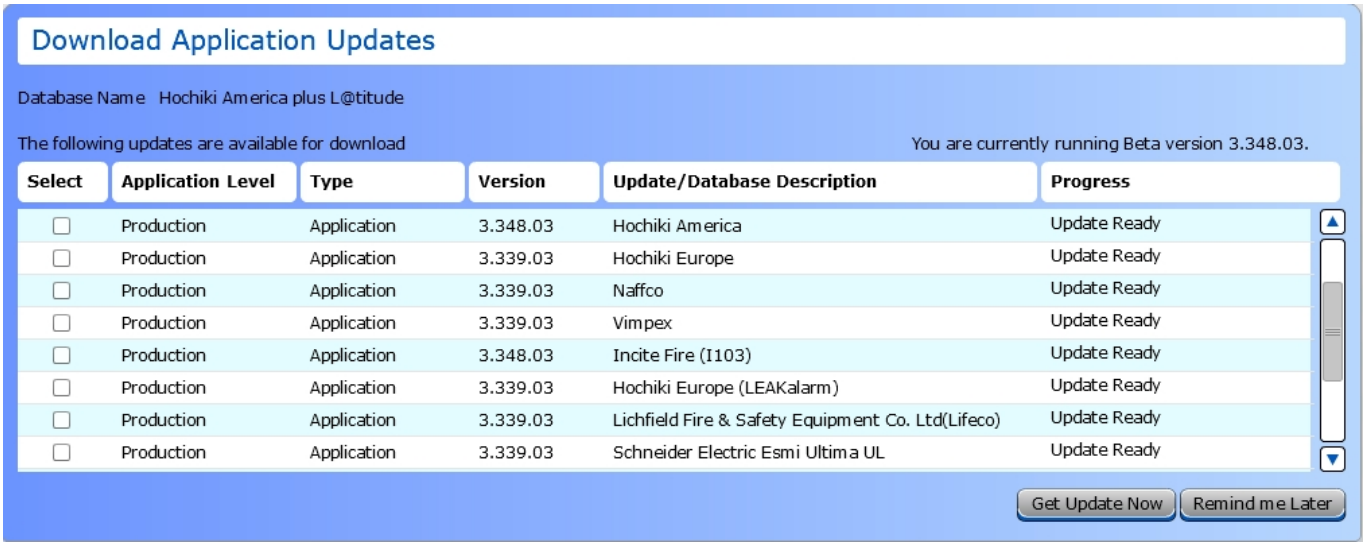
Updating LE2

Upon launch, LE2 will prompt an update if the current version is not the latest.

1. To update from the application, click **Tools** > **Edit Preferences** > **Updates** tab.
2. Click **Check Now**.



3. The **Download Application Updates** window will appear. Select the desired update and click **Get Update Now**.

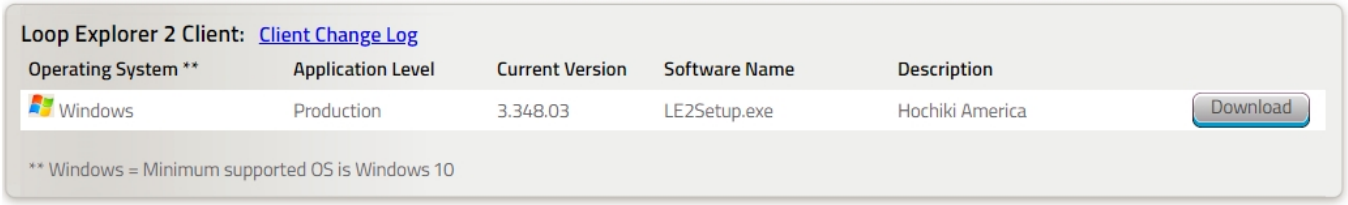


4. Follow the instructions on each window to complete the installation and accept the user agreement.

NOTE When performing an update, LE2 does a complete uninstall before reinstalling the selected update.

IMPORTANT! Depending on your virus protection, there may be additional windows or steps that must be taken to complete installation.

A list of changes made in each update is available in Virtual Resource under the **Client Change Log**.



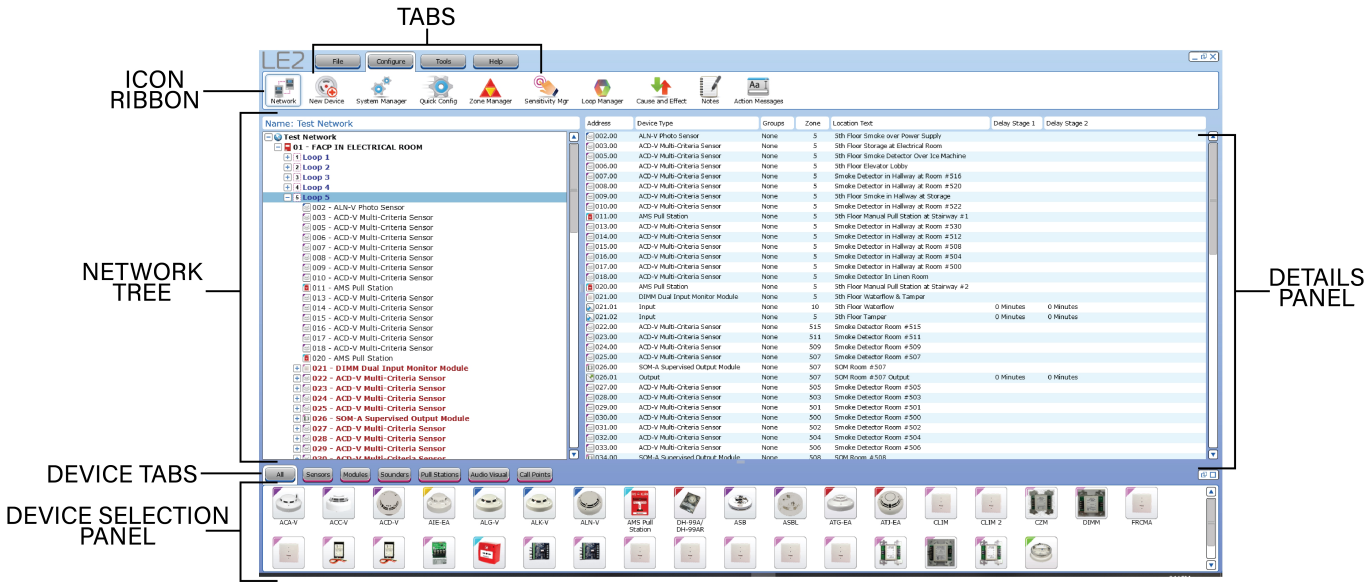
USER INTERFACE

GUI Overview **25**

Tabs **29**

GUI Overview

This is an overview of the Network View of the LE2 GUI. You can find more information about each section of GUI in the sections below.



The Tabs and Icon Ribbon are the primary navigation tools in LE2. These are explained in the Tabs section below. See Tabs for more information. Additionally, each tab has expanded detail in dedicated sections.

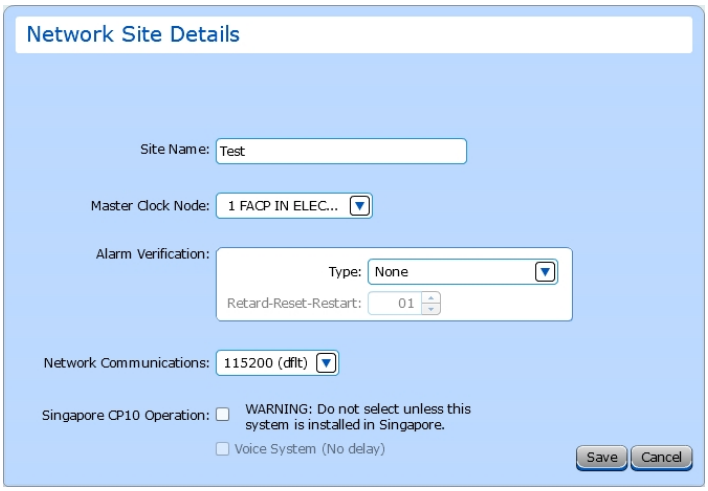
- File Tab
- Configure Tab
- Tools Tab
- Help Tab

The Network Tree displays all panels, modules, and devices on the network. Use the + and - to expand and contract the groups.

The Device Tabs filter the modules displayed.

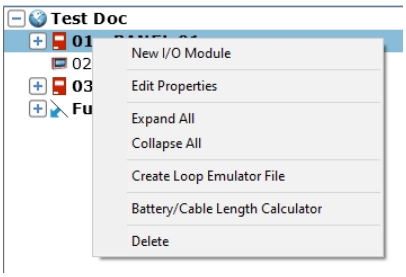
Using the Network Tree

Network Site Details



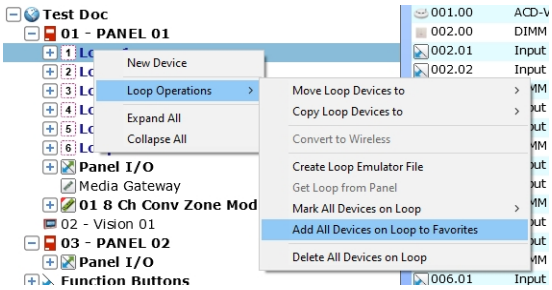
- **Site Name**. Enter a name for the network. There are no character limits on this field.
- **Master Clock Node**. Use the drop-down box to select the panel whose clock will be used as the master.
- **Alarm Verification**. Use the drop-down box to select the desired option. Options are:
  - *PAS Only* - This delays the activation while staff investigates the source of the fire alarm signal. This applies only to automatic fire detection devices (heat, CO).
  - *Alarm Verification Only* - This delays the activation for a configured amount of time. This applies to smoke sensors only.
  - *Pre-Signal or Verification* - This combines Pre-Signal and Alarm Verification.
  - *PAS or Verification* - This combines PAS and Alarm Verification.
  - *Pre-Signal Only* - The intial alarm signal will not activate the general fire alarm system. Subsequent signals will activate the system,
- **Retard-Reset-Restart**. Select the amount of time to delay the alarm, between 5-55 seconds.
- **Network Communications**. Use the drop-down box to select the baud rate.
- **Singapore CP10 Operation**. Check the box if the fire alarm system is being installed in Singapore. A warning will appear stating that the system will not meet UL requirements if this option is selected. Check the box if the system is a **Voice System**.

Panel Options



- **New I/O Module**. This opens the New I/O Module wizard.
- **Edit Properties**. This opens the Panel Configuration window.
- **Expand / Collapse All**. This will expand or collapse the network tree view.
- **Create Loop Emulator File**. This is an advanced engineering feature. Contact your technical support for more information.
- **Battery / Cable Length Calculator**. This opens the Battery and Cable Length Calculator.
- **Delete**. This deletes the panel from the network.

Loop Options



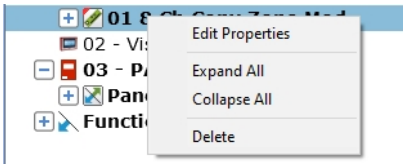
- **New Device**

  This opens the New Device wizard.

- **Loop Operations**
  - **Move / Copy Loop Devices to >** Move or copy the devices from the current loop to another loop on the network.
  - **Convert to Wireless**. For future use.
  - **Create Loop Emulator File**. This is an advanced engineering feature. Contact your technical support for more information.
  - **Get Loop from Panel**. For future use.
  - **Mark All Devices on Loop >** This allows the user to mark all devices on the selected loop as Installed or Not Installed.
  - **Add All Devices on Loop to Favorites**. This adds all devices on the selected loop to the favorites.
  - **Delete All Devices on Loop**. This deletes all devices on the loop.
- **Expand / Collapse All**

  This will expand or collapse the network tree view.

Module Options

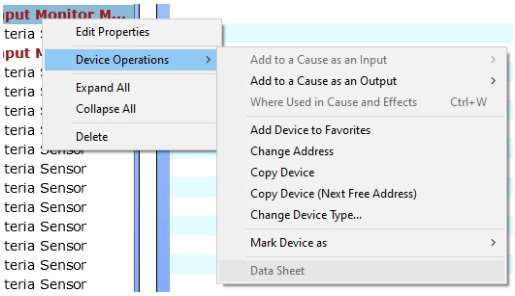


Edit Properties. This opens the Module Configuration window.

Expand / Collapse All. This will expand or collapse the network tree view.

Delete. This will delete the currently-selected module from the network.

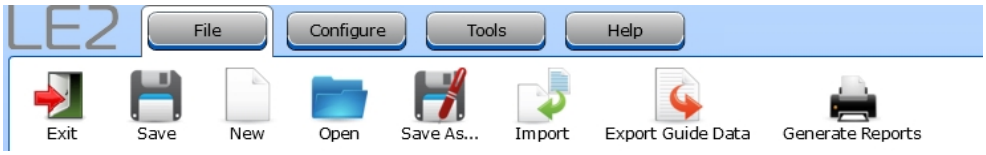
Device Options



- **Edit Properties** — This opens the New Device wizard.
- **Device Operations >**
  - **Add to a Cause as an Input / Output >**. A list of existing Cause / Effects will appear. This will add the device to the selected Cause / Effect.
  - **Where Used in Cause and Effects**. This displays a list of Cause/Effects that use this device.
  - **Add Device to Favorites**. This the device to the device favorites list.
  - **Change Address**. Select this to change the device address.
  - **Copy Device**. This opens an Address selection window. To copy this device, select the desired address.
  - **Copy Device (Next Free Address)**. This copies the selected device to the next free address.
  - **Change Device Type...**. This opens the device selection window. Select the desired device.
  - **Mark Device as >**. This marks the device as Installed or Not Installed.
  - **Data Sheet**. If linked, this opens the device datasheet.
- **Expand / Collapse All** — This will expand or collapse the network tree view.
- **Delete** — This deletes the selected device from the network.

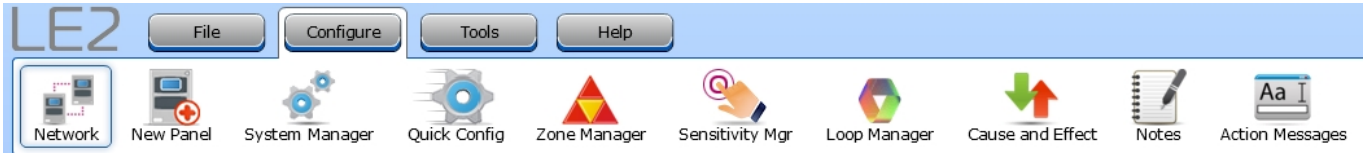
Tabs

File Tab



Icon	Label	Description
	Exit	This closes the LE2 application.
	Save	This saves changes to the current configuration under the current filename. **NOTE** AutoSave can be enabled in **Edit Preferences**.
	New	Starts a New Project.
	Open	Opens an existing project.
	Save As...	This allows the current configuration to be saved with a new file name.
	Import	Opens the Loop Explorer 1 conversion utility. **NOTE** Using the **Import** option can result in data voids in the resulting configuration file. The recommended procedure for importing a configuration file is to use the Transfer Configuration procedure.
	Export Guide / Graphix / L@ti-View Data	Opens the **Save File** window that allows the export of configuration data for the Guide / Graphix / L@ti-View application.
	Generate Reports	Opens the **Generate Reports** window that allows the generation of many different reports.

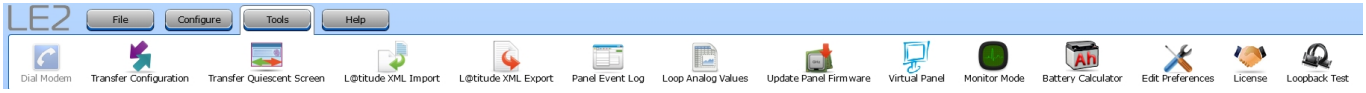
Configure Tab



Icon	Label	Description
	Network	This displays the network tree.
	New Panel New Module New Device	Depending on the selection in the Network Tree, one of these icons will be displayed in the ribbon. This will open the **New Panel**, **New Module**, or **New Device** wizard.
	System Manager	This tool allows the configuration of user accounts, user levels, panel passcode preferences, and function button management.[1]
	Quick Config	Quick Config opens a table that displays all SLC devices on the loop and allows the zone number and location text of each SLC device to be edited.
	Zone Manager	The Zone Manager opens a window with a list of all available zones on each system. It allows a quick review of the zones and the inputs and outputs that have been assigned to each zone. It also allows users to edit zone names, modify zoned devices, and assign an alarm verification type.
	Sensitivity Mgr	This is a configuration tool for making global changes to individual or multiple sensors of the same type on the network without modifying each sensor separately.
	Group Manager	**COMING SOON** This tool allows a user to add Zones, Inputs, and Outputs into Groups that can be used in Cause and Effects.
	Loop Manager	This tool is for making global changes to specific aspects of SLC devices on each loop on the network without modifying each device separately.
	Cause and Effect	The Cause and Effect window displays a summary view of all Cause and Effect relationships on the system. This allows the creation, deletion, and modification of Cause and Effects.
	Notes	This opens the Notes Editor, which allows the user to add plaintext notes about the network. Notes are saved in the LE2 .nle file.
	Action Messages	This window allows the user to add custom messages to be displayed when an input is activated.

Icon	Label	Description
	Templates Mgr	This tool allows users to create a custom Media Gateway SIA/CID central station reporting code table. **NOTE** This feature is not available in all configurations.

Tools Tab



Icon	Label	Description
	Dial Modem	This allows users to interface to a serial dialer modem. This can be used to configure or obtain the event history of a fire alarm system. [2]
	Transfer Configuration	This tool allows the user to connect to a Fire Alarm System to set the time or import or export a configuration.
	Transfer Quiescent Screen	This allows the user to transfer a custom quiescent screen from LE2 to the panel. [1]
	XML Import	This tool allows users to import data from an existing configuration or from an LE2 exported configuration file.[1]
	XML Export	This tool allows users to create a configuration file to export to a control unit or as a backup.[1]
	Panel Event Log	The Event log tool can be used to import an existing panel event log from a control unit to LE2 in order to view or save it on a computer.
	Loop Analog Values	Sensors (detectors) on a SLC loop have Analog Values which represent current value (clean air), last calibrated zero point, and last calibrated fire point. These Analog Values relate to the health of the sensor. These values can be retrieved using the Analog Values window.[2]
	Update Panel Firmware	This tool is used to update control unit firmware from a firmware file saved locally on the PC.
	Virtual Panel	The Virtual Panel tool provides remote access to the display and controls of connected panel.[2]
	Monitor Mode	This tool can monitor or save event data generated from a control unit's serial port for the unit printer.[2]
	Battery Calculator	This tool can be used to calculate the minimum battery capacity and the maximum wire length requirements for their system.
	Edit Preferences	This opens a window where the user can setup general preferences, display options, and check for software updates. All preferences will be saved across projects.

Icon	Label	Description
	License	The license tool displays the current username and expiration date for the user license.
	Loopback Test	This tool allows users to test the connectivity of the transmit and receiver of a serial cable. [2]

Help Tab

Icon	Label	Description
	View Application Errors	This is the application error log that stores error code details encountered in LE2.
	View Communication Logs	This is the application communication log that stores communication details between LE2 and connected units.
	Hochiki America / VES	This will open the website for the appropriate company.
	About	This window displays information about the current software version and a link to the software release notes webpage.

[1] Not supported on legacy panels.

[2] Only supported on legacy panels.

FILE TAB

Click the icon to see detailed information about that toolbar option.

File Commands **36**

Import **37**

Export Graphix / Guide Data **38**

Generate Reports **39**

File Commands

The first several icons on this tab are Exit, Save, New, Open, and Save As... These are standard commands available in most application and function as expected.

Import

There are two ways to import an LE1 configuration into LE2. The recommended procedure for importing an LE1 configuration file is to connect the panel to a computer with LE2 and using the Transfer Configuration procedure.

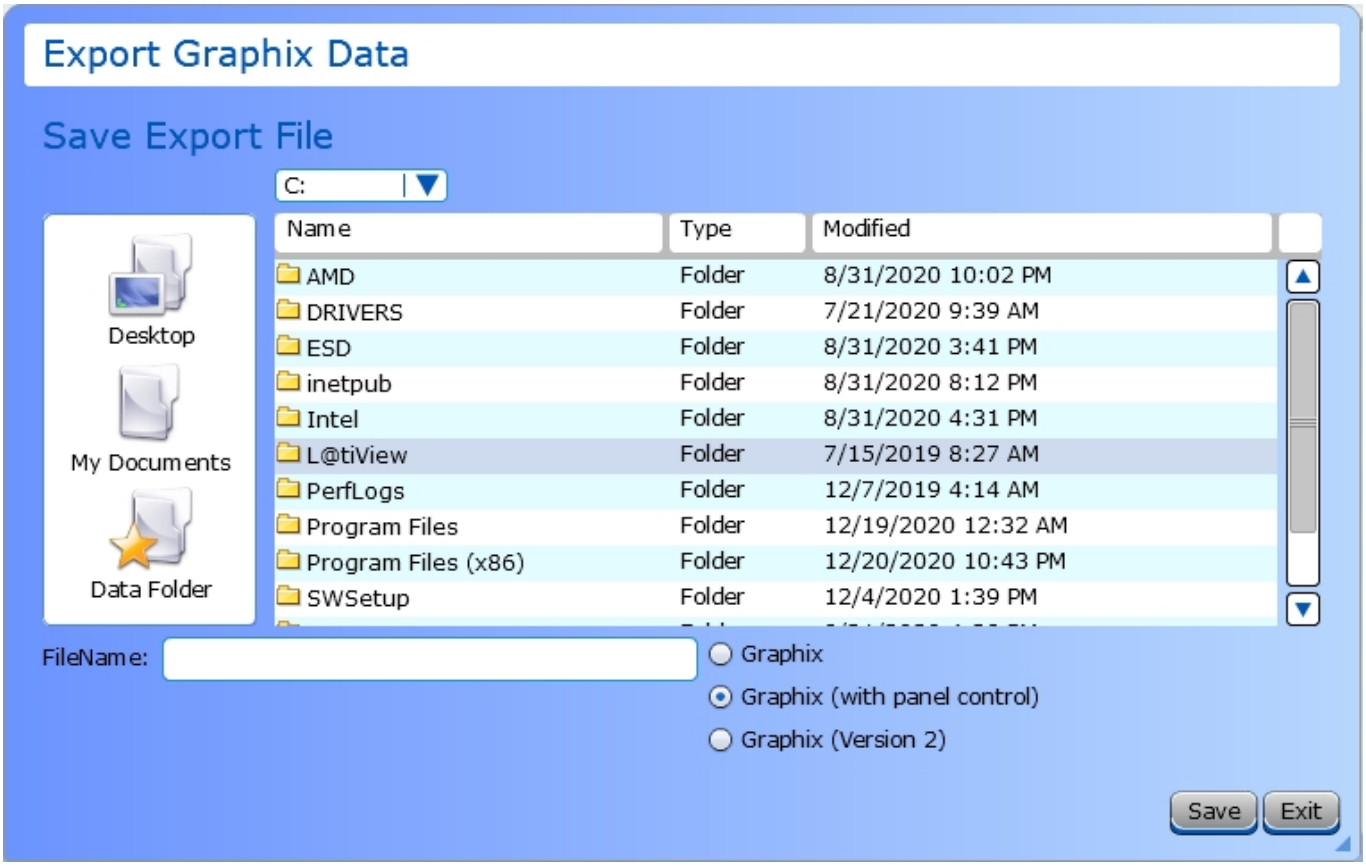
Alternatively, the **Import** option allows the user to select a file generated by the Loop Explorer 1 conversion utility to import into LE2. This import file (in .lx9 format) can be generated in LE1 under **File** > **Export Loop Explorer Config...** > **LE2 File Conversion**.

WARNING! Using the **Import** option can result in data voids in the resulting configuration file. The recommended procedure for importing a configuration file is to use the Transfer Configuration procedure.

Export Graphix / Guide Data

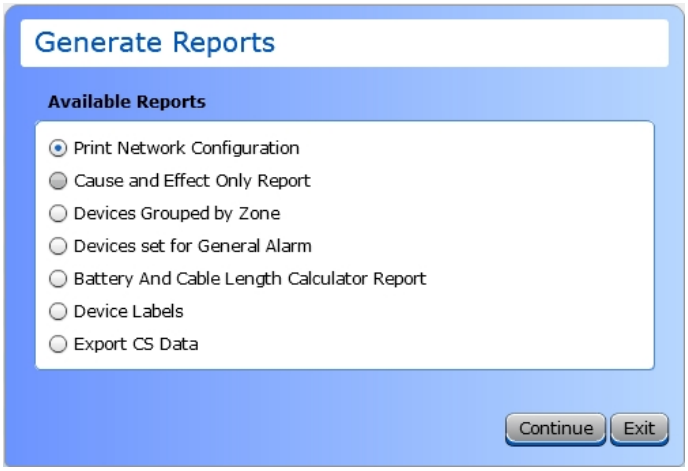
This tool allows the export of the data for importing into Graphix, Guide or L@ti-View. There are three save options:

- Graphix / GUIDE
- Graphix / GUIDE (with panel control)
- Graphix / GUIDE (version 2)



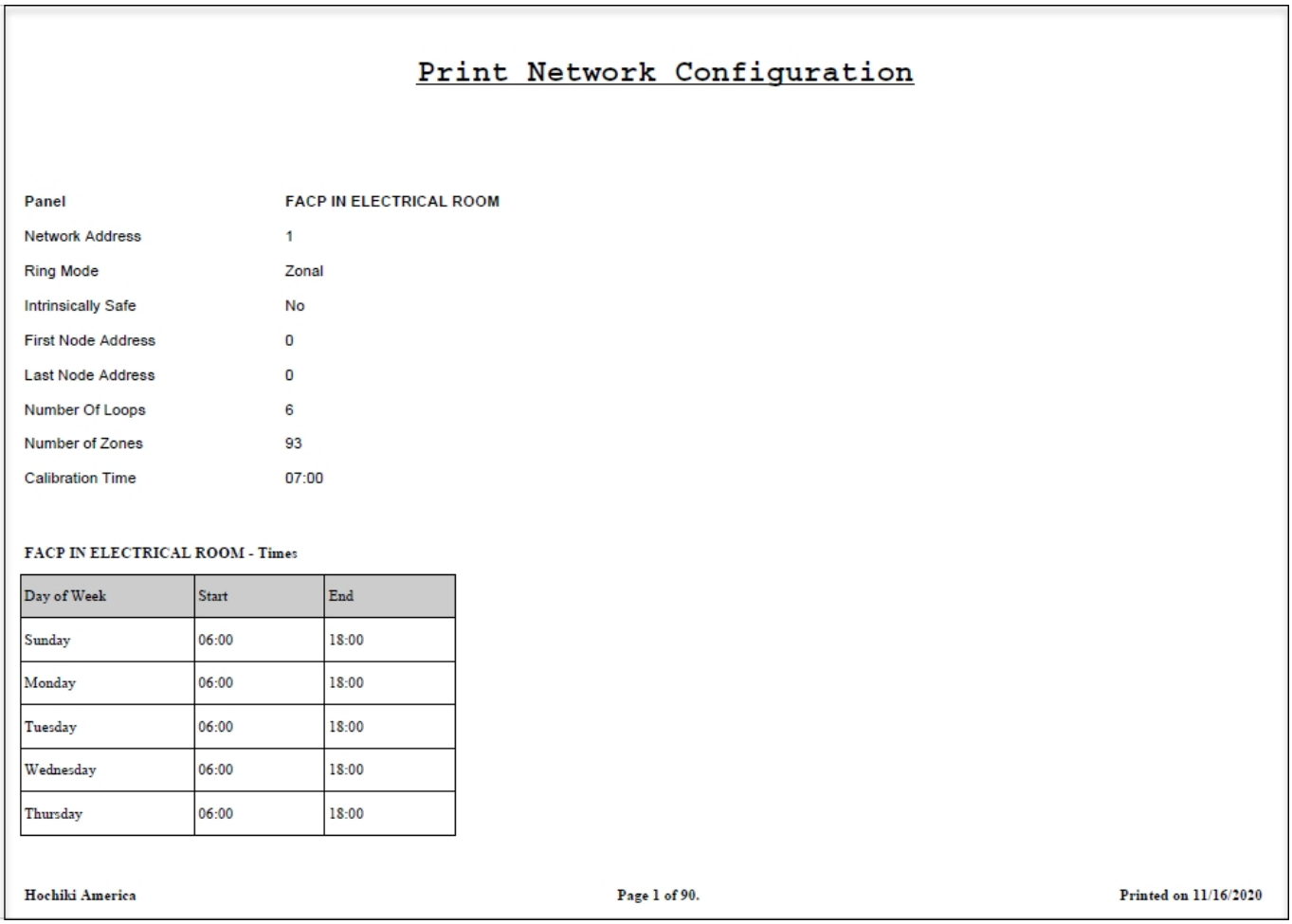
Generate Reports

This feature allows the user to create a .pdf or .csv file that can use to save information about your network configuration and cause and effects. It also can generate device labels and export Central Station data.



Print Network Configuration

This report contains comprehensive information about the entire network configuration, including information about the Panel, Day / Night Times, Local I/O, Network Interface, SLC Loops, Vision units on the network, and Action Messages. This report also details Cause and Effects on the network.



Print Network Configuration

Panel	FACP IN ELECTRICAL ROOM
Network Address	1
Ring Mode	Zonal
Intrinsically Safe	No
First Node Address	0
Last Node Address	0
Number Of Loops	6
Number of Zones	93
Calibration Time	07:00

FACP IN ELECTRICAL ROOM - Times

Day of Week	Start	End
Sunday	06:00	18:00
Monday	06:00	18:00
Tuesday	06:00	18:00
Wednesday	06:00	18:00
Thursday	06:00	18:00

Hochiki America Page 1 of 90. Printed on 11/16/2020

Each network node's panel is organized by address, from low to high. At the beginning of each Network Address, the panel name and details are listed in the following format:

Panel	FireNET L@titude
Network Address	1
Ring Mode	Common
First Node Address1	0
Last Node Address1	0
Number of Loops	6
Number of Zones	6
Calibration Time	7:00

The first and last node addresses are used to identify the first and last node of a Class B SLC wired network.

I/O Configuration

Details are provided in the report regarding the Zone Number, Input Action, Delay(s), and Location Text for each panel I/O for each network node. The following panel I/O are included in the report:

- Programmable Routing Input 1
- Programmable Routing Input 2
- Fire Routing Input
- Trouble Routing Input
- Programmable Input 1
- Programmable Input 2
- Programmable Input 3
- NAC 1
- NAC 2
- NAC 3
- NAC 4
- Programmable 1 Relay Output
- Programmable 2 Relay Output
- Fire Relay Output
- Supervisory Relay Output
- Fire Routing Output 2
- Programmable Routing Output
- Trouble Relay Output
- Trouble Routing Output

Network Configuration

The **Network Interface** allows a user to select which network events that a panel will respond to, and define the way in which it will respond. All other panels, aside from the currently-edited panel, will be listed. Click + to expand the properties of the node and select how the panel will respond to network events. Each panel can have a unique profile that defines how it will respond to the rest of the nodes and event types on the network.

- Process
- Display
- Log
- Print
- Buzz

When panels are networked together, they share locally occurring events with other nodes on the network. The following are the panel event types that can be processed.

- Fire
- Emrg
- Aux
- PreAlarm
- Trouble
- Disablement
- Supervisory
- Test
- Status - Reset, Resound, Silence Network Command

When these event types are generated by a node on the network, it will be processed by other networked panels if that event is selected.

Loops

Devices connected to each loop are listed, including the Zone Number, Input Action, Delay(s), and Location Text of each device.

Cause and Effects

The Cause and Effects configuration for each Action, Disable, Test Mode in the configuration file are listed by name, with two separate tables. One of these tables is for the Cause and one is for the Effect in the relationship. An example of the format is as follows:

Name: RM 408 SMOKE
Type: Action
Operator: OR / Single
Effect: Temporal

Cause	Location Text
P01 L3 026.0 ACD-V Multi-Criteria Sensor	LEVEL 4 RM 408 MASTER BEDROOM
P01 L3 027.0 ACD-V Multi-Criteria Sensor	LEVEL 4 RM 408 FRONT BEDROOM
P01 L3 028.0 ACD-V Multi-Criteria Sensor	LEVEL 4 RM 408 KITCHEN

Effect	Location Text
P01 L3 153.0 ASBL Low Frequency Sounder Base	LEVEL 4 SMOKE RM 408 MASTER BEDROOM
P01 L3 154.0 ASBL Low Frequency Sounder Base	LEVEL 4 SMOKE RM 408 FRONT BEDROOM
P01 L3 156.0 ASBL Low Frequency Sounder Base	LEVEL 4 SMOKE RM 408 LIVING ROOM

User Accounts

The user accounts for default levels (1-3) are included and any custom user accounts created. Report details include each user accounts' name, account level (1-3), code, and date format. Default accounts will be listed as follows:

Name 0 Default User
Feature Group User Level 2
Code 222222
Date/Time Format MM/DD/YYYY HH:mm:ss

Name 1 Engineer User
Feature Group User Level 3
Code 333333
Date/Time Format MM/DD/YYYY HH:mm:ss

Name 2 Key Switch User
Feature Group User Level 2
Code 0
Date/Time Format MM/DD/YYYY HH:mm:ss

Name 3 Non Logged User
Feature Group Logged out
Code 0
Date/Time Format MM/DD/YYYY HH:mm:ss

Function Buttons

User accounts with assigned function buttons are included in the **Accounts** section. Function buttons assigned to a user account are marked with **Yes**; otherwise, they are marked with **No**. An example of the format is as follows:

Name: 1 User Level 2
Session Timeout: 120 seconds
User Function Buttons:

Yes	Fire Drill	Yes	NAC Circuit Disablement	No	Function Button 3
No	Function Button 4	No	Function Button 5	No	Function Button 6
No	Function Button 7	No	Function Button 8	No	Function Button 9
No	Function Button 10	No	Function Button 11	No	Function Button 12
No	Function Button 13	No	Function Button 14	No	Function Button 15
No	Function Button 16	No	Function Button 17	No	Function Button 18
No	Function Button 19	No	Function Button 20	No	Function Button 21
No	Function Button 22	No	Function Button 23	No	Function Button 24

Network Notes

User notes are included at the end of this report.

Cause and Effect Only

This report contains only the **Cause and Effects** section of the Network Configuration report. This report outputs all of the Cause and Effect relationships organized by type (action, disable, test mode) into a printable PDF format. Each “Cause” and “Effect” in relationship entry is separated into two tables with the Name of the relationship and type parameters at the top. An example of the format is as follows:

Name: RM 408 SMOKE
Type: Action
Operator: OR / Single
Effect: Temporal

Cause and Effect Only Report

1. Cause and Effects

1.1. Primary Recall & Louvers - Elevators 1 & 2

Primary Recall & Louvers - Elevators 1 & 2	
Name	Primary Recall & Louvers - Elevators 1 & 2
Type	Action
Operator	OR / Single
Effect	Continuous

Causes	
Causes	Location Text
P01 L2 007.0 ACD-V Multi-Criteria Sensor	2nd Floor Elevator Lobby
P01 L2 007.1 ACD-V Multi-Criteria Sensor	2nd Floor Elevator Lobby
P01 L2 007.2 ACD-V Multi-Criteria Sensor	2nd Floor Elevator Lobby
P01 L3 005.0 ACD-V Multi-Criteria Sensor	3rd Floor Elevator Lobby
P01 L3 005.1 ACD-V Multi-Criteria Sensor	3rd Floor Elevator Lobby
P01 L3 005.2 ACD-V Multi-Criteria Sensor	3rd Floor Elevator Lobby
P01 L4 006.0 ACD-V Multi-Criteria Sensor	4th Floor Elevator Lobby
P01 L4 006.1 ACD-V Multi-Criteria Sensor	4th Floor Elevator Lobby
P01 L4 006.2 ACD-V Multi-Criteria Sensor	4th Floor Elevator Lobby

Devices Grouped by Zone

This report contains only the **Zones** section of the Network Configuration report.

Devices Grouped by Zone

Z1 1ST FLOOR COMMON AREA (178 items)

Panel	Loop	Addr.	Name	Zone	Type	Action	1st Delay	2nd Delay	Text
1	1	001.00	ACD-V Multi-Criteria Sensor	0001	Common	None			Riser Room
1	1	001.01	ACD-V Multi-Criteria Sensor	0001	Sensor	Fire			Riser Room
1	1	001.02	ACD-V Multi-Criteria Sensor	0001	Output				Riser Room
1	1	002.00	DIMM Dual Input Monitor Module	0001	Common				Fire Pump Running
1	1	002.01	DIMM Dual Input Monitor Module	0001	Input	Technical Alarm			Fire Pump Running
1	1	002.02	DIMM Dual Input Monitor Module	0001	Input	Fire			Fire Pump Running
1	1	003.00	DIMM Dual Input Monitor Module	0001	Common				Fire Pump Power Failure
1	1	003.01	DIMM Dual Input Monitor Module	0001	Input	Technical Alarm			Fire Pump Power Failure
1	1	003.02	DIMM Dual Input Monitor Module	0001	Input	Fire			Fire Pump Power Failure
1	1	004.00	DIMM Dual Input Monitor Module	0001	Common				Fire Pump Phase Reversal
1	1	004.01	DIMM Dual Input Monitor Module	0001	Input	Technical Alarm			Fire Pump Phase Reversal
1	1	004.02	DIMM Dual Input Monitor Module	0001	Input	Fire			Fire Pump Phase Reversal
1	1	005.00	DIMM Dual Input Monitor Module	0001	Common				Riser Tamper

Devices set for General Alarm

This report lists all devices on the network set for general alarm. It also contains the **Flags** section from the Network Configuration report.

Devices set for General Alarm

1. Panel FACP IN ELECTRICAL ROOM

1.1. Panel Summary

FACP IN ELECTRICAL ROOM	
Panel	FACP IN ELECTRICAL ROOM
Network Address	1
Ring Mode	Zonal
Intrinsically Safe	No
First Node Address	0
Last Node Address	0
Number Of Loops	6
Number of Zones	139
Calibration Time	07:00

1.2. Loops

FACP IN ELECTRICAL ROOM - Loop 1, 69 total Device(s)

Addr.	Name	Zone	Type	Flags	1st Delay	2nd Delay	Text
071.01	R2MH Dual Relay Module	0001	Output	ME			Fire Damper Relays
071.02	R2MH Dual Relay Module	0001	Output	ME			Fire Damper Relays

FACP IN ELECTRICAL ROOM - Loop 2, 77 total Device(s)

Addr.	Name	Zone	Type	Flags	1st Delay	2nd Delay	Text
027.01	SOM-A Supervised Output Module	0207	Output	MES			SOM Room #207 Output
035.01	SOM-A Supervised Output Module	0208	Output	MES			SOM Room #208 Output
043.01	SOM-A Supervised Output Module	0222	Output	MES			SOM Room #222 Output
050.01	SOM-A Supervised Output Module	0232	Output	MES			SOM Room #232 Output

Battery and Cable Length Calculator

This report lists all of the information from the battery and cable length calculator from LE2.

Battery And Cable Length Calculator Report

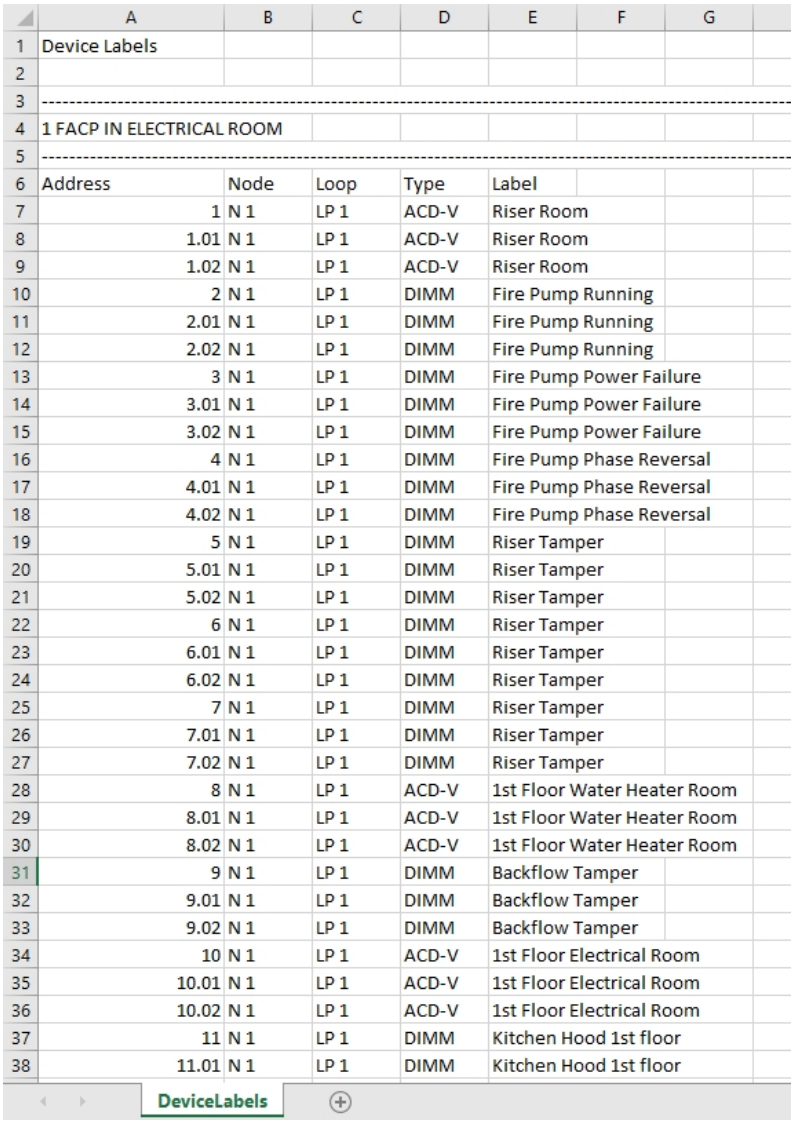
Control Panel		
Panel	FACP IN ELECTRICAL ROOM	
Network Address	1	
Panel Type	FireNET L@titude	
Number Of Loops	6	
Total Num. Of Devices	455	
Panel Output Voltage	24 VDC	
Standby Period	24 Hours	
Required Alarm Time	5 Minutes	
Number Of Devices With LED ON During Alarm	5	

Panel Current Settings		
Type	Standby Load (mA)	Alarm (mA)
Backlight Off	780	850
Backlight On	780	850

All loads of the fire control panel exclude external loads except End Of Line (EOL) devices.

Device Labels

This report lists the labels for all devices configured on the network. This report is only available in .csv format.



	A	B	C	D	E	F	G
1	Device Labels						
2							
3	----------						
4	1 FACP IN ELECTRICAL ROOM						
5	----------						
6	Address	Node	Loop	Type	Label		
7	1	N 1	LP 1	ACD-V	Riser Room		
8	1.01	N 1	LP 1	ACD-V	Riser Room		
9	1.02	N 1	LP 1	ACD-V	Riser Room		
10	2	N 1	LP 1	DIMM	Fire Pump Running		
11	2.01	N 1	LP 1	DIMM	Fire Pump Running		
12	2.02	N 1	LP 1	DIMM	Fire Pump Running		
13	3	N 1	LP 1	DIMM	Fire Pump Power Failure		
14	3.01	N 1	LP 1	DIMM	Fire Pump Power Failure		
15	3.02	N 1	LP 1	DIMM	Fire Pump Power Failure		
16	4	N 1	LP 1	DIMM	Fire Pump Phase Reversal		
17	4.01	N 1	LP 1	DIMM	Fire Pump Phase Reversal		
18	4.02	N 1	LP 1	DIMM	Fire Pump Phase Reversal		
19	5	N 1	LP 1	DIMM	Riser Tamper		
20	5.01	N 1	LP 1	DIMM	Riser Tamper		
21	5.02	N 1	LP 1	DIMM	Riser Tamper		
22	6	N 1	LP 1	DIMM	Riser Tamper		
23	6.01	N 1	LP 1	DIMM	Riser Tamper		
24	6.02	N 1	LP 1	DIMM	Riser Tamper		
25	7	N 1	LP 1	DIMM	Riser Tamper		
26	7.01	N 1	LP 1	DIMM	Riser Tamper		
27	7.02	N 1	LP 1	DIMM	Riser Tamper		
28	8	N 1	LP 1	ACD-V	1st Floor Water Heater Room		
29	8.01	N 1	LP 1	ACD-V	1st Floor Water Heater Room		
30	8.02	N 1	LP 1	ACD-V	1st Floor Water Heater Room		
31	9	N 1	LP 1	DIMM	Backflow Tamper		
32	9.01	N 1	LP 1	DIMM	Backflow Tamper		
33	9.02	N 1	LP 1	DIMM	Backflow Tamper		
34	10	N 1	LP 1	ACD-V	1st Floor Electrical Room		
35	10.01	N 1	LP 1	ACD-V	1st Floor Electrical Room		
36	10.02	N 1	LP 1	ACD-V	1st Floor Electrical Room		
37	11	N 1	LP 1	DIMM	Kitchen Hood 1st floor		
38	11.01	N 1	LP 1	DIMM	Kitchen Hood 1st floor		

DeviceLabels

Export CS (Central Station) Data

This option will generate a report of all off premises reporting SIA and CID code data in .csv format for a central station.

Once this report is generated, create a new, blank spreadsheet in Excel. Then, click **Data** > **Import** to import the .csv into Excel.

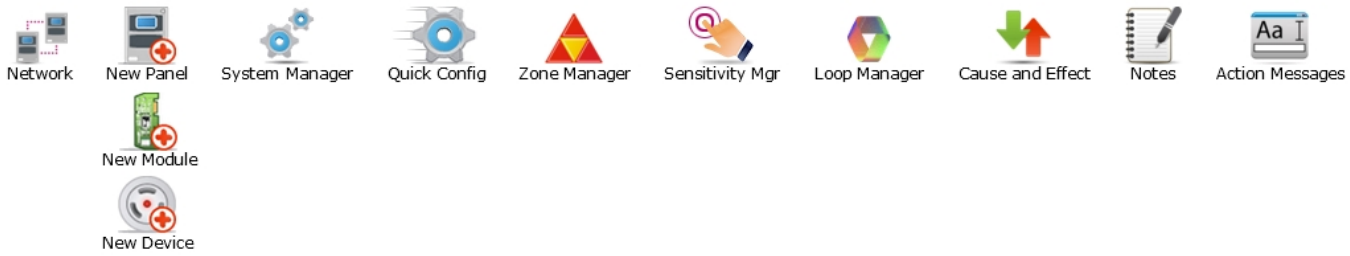
IMPORTANT! Using **File** > **Open** in Excel, or double-clicking on the .csv file to open it WILL result in data translation errors. The import procedure above is the ***only*** recommended procedure for viewing the Central Station Report.

	A	B	C	D	E	F	G
1	Address	Description	Location Text	Zone	CID Zone#	CID Event Code	
2							
3							
4		Address 1					
5		Name: FACP IN ELECTRICAL ROOM					
6		Panel Text: TEST					
7		Contact ID Reporting (Detailed)					
8		Report By Points					
9							
10		Panel I/O					
11	0	Programmable Input 1		0	4	??	
12	1	Programmable Input 2		0	5	??	
13	2	Programmable Input 3	None	0	6	??	
14	3	Fire Routing Input		0	2	??	
15	4	Prog Routing Input 1		0	1	??	
16	5	Prog Routing Input 2		0	0	??	
17	6	Trouble Routing Input		0	3	??	
18		Loop 1					
19	1	ACD-V Multi-Criteria Sensor	Riser Room	1	100	300	
20	2	DIMM Dual Input Monitor Module	Fire Pump Running	1	101	300	
21	2.01	DIMM Dual Input Monitor Module	Fire Pump Running	1	101	300	
22	2.02	DIMM Dual Input Monitor Module	Fire Pump Running	1	101	300	
23	3	DIMM Dual Input Monitor Module	Fire Pump Power Failure	1	102	300	
24	3.01	DIMM Dual Input Monitor Module	Fire Pump Power Failure	1	102	300	
25	3.02	DIMM Dual Input Monitor Module	Fire Pump Power Failure	1	102	300	
26	4	DIMM Dual Input Monitor Module	Fire Pump Phase Reversal	1	103	300	
27	4.01	DIMM Dual Input Monitor Module	Fire Pump Phase Reversal	1	103	300	
28	4.02	DIMM Dual Input Monitor Module	Fire Pump Phase Reversal	1	103	300	
29	5	DIMM Dual Input Monitor Module	Riser Tamper	1	104	300	
30	5.01	DIMM Dual Input Monitor Module	Riser Tamper	1	104	300	
31	5.02	DIMM Dual Input Monitor Module	Riser Tamper	1	104	300	
32	6	DIMM Dual Input Monitor Module	Riser Tamper	1	105	300	
33	6.01	DIMM Dual Input Monitor Module	Riser Tamper	1	105	300	
34	6.02	DIMM Dual Input Monitor Module	Riser Tamper	1	105	300	
35	7	DIMM Dual Input Monitor Module	Riser Tamper	1	106	300	
36	7.01	DIMM Dual Input Monitor Module	Riser Tamper	1	106	300	
37	7.02	DIMM Dual Input Monitor Module	Riser Tamper	1	106	300	
38	8	ACD-V Multi-Criteria Sensor	1st Floor Water Heater Roor	1	107	300	

Test

CONFIGURE TAB

Click the icon to see detailed information about that toolbar option.



Network 51

New Panel Wizard 52

New I/O Module 55

New Device 56

System Manager 57

Quick Config 63

Zone Manager 64

Sensitivity Mgr 65

COMING SOON - Group Manager 67

Loop Manager 68

Cause and Effect 69

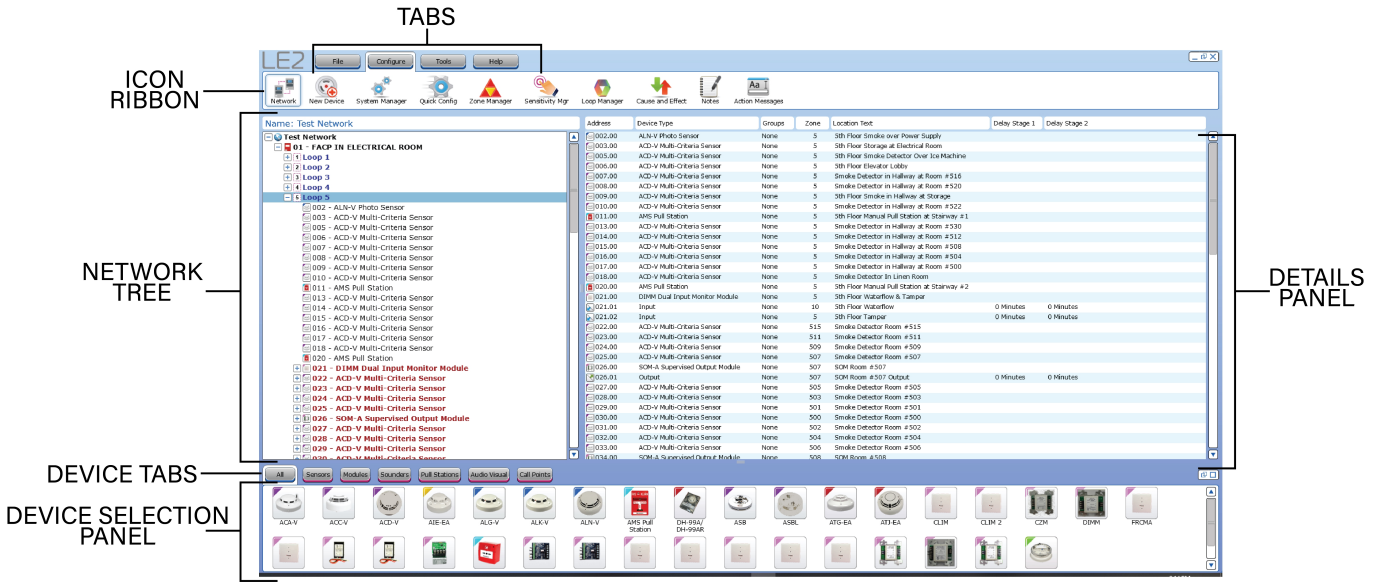
Notes 77

Action Messages 78

Templates Mgr 79

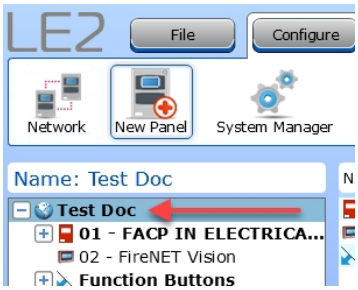
Network

This option displays the entire network view. Refer to GUI Overview for detailed information on the parts of this window.

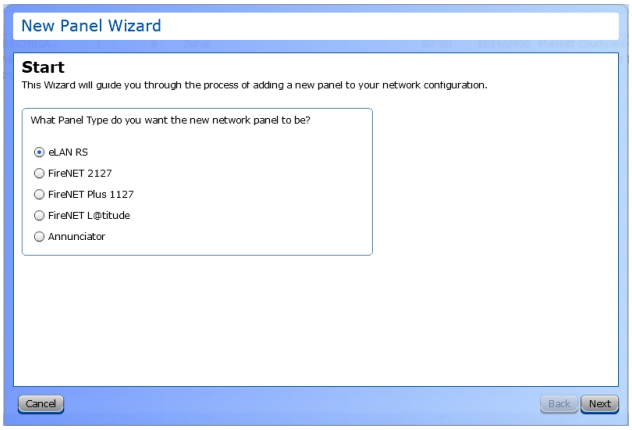


New Panel Wizard

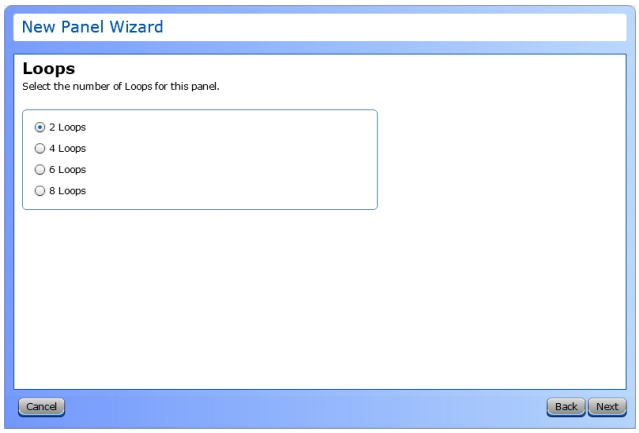
This will open the **New Panel Wizard**, which provides the user with a step-by-step walkthrough for adding a new panel to their configuration. This icon is only visible when the Network Overview ( ) is selected, as shown.



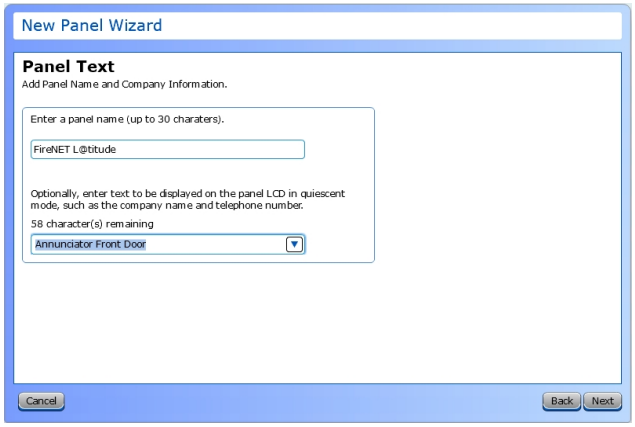
1. **Start.** Select the desired panel type.



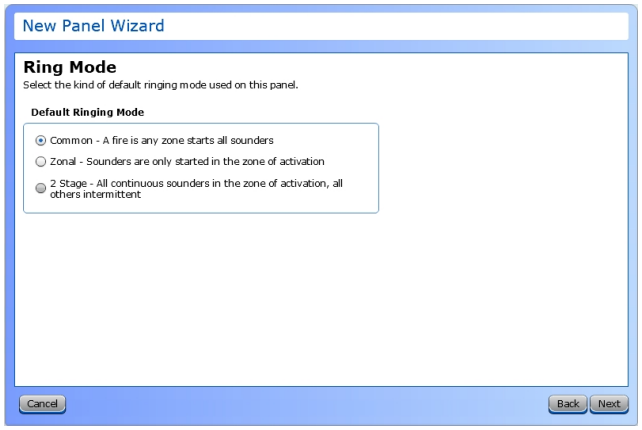
2. **Loops.** Select the desired number of loops to add to the network.



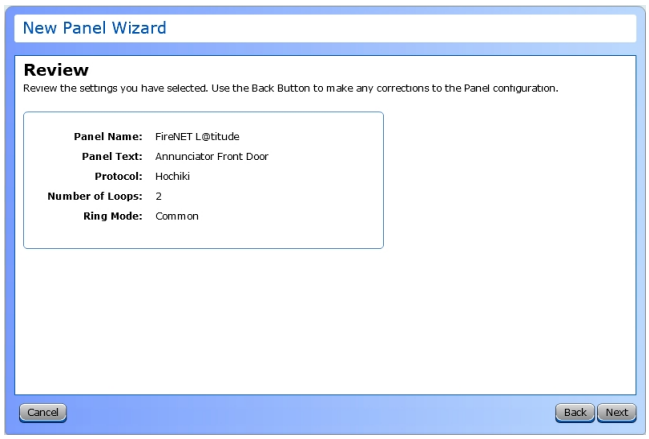
3. **Panel Text.** Enter a panel name (up to 30 characters). Optionally, enter text (up to 80 characters) to be displayed on the panel LCD in quiescent mode, such as the company name and telephone number.



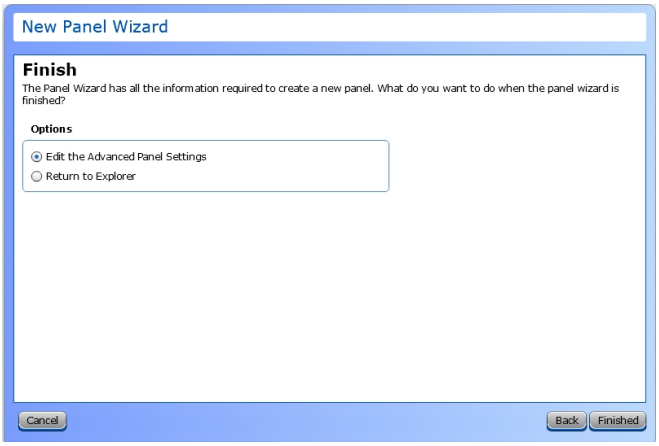
4. **Ring Mode.** Select the default ringing mode.



5. **Review.** Review the selected settings.

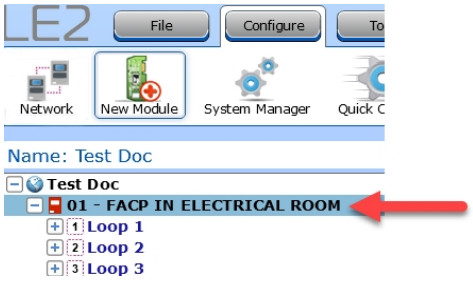


6. **Finish.** Select the action to be done when the wizard finishes.



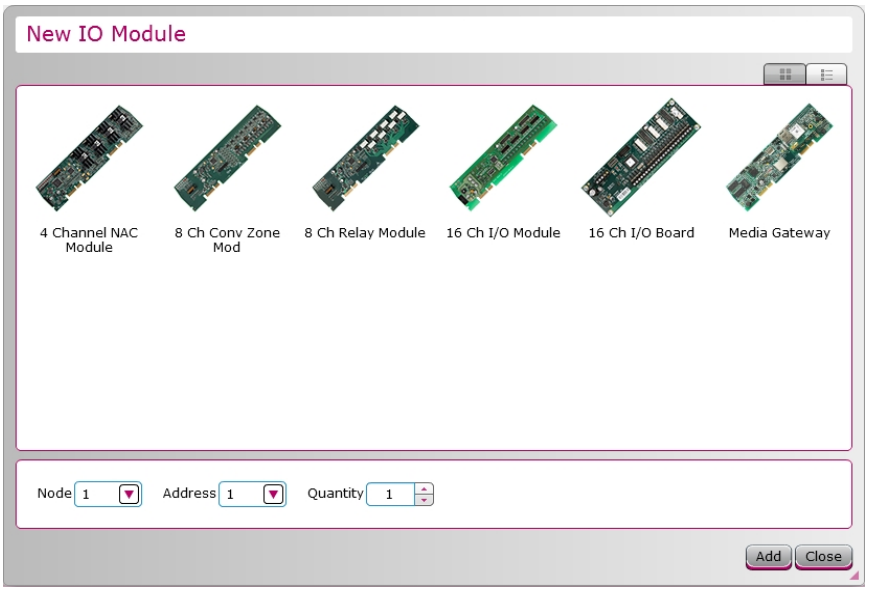
New I/O Module

This will open the **New I/O Module** window, which allows the addition of a new module to the configuration. This icon is only visible when a panel is selected in the network tree.



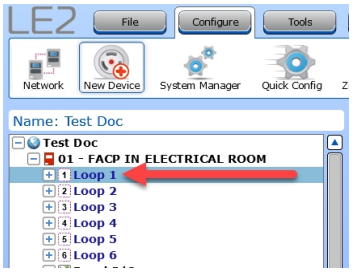
Select the desired module. Then, select a **Node**, **Address**, and **Quantity**.

NOTE For Media Gateway, only the **Node** field is active and editable.

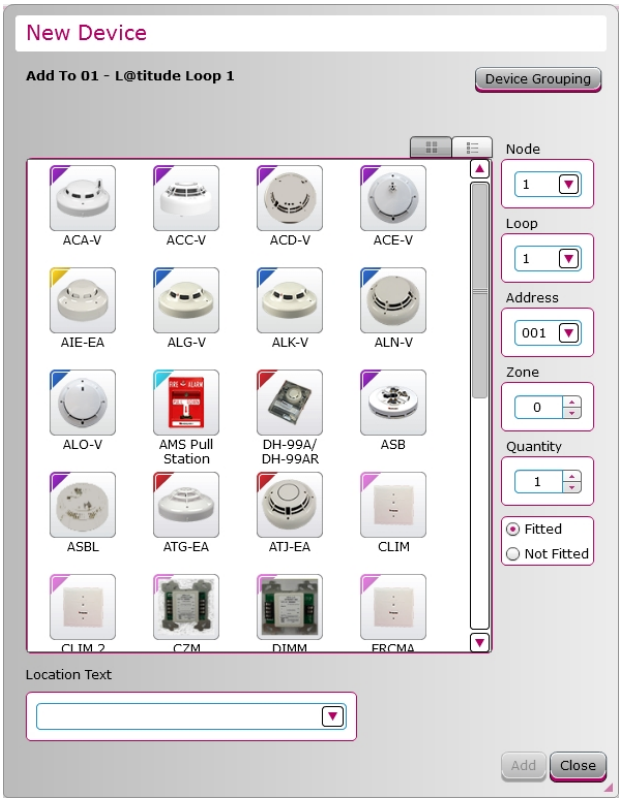


New Device

Click **New Device** to add a new device to the configuration. This icon is only visible when a loop is selected in the network tree.



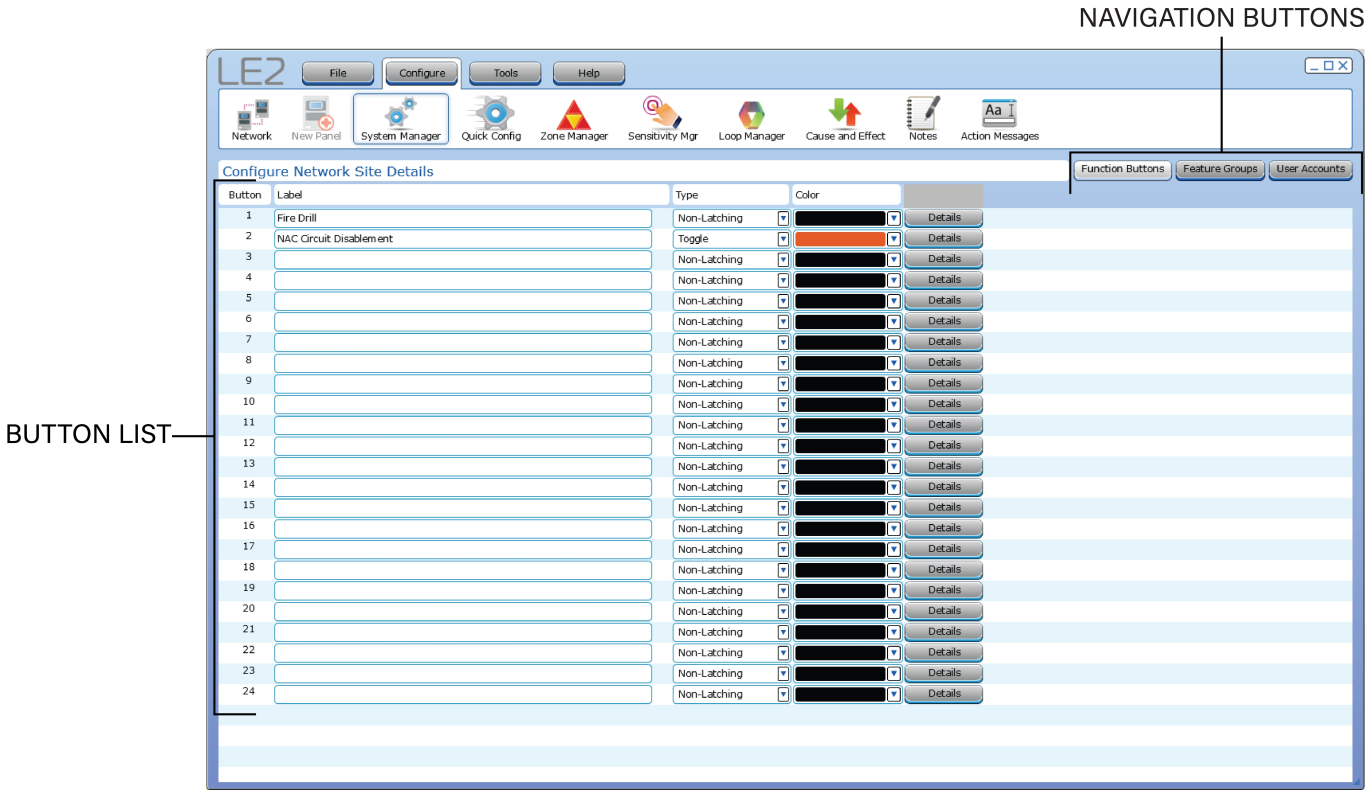
1. Select the desired device to add to the network configuration.
2. Select the **Node**, **Loop**, **Address**, **Zone**, and **Quantity**.
3. Then, select whether the device is *Fitted* or *Not Fitted*.



System Manager

The **System Manager** is only available in supported FACPs with predominantly GUI-based input control. This window contains global settings to configure Function Buttons, Feature Groups, and User Accounts. These settings are applied to all applicable panels, annunciators, and modules on the network tree.

NOTE This feature is not available on legacy panels.



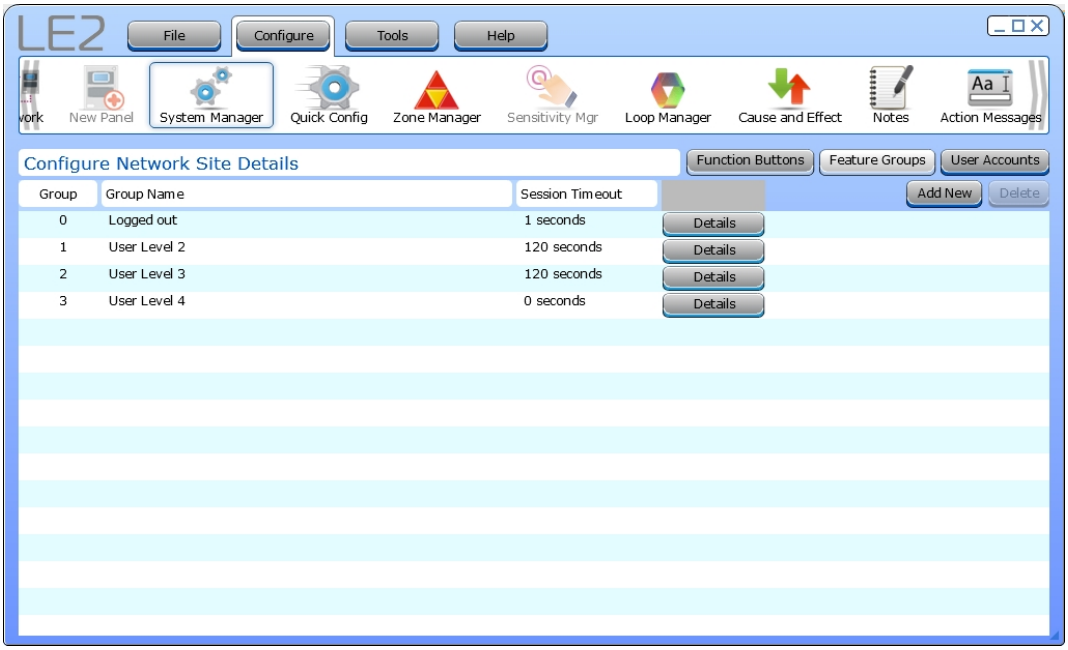
Function Buttons

These programmable input buttons can be assigned any Input Action and Input Latch setting. All Function Buttons must be assigned a label, color, zone, type, input delay, and feature group. They can also be used in a cause and effect relationship.

1. To configure a function button, enter a text **Label**.
2. Select an Input Latch Type from the **Type** drop-down. Options are *Latching*, *Non-Latching*, and *Toggle*.
3. Select a **Color** from the drop-down.
4. Click **Details**. The **Input Properties** window for this button appears.

a. Select an **Input Action**. This field describes what type of action the panel should take in response to an activation of the input.
b. Select the **Feature Group**(s). This will restrict the action unless the user is logged in as one of the selected User Levels. A Feature Group is automatically selected when the **Input Action** is selected, but can be changed.
c. Check the **Output Delay** *Bypass* box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
d. Select a **Function Button Color** from the drop-down. If a color had already been selected in the **System Manager** window, it will be reflected here. A new color can be chosen if desired.
e. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom **Input Action Message** can be entered.
f. Set the **Input Delay** in seconds, up to 180 seconds. This setting delays the panel's response to an activation. No panel response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
g. Set the **Input Latch** to Latching, Non-latching, or Toggle.
h. Each input circuit is Normally Open, but Closed upon activation. Selecting **Input Invert** will set the circuit to be Normally Closed, but Open upon activation.
i. Set the **Location Text**, up to 80 characters. This text is displayed when the circuit is activated.
j. Set the desired **Map to Zone** number for the circuit. Allowable values depend on the panel.

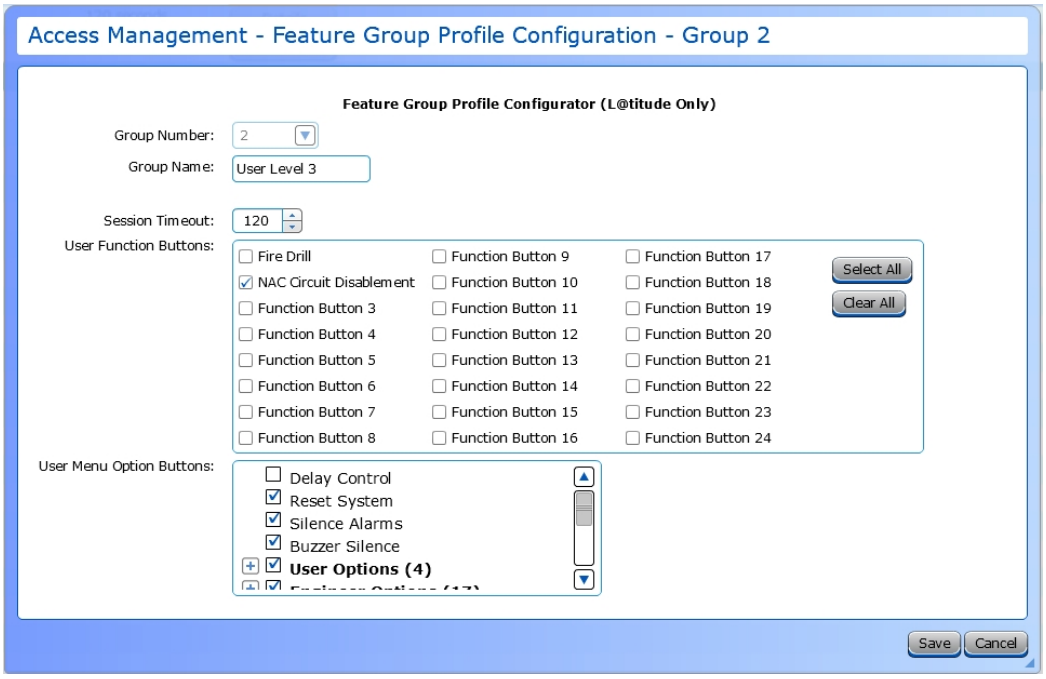
Feature Group



Feature Groups permit and restrict access to various GUI features. The Feature Group can be modified using the **Details** button. A maximum of 27 groups are permitted.

- To edit an existing **Feature Group**, click **Details**. The configuration window will display, allowing the modification of that feature group.
- To create a new feature group, click **Add New** at the right. This will also display the configuration window. Enter the desired information for the new feature group.

NOTE **Feature Groups** with a Group number of 4 or more can be deleted. Users are not permitted to delete default user accounts (Group Numbers 0 - 3).



This window allows the selection of **User Function Buttons** and **User Menu Option Buttons** for the selected Feature Group. Selecting a box in the **User Menu Option Buttons** or **User Function Buttons** pane will add or remove the menu button for the Feature Group.

- The **Session Timeout** countdown (in seconds) is the countdown timer for user logout due to inactivity. Range between 0 - 255.
- **Group Name** (20 characters) can also be configured. Default Group Names (Groups 0 - 3) cannot be changed.

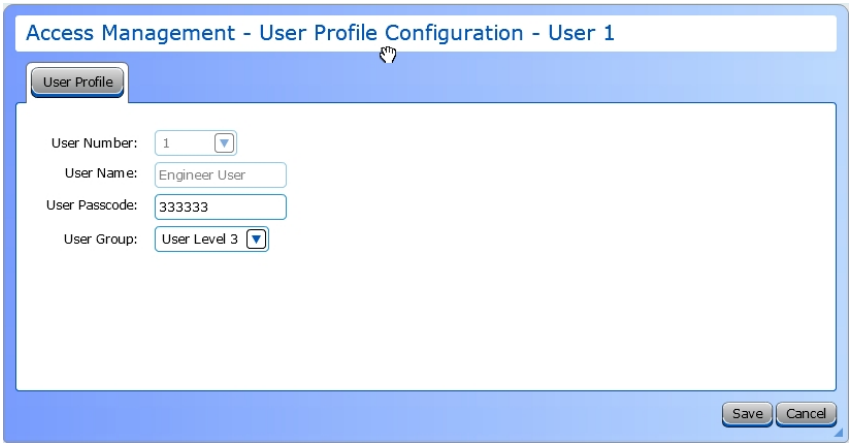
User Menu Option Buttons

Feature	Description	Selected by Default for...
Delay Control	This option allows (checked) or prevents (unchecked) a user to set delay timers in their configuration when using the panel GUI.	Group Number 1 (User Level 2) and higher
Reset System	This option will add (checked) or remove (unchecked) the Reset button from the GUI. If unchecked, users will be prevented from clearing active event conditions (fire, trouble, supervisory, etc) locally or across the network.	Group Number 1 (User Level 2) and higher
Silence Alarms	This option will add (checked) or remove (unchecked) the **Silence Alarms** button from the GUI. If unchecked, users will not be able to silence active NACs on the system locally or across the network.	Group Number 2 (User Level 3) and higher
Buzzer Silence	This option will add (checked) or remove (unchecked) the **Buzzer Silence** button from the GUI. If unchecked, users will not be able to silence active buzzers locally or across the network.	All User Groups
User Options	This option will add (checked) or remove (unchecked) the **User Options** menu, and/or add or remove individual items within the User Options menu, including, but not limited to, Panel Tests, View Event Log, and Disablements.	All User Groups

Feature	Description	Selected by Default for...
Engineer Options	This option will add (checked) or remove (unchecked) the **Engineer Options** menu, and/or add or remove individual items within the Engineer Options menu, including, but not limited to, Edit Configuration, Autolearn, and Engineer Disablements.	Group Number 2 (User Level 3) and higher
Fire Events Fault Events Disablement Events Other Events Zone in Test Events	This option will add (checked) or remove (unchecked) the associated event tab from the GUI. **Zone in Test Events** are displayed in the **Other Events** tab.	All User Groups
User Controls	This option will add (checked) or remove (unchecked) the ability for the user to login to another account or logout until the session timeout expires.	All User Groups.

User Accounts

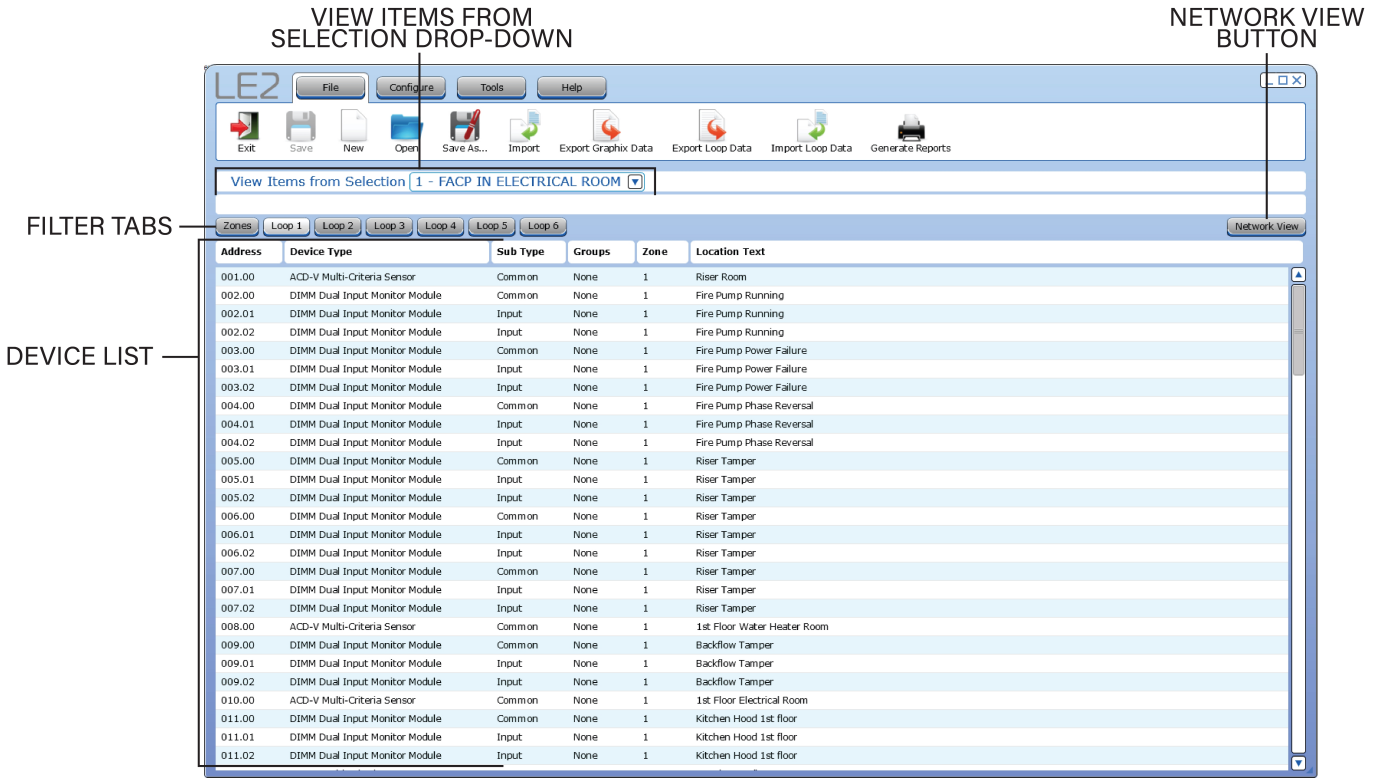
Each panel installer can be assigned a unique user account, which can then be assigned to a Feature Group. User Accounts can be modified using the configuration window in the **Details** button. A maximum of 63 user accounts can be created.



1. Select a **User Number** from the drop-down box. Accounts with a User Number of 4 and higher can be deleted. Users are not permitted to delete default user accounts with a User Numberbetween 0 – 2.
2. Enter a **User Name**. User Names have a 20 character limit. Default User Names cannot be modified.
3. Enter a **User Passcode**. This passcode must be either 5 or 6 digits long. Only numbers are permitted.
4. Select a **User Group** level from the drop-down box.

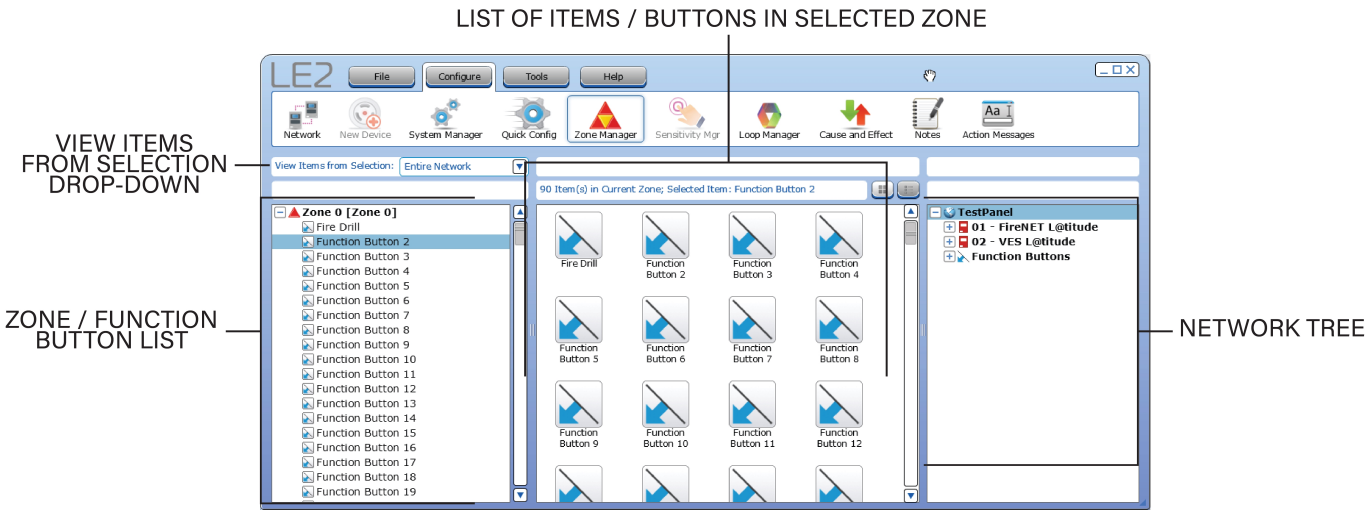
Quick Config

Quick Config displays a table that shows every SLC device on the loop and allows the zone number and location text of each SLC device shown to be edited.



Zone Manager

The **Zone Manager** is a tool used for quickly viewing all panel and loop devices mapped to selected zones, and for configuring them to particular zones. The list on the left shows all zones. The highlighted icons contain devices, where the shaded ones do not.



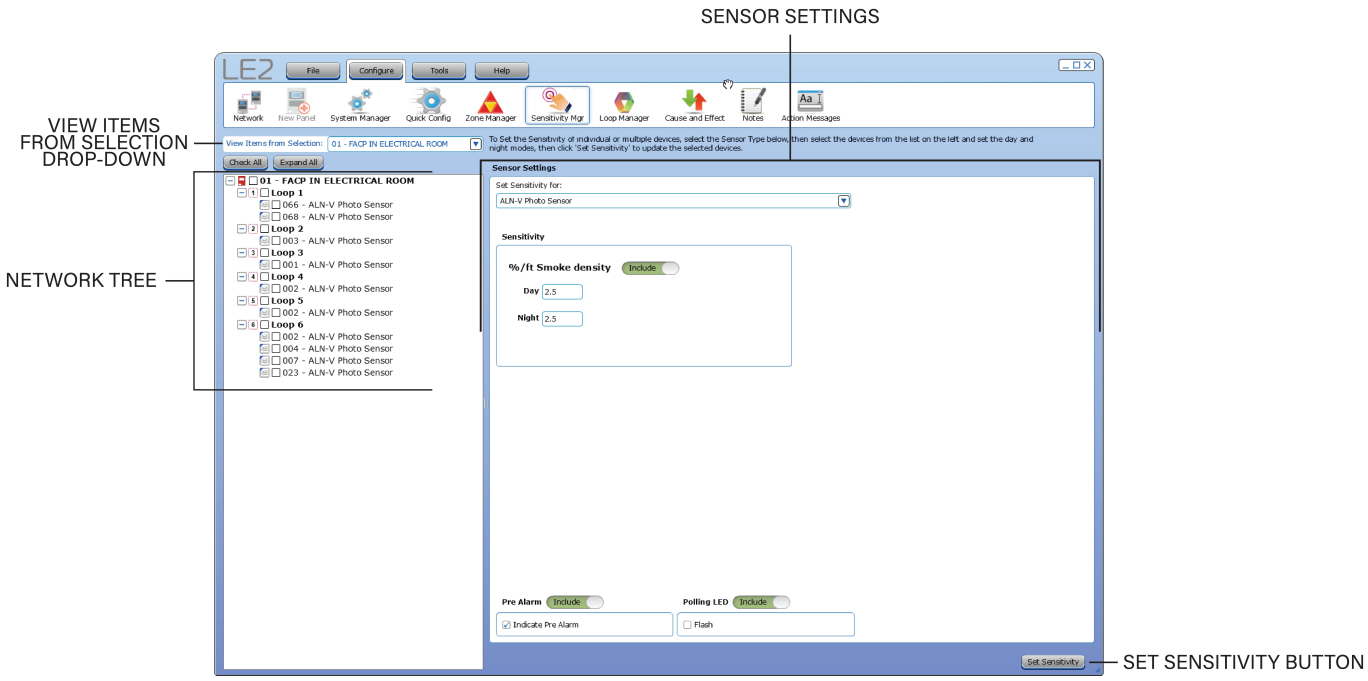
View all of the SLC devices, or panel inputs and outputs that are assigned to that zone by clicking on that zone in the Zone List. Drag-and-drop SLC devices and panel I/O to a selected zones. If the Alarm Verification feature is enabled in the network settings, it can be enabled or disabled from Zone Manager on a per zone basis.

NOTE There are some restrictions on legacy panels.

1. Select a Panel to view contents of the selected zone.
2. Select one or more items - to select multiple items hold **Ctrl** or **Shift** and select the desired items.
3. Drag-and-drop desired items onto a new zone. This will remove the icon from the view on the right, as it has been moved to the new zone.
4. To make changes to the zone name or enable alarm verification, double-click the desired Zone in the left pane. A Zone detail window will appear.
5. To enable Alarm Verification operation, select the **Alarm Verification Enabled** check box for that zone.

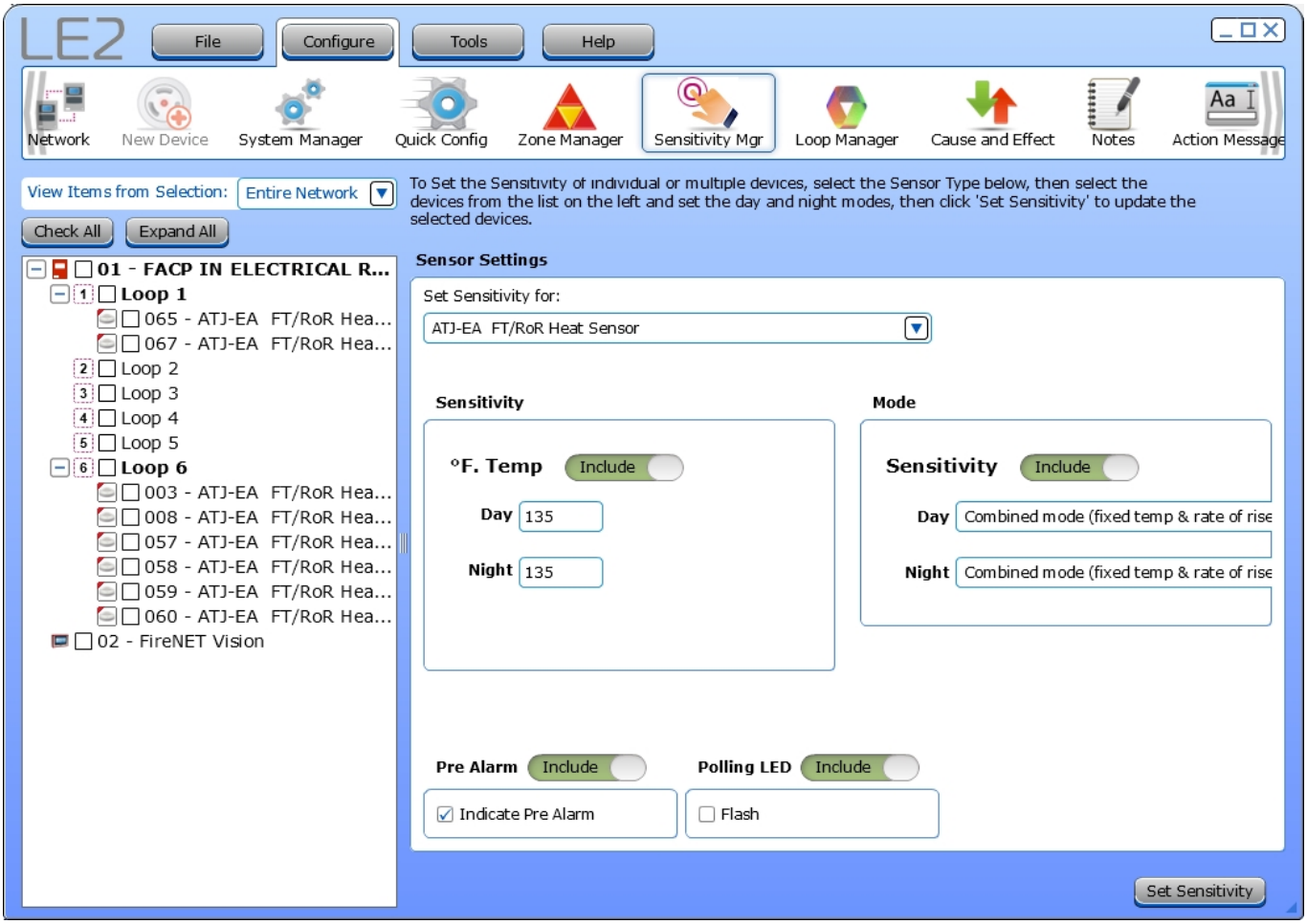
Sensitivity Mgr

Sensitivity Mgr is a configuration tool for making global changes to individual or multiple sensors of the same type on the network without modifying each sensor separately.

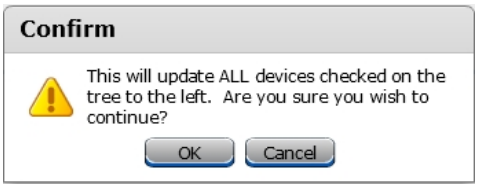


To set the sensitivity of an individual or multiple devices,

1. Select the desired sensor type from the **Set Sensitivity For** drop-down list. All available device types connected on the loop are shown in the list. Once a device type is selected, the sensitivity editor is displayed along with all applicable modes. Configure sensitivity as desired. **Polling LED Flash** and **Pre Alarm** mode may also be set at the bottom of this window.
2. The entire network tree for the selected sensor device type is displayed on the left. Other devices that may be on the loop are not shown. The network tree view may be restricted by the panel using the **View Items From Selection** drop-down. Check the boxes for the desired devices to apply the sensor settings.
3. Enter the desired selections (Day and Night Sensitivity, Smoke Density, etc.).

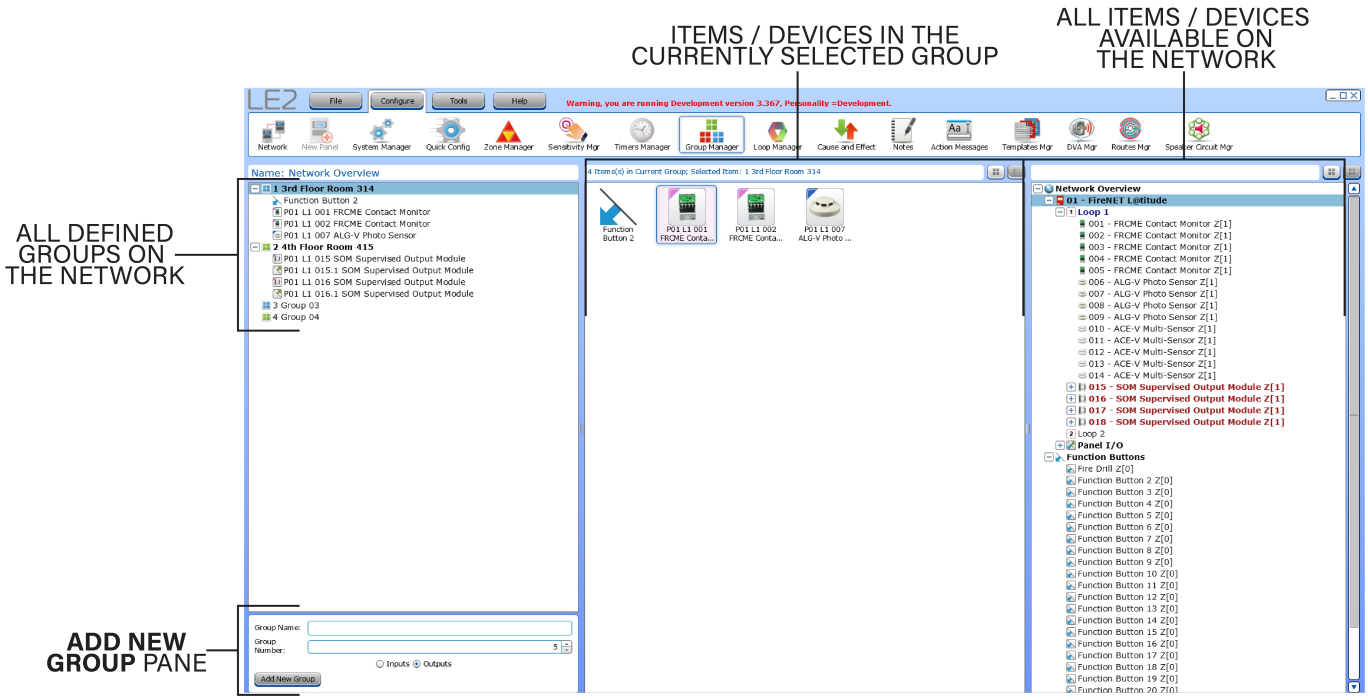


4. Click **Set Sensitivity**. A confirmation window will appear. Changes will be made on all selected sensors.



COMING SOON - Group Manager

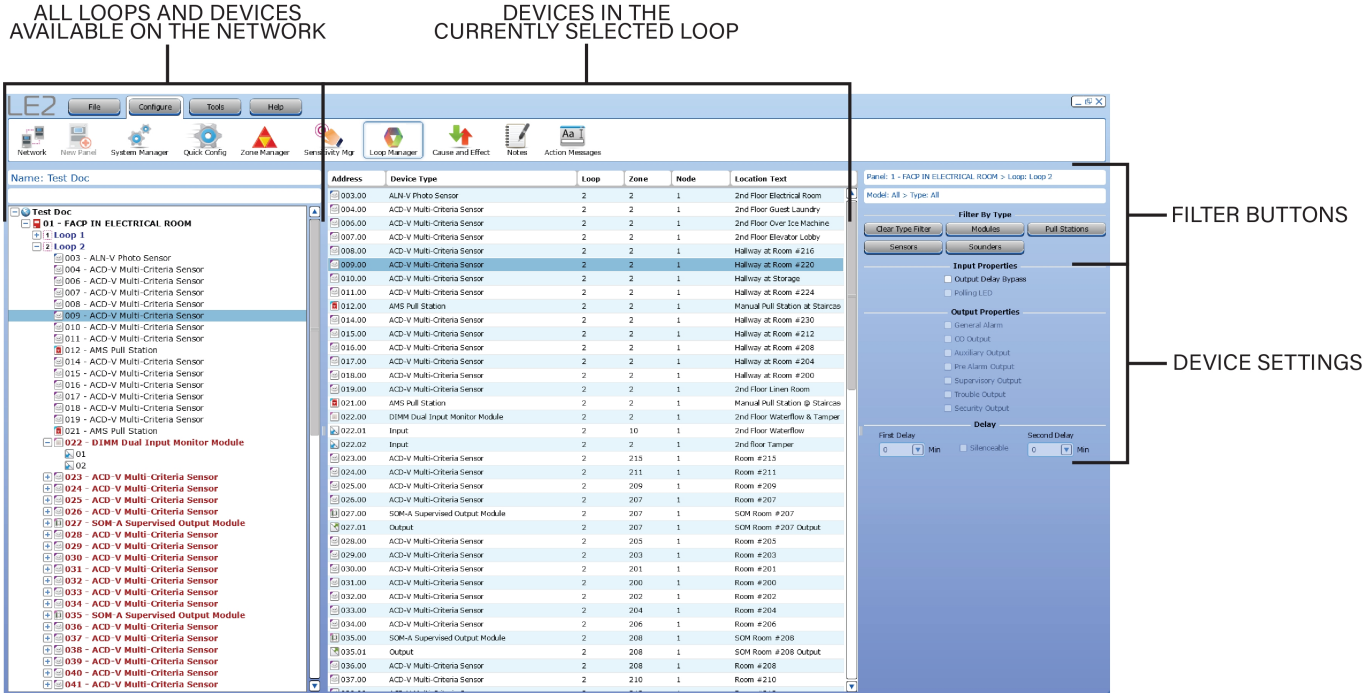
The **Group Manager** allows user to add zones, inputs, and outputs into one or more groups. These Input and Output Groups can be used in a cause and effect relationship. The groups are displayed in the tree and must be given a name and type. Any input or output shown in the network tree may be placed in either an input or output group. Anything placed in the group is displayed in the center pane.



Up to 5000 total groups may be configured and each Group Name can be up to 20 characters long.

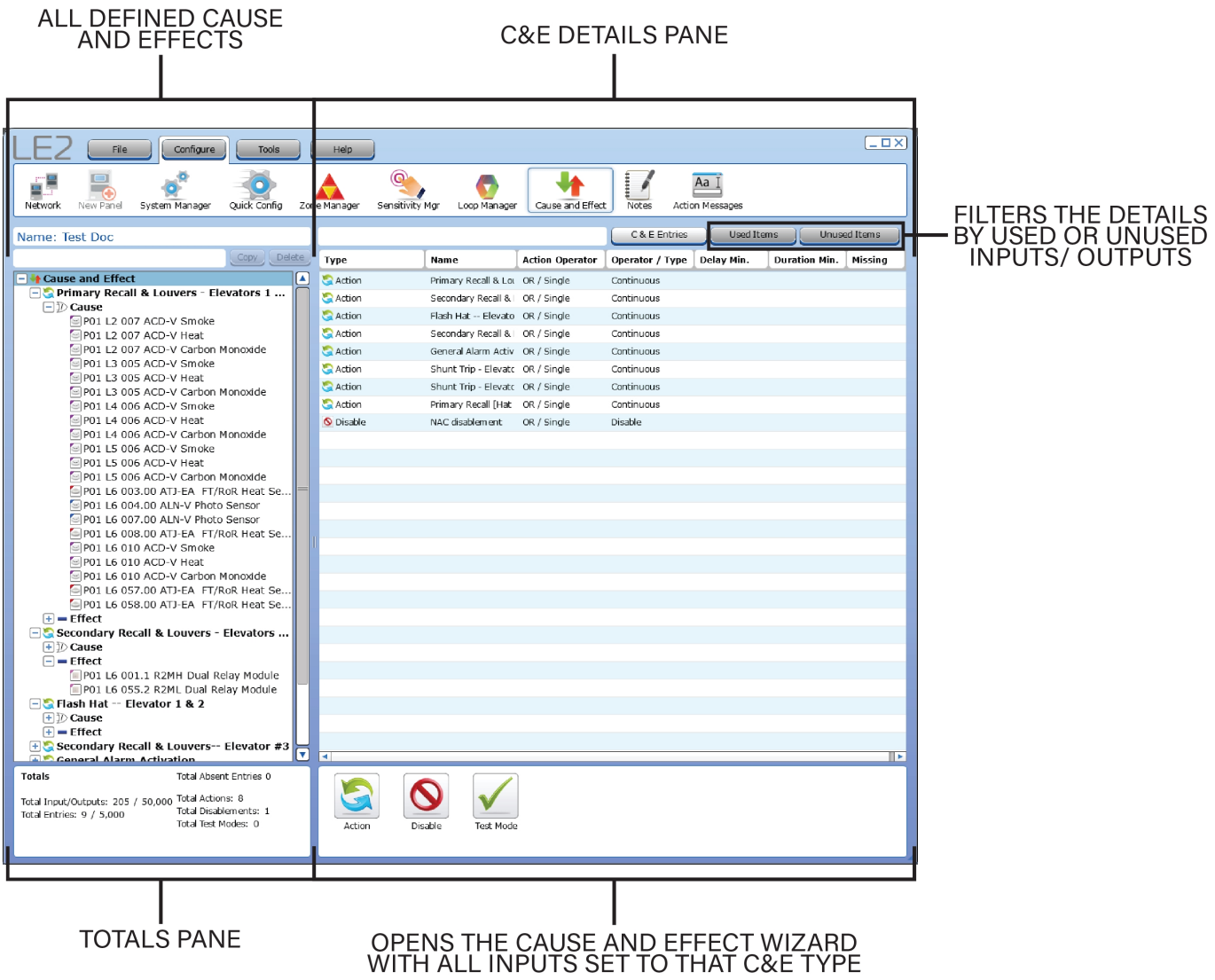
Loop Manager

The **Loop Manager** can be used to configure output SLC devices to become active for event types options listed. This tool can also be used to configure Polling LED and Output Delay Bypass for Input SLC devices.



Cause and Effect

A **Cause and Effect** relationship is a custom program created to link any input or group of inputs on the system, to any output or group of outputs.



Relationships can be generated between inputs and outputs using the Cause and Effect wizard located in the **Configure** tab. These relationships are based on an action and resulting reaction. The **ACTION** is one or more inputs referred to as the **Cause**. The resulting **REACTION** is the activation of one or more outputs referred to as the **Effect**.

LE2 currently supports three types of cause and effect relationships:

Action		Creates an action output in response to an input activation. One example of an Action C&E is a relay that follows the state of an input. A common application might be relays for elevator recall, door release functions, or damper control.
Disable		Creates an input (with an Action of Disablement) that disables outputs or zones on one or more panels.
Test Mode		Creates an input (with an Action of Test) that puts a zone or zones into Test Mode.

Each relationship type has predetermined input action types that must be established before attempting to use the input in the cause and effect wizard. If a user attempts to make a relationship without configuring the input, no selection will be allowed.

Use Case

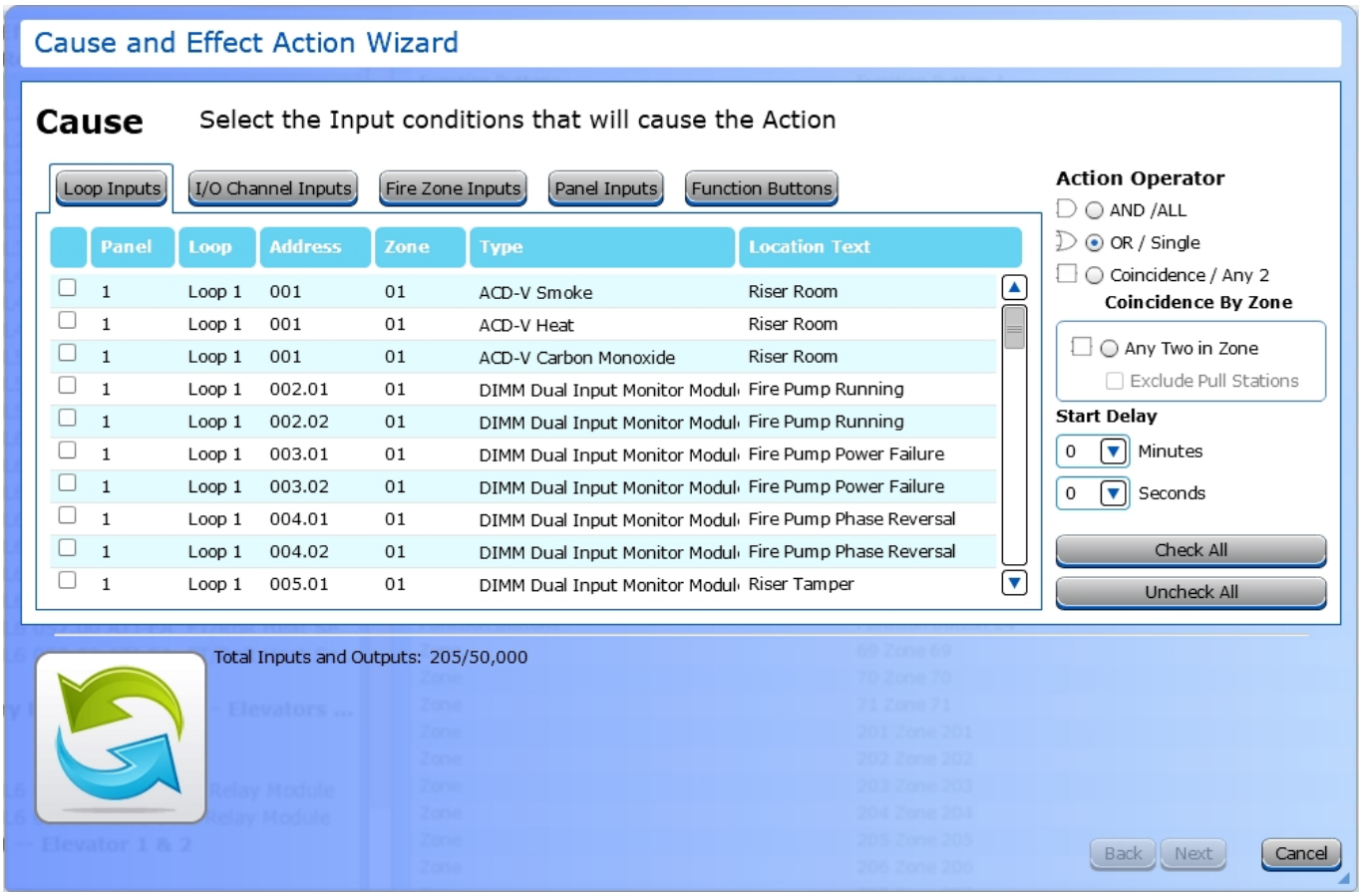
These relationships can be useful when using input actions that generally have no reaction, such as “transparent” inputs. They can also be used to create evacuation events that are generated by specific inputs. It is recommended that default settings are removed from Effect outputs to prevent activations outside the cause and effect relationship.

Each Cause and Effect Relationship is organized by name in an expandable list. Items within the tree can be copied and deleted.

- The **C&E Entries** tab displays information related to the selected C&E(s).
- The **Used Items** tab displays all inputs and outputs used in Cause and Effects.
- The **Unused Items** tab displays all unused inputs and outputs.

Cause and Effect Wizard

Each type of relationship can be configured using a wizard for the specific type. Based on panel type, permitted values may vary. For non-legacy panels, a maximum of 5000 entries are allowed in the Cause & Effect tree and a maximum of 50,000 inputs and outputs may be assigned.



Common features for each wizard include:

1. Each tab displays a variable list of I/O items available for Cause and Effects. When an item is selected, that tab will be highlighted in green.
2. **Check All** or **Uncheck All** buttons to select or deselect all inputs listed in the selected input category.
3. The lists of I/O devices display detailed information for each. The list can be sorted by column, and a **<Ctrl+click>** will allow multi-column sorting.
4. All C&E entries must be named at the end of the wizard

Action Operator

Action operator items define the input conditions that will generate the effect.

AND/ALL		The **AND/ALL** operator allows multiple inputs to trigger the cause. When this operator is selected, two or more inputs are required to trigger the effect. If three inputs are selected for the **Cause**, all inputs must be active before the **Effect** will be triggered.
OR/Single		The **OR/Single** operator allows a single input to trigger the cause. If a group of inputs is selected for the **Cause**, a single activation of an input within the group will trigger the **Effect**.
Coincidence / Any 2		The **Coincidence / Any 2** operator allows any combination of pairs in a group of 2 or more inputs to activate the **Cause**.
Coincidence by Zone		The **Coincidence by Zone** operator allows any combination of pairs in a group of 2 or more inputs in a single zone to activate the **Cause**. This operator also allows the user to disallow the use of any pull station as an input. This operation is only available for Action relationship types.

Output Type

These are the output patterns that supported devices can generate. Not all devices support all patterns. These patterns override assigned output patterns configured in the network tree.

- Temporal
- Continuous
- March

Output Delay Override

Checking this option will override any previously delayed outputs and immediately activate them.

Action

The Action relationship type can be used with any input or group of inputs. The relationship is made up of a **Cause** of one or more inputs and the effect of one or more outputs.

The **Cause** flows with the following logic:

Cause: Input category → Input 1 → Action Parameter Selection → Start Delay → Next

Each input must be selected in one or more categories before they will be entered as a **Cause** variable. Inputs are categorized in the Cause and Effect Action Wizard by the following:

- Input Groups
- Timers
- Function Buttons
- Loop Inputs
- I/O Channel Inputs

- Fire Zone Inputs
- Panel Inputs

All selected inputs must be assigned an Action operator that defines the input conditions that will generate the effect. The **Effect** flows with the following logic:

Effect: Output category → Output 1 → Output Type selection → Duration → Next

Each Output must be selected in one or more categories before they will be entered as an **Effect** variable. Outputs are categorized in the Cause and Effect Action Wizard by the following:

- Output Groups
- Timers
- Loop Outputs
- I/O Channel Outputs
- Zone Outputs
- Panel Outputs

All selected outputs must be assigned an Output Type that defines the pattern that will be used when the effect activates.

Start Delay

Cause inputs may be optionally assigned a Start Delay timer. The start delay timer delays the response input(s) triggers in the **Cause** for specified time in minutes and/or seconds.

Disable

The Disable relationship type can be used to prevent a response from desired I/O. The Cause must be an input or group of inputs configured with the Input Action = Disablement. Inputs are categorized in the Cause and Effect Disablement Wizard by the following:

- Loop Inputs
- I/O Channel Inputs
- Panel Inputs
- Function Buttons

The Effect can be applied to one or more Inputs and Outputs in the following categories:

- Zone
- Local I/O
- Output Groups
- Input Groups
- Inputs
- Outputs
- I/O Inputs
- I/O Channel Output
- Loops

Disabled I/O can be re-enabled when the cause is reset and the Enable action is taken from the disablements screen in the panel GUI.

Test Mode

The Test Mode relationship type can be used to force a zone or group of outputs into a special test mode that will force all detectors to become non-latching. The **Cause** must be an input or group of inputs configured with the Input Action = Test Mode. Inputs are categorized in the Cause and Effect Wizard by the following:

- Loop Inputs
- I/O Channel Inputs
- Panel Inputs
- Function Buttons

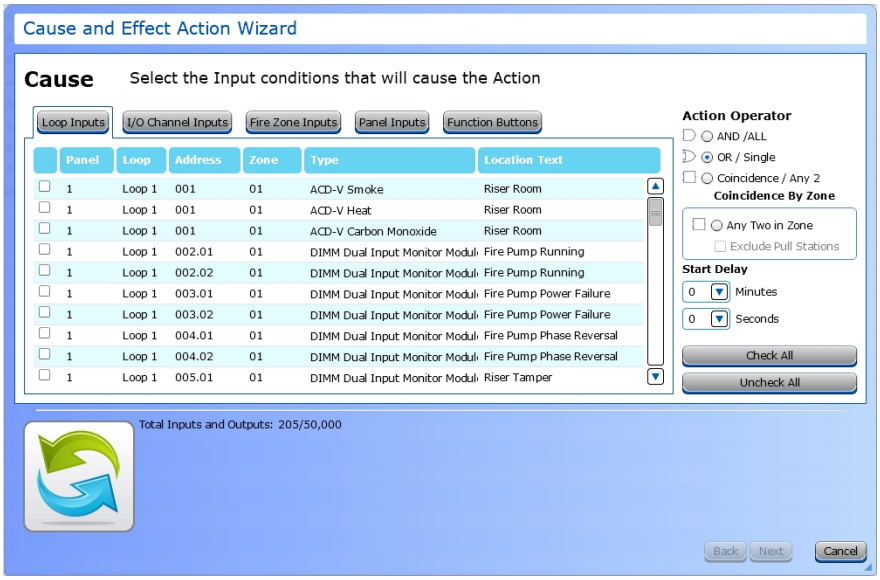
The Effect can be applied to one or more Zones and Output Groups.

Test Type

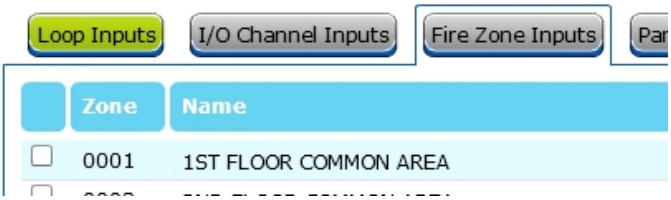
NAC outputs must be set to Silent or Audible under Test Type to configure if **Effect** sounders should activate horns when the cause is triggered.

Cause & Effect Wizard Walkthrough

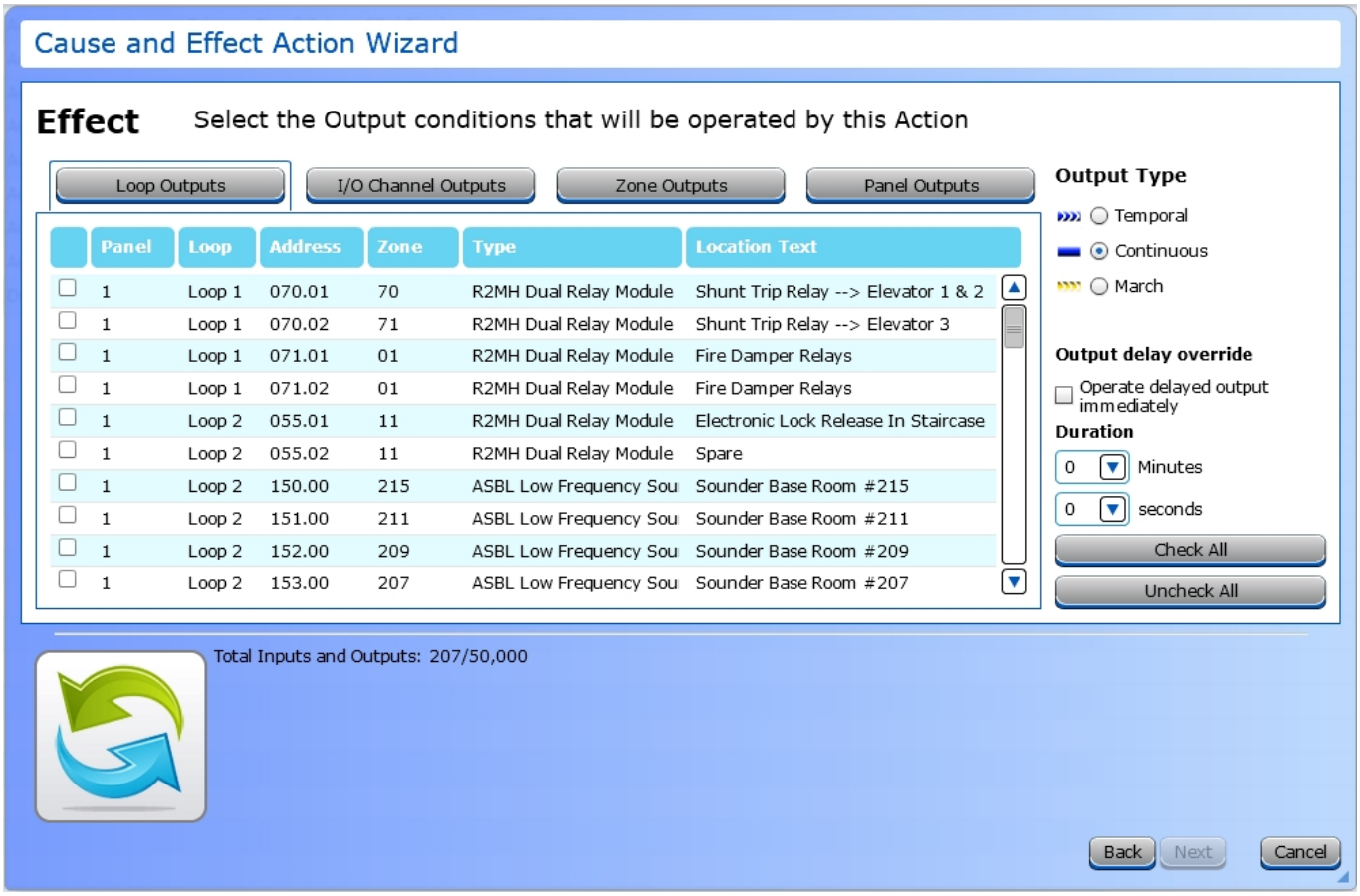
1. To create a Cause & Effect, select the icon for the type of C&E in the bottom-right pane. The Cause & Effect Wizard will open. All available SLC devices are displayed in the tabs shown. Each device is listed numerically by address and loop number. These devices can be sorted by column. Multi-column sorting is available by holding Ctrl while clicking the desired columns.



2. Click the checkbox next to each desired item to make a CAUSE selection.
3. Move through the tabs to make all desired CAUSE selections. Tabs with selected devices will be green. To select all inputs in the active tab, click **Check All**. To clear the current selections, click **Uncheck All**.

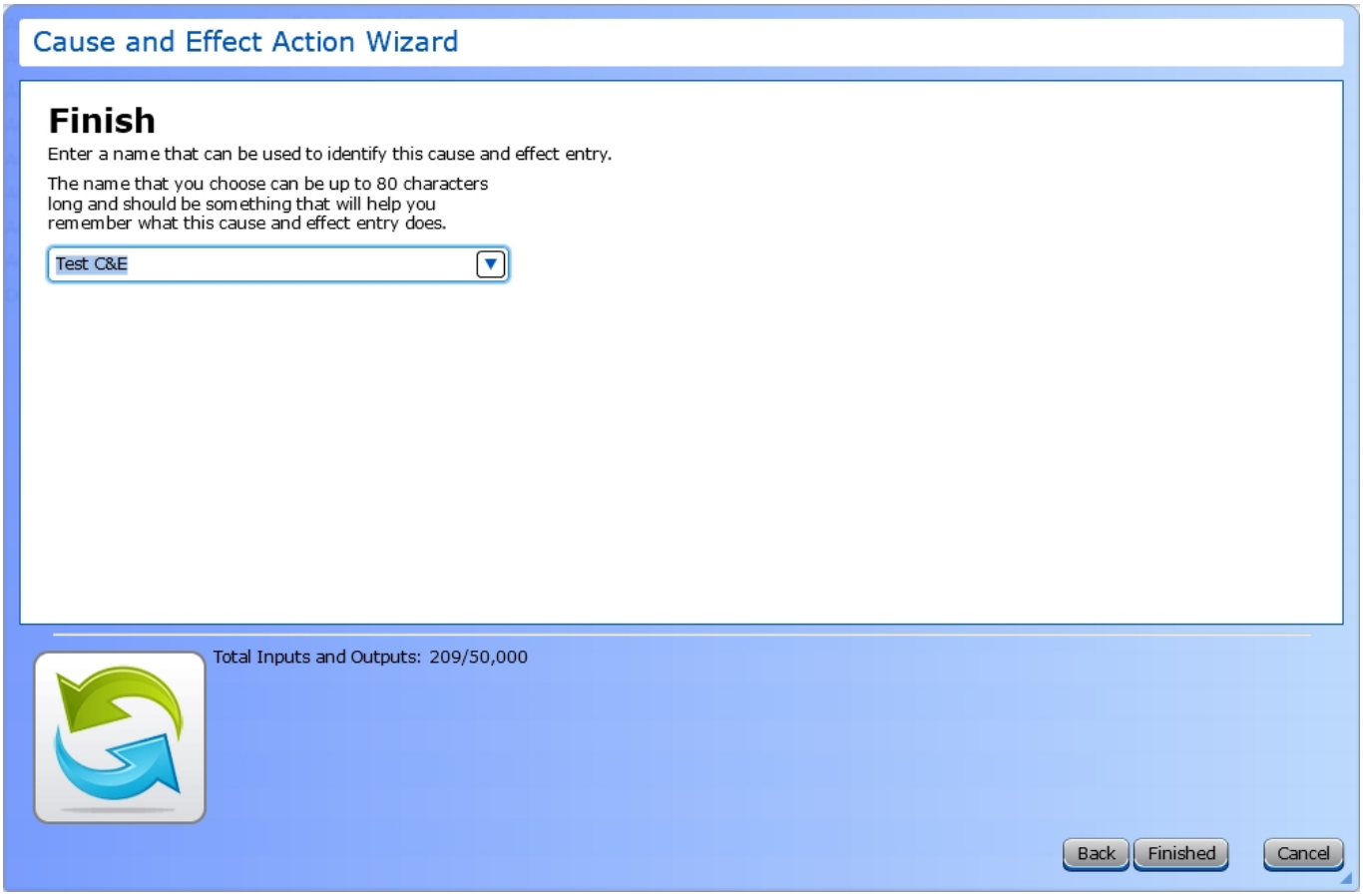


4. Select the desired Action Operator. Refer to Action Operators for detailed information on each selection.
5. If desired, set a Delay period in Minutes and Seconds. The start delay timer delays the response input(s) triggers in the CAUSE for specified time in minutes and/or seconds.
6. Once all input selections have been made, click **Next**. The Effect window will appear.



7. Select the desired outputs from each tab.
8. Choose whether the **Output Type** should be Temporal, Continuous, or March. Refer to Output Types for detailed information about these selections.
9. If desired, select the **Output delay override**. Checking this option will override any previously delayed outputs and immediately activate them.

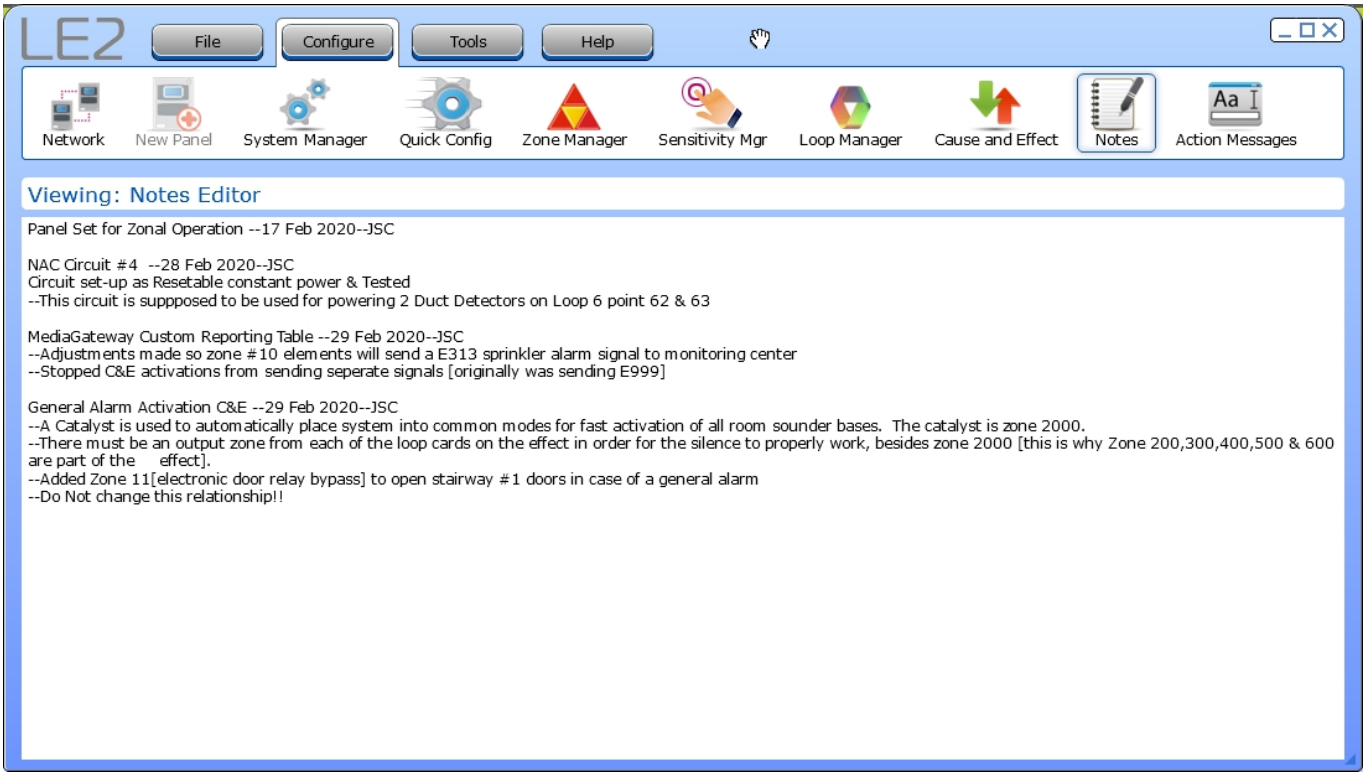
10. Set the desired **Duration** of the output. If no duration is set, it will remain active until the input switch is restored AND the panel is reset.
11. Click **Next**. The **Finish** window will appear.



12. Enter a name for the Cause & Effect. Click **Finished**.

Notes

The **Notes** tool offers a notepad for users to store information or notes about their network file. All notes are left justified. Only plaintext is allowed. When pasting text from a another text editor in Notes, minimal formatting is retained. The tool will keep numbered and bulleted list items indented with space padding.

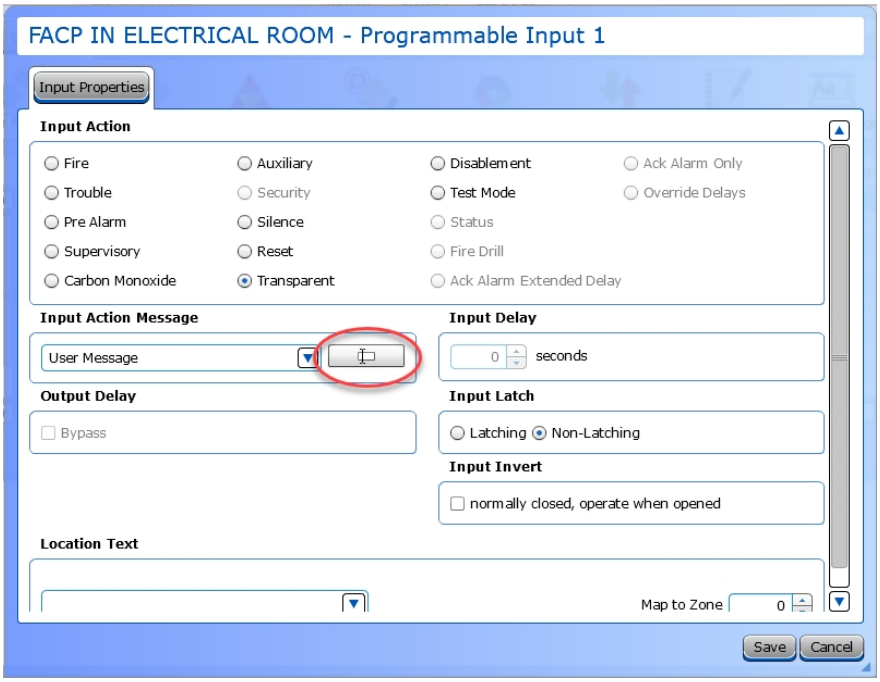


Action Messages

When configured, the control unit will display custom or default text as detailed by the user. This enables the user to display custom **Action Messages** that replace the default event action message. Up to 9 custom messages may be stored.

1. To define new action messages, click **Action Message** in the toolbar. The **Input Action Messages** window will appear.
2. Select any of the *User Message* entries and enter the new, desired action message.
3. Click **OK**.

To use a custom action message, edit the properties of any input and use the **Input Action Message** drop-down list. The action messages can be modified in these windows, by clicking the icon next to the **Input Action Message** field.

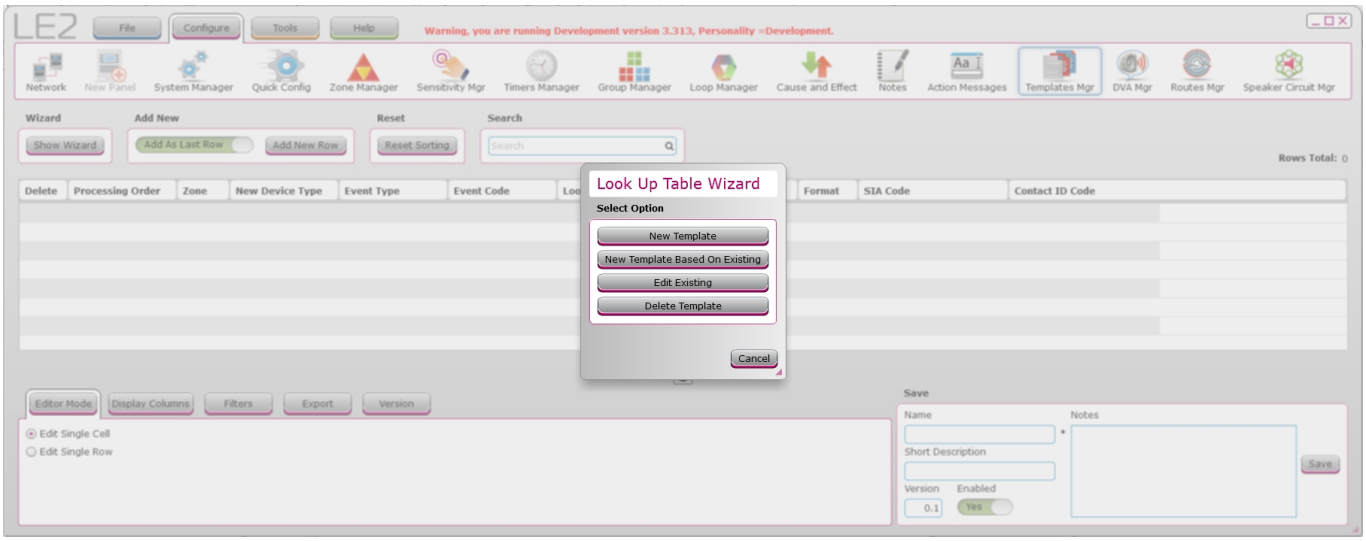


Templates Mgr

IMPORTANT! This feature is not available in all configurations.

The **Templates Manager** allows users to create custom Media Gateway Off-Premises reporting code tables that can be imported or exported to the Media Gateway. The wizard assists with template creation. Depending on the user permissions and configuration, different options may be permitted in the Table Editor. For more information, contact Technical Support.

For full details and technical information, refer to the **Media Gateway Panel Module (S788) Functionality and Configuration Guide** (MAN-1483).



TOOLS TAB

Click the icon to see detailed information about that toolbar option.

Dial Modem 81

Transfer Configuration 82

Transfer Quiescent Screen 85

XML Import 87

XML Export 88

Panel Event Log 89

Loop Analog Values 90

Update Panel Firmware 91

Virtual Panel 93

Monitor Mode 94

Battery Calculator 95

Edit Preferences 96

License 99

Loopback Test 100

Dial Modem

The **Dial Modem** feature allows users to interface to a serial dialer modem. This can be used to test call a fire alarm system. A modem is required for this functionality.

NOTE This feature is only supported on legacy panels.

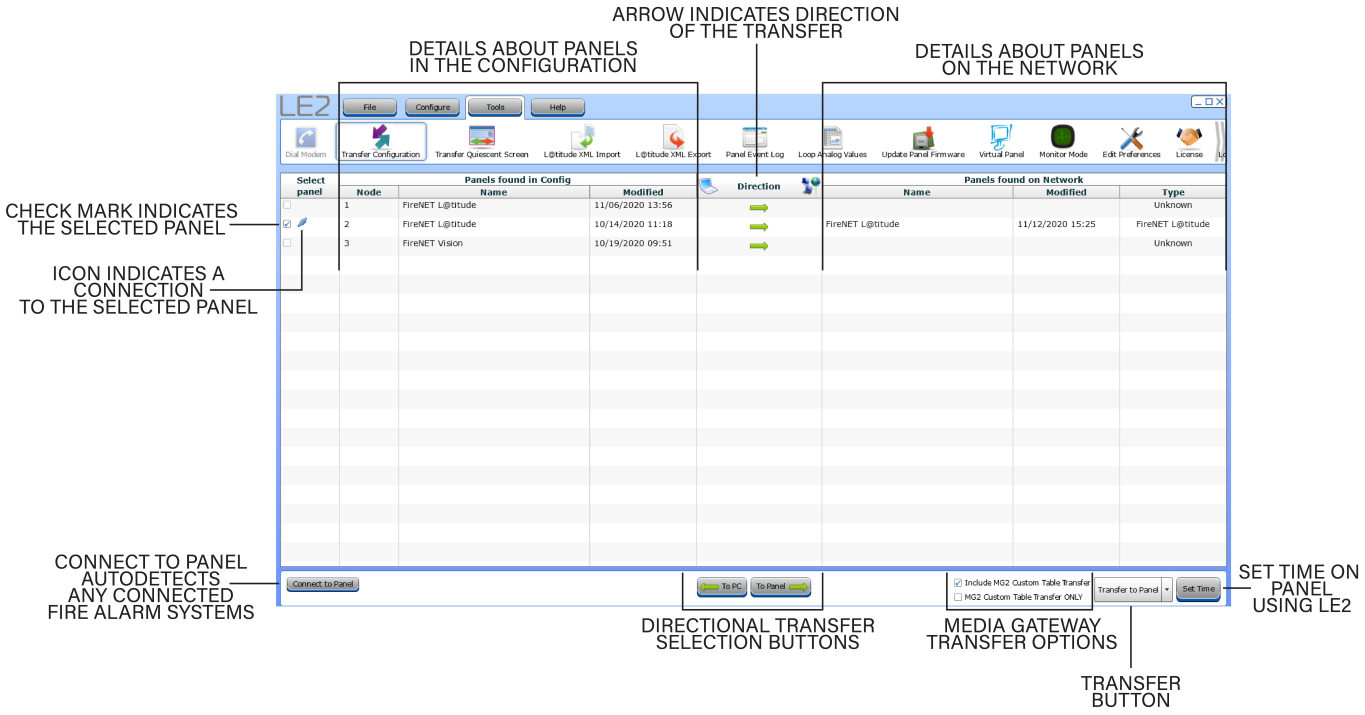
1. Before using this functionality, the Dialer Modem COM port must be set in **Edit Preferences**.
2. Add Dialer to the network.
3. Click **On** and enter the phone number of the panel(s) to call.
4. Once a connection is made, the user will be able to import the event log and analog values from the connected panel.

Transfer Configuration

The **Transfer Configuration** tool allows users to either import or export a configuration file or set the time on the connected control unit.

NOTE If the **Transfer Configuration** icon is disabled, check the LE2 license.

A transport method compatible with the hardware must be used in order to transfer configurations between LE2 and a control unit.



Click **Connect to Panel** to auto-detect the connected Fire Alarm System(s).

Panels in the LE2 configuration are displayed on the left side. The panel found on the network will be displayed, along with the latest modification date, and panel type. The date in the Modified column is the last date a configuration was transferred to that panel.

Click **To PC** or **To Panel** to control the direction of the transfer. The **Direction** column in the center of the window will display an arrow to indicate the direction of the transfer.

There are two options for transferring the Media Gateway Custom Table. **Include MG2 Custom Table Transfer** will include the custom table with the configuration. **MG2 Custom Table Transfer ONLY** transfers ONLY the custom table and will not update the configuration of the selected panel.

Use the **Set Time** button to use LE2 to set the date and time on the selected panel.

USB Transfer

The USB transfer is dependent on the Fire Alarm control unit hardware; the USB port must be identified before attempting to transfer a configuration using LE2.

USB-A Port Configuration

Use the XML Import or XML Export features to perform a transfer with a USB drive.

Transfer Configuration from a Control Unit to LE2 using a USB-A Flash Drive

Follow the procedures in XML Import to import a configuration using a flash drive.

Transfer Configuration from LE2 to a Control Unit using a USB-A Flash Drive

1. Obtain a USB-A flash drive containing the desired LE2 configuration file. For information on getting the configuration file onto a flash drive, see XML Export.
2. On the panel, log into a User Account with User Access Level 3. The default user account with this permission is the Engineer, which has a default passcode of 333333.
3. Remove anything attached to the USB drive (keychains, etc) to prevent stress damage to the port. A loose connection will cause a read error.
4. Insert the flash drive into the appropriate port.
5. On supported control units, the panel will display a list of files that may be overwritten or imported. This may take up to 5 seconds. If the control unit does not display file list, ensure that the panel is logged into a User Account with User Access Level 3. On the panel, select **Engineer Options** > **Edit Configuration** > **Import/Export Configuration**.
6. Select the desired file and select **Import**.
7. Confirm **Import** operation when prompted.

USB Transfer using a Cable

Determine the USB port on the computer and obtain an appropriate cable with a male USB connection. The exact cable needed depends on the USB ports available on the panel and computer.

Import to LE2

1. If a configuration has not been defined, log into a User Account with User Access Level 3. The default user account with this permission is the Engineer, which has a default passcode of 333333.
2. Perform an Autolearn.
3. Connect the USB cable from the PC to the control unit.

4. In the Transfer Configuration window, select **Connect to Panel** and **To PC** for the direction of transfer.
5. Click **Transfer to PC**.

Export to Control Unit

A configuration file may be exported from a previously saved configuration file or from working network file in LE2.

1. Connect the cable from the computer to the USB-B port on the control unit.
2. Click **Connect to Panel** > **To Panel** for the direction of transfer.
3. Click **Transfer to Panel**.
4. Wait for the configuration transfer to complete. A window will display requesting to return to the network tree.
5. The USB Cable may be removed from the control unit.

Serial Transfer

On supported panels, users can use a serial programming cable to transfer configuration files between LE2 and the Fire Alarm System .

1. Using a serial programming cable (described in detail in Getting Started), plug the serial connector into an open COM port on the computer. Note the port number that corresponds to this COM port. This port can be selected in **Edit Preferences**. Use the Windows Device Manager to determin which COM Porrt is associated with the Serial Adapter.
2. Connect the other end of the serial cable into the 10-pin port (labeled PC).
3. Click **Transfer Configuration** from the **Tools** tab and click **Connect to Panel**.
4. On some legacy panels, a password may be required. Enter the appropriate password.
5. LE2 will automatically detect connected units with an icon. Select the desired panel.
6. Select the direction of the transfer.
7. Click **Transfer to _____** and wait for the transfer to complete. A window will display requesting to return to the network tree.
8. Repeat this process if other panels on the network require configuration.

Transfer Quiescent Screen

On devices with an LCD screen, a custom GUI Screen or logo may be transferred from LE2. This screen will be displayed on the unit when the panel is in normal standby. This tool provides storage and management for multiple images.

To add new images, click **Quiescent Screen Maintenance**. Click **Add New** to search for an add new images to the list.

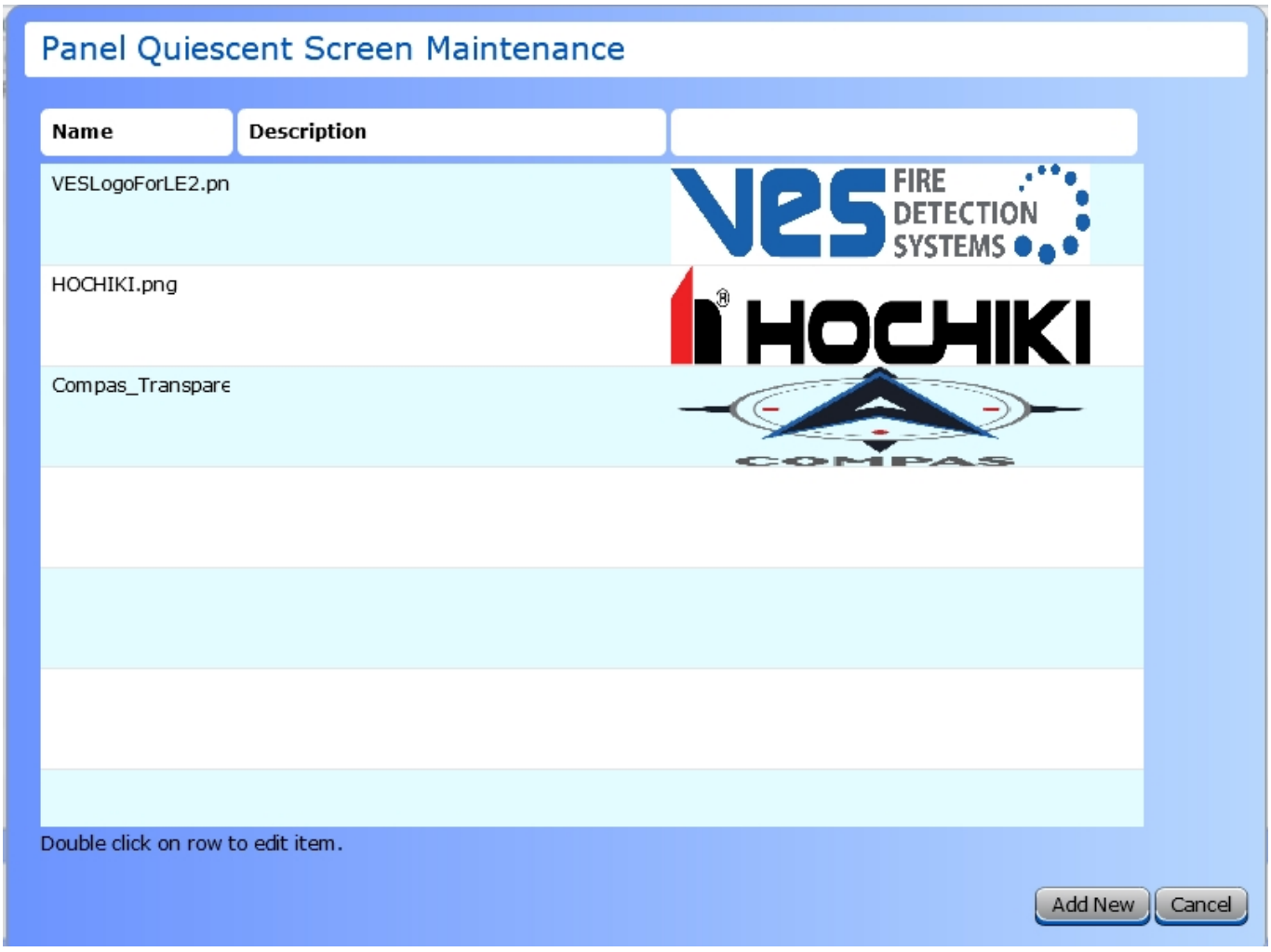
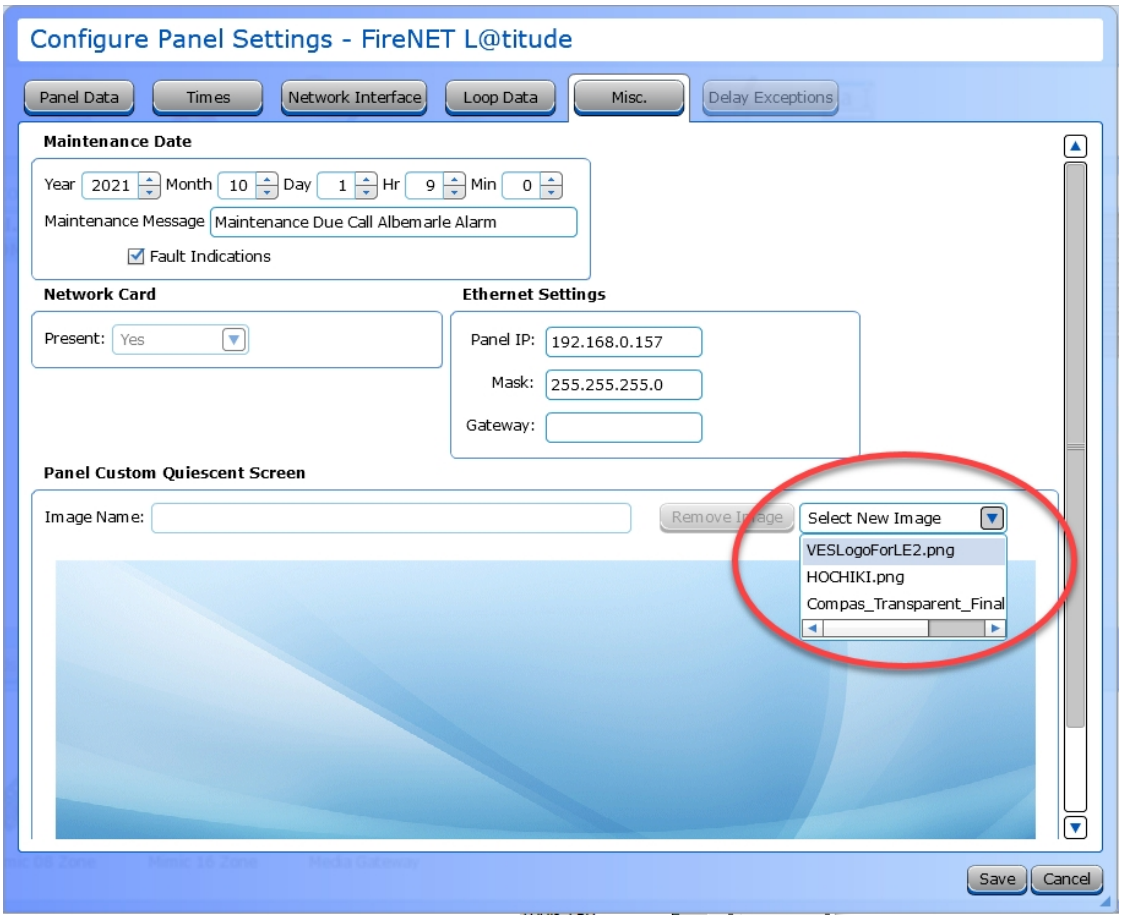


Image files must be .png, cannot be more than 780 pixels x 283 pixels, and not over 2.6 MB in size.

Existing image details may be edited when the desired image row is double-clicked. Each image may be given a Name and Description that will be displayed in the Quiescent Screen Maintenance table. A thumbnail will be displayed for each image.

1. To select one of these images for your quiescent screen, go to the **Network** view (**File** > **Network**).
2. Double-click the desired panel to open the **Edit Properties**windows.
3. Select the **Misc.** tab.



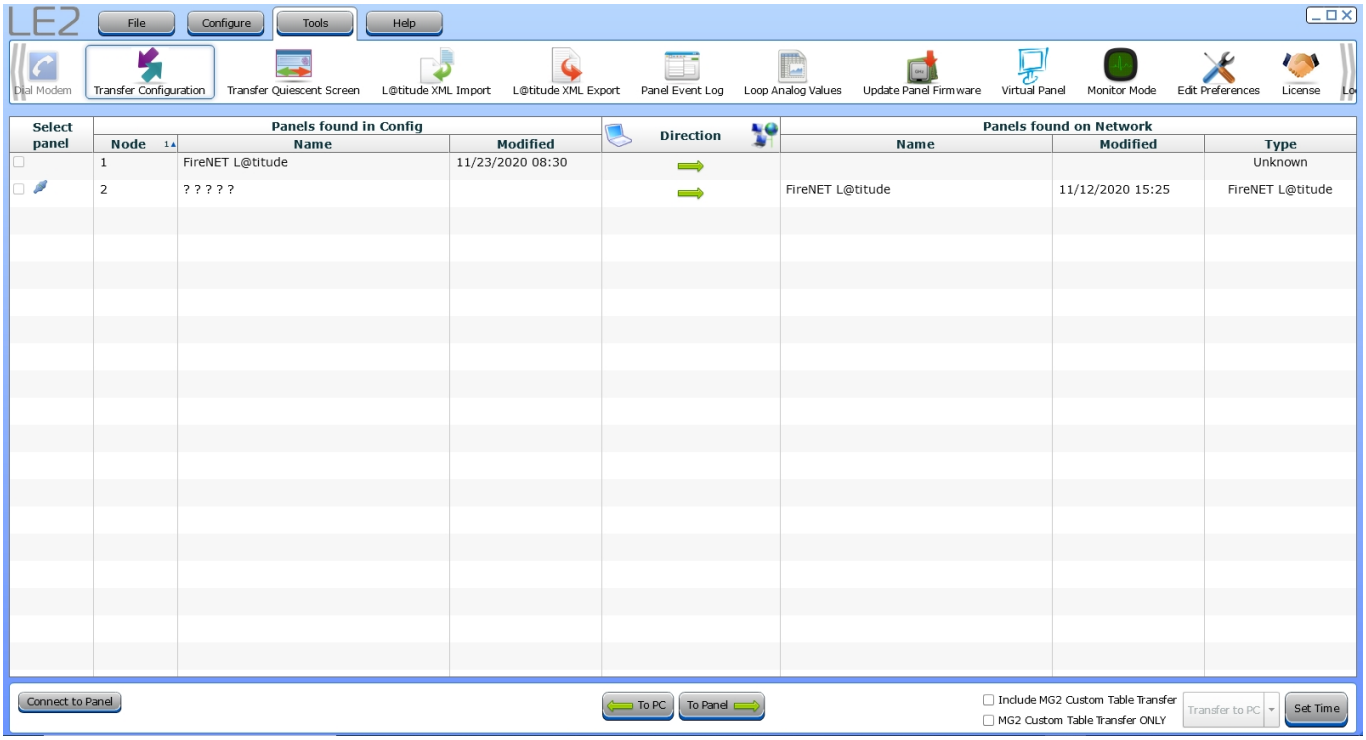
4. Use the **Select New Image** drop-down to choose which image to use for the quiescent screen and click **Save**.
5. Repeat this process for each panel on the network. The image will be updated at the time of the next configuration update.

XML Import

This option allows users to import a configuration file.

NOTE Not available on Legacy panels.

1. Click **XML Import**.
2. Navigate to and select the desired configuration file to import and click **Open**.
3. Click **To PC**.
4. Click **Transfer to PC**.



XML Export

This option allows users to export a configuration file. Click the **XML Export** button on the Tools tab to name and save the .xml file.

NOTE Not available on Legacy panels.

A USB A flash drive with at least 1 MB of available space is required for this method of configuration transport. A user may also choose to save the file locally on their PC for future use.

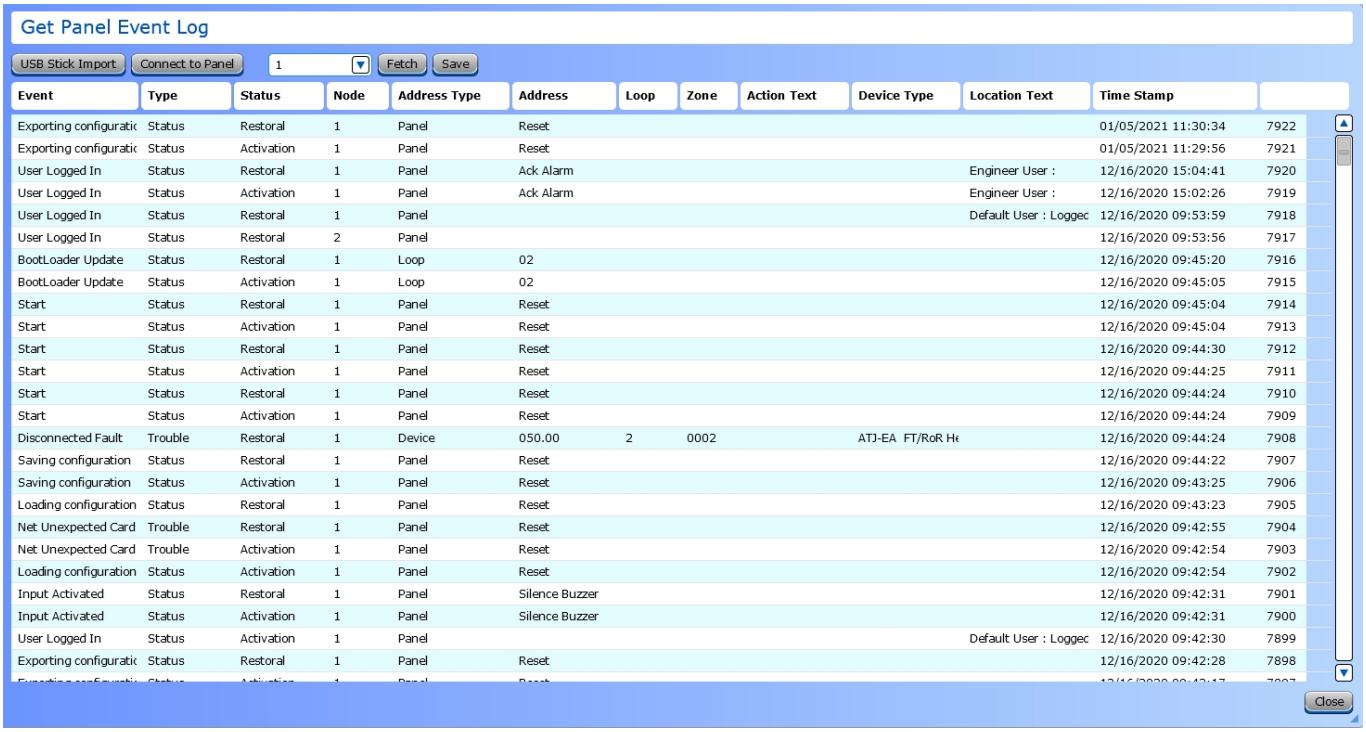
1. With the USB drive inserted, click **XML Export**.
2. Select the panels to include in the transfer.
3. Click **Select File** and navigate to the USB drive. The file must be placed directly on the drive, NOT in a folder. Saving the file in a folder will prevent the panel from locating it.
4. Enter the desired file name and click **Save**.
5. Click **Export** to initiate the export process. A notification will appear when the transfer is complete.

Panel Event Log

The Event log screen allows the option of uploading the event log from a given panel from its stored memory, and to view it from a computer. The events are stored in order of priority and occurrence. When the event log is full, the oldest and lowest priority event will be dropped as new events occur.

NOTE The number of events that can be stored in the Panel Event Log is panel-dependent.

1. Connect the control unit to the computer using the appropriate cable.
2. Click **Connect to Panel** and select the desired panel from the drop-down box on the **Event Log** tab.
3. Click **Fetch** to obtain the log from the panel and display the **Event Log** window.
4. Click **Save** to save the event log as a .csv, which can be opened in a spreadsheet.

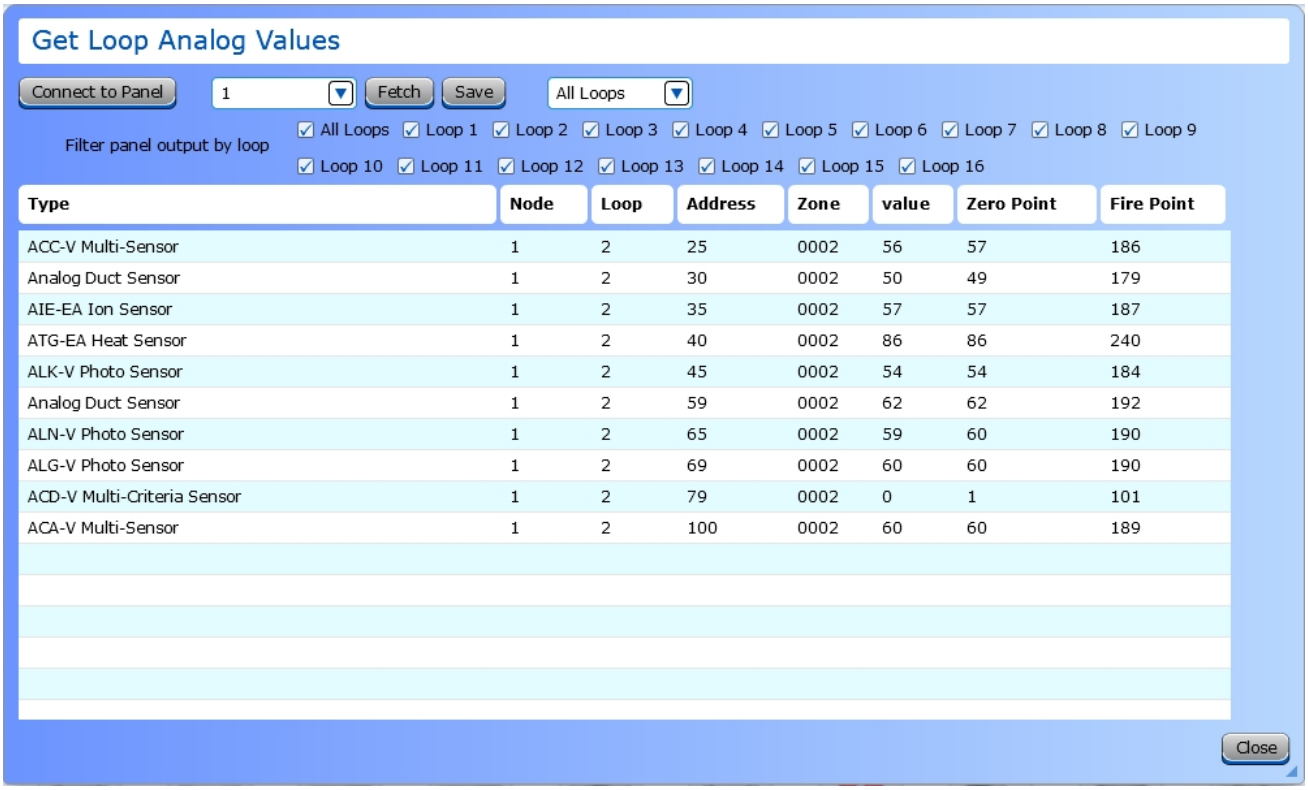


Event	Type	Status	Node	Address Type	Address	Loop	Zone	Action Text	Device Type	Location Text	Time Stamp	
Exporting configuratic	Status	Restoral	1	Panel	Reset						01/05/2021 11:30:34	7922
Exporting configuratic	Status	Activation	1	Panel	Reset						01/05/2021 11:29:56	7921
User Logged In	Status	Restoral	1	Panel	Ack Alarm					Engineer User :	12/16/2020 15:04:41	7920
User Logged In	Status	Activation	1	Panel	Ack Alarm					Engineer User :	12/16/2020 15:02:26	7919
User Logged In	Status	Restoral	1	Panel						Default User : Loggec	12/16/2020 09:53:59	7918
User Logged In	Status	Restoral	2	Panel							12/16/2020 09:53:56	7917
BootLoader Update	Status	Restoral	1	Loop	02						12/16/2020 09:45:20	7916
BootLoader Update	Status	Activation	1	Loop	02						12/16/2020 09:45:05	7915
Start	Status	Restoral	1	Panel	Reset						12/16/2020 09:45:04	7914
Start	Status	Activation	1	Panel	Reset						12/16/2020 09:45:04	7913
Start	Status	Restoral	1	Panel	Reset						12/16/2020 09:44:30	7912
Start	Status	Activation	1	Panel	Reset						12/16/2020 09:44:25	7911
Start	Status	Restoral	1	Panel	Reset						12/16/2020 09:44:24	7910
Start	Status	Activation	1	Panel	Reset						12/16/2020 09:44:24	7909
Disconnected Fault	Trouble	Restoral	1	Device	050.00	2	0002		ATJ-EA FT/RoR He		12/16/2020 09:44:24	7908
Saving configuration	Status	Restoral	1	Panel	Reset						12/16/2020 09:44:22	7907
Saving configuration	Status	Activation	1	Panel	Reset						12/16/2020 09:43:25	7906
Loading configuration	Status	Restoral	1	Panel	Reset						12/16/2020 09:43:23	7905
Net Unexpected Card	Trouble	Restoral	1	Panel	Reset						12/16/2020 09:42:55	7904
Net Unexpected Card	Trouble	Activation	1	Panel	Reset						12/16/2020 09:42:54	7903
Loading configuration	Status	Activation	1	Panel	Reset						12/16/2020 09:42:54	7902
Input Activated	Status	Restoral	1	Panel	Silence Buzzer						12/16/2020 09:42:31	7901
Input Activated	Status	Activation	1	Panel	Silence Buzzer						12/16/2020 09:42:31	7900
User Logged In	Status	Activation	1	Panel						Default User : Loggec	12/16/2020 09:42:30	7899
Exporting configuratic	Status	Restoral	1	Panel	Reset						12/16/2020 09:42:28	7898

Loop Analog Values

Sensors (detectors) on a SLC loop have Analog Values which represent current value (clean air), last calibrated zero point, and last calibrated fire point. These Analog Values relate to the health of the sensor. These values can be retrieved using the **Get Loop Analog Values** window.

1. For Legacy FACPs, connect a serial programming cable with an adapter to an available port on the computer. Set the Serial COMM port in **Edit Preferences**. For current panels, use a compatible cable to connect the computer to the control unit's USB-B port.
2. Choose a panel from the drop-down list box.
3. Click **Connect to Panel**. Enter a password if prompted (1111 or 4444).
4. Select a Loop on the panel from the drop-down box.
5. Click **Fetch** to retrieve the values of all sensors on the chosen Loop(s).
6. Click and select a device from the list to show the reading and the calculated percentage of the Health.
7. Click **Save** to save the Analog Values as a .csv file, which can be opened in a spreadsheet.



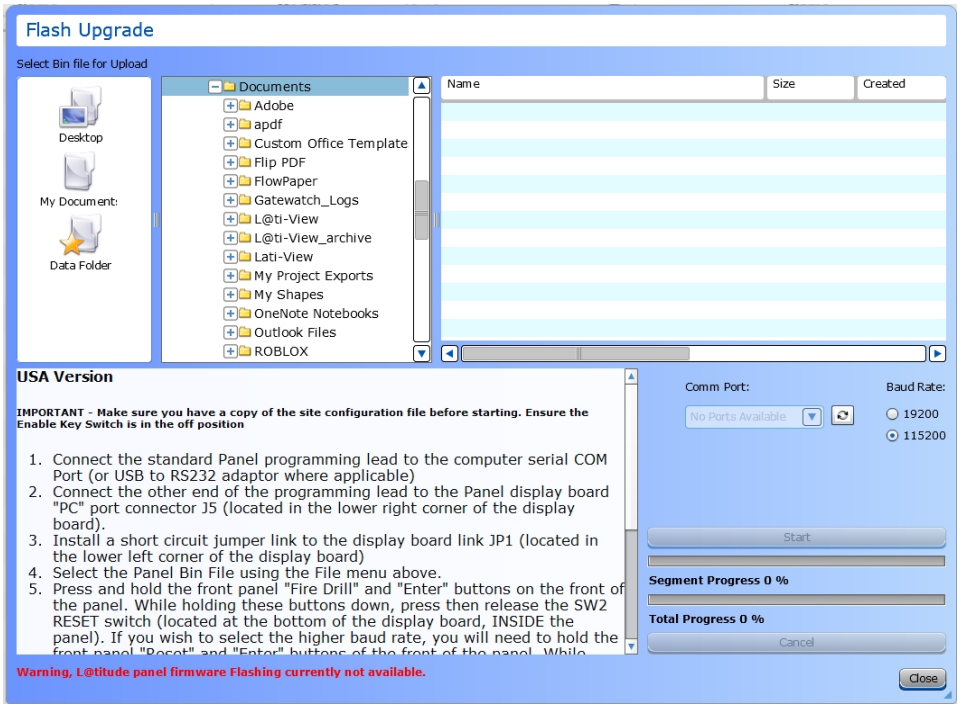
Update Panel Firmware

This tool allows the user to update the panel firmware on supported control units. Before attempting to update the control unit, place the firmware file in a location on the local hard drive. The firmware is updated from a firmware file saved on the PC that is exported via LE2. It is important the control unit maintain AC Power during the entire update.

FireNET / FireNET + / Elite / Elite RS

Before beginning, obtain serial programming cable and a Serial to PC adapter detailed in Getting Started. This hardware is required to communicate with control units that use serial ports.

1. Connect the serial programming cable with adapter to available port on your PC.
2. Set the serial comm port in **Edit Preferences**. Use the computer Device Manager to determine which the comm port is in use by the serial adapter.
3. Connect the serial cable to the appropriate 10-pin port. On applicable units this is J5.
4. Install a short circuit jumper link to appropriate link. On applicable units this is JP1.
5. Set the programming switch to PC mode on applicable control units.
6. Click **Update Panel Firmware**. The **Flash Upgrade** window will appear.



7. Select the desired firmware file using the file navigator inside the window.
8. Select the **Comm Port** and **Baud Rate**.
9. Press and hold the front panel **Fire Drill** and **Enter** buttons. While holding down these buttons, press and release the **RESET** switch (SW2 on applicable units).

NOTE To select the higher baud rate, hold the front panel **Reset** and **Enter** buttons of the front of the panel. While holding down these buttons, press and release the **RESET** switch.

10. If successful, the panel display will be blank and front panel indicators may be illuminated.
11. Release the **Fire Drill** and **Enter** buttons of the front of the panel.
12. Select the comm port and baud rate. Click the **Start** button. If an error occurs, select the other baud rate option.
13. There will be a loading bar in the window giving progress updates.
14. A pop-up window will be displayed when the transfer is complete. The panel should start initializing automatically. If it doesn't, press the **RESET** switch (SW2 on appliable units).
15. Remove the short circuit jumper link (JP1 on applicable units).
16. Autolearn the panel.
17. Load the site configuration file into the panel.

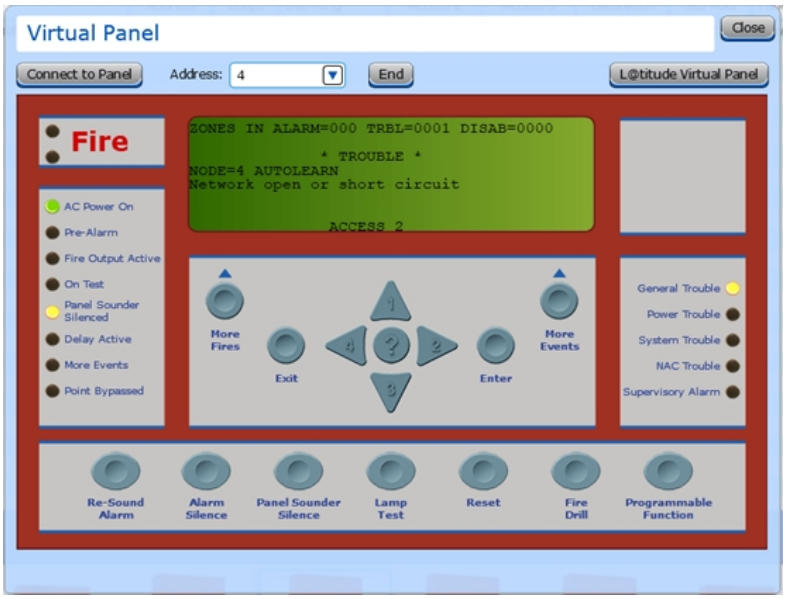
Virtual Panel

This tool provides remote access to the fire alarm system's GUI and other controls from a computer. This tool will emulate physical buttons on applicable control units.

NOTE Virtual Panel is only supported on legacy panels.

FireNET / FireNET + / Elite / Elite RS

1. Connect a serial programming cable with adapter to an available port on the computer. In **Edit Preferences**, set the serial COMM port in use.
2. Click **Connect to Panel**.
3. Enter a password; either 1111 or 4444.
4. Once logged in, click **Start** to begin panel emulation and remote access.
5. Once logged in, the GUI can be navigated as if physically at the panel. Any events on the system will activate the emulated indicator LEDs.



NOTE To connect to other nodes on the network, repeat the login process and select the desired node in the **Address** drop-down.

Monitor Mode

The Monitor Mode tool the monitoring and saving of ASCII text output from the control panel. For example, it can be used to observe real-time event data printed by the control panel's printer on the computer monitor.

NOTE This feature is only available on legacy panels.

This tool requires a serial programming cable and a Serial to PC adapter, as detailed in Getting Started.

1. Set the Serial COMM port and Baud Rate (19200) in **Edit Preferences**. To determine which COMM port is connected to the serial adapter, consult the device manager of the computer running LE2. Click **Save**.
2. Click **Monitor Mode**.
3. Click **Start** to begin capturing data.
4. Use the control unit to generate desired printer events to capture, such as Fire Drill.
5. Click **Audit Stamp** to print a date and time for captured text.

6. Click **Stop** to end data capture.
7. Save or clear data as desired. Saved data is placed in a .txt file in the same format as the captured text in the window. Unprintable characters print symbols.
8. Click **Close** to exit. All unsaved data will be lost.

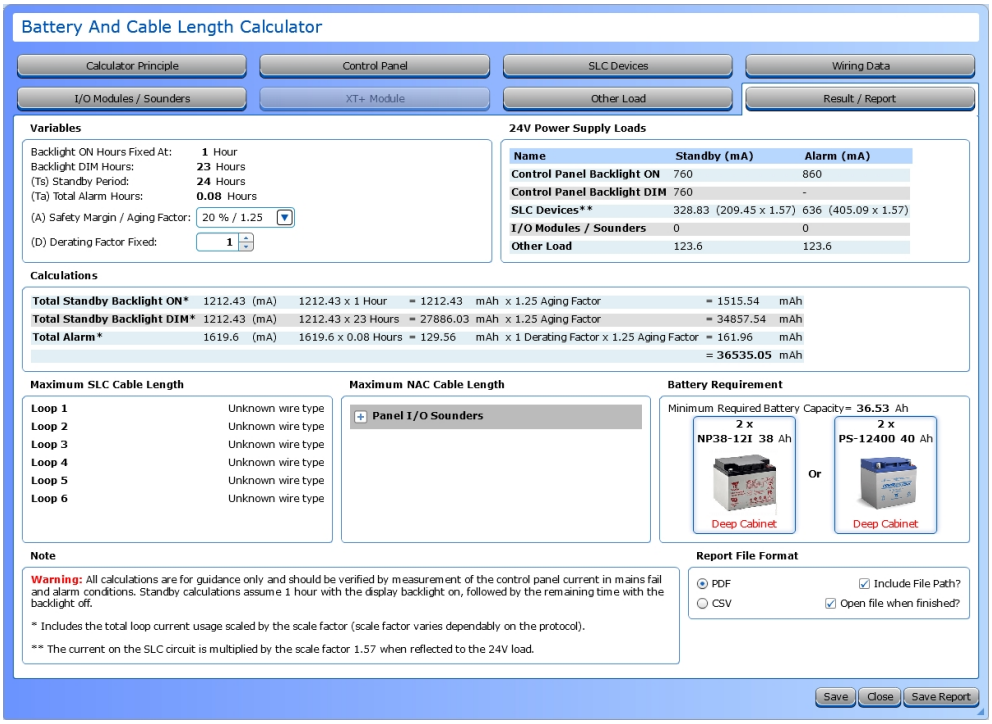
Battery Calculator

The battery calculator assists in determining the required backup battery capacity and the maximum cable length for the SLC and Panel NAC circuits. The tool uses a combination of user data and known data to make the calculations to produce a report. All formulas used in the calculator are clearly stated for local authority transparency.

This tool uses known data for the control unit, loop devices, and peripheral cards, as part of the battery and cable length calculations. Other variables must be input by the user to complete calculations for the report . These unknown variables include Total Expected Current.

The report provides a Maximum SLC cable length, NAC cable length, and the minimum battery capacity requirement and all variables, 24V power supply loads, and calculations that produced these results. The results of this report can be saved as a PDF or as a spreadsheet file (*.csv).

If there is a network of panels, the desired panel must first be selected before using the calculator.The calculator information is stored for each panel unless another configuration is imported from the panel. The import will erase the contents of the battery calculator.

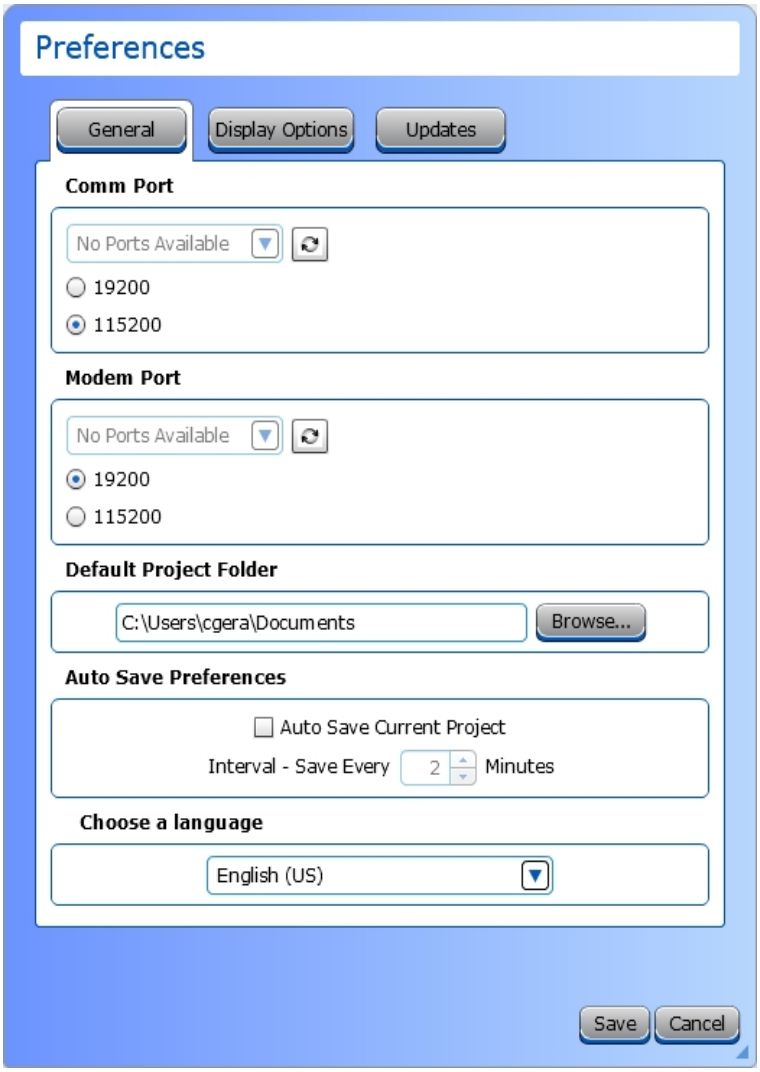


Edit Preferences

This tool can be used to set preferences for Loop Explorer 2, such as Auto Save, Save location, and Language. It can also be used to set preferences for zones, project trees, window prompts, and display items. Some critical items are set in this window such as the selection of the Serial Comm Port and the Updates page.

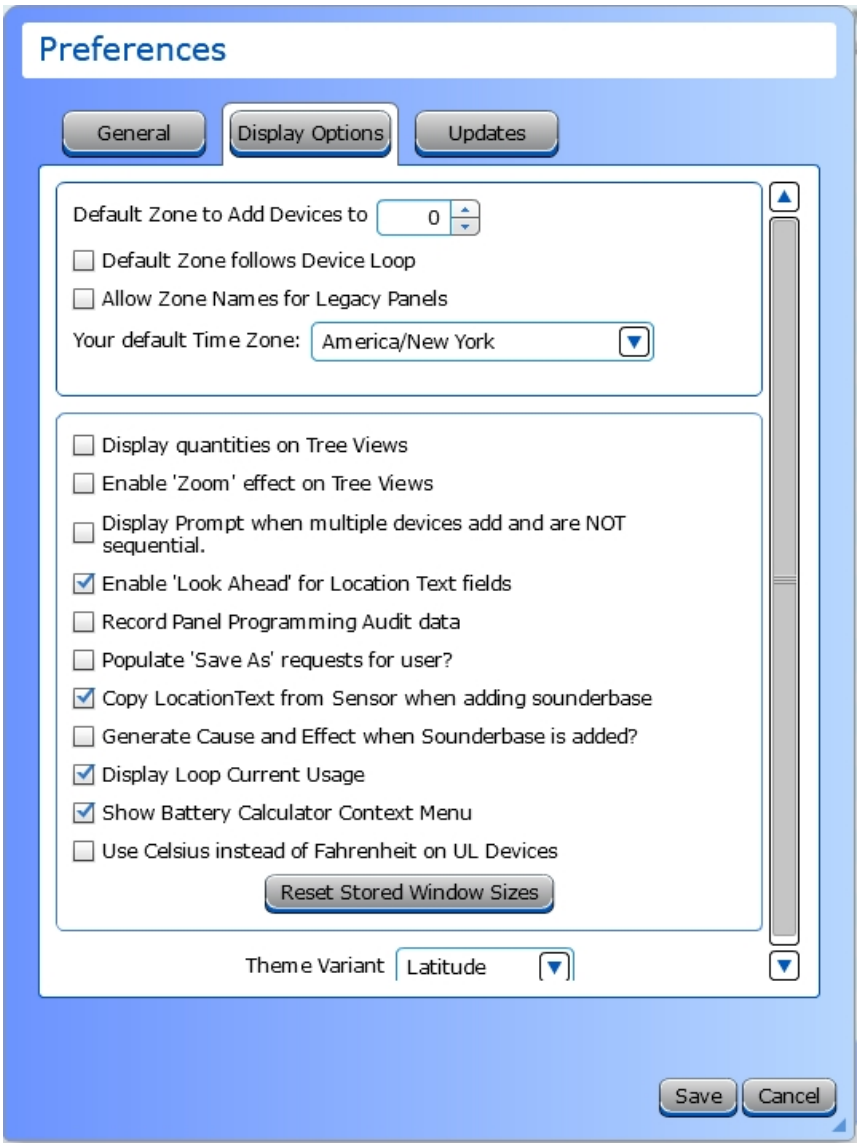
General Tab

The General Tab can be used to set comm ports, the Default Project Folder (where projects will be saved), Auto Save options, and language. The serial **Comm Port** must be set before using some features in LE2, such as configuration transfer on control units that use serial communications. Select an appropriate **Baud Rate**.



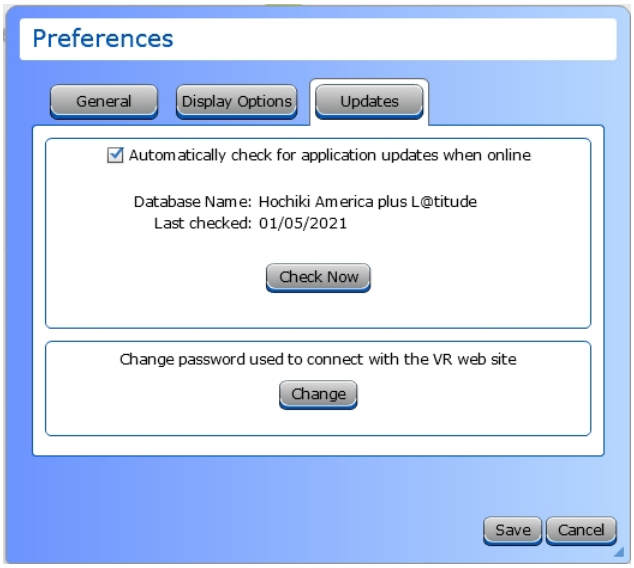
Display Options

The Display Options Tab can be used to set preferred defaults, such as zones, time zone, temperature unit, display settings, and reset window sizes. All changes made in this window will be applied across all projects in LE2.

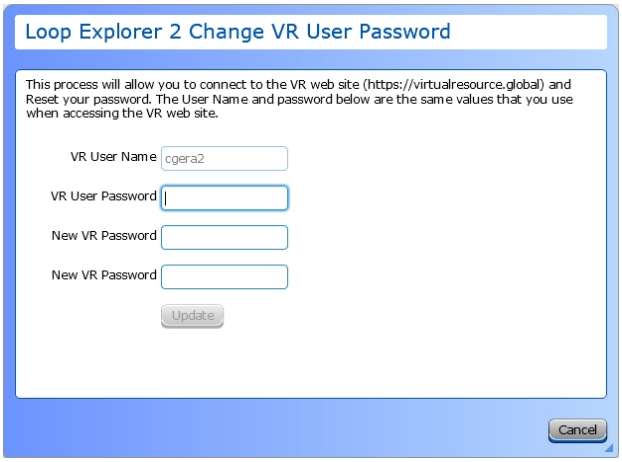


Updates Tab

The **Updates Tab** can be used to check for updates to LE2. An internet connection is required. Click **Check Now** to determine if any updates are available.



Also in the Updates Tab, the Virtual Resource password can be updated or changed if it has expired. Click **Change** to open a window that will connect to the password maintenance page to the Virtual Resource website.



An internet connection is required to change the VR password. Once the password is changed, enter the new password in the License window.If an incorrect password is entered 10 times, the LE2 account will be locked. Contact Tech Support to unlock the account.

License

The license window holds the current username and password and the expiration date for the user license. The current user can be changed in this window by entering alternate credentials.

Each License can be set for a duration of 7 days - 6 months for each user, depending on the the admin setup. This limitation exists to prevent unauthorized access to a client's system. This expiration date is displayed on the **License** window. A warning will be given several days before the license expires. Once the license has expired, LE2 can still be used, but some features will be limited, such as panel programming and Guide export files.

NOTE An internet connection is required to access the License window, renew a license, or update an expired license.

Loopback Test

The Loopback Test tool requires the use of a serial loopback adapter. This tool allows users to test the connectivity of the transmit and receiver of a serial cable. When the connection is working, any data entered in the transfer box will be displayed in the receiver box.

HELP TAB

Click the icon to see detailed information about that toolbar option.

View Application Errors **102**

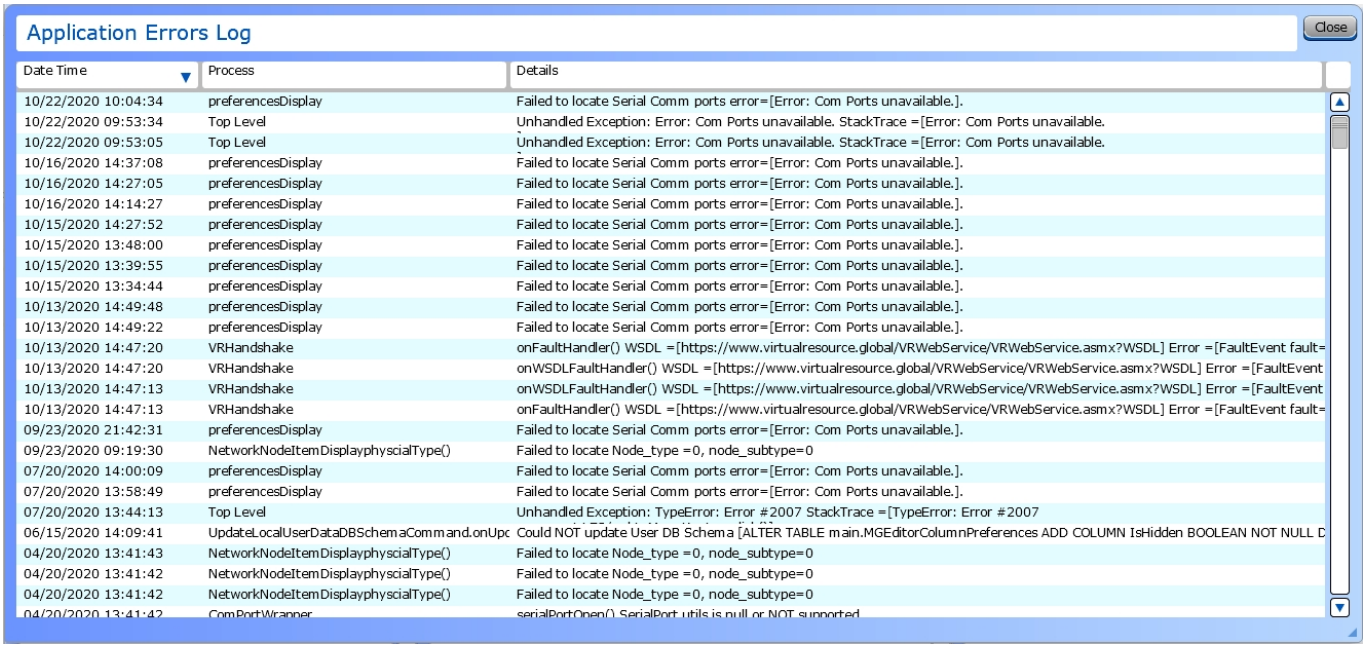
View Communication Logs **103**

Company Name **104**

About **105**

View Application Errors

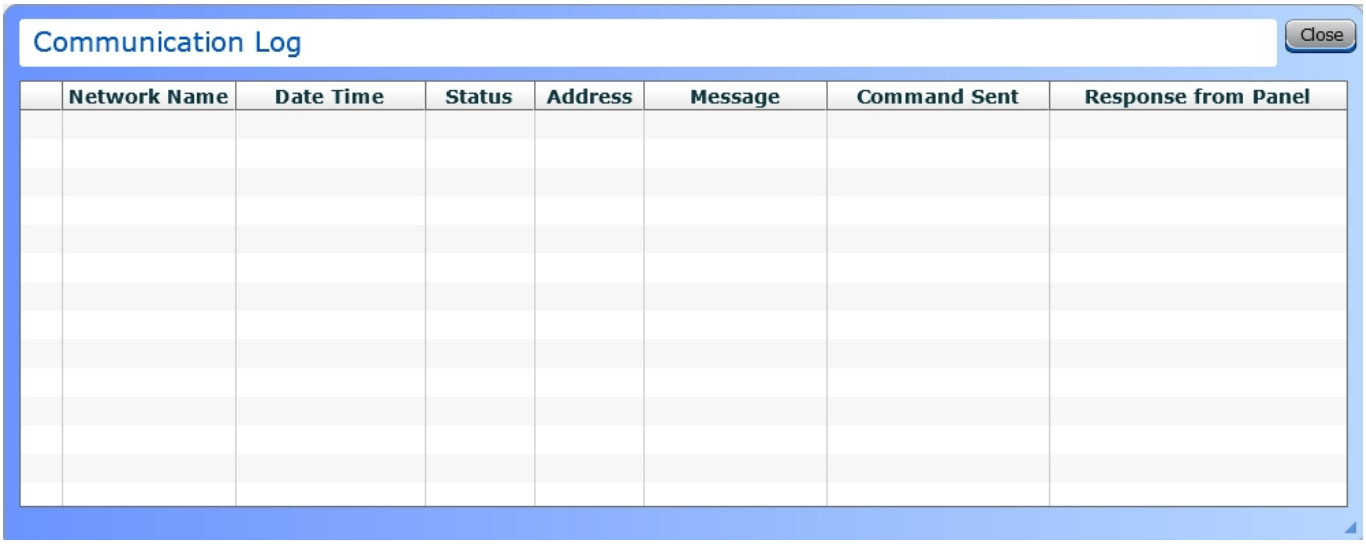
This is a diagnostic tool that serves as an application error log. It stores details on any error codes encountered in LE2. When a process fails, it is listed in this window, with a timestamp and description.



Date Time	Process	Details
10/22/2020 10:04:34	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
10/22/2020 09:53:34	Top Level	Unhandled Exception: Error: Com Ports unavailable. StackTrace =[Error: Com Ports unavailable.
10/22/2020 09:53:05	Top Level	Unhandled Exception: Error: Com Ports unavailable. StackTrace =[Error: Com Ports unavailable.
10/16/2020 14:37:08	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
10/16/2020 14:27:05	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
10/16/2020 14:14:27	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
10/15/2020 14:27:52	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
10/15/2020 13:48:00	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
10/15/2020 13:39:55	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
10/15/2020 13:34:44	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
10/13/2020 14:49:48	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
10/13/2020 14:49:22	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
10/13/2020 14:47:20	VRHandshake	onFaultHandler() WSDL =[https://www.virtualresource.global/VRWebService/VRWebService.asmx?WSDL] Error =[FaultEvent fault=
10/13/2020 14:47:20	VRHandshake	onWSDLFaultHandler() WSDL =[https://www.virtualresource.global/VRWebService/VRWebService.asmx?WSDL] Error =[FaultEvent
10/13/2020 14:47:13	VRHandshake	onWSDLFaultHandler() WSDL =[https://www.virtualresource.global/VRWebService/VRWebService.asmx?WSDL] Error =[FaultEvent
10/13/2020 14:47:13	VRHandshake	onFaultHandler() WSDL =[https://www.virtualresource.global/VRWebService/VRWebService.asmx?WSDL] Error =[FaultEvent fault=
09/23/2020 21:42:31	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
09/23/2020 09:19:30	NetworkNodeItemDisplayphyscialType()	Failed to locate Node_type =0, node_subtype=0
07/20/2020 14:00:09	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
07/20/2020 13:58:49	preferencesDisplay	Failed to locate Serial Comm ports error=[Error: Com Ports unavailable.].
07/20/2020 13:44:13	Top Level	Unhandled Exception: TypeError: Error #2007 StackTrace =[TypeError: Error #2007
06/15/2020 14:09:41	UpdateLocalUserDataDBSchemaCommand.onUpc	Could NOT update User DB Schema [ALTER TABLE main.MGEditorColumnPreferences ADD COLUMN IsHidden BOOLEAN NOT NULL D
04/20/2020 13:41:43	NetworkNodeItemDisplayphyscialType()	Failed to locate Node_type =0, node_subtype=0
04/20/2020 13:41:42	NetworkNodeItemDisplayphyscialType()	Failed to locate Node_type =0, node_subtype=0
04/20/2020 13:41:42	NetworkNodeItemDisplayphyscialType()	Failed to locate Node_type =0, node_subtype=0
04/20/2020 13:41:42	ComPortWrapper	serialPortOpen() SerialPort utils is null or NOT supported

View Communication Logs

This is a diagnostic tool that monitors the communication between LE2 and connected units. The data being sent/received is logged here. This feature must be activated in **Edit Preferences** > **Display Options** > **Record Panel Programming Audit Data (checkbox)** before the data will be logged.



Company Name

This will open the website for Hochiki or VES, depending on the configuration and selected database.

About

This window displays information about the Software Version, Database Information, and Release Type.

PANEL CONFIGURATION

Panel Configuration will depend on the site, customer, and local authority requirements. When new panels are added, LE2 will build a baseline network tree based on the panel type. Double-click the desired network panel to access the settings.

Panels **107**

FireNET L@titude, VES L@titude, Compas 107

Elite, Elite RS, eLAN RS, FireNET, FireNET+, FireNET LCD Network Annunciator 123

FireNET Vision, L@titude Vision, Compas Vision 133

Panel I/O Configuration **137**

Inputs 137

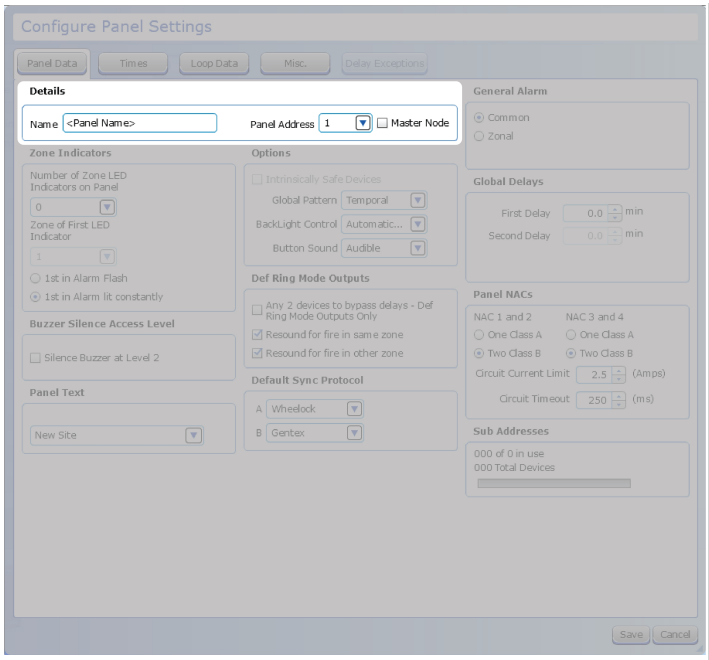
Outputs 137

Function Button Configuration **139**

Panels

FireNET L@titude, VES L@titude, Compas

Panel Data Tab



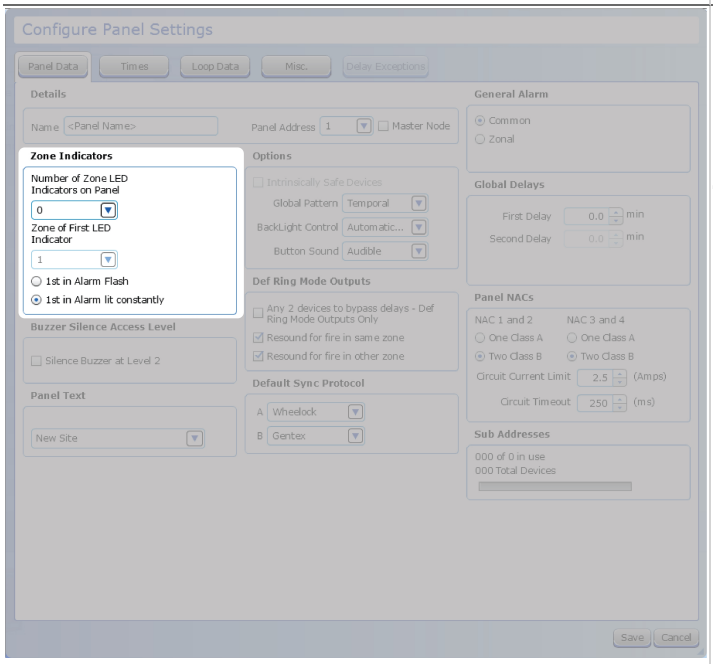
NAME
Text Box, up to 30 characters allowed, including special characters.

This is the name of the selected panel.

PANEL ADDRESS
Drop-down List. Allowed values are 1-64.

This is the node number of the panel on a multi-panel network. The first panel added to the configuration will be assigned an address of 01. Subsequent panels added will be assigned the next available address number, or a specific address can be selected from the drop-down box.

> **NOTE** If a panel address is changed in LE2, the physical address must be changed as well.



NUMBER OF ZONE LED INDICATORS ON PANEL
*Drop-down List. Allowed values are **0**, **48**, **96**, and **144**.*

This sets the number of Zone LEDs available on the panel.

ZONE OF FIRST LED INDICATOR
Drop-down List. Allowed values are panel-dependent.

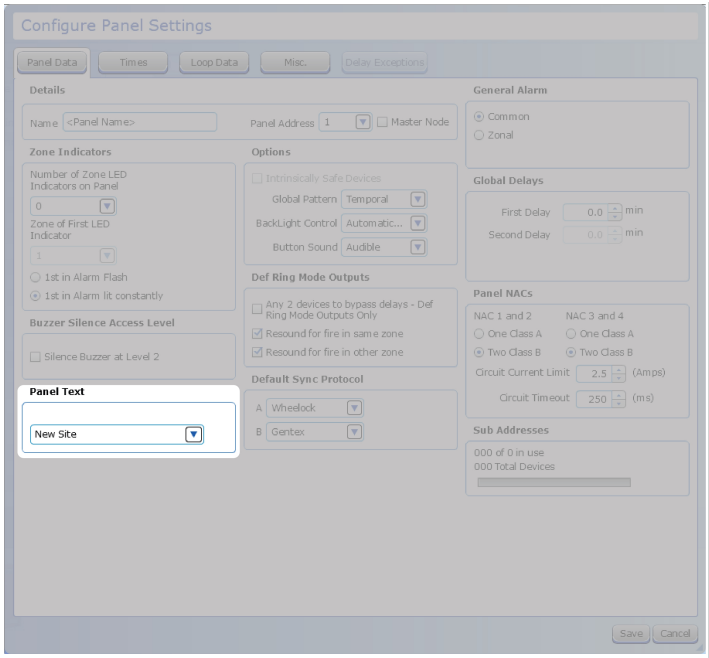
This sets the number of the first LED on the zone LED board.

1ST IN ALARM FLASH
Radio Button

Select this option to direct the first LED to activate to flash.

1ST IN ALARM LIT CONSTANTLY
Radio Button

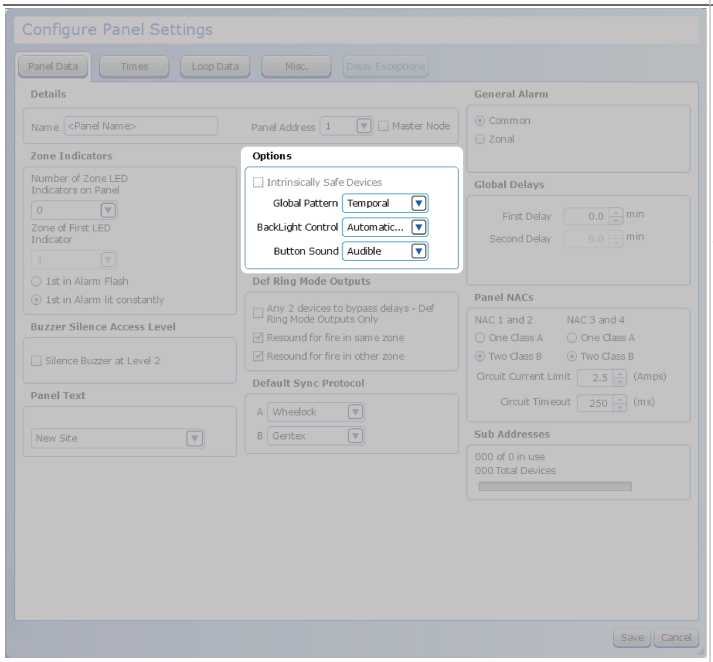
Select this option to direct the first LED to activate to light constantly.



PANEL TEXT

Text box. Up to 80 characters, including special characters.

This will provide site location details that will be displayed on the GUI of all panels on the network when events are generated on the panel.



INTRINSICALLY SAFE DEVICES - *Apollo Protocol Only*

Check Box.

This sets the characteristics of the detection circuit to enable the correct monitoring of the circuit. Selecting this option will reduce the number of LEDs active on each loop from 5 to 2, which will reduce the current draw.

GLOBAL PATTERN

*Drop-Down List. Allowed values are **Continuous** (high steady state), **March** (high and low for even intervals), and **Temporal** (synchronized on a system basis, three even on/off cycles followed by off period).*

This will set the pattern that will be assigned to a NAC circuit output pattern.

BACKLIGHT CONTROL

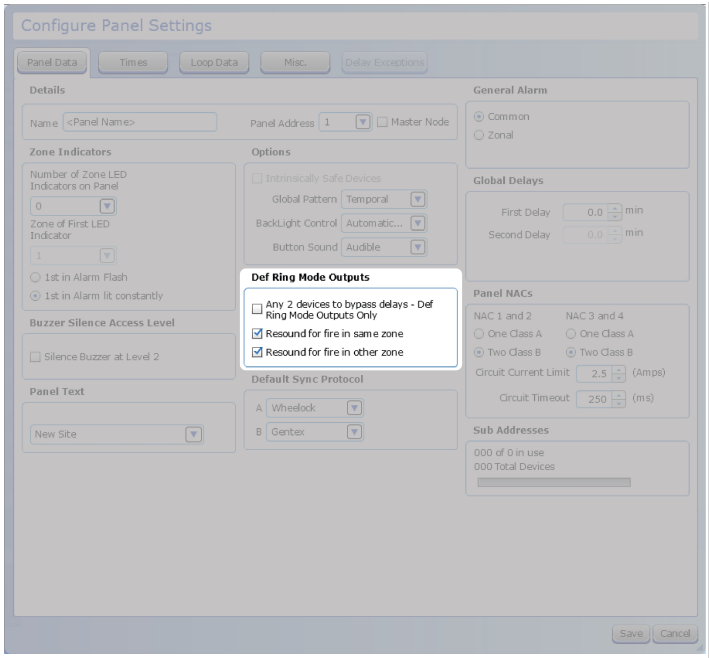
*Drop-Down List. Allowed values are **Automatic Dim** and **Fixed Brightness**.*

This sets the backlight control of the LCD display.

BUTTON SOUND

*Drop-Down List. Allowed values are **Audible** and **Silent**.*

This setting will determine whether touching the GUI will produce a sound.



ANY 2 DEVICES TO BYPASS DELAYS - DEF RING MODE OUTPUTS ONLY

Check Box.

When delays are present on SLC or panel outputs, an activation of two or more points will remove the delays and cause the outputs to activate immediately.

> **NOTE** All delayed outputs must be configured for general alarm for this feature to take effect.

RESOUND FOR FIRE IN SAME ZONE

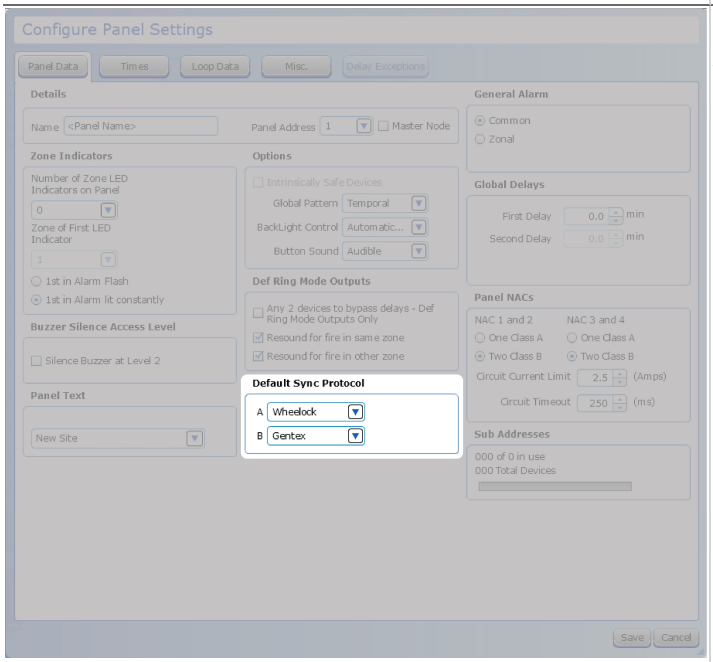
Check Box.

Check this box to force the control unit to re-activate silenced NACs if a second point activates within the same zone as the first point.

RESOUND FOR FIRE IN OTHER ZONE

Check Box.

Check this box to force the control unit to re-activate silenced NACs if a second point activates in a different zone from the first point.

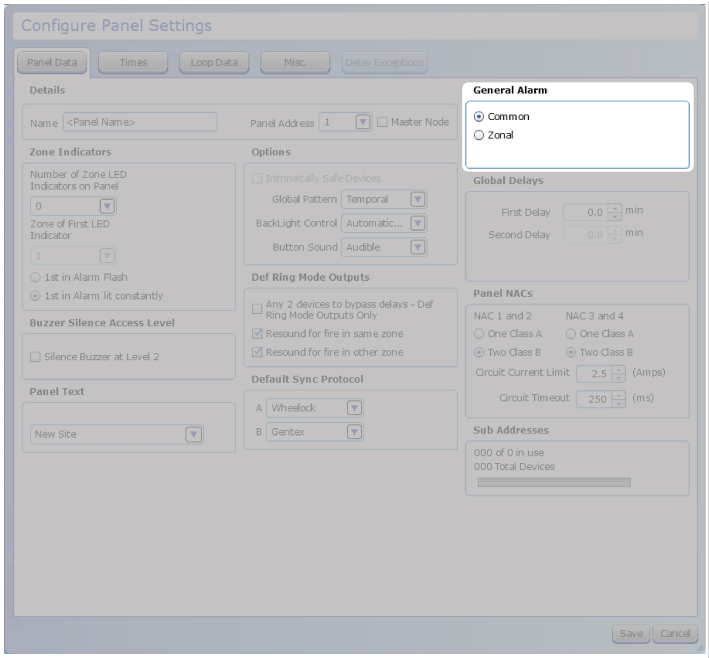


DEFAULT SYNC PROTOCOL

A | B

*Drop-Down List. Allowed values are **Gentex**, **Amseco**, **Wheelock**, and **System Sensor**.*

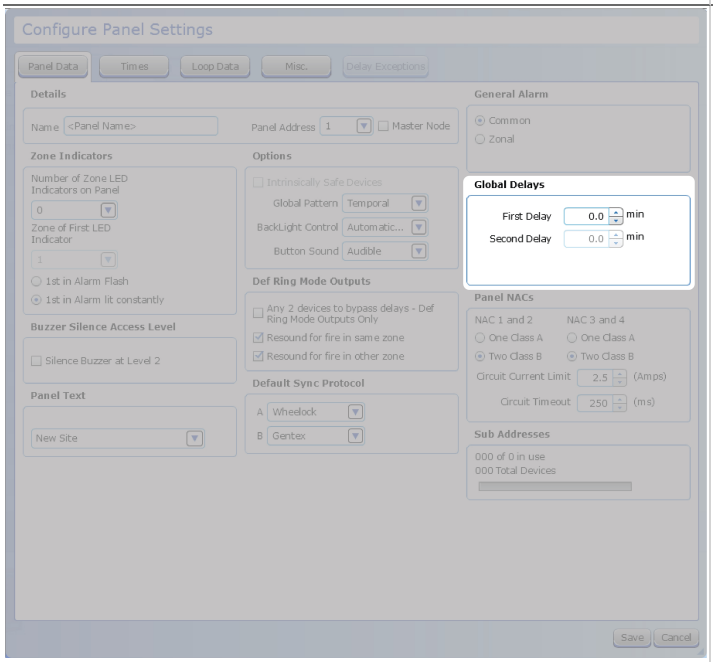
This sets the strobe protocols being used. Only two protocols may be used at a given time.



GENERAL ALARM

*Radio Button. Allowed values are **Common** (The panel will activate all notification appliances zones when any General alarm activation occurs.) and **Zonal** (The panel will activate a general alarm for outputs ONLY in the same zone as the activation point. If a subsequent point of activation is in another zone, all notification appliances in that zone will be activated.)*

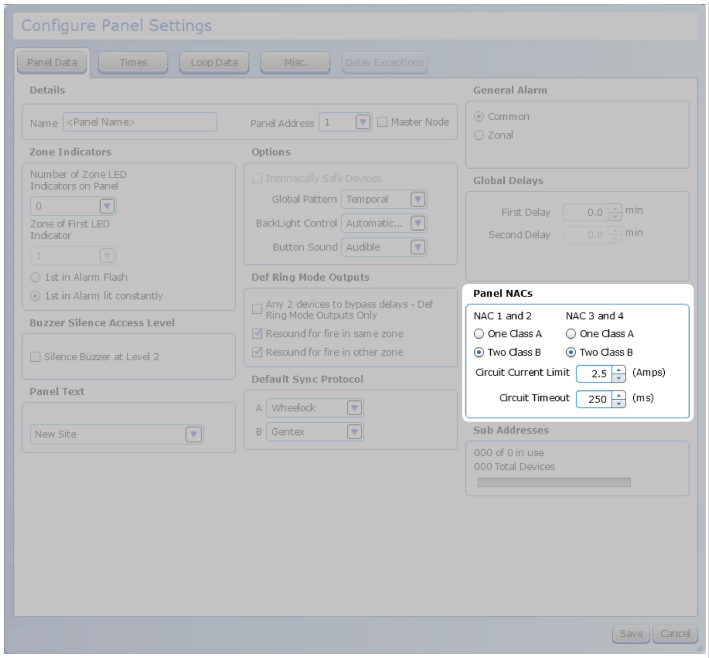
This sets how the panel will respond to a single general alarm activation.



GLOBAL DELAYS

Up / Down Arrows. Allowed values are 0-10, in 0.5 minute increments.

This sets an output delay for the set number of minutes if the Ignore Global Delay check box is unselected.



PANEL NACs

NAC 1 AND 2 | NAC 3 AND 4

*Radio Button. Allowed values are **One Class A** and **Two Class B** (default).*

This sets the class configuration for NAC pairs.

CIRCUIT CURRENT LIMIT

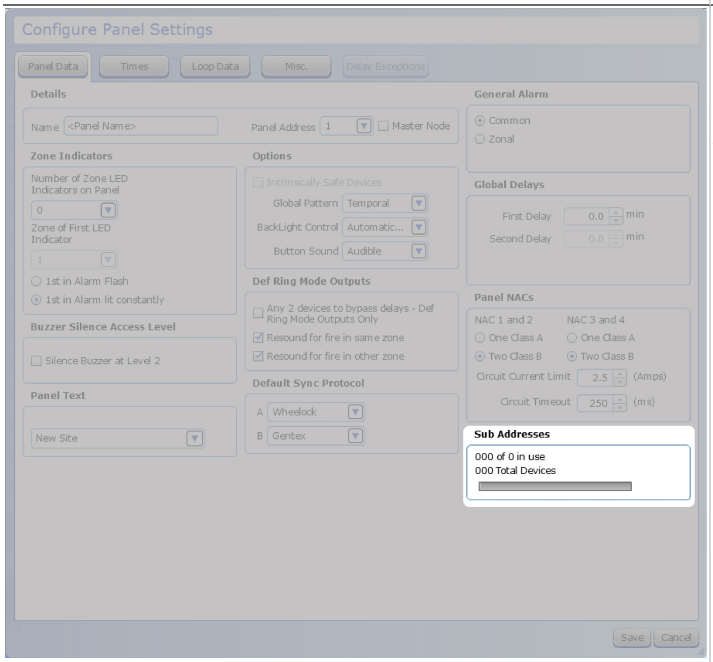
Up / Down Arrows. Allowed range is 0.5 - 2.5A.

This sets the current limit on the NAC circuit. All panel NACs may be restricted to overcurrent at a defined upper threshold. If this limit is exceeded while the NAC is active, the FACP will shut down the NAC and post a Trouble. This setting will affect battery load calculations.

CIRCUIT TIMEOUT

Up / Down Arrows. Allowed range is 50-250ms.

This sets the amount of time the NAC will stay active once it reaches the circuit limit.



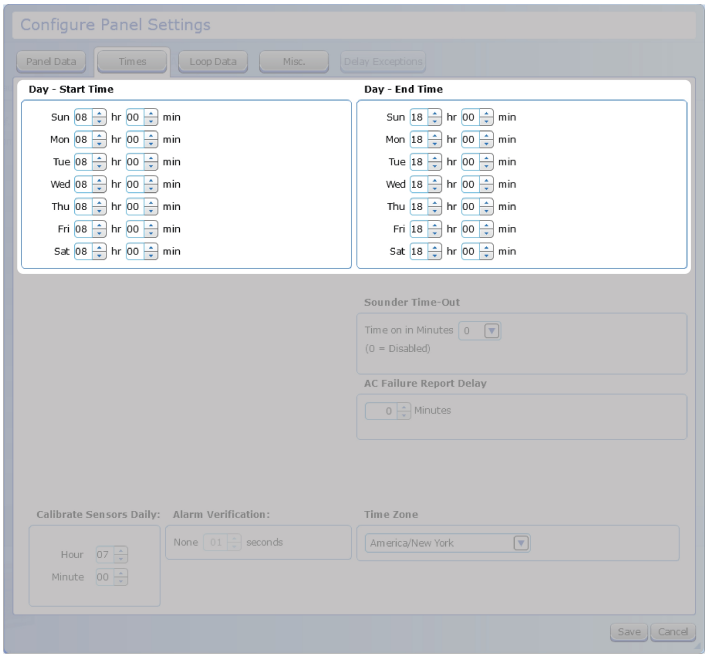
SUB ADDRESSES

This displays the number of sub addresses in use and the number available. The number of subaddresses available will change, depending on the number of loops on the network.

The usage bar changes as subpoints are added or deleted on the loop. Total devices is also shown.

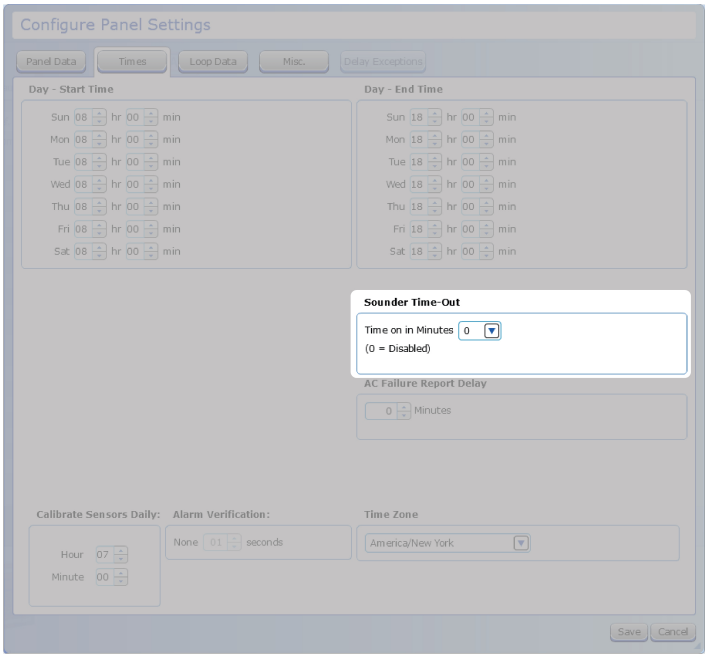
Times Tab

This tab allows the configuration of set timed features common to panel operations.



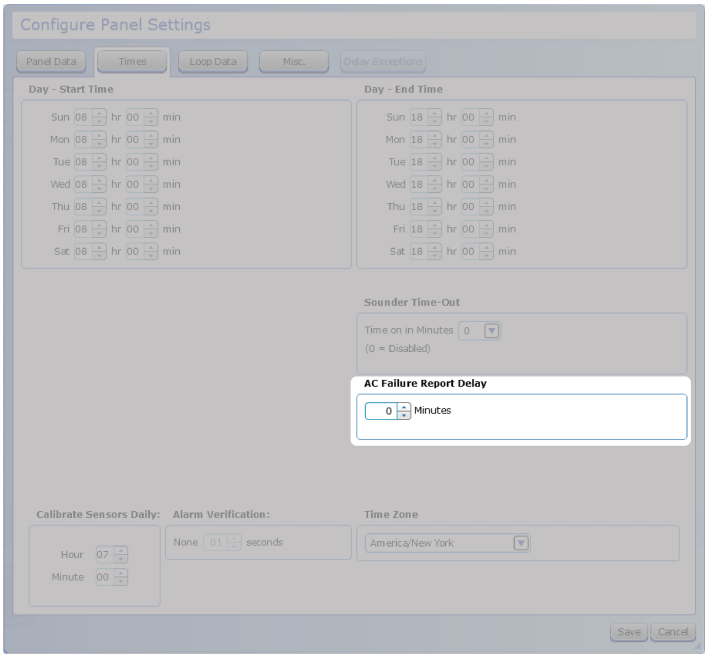
DAY - START TIME | DAY - END TIME
Up / Down Arrows. Any time of day (24 hour time format) is allowed, incremented in minutes.

The start and end times are used to define the Day and Night mode of the panel. Between the hours set for Start and End Time, the detector's Day sensitivity is used. The Night sensitivity is used during all other hours.



SOUNDER TIME-OUT
Drop-Down List. The panel default is 0, which disables this feature. Allowed values are 5 to 60 minutes, in 5 minute increments.

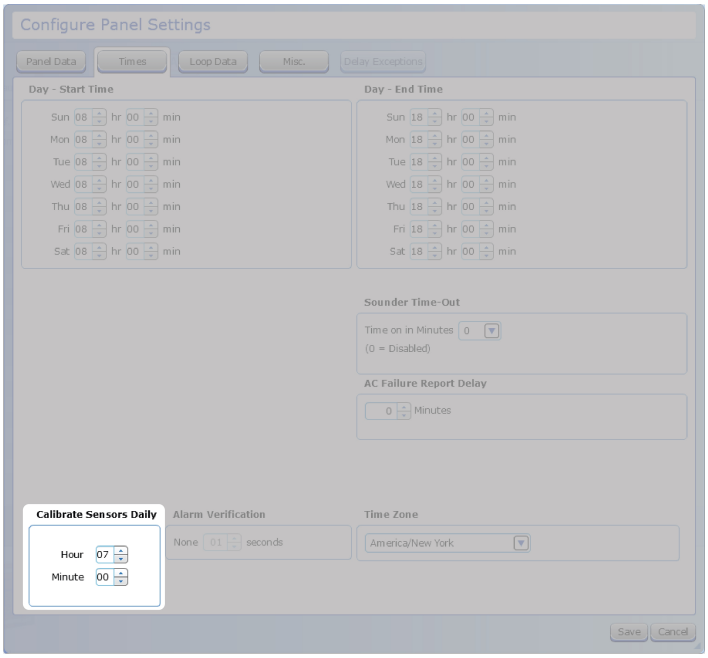
This programs the NAC circuits to automatically silence after a period of time.



AC FAILURE REPORT DELAY

Up / Down Arrows. Allowed values are 0-240 minutes. The default is 60 minutes.

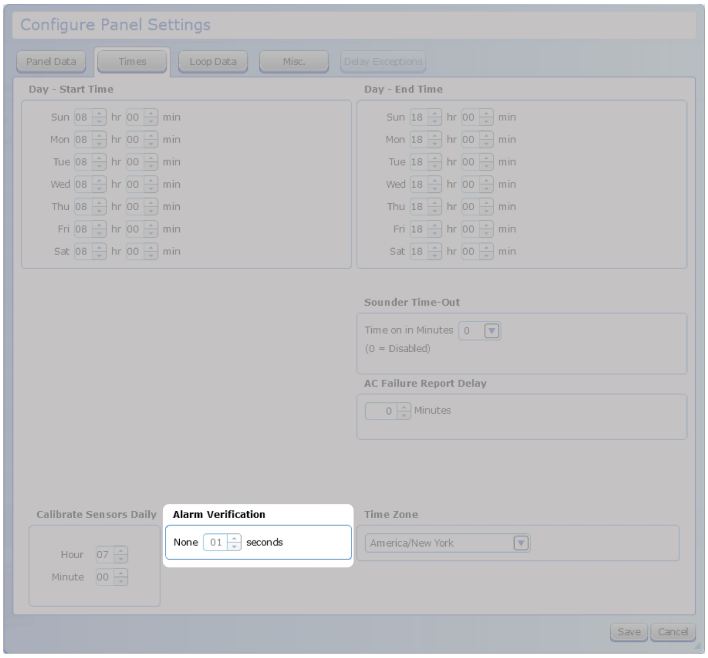
This configures the panel to delay ground trouble annunciation by time period. All normal panel trouble responses and Media Gateway signaling (configuration-dependent) will occur after official trouble annunciation at the panel.



CALIBRATE SENSORS DAILY

Up / Down Arrows. Any time of day (24 hour time format) is allowed, incremented in minutes.

This sets time each day when the sensors will perform their calibration routine. Calibration occurs once per day and should be set to a time when building environmental conditions are most stable.

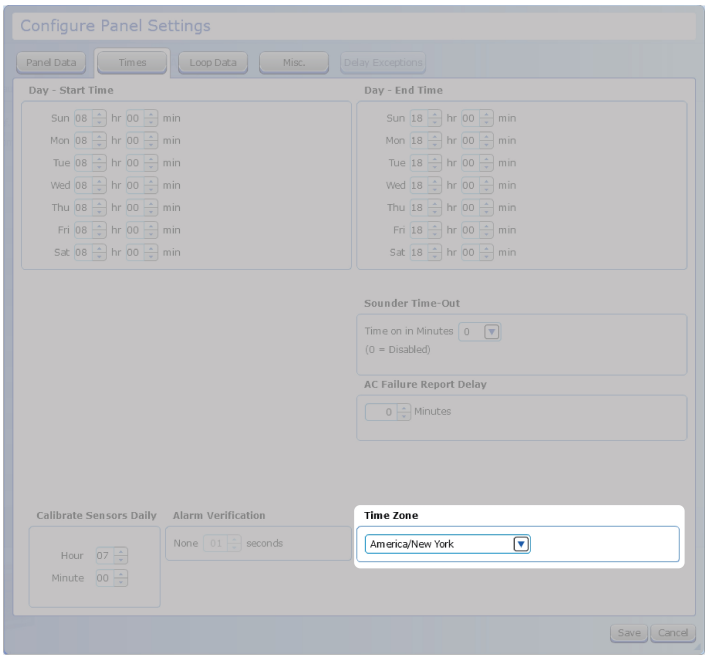


ALARM VERIFICATION

Up / Down Arrows. Allowed values are between 5-55 seconds, in 5 second increments.

This sets the timing delay for the verification period.

> **NOTE** This field will be disabled until **Alarm Verification** is set in the Network Settings.



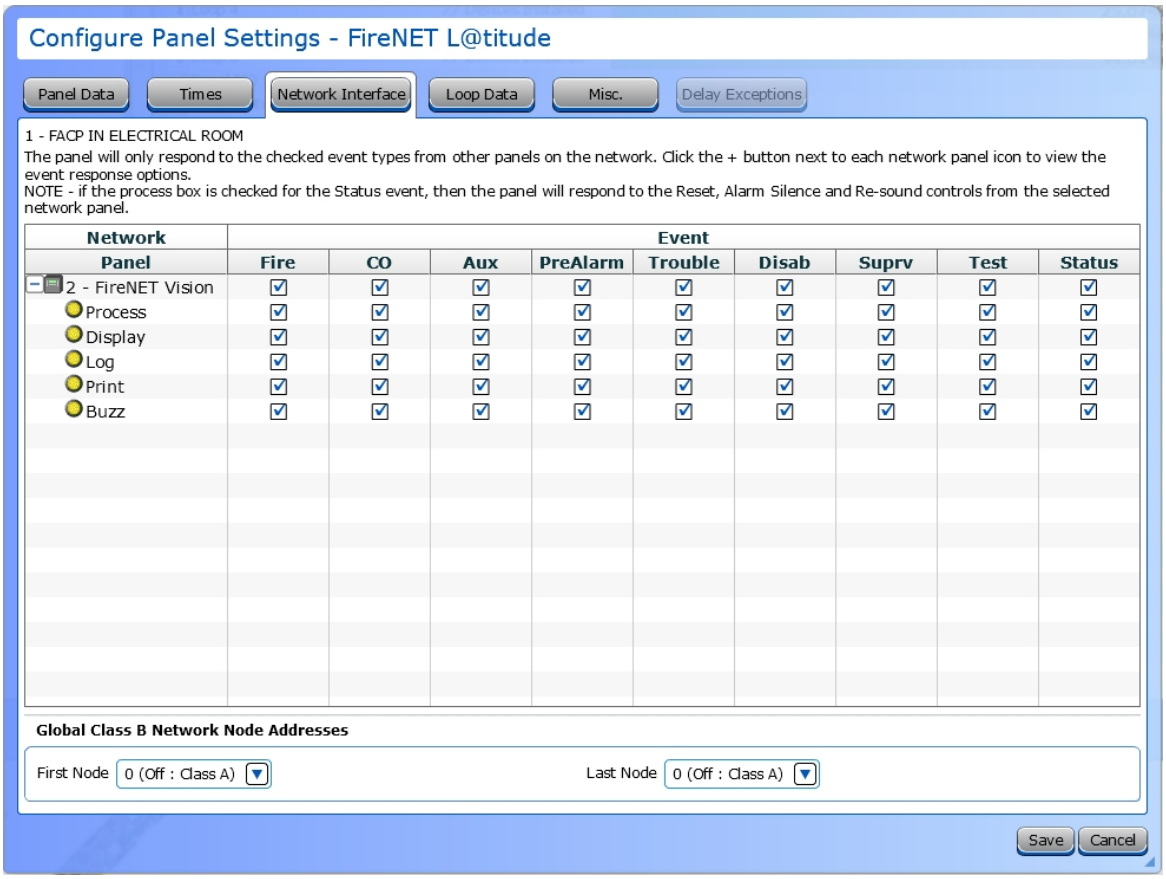
TIME ZONE

Drop-Down List. Allowed values include all global time zones.

This sets the appropriate time zone. The default shown here will match the time zone set in **Edit Preferences**.

Network Interface Tab

The network interface tab is available in the panel settings manager of networked panels. This tab is disabled for panels on a single node network.



The **Network Interface** tab allows a user to select which network events that a panel will respond to, and define the way in which it will respond. All other panels, aside from the currently-edited panel, will be listed. Click **+** to expand the properties of the node and select how the panel will respond to network events. Each panel can have a unique profile that defines how it will respond to the rest of the nodes and event types on the network.

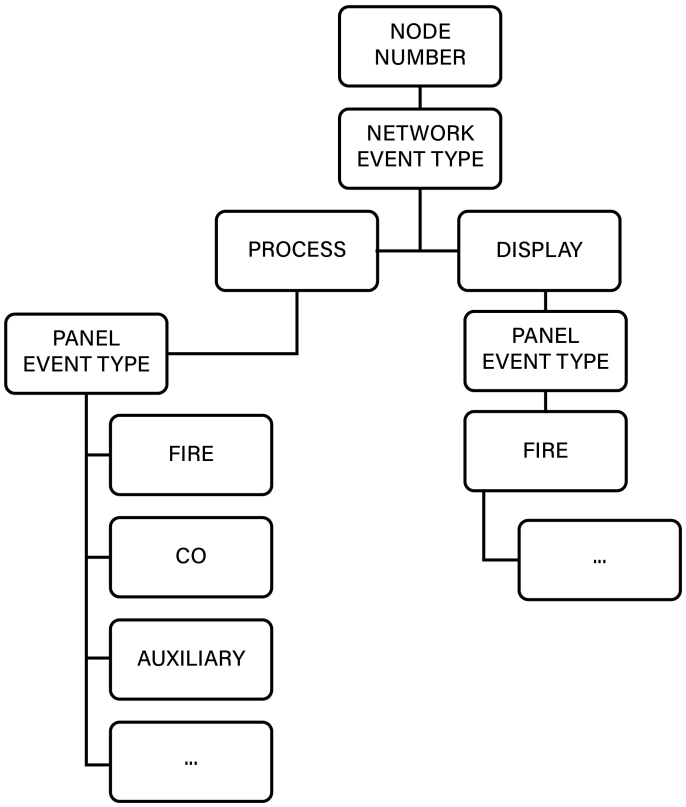
Action	Description
Process	This instructs the node receiving a network event to behave exactly as it would if it were a local node event. For example, in the even tof, the panel would be expected to activate the NAC outputs and fire relays. Selecting the **Process** option ensures that the panel does this from network fire events. If the process option is not selected, the panel would not process the event as a local event and would not activate the NAC outputs or fire relays when a fire event is received from the network.
Display	This option instructs the node receiving the network event to display the event on the LCD display exactly as it would if it were a local node event.
Log	This gives the option to store the network event in the local node event log. For example if a panel is designated as a master panel, it may be required that the panel logs all events on the network, whereas other panels log only their own events. Each node can store up to 500 events in the event log.

Action	Description
Print	This gives the option to print the network event. The node will print local events and network events assigned to it. It is possible that a master panel can be required to print all events (both local and network wide), while other panels print only local events.
Buzz	This gives the option to operate the node buzzer upon receipt of a network event.

When panels are networked together, they share locally occurring events with other nodes on the network. The following are the panel event types that can be processed.

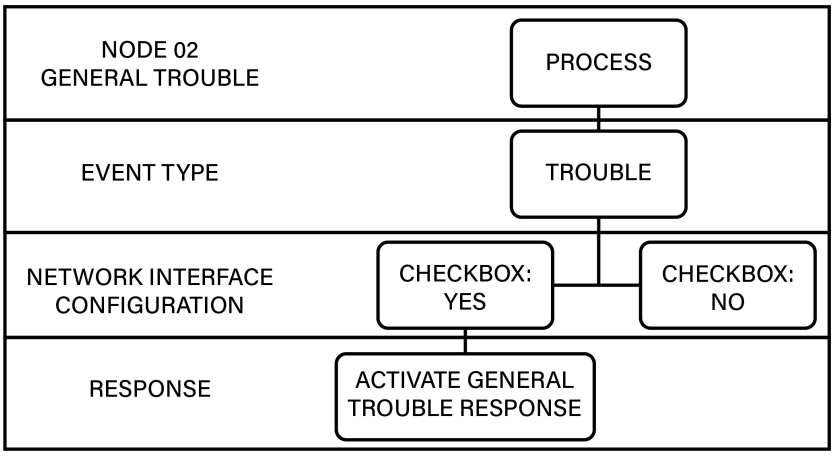
- Fire
- CO
- Aux
- PreAlarm
- Trouble
- Disablement
- Supervisory
- Test
- Status - Reset, Resound, Silence Network Command

The network processing hierarchy is as follows, where NODE NUMBER represents a networked node.



Each network event type received from networked nodes are processed based on the network interface configuration.

The event type is processed by other panels based on the network interface configuration. When items are checked, the panel will process an incoming event for each type listed. When event types are unchecked, the panel will ignore incoming events for each network type unchecked.

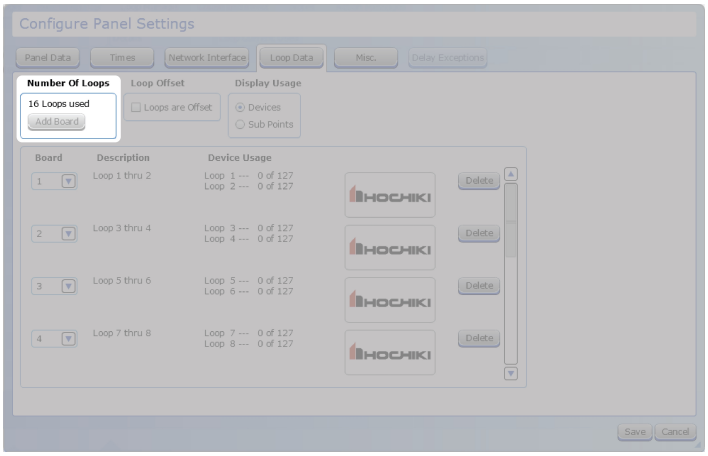


GLOBAL CLASS B NETWORK NODE ADDRESSES

The First Node Address and Last Node Address are used to identify network nodes on either side of a network Class B SLC on supervised networks.

Loop Data Tab

Set the number of loops installed in the FACP in the **Loop Data** tab. The number of loops must be entered when users do not use panel export.



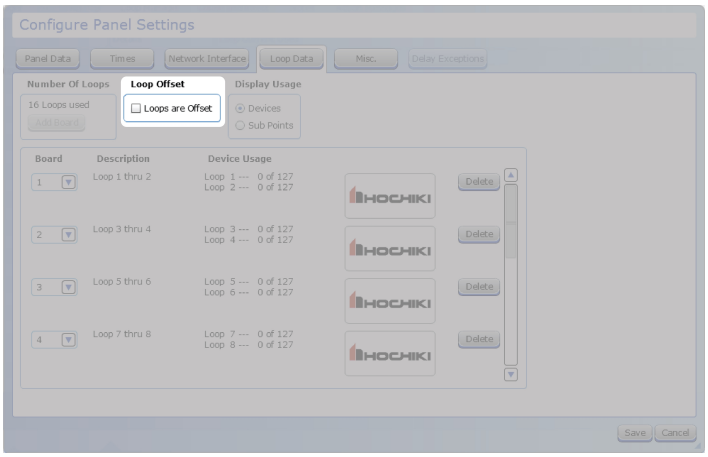
NUMBER OF LOOPS

Button.

> **NOTE** On Multi-Protocol panels, select either the Hochiki or Apollo protocol.

Assign an address number to the loop card. The default is the next number in the sequence.

Review the address numbers before sending the data to the panel. If the information does not match the hardware, the panel will have errors and an updated configuration will need to be transferred.

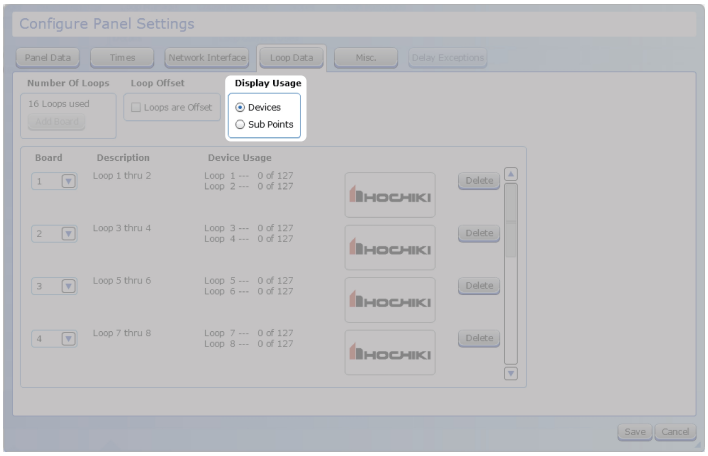


LOOP OFFSET

Check Box.

Checking this box will offset all panel loops by the total of the previous loop count. This is typically used when more than one panel is installed on a network, so that the loop numbering will be sequential across several panels. The changes to the loop numbering will be shown in the Network Tree and all other places where loop numbers are displayed.

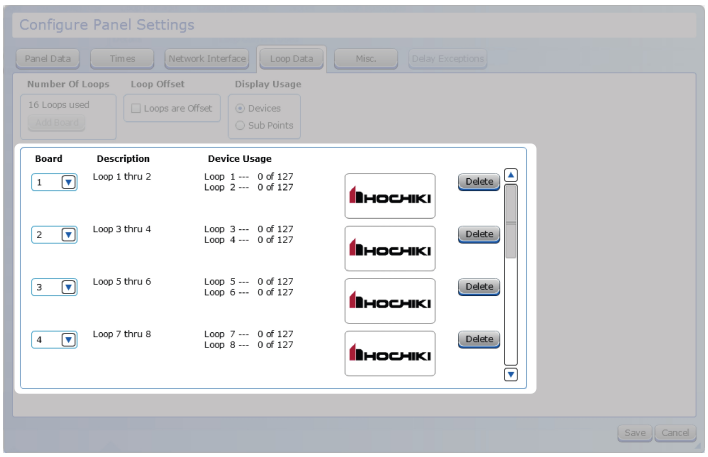
EXAMPLE A network has three panels, with 4 loops each. If Panels 2 and 3 are offset, Panel 2 loops would change to loops 5,6,7,8 and Panel 3 loops would change to 9,10,11,12.



DISPLAY USAGE

*Radio Button. Allowed values are **Devices** and **Sub Points**.*

This changes the display in the loop table to show either the number of **Devices** on the loop or the number of **Sub Points**.

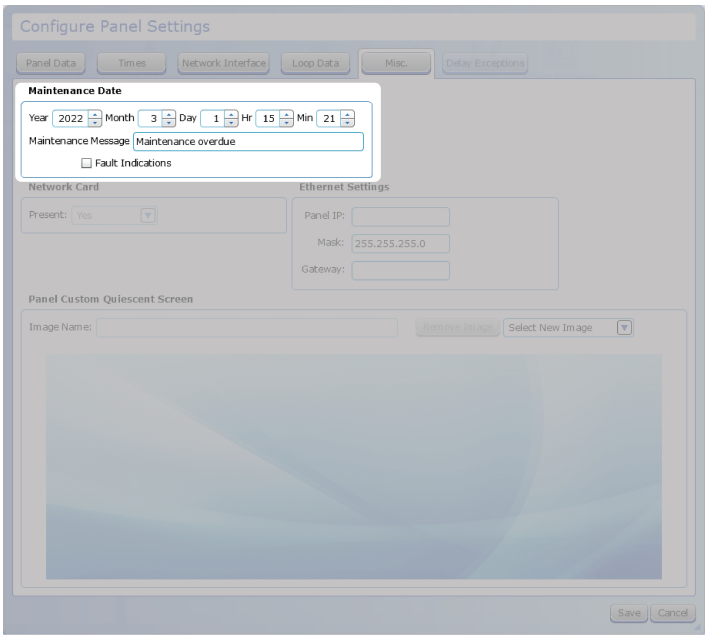


LOOP DATA TABLE

This section of the Loop Data tab displays all loop cards that have been added to the network.

- The **Board** drop-down sets the address for each card.
- The **Description** displays what loops are assigned each address.
- The **Device / Sub Address Usage** displays how many devices or subaddresses are in use on each loop address.
- The logo indicates the assigned protocol for each loop address. Multi-protocol networks will also have a radio button that allows a card to be assigned to an alternate protocol.

Misc Tab



YEAR | MONTH | DAY | HR | MIN

Up / Down Arrows. Allowed values are:

- *Year - 2000 - 2200*
- *Month - 1-12*
- *Day - 1-31 (month-dependent)*
- *Hr - 0-23*
- *Min - 0-59*

This is the date when panel maintenance is due.

MAINTENANCE MESSAGE

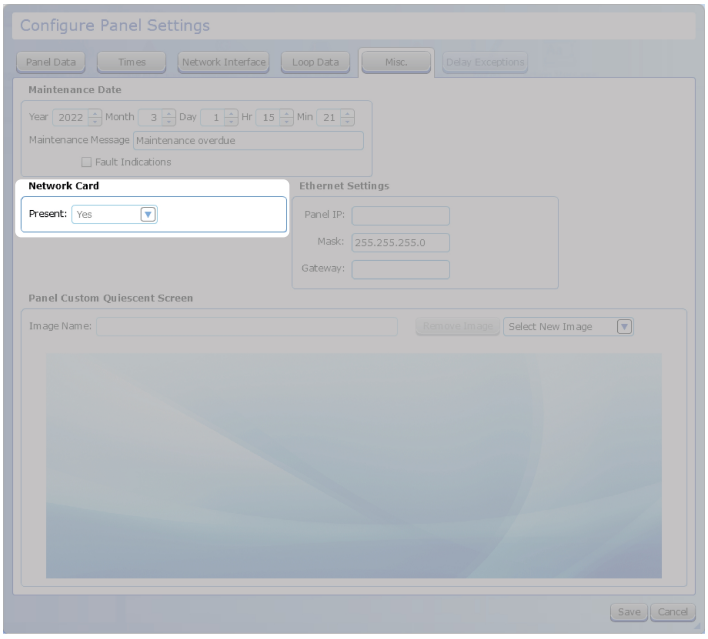
Text Box. Unlimited characters. Special characters are allowed.

This is the message that should appear when maintenance is due.

FAULT INDICATIONS

Check Box.

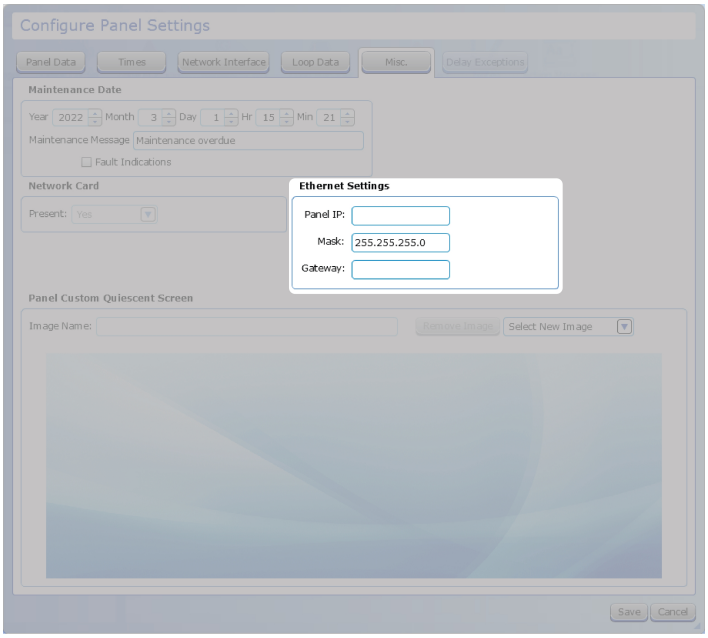
This setting determines if the panel should post a Trouble message when panel maintenence is due.



PRESENT

*Drop-Down List. Allowed values are **Yes** or **No**.*

This setting indicates if a network card is connected. Set this field to Yes when a panel with a network card is installed, but not networked to other control units.



PANEL ID
Text Box.

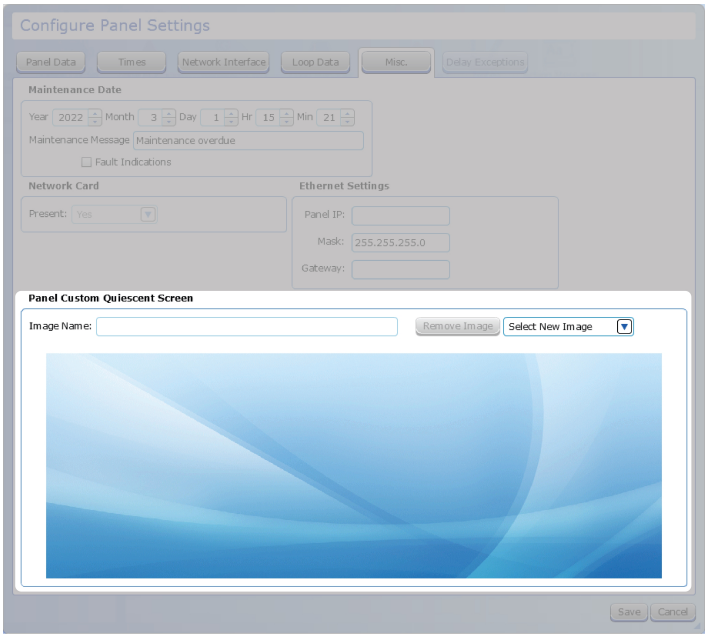
This is the IP address of the panel.

MASK
Text Box.

This is the subnet mask of the panel.

GATEWAY
Text Box.

This is the ethernet gateway of the panel.

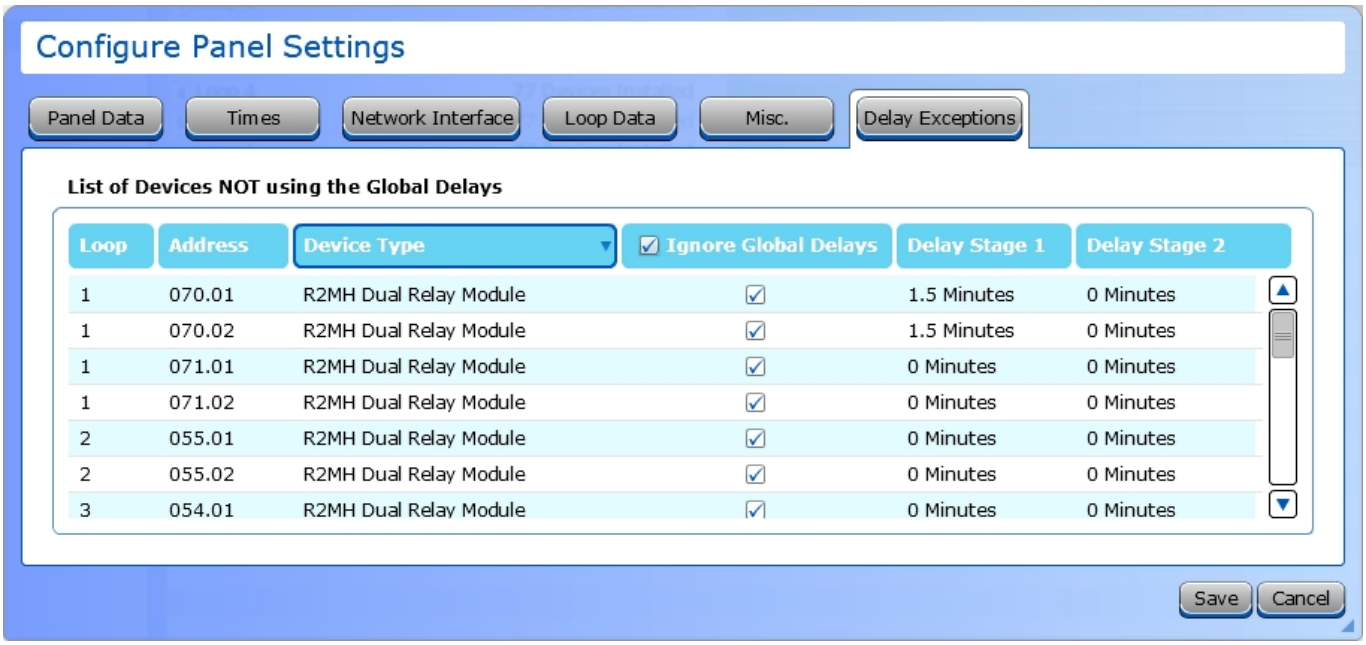


PANEL CUSTOM QUIESCENT SCREEN

This is where the custom quiescent screen information is displayed. To add a new quiescent screen, use the Transfer Quiescent Screen tool. Then, select the new screen from this window,

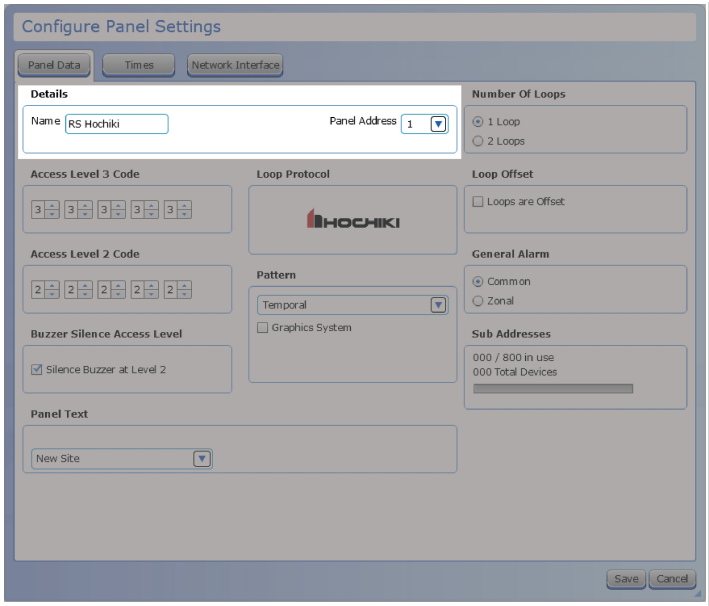
Delay Exceptions Tab

This tab contains a list of all devices ***not*** using the delays set in the Panel Data tab. This list can be sorted by column. The **Ignore Global Delays** column check box can be checked to configure all listed devices to ignore the set delays.



Elite, Elite RS, eLAN RS, FireNET, FireNET+, FireNET LCD Network Annunciator

Panel Data Tab

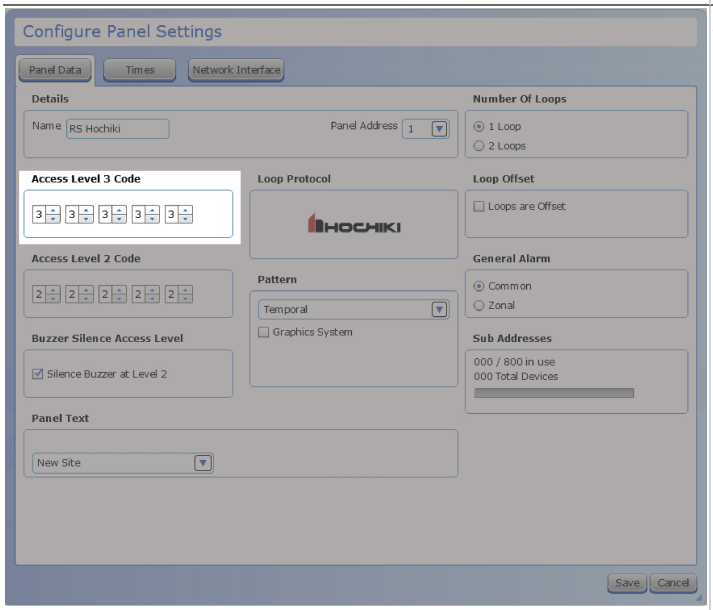


NAME
Text Box, up to 30 characters allowed, including special characters.

This is the name of the selected panel.

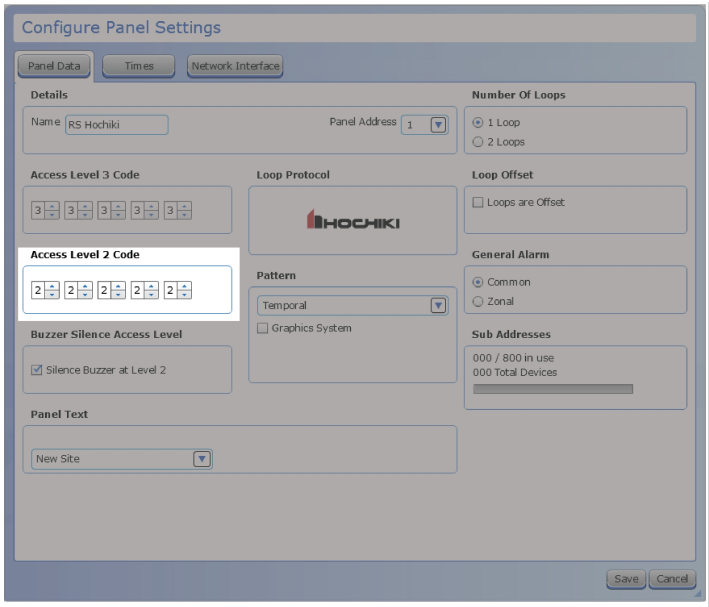
PANEL ADDRESS
Drop-down List. Allowed values are 1-64.

This is the node number of the panel on a multi-panel Network. The first panel added to the configuration will be assigned an address of 01. Subsequent panels added will be assigned the next available address number, or a specific address can be selected from the drop-down box.



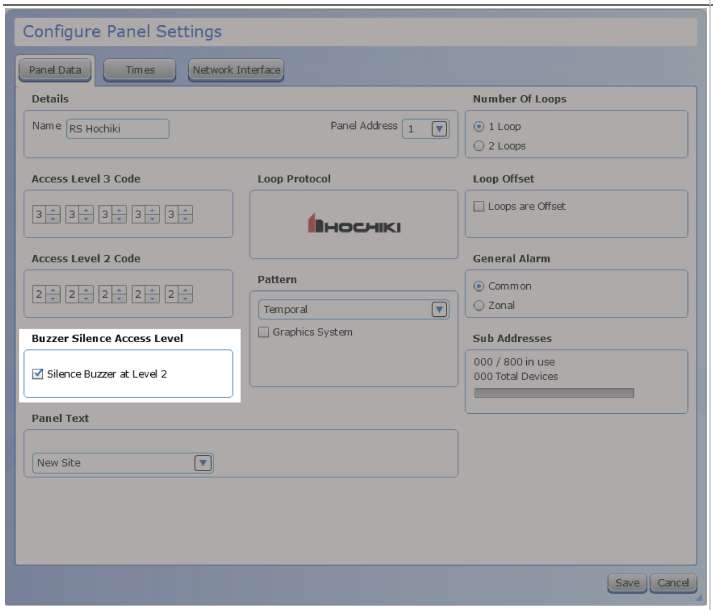
ACCESS LEVEL 3 CODE
Up / Down Arrows. Each box has allowed values of 1 - 4.

This is the code to access user level 3 options.



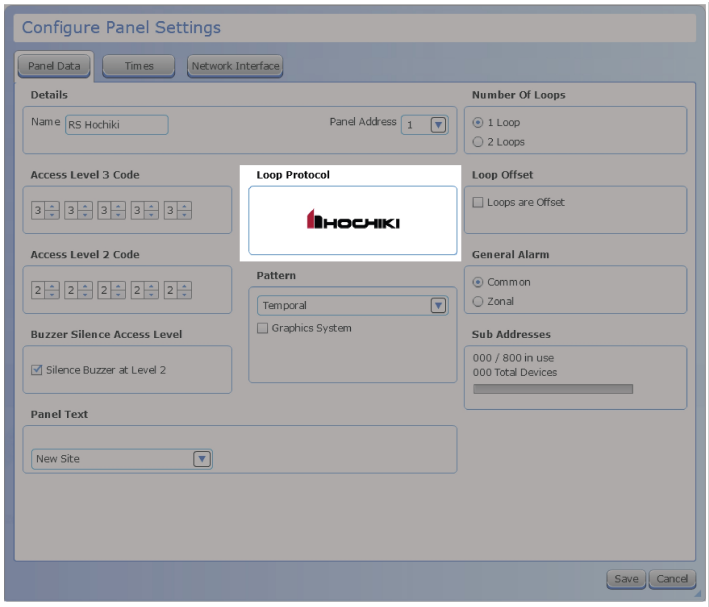
ACCESS LEVEL 2 CODE
Up / Down Arrows. Each box has allowed values of 1 - 4.

This is the code to access user level 2 options.

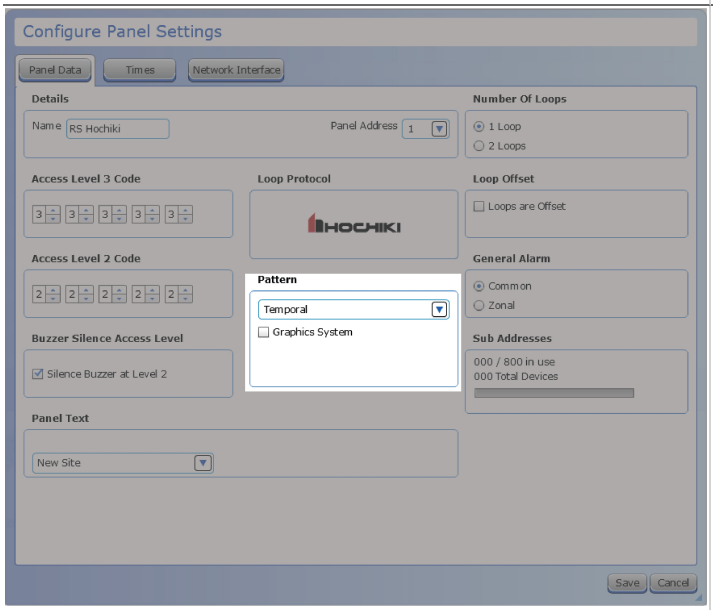


SILENCE BUZZER AT LEVEL 2
Check Box

Check this box to allow a Level 2 user to silence the panel buzzer.



LOOP PROTOCOL
Informational Only. This displays the currently-selected protocol.

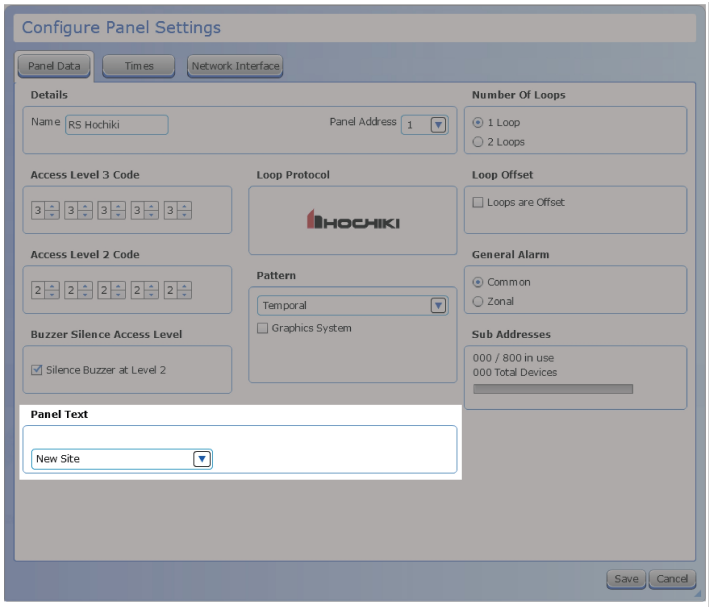


GLOBAL PATTERN
*Drop-Down List. Allowed values are **Continuous** (high steady state), **MarchCode** (high and low for even intervals), and **Temporal** (synchronized on a system basis).*

This will set the pattern that will be assigned to a NAC circuit output pattern.

GRAPHICS SYSTEM
Check Box.

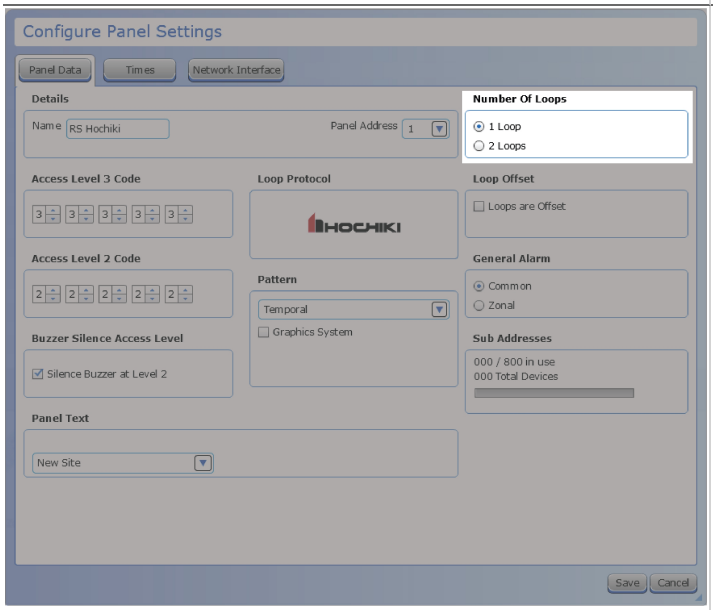
Selecting this option will alert the panel anel that Guide / Graphix are present and to report when the software is no longer communicating with the panel.



PANEL TEXT

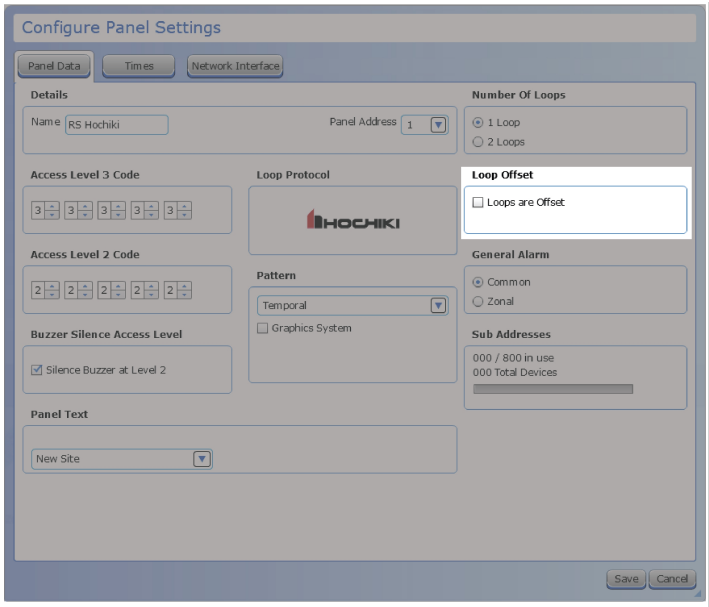
Text box. Up to 80 characters, including special characters.

This will provide site location details that will be displayed on the GUI of all panels on the network when events are generated on the panel.



NUMBER OF LOOPS

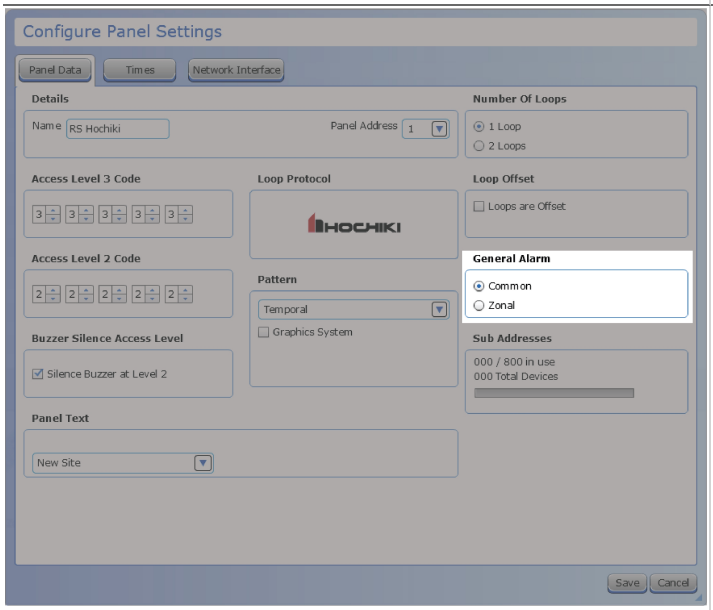
Radio Button. Allowed values are panel-dependent.



LOOP OFFSET
Check Box.

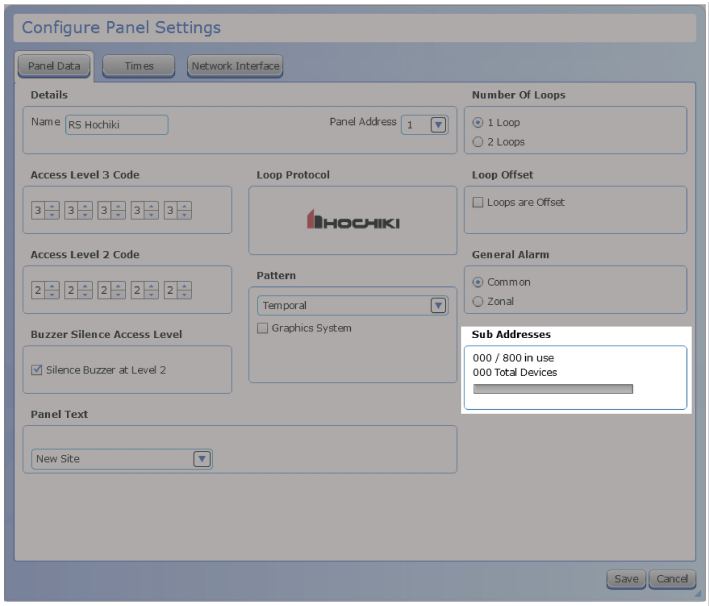
Checking this box will offset all panel loops by the total of the previous loop count. This is typically used when more than one panel is installed on a network, so that the loop numbering will be sequential across several panels. The changes to the loop numbering will be shown in the Network Tree and all other places where loop numbers are displayed.

EXAMPLE A network has three panels, with 4 loops each. If Panels 2 and 3 are offset, Panel 2 loops would change to loops 5,6,7,8 and Panel 3 loops would change to 9,10,11,12.



GENERAL ALARM
*Radio Button. Allowed values are **Common** (The panel will activate all notification appliances zones when any General alarm activation occurs.) and **Zonal** (The panel will activate a general alarm for notification appliances ONLY in the same zone as the activation point. If a subsequent point of activation is in another zone, all notification appliances in that zone will be activated.)*

This sets how the panel will respond to a single general alarm activation.



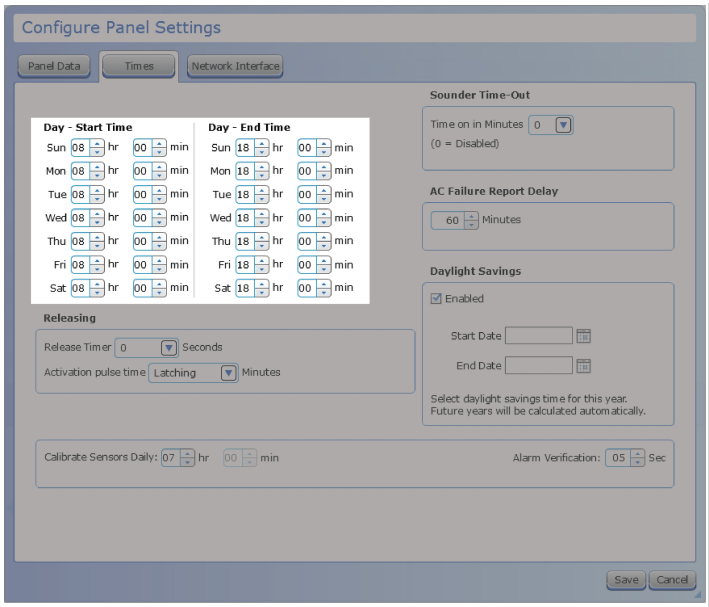
SUB ADDRESSES

This displays the number of sub addresses in use and the number available. The number of subaddresses available will change, depending on the number of loops on the network.

The usage bar changes as subpoints are added or deleted on the loop. Total devices is also shown.

Times Tab

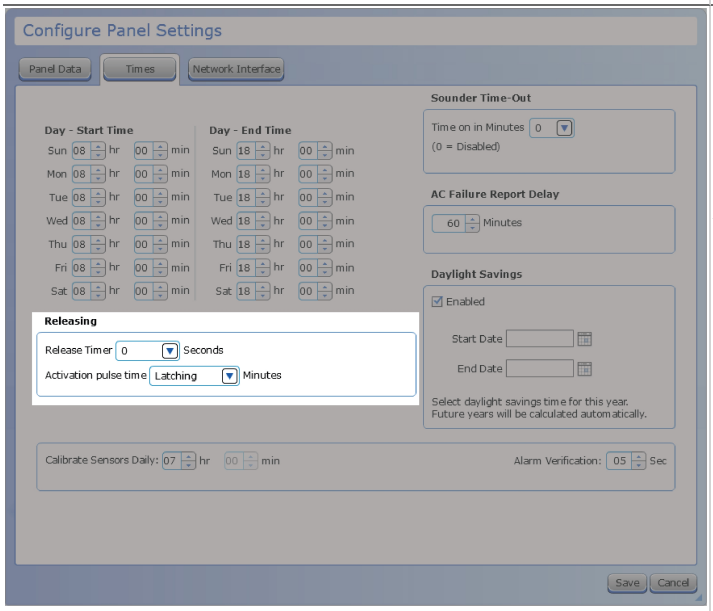
This tab allows the configuration of set timed features common to panel operations.



DAY - START TIME | DAY - END TIME

Up / Down Arrows. Any time of day (24 hour time format) is allowed, incremented in minutes.

The start and end times are used to define the Day and Night mode of the panel. At the onset of the Start time, the detector's Day sensitivity is used. At the onset of the End time, the detector's Night sensitivity is used.



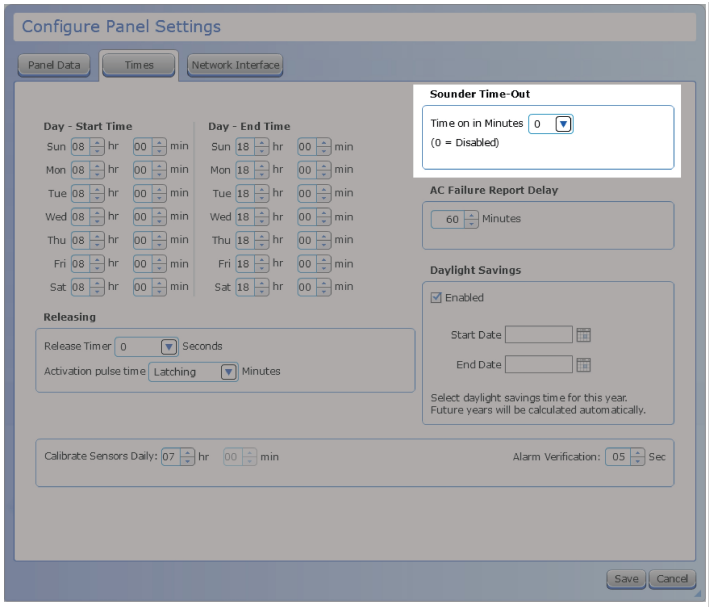
RELEASE TIMER

Drop-Down List. Allowed values are 0-60.

The delay between the activation of a module and extinguishant release.

ACTIVATION PULSE TIME

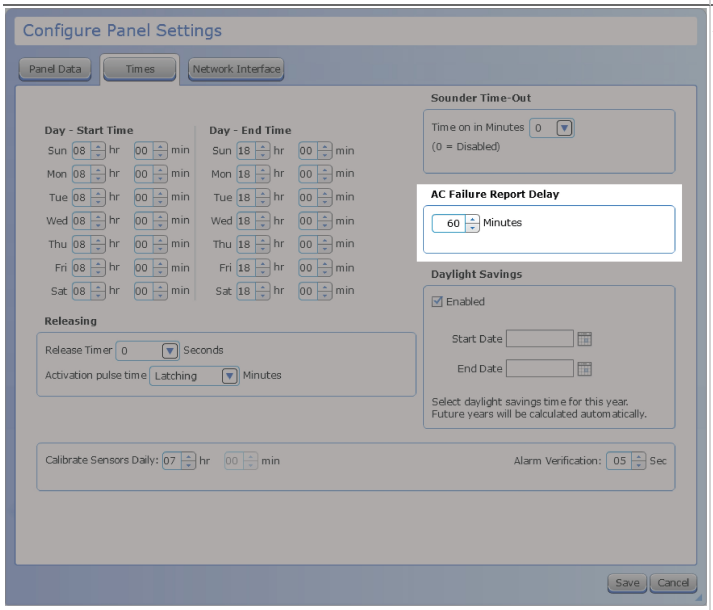
*Drop-Down List. Allowed values are **Latching**, **5**, **10**, **15**, **20**, **25**, or **30**.*



SOUNDER TIME-OUT

Drop-Down List. The panel default is 0, which disables this feature. Allowed values are 5 to 60 minutes, in 5 minute increments.

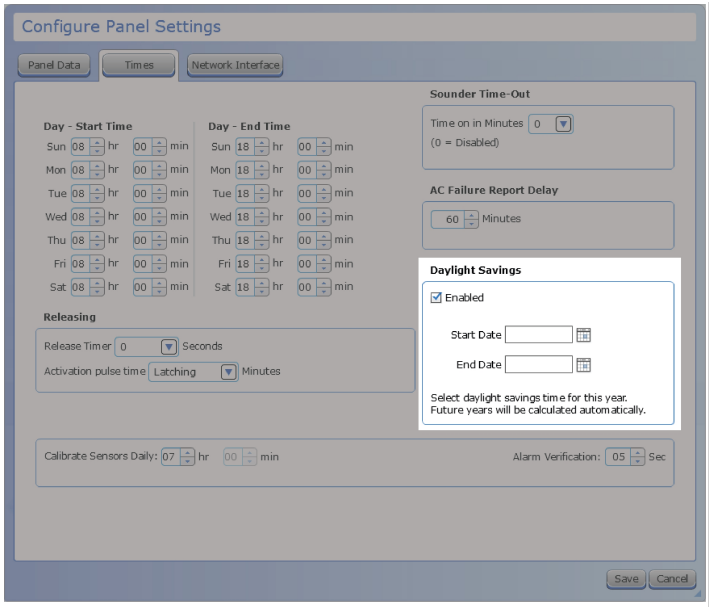
This programs the NAC circuits to automatically silence after a period of time.



AC FAILURE REPORT DELAY

Up / Down Arrows. Allowed values are 0-240 minutes. The default is 60 minutes.

This programs the panel to delay panel trouble reporting.

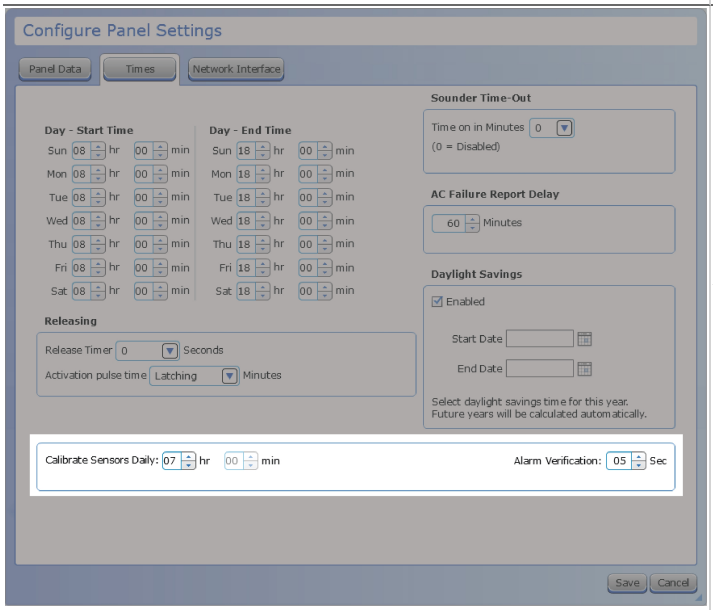


DAYLIGHT SAVINGS

Enabled. *Check Box.*

Start / End Date. *Calendar Pop-Up.*

This sets the panel to use daylight savings time, starting and ending on the dates selected for the current year. Future years will be calculated automatically.



CALIBRATE SENSORS DAILY

Up / Down Arrows. Only the ***Hours*** *field can be edited.*

This sets time each day when the sensors will perform their calibration routine. Calibration occurs once per day should be set to a time when building environmental conditions are most stable.

ALARM VERIFICATION

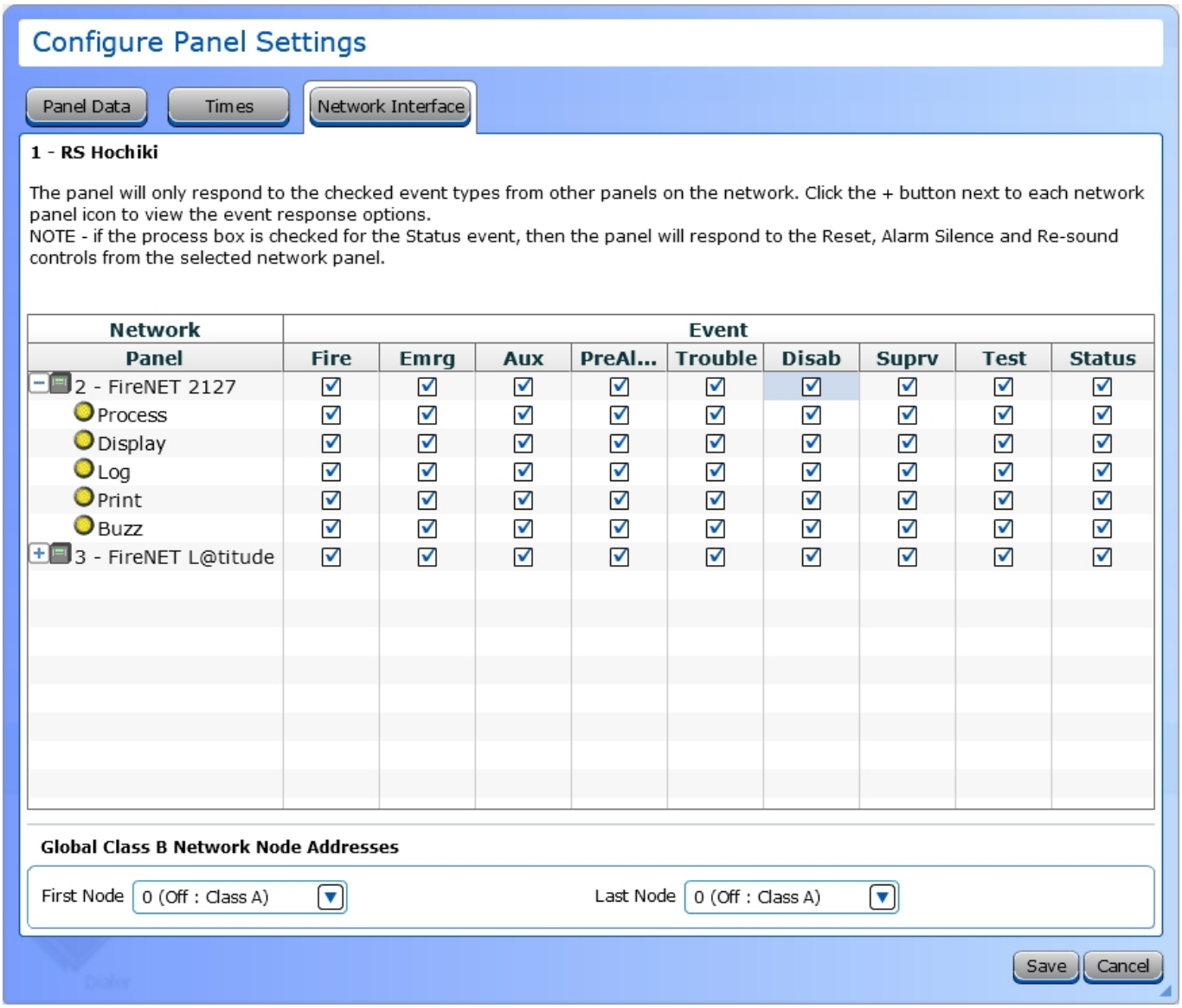
Up / Down Arrows. Allowed values are between 5-60 seconds, in 5 second increments.

This sets the timing delay for the verification period.

> **NOTE** This field will be disabled until **Alarm Verification** is set in the Network Settings.

Network Interface Tab

The network interface tab is available in the panel settings manager of networked panels. This tab is disabled for panels on a single node network.



The **Network Interface** tab allows a user to select which network events that a panel will respond to, and define the way in which it will respond. All other panels, aside from the currently-edited panel, will be listed. Click + to expand the properties of the node and select how the panel will respond to network events. Each panel can have a unique profile that defines how it will respond to the rest of the nodes and event types on the network.

Action	Description
Process	This instructs the node receiving a network event to behave exactly as it would if it were a local node event. For

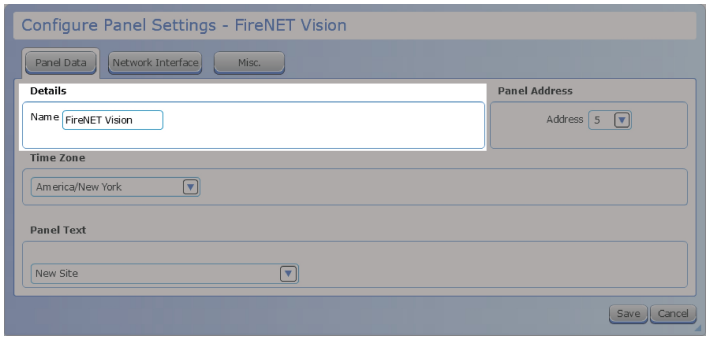
Action	Description
	example, in the even tof, the panel would be expected to activate the NAC outputs and fire relays. Selecting the **Process** option ensures that the panel does this from network fire events. If the process option is not selected, the panel would not process the event as a local event and would not activate the NAC outputs or fire relays when a fire event is received from the network.
Display	This option instructs the node receiving the network event to display the event on the LCD display exactly as it would if it were a local node event.
Log	This gives the option to store the network event in the local node event log. For example if a panel is designated as a master panel, it may be required that the panel logs all events on the network, whereas other panels log only their own events. Each node can store up to 500 events in the event log.
Print	This gives the option to print the network event. The node will print local events and network events assigned to it. It is possible that a master panel can be required to print all events (both local and network wide), while other panels print only local events.
Buzz	This gives the option to operate the node buzzer upon receipt of a network event.

When panels are networked together, they share locally occurring events with other nodes on the network. The following are the panel event types that can be processed.

- Fire
- Emrg
- Aux
- PreAlarm
- Trouble
- Disablement
- Supervisory
- Test
- Status - Reset, Resound, Silence Network Command

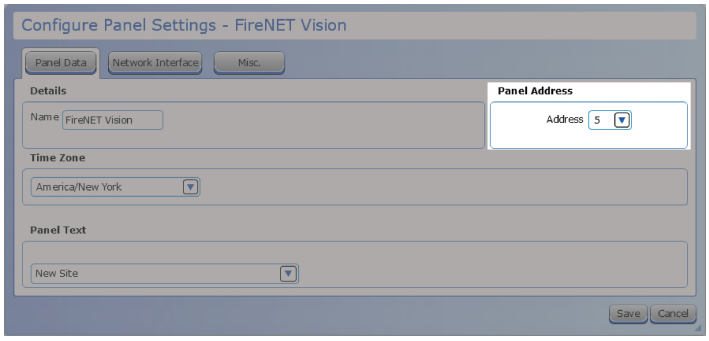
FireNET Vision, L@titude Vision, Compas Vision

Panel Data Tab



NAME
Text Box, up to 30 characters allowed, including special characters.

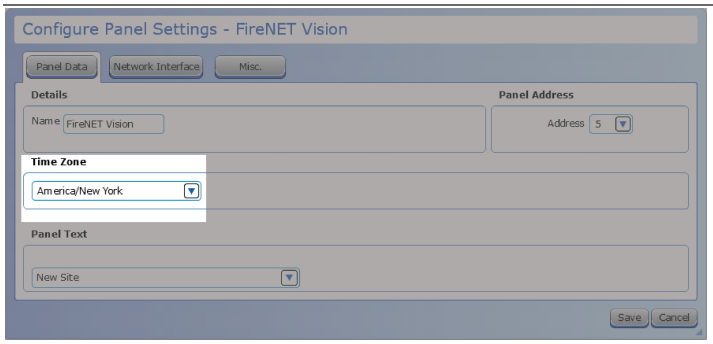
This is the name of the selected panel.



PANEL ADDRESS

Drop-down List. Allowed values are 1-64.

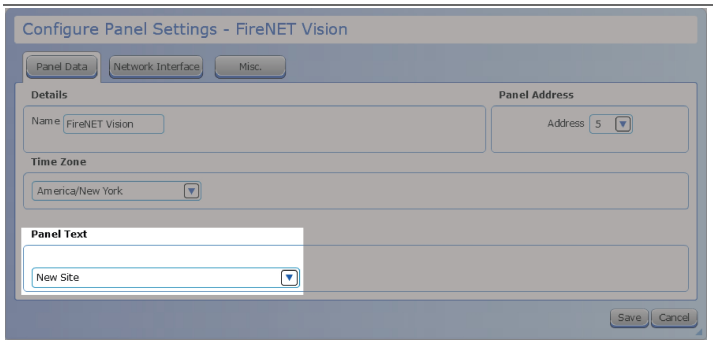
This is the node number of the panel on a multi-panel Network. The first panel added to the configuration will be assigned an address of 01. Subsequent panels added will be assigned the next available address number, or a specific address can be selected from the drop-down box.



TIME ZONE

Drop-Down List. Allowed values include all global time zones.

This sets the appropriate time zone. The default shown here will match the time zone set in **Edit Preferences**.

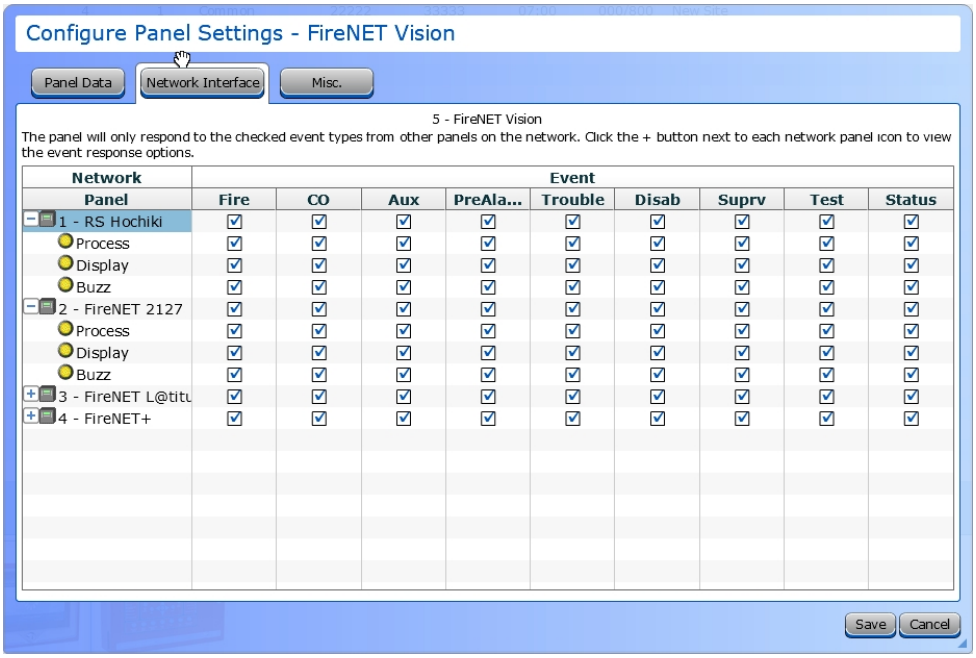


PANEL TEXT

Text box. Up to 80 characters, including special characters.

This will provide site location details that will be displayed on the GUI of all panels on the network when events are generated on the panel.

Network Interface Tab



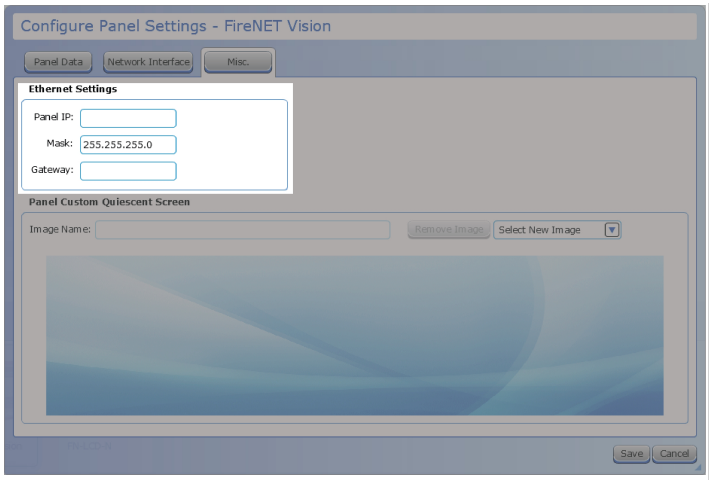
The **Network Interface** tab allows a user to select which network events that a panel will respond to, and define the way in which it will respond. All other panels, aside from the currently-edited panel, will be listed. Click + to expand the properties of the node and select how the panel will respond to network events. Each panel can have a unique profile that defines how it will respond to the rest of the nodes and event types on the network.

Action	Description
Process	This instructs the node receiving a network event to behave exactly as it would if it were a local node event. For example, in the even tof, the panel would be expected to activate the NAC outputs and fire relays. Selecting the **Process** option ensures that the panel does this from network fire events. If the process option is not selected, the panel would not process the event as a local event and would not activate the NAC outputs or fire relays when a fire event is received from the network.
Display	This option instructs the node receiving the network event to display the event on the LCD display exactly as it would if it were a local node event.
Buzz	This gives the option to operate the node buzzer upon receipt of a network event.

When panels are networked together, they share locally occurring events with other nodes on the network. The following are the panel event types that can be processed.

- Fire
- CO
- Aux
- PreAlarm
- Trouble
- Disablement
- Supervisory
- Test
- Status - Reset, Resound, Silence Network Command

Misc Tab



PANEL ID
Text Box.

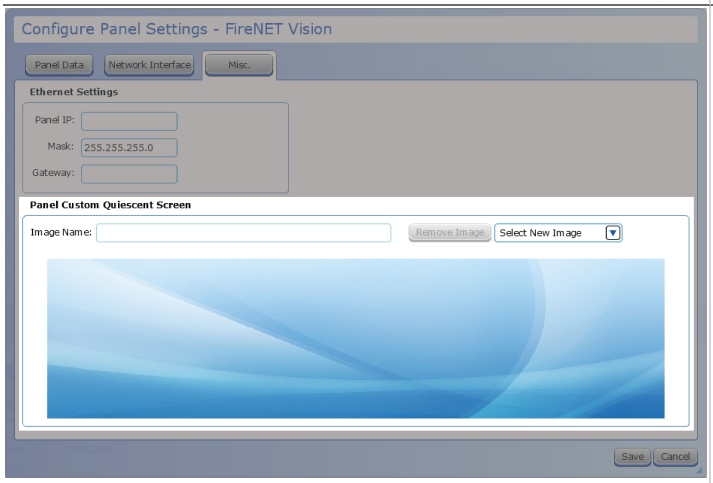
This is the IP address of the panel.

MASK
Text Box.

This is the subnet mask of the panel.

GATEWAY
Text Box.

This is the ethernet gateway of the panel.

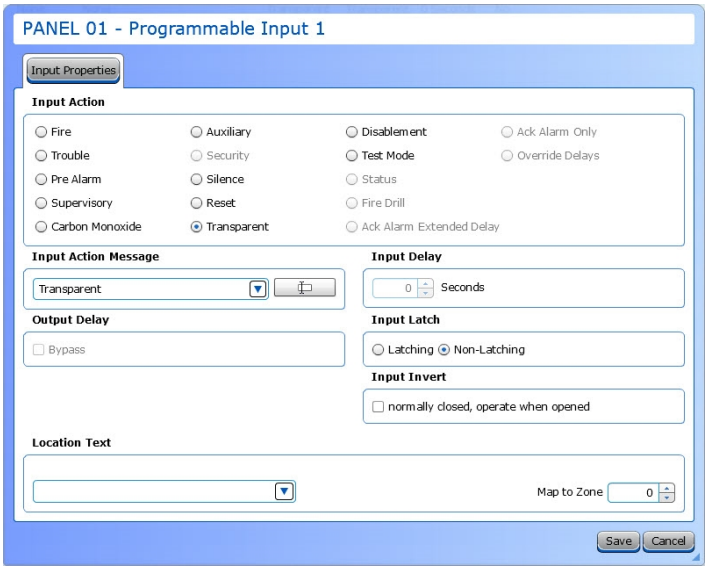


PANEL CUSTOM QUIESCENT SCREEN

This is where the custom quiescent screen information is displayed. To add a new quiescent screen, use the Transfer Quiescent Screen tool. Then, select the new screen from this window,

Panel I/O Configuration

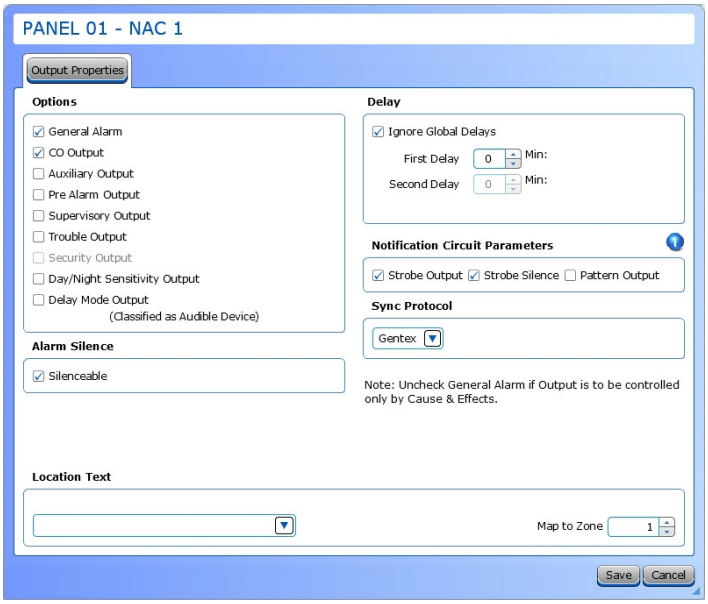
Inputs



1. Choose an **Input Action**. This will determine the default Input Action Message.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.
6. Each input circuit is Normally Open, but Closed upon activation. Selecting **Input Invert** will set the circuit to be Normally Closed, but Open upon activation.

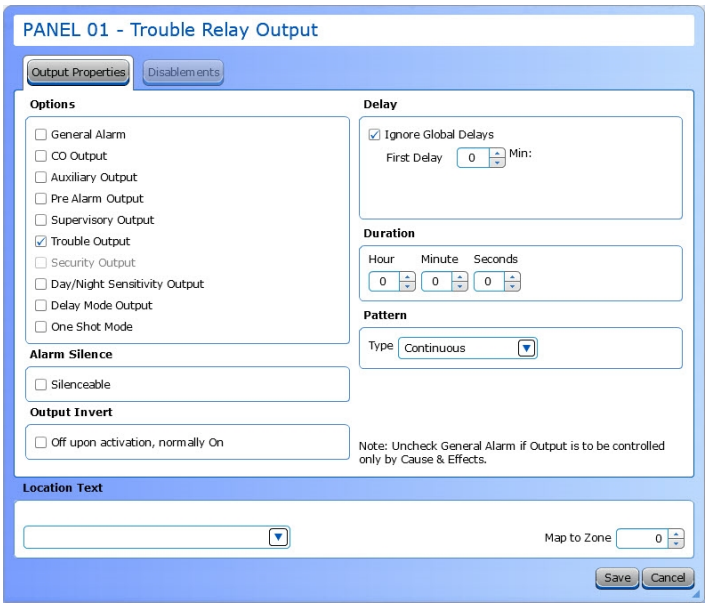
Outputs

NACs



Refer to NAC Module Properties details for instructions on configuring the NAC Outputs.

Other Outputs

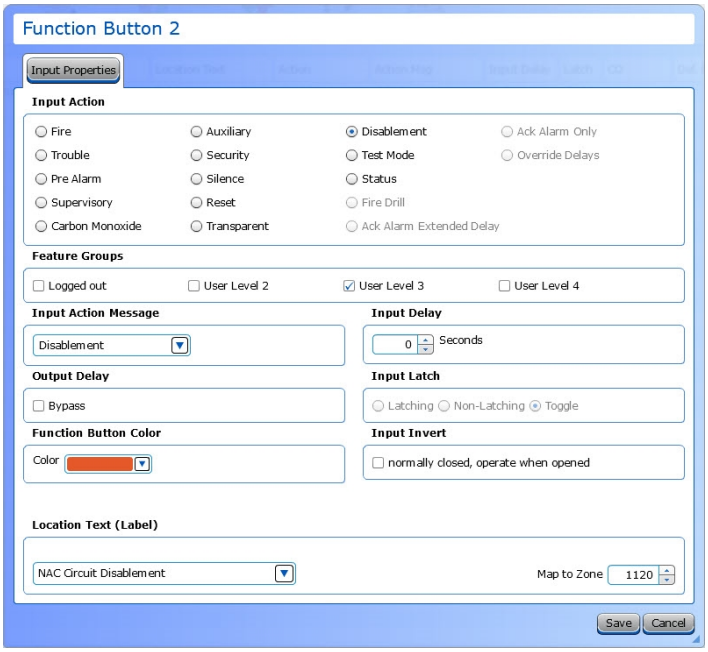


1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active.
3. Each output circuit is SPST. Outputs are normally-open (N.O.) and close upon activation. Selecting **Output Invert** will set the output circuit to be normally-closed (N.C.); inverted outputs open upon activation. During times of complete power loss (loss of both normal and backup power), all outputs will open regardless of their configuration settings. Inverting an output does not change the quiescent current consumption of the panel module.
4. **Ignore Global Delays.** This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the **First Delay** and **Second Delay** fields. Second Delay is only visible if the output is silenceable.

> **NOTE** If checked,
> - the initial activation of the output will be delayed based on the settings in the First Delay field.
> - if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

5. Enter a **Duration** to select how long an output will be active. If set to 0, it will remain active until the system is reset.
6. Where applicable (this field does not exist on every output), set the **Pattern** using the drop-down box. Allowed values are *Continuous* (high steady state), *March Code* (high and low for even intervals), *Temporal* (synchronized on a system basis, three even on/off cycles followed by off period), and Panel Global Pattern (will follow the panel pattern setting, configured in the panel settings).

Function Button Configuration



1. Choose an **Input Action**.
2. Select which **Feature Groups** can access this function button.
3. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom **Input Action Message** can be entered.
4. Check the **Output DelayBypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Use the drop-down box to select a **Color** for the function button.
6. Set the **Input Delay** in seconds, up to 180 seconds. Input activation will prevent the panel's response for specified time period when the input is activated. No activation will occur if the input state is reset to normal before time period expires.
7. Set the **Input Latch** to Latching or Non-latching.
8. Each input circuit is Normally Open, but Closed upon activation. Selecting **Input Invert** will set the circuit to be Normally Closed, but Open upon activation.

MODULE CONFIGURATION

Module Configuration will depend on the site, customer, and local authority requirements. When new modules are added, LE2 will add applicable configuration items. Double-click these items to access the module configuration settings.

L@titude and Compas Modules **141**

4 Channel NAC Module 141

8 Channel Conventional Zone Module 145

8 Channel Relay Module 147

16 Channel I/O Board and Panel Module 148

Media Gateway Panel Module 151

Legacy Panel Modules **155**

eView Serial Annunciator / FireNET LCD-S 155

16 Channel I/O Board 156

Dialer 157

eMatrix / Mimic 159

eMatrix / Mimic 16 Way Card Expansion Kit 161

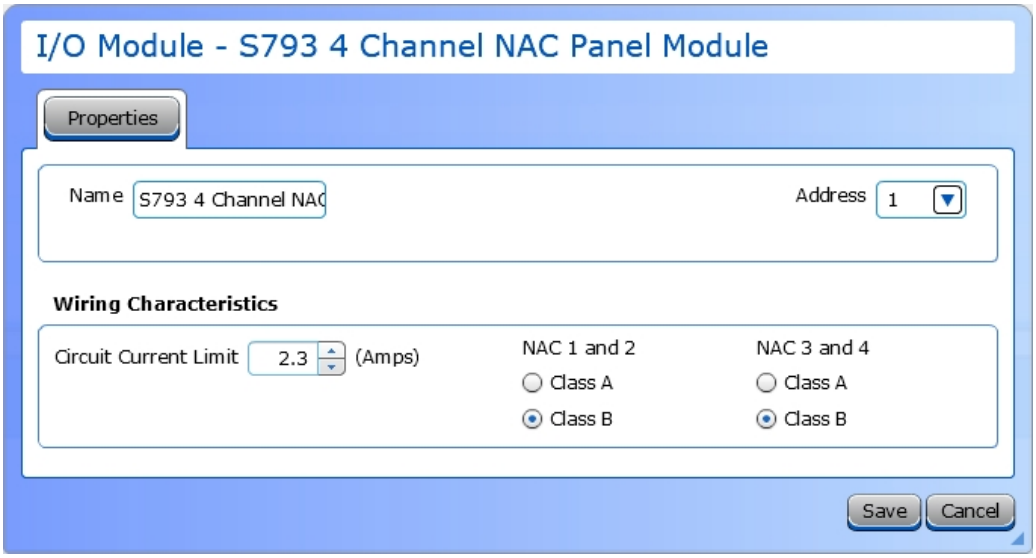
XT+ Module 162

L@titude and Compas Modules

4 Channel NAC Module

NAC Module Properties

Double-click the 4 Channel NAC Module in the network tree to configure the NAC module.



1. If desired, enter a custom **Name** for the module that will be displayed in the network tree.
2. Using the drop-down box, set the **Address** for the module from 1 - 32.
3. Set the **Circuit Current Limit**, between 0.5 A- 2.3 A. This is the maximum current that can be provided by each circuit. This setting applies to all output circuits of this module, whether Class A or Class B. The default setting is 2.3 A.

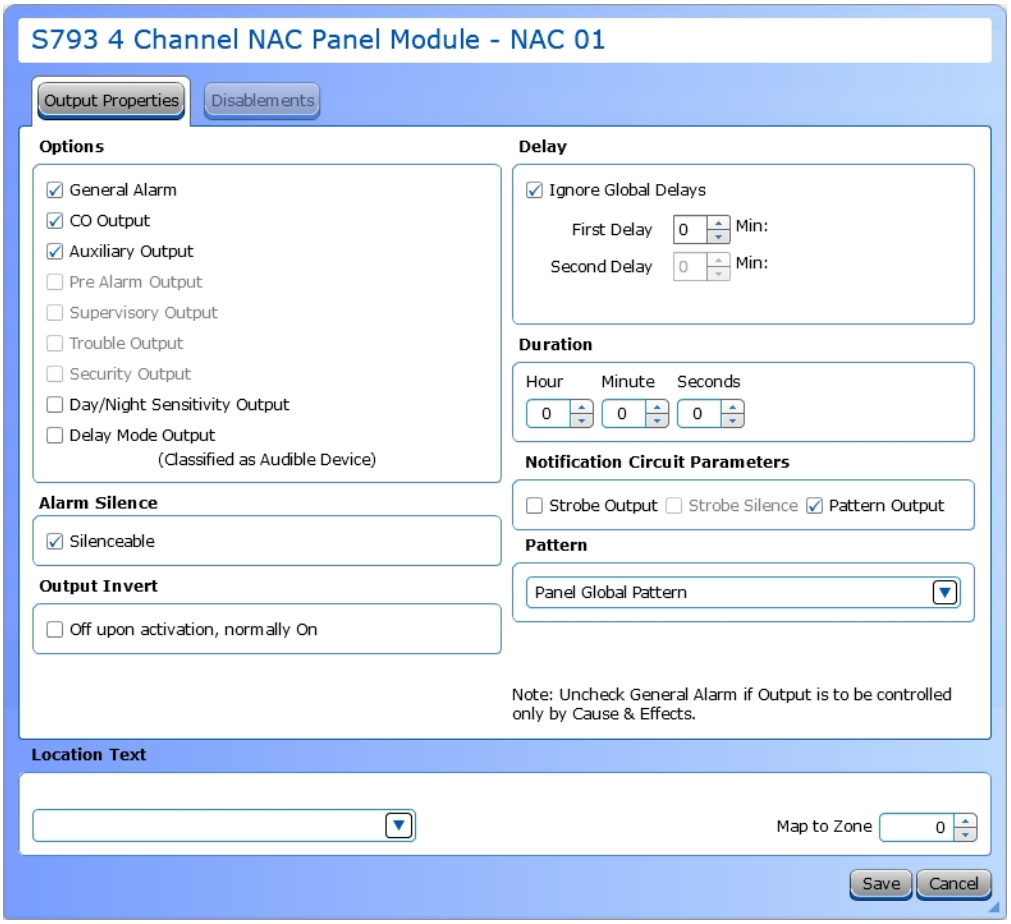
NOTE The maximum operating current for all 4 channels combined is 5 A.

4. Set the **Wiring Class** to A or B for each circuit. Wiring class can only be selected in output pairs. When Class A is selected, the output pair forms a single circuit. When Class B is selected, the output pair forms two independent circuits.

By default, all circuits are programmed Class B. When circuits are wired Class A but not programmed to match (and vice versa), circuits will report wiring trouble.

Channel Properties

Double-click the individual NACs under the 4 Channel NAC Module in the network tree to configure each channel.



1. **Notification Circuit Parameters.** The Notification Circuit Parameter should be selected first because it defines which output will be used. This portion of the window will display different options based on which output type is selected. They are:

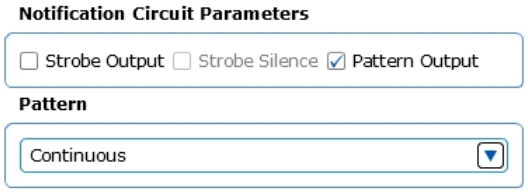
    - Pattern Output (default)
    - Strobe Output
    - Power Output

- To silence horns only, check **Silenceable** and **Strobe Output**.
- To silence horns and strobes, check **Silenceable**, **Strobe Output**, and **Strobe Silence**.
- To configure a Temporal or Continuous 24V output, check **Pattern Output** and select **Panel Global Pattern** or **Continuous** from the Pattern drop-down menu. Set the **Panel Global Pattern** under Panel Settings to Temporal.

> **NOTE** To silence the Pattern Output, check the Silenceable box.

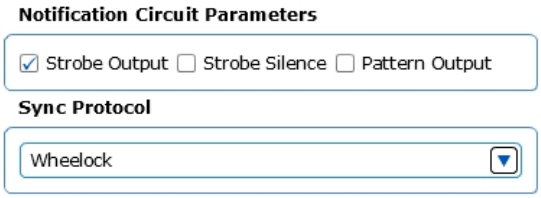
- To configure the output to supply 24V power for a non-NAC application, uncheck all **Notification Circuit Parameter** checkboxes. Select **Continuous**, **Door Holder**, or **Resettable** from the AUX 24V DC drop-down menu.

Pattern Output



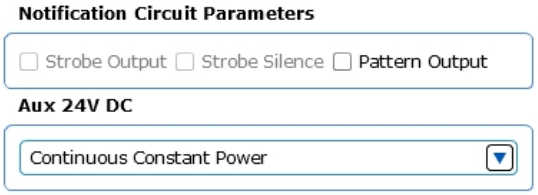
- To configure a continuous 24 V output (i.e., to power one or more notification appliances that are not required to be synchronized) during activation, select **Pattern Output**, then **Continuous** from the Pattern drop-down menu.
- To configure a pulsing 24 V output (i.e., to power a simple bell) during activation, select **Pattern Output**, then **Panel Global Pattern** from the drop-down menu. This selection will follow the panel pattern setting, configured in the panel settings.

Strobe Output



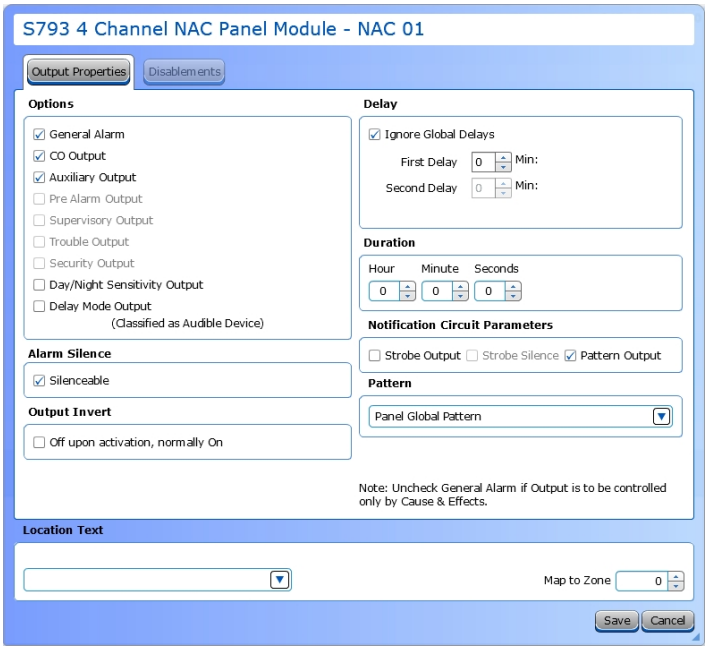
To use a built-in manufacturer's synchronization protocol, select **Strobe Output** and select an option from the drop-down box. By default, the Alarm Silence button on the panel will silence only horns. Select **Strobe Silence** to configure the Alarm Silence button to silence the horns and strobes.

Power Output



To configure the output to supply power for a non-NAC application, all boxes must be unselected. The following options are available from the AUX 24V DC drop-down menu.

- Continuous Constant Power - Continuous constant power provides a voltage output comparable to AUX 24V.
- Door Holder - Door Holder outputs lose power during fire alarm conditions and/or during AC power loss.
- Resettable - Resettable causes power loss that lasts 4-5 seconds each time the panel is reset.



2. Select the desired output **Options**. This selection will activate the circuit when the selected event(s) occur. To use cause and effect programming, LE2 must be used for configuration and all output options must be deselected.
3. Set whether the output will be **Silenceable**. Each NAC is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the NAC should return to normal standby when Alarm Silence is active.
4. Each output circuit is SPST. Outputs are normally-open (N.O.) and close upon activation. Selecting **Output Invert** will set the output circuit to be normally-closed (N.C.); inverted outputs open upon activation. During times of complete power loss (loss of both normal and backup power), all outputs will open regardless of their configuration settings. Inverting an output does not change the quiescent current consumption of the panel module.
5. **Ignore Global Delays**. This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the **First Delay** and **Second Delay** fields. **Second Delay** is only visible if the output is silenceable.

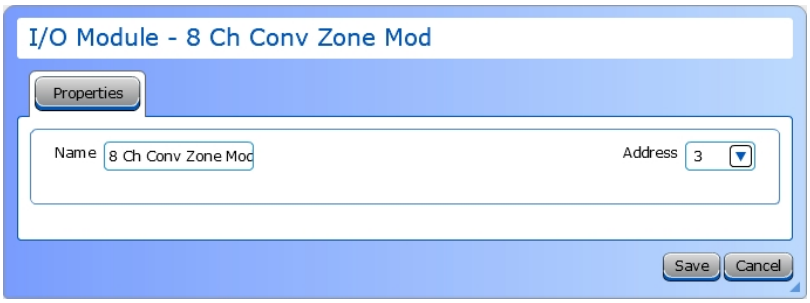
NOTE If checked,
- the initial activation of the output will be delayed based on the settings in the First Delay field.
- if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

6. Enter a **Duration** to select how long an output will be active. If set to 0, it will remain active until the system is reset.
7. Set the **Location Text**, up to 80 characters. This text is displayed when the circuit reports trouble and is the name of the channel displayed in the network tree.
8. Use the **Map to Zone** field to set the zone number for the circuit. Allowable values depend on the network configuration.

8 Channel Conventional Zone Module

Module Properties

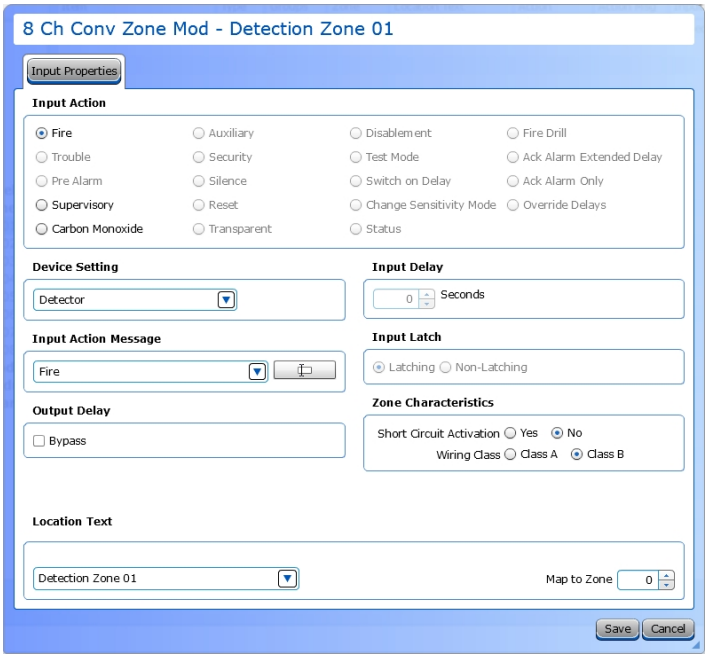
Double-click the 8 Channel Conventional Zone Module in the network tree to configure the module.



1. If desired, enter a custom **Name** for the module that will be displayed in the network tree.
2. Using the drop-down box, set the **Address** for the module from 1 - 32.

Input Configuration

Double-click each Detection Zone under the 8 Channel Conventional Zone Module in the network tree to configure the inputs.



1. Choose a **Device Setting** from the drop-down list. The default setting is Detector.

> **NOTE** ***This step must be done first, as it will affect the remaining configuration selections.***

2. Choose an **Input Action**. The default setting is Fire. For the default device setting (Detector), the setting can be changed to Supervisory or Carbon Monoxide. Other device settings will have different allowable input actions available, based on each device's capabilities and limitations.
3. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
4. Check the **Output Delay** Bypass box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Delay** in seconds, up to 180 seconds. This setting delays the panel's response to an activation. No panel response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
6. Set the **Input Latch** field to Latching or Non-latching.
7. Set the **Short Circuit Activation** field to Yes or No.

- When set to yes, a short on the circuit results in activation.
- When set to no, a short on the circuit results in a trouble. To cause an activation, a trigger resistor must be used.

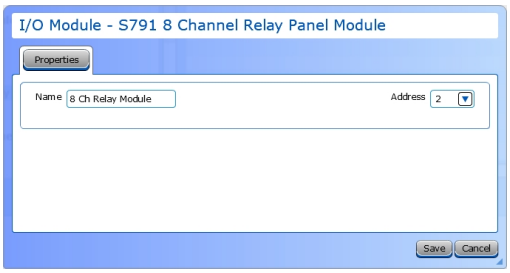
8. Set the **Wiring Class** to A or B for each circuit. Wiring class can only be selected in input pairs. When Class A is selected, the input pair forms a single circuit. When Class B is selected, the input pair forms two independent circuits.
9. Set the **Location Text**, up to 80 characters. This text is displayed when the circuit is activated.
10. Use the **Map to Zone** field to set the zone number for the circuit. Allowable values are dependent on the network configuration.

The circuit will not follow alarm verification zone settings.

8 Channel Relay Module

Module Properties

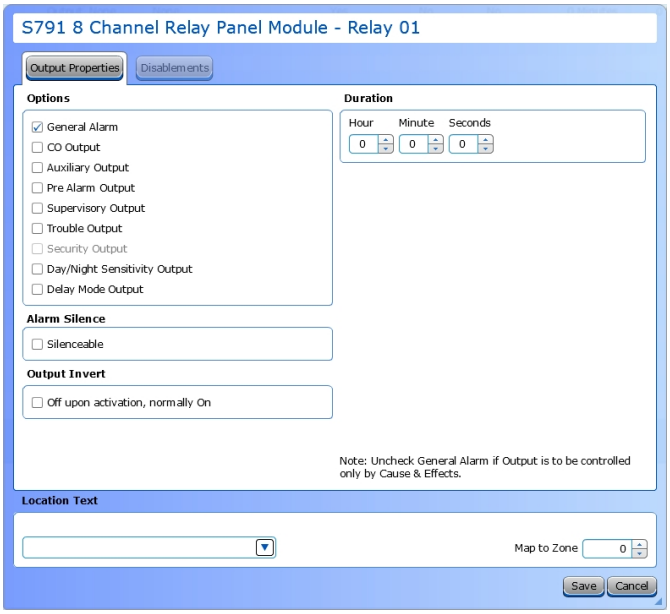
Double-click the 8 Channel Relay Module in the network tree to configure the module.



1. If desired, enter a custom **Name** for the module that will be displayed in the network tree.
2. Using the drop-down box, set the **Address** for the module from 1 - 32.

Output Configuration

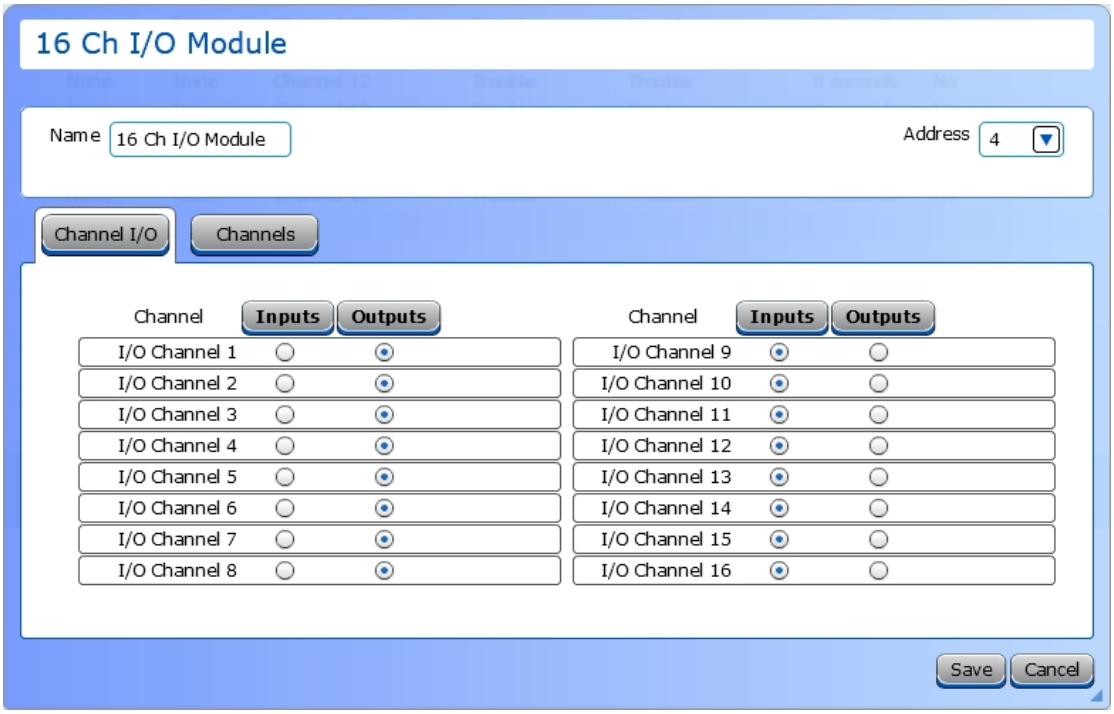
Double-click each relay under the 8 Channel Relay Module in the network tree to configure the outputs.



1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active. If this box is checked, the **Second Delay** field is displayed.
3. Each output circuit is SPST. Outputs are normally-open (N.O.) and close upon activation. Selecting **Output Invert** will set the output circuit to be normally-closed (N.C.); inverted outputs open upon activation. During times of complete power loss (loss of both normal and backup power), all outputs will open regardless of their configuration settings. Inverting an output does not change the quiescent current consumption of the panel module.
4. Enter a **Duration** to select how long an output will be active. If set to 0, it will remain active until the system is reset or silenced (configuration-dependent).
5. Set the **Location Text**, up to 80 characters.
6. Use the **Map to Zone** field to set the zone number for the circuit. Allowable values are dependent on network configuration.

16 Channel I/O Board and Panel Module

Module Configuration

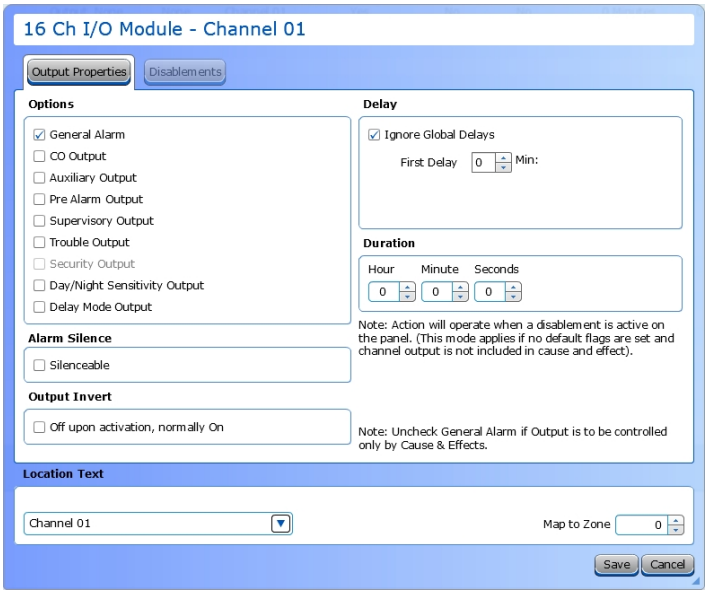


Double-click the 16 Channel I/O Module in the network tree to configure the module.

1. If desired, enter a custom **Name** for the module that will be displayed in the network tree.
2. Using the drop-down box, set the **Address** for the module from 1 - 32.
3. Use the radio buttons to set each channel to be an input or output.

Channel Properties

For channels set as Outputs

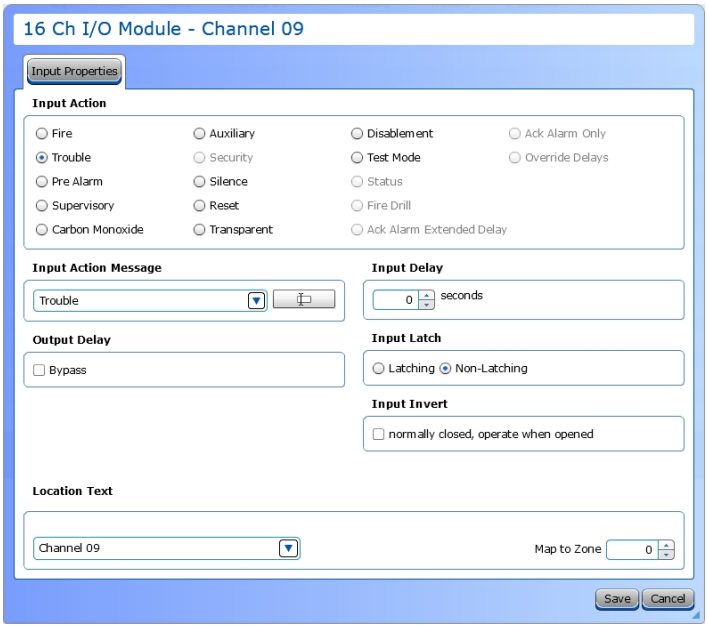


1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active. If this box is checked, the **Second Delay** field is displayed.
3. Each output circuit is SPST. Outputs are normally-open (N.O.) and close upon activation. Selecting **Output Invert** will set the output circuit to be normally-closed (N.C.); inverted outputs open upon activation. During times of complete power loss (loss of both normal and backup power), all outputs will open regardless of their configuration settings. Inverting an output does not change the quiescent current consumption of the panel module.
4. **Ignore Global Delays**. This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the **First Delay** and **Second Delay** fields. **Second Delay** is only visible if the output is silenceable.

> **NOTE** If checked,
> - the initial activation of the output will be delayed based on the settings in the First Delay field.
> - if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

5. Enter a **Duration** to select how long an output will be active. If set to 0, it will remain active until the system is reset.
6. Set the **Location Text**, up to 80 characters.
7. Use the **Map to Zone** field to set the zone number for the circuit. Allowable values are dependent on network configuration.

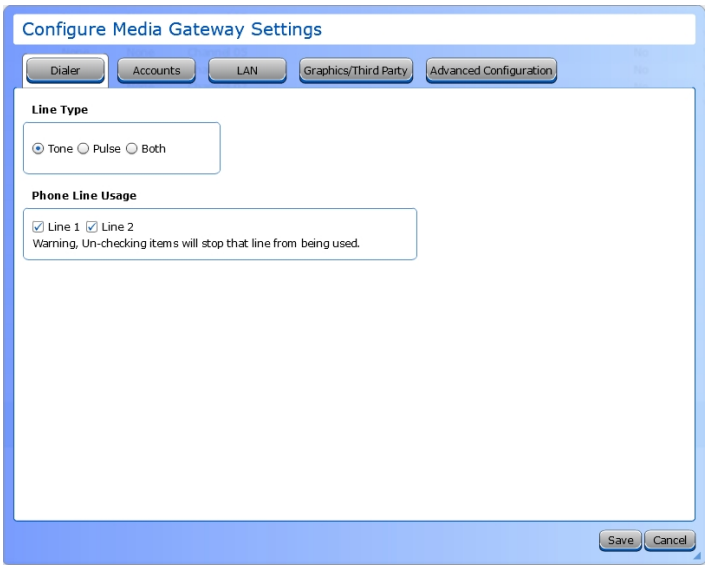
For channels set as Inputs



1. Choose an **Input Action**.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom **Input Action Message** can be entered.
3. Check the **Output Delay** Bypass box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
4. Set the **Input Delay** in seconds, up to 180 seconds. Input activation will prevent the panel's response for specified time period when the input is activated. No activation will occur if the input state is reset to normal before time period expires.
5. Set the **Input Latch** to Latching or Non-latching.
6. Each input circuit is Normally Open, but Closed upon activation. Selecting **Input Invert** will set the circuit to be Normally Closed, but Open upon activation.
7. Set the **Location Text**, up to 80 characters. This text is displayed when the circuit is activated.
8. Set the desired **Map to Zone** number for the circuit. Allowable values are dependent on network configuration.

Media Gateway Panel Module

Dialer Tab

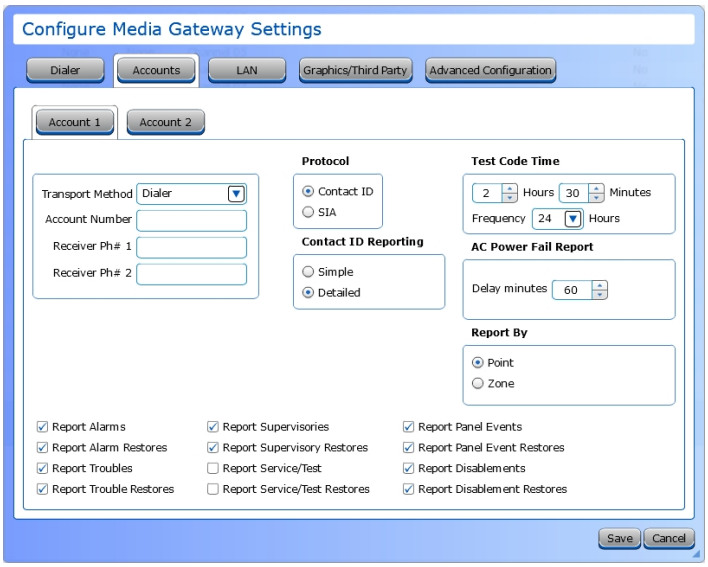


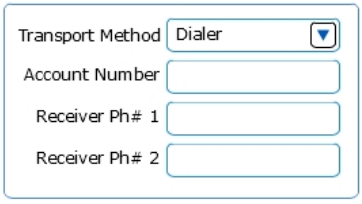
1. Select a **Line Type**. This is the method used by the Media Gateway to dial. Options are Tone, Pulse, or Both.

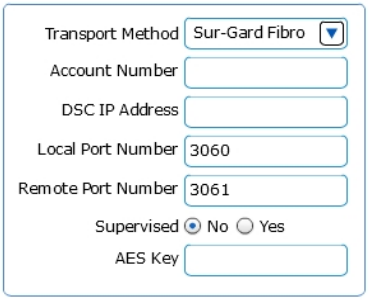
   Tone is the preferred in most installations. However, depending on your location, Tone may not be supported. When Both is selected, the Media Gateway first attempts Tone dialing. If that fails, Pulse will be attempted. Both can be selected during troubleshooting, but is not recommended for the final installation.
2. Select the line(s) that should be monitored. Phone line monitoring is optional since the phone lines may not be connected.

   All phone lines that are in use must be monitored. Phone lines that are not monitored will not be used.

Accounts Tab







For each account,

1. Select either Dialer or Sur-Gard FIBRO for the **Transport Medium**. Dialer will use the phone line pathways; Sur-Gard Fibro will use Ethernet.

- *If **Dialer** is selected,*

a. Set the **Account Number** that will be used to identify the particular site to which the Media Gateway sends data. The account number must be between 4-6 digits.
b. Set the **Phone Number(s)** of the receiver (monitoring station). An optional second number may be entered. Each number can be up to 30 digits. If a pause is needed, insert a "," character. To wait for a secondary dial tone, insert a "w" character.

- *If **Sur-Gard Fibro** is selected,*

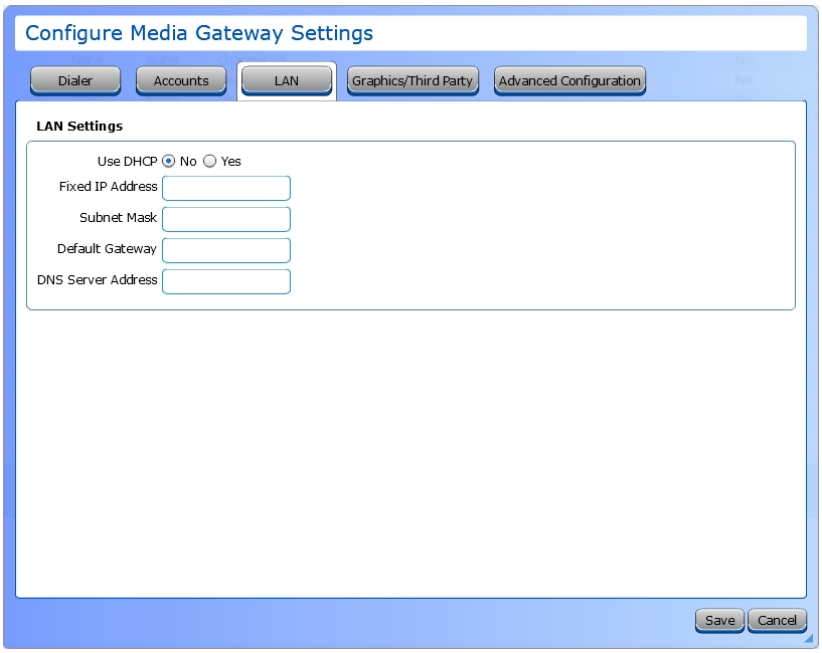
a. Set the **Account Number** that will be used to identify the particular site to which the Media Gateway sends data. The account number must be between 4-6 digits.
b. Enter a **DSC IP Address**. This is the IP address of the Sur-Gard FIBRO receiver. This should be obtained from your central station.
c. Enter the **Local Port Number**. This is the local port number of the Sur-Gard FIBRO receiver. This should be obtained from your central station.
d. Enter the **Remote Port Number**. This is the remote port number of the Sur-Gard FIBRO receiver. This should be obtained from your central station.
e. Select whether the connection is **Supervised**. When supervision is enabled, the panel monitors the connection to the central station.
f. Enter the **Advanced Encryption Standard (AES) Key**, up to 32 characters.
g. For reporting code modification, contact technical support.

2. Select Contact ID or SIA for the **Protocol**. This is the signaling method that will be used to transfer data to the receiver (monitoring station). If Contact ID is selected, select either Simple or Detailed reporting.
3. Set the time for a test signal to be sent. The **Time** field is for the time of day in 24-hour format.
4. Set the **Frequency** interval of the test signal . Valid options are 6, 12, 18, or 24 hours.
5. Set a time delay before the Media Gateway reports an **AC Power Failure**. Valid values are 0 - 180 minutes.
6. Select whether to report by Point (device) or by Zone. Zone reporting sends the same signal for all points in the zone, therefore the central station will not be able to differentiate between different points in the zone. Point reporting provides more specific location information. When selecting to report by Point, Contact ID may not report points above 99 or loops in excess of 9 accurately. SIA is the preferred transmission protocol.
7. Choose the panel event types that the Media Gateway will transmit to the receiver. This is user-configurable for any given setup. For example, it enables Account 1 to report alarms to one central station and Account 2 to report trouble signals to another station.

   Account 2 can be used as a backup to Account 1. To set an account as a backup, select **Backup Reporting** for Account 2 and de-select all other event types. When a transmission fails using the primary account, the panel will attempt

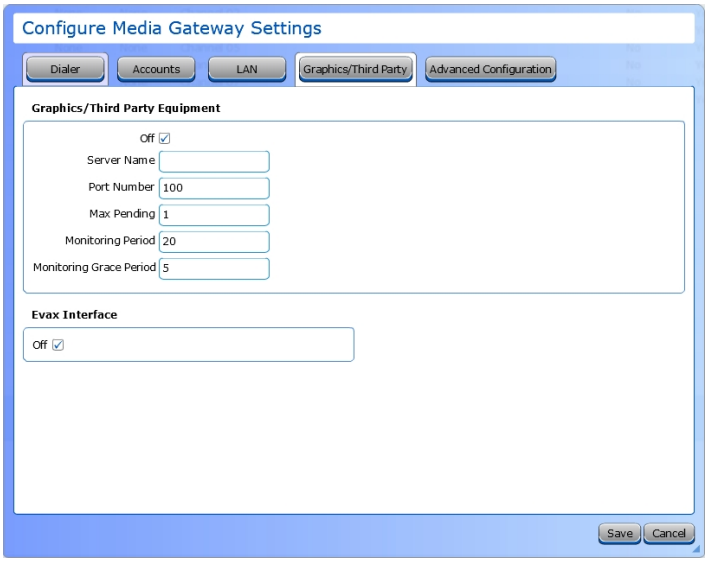
communication using the backup account.

LAN Tab



These fields are common parameters that are a function of the LAN through which the Media Gateway is connected. Contact your network administrator for appropriate settings.

Graphics / Third Party Tab



1. Check the **Off** box to set whether MCE is off or on.
2. Enter the **Server Name**.
3. Enter the **Port Number**. The default setting is 100.
4. Enter the **Max Pending**. This is used to specify the maximum number of events that the Media Gateway may store before sending them. This will almost always be set to 1, so events are sent as they happen, unless there is some specific communication problem to be overcome.
5. Enter the **Monitoring Period**. This is the amount of time (in seconds) that the heartbeat will be sent after activation of connection monitoring. The default is 20 seconds.
6. Enter the **Monitoring Grace Period**. This is the amount of time (in seconds) before the alarm is triggered. The default is 5 seconds.
7. Check the **Off** box to set whether Evax is off or on.

Advanced Configuration Tab

Refer to the **Media Gateway Panel Module (S788) Functionality and Configuration Guide** (MAN-1483HA) for details on this feature.

Legacy Panel Modules

eView Serial Annunciator / FireNET LCD-S

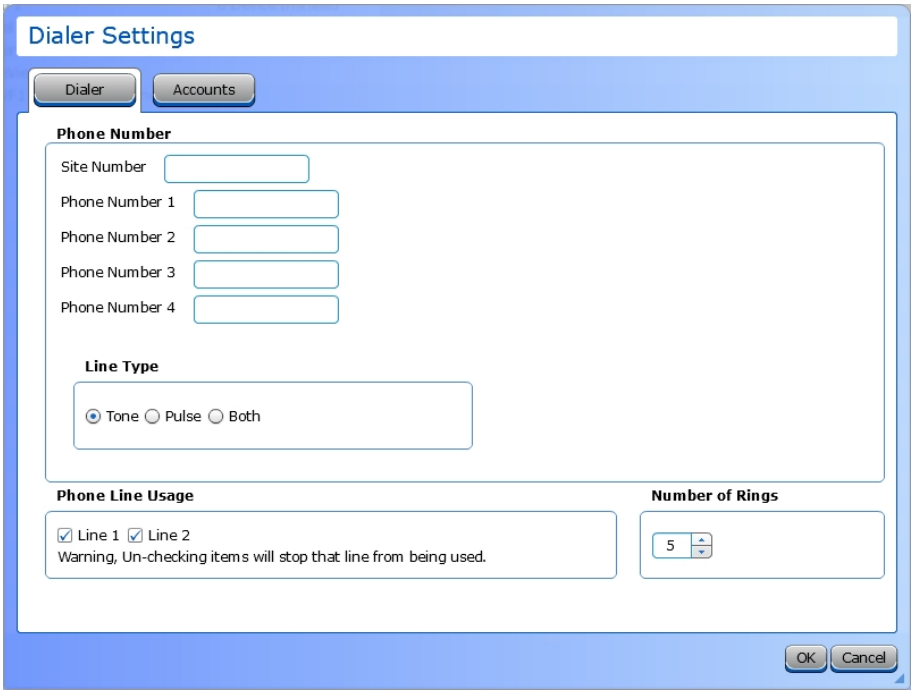
1. If desired, enter a **Name** for the eView Serial Annunciator. Up to 20 characters are permitted and special characters are allowed.
2. Assign an address using the **Address** drop-down box, between 1-15.

16 Channel I/O Board

Refer to 16 Channel I/O Board for configuration instructions.

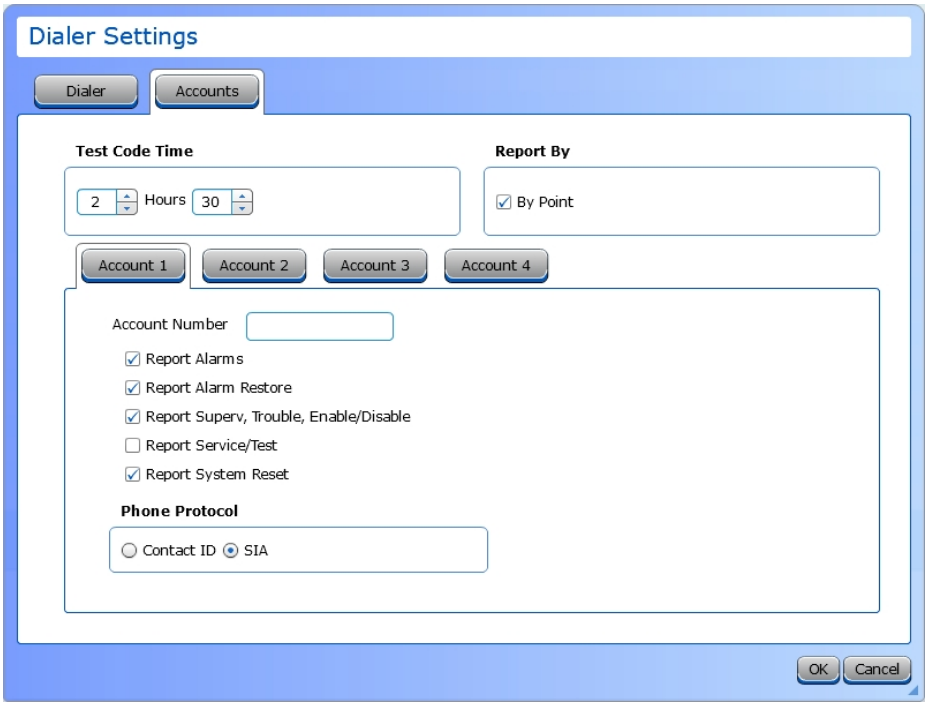
Dialer

Dialer Tab



1. Enter the **Site Number**. This is the phone number connected to the panel. Up to 20 characters are permitted and special characters are allowed.
2. Enter up to 4 **Phone Numbers** for the Central Station Receiver. Up to 24 characters are permitted, 0-9 and (,). Inserting a "," before the start of the phone number will insert a 3 second pause before dialling.
3. Select a **Line Type**. This is the method used by the Dialer to dial. Options are Tone, Pulse, or Both. Tone is the preferred in most installations. However, depending on the location, Tone may not be supported. When Both is selected, the Dialer first attempts Tone dialing. If that fails, Pulse will be attempted. Both can be selected during troubleshooting, but is not recommended for the final installation.
4. Select the line(s) that should be monitored. Phone line monitoring is optional as the phone lines may not be connected. All phone lines that are in use must be monitored. Phone lines that are not monitored will not be used.
5. Select the **Number of Rings** allowed before hanging up. Allowed values are between 2 - 9.

Accounts Tab



1. Set the **Test Code Time** (in 24 hour format) for the daily test call with the Central Station Receiver. The dialer will call the receiver at the configured time to verify connectivity and report status.
2. Select whether to **Report By** Point (device) or by Zone. Zone reporting sends the same signal for all points in the zone, therefore the central station will not be able to differentiate between different points in the zone. Point reporting provides more specific location information.

   When selecting to report by Point, Contact ID may not report points above 99 or loops in excess of 9 accurately when Simple Reporting is selected. SIA is the preferred transmission protocol.

3. For each account (1-4),

- Set the **Account Number** that will be used to identify the particular site to which the Dialer sends data. The account number must be 4 digits.
- Choose the panel event types that will be transmitted to the receiver. This is user-configurable for any given setup. For example, it enables Account 1 to report alarms to one central station and Account 2 to report trouble signals to another station.

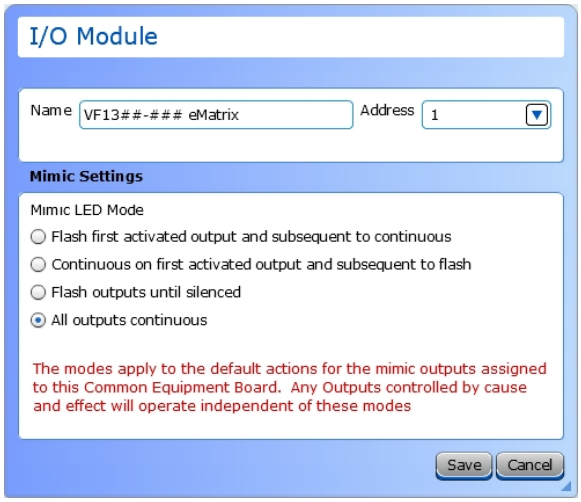
  Account 2 can be used as a backup to Account 1 (and Account 4 as a backup to Account 3). To set an account as a backup, select **Backup Reporting** for Account 2 (or 4) and de-select all other event types. When a transmission fails using the primary account, the panel will attempt communication using the backup account.

- Select Contact ID or SIA for the **Protocol**. This is the signaling method that will be used to transfer data to the receiver (monitoring station).

eMatrix / Mimic

1. If desired, enter a custom **Name** for the eMatrix module.
2. Select the desired **Address**, between 1 - 32.
3. Select the desired **Mimic LED Mode**. These modes control the LED blink behavior. Options are:

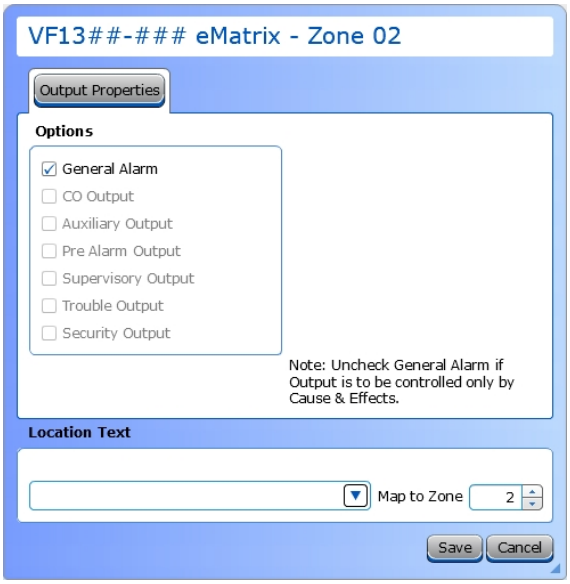
- **Flash first activated output and subsequent to continuous**: The first LED to activate will flash. Subsequent LEDs will illuminate continuously.
- **Continuous on first activated output and subsequent to flash**: The first LED to activate will illuminate continuously. Subsequent LEDs will flash.
- **Flash outputs until silenced**: All LEDs will flash.
- **All outputs continuous**: All LEDs will illuminate continuously.



Zone Properties

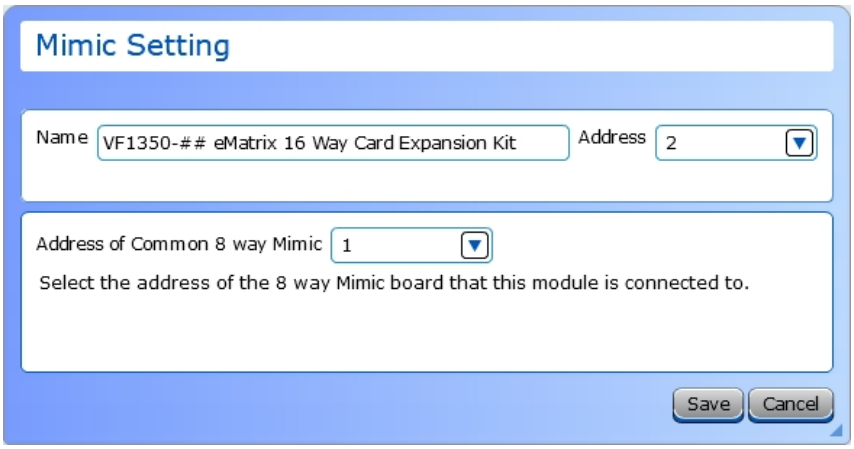
The eMatrix can assign up to 8 LED zones using the individual zone output property configuration windows. Each of these 8 zone LEDs can be added to a cause and effect and assigned a unique zone number from 0-500.

1. Select the panel events that will trigger the LED to activate.
2. Enter the desired **Location Text**, up to 80 characters.
3. Assign the LED zone a unique zone number between 0-500.



eMatrix / Mimic 16 Way Card Expansion Kit

This is an optional expansion card for the eMatrix, which can expand the zone capability to 24 total zones. Each expansion card can be assigned an eMatrix (when multiple are in use) and a unique address number. Zones are configured the same way as the eMatrix zones.



1. If desired, enter a custom **Name** for the expansion card.
2. Assign an **Address** from 1-32.
3. When multiple eMatrix units are in use, use the drop-down box to select the address of the connected module.

Zone Properties

Refer to eMatrix Zone Properties for details on configuration the zones for the 16 Way Expansion Kit.

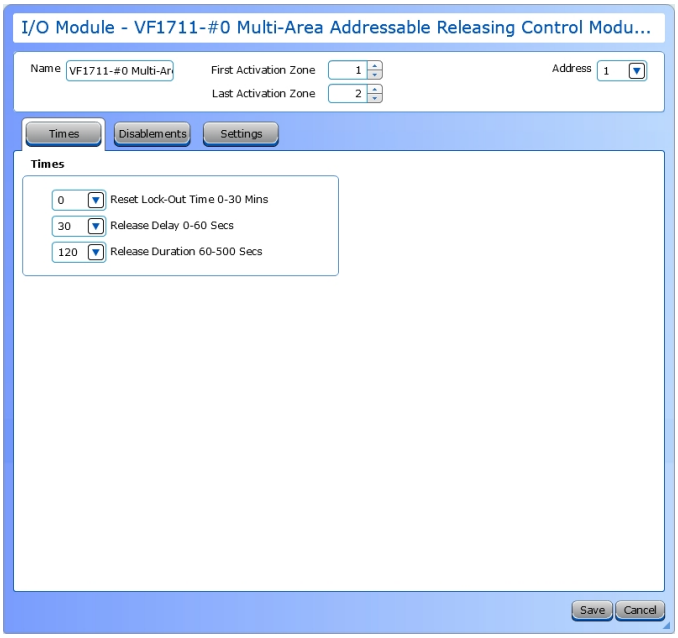
XT+ Module

A master FACP must be configured, and then up to 15 XT+ modules can be added.

Item	Description	Value	LE2 Default
Name	This is the name used by LE2 to refer to the XT+ Module.	XT+ Module <#>	VF1711-#0 Multi-Area Addressable Releasing Control Module 1 Area
First Activation Zone	The lowest numbered zone in the releasing area for this module.	1-500	1
Last Activation Zone	The highest numbered zone in the releasing area for this module.	1-500	2
Address	The address of the module.	1-15	1

The releasing area of a module must consist of one or more sequentially numbered zones. This range of zones is defined by the first and last activation zones. Initiating devices which are in this range of zones and are connected directly to the same panel as the XT+ will be the only devices that will initiate a release. When configured for coincidence, any two of these devices will initiate a release. Devices outside this range or connected to other network panels will not initiate a release.

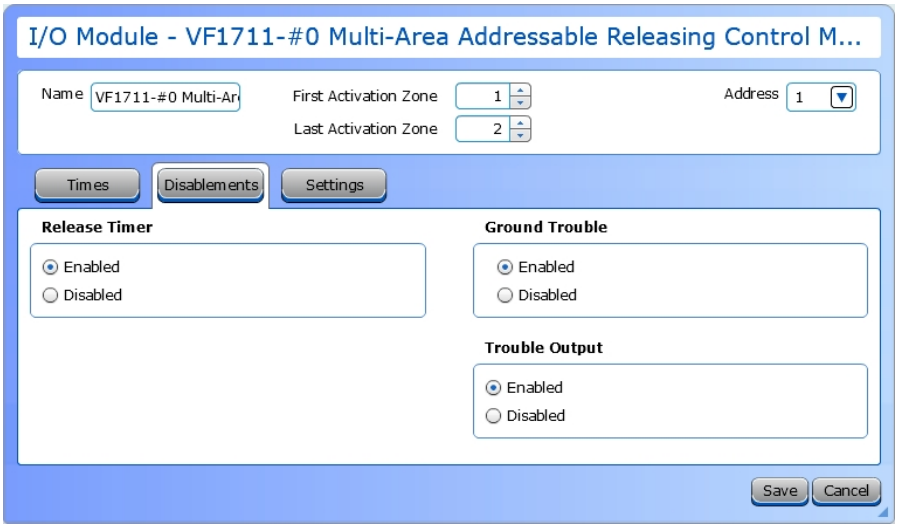
Times Tab



Item	Description	Value	LE2 Default
Reset Lock-Out Time	The length of time before the extinguishant outputs can be reset.	0 - 30 minutes	0 minutes
Release Delay	The delay between the activation of a module and	0 - 60	30 seconds

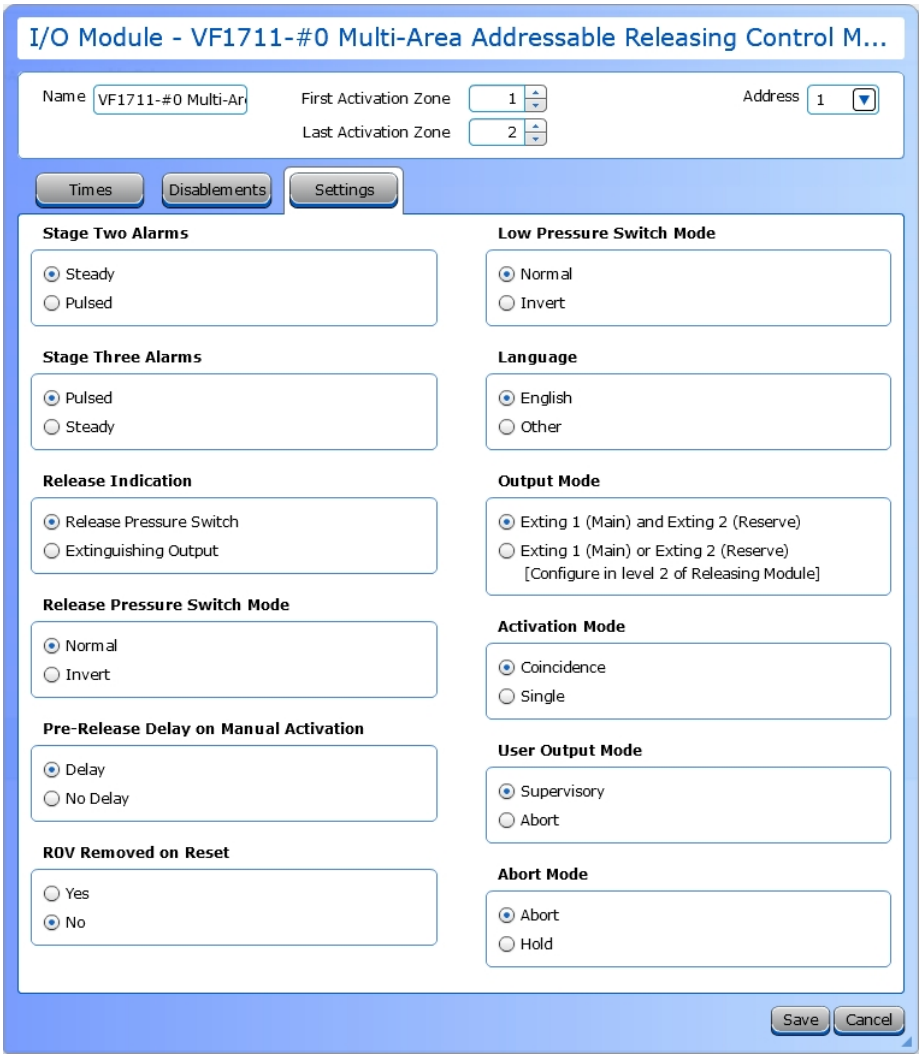
Item	Description	Value	LE2 Default
	extinguishant release.	seconds	
Release Duration	The length of time the extinguishants are released.	60 – 500 seconds	120 seconds

Disablements Tab



Item	Description	Value	LE2 Default
Release Timer	This disables the "Release Duration" above setting.	Enabled or Disabled	Enabled
Ground Trouble	This disables ground trouble monitoring.	Enabled or Disabled	Enabled
Trouble Output	The trouble relay on each module can be disabled.	Enabled or Disabled	Enabled

Settings Tab



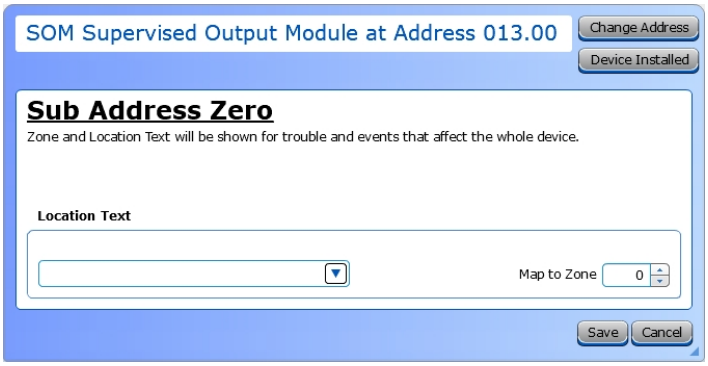
Item	Description	Value	LE2 Default
Stage Two Alarms	The second stage alarm NAC output can be set to activate pulsed or steady.	Pulsed (Temporal 3) Steady	Steady
Stage Three Alarms	The third stage alarm NAC output can be set to activate pulsed or steady.	Pulsed Steady	Pulsed
Release Indication	The Release Pressure Switch is normally used, but can be bypassed to use the Extinguishing Output when no pressure switch is available.	Release Pressure Switch Extinguishing Output	Release Pressure Switch
Release Pressure Switch Mode	This can be used to invert the action of the Release Pressure Switch input when a normally closed Pressure Switch is available.	Normal Invert	Normal

Item	Description	Value	LE2 Default
Pre-Release Delay on Manual Activation	This can be used to eliminate the countdown when manually releasing the extinguishant.	Delay No Delay	Delay
R0V Removed on Reset	The Aux24V output supply can be configured such that the R0V (negative) is removed for around 5 seconds when the module is reset. This is typically used to reset ancillary items such as beam detectors which need a power cycle to reset them.	Yes No	No
Low Pressure Switch Mode	This can be used to invert the action of the Low Pressure Switch input. For UL compliance, this field must be set to Normal.	Normal Invert	Normal
Language	Some modules are factory fitted with an alternate language to English. The alternate language can be used by selecting Other.	English Other	English
Output Mode	When set to Common, the two extinguishing outputs are released at the same time. When set to Main / Reserve, output 1 will release and a Main / Reserve selection option appears at Access Level 2. The Reserve Cylinders LED will be illuminated and output 2 will release during the next activation.	Common Main / Reserve	Common
Activation Mode	By default, two devices (Coincidence) must be active for a module to enter the Activated condition. This setting can be used to allow any Single active device to cause the module to enter the Activated condition. **IMPORTANT!** Initiating devices must be connected directly to the same panel as the XT+ Releasing Control Unit. (Devices in the same zone connected to other network panels will not initiate a release.)	Coincidence Single	Coincidence
User Output Mode	This changes the function of the of the Supv terminal.	Supervisory Abort	Supervisory
Abort Mode	Abort switches are not permitted on systems intended to perform pre-action or deluge water functions. For UL compliance, this field must be set to Abort.	Abort Hold	Abort

When the Manual Release input is configured for no delay, it will override an active Abort input. When the Manual Release input is configured for pre-release delay, it will override an active Abort input and cause the countdown to resume.

DEVICE CONFIGURATION

Configuration instructions for each device are provided in the sections below. In addition to the fields described below, each window also contains a **Location Text** and **Map to Zone** field. Enter up to 80 characters for location text. This text is displayed when the circuit is activated. Use the Map to Zone field to set the zone number for the circuit. Allowable values are dependent on the network configuration.



Some windows have one or two additional buttons as shown here.

Change Address. Use this option to change the address of the device.

Device Installed. Use this option to toggle the device to be installed or uninstalled.

Device Settings / Input Actions **168**

Hochiki Protocol **171**

Audio Visual 171

Call Point 172

Modules 172

Pull Stations 184

Sensors 185

Sounders 196

Apollo Protocol **197**

Audio Visual 197

Modules 200

Pull Stations 206

Sensors 208

Device Settings / Input Actions

Each input has a **Device Setting** and an **Input Action**.

- The **Device Setting** field describes the type of device that is connected to the input and determines the detailed response to the activation.
- The **Input Action** field describes what type of action the panel should take in response to an activation of the input. These fields are used together to define how the FACP reacts to activation of the input.

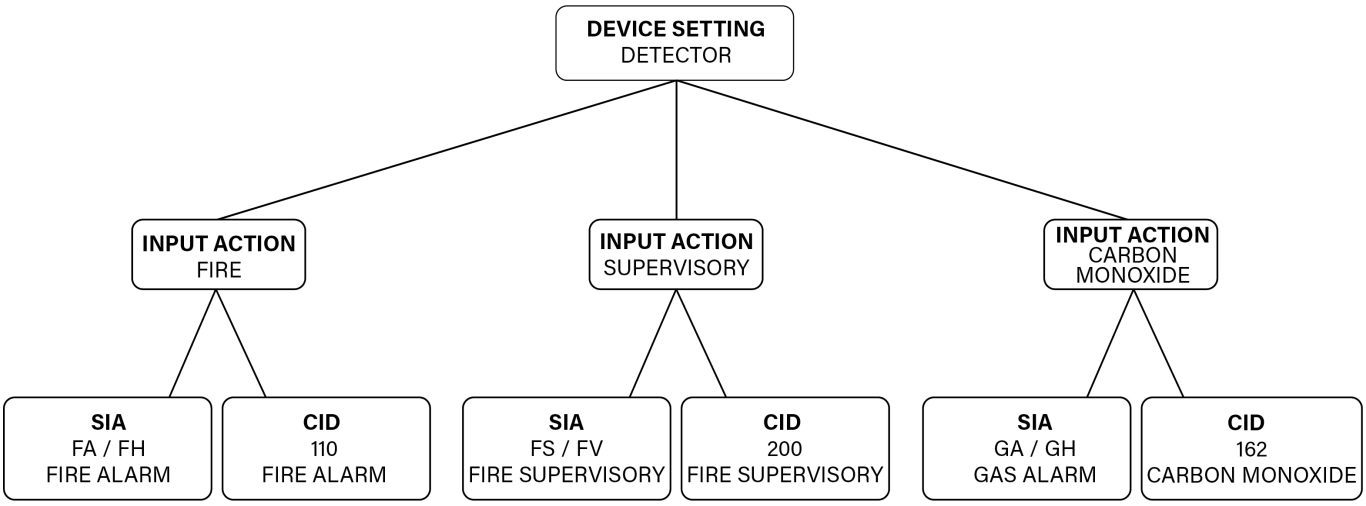
Depending on the **Device Setting**, restrictions are set on which **Input Action** values are permitted. For example, a **Device Setting** of *Manual Pull Station* is restricted to an **Input Action** of *Fire*.

Depending on the **Input Action** selected, restrictions are placed on other parameter values. For instance, an **Input Action** of type *Fire* can not be configured as Non-Latching.

A device setting of *General Purpose N/O EOL* allows the widest range of input actions. This selection will transmit a signal based on the selected **Input Action** to the off-premises monitoring station, with a general event type message. Available input actions for this setting are shown here:

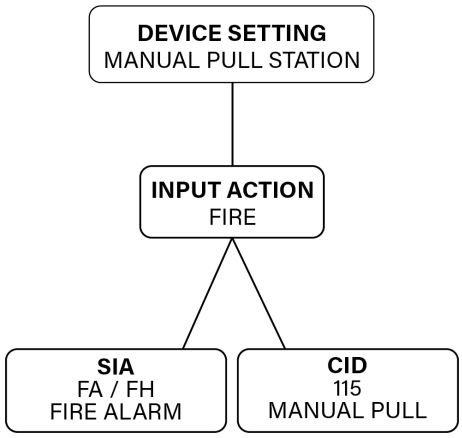
- Fire
- Trouble
- Pre Alarm
- Supervisory
- Carbon Monoxide
- Auxiliary
- Silence
- Reset
- Transparent
- Disablement
- Test Mode
- Fire Drill

This chart shows an example of L@titude / Compas fire signals sent for the **Device Setting** of Detector (default) and the three possible **Input Actions** (*Fire*, *Supervisory*, and *Carbon Monoxide*).

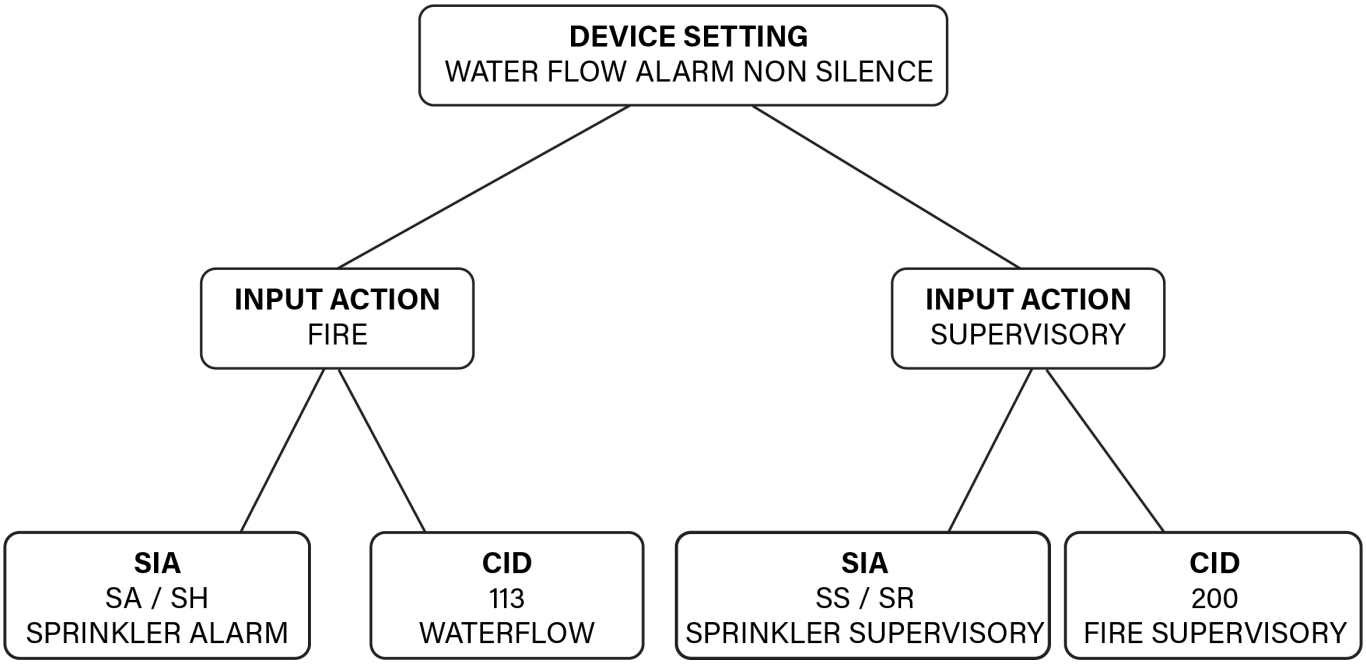


Selecting *Manual Pull Station* as the **Device Setting** will also send a fire signal. This chart shows an example of the signals sent for this setting and the only possible **Input Action** (*Fire*).

The device setting of *Manual Pull Station* enabled the panel to send a more specific CID fire event type (115 Manual Pull) to the off-premises monitoring station. The SIA communication protocol does not have a more specific fire event type for a manual activation, so the SIA event type is the same in both cases.



A **Device Setting** of *Water Flow Alarm Non Silence* restricts the operation of the Alarm Silence function. It will also cause the event type being transmitted to an off-premises monitoring station to indicate a more specific fire event type of *Waterflow*.



NOTE Note that the SIA and CID signals for **Input Action**: *Fire* differ in each of these examples. This demonstrates how the **Device Setting** determines the final, detailed response to the activation.

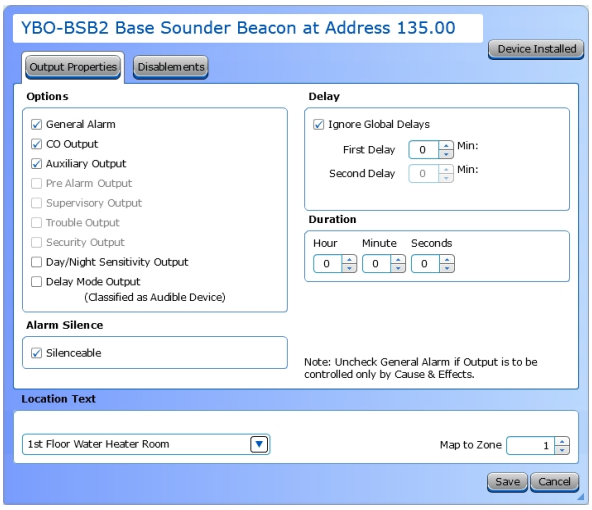
Hochiki Protocol

Audio Visual

YBO-BSB2 Base

When adding the YBO-BSB2 Base to a configuration, select the device(s) to host the base.

Once the base has been assigned to one or more devices, it can be configured by double-clicking the base in the network tree.



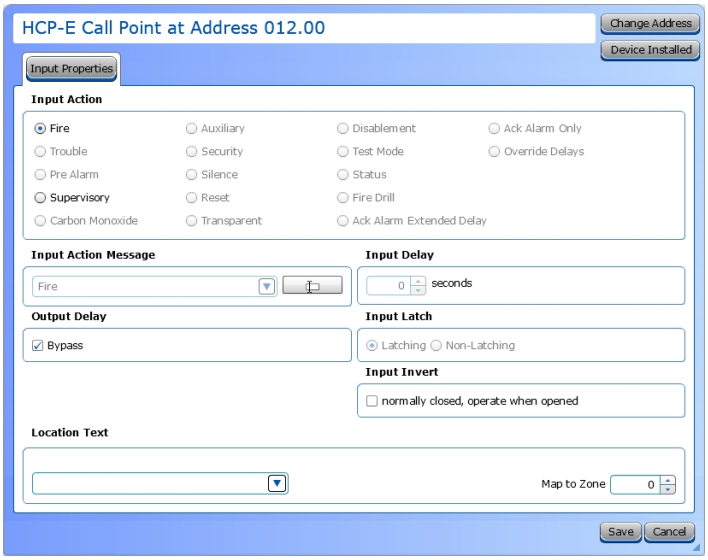
1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active. If this box is checked, the **Second Delay** field is displayed.
3. **Ignore Global Delays.** This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the **First Delay** and **Second Delay** fields. Second Delay is only visible if the output is silenceable.

> **NOTE** If checked,
> - the initial activation of the output will be delayed based on the settings in the First Delay field.
> - if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

4. Enter a **Duration** to select how long an output will be active. If set to 0, it will remain active until the system is reset or silenced (configuration-dependent).

Call Point

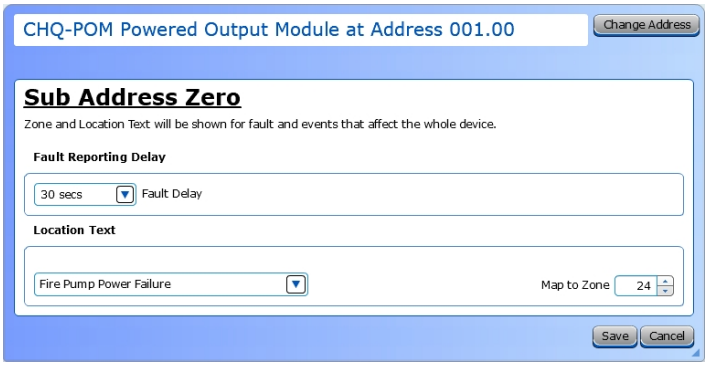
HCP-E



1. Choose an **Input Action**.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom **Input Action Message** can be entered.
3. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
4. Set the **Input Delay** in seconds, up to 180 seconds. Input activation will prevent the panel's response for specified time period when the input is activated. No activation will occur if the input state is reset to normal before time period expires.
5. Set the **Input Latch** to Latching or Non-latching.
6. Each input circuit is Normally Open, but Closed upon activation. Selecting **Input Invert** will set the circuit to be Normally Closed, but Open upon activation.

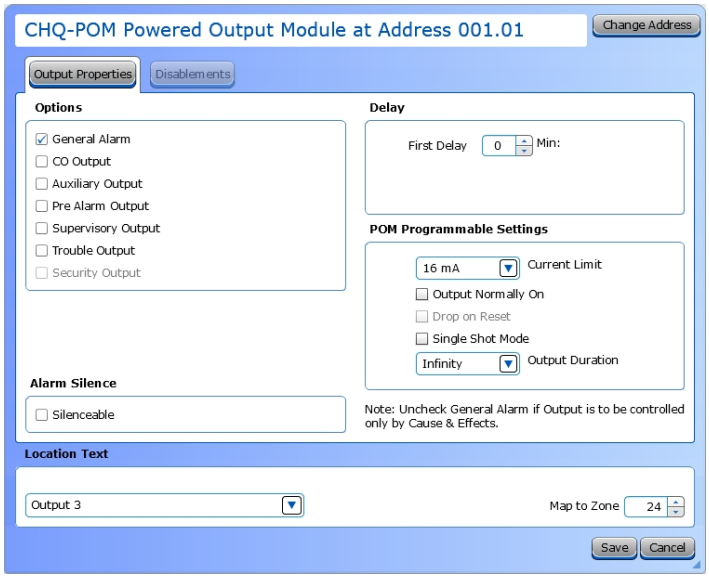
Modules

CHQ-POM



Set the **Fault Reporting Delay** from 0 - 180 seconds.

Output Properties



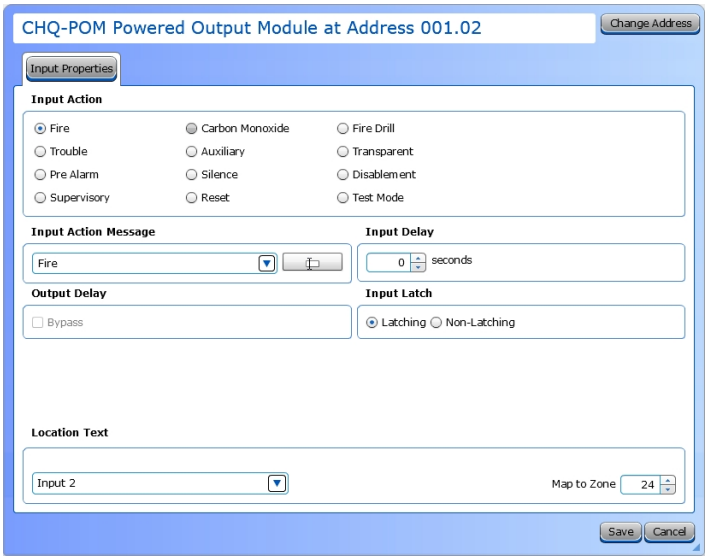
1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active. If this box is checked, the **Second Delay** field is displayed.
3. **Delay** This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the **First Delay** and **Second Delay** fields. Second Delay is only visible if the output is silenceable.

> **NOTE** If checked,
> - the initial activation of the output will be delayed based on the settings in the First Delay field.
> - if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

4. **POM Programmable Settings.**

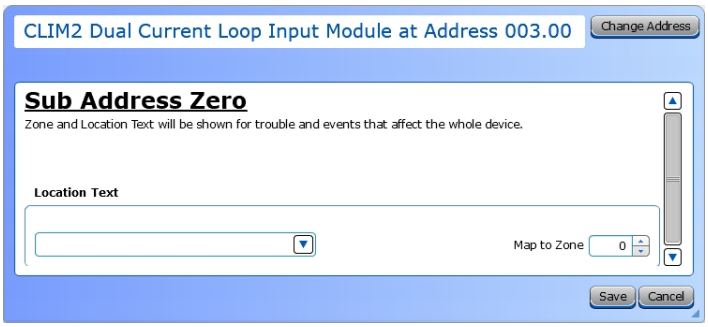
- **Current Limit.** Use the drop-down box to select the current limit from 2 mA to 32 mA.
- **Output Normally On**. Check the box to set the output to default to "on". When the output is activated, it will turn off.
- **Drop on Reset**. Check the box to momentarily drop the voltage when a system reset occurs.
- **Single Shot Mode**. When this box is checked, upon point activation, the output of the point will transition from the "normal" state to the "activated" state for the duration specified, and then return to the "normal" state. The output will remain in the "normal" state until after the point is restored. After the point is restored, the process can reoccur.
- **Output Duration**. Use the drop-down box to set the desired length of time that the output is activated.

Input Properties



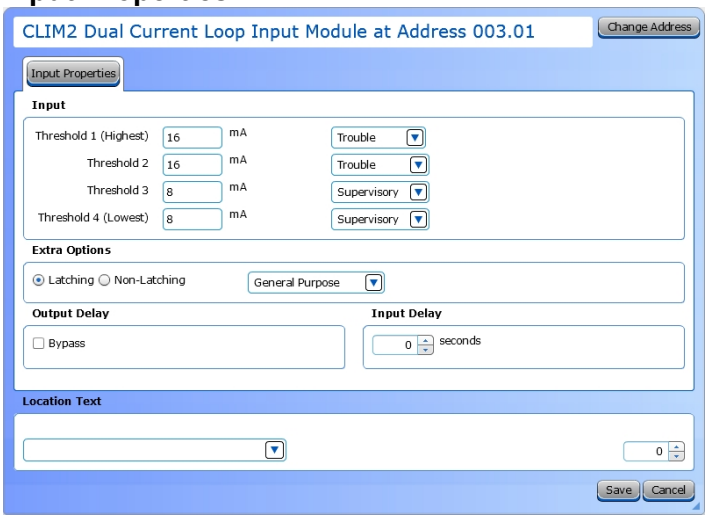
1. Choose an **Input Action**.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom **Input Action Message** can be entered.
3. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
4. Set the **Input Delay** in seconds, up to 180 seconds. Input activation will prevent the panel's response for specified time period when the input is activated. No activation will occur if the input state is reset to normal before time period expires.
5. Set the **Input Latch** to Latching or Non-latching.

CLIM / VF6056-00,
CLIM2 / VF6057-00



Refer to Device Configuration for details about the options in this window.

Input Properties



1. Set the **Threshold** settings for the input. Each threshold may be set to a different value and a different input action to allow for maximum current monitoring flexibility and annunciation. Set a threshold value and associated event for each Threshold field. The allowed range is 3mA - 24mA. Each lower threshold value must be less than or equal to the value directly above. Once the module detects the threshold limit, the associated event type is activated on the panel.
2. Set the **Input Latch** to Latching or Non-latching.
3. Use the **Device Setting** drop-down box to set the function of the module.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Delay** in seconds, up to 180 seconds. Input activation will prevent the panel's response for specified time period when the input is activated. No activation will occur if the input state is reset to normal before time period expires.

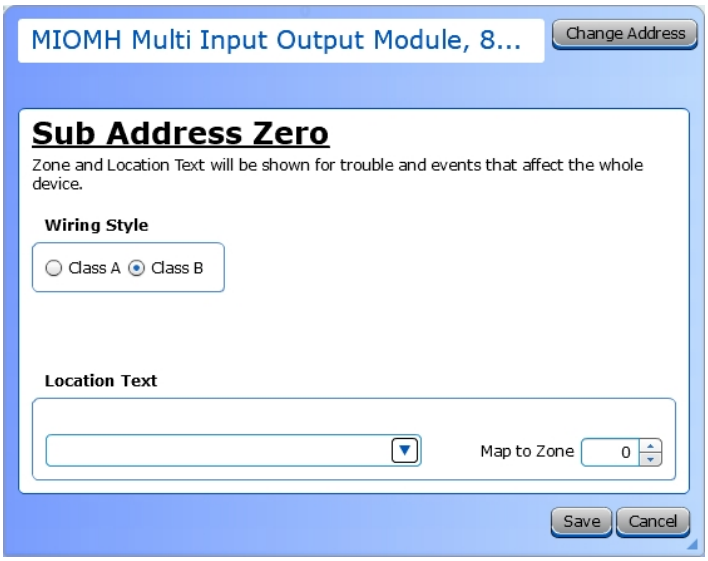
CZM / VF2011-00,
DIMM / VF6007-00,
FRCMA / VF6020-00,
FRCMA-I / VF6021-00,
FRCMA-P / VF6022-00,
FRCMA-PI / VF6023-00,
FRCME / VF6024-00

1. Choose a **Device Setting** from the drop-down list. The default setting is Manual Pull Station.

> **NOTE** ***This step must be done first, as it will affect the remaining configuration selections.***

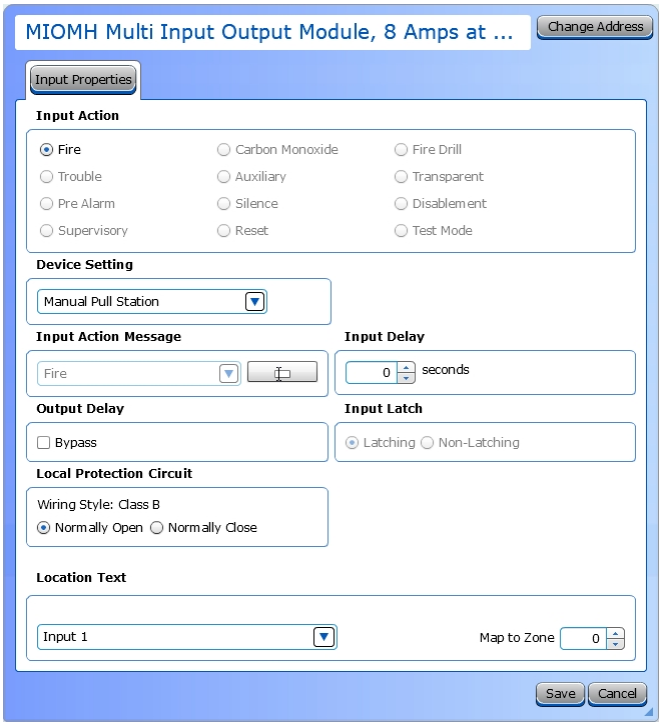
2. Choose an **Input Action**. The default setting is Fire. For the default device setting (Manual Pull Station), the setting must be Fire. Other device settings will have different allowable input actions available, based on each device's capabilities and limitations.
3. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Delay** in seconds, up to 180 seconds. This setting delays the panel's response to an activation. No panel response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
6. Set the **Input Latch** field to Latching or Non-latching.

MIOMH



Set the **Wiring Style** to A or B for each circuit. Wiring class can only be selected in input pairs. When Class A is selected, the input pair forms a single circuit. When Class B is selected, the input pair forms two independent circuits.

Input Properties

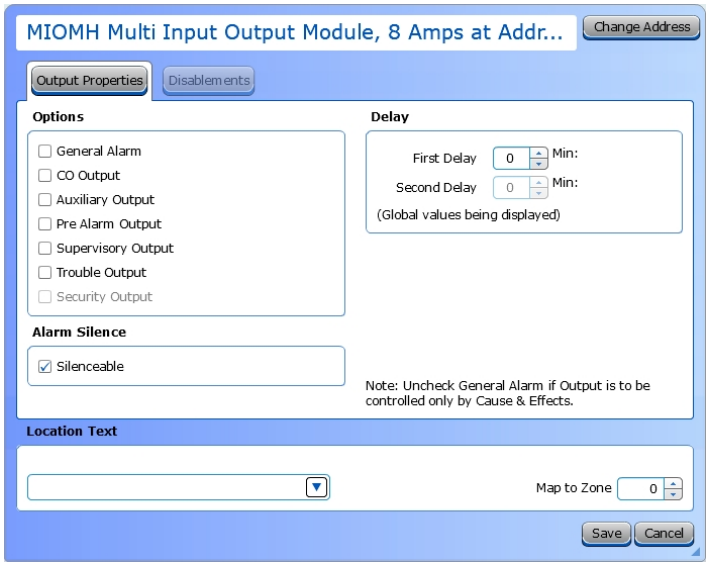


1. Choose a **Device Setting** from the drop-down list. The default setting is Manual Pull Station.

   NOTE ***This step must be done first, as it will affect the remaining configuration selections.***

2. Choose an **Input Action**. The default setting is Fire. For the default device setting (Manual Pull Station), the setting must be Fire. Other device settings will have different allowable input actions available, based on each device's capabilities and limitations.
3. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Delay** in seconds, up to 180 seconds. This setting delays the panel's response to an activation. No panel response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
6. Set the **Input Latch** field to Latching or Non-latching.
7. When the **Wiring Style** is set to Class B, set whether the circuit is normally open or normally closed.

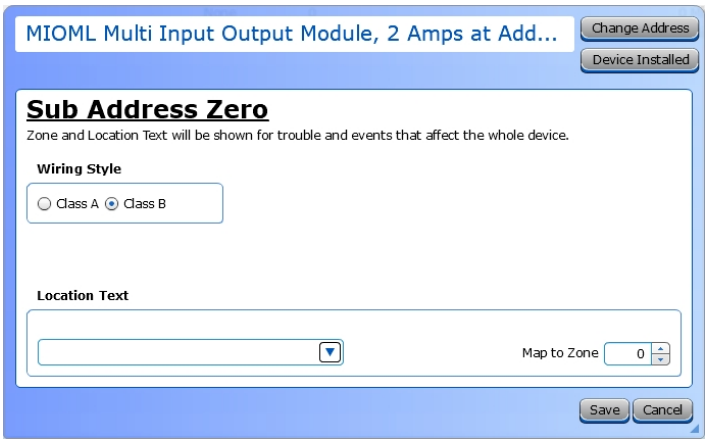
Output Properties



1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active. If this box is checked, the **Second Delay** field is displayed.
3. **Delay.**. This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the **First Delay** and **Second Delay** fields. **Second Delay** is only visible if the output is silenceable.

NOTE If checked,
- the initial activation of the output will be delayed based on the settings in the First Delay field.
- if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

MIOML



Set the **Wiring Style** to A or B for each circuit. Wiring class can only be selected in input pairs. When Class A is selected, the input pair forms a single circuit. When Class B is selected, the input pair forms two independent circuits.

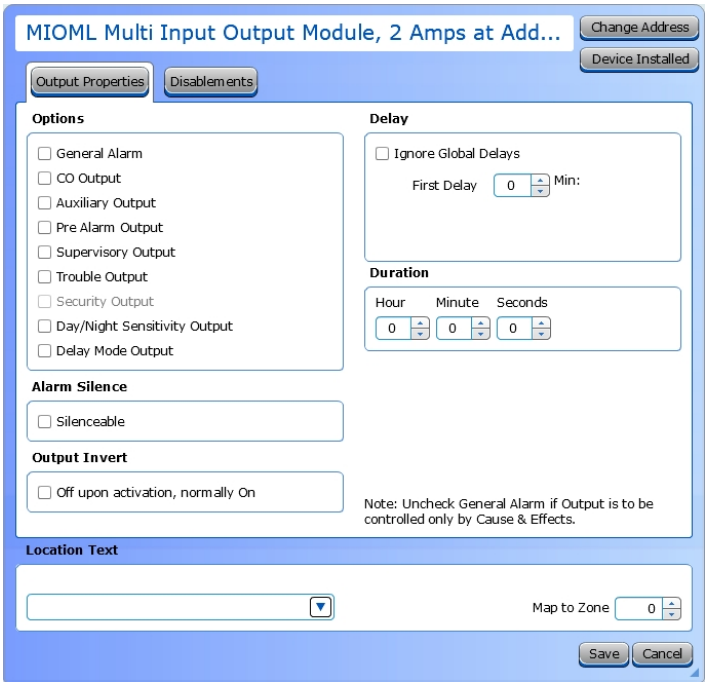
Input Properties

1. Choose a **Device Setting** from the drop-down list. The default setting is Manual Pull Station.

> **NOTE** ***This step must be done first, as it will affect the remaining configuration selections.***

2. Choose an **Input Action**. The default setting is Fire. For the default device setting (Manual Pull Station), the setting must be Fire. Other device settings will have different allowable input actions available, based on each device's capabilities and limitations.
3. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Delay** in seconds, up to 180 seconds. This setting delays the panel's response to an activation. No panel response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
6. Set the **Input Latch** field to Latching or Non-latching.
7. When the **Wiring Style** is set to Class B, set whether the circuit is normally open or normally closed.
8. Each input circuit is Normally Open, but Closed upon activation. Selecting **Input Invert** will set the circuit to be Normally Closed, but Open upon activation.

Output Properties

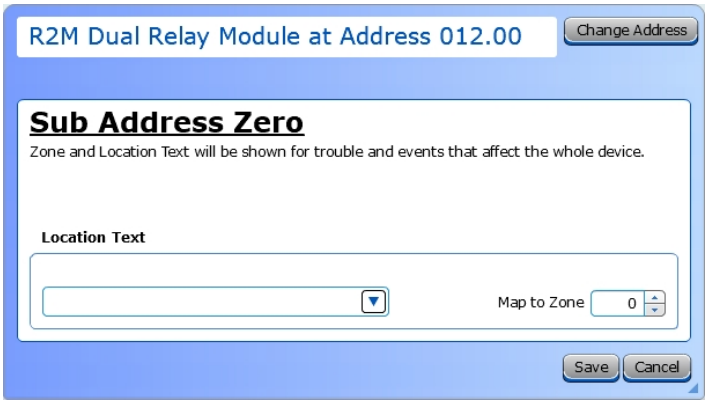


1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active. If this box is checked, the **Second Delay** field is displayed.
3. Each output circuit is SPST. Outputs are normally-open (N.O.) and close upon activation. Selecting **Output Invert** will set the output circuit to be normally-closed (N.C.); inverted outputs open upon activation. During times of complete power loss (loss of both normal and backup power), all outputs will open regardless of their configuration settings. Inverting an output does not change the quiescent current consumption of the panel module.
4. **Delay.**. This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the **First Delay** and **Second Delay** fields. **Second Delay** is only visible if the output is silenceable.

> **NOTE** If checked,
> - the initial activation of the output will be delayed based on the settings in the First Delay field.
> - if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

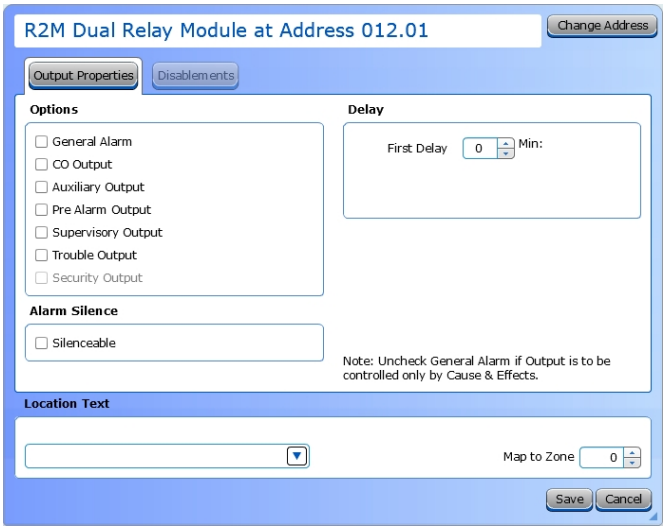
5. Enter a **Duration** to select how long an output will be active. If set to 0, it will remain active until the system is reset.

R2M / VF6005-00,
R2MH / VF6054-00,
R2MH-I / VF6055-00,
R2ML / VF6052-00,
R2ML-I / VF6053-00



Refer to Device Configuration for details about the options in this window.

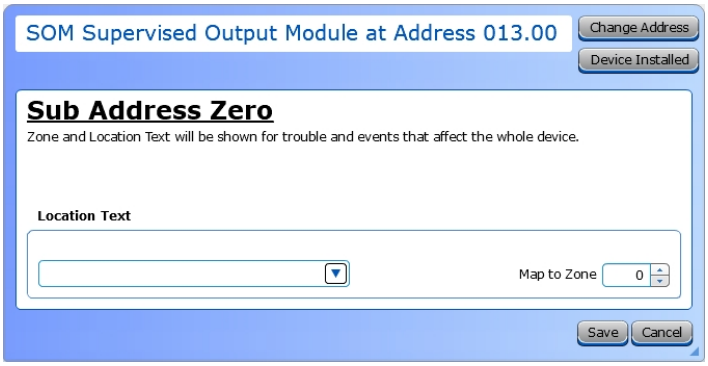
Channel Configuration



1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active. If this box is checked, the **Second Delay** field is displayed.
3. **Delay.**. This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the **First Delay** and **Second Delay** fields. **Second Delay** is only visible if the output is silenceable.

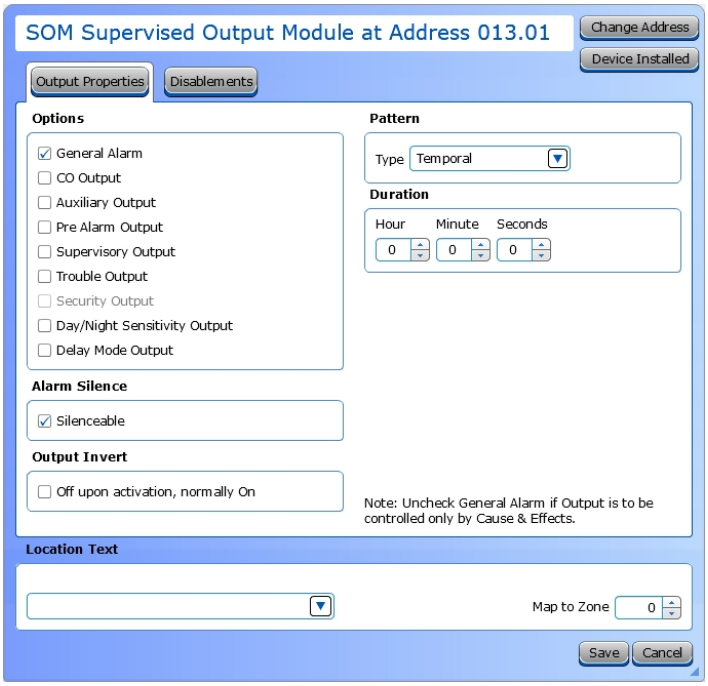
NOTE If checked,
- the initial activation of the output will be delayed based on the settings in the First Delay field.
- if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

SOM / VF6004-00



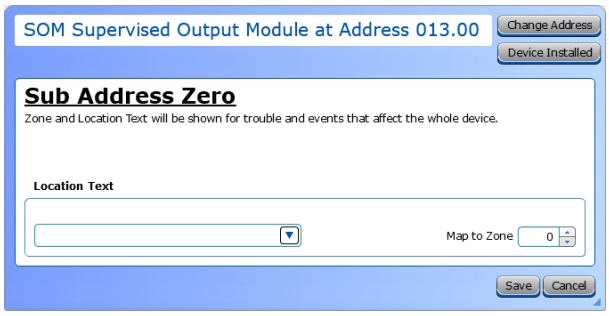
Refer to Device Configuration for details about the options in this window.

Channel Configuration



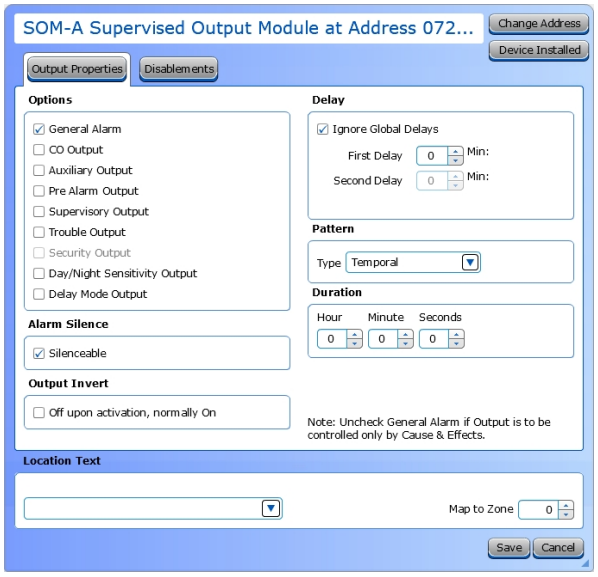
1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active.
3. Each output circuit is SPST. Outputs are normally-open (N.O.) and close upon activation. Selecting **Output Invert** will set the output circuit to be normally-closed (N.C.); inverted outputs open upon activation. During times of complete power loss (loss of both normal and backup power), all outputs will open regardless of their configuration settings. Inverting an output does not change the quiescent current consumption of the panel module.
4. Set the **Pattern** using the drop-down box. Allowed values are *Continuous* (high steady state), *March Code* (high and low for even intervals), *Temporal* (synchronized on a system basis, three even on/off cycles followed by off period), and Panel Global Pattern (will follow the panel pattern setting, configured in the panel settings).
5. Enter a **Duration** to select how long an output will be active. If set to 0, it will remain active until the system is reset.

SOM-A / VF6040-00, SOM-AI / VF6041-00



Refer to Device Configuration for details about the options in this window.

Channel Configuration

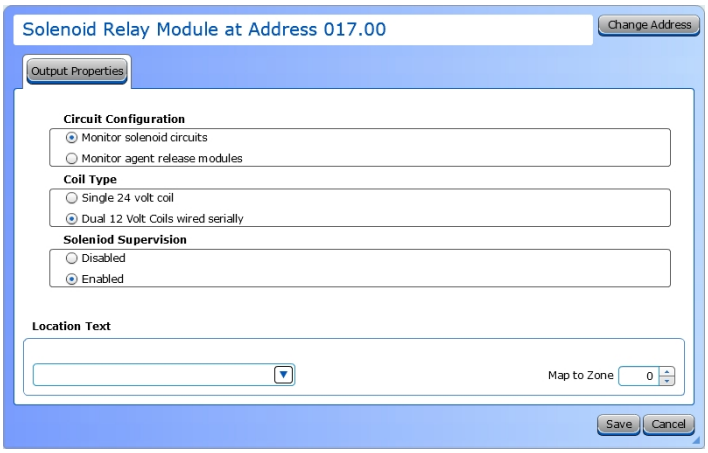


1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active.
3. Each output circuit is SPST. Outputs are normally-open (N.O.) and close upon activation. Selecting **Output Invert** will set the output circuit to be normally-closed (N.C.); inverted outputs open upon activation. During times of complete power loss (loss of both normal and backup power), all outputs will open regardless of their configuration settings. Inverting an output does not change the quiescent current consumption of the panel module.
4. **Ignore Global Delays.** This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the **First Delay** and **Second Delay** fields. Second Delay is only visible if the output is silenceable.

> **NOTE** If checked,
> - the initial activation of the output will be delayed based on the settings in the First Delay field.
> - if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

5. Set the **Pattern** using the drop-down box. Allowed values are *Continuous* (high steady state), *March Code* (high and low for even intervals), *Temporal* (synchronized on a system basis, three even on/off cycles followed by off period), and Panel Global Pattern (will follow the panel pattern setting, configured in the panel settings).
6. Enter a **Duration** to select how long an output will be active. If set to 0, it will remain active until the system is reset.

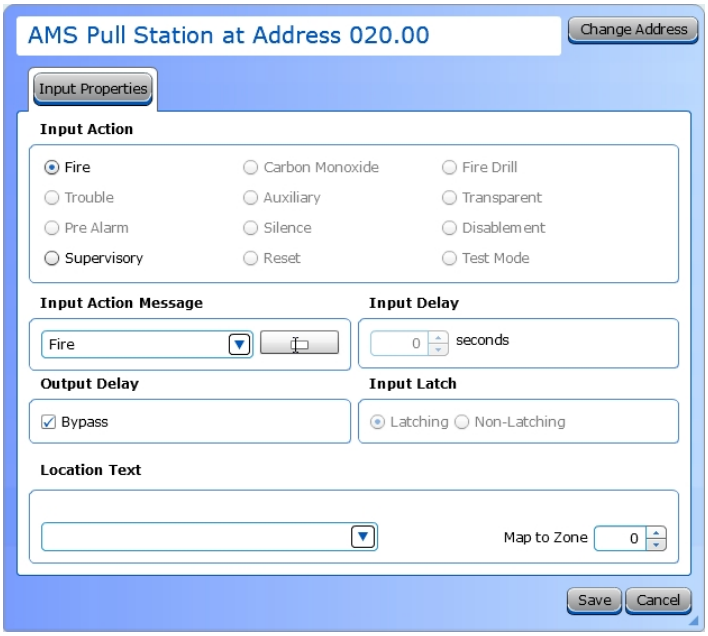
SRM



1. Set the **Circuit Configuration** that corresponds to the terminals being used.
2. Set the **Coil Type**. Select the option that corresponds to the connected coil type.
3. Set **Solenoid Supervision** to enable supervision on the solenoid coil.

Pull Stations

AMS Pull Stations / VF3029-10

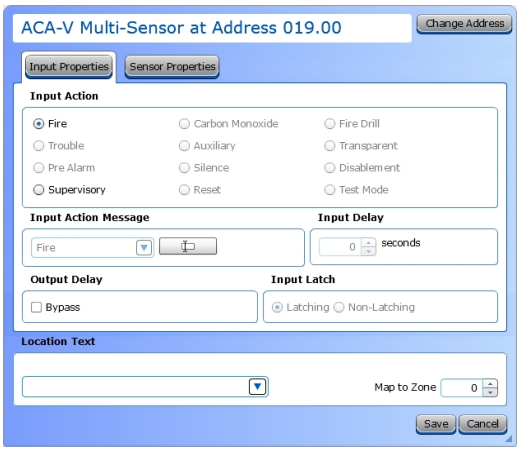


1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

Sensors

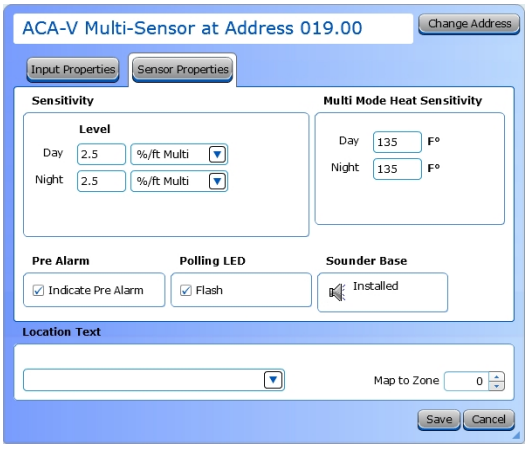
ACA-V / VF2008-00, ACC-V / VF2012-00

Input Properties



1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

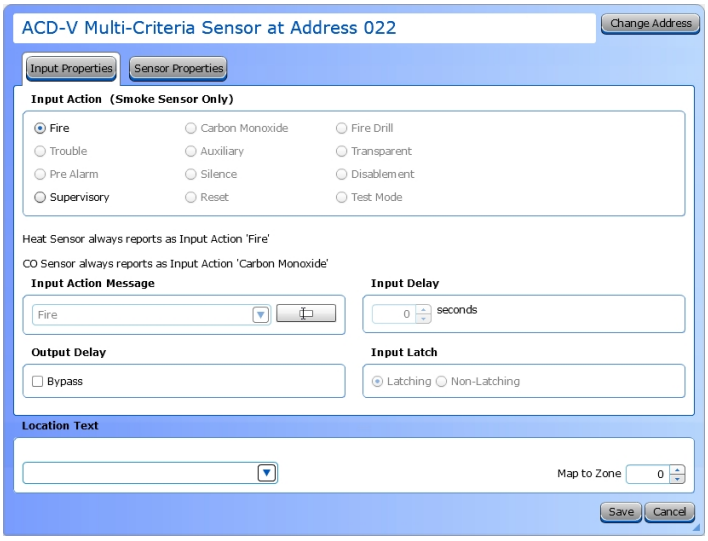
Sensor Properties



1. Set the desired **Day and Night Sensitivity Level**.
   - When *%/ft Multi* or *%/ft Optical* are selected , allowed values are 0.88 - 3.57 (2.5 is the default).
   - When *F Heat* is selected, allowed values are 32 - 158 (135 is the default).
2. If *%/ft Multi* is selected, set the **Multi Mode Heat Sensitivity for Day and Night**. Allowed values are 135 (default) - 150.
3. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.
4. Check the **Polling LED Flash** check box to flash a green LED when the sensor is being polled by the panel. If it responds as expected, the sensor is connected and operating as expected. If the sensor reports any issues, the panel will indicate a Trouble condition.
5. An informational icon under **Sounder Base** will indicate whether a base has been installed on this sensor.

ACD-V / VF2014-00

Input Properties



1. Choose an **Input Action** for the Smoke Sensor ONLY. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

Sensor Properties

1. **Mode.** This sensor can be set to one of 16 modes. Use the Day and Night drop-down boxes to set the desired mode. The other fields in this window rely on this setting to be active or grayed out.

> **NOTE** For more detailed information on these modes, including when to use each mode, refer to the **Fire Alarm Sensor - Mode Information and Selection Guide**.

2. **Alarm Value**. This section of the window contains Day and Night fields for each part of the available modes. Set the desired value in each field.

S/H/CO	S/H	Smoke	CO/H	CO	H(FT)	H(RoR)	COHb

Allowed Value Range	4*	3*	1 - 3.5	4*	3 - 15	135 - 150	27*	6.2*
Default Value	4	3	3	4	4	135	27	6.2

3. **Pre-Alarm Value** . This section of the window contains the settings for activation a pre-alarm condtion. Set the desired value in each field.

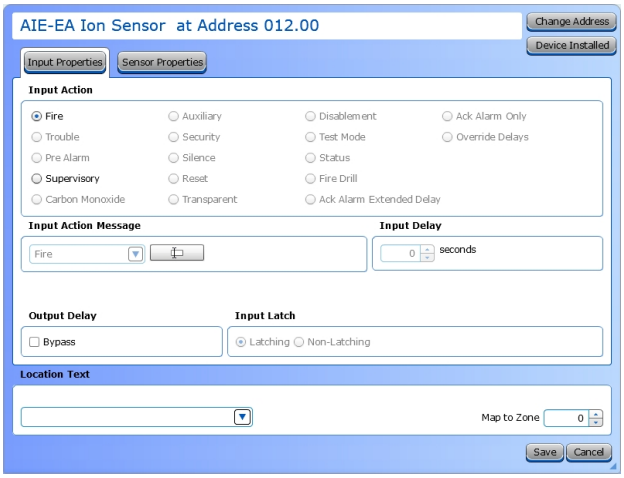
	S/H/CO	S/H	Smoke	CO/H	CO	H(FT)	H(RoR)	COHb
Allowed Value Range	3.5*	2.5*	1 - 3.5	3.5*	3 - 15	120 - 150	27*	5.2*
Default Value	3.5	2.5	2.5	3.5	3.5	120	27	5.2

** This field is for informational purposes only. This value is not editable.*

4. **Polling LED**. This LED flashes green when the sensor is being polled by the panel. If it responds as expected, the sensor is connected and operating as expected. If the sensor reports any issues, the panel will indicate a Trouble condition.

AIE-EA / VF2001-00

Input Properties



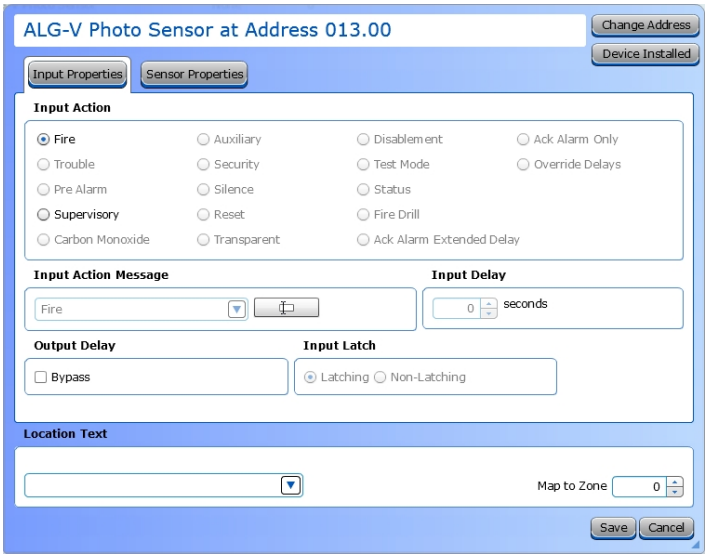
1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

Sensor Properties

1. Set the desired **Day and Night Sensitivity Level**. Options are ***Low***, ***Normal***, and ***High***.
2. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.
3. An informational icon under **Sounder Base** will indicate whether a base has been installed on this sensor.

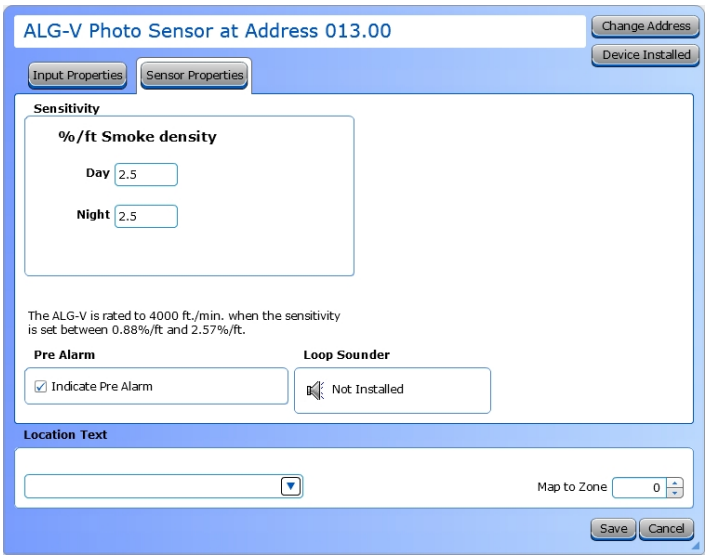
ALG-V / VF2002-00

Input Properties



1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

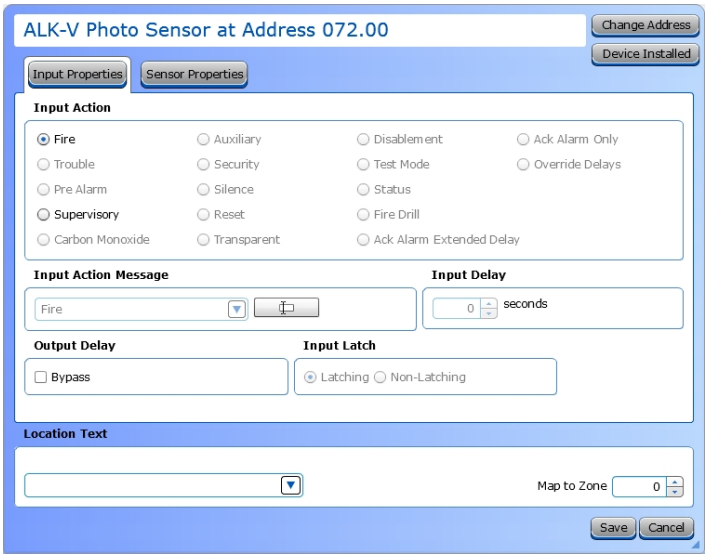
Sensor Properties



1. Set the desired **Day and Night Sensitivity Level**. The allowable range is 0.9 - 3.5%/ft.
2. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.
3. An informational icon under **Sounder Base** will indicate whether a base has been installed on this sensor.

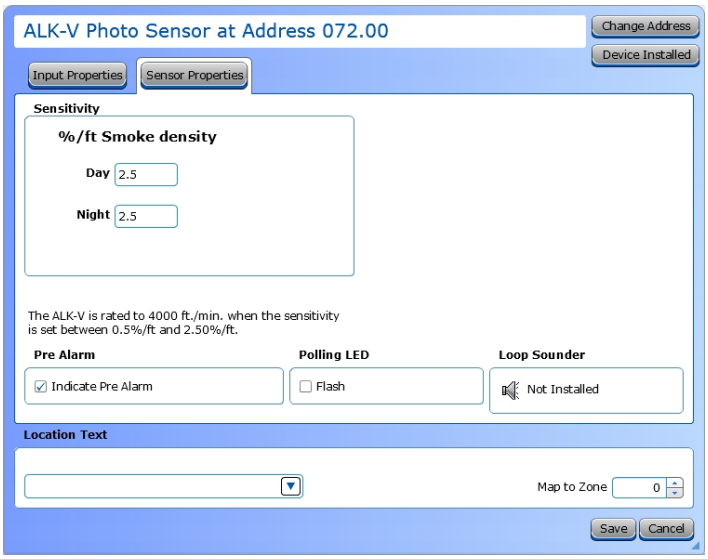
ALK-V / VF2005-00

Input Properties



1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

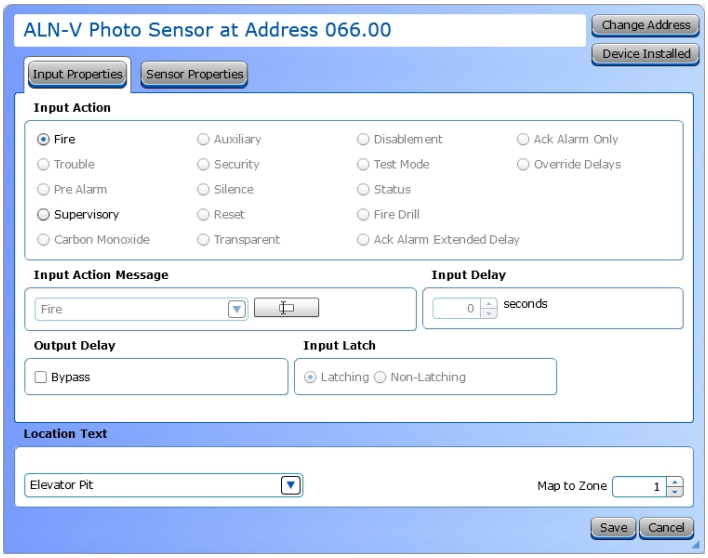
Sensor Properties



1. Set the desired **Day and Night Sensitivity Level**. The allowable range is 0.5 - 3.8%/ft.
2. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.
3. Check the **Polling LED Flash** check box to flash a green LED when the sensor is being polled by the panel. If it responds as expected, the sensor is connected and operating as expected. If the sensor reports any issues, the panel will indicate a Trouble condition.
4. An informational icon under **Sounder Base** will indicate whether a base has been installed on this sensor.

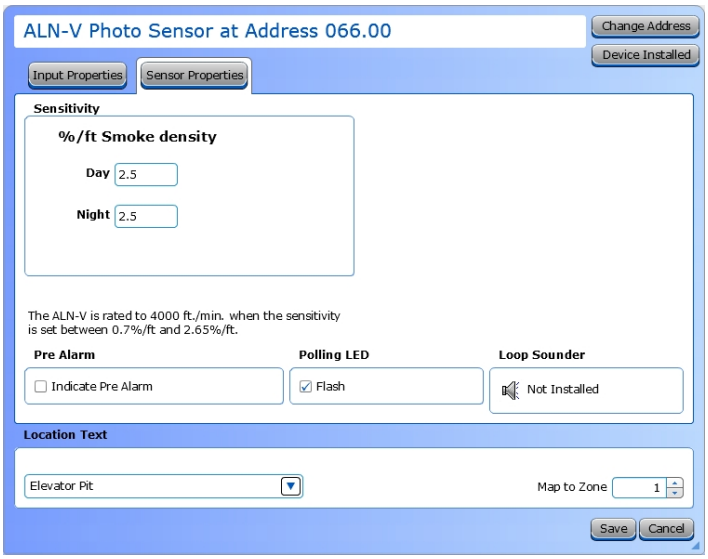
ALN-V / VF2011-00

Input Properties



1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

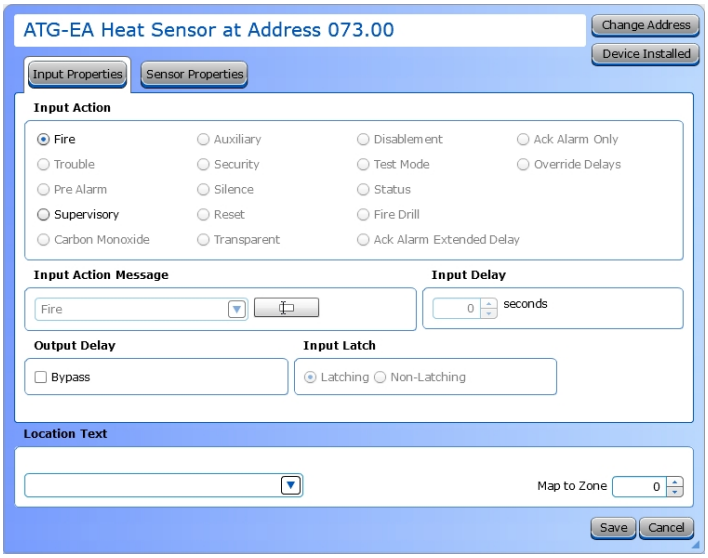
Sensor Properties



1. Set the desired **Day and Night Sensitivity Level**. The allowable range is 0.7 - 4%/ft.
2. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.
3. Check the **Polling LED Flash** check box to flash a green LED when the sensor is being polled by the panel. If it responds as expected, the sensor is connected and operating as expected. If the sensor reports any issues, the panel will indicate a Trouble condition.
4. An informational icon under **Sounder Base** will indicate whether a base has been installed on this sensor.

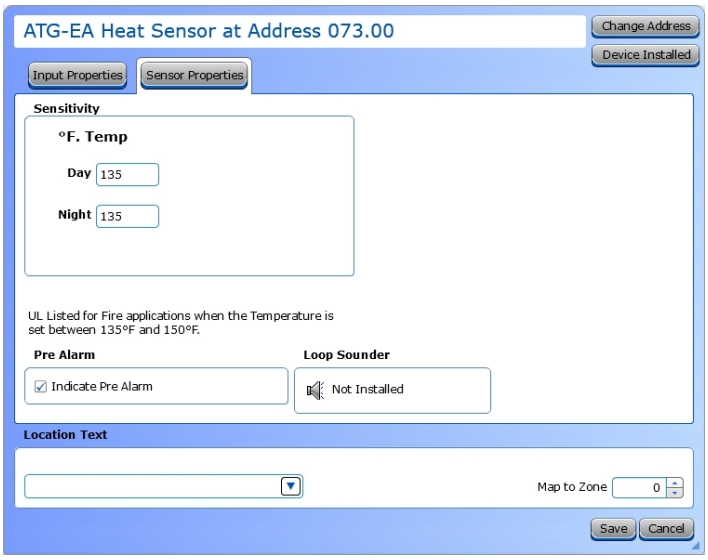
ATG-EA / VF2003-00

Input Properties



1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

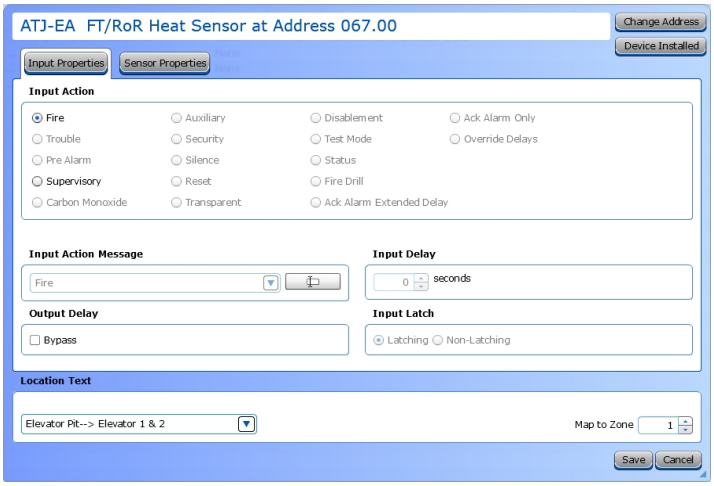
Sensor Properties



1. Set the desired **Day and Night Sensitivity Level**. The allowable range is 32 - 158°F.
2. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.
3. An informational icon under **Sounder Base** will indicate whether a base has been installed on this sensor.

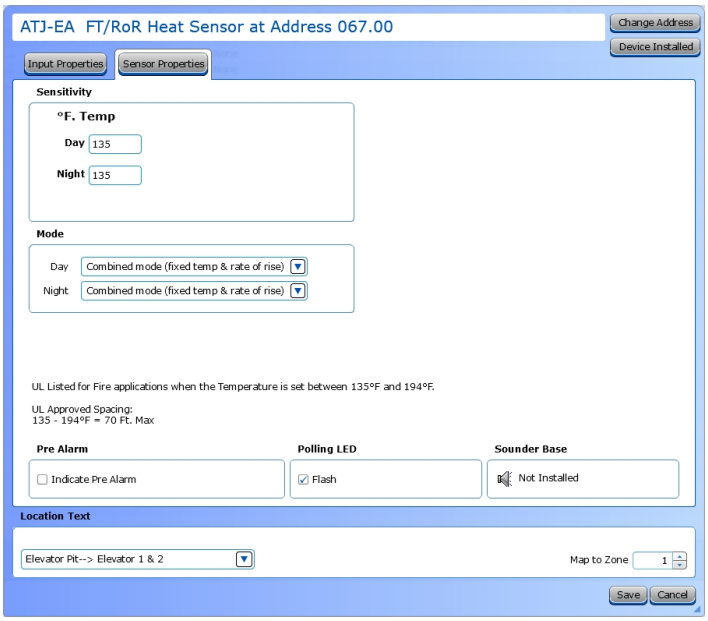
ATJ-EA / VF2010

Input Properties



1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

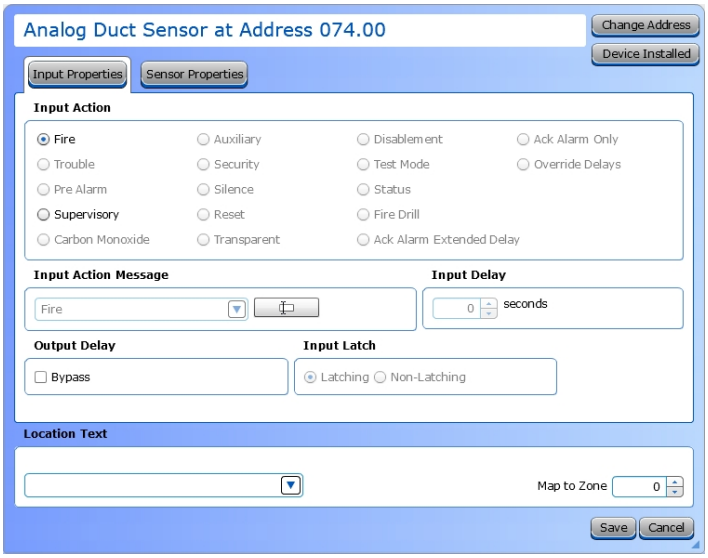
Sensor Properties



1. Set the desired **Day and Night Sensitivity Level**. The allowable range is 32 - 194°F.
2. Set the **Day** and **Night Mode**. This sensor can be set to Fixed Temperature only or a combined mode with Fixed Temperature and Rate of Rise.
3. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.
4. Check the **Polling LED Flash** check box to flash a green LED when the sensor is being polled by the panel. If it responds as expected, the sensor is connected and operating as expected. If the sensor reports any issues, the panel will indicate a Trouble condition.
5. An informational icon under **Sounder Base** will indicate whether a base has been installed on this sensor.

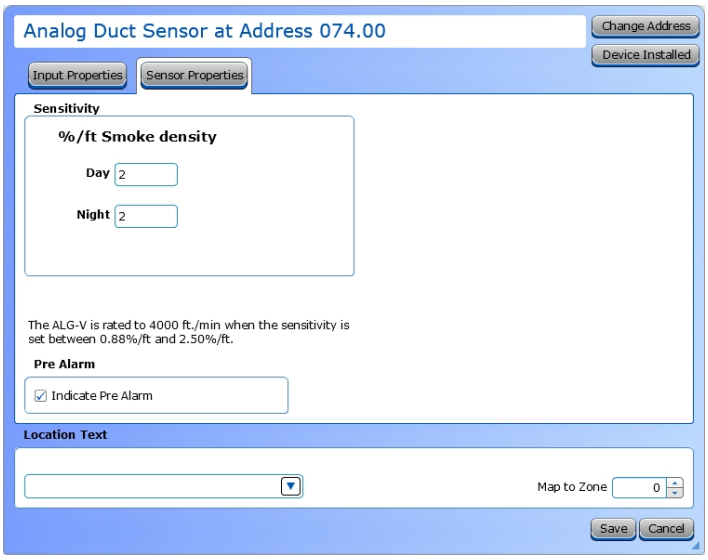
DH99A, DH99AR / VF5013, VF5014

Input Properties



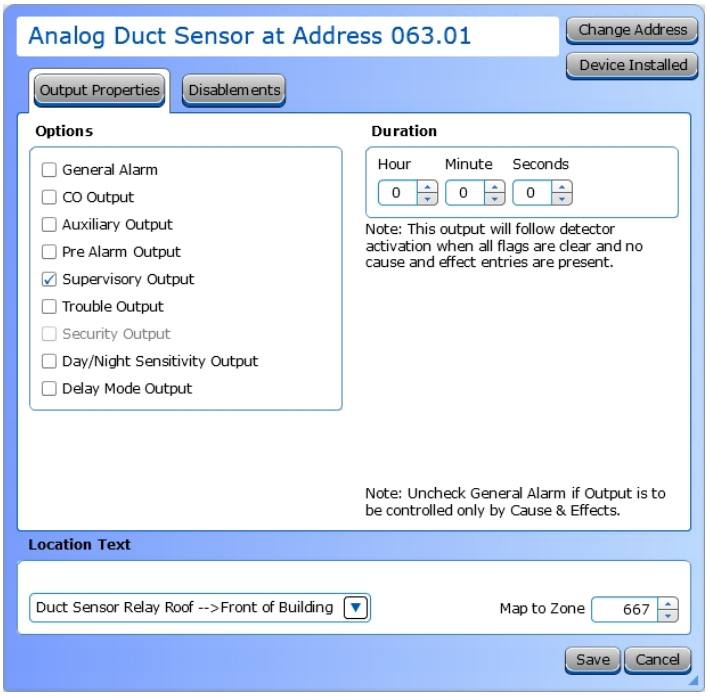
1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

Sensor Properties



1. Set the desired **Day and Night Sensitivity Level**. The allowable range is .88 - 2.75%/ft.
2. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.

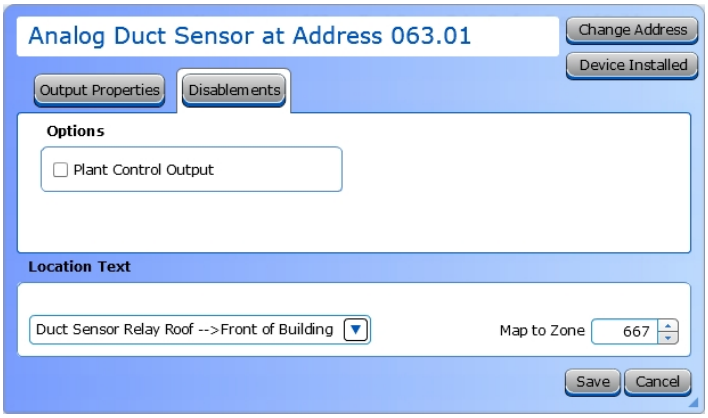
Output Properties



1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active.
3. Set the **Pattern** using the drop-down box. Allowed values are *Continuous* (high steady state), *March Code* (high and low for even intervals), *Temporal* (synchronized on a system basis, three even on/off cycles followed by off period), and *Panel Global Pattern* (will follow the panel pattern setting, configured in the panel settings).

5. Enter a **Duration** to select how long an output will be active. If set to 0, it will remain active until the system is reset.

Disablements Properties

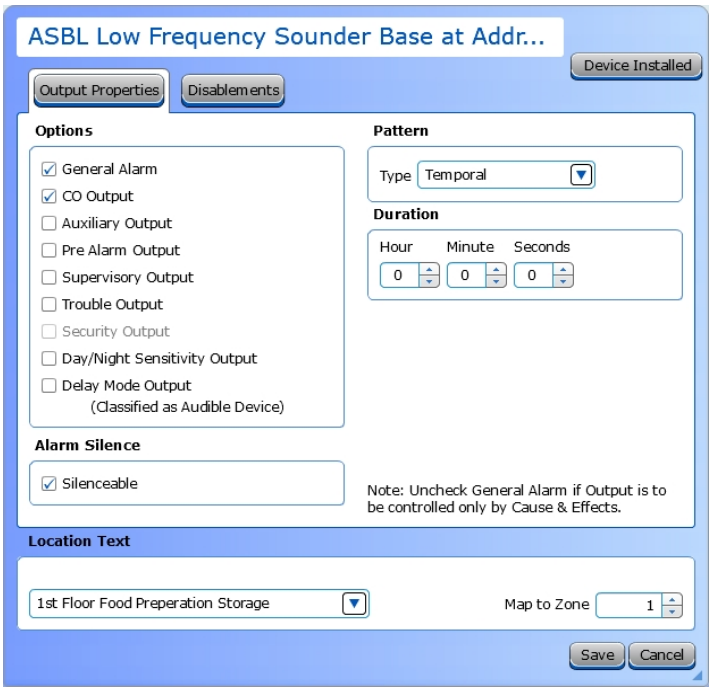


Check the box to add this device to a **Plant Control Output** group.

Sounders

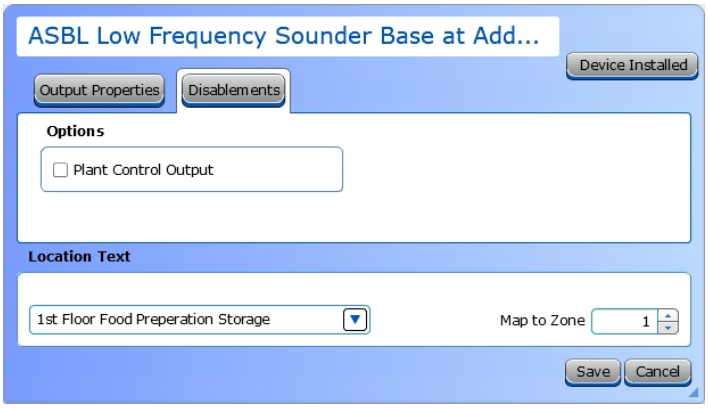
ASB / VF7008,
ASBL / VF7005

Output Properties



1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active.
3. Set the **Pattern** using the drop-down box. Allowed values are *Continuous* (high steady state), *March Code* (high and low for even intervals), *Temporal* (synchronized on a system basis, three even on/off cycles followed by off period), and *Panel Global Pattern* (will follow the panel pattern setting, configured in the panel settings).
4. Enter a **Duration** to select how long an output will be active. If set to 0, it will remain active until the system is reset.

Disablements Properties



Check the box to add this device to a **Plant Control Output** group.

Apollo Protocol

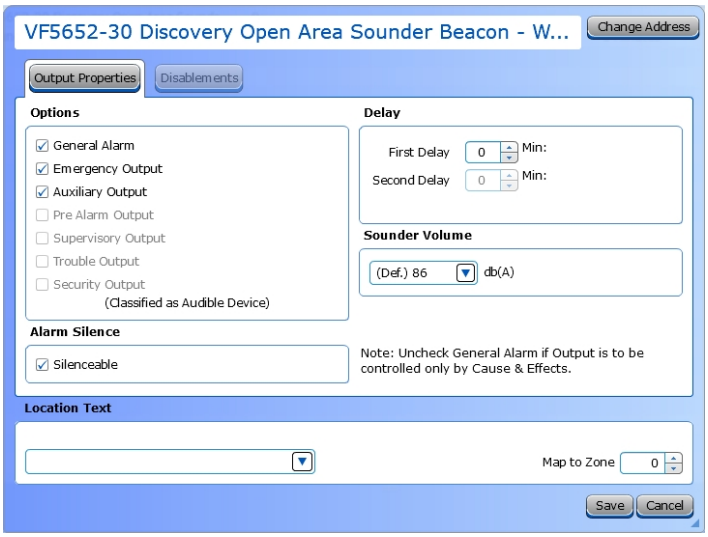
Audio Visual

VF5651-10 - XP95A Sounder Beacon Base

1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active.
3. **Delay**. This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the First Delay and Second Delay fields. Second Delay is only visible if the output is silenceable.

NOTE If checked,
- the initial activation of the output will be delayed based on the settings in the First Delay field.
- if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

VF5652-30 - Discovery Open Area Sounder Beacon

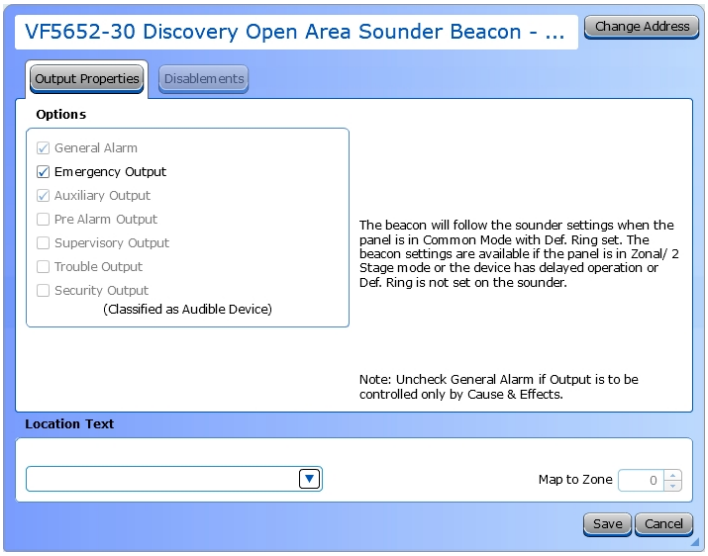


1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active.
3. **Delay**. This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the First Delay and Second Delay fields. Second Delay is only visible if the output is silenceable.

> **NOTE** If checked,
> - the initial activation of the output will be delayed based on the settings in the First Delay field.
> - if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

4. **Sounder Volume.** Use the drop-down to select the desired volume of the sounder beacon. The default is 86db.

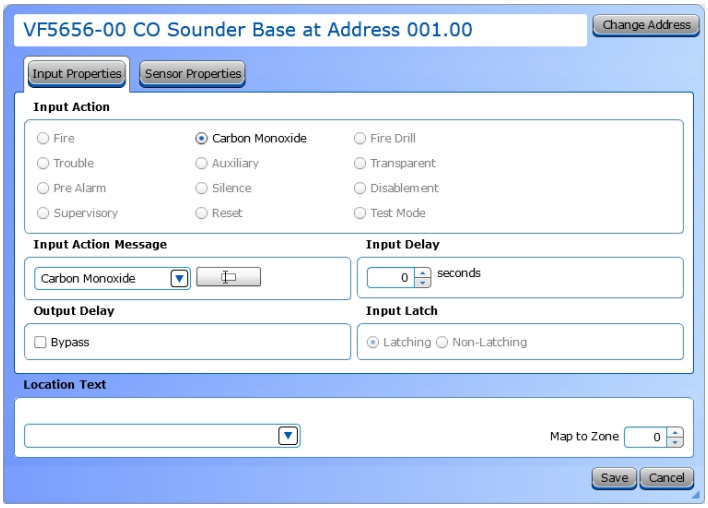
Output Properties



Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.

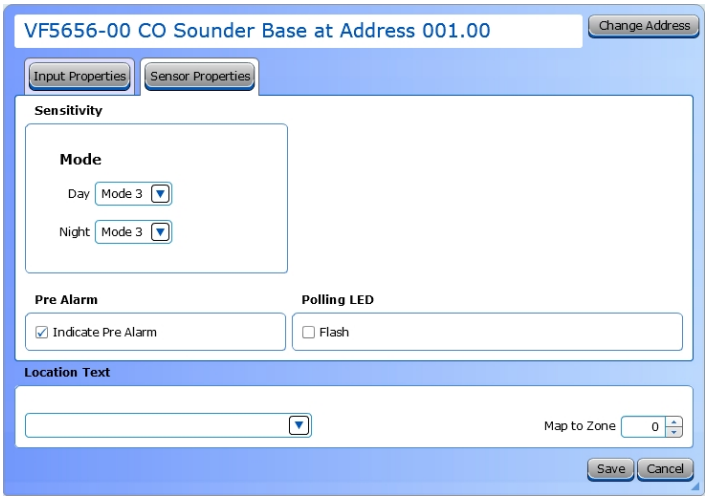
VF5656-00 - CO Sounder Base

Input Properties



1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

Sensor Properties

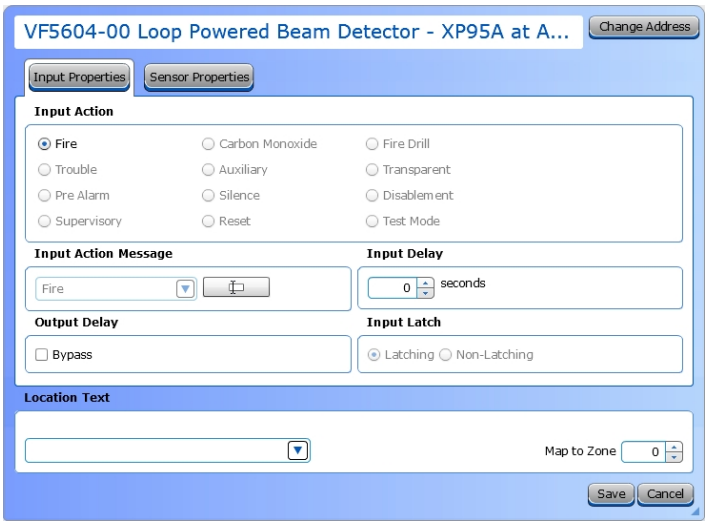


1. Set the desired **Day and Night Sensitivity Level**. The allowable options are *Mode 1*, *Mode 2*, and *Mode 3*.
2. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.
3. Check the **Polling LED Flash** check box to flash a green LED when the sensor is being polled by the panel. If it responds as expected, the sensor is connected and operating as expected. If the sensor reports any issues, the panel will indicate a Trouble condition.

Modules

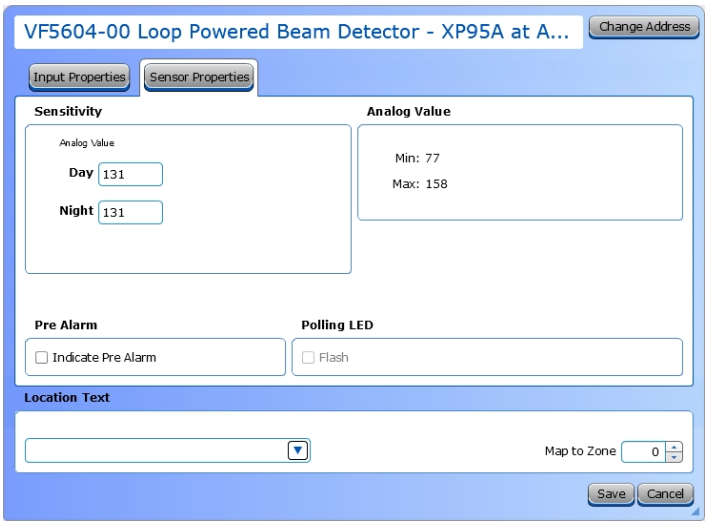
VF5604 - Loop Powered Beam Detector

Input Properties



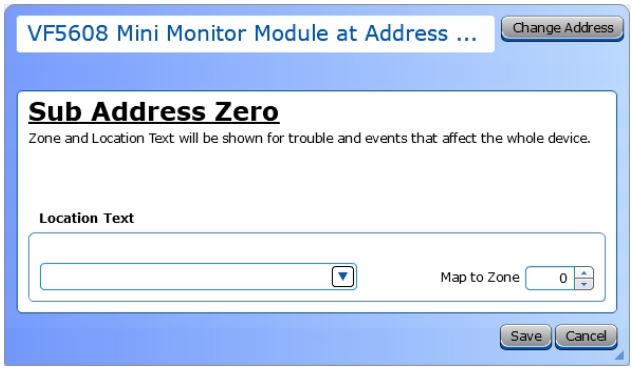
1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

Sensor Properties



1. Set the desired **Day and Night Sensitivity Level**. The allowable range is 77 - 158.
2. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.
3. Check the **Polling LED Flash** check box to flash a green LED when the sensor is being polled by the panel. If it responds as expected, the sensor is connected and operating as expected. If the sensor reports any issues, the panel will indicate a Trouble condition.

VF5608 - Mini Monitor Module,
VF5660 - XP95A Priority Mini Switch Monitor Module,
VF5661 - Mini Switch Monitor Module,
VF5662 - Standard Input Module,
VF5663 - Priority Input Module
VF5664 - Dual Priority Switch Monitor Module
VF5680 - Switch Monitor Unit - DIN Rail



Refer to Device Configuration for details about the options in this window.

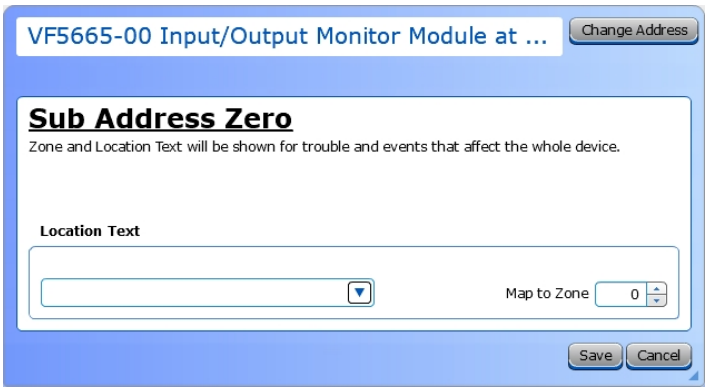
Input Properties

1. Choose a **Device Setting** from the drop-down list. The default setting is Manual Pull Station.

   NOTE ***This step must be done first, as it will affect the remaining configuration selections.***

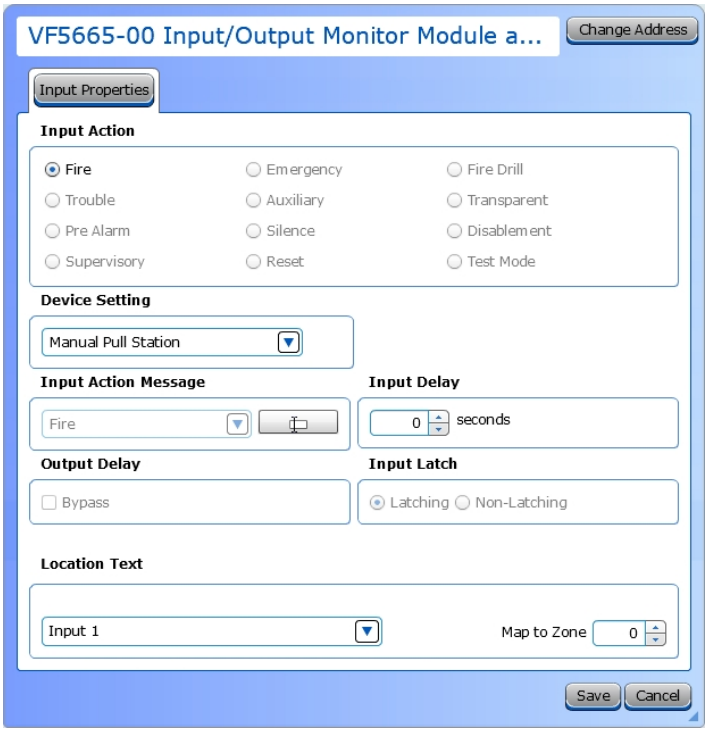
2. Choose an **Input Action**. The default setting is Fire. For the default device setting (Manual Pull Station), the setting must be Fire. Other device settings will have different allowable input actions available, based on each device's capabilities and limitations.
3. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Delay** in seconds, up to 180 seconds. This setting delays the panel's response to an activation. No panel response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
6. Set the **Input Latch** field to Latching or Non-latching.

VF5665 - Input / Output Monitor Module,
VF5682 - Input / Output Module DIN-Rail



Refer to Device Configuration for details about the options in this window.

Input Properties

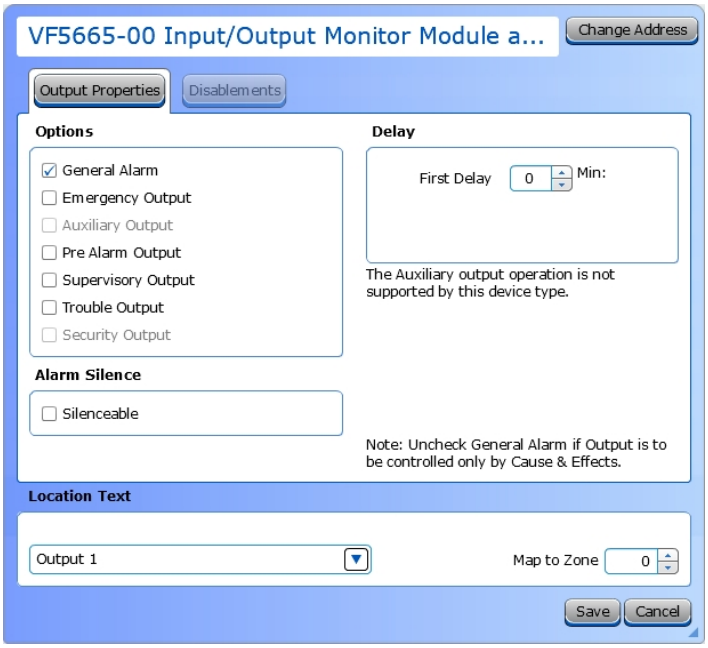


1. Choose a **Device Setting** from the drop-down list. The default setting is Manual Pull Station.

> **NOTE** ***This step must be done first, as it will affect the remaining configuration selections.***

2. Choose an **Input Action**. The default setting is Fire. For the default device setting (Manual Pull Station), the setting must be Fire. Other device settings will have different allowable input actions available, based on each device's capabilities and limitations.
3. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Delay** in seconds, up to 180 seconds. This setting delays the panel's response to an activation. No panel response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
6. Set the **Input Latch** field to Latching or Non-latching.

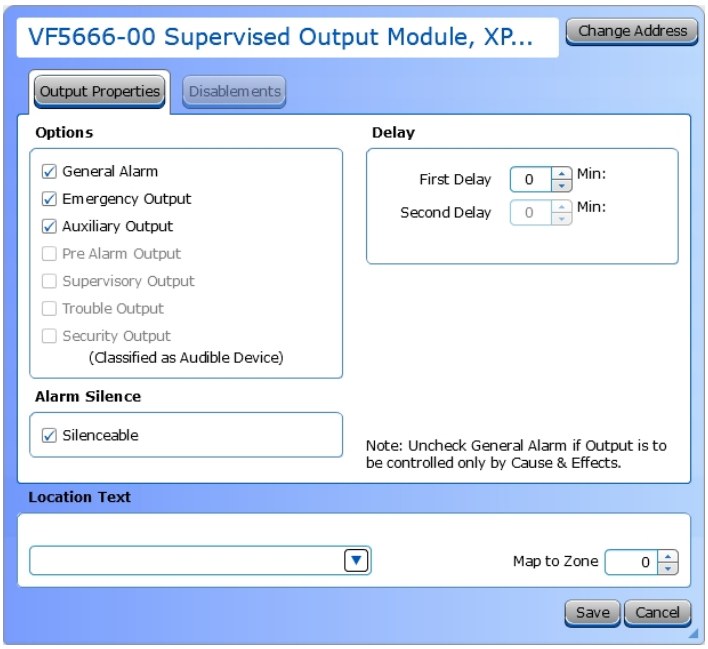
Output Properties



1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active.
3. **Delay**. This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the First Delay and Second Delay fields. Second Delay is only visible if the output is silenceable.

NOTE If checked,
- the initial activation of the output will be delayed based on the settings in the First Delay field.
- if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

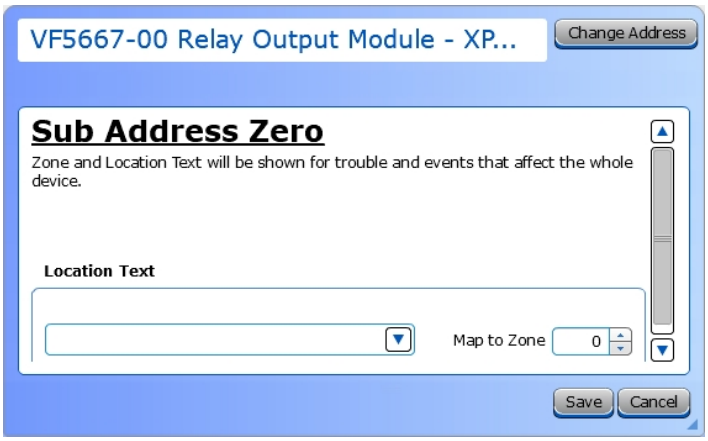
VF5666 - Supervised Output Module,
VF5681 - Switch Sounder Control Unit DIN-Rail



1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active.
3. **Delay**. This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the First Delay and Second Delay fields. Second Delay is only visible if the output is silenceable.

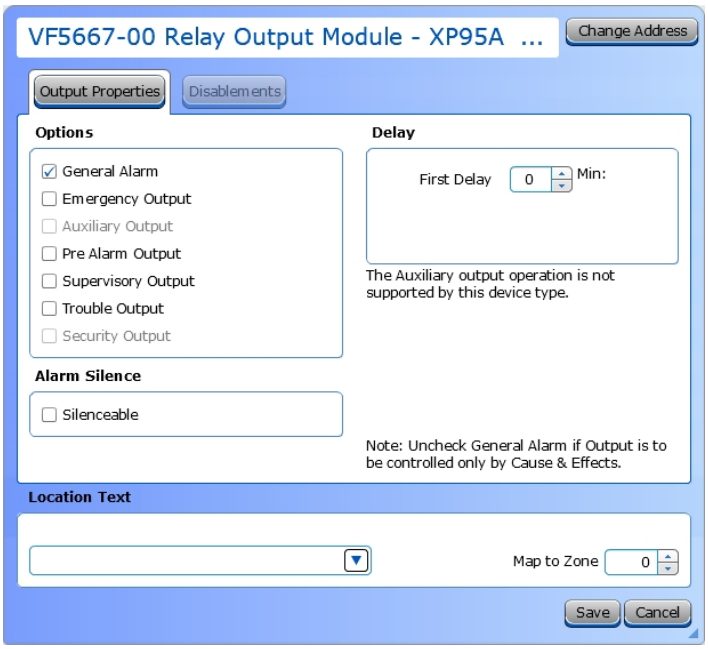
NOTE If checked,
- the initial activation of the output will be delayed based on the settings in the First Delay field.
- if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

VF5667 - Relay Output Module



Refer to Device Configuration for details about the options in this window.

Output Properties

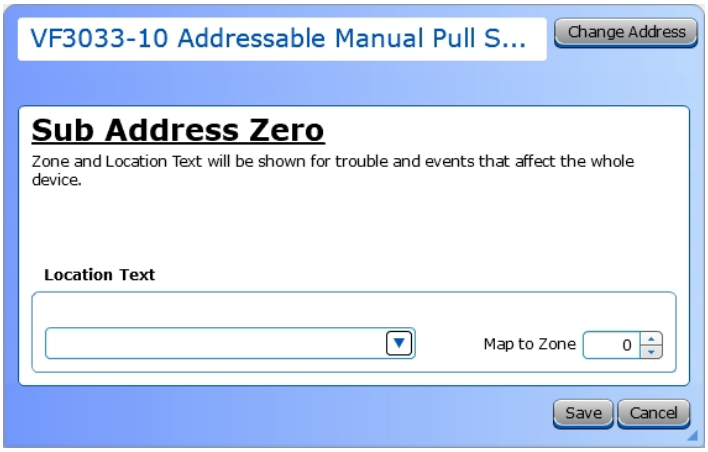


1. Select the desired **Output Options**. This selection will activate the circuit when the selected event(s) occur.
2. Set whether the output will be **Silenceable**. Each channel is configurable in reaction to the Alarm Silence button on the front panel. Check the box if the channel should return to normal standby when Alarm Silence is active.
3. **Delay**. This setting controls the delay of the activation of the output. If unchecked, it will activate based on the Global Delay settings in the Panel Settings. If checked, it will activate based on the settings in the First Delay and Second Delay fields. Second Delay is only visible if the output is silenceable.

NOTE If checked,
- the initial activation of the output will be delayed based on the settings in the First Delay field.
- if the output is silenceable, subsequent re-sounding of the output will be delayed based on the settings in the Second Delay field.

Pull Stations

VF3033-10 - Addressable Manual Pull Station



Refer to Device Configuration for details about the options in this window.

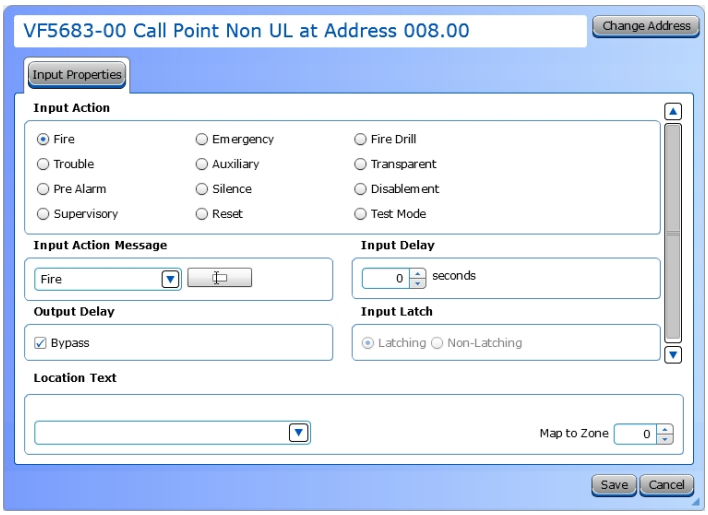
Input Properties

1. Choose a **Device Setting** from the drop-down list. The default setting is Manual Pull Station.

> **NOTE** ***This step must be done first, as it will affect the remaining configuration selections.***

2. Choose an **Input Action**. The default setting is Fire. For the default device setting (Manual Pull Station), the setting must be Fire. Other device settings will have different allowable input actions available, based on each device's capabilities and limitations.
3. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Delay** in seconds, up to 180 seconds. This setting delays the panel's response to an activation. No panel response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
6. Set the **Input Latch** field to Latching or Non-latching.

VF5683 - Call Point

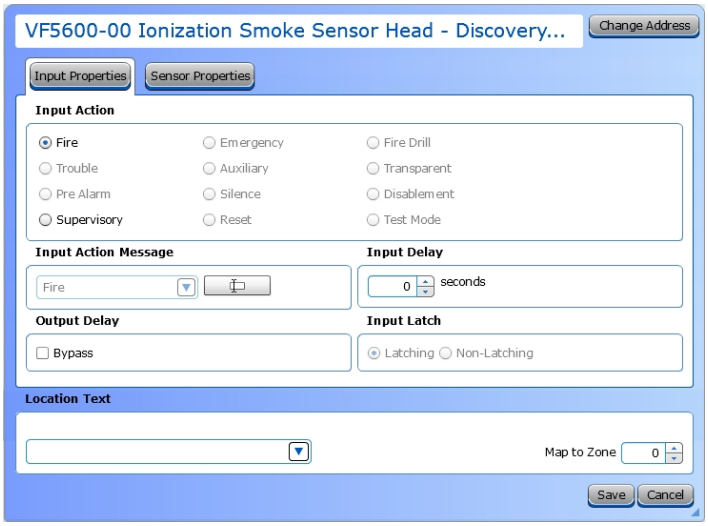


1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

Sensors

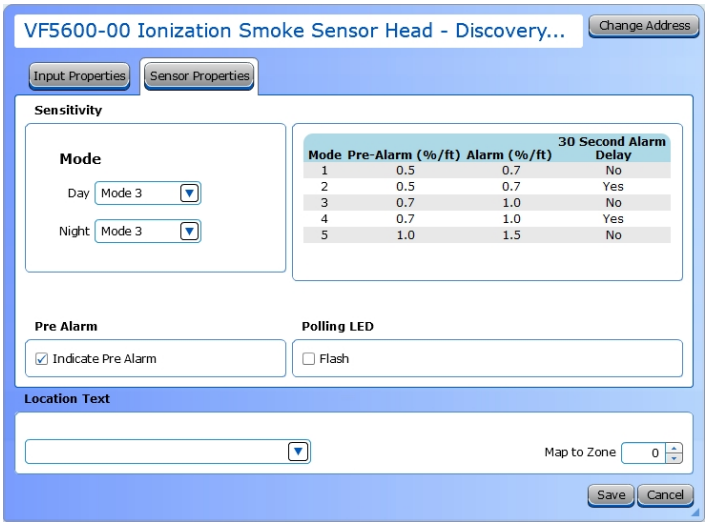
VF5600 - Ionization Smoke Sensor Head,
VF5601 - Photoelectric Smoke Sensor Head,
VF5602 - Heat Sensor Head,
VF5603 - Multisensor Sensor Head,
VF5606 - Carbon Monoxide Detector Head

Input Properties



1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

Sensor Properties



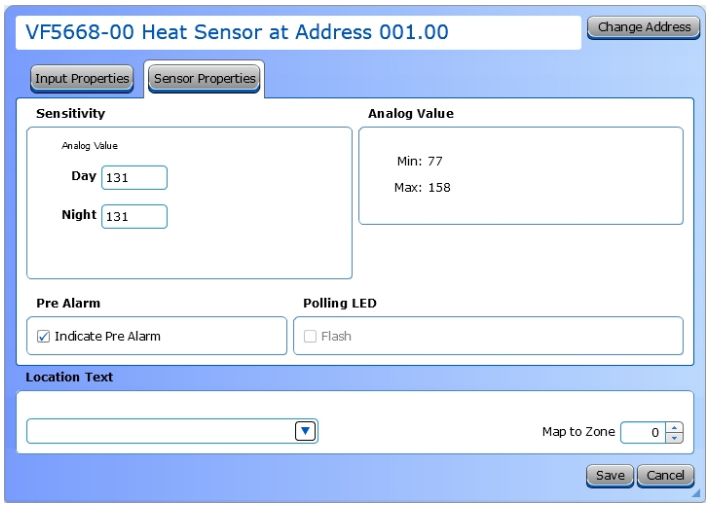
1. Set the desired **Day and Night Sensitivity Level**. The allowable options are *Mode 1*, *Mode 2*, and *Mode 3*.
2. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.
3. Check the **Polling LED Flash** check box to flash a green LED when the sensor is being polled by the panel. If it responds as expected, the sensor is connected and operating as expected. If the sensor reports any issues, the panel will indicate a Trouble condition.

VF5668 - Heat Sensor,
VF5669 - Ionization Smoke Sensor,
VF5670 - Photoelectric Smoke Sensor,
VF5671 - Multisensor Sensor

Input Properties

1. Choose an **Input Action**. The default setting is Fire.
2. **Input Action Message** is automatically set based on the selected **Input Action**. If desired, a custom message can be entered.
3. Set the **Input Delay**, up to 180 seconds. This delays the panel's response to an activation. No response will occur if the input state is restored to normal before time period expires. A non-latching input will not activate if restored before the time period expires.
4. Check the **Output Delay Bypass** box if activation of this circuit should immediately activate its associated outputs, even if those outputs have configured delays.
5. Set the **Input Latch** field to Latching or Non-latching.

Sensor Properties



1. Set the desired **Day and Night Sensitivity Level**. The allowable range77 - 158.
2. Check the **Pre Alarm** check box to cause a warning at the main panel that the detector is near activation. When the smoke density reaches the warning threshold, the sensor enters the pre-alarm condition. The panel will indicate this state on the panel GUI without initiating an alarm on the system. This will allow time to investigate a false alarm or potential fire.
3. Check the **Polling LED Flash** check box to flash a green LED when the sensor is being polled by the panel. If it responds as expected, the sensor is connected and operating as expected. If the sensor reports any issues, the panel will indicate a Trouble condition.

COMMON PROCEDURES

Adding Panels / Devices to a Network **211**

Add an SLC Device **212**

Add Favorites **213**

Add Multiple Devices of the Same Type **214**

Open Network File **215**

Create a New File from an Existing File **217**

Connect to a Panel **218**

Alarm Verification **219**

Bridge Networking **221**

Adding Panels / Devices to a Network

Adding a panel or device to a network can be accomplished in two ways - through the Wizard described in the Configure Tab or by double-clicking the panel from the Device Selection Panel.

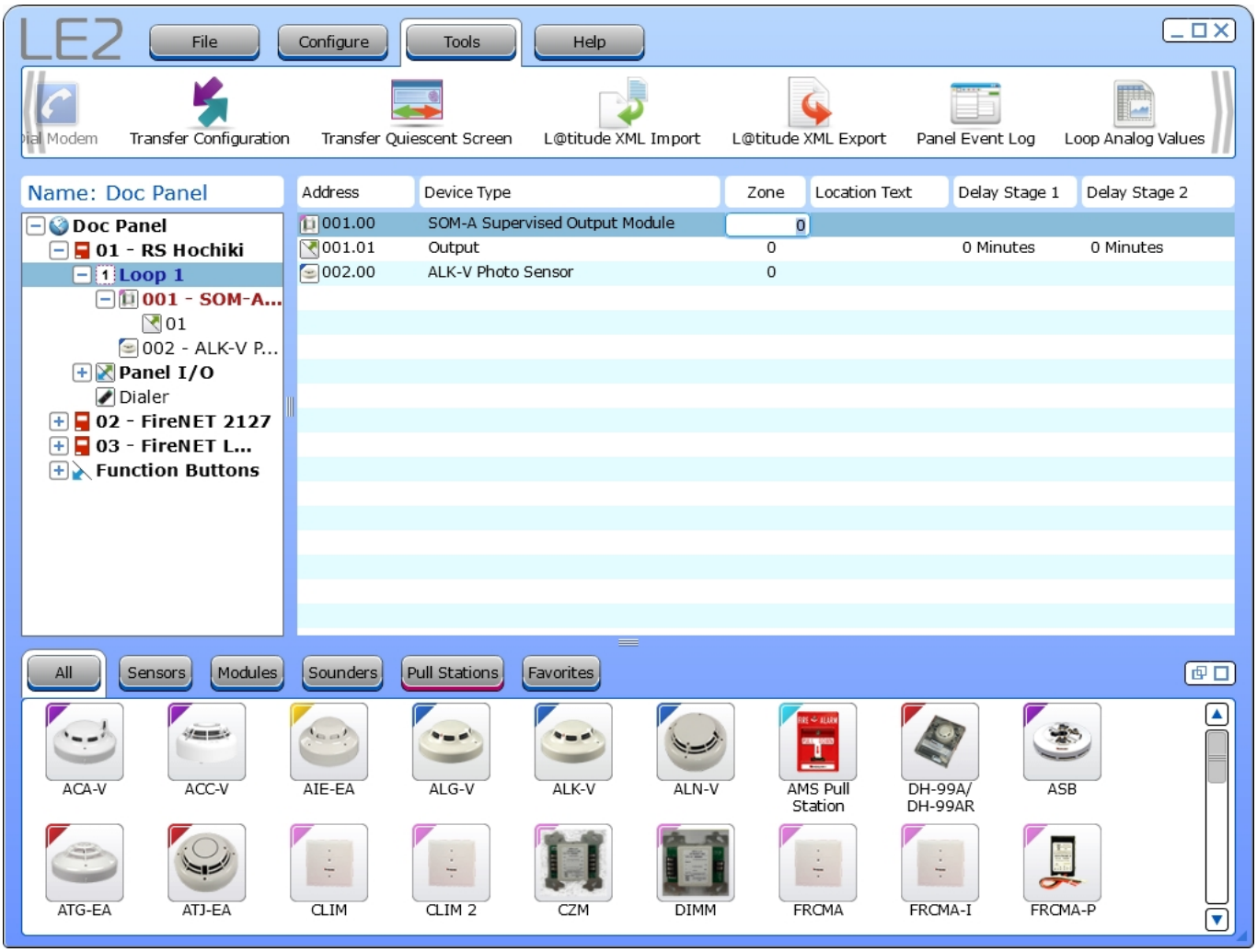
Add a Panel (without the Wizard)

1. To add a panel to the network, select the Network Overview (globe icon) in the Network Tree.
2. Right-click and select **New Panel** OR drag-and-drop the desired panel from the **Panels** pane at the bottom of the window.
3. Changes can be made to the default configuration using **Edit Properties**.

When new panels are added, LE2 will build a network tree based on the panel type.

Add an SLC Device

1. Expand the network tree by clicking on the (+) button next to the panel name. This displays Loops, Panel I/O, and Modules.
2. Select the loop on which to add the SLC device. A list of available devices is displayed in the bottom pane. If any devices have been added to Favorites, a separate tab will appear called **Favorites**. Alternatively, drag-and-drop the items onto the desired loop.

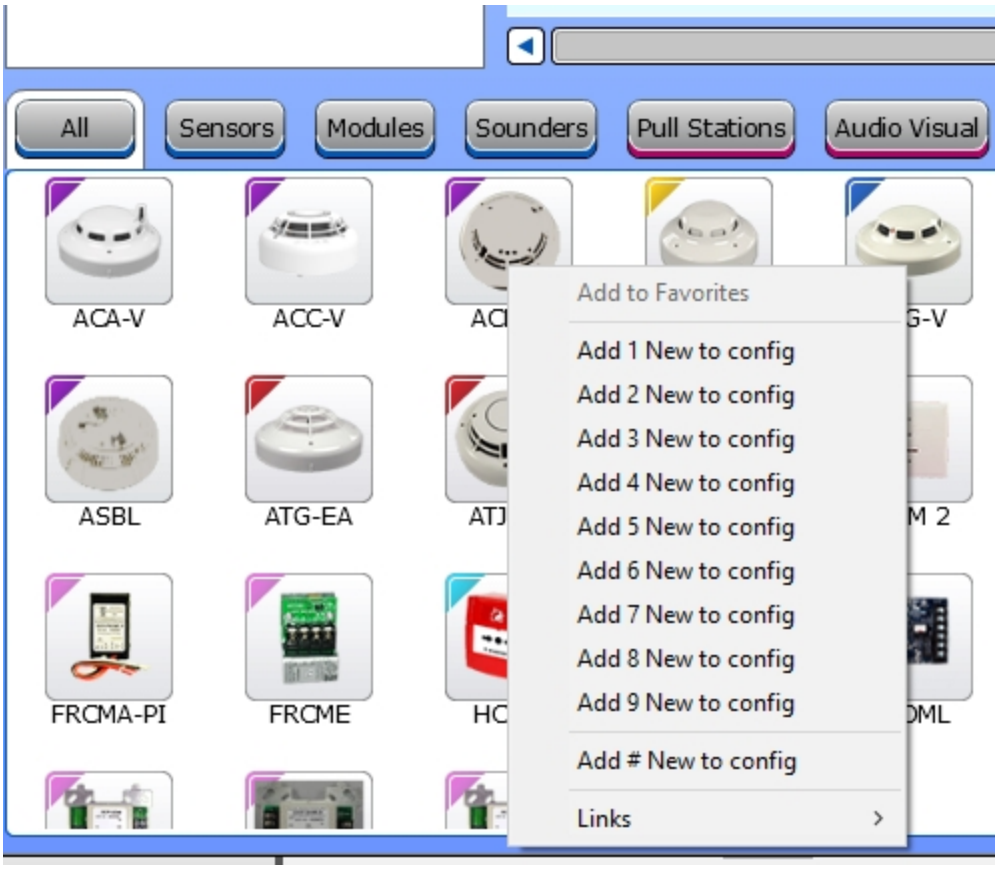


Add Favorites

Add modules or devices to favorites by right-clicking that device in the bottom pane and selecting **Add to Favorites**. This feature is only available for Modules and Devices.

Add Multiple Devices of the Same Type

Right-click the desired device in the bottom pane and select the number of devices to add to the network, between 1 and 9. If more than 9 are needed, click **Add # New to config** and enter the desired number of devices to add to the network.



Open Network File

Upon the launch of LE2, the **Open Network File** window is displayed. These are the options from that window:

- Create New File
- Open File
- Connect to Panel
- Exit

Open File and **Connect to Panel** create a new LE2 file and location path. For new site configurations, the recommended option is **Create New File**.

Create New File

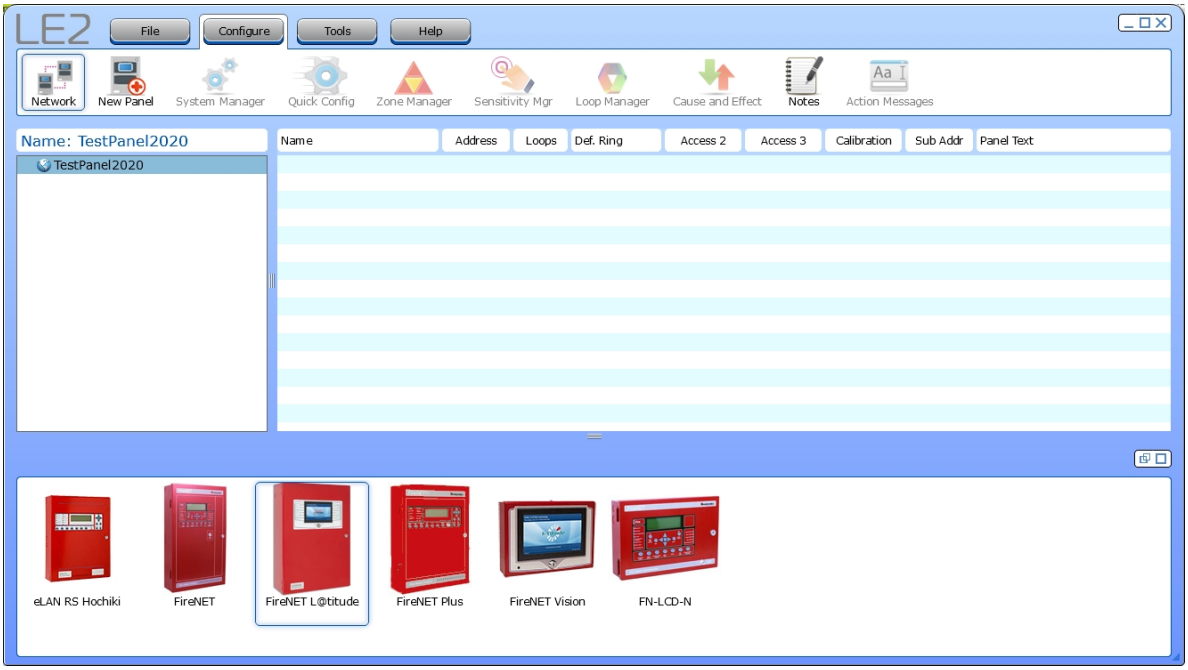
When **Create New File** is selected, a blank configuration file will be created. Panels and devices must be manually added or tranferred to the panel. All panel settings, panel I/O, SLC devices, and peripherals added will be configured with default LE2 settings, such as:

- Panel Name, such as Fire NET L@titude or RS Hochiki. This name can be changed by the user using the panel setting configuration window.
- Strobe Sync Protocol A will be set to Wheelock. Strobe Sync Protocol B will be set to Gentex FACP
- General Alarm Mode will be set to Common.
- Panel NACs will be set to have a current limit of 2.5A, circuit timeout 250ms, and Class B.
- Panel I/O will be set to Zone 0.
- Added devices will be added to Zone 01.
- Default Ring Mode will be Resound for fire in the same or other zone enabled.

Because this option requires user input for unknown variables, the user must carefully configure each panel, device, and panel module / peripherals with correct Address numbers and settings. If not configured properly, the panel will display errors when the configuration is transferred.

A common mistake with this selection is, for panels with a zone board, the user must select the number of zone indicators on the board (48, 96, 144). If this isn't done, the user will have to send the configuration to the panel again with the correction.

1. To create a new file, click **File** > **New** and enter a file name and save location when prompted. LE2 will display a blank configuration page.



Click **Tools** > **Edit Preferences** to begin setting global software preferences.

General Tab

1. If applicable, configure the Comm Port in use by the serial programming cable. Choose the applicable baud rate. The Refresh icon may be used to check for other connected serial Comm Ports.
2. Configure Auto Save Preferences.

Display Options Tab

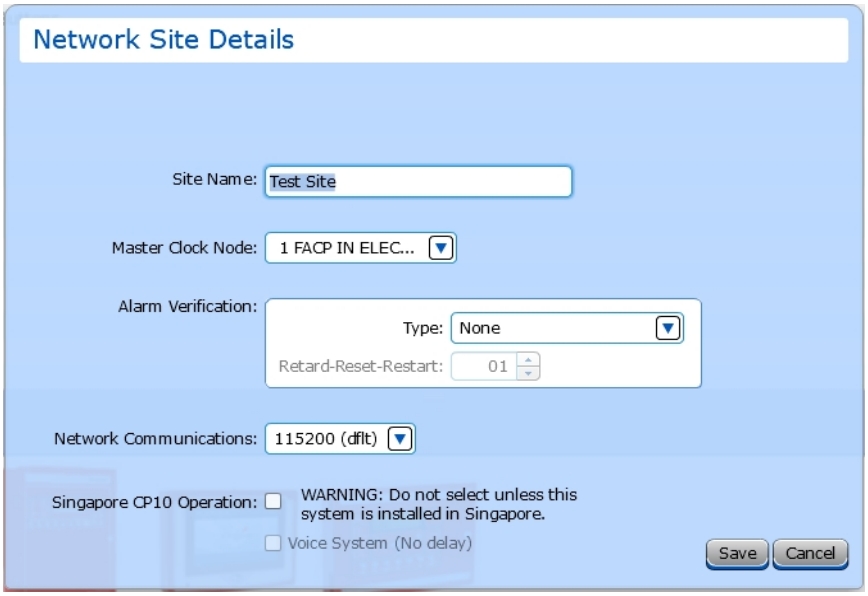
1. Set the **Default Zone to Add Devices**. This sets the zone where newly-added SLC devices will be automatically set.
2. Check all desired preferences.
3. Set the default **Time Zone**.
4. Click **Save**.

Begin building the network configuration by adding a panel to the network. Refer to Adding Panels / Devices to a Network.

Create a New File from an Existing File

For existing sites, it may be desired or necessary to create a new file using an existing one for the site.

1. Click **Open** in the File tab.
2. Locate the desired file. It may be displayed in the recently opened projects area. If not, use the file navigator to locate the file.
3. Click **Save As** to make a copy of the file with a new name.
4. To edit the **Network Site Details**, right-click the global icon (the top of the network tree) and click **Edit Properties**. Edit the desired site details and click **Save**.



Connect to a Panel

The existing site configuration can be imported to LE2 if the current user does not have access to the original, or if Autolearn will be used.

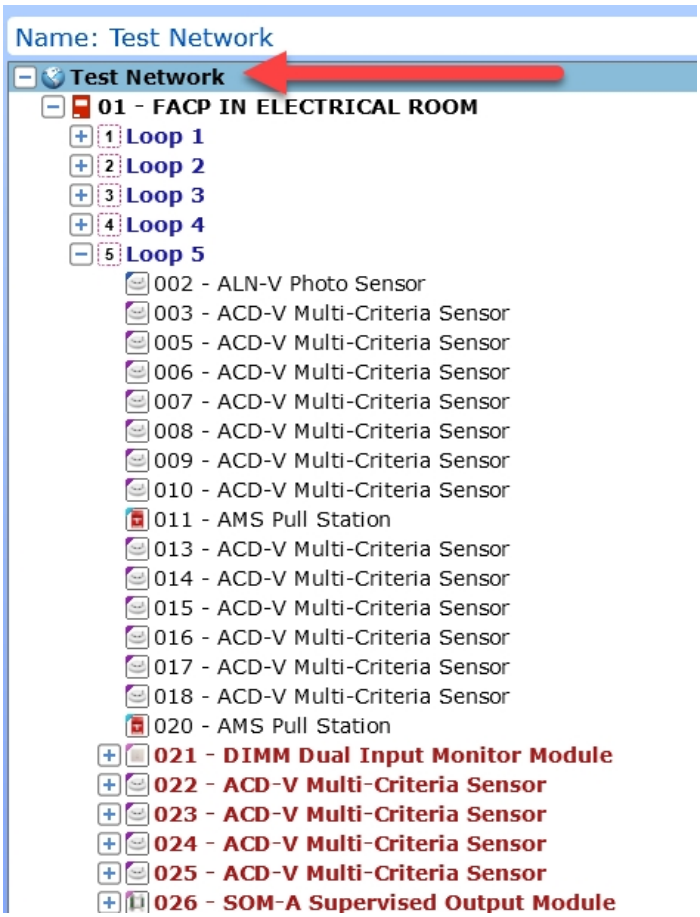
The **Connect to Panel** option will prompt the user to choose a file name and save location before navigating to the Transfer Configuration window. Because this option creates a new network file with a blank network site tree, the user cannot send a configuration to the panel from LE2. This is prevented by graying the transfer to PC button.

Alarm Verification

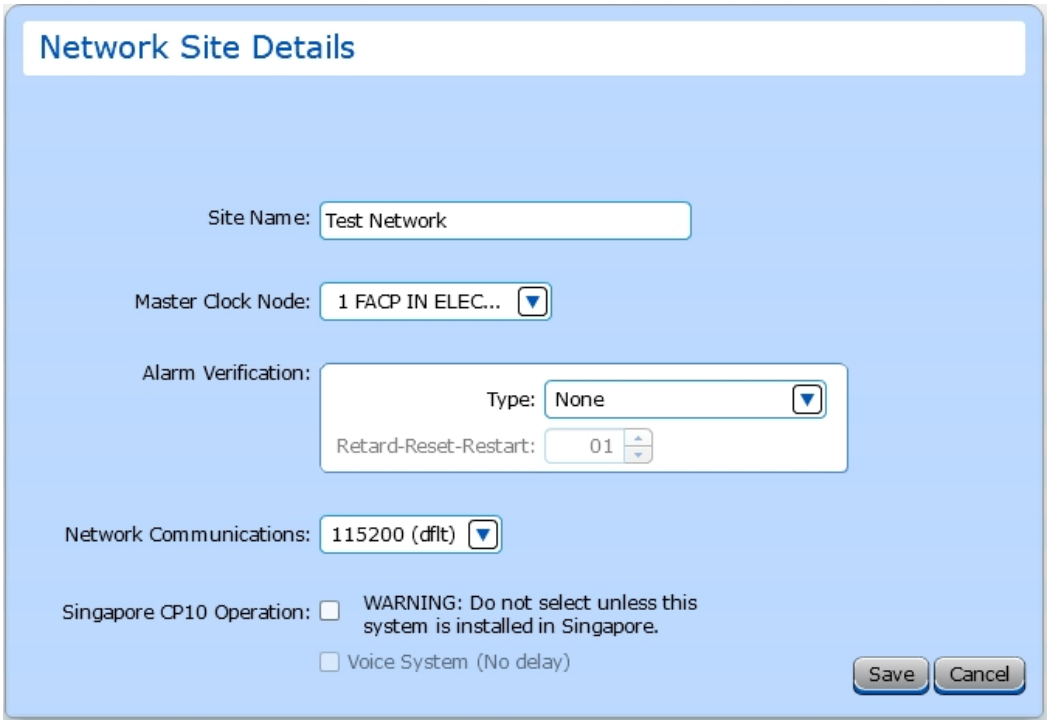
Alarm Verification is a zone-based feature of automatic fire-detection and alarm systems to reduce unwanted alarms. Alarm conditions are reported or confirmed for a minimum time period in order to be accepted as a valid alarm.

NOTE Legacy panels have limitations on alarm verification.

1. Right-click the **Network Overview** level (shown below) and click **Edit Properties**.



2. The **Network Site Details** window will appear. Select the desired setting from the Alarm Verification drop-down list and click **Save**.



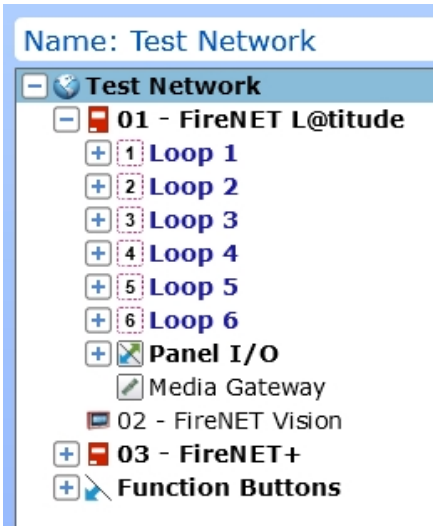
3. Navigate to **Configure** > **Zone Manager**.
4. Double-click the zone number to assign to the Alarm Verification zone selection. The **Zone Detail** window will appear.

5. Click the **Alarm Verification Enabled** checkbox and click **Save**.

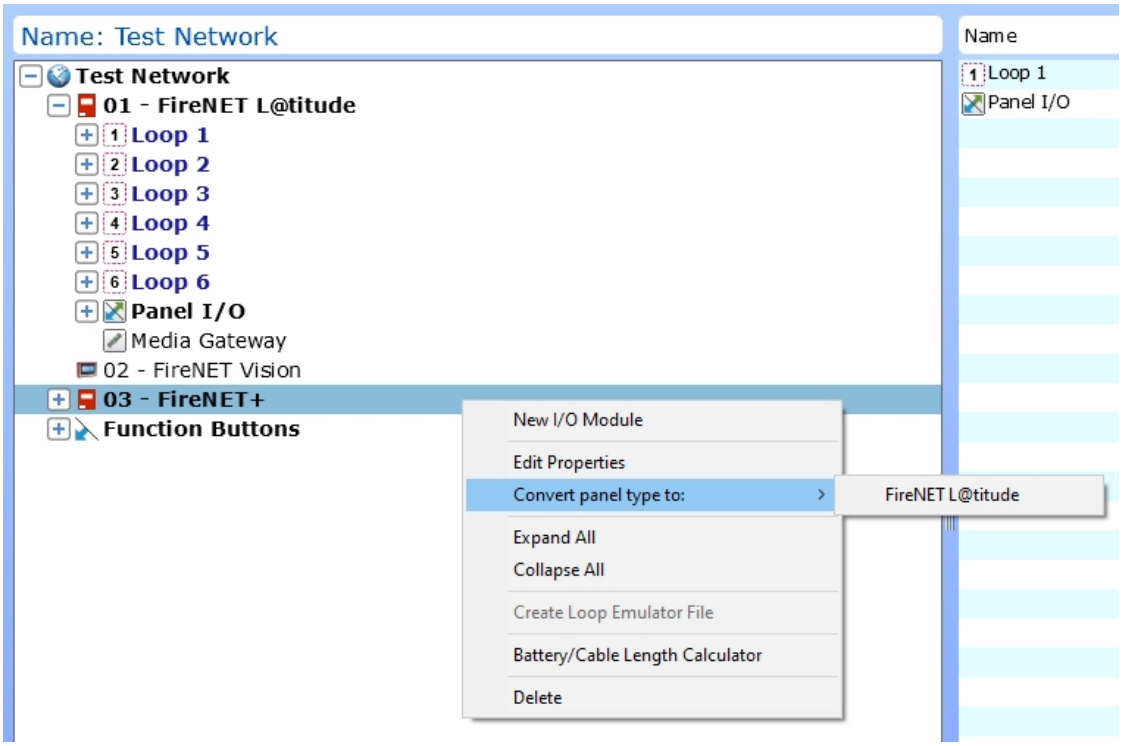
Bridge Networking

This enables backwards compatibility mode on newer FACPs. To use bridge networking, there must be a legacy product (FireNET or FireNET+) on the same network as a new series of FACP (FireNET L@titude).

1. Open the site network configuration file that holds the configuration for the legacy units.
2. Add a new panel to the existing network configuration. The newly added unit will automatically be entered into bridge mode.



When a legacy panel is added, the panel type can be changed using the network tree. Right-click on the legacy panel and click **Convert Panel To:**. Select the desired panel type.



When panels are in bridge mode, some features are altered to match the capabilities of the legacy products. For example, legacy panels are restricted to 4 loops and 500 zones.

INDEX

2

24V 95, 142

A

AUX 24V 142

B

Buzzer 60, 116

C

Class A 111, 141, 177

Class B 41, 111, 141, 177, 215

E

Event Log 32, 60, 81, 115

F

Fire Relay 41

Fire Routing Input 41

Fire Routing Output 2 41

H

Heartbeat 153

L

Loop Explorer 2 16, 96

N

Network 14, 21, 25, 39, 51, 81, 106, 141, 167, 211

P

Panel Tests 60

Printer 32, 94

S

SLC 30, 40, 63, 90, 109, 212

T

Terminals 184

Trouble Relay 41, 163

Trouble Routing Input 41

Trouble Routing Output 41

Z

Zone LED 107

GLOSSARY

.

.csv
A Comma Separated Values (CSV) file is a plain text file that contains a list of data, separated by commas. This is very commonly opened in a spreadsheet.

.lx9
The file format for LE1 configuration files.

.nle
The file format for LE2 configuration files.

.pdf
PDF stands for Portable Document Format, used to display documents in an electronic form, typically within Adobe Acrobat.

.xls
This is a Microsoft spreadsheet file, opened in MS Excel.

.xml
XML is a markup language to define a way to encode documents that both humans and machines could read. It does this through the use of tags that define the structure of the document, as well as how the document should be stored and transported. This is typically opened in a browser.