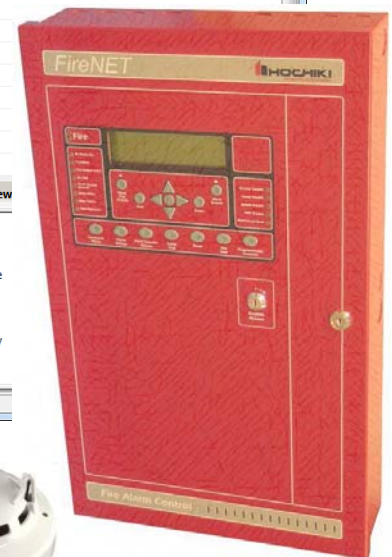
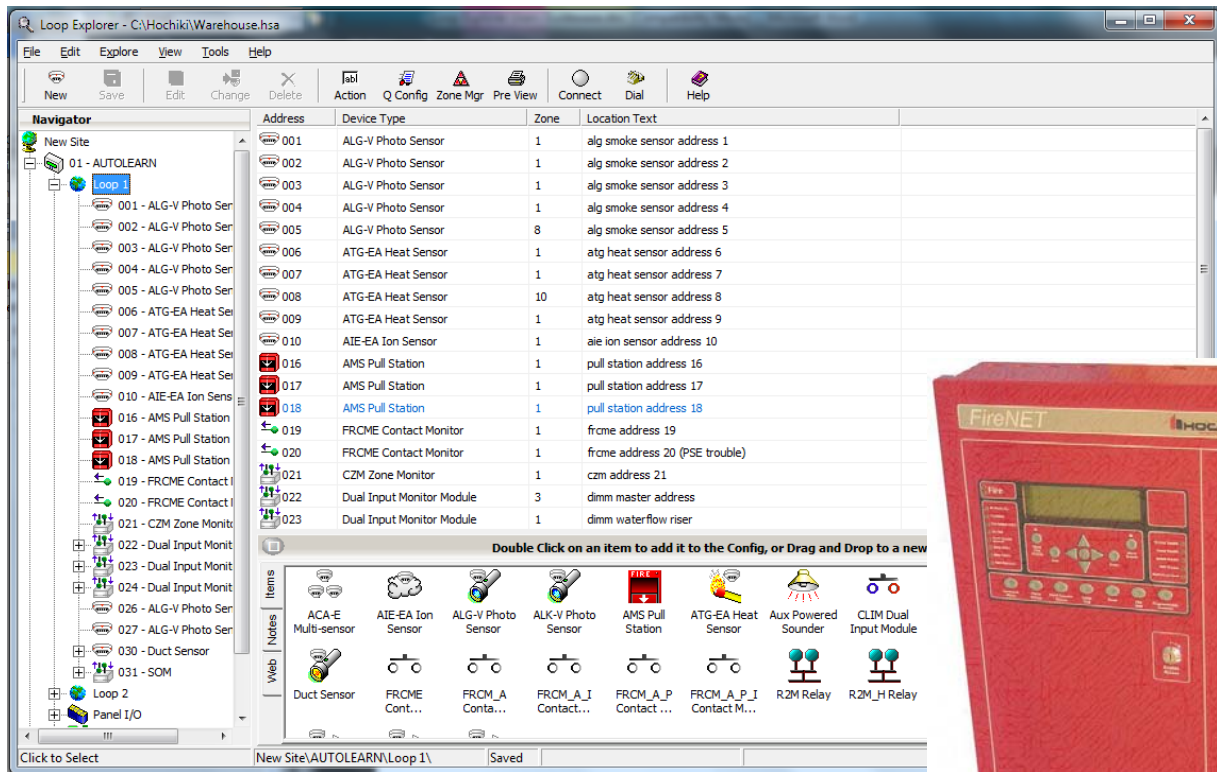


# Loop Explorer User Guide



Hochiki America Corporation  
7051 Village Drive, Suite 100  
Buena Park, CA 90621-2268  
714.522.2246 Corporate Headquarters  
800.845.6692 Technical Support  
<http://www.hochiki.com>

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# Table of Contents

<b>Table of Contents</b> .....	<b>2</b>
<b>Prefix – Programming Compliance with UL864 9th Edition</b> .....	<b>4</b>
Limitations of Fire Alarm Systems .....	5
<b>Introduction</b> .....	<b>8</b>
<b>1. FireNET Agency Listings, Approvals, Requirements</b> .....	<b>9</b>
1.1 Federal Communications Commission (FCC).....	9
1.2 Underwriters Laboratories (UL).....	9
1.3 National Fire Protection Association (NFPA) .....	9
<b>2. Loop Explorer Software Programming</b> .....	<b>10</b>
2.1 PC Requirements .....	10
2.2 Installing Loop Explorer .....	10
2.3 Launching Loop Explorer.....	11
2.4 Connecting Your PC to FireNET.....	11
2.4.1 Using PC Connect .....	11
2.4.2 Setting a COM Port.....	16
2.5 Getting Familiar with Loop Explorer.....	16
2.5.1 User Interface .....	17
2.5.2 Menu and Toolbar Overview .....	19
2.5.3 Main Tool Bar Icons.....	26
2.5.4 Items Pane Icons .....	28
2.6 Developing a Site.....	32
2.6.1 Creating a New Site.....	32
2.6.2 Editing an Existing Site .....	33
2.6.3 Saving a Site.....	34
2.7 Configuring Panels to a Network .....	35
2.7.1 Adding a Panel .....	35
2.7.2 Configuring and Editing a Panel .....	36
2.7.3 Editing a FN-LCD-N Network LCD Annunciator.....	42
2.7.4 Reserved for Future Use .....	42
2.7.5 Editing a Local Panel I/O .....	43
2.7.6 Removing a Panel .....	43
2.8 Configuring Option Boards/Serial LCD Annunciators on a Panel .....	44
2.8.1 Adding an Option Board/Serial LCD Annunciator .....	44
2.8.2 Editing an Option Board/Serial LCD Annunciator .....	44
2.8.3 Removing an Option Board/Serial LCD Annunciator .....	45
2.9 Configuring Panel I/O and Devices on a Loop.....	46
2.9.1 Adding a Device on a Loop.....	46
2.9.2 Editing Panel I/O and Devices on a Loop .....	46
2.9.3 Changing a Device on a Loop.....	52
2.9.4 Deleting a Device on a Loop.....	52
2.10 Loop Explorer Abilities .....	53
2.10.1 Reserved for Future Use.....	53
2.10.2 Cause & Effect Summary.....	53

2.10.3 Reserved for Future Use.....	53
2.10.4 Zone Manager .....	53
2.10.5 Reserved for Future Use.....	53
2.11 Loop Explorer Networking .....	54
2.11.1 Getting it working .....	54
2.11.2 Using the Loop Explorer PC configuration .....	54
2.11.3 Fire action .....	55
2.11.4 Auxiliary action.....	55
2.11.5 Pre-alarm action .....	55
2.11.6 Trouble action .....	55
2.11.7 Disablement action .....	56
2.11.8 Supervisory Alarm action .....	56
2.11.9 Test action .....	56
2.11.10 Status .....	56
2.12 Loop Explorer Networking - Keeping a record .....	59
2.13 Loop Explorer Networking - Using zones.....	66
2.14 Loop Explorer Options .....	67
2.14.1 COM Port.....	67
2.14.2 Default Project Folder/ Memory Management .....	67
2.14.3 Splash Screen .....	67
2.14.4 Other.....	68
2.15 Cause and Effect Programming.....	69
2.15.1 Cause & Effect Types .....	69
2.15.2 Cause & Effect Examples .....	71
<b>3. Troubleshooting.....</b>	<b>73</b>

## Prefix – Programming Compliance with UL864 9th Edition

<b>Notice to Users, Installers, Authorities Having Jurisdiction, and other involved parties</b>			
<p>This product incorporates field-programmable software. In order for the product to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864 9<sup>th</sup> Edition, certain programming features or options must be limited to specific values or not used at all as indicated below.</p>			
<b>Program Feature or Option</b>	<b>Permitted in UL 864? (Y/N)</b>	<b>Possible settings</b>	<b>Settings permitted in UL864</b>
AC Fail Delay	Yes	0 – 24 hours	1 – 3 hours
Alarm Verification	Yes	5 – 60 seconds	60 second setting
Disable Buzzer	Yes	Enable/Disable	Enable
Disable Ground Trouble	Yes	Enable/Disable	Enable
Set Buzzer Silence Access Level	Yes	1 or 2	2
“Waterflow Alarm” and “General Purpose” Device Type	No	0 – 120 seconds	0 seconds
Disable SOM-R	No	Enable/Disable	None

## ***Limitations of Fire Alarm Systems***

Follow Recommended Installation Guidelines: To achieve early fire detection, fire detection sensors should be installed in all rooms and areas of a house, apartment, or building in accordance with the recommendations of the National Fire Protection Association Standard 72 (NFPA 72), manufacturer's recommendations, state and local codes, and the recommendations contained in Guide for the Proper Use of System Smoke Detectors, which is made available at no charge to all installing dealers. Generally, the standards and recommendations include the following (but installers should refer to the specific guidelines above before installing):

- Sleeping Rooms: Smoke detectors should be installed in every sleeping room.
- Hallways: More than one smoke detector should be installed in a hallway if it is more than 30 feet long.
- At least Two Smoke Detectors: There should never be less than two smoke detectors per apartment or residence.
- Smoke Detectors in Alarm, Electrical, or Phone Locations: Smoke detectors should be located in any room where an alarm control is located or an alarm control connects to an electrical source or phone line. If detectors are not so located, a fire within the room could prevent the alarm control from reporting a fire.
- Notification Systems: All fire alarm systems require notification devices, including sirens, bells, horns, and/or strobes. In residential applications, each automatic alarm initiating device when activated should cause the operation of alarm notification device that should be clearly audible in all bedrooms over ambient or background noise levels (at least 15dB above noise) with all intervening doors closed.
- Alarm in Every Bedroom and Level of Residence: A smoke detector with an integral sounder (smoke alarm) should be located in every bedroom and an additional notification device should be located on each level of a residence.
- Maintenance: A maintenance agreement should be arranged through the local manufacturer's representative and maintenance should be performed annually by authorized personnel only. To keep a fire alarm system in excellent working order, ongoing maintenance is required per the manufacturer's recommendations and UL and NFPA standards. At a minimum the requirements of Chapter 7 of NFPA 72 (1999) shall be followed.
- Test Weekly: The alarm system should be tested weekly to make sure all sensors and transmitters are working properly. The most common cause of an alarm system not functioning when a fire occurs is inadequate maintenance.

Alarms Cannot Guarantee Warning or Protection: Fire alarm system cannot guarantee warning or protection against fire in every potential situation. A study by the Federal Emergency Management Agency (an agency of the United States government) indicated that smoke detectors may not go off or give early warning in as many as 35% of all fires.

Limitation on Fire Alarm Effectiveness: A fire alarm system may not provide timely or adequate warning, or simply may not function, for a variety of reasons. For example:

- No Detection: Particles of combustion or smoke from a developing fire may not reach the sensing chambers of smoke detectors because:
  1. **Barriers** (such as closed or partially closed doors, walls, or chimneys) may inhibit particle or smoke flow.
  2. Smoke particles may become **cold, stratify, or not reach** the ceiling or upper walls where detectors are located.
  3. Smoke particles may be **blown away** from detectors by air outlets.
  4. Smoke particles may be **drawn into air returns** before reaching the detector.
- No Multi-Floor Detection: In general, smoke detectors on one level of a structure cannot be expected to sense fires developing on another level.
- Insufficient Smoke: The amount of smoke present may be insufficient to alarm smoke detectors. Smoke detectors are designed to alarm, at various levels of smoke density. If such density levels are not created by a developing fire at the location of the detector, the detector will not go into alarm.
- Smoldering vs. Flaming Fires: Smoke detectors, even when working properly, have sensing limitations. Detectors that have photoelectric sensing chambers tend to detect smoldering fires better than flaming fires, which have little visible smoke. Detectors that have ionizing-type sensing chambers tend to detect fast flaming fires better than smoldering fires. Because fires develop in different ways and are often unpredictable in their growth, neither type of detector is necessarily best and a given type of detector may not provide adequate warning of a fire.
- False Alarms and Pre-Fire Disconnection: Smoke detectors are subject to false alarms and nuisance alarms and may have been disconnected by users. For example, a smoke detector located in or near a kitchen may go into nuisance alarm during normal operation of kitchen appliances. In addition, dusty or steamy environments may cause a smoke detector to falsely alarm. If the location of a smoke detector causes an abundance of false alarms or nuisance alarms do not disconnect the smoke detector, call a professional to analyze the situation and recommend a solution.
- Fast Fires and Explosions: Smoke detectors cannot be expected to provide adequate warning of fires caused by arson and children playing with matches (especially within bedrooms), smoking in bed, violent explosions (caused by escaping gas, improper storage of flammable materials, etc.).
- Heat Detectors: Heat detectors do not sense particles of combustion and are designed to alarm only when heat on their sensors increases at a predetermined rate or reaches a predetermined level. Heat detectors are designed to protect property, not life.

- Unheeded Warning: Warning devices (including horns, sirens, and bells) may not alert people or wake up sleepers who are located on the other side of closed or partially open doors. A warning device that activates on a different floor or level of a dwelling or structure is less likely to awaken or alert people. Even persons who are aware may not notice the warning if the alarm is muffled by noise from a stereo, radio, air conditioner or other appliance, or by passing traffic. Audible warning devices may not alert the hearing impaired (strobes or other devices should be provided to warn these people). Any warning device may fail to alert people with a disability, deep sleepers, people who have recently used alcohol or drugs, or people on medication or sleeping pills.
  - Strobes: Strobes can under certain circumstances, cause seizures in people with conditions such as epilepsy.
  - Drills: Studies have shown that certain people, even when they hear a fire alarm signal, do not respond or comprehend the meaning of the signal. It is the property owner's responsibility to conduct fire drills and other training exercises to make people aware of fire alarm signals and instruct on the proper reaction to alarm signals.
  - Hearing Loss: In rare instances, the sounding of a warning device can cause temporary or permanent hearing loss.
- Telephone Transmissions Problems: Telephone lines needed to transmit alarm signals from a premise to a central station may be out of service or temporarily out of service. For added protection against telephone line failure, backup radio transmission systems are recommended.
- System Failure With Age or Lack of Maintenance: System components, though designed to last many years, can fail at any time. As a precautionary measure, it is recommended that smoke detectors be checked, maintained, and replaced per manufacturer's recommendations.
- Electrical Power Problems: System components will not work without electrical power. If system batteries are not serviced or replaced regularly, they may not provide battery backup when AC power fails.
- High Air Velocity or Dusty or Dirty Environments: Environments with high air velocity or that are dusty or dirty require more frequent maintenance.

Importance of Maintenance: In general, fire alarm systems and devices will not work without power and will not function properly unless they are maintained and tested regularly.

Alarm is Not Substitute for Insurance: While installing a fire alarm system may make the owner eligible for a lower insurance rate, an alarm system is not a substitute for insurance. Property owners should continue to act prudently in protecting the premises and the people in their premises and should properly insure life and property and buy sufficient amounts of liability insurance to meet their needs.

## Introduction

FireNET is an analog addressable fire alarm system that meets the requirements of UL 864 9<sup>th</sup> Edition. *Loop Explorer* is a software tool that allows you to use a laptop or other compatible computer to program the FireNET panel. This manual is designed to explain how to install and use Loop Explorer.

**NOTE:** *You should be thoroughly familiar with the programming concepts of the FireNET fire alarm control panel before using Loop Explorer. 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.*

Please see the **FireNET 2127/4127 Installation and Operation Manual** (P/N 1700-09948) and/or the **FireNET Plus Installation and Operation Manual** (1700-10840) for details about installing, operating and programming the FireNET panel.



# 1. FireNET Agency Listings, Approvals, Requirements

## 1.1 Federal Communications Commission (FCC)

The FireNET 2127/4127 and FireNET Plus have been verified to comply with FCC Rules Part 15 Class A. Operation is subject to the following conditions:

1. This device may not cause radio interference.
2. This device must accept any interference received, including any that may cause undesired operation.

## 1.2 Underwriters Laboratories (UL)

The FireNET 2127/4127 and FireNET Plus panels are UL864 9<sup>th</sup> Edition listed and suitable for use as a commercial protected premises control unit as follows:

- Local signaling unit
- Types of signaling services are automatic, manual, waterflow, & sprinkler supervisory.
- Style 4, 6, or 7 for Signaling Line Circuits
- Style Y for Notification Appliance Circuits
- Non-coded signaling
- Central Station Service – DACT type (protected premise)
- Remote Station Service – DACT type (protected premise)
- Proprietary Service – DACT type (protected premise – FireNET 2127/4127 only)\*
- Auxiliary Service – local energy type (protected premise - FireNET 2127/4127 only)

\*When used with the Bosch D6600 Digital Alarm Communicator Receiver.

## 1.3 National Fire Protection Association (NFPA)

Install and configure the FireNET system in accordance with NFPA 72 and 13.

All field wiring must be installed in accordance with NFPA 70 National Electric Code (Article 760).

## 2. Loop Explorer Software Programming

This section covers the use of the FireNET Loop Explorer software package. FireNET is an extremely flexible and robust system that can grow modularly as the application requires. To take full advantage of the power and flexibility of FireNET, the Loop Explorer software must be used for programming the system.

This section is intended to be an overview of the Loop Explorer programming process.

### 2.1 PC Requirements

---

FireNET Loop Explorer software requires the following minimum PC requirements.

- PC with Pentium II 300 MHz or higher processor; Pentium III recommended.
- Microsoft Windows 98SE or later operating system; Windows 2000, XP, Windows Vista, or Windows 7 recommended (English versions only).
- 100 MB of available disk space
- 64 MB RAM
- PS2 Microsoft Mouse or compatible pointing device and PS2 Keyboard
- CD ROM Drive
- VGA 256 color monitor. SVGA recommended @ 1024 x 768. Hardware acceleration minimized.
- Serial communication port that can be configured as COM1-8
- FN-X187 or FN-S187 RS232 serial programming cable

**NOTE:** Revision level of software and firmware at the time this manual was released:

- Loop Explorer: 6.1xx
- FireNET panel firmware: 4.0xx

### 2.2 Installing Loop Explorer

---

The Loop Explorer software CD includes an Autorun file which automatically launches the Loop Explorer installation routine when the CD is placed in the PC's CD ROM drive. Follow the directions that appear on the screen to install FireNET Loop Explorer to your PC hard drive. Open the ReadMe file provided on the Loop Explorer CD for additional details on how to install Loop Explorer software.

## 2.3 Launching Loop Explorer

---

Once FireNET Loop Explorer is installed on your PC's hard drive, you can launch it from your Start Menu under Programs - Hochiki - FireNET Loop Explorer. Click the FireNET Loop Explorer icon to launch the program.

## 2.4 Connecting Your PC to FireNET

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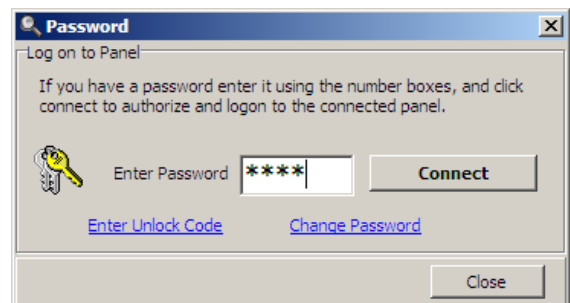
The easiest way to transfer your system configuration data between FireNET and the PC running Loop Explorer software is to directly connect your PC to the panel. This section provides instructions on how to connect the PC to the FireNET control panel.

1. Obtain or locate a FN-X187 or FN-S187 serial programming cable.
2. Plug the DB9 connector into an open COM port on the PC. (You will need to note what COM port number this has been configured as)
3. Plug the other end of the serial cable into the RS232 port on the back of the cabinet door - (J5 labeled "PC"). On the FireNET *Plus*, this port is located on left side of the metal plate below the control buttons.
4. In the File menu, click on Options and set the COM port to the appropriate setting (COM 1-8)

### 2.4.1 Using PC Connect

#### 2.4.1.1 Using Transfer

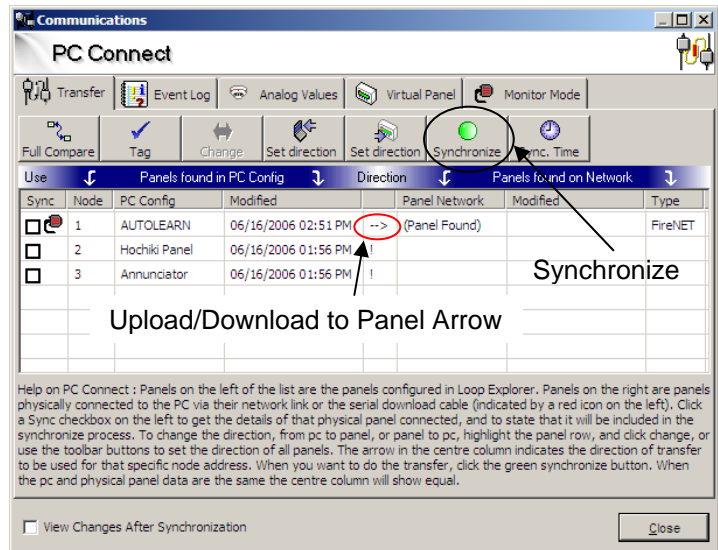
1. Click on the Connect icon on the tool bar or click File, P.C. Connect, to search the panel Network for attached panels and configurations in Loop Explorer.
2. A Password window will appear. Enter the correct password for access to the panel.
3. Press the **Connect** button.



**NOTE:** This password protects the panel's configuration data from unauthorized access. It is important to set and record the password that has been assigned to the panel for future and ongoing access to the configuration. This allows each FireNET installation to have security protection for the site specific programming.

4. Wait until Loop Explorer has searched all 64 possible panels, and it will then show the PC connection window.

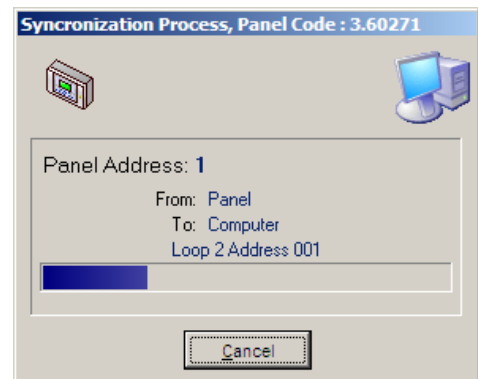
5. The Network tab allows you to transfer or retrieve data to the selected panel or panels. The panels that are on the network are shown as a list. Depending on the time stamp information (Modified) of both, Loop Explorer will suggest a transfer from PC to panel, or panel to PC.



6. Click the checkbox to select the panels desired for synchronization. The direction of config transfer can be changed by clicking **Change** in the toolbar above the PC connect detail view. Click **Synchronize** to activate the process. This will upload or download a configuration according to the orientation of change, indicated by an arrow in between the Modified heading and Panel Network.

7. Click **Full Compare** to compare panel configuration data against the PC configuration.

- “=” means the configuration data is the same.
- “←“ or “→” means they are not, and the arrow suggests the transfer direction for correct synchronization.



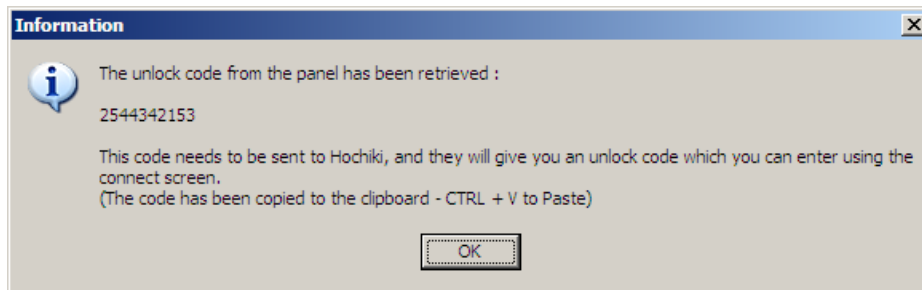
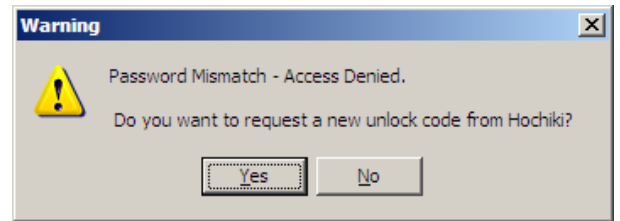
8. Click the **Synchronize Time** button to set the time and date in the FireNET panel. This operation will set the time/date in all networked panels to the time/date in the PC being used for programming

**WARNING:** Before downloading or uploading a panel/network configuration, the user should be aware of the resultant effect of transferring configuration data. When downloading to a panel/network from the PC (Loop Explorer), the configuration data in the panel/network will be erased and overwritten with the configuration data from Loop Explorer project file (\*.hsa). When uploading from a panel/network to the PC, the opposite will occur. The Loop Explorer project file will be erased and overwritten. Uploading from the panel/network should only be performed for emergency recovery in the event that the Loop Explorer project file has been lost or corrupted. Upload operation is not intended for routine use. The derivative uploaded project file will include panel/network configuration data, but will not include common Loop Explorer data not stored in the panel/network memory. Common practice should be to always use the source Loop Explorer project file and download to the panel/network.

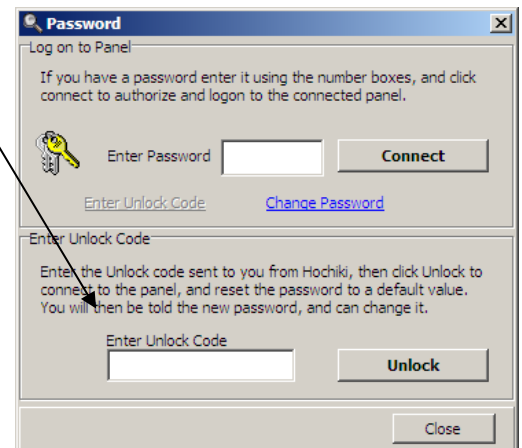
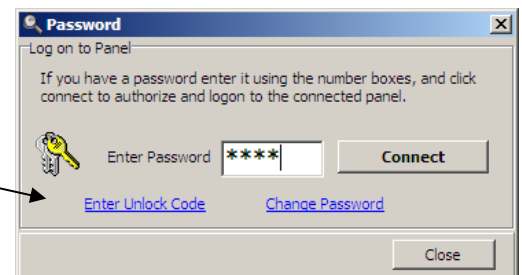
## 2.4.1.2 Using the Hochiki Unlock Code

If you do not have the correct password, the Hochiki Unlock Code must be used to remove the existing password and create a new one.

1. If you input the incorrect password an additional window will appear, asking if you wish to request an unlock code from Hochiki. Press the **Yes** button.
2. An additional window will appear, showing the encrypted unlock code. The code will automatically be saved to the Windows clipboard. Paste this code in to an email. From the **Tools** menu, select **Submit Bug/Comment Report** to create an email that will send the encrypted unlock code to [techsupport@hochiki.com](mailto:techsupport@hochiki.com) for decryption.



3. Upon customer verification, Hochiki will email the decrypted unlock code to the user. Upon receipt, open P.C. Connect.
4. In the Password window, click on the Enter Unlock Code.
5. The Password window will increase in size to show the Enter Unlock Code section.
6. Enter the decrypted unlock code in the appropriate box.
7. Press the Unlock button. The panel will revert back to a default password (1111).
8. A new password can now be installed for the panel.



**NOTE:** The encrypted and decrypted unlock codes are only valid for 24 hours. After 24 hours, the panel will create a new encrypted unlock code.

### 2.4.1.3 Using the Event Log

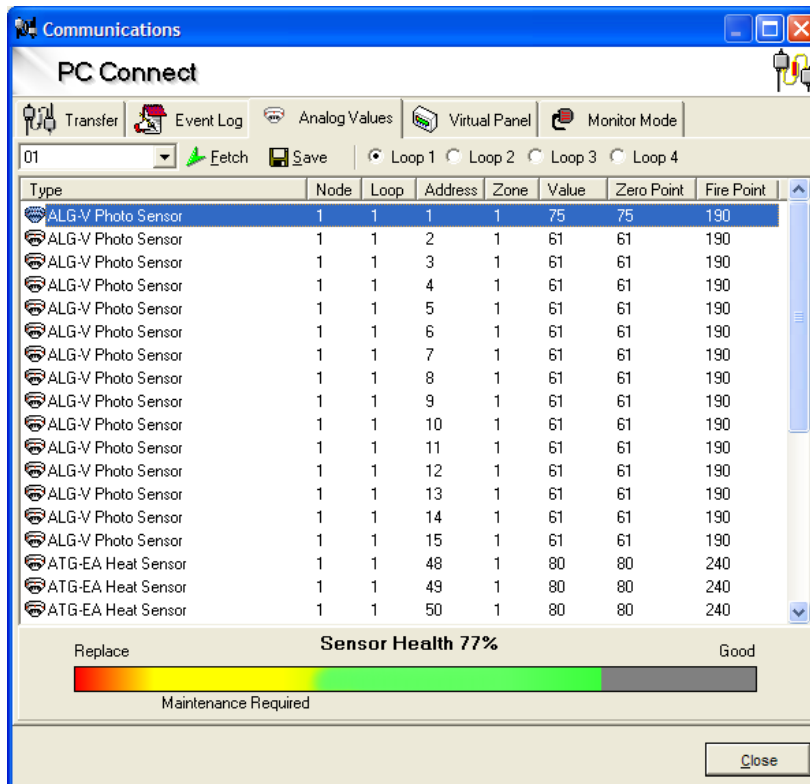
The Event log screen gives you the option of uploading the event log from a given panel from its stored memory, and to view it from your computer. The panel event log is capable of storing up to 500 events. The events are stored in order of priority and occurrence. When the event log is full, the oldest and lowest priority event will be dropped as new events occur.

1. Select the panel from the drop-down list box on the Event Log tab.
2. Click Fetch to obtain the log from the panel and display it Event Log window.
3. You may export the panel event log by saving the log to a file. Press Save to create/save the event log as an Excel spreadsheet file (\*.csv).

### 2.4.1.4 Device Analog Values

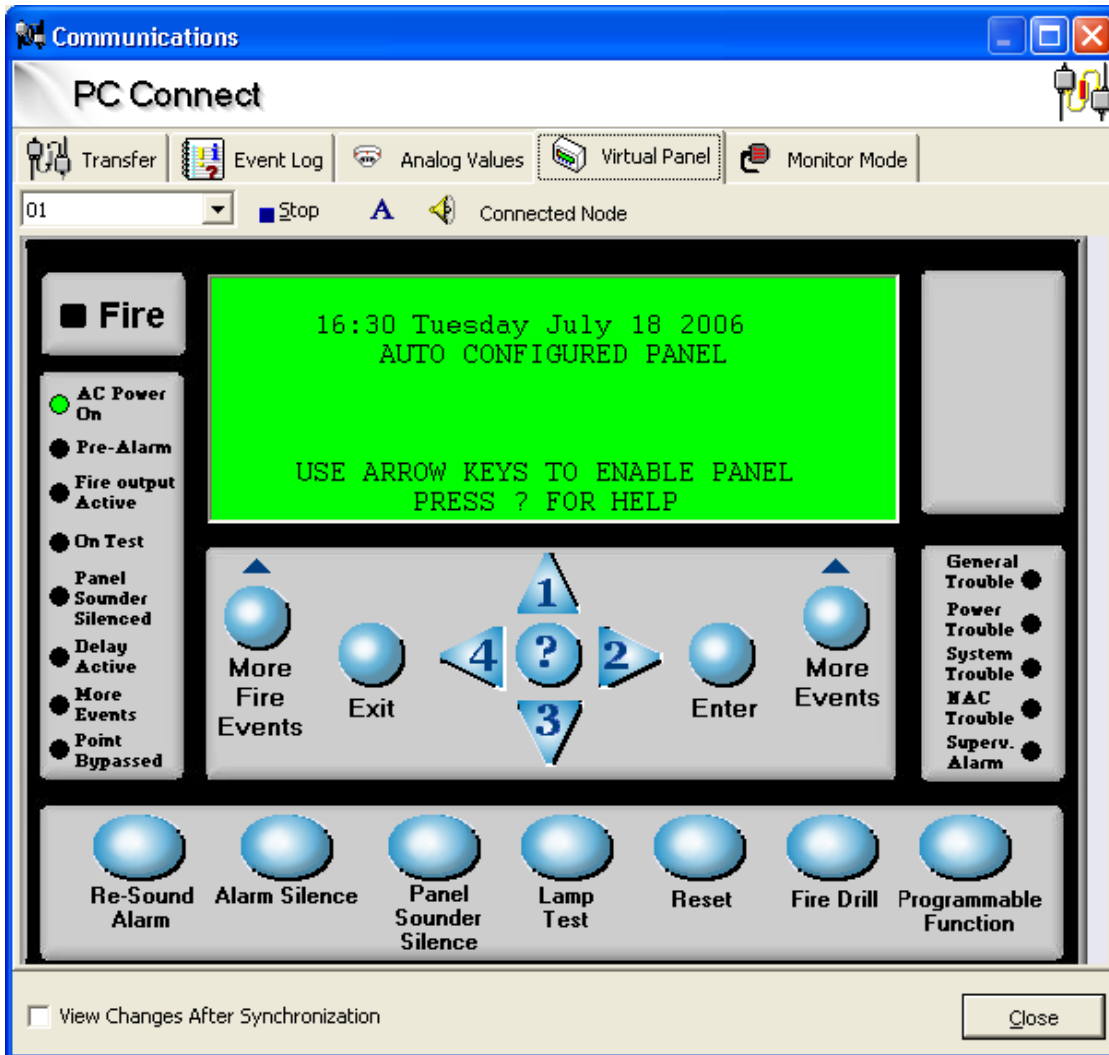
Sensors (detectors) on a SLC loop have Analog Values which represent current value (clean air), last calibrated zero point, and last calibrated fire point. These Analog Values relate to the health of the sensor. These values can be retrieved using the Analog Values window.

1. Choose a panel from the drop-down list box on the Analog Values tab.
2. Select a Loop on the panel using the buttons.
3. Click Fetch to retrieve the values of all sensors on the chosen Loop.
4. Click and select a device from the list to show the reading and the calculated percentage of the Health. Press Save to create/save the Analog Values as an Excel spreadsheet file (\*.csv).



### 2.4.1.5 Using Virtual Panel

The virtual panel will replicate the display and controls of the selected panel. Choose a panel from the drop-down box, then click start to mimic the panel display; you will be able to use all the buttons in the normal way. The LED's and LCD screen on the Virtual Panel display will indicate real-time status of the FireNET control panel selected.



### 2.4.1.6 Using the Monitor window

The Monitor Mode window allows you to monitor the actual ASCII event text via direct serial output from the panel connected on the chosen COM port. All event data will be displayed as it occurs from the connected panel. This is useful for seeing the real-time panel events being sent over the panel's COM port. Press Save to create/save the Monitor Mode activity as a Word file (\*.rtf).

## 2.4.2 Setting a COM Port

If you cannot connect to your panels, it may be necessary to adjust your COM Port settings

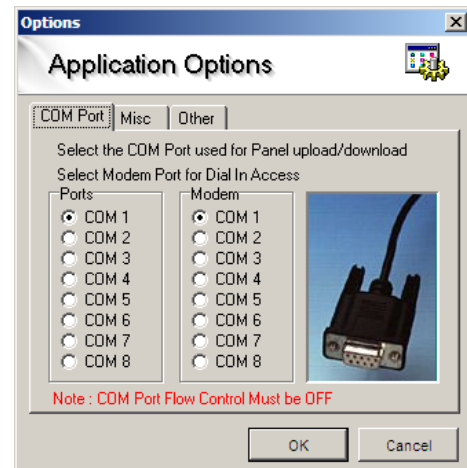
On some computers, it may be necessary to change the communications port used to transfer data to and from the panel. The default is COM 1; however it is fairly easy to change the selected COM port.

To Change the COM port:

1. Open File: Options from the Menu bar drop-down list.
2. An **Application Options** window (as shown) will appear, with the first tab COM Port selected.
3. Select the COM port you wish to use.

**NOTE:** Windows COM Port settings should be as follows:

- 9600 Baud
- 8 Data Bits
- No Parity
- 1 Stop Bit
- Flow Control None



**NOTE:** For computers that do not have COM (serial) ports, a USB-to-COM adapter will be needed. There are several 3<sup>rd</sup> party brands, types, and models available. They do not all perform the same and many have unique idiosyncrasies. Hochiki recommends the brand **IO Gear** model **GUC232A** unit or equivalent.

## 2.5 Getting Familiar with Loop Explorer

The FireNET Loop Explorer main screen contains a user-friendly interface that allows the installer or service person to easily navigate to any panel, circuit, loop, zone, or device on the system and quickly make any configuration changes required. (See Figure 2.5) This section provides a basic overview of the various elements of the FireNET Loop Explorer user interface.



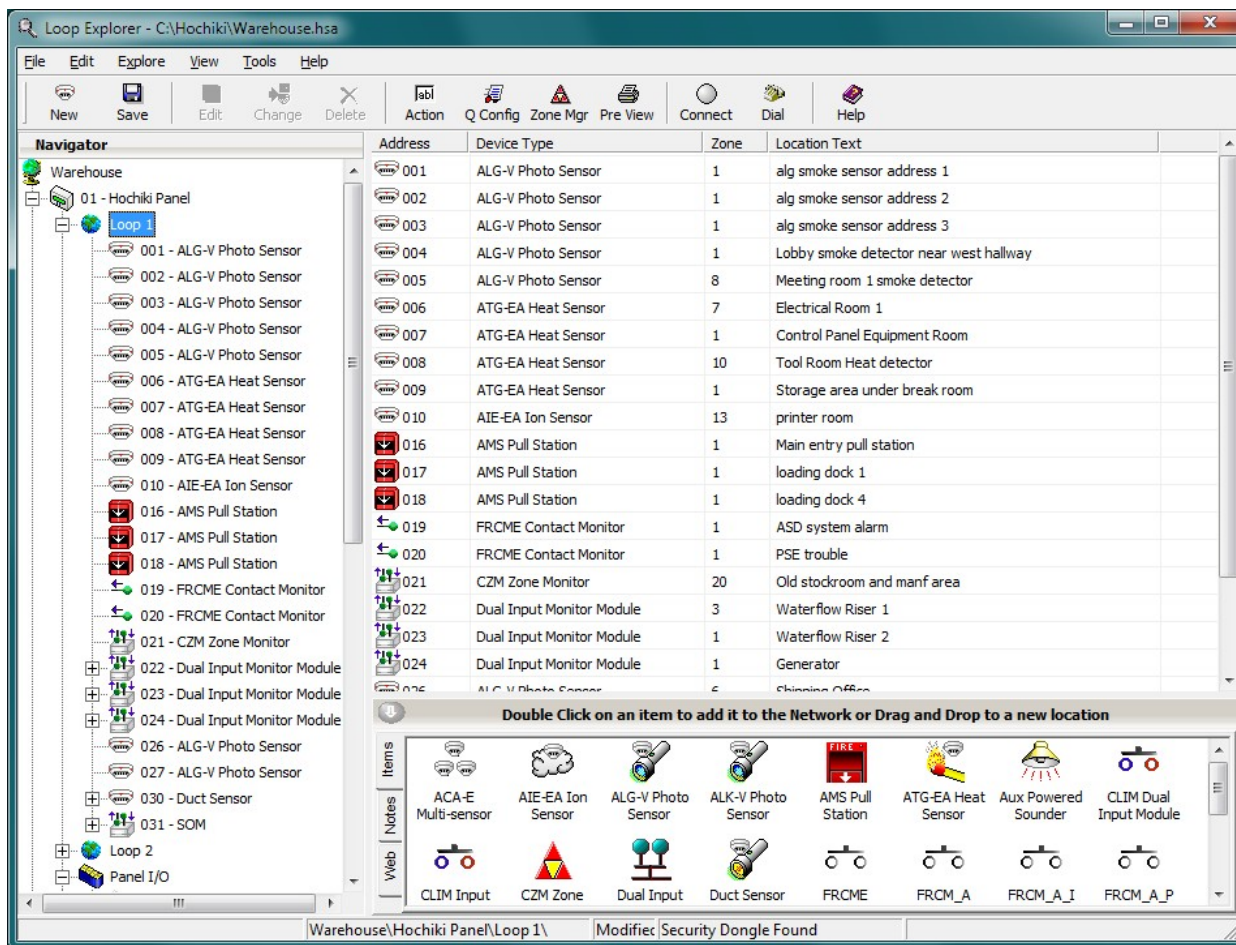


Figure 2.5 FireNET Loop Explorer Main Screen

## 2.5.1 User Interface

As shown in Figure 2.5, the Loop Explorer main interface has several different sections that make programming the FireNET control panel fast and easy to do.

The main screen has two main windows, the navigation tree on the left and the detail view on the right. The toolbar at the top allows the user to quickly carry out any action, just by clicking one of the buttons.

The Navigation tree acts like Windows Explorer allowing you to expand and contract levels using the + and - boxes, situated to the left of the items.

The detail on the right shows the selected items content. In Figure 2.5 the table shows what devices are currently connected to a loop. The detail view reveals extra information not given in the tree such as device type, location text and zone information. These cannot be changed through the detail viewer, but must be changed using the edit menus. Selecting the item from the table will expand that level. Or you may do so by clicking an expansion box in the site tree. The menus at the top can be expanded in the usual fashion and some toolbar options will also appear in the menus. All of the options at the top on the toolbar will become active or inactive according to what is selected in the Navigation tree and Device table.

### 2.5.1.1 Expanding and contracting windows in Loop Explorer

You may Expand and Contract any level in the navigation tree, shown as positive [+] or negative [-] boxes. To expand one level, click on the positive box next to the level you wish to expand. In figure 2.5, click on the [+] box next to the panel and the level is expanded, revealing that it has two loops and a local panel I/O (all panels have a local panel I/O). You may further expand each level by clicking on its [+] box or by double clicking on the item itself. To contract a level do the reverse; click on its [-] box, which will contract that level, hiding the detail.

To completely expand or contract all positive and negative boxes, select the very top level, which will be the site name in the navigation tree, then use the right click option menu to select either Full Expand, or Full Contract.

### 2.5.1.2 Menu

Across the top of the main Loop Explorer screen is the menu bar. The menu bar contains 6 pull down menus **File**, **Edit**, **Explore**, **View**, **Tools**, and **Help**, which will be explained later in this section.

### 2.5.1.3 Toolbar

The toolbar is located directly under the menu bar at the top of the main screen. The most common Loop Explorer menu commands are duplicated on the toolbar and represented by name and graphical icon.

### 2.5.1.4 Navigator Pane

Along the left hand side on the main screen is the Navigator pane. The navigator pane is similar to the Windows Explorer style directory tree used in Windows operating systems. The Navigator pane displays all of the components of the system in a tree type structure. System components such as an SLC loop, that have the ability to have additional devices connected to it, can be expanded to show all of the connected devices, or contracted to show just the loop name by clicking on the [+] or [-] sign next to its name.

### 2.5.1.5 Device Table

The device table is the table of cells that take up the most space on the main screen. This table displays a list of all the devices, circuits, or sub-addresses that are associated with the device currently selected in the Navigator pane. Devices in the Device Table can be double-clicked on to configure the attributes of that device.

### 2.5.1.6 Items / Notes / Web Section

The **Items/Notes/Web** section at the bottom of the main screen has tabs along the left side that switch the content of the section from **Items**, **Notes** or **Web** view. In **Items** view, a list of items that can be added to the device currently selected in the Navigator pane is displayed. You can double click or drag and drop these items from the Items Pane to the Navigation tree. The **Notes** view provides a small amount of space to keep notes about the project. Basic word processing type formatting tools are available from a toolbar that is displayed above the Notes section. If the formatting tools are not visible you can display them from the **View** menu by clicking on **Notes Toolbar**. The **Web** view allows a user to connect to the Hochiki web site and access application and technical support services, as well as providing contact information for relevant questions.

### 2.5.2 Menu and Toolbar Overview

Across the top of the screen is the main menu and just below that is the toolbar. Many of the options on the menu and toolbar are similar to what you have experienced in other Windows based programs. The functions on the toolbar are the more frequently used features of the Loop Explorer software. If you prefer, the toolbar commands also appear in the drop down menus above.

The following sections will give you a brief overview of each of the menu and toolbar functions.

#### 2.5.2.1 File Menu

The File menu is very similar to what you have seen in other Windows based programs. Following is a brief overview of each command on the File menu and its associated function.

##### **New - (Also appears as an icon on the toolbar)**

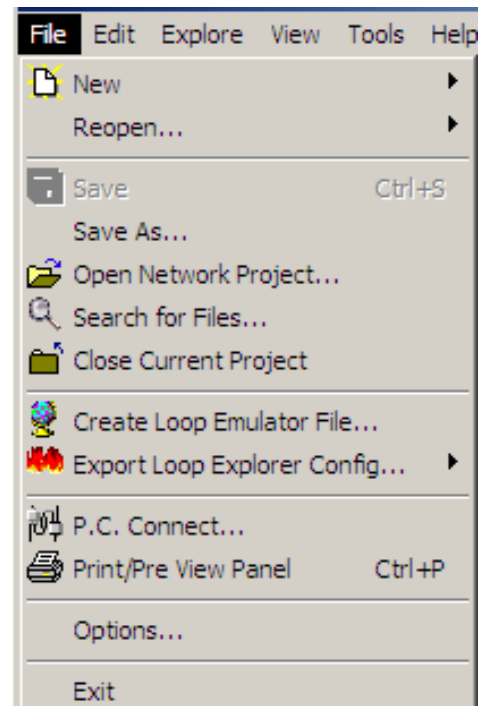
The New menu has two sub menus Config and Device. Config allows you to start a new project or network. Device will give you a choice of devices that can be added to the current project. The Device menu option will change and display only those devices that can be added to the section of the panel you are currently working on.

##### **Reopen**

Reopen allows a user to select from the 10 most recently opened databases, without the need to search for it on a user's hard drive or server.

##### **Save - (Also appears as an icon on the toolbar)**

Saves the current project to disk.



**Save As**

Saves the current project to disk with another file name or to a different file location.

**Open Network Project**

Opens a previously saved FireNET Loop Explorer project.

**Close Current Project**

Closes the current project being worked on. You will be prompted to save the project if it was not saved prior to selecting this menu option.

**Create Loop Emulator File**

Allows the selected panel configuration to be exported as a \*.hle file, which can be used with the Hochiki True Loop Emulator tool that will be released in the future.

**Export Loop Explorer Config**

Allows the selected panel network configuration to be exported as a \*.lx2 file which can be imported into a Hochiki graphics software package that will be released in the future.

**PC Connect - (Also appears as an icon on the toolbar)**

Establishes communication between the FireNET panel and PC. The FN-X187 or FN-S187 serial programming cable must be installed between the PC and the panel. The COM port of the PC must be identified to the Loop Explorer software through the Options menu for the communication link to operate properly.

**Print/Pre View Panel - (Also appears as an icon on the toolbar)**

Print/Pre View will allow you to print a report of all the configuration data for the current project. Several filters are available that allow you to add or delete various sections of the report.

**Options**

Brings up a new window that will allow you to set global parameters for the Loop Explorer software such as COM Port number, and default file location that Loop Explorer saves projects to.

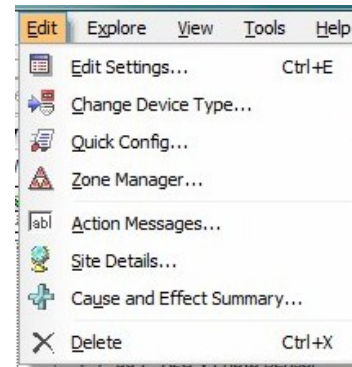
**Exit**

Close the FireNET Loop Explorer application.

## 2.5.2.2 Edit Menu

### **Edit Settings - (Also appears as an icon on the toolbar marked Edit)**

Edit Settings will allow you to change the configuration of any device that is currently selected in the Navigator pane. For example if you have clicked on the FireNET control panel in the Navigator pane, the configure panel window will open up allowing you to change the options specific to that panel.



### **Change Device Type - (Also appears as an icon on the toolbar)**

This menu option will only be active if an SLC loop device is selected in the Navigator pane or the device list table. By selecting Change Device Type you can easily change any SLC loop device to another type of device. For example you can change an R2M dual relay module to an FRCME-4 input module.

### **Quick Config - (Also appears as an icon on the toolbar)**

The quick config menu option is only active when a panel has been selected in the Navigator pane. Quick config opens up a table that shows every SLC device on the loop and allows you to edit the zone number and location text of each SLC device shown.

### **Zone Manager - (Also appears as an icon on the toolbar)**

The Zone Manager menu option brings up a new window with a list of zones 0-500 available on each system. By clicking on each zone number in the list, you can quickly view all of the SLC devices, or panel inputs and outputs that are assigned to that zone. Zone Manager also allows you to drag and drop SLC devices and panel I/O to a particular zone. The alarm verification feature can be enabled or disabled from Zone Manager on a per zone basis.

### **Action Messages- (Also appears as an icon on the toolbar)**

The FireNET panel has 11 predefined action messages that can be assigned to inputs on the system. These action messages appear on the main panel LCD status display when the input they are assigned to activates. The 11 predefined action messages that the system includes are:

- Fire
- Trouble
- Pre Alarm
- Supervisory Alarm
- Auxiliary
- Silence
- Reset
- Fire Drill
- Transparent

In addition to these 11 predefined action messages you can add 9 custom action messages of your choosing. These custom messages can be up to 15 characters long.

Select the **Action Messages** menu option to create/edit these custom action messages.

### **Site Details**

Loop Explorer defines a Site as a single FireNET panel or multiple FireNET panels configured in a network. The default name for a site is "New Site". Using the Site Details menu option you can give the site a new custom name of up to 25 characters. The site name only appears in the Loop Explorer software and does not appear on the panel display.

### **Cause and Effect Summary**

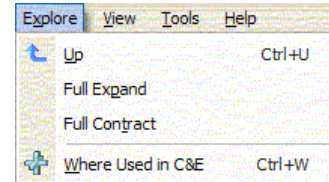
The C&E Summary menu option opens a new window that has a summary view of all Cause and Effect relationships on the system. A cause and effect relationship is a custom program you create to link any input or group of inputs on the system, to any output or group of outputs. The cause and effect relationships on the FireNET system can be extremely powerful and are explained later in this section of the manual.

### **Delete - (Also appears as an icon on the toolbar)**

The delete menu option will delete the device that is selected in the Navigator pane from the system. As a safeguard to inadvertently deleting an entire panel, Loop Explorer requires that all of the devices on the SLC loops be deleted before a panel can be removed from the configuration.

### 2.5.2.3 Explore Menu

The Explore Menu has basic commands that allow the user to navigate and change the appearance of the Navigator pane.



#### Up

The Up menu command moves the selection in the Navigator pane up one level. For example, if an SLC loop device is selected, clicking Up will move the selection to the Loop level. If a loop is selected, clicking Up moves the selection up to the Panel level.

#### Full Expand

The Full Expand command fully expands the item currently selected in the Navigator Pane. If a panel is selected, Full Expand will show all of the panel's Loops, SLC Devices and I/O circuits with a single click. If the Site is selected, all panels will be expanded, along with all Loops, SLC Devices and I/O for every panel. With a single click Full Expand is the equivalent of clicking the [+] box next to every panel and loop in the Navigator pane.

#### Full Contract

Full Contract is the opposite of Full Expand. When you click on Full Contract, the selected item is contracted to show only the very top level of that item.

#### Where Used in C&E

The Where Used in C&E option will display the name of all Cause and Effect relationships assigned to the selected SLC or I/O device. This summary can help establish where and how an input or output is being used in your custom C&E programming.

## 2.5.2.4 View Menu

### Normal Details / List Icons

The first two menu options change the appearance of the Device Table. By choosing **Normal Details**, the Device Table displays the standard table data with separate cells for Item, Type, Location Text, and Zone.

By choosing **List Icons**, the Device Table shows only icons and the addresses of the system devices.

### Show Task Pane

The task pane is a small window that has a hyperlink list of the most common tasks or operations that are done to configure a typical system. Clicking this menu option shows or hides the task pane.

### Show Long Device Names

This option changes the display of the Navigator pane. If **Long Device Names** is selected (checkbox next to menu option) the full name of each device (Dual Relay Module) is shown in the Navigator pane. If **Long Device Names** is not selected the part number only (R2M) displays in the Navigator pane.

### Show Notes Toolbar

If selected, this option displays the formatting toolbar on the Notes section at the bottom of the main screen. If not selected the formatting toolbar is not displayed.

### Show Toolbar

The main toolbar is located just below the menu bar at the top of the main screen. Clicking this menu option shows or hides the main toolbar.

### Show Grid Lines

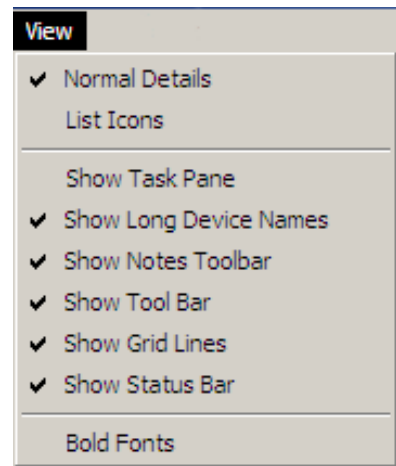
Clicking this menu option shows or hides the grid lines in the Device Table.

### Show Status Bar

The status bar is the small gray bar located at the very bottom of the main screen. It is divided into sections that provide information related to the operation you are performing in Loop Explorer. Clicking this menu option shows or hides the status bar.

### Bold Fonts

When selected, the fonts are bolded in the Navigation Pane and the Device Table.

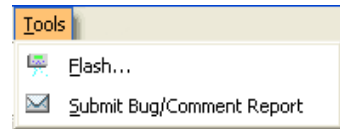




### 2.5.2.5 Tools Menu

#### Flash

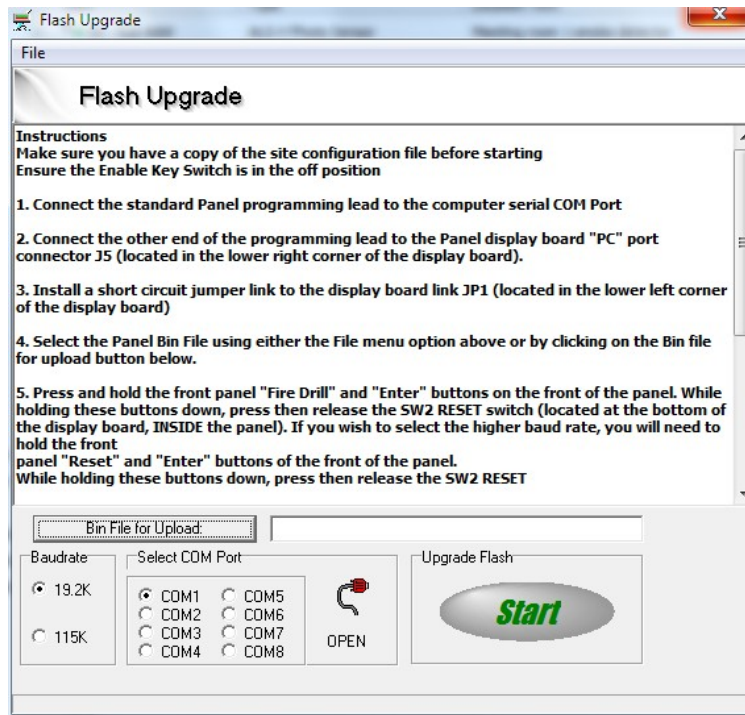
The firmware that the FireNET panel utilizes can easily be upgraded as Hochiki adds new features to the product in future releases. This menu option will open a new window that will allow you to “flash” (update) the FireNET panel firmware. This utility should only be used under the direction of Hochiki America technical support by Hochiki certified service professionals.



**WARNING!** Improper use of the Flash option can result in damage to the panel's firmware and operation.

When performing a “flash” upgrade to a panel, contact Hochiki Tech Support to ensure proper firmware versions and compatibility.

Before beginning the “flash” upgrade process, be sure to review and then follow the exact instructions outlined in the Flash Upgrade window when executing the process.

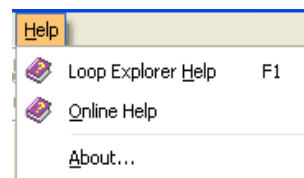


#### Submit Comment / Bug Report

Selecting this menu option will launch your computers email program and open a new email addressed to Hochiki America technical support. You may use this to send comments or bug reports to Hochiki via email.








### 2.5.2.6 Help Menu






Loop Explorer contains a very comprehensive help system that can answer most of your programming questions.





### 2.5.3 Main Tool Bar Icons

Though Loop Explorer uses menu items, it also uses Navigation Icons for those actions that are more frequent.

 New	New Panel	Allows you to add another Panel to your site. You will only see this icon on the icon toolbar if you have selected the Site at the top of the Navigation tree.
 New	New Option Board	Allows you to add another Option board to your panel. You will only see this icon on the icon toolbar if you have selected a panel in the Navigation tree.
 New	New Device	Allows you to add another device to a loop. You will only see this icon toolbar if you have selected a loop in the Navigation tree.
 Save	Save	Saves the current project to disk.
 Edit	Edit Settings	Edit Settings will allow you to change the configuration of any device that is currently selected in the Navigator pane. For example if you have clicked on the FireNET control panel in the Navigator pane, the configure panel window will open up allowing you to change the options specific to that individual control panel.
 Change	Change Device Type...	This menu option will only be active if an SLC loop device is selected in the Navigator pane or the device list table. By selecting Change Device Type you can easily change any SLC loop device to another type of device. For example you can change an R2M dual relay module to an FRCME-4 input module.
 Delete	Delete	The delete menu option will delete the device that is selected in the Navigator pane from the system. As a safeguard to inadvertently deleting an entire panel, Loop Explorer requires that all of the devices on the SLC loops be deleted before a panel can be removed from the configuration.




 Used In	Where Used in C&E Summary	The Where Used in C&E option will display the name of all Cause and Effect relationships assigned to the selected SLC or I/O device. This summary can help establish where and how an input or output is being used in your custom C&E programming.
 Action	Action Messages	FireNET has 11 predefined action messages that can be assigned to inputs on the system. These action messages appear on the main panel LCD status display when the input they are assigned to activates. The 11 predefined action messages that the system includes are: <ul style="list-style-type: none"> <li>• Fire</li> <li>• Trouble</li> <li>• Pre Alarm</li> <li>• Supervisory Alarm</li> <li>• Auxiliary</li> <li>• Silence</li> <li>• Reset</li> <li>• Fire Drill</li> <li>• Transparent</li> </ul> <p>In addition to these 11 predefined action messages you can add 9 custom action messages of your choosing. These custom messages can be up to 15 characters long.</p>
 Q Config	Quick Config	Opens a new window in Loop Explorer that allows a user to define the Zone and text for each device connected to each loop on a panel.
 Zone Mgr	Zone Manager	The Zone Manager icon brings up a new window with a list of zones 0-500 available on each system. By clicking on each zone number in the list, you can quickly view all of the SLC devices, or panel inputs and outputs that are assigned to that zone. Zone Manager allows you to drag and drop SLC devices and panel I/O to a particular zone. The alarm verification feature can be enabled or disabled from Zone Manager on a per zone basis.
 Pre View	Print/Preview Panel	Print/Preview will allow you to print a report of all the configuration data for the current project. Several filters are available that allow you to add or delete various sections of the report.

	PC Connect	Establishes communication between the FireNET panel and the PC. The Loop Explorer serial cable must be installed between the PC and the panel, and the COM port of the PC must be identified to the Loop Explorer software through the Options menu for the communication link to operate properly.
	Help	Loop Explorer contains a very comprehensive help system that can answer most of your programming questions.



## 2.5.4 Items Pane Icons

The Items Pane gives a user the ability to drag and drop icons into the Navigation Pane. All hardware items (panels, option boards and devices) are available for a user to pull directly into the user's site quickly and simply.














### 2.5.4.1 Panel Icons

 Hochiki 2 Loop Panel	FireNET 2127 2 Loop Control Panel	Adds a 2-Loop Panel to the site.
 Hochiki 4 Loop Panel	FireNET 4127 4 Loop Control Panel	Adds a 4-Loop panel to the site
 Network Annunciator	Network Annunciator	Adds a FN-LCD-N Network Annunciator to the site




### 2.5.4.2 Option Board Icons

 I/O Module	I/O Module	Adds a 16 channel I/O board to a panel
 Serial Annun.	Serial Annunciator	Adds a FN-LCD-S Serial Annunciator to a panel

### 2.5.4.3 Device Icons

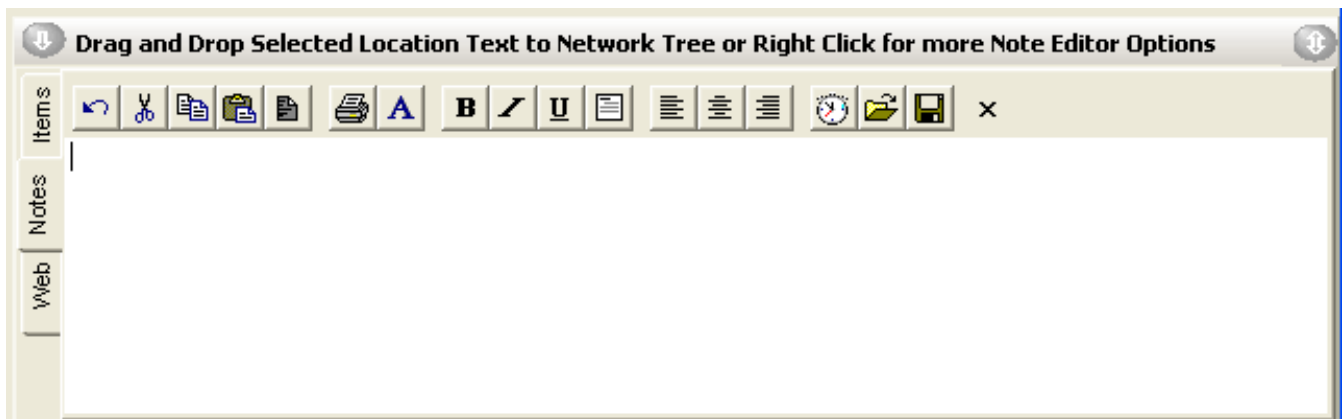
 Duct Sensor	DH98-A DH98-AR	Adds a DH98-A or a DH98-AR analog duct detector to a Loop
 FRCME Cont...	FRCME	Adds an addressable FRCME contact monitor module (all FRCM varieties)
 Supervised Output Module	SOM	Adds an addressable Supervised Output Module to a Loop (all SOM varieties)
 Dual Relay Module	R2M	Adds an addressable Dual Relay Module to a Loop (all R2M varieties)
 ALK-V Photo Sensor	ALK-V ALK-V2	Adds an ALK-V or ALK-V2 Analog Photoelectric Smoke Detector to a Loop
 ALG-V Photo Sensor	ALG-V	Adds an Analog Photoelectric Smoke Detector to a Loop
 ATG-EA Heat Sensor	ATG-EA	Adds an Analog Heat Detector to a Loop
 AIE-EA Ion Sensor	AIE-EA	Adds an Analog Ionization Smoke Detector to a Loop
 ACA-E Multi-sensor	ACA-V	Adds an Analog Multi (Photoelectric and Heat) Detector to a Loop
 CZM Zone Monitor	CZM	Adds an addressable Conventional Zone Module to a Loop
 Dual Input Monitor...	DIMM	Adds an addressable Dual Input Module to a Loop
 Aux Powered Sounder	ASB	Adds a Aux Powered Sounder to a device
 AMS Pull Station	AMS	Adds an addressable AMS Pull-Station

#### 2.5.4.4 Cause and Effect Icons

 Action	Cause and Effect Action	Opens the Cause and Effect wizard for creating a Cause and Effect Action.
 Disablement	Cause and Effect Disablement	Opens the Cause and Effect wizard for creating a Cause and Effect Disablement.
 Test Mode	Test Mode	Opens the Cause and Effect wizard for creating a Cause and Effect Test Mode.

#### 2.5.4.5 Notes Pane

The **Notes** pane allows the user to add notes about the project. It includes many features found in a word processor program which are listed in the right click options menu. The Notes feature operates much like a simple version of Microsoft Word®.



The menu icons items in the Notes toolbar are as follows:

##### **Undo-**

This action will undo the last change made to the text in the box.

##### **Cut, Copy, Paste-**

These allow you to Cut or Copy text, and to Paste text into the Notes. You can use Cut, Copy and Paste to move text to and from other applications.

##### **Select All-**

This will select all the text in the text box, ready for a change that will affect the entire text.

##### **Print-**

This will bring up the usual print dialog, from where it's possible to select a printer, and print out the contents of the Notes.

**Font-**

Select this to bring up a Font Dialog box, which allows you to change the font size, and style of the selected text, and any text written after the cursor.

**Bold-**

This will change the selected text to Bold

**Italic-**

This will change the selected text to italic.

**Underline-**

This will change the selected text to underlined.

**Word Wrap-**

Word wrap is useful if you want to make sure you view all the text in the box at the same time. If there is more text than the length of the Notes pane, then the text will wrap to the next line.

**Left Justify-**

This will change the selected text to a left justification, like the text on this page.

**Center Justify-**

This will change the selected text to a center justification.

**Right Justify-**

This will change the selected text to a right justification.

**Insert Date and Time-**

Use this to insert the current date and time, in the format to which your computer has been set to.

**Import Text from File-**

You may import text from a .txt or .rtf file, but note that all text in the text box will be overwritten with the text in the file. If you do not want this to happen, select the text in another application, and copy and paste it into the Loop Explorer Notes.

**Save to File**

This will save the contents of the Notes pane to a selected file with the .rtf format file extension, which can then be used in any other text editor.

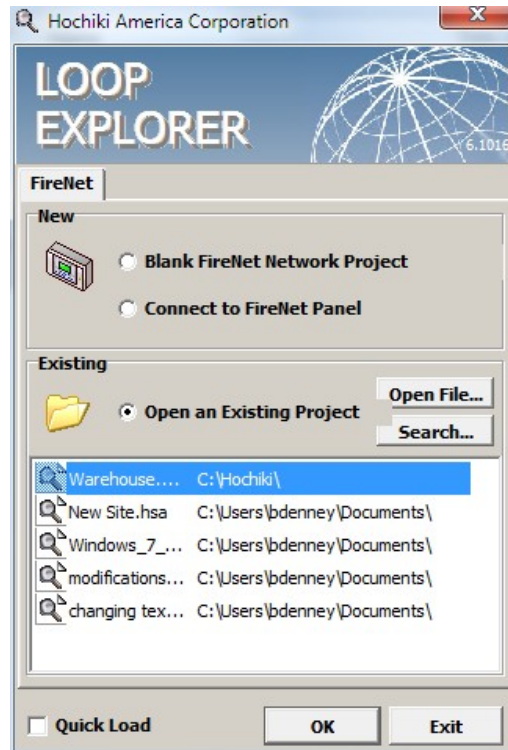
**Hide Toolbar-**

Check this option to hide the toolbar, which attaches to the top of the Notes page. The toolbar has the same options as the Right click menu.

## 2.6 Developing a Site

### 2.6.1 Creating a New Site

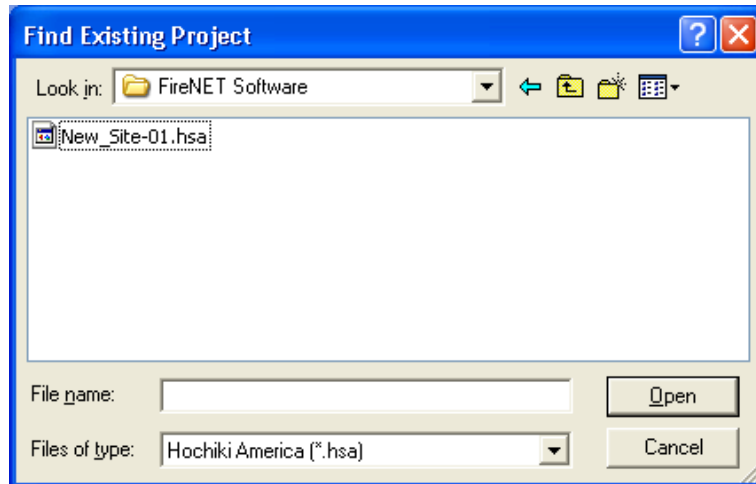
1. When starting Loop Explorer you will be presented with a Loop Explorer window.
2. If you wish to start a new Network Project, Click on **Blank FireNET Network Project**, and click **OK**.
3. You will now be asked to save the project. Select a suitable location and click save. This will now save the empty project. Any further changes made to the new site will automatically be saved to the file just created if **AutoSave** is enabled in **Options**. If not, you must click the **Save** icon after changes are made. You will now be presented with a blank project with only **Cause and Effect** in your navigation tree, and the “Welcome to Loop Explorer” task pane.





## 2.6.2 Editing an Existing Site

Click on **Open an Existing Project** and either enter the path by typing it in or click Find File to browse and find the site you wish to open. Click Open to open it. The displayed file format is .HSA, which is unique to Loop Explorer, and you will only see Loop Explorer files (.hsa) in the directory you are viewing.



### 2.6.2.1 Finding a Recent Project

1. Open Loop Explorer.
2. In the menu, click the **File: Reopen**.
3. Then choose the file from the list. Only the ten most recently opened files will be displayed.

### 2.6.2.2 Opening a new project file while within a Loop Explorer project file

1. Click **File, New> Config...** This will ask if you wish to open a different site.
2. Click the Close box in the top right-hand corner to exit this window and return to your current site, or you may continue to open and create a new project. Click Exit to exit the Loop Explorer program.

**NOTE:** You may also close a project by clicking **File: Close Current Project**.

### 2.6.2.3 Opening an existing project while in a different Loop Explorer project file

1. Click **File: Open Network Project**. This will show a browsing window.
2. Select the desired project and click OK to open it or Cancel to exit the window.

### 2.6.2.4 To Change the Name of a New Site

1. Click on the Site name in the Navigation tree after creating a new site.
2. Click on Edit from either the right click menu or the toolbar.
3. Enter the desired site name (25 characters maximum).

## 2.6.3 Saving a Site

You may save the project you are working on at any moment, just by clicking on the Save icon in the toolbar. This will save all changes you have made since your last save point. The Save option will only become available if you make changes to an existing project, otherwise it will be inactive. By clicking Save, you will overwrite the current project file, and replace it with the new configuration.

If you have never saved the particular project before now, it will prompt you to choose a filename and folder to be saved into. This can be done at any time, using the **Save As...** option.

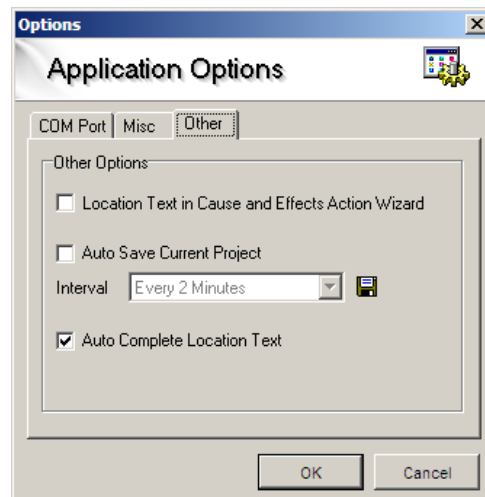
If you try to close a project without saving it, Loop Explorer will ask for confirmation before closing the project.

### 2.6.3.1 Using Autosave

A user has the option to set up Autosave, which will automatically save the project at a specific interval. Saving will not be done if the PC connect screen is open.

To Enable Auto Save:

4. Open File: Options from the Menu bar.
5. An **Application Options** window (as shown) will appear, click on the **Other** tab.
6. Select the **Autosave Current Project** checkbox.
7. Select the appropriate **Interval** you wish the project to Autosave.



## 2.7 Configuring Panels to a Network

---

The FireNET analog addressable fire system is capable of supporting a maximum of 64 nodes (panels and network annunciators) and a maximum of 500 network-wide zones. Any number of devices can be allocated to any zone ensuring that any system configuration can be easily accommodated.

To ensure that the system is installed and commissioned with the minimum of trouble, it should be carefully planned before the installation is begun. This involves allocating an address to each device and allocating a message of up to 40 characters (including spaces) to each address to assist in the location of the devices. Devices should then be grouped into zones in accordance with the appropriate fire detection systems design standard, building plans, and local fire codes. The FireNET control panel offers an extensive list of features and options for fire alarm control and monitoring that can be configured via Loop Explorer or the front panel controls.

### 2.7.1 Adding a Panel

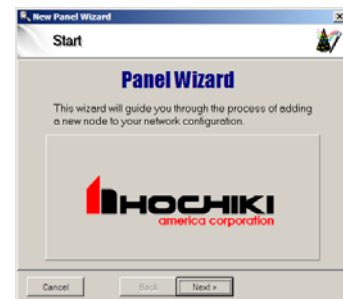
Upon starting a new network you will automatically be asked if you want to add a new panel to the project by using the Panel Wizard. Click yes, and the Panel Wizard will start, or click No to directly edit the configuration settings of the new panel.

To add another new panel to the configuration you may do it several different ways, using the main menus, toolbar, and right click menu.

#### 2.7.1.1 Using the Panel Wizard

The Panel Wizard will easily help you to add a panel to your network, and will set up a lot of the default values for you. These default values can be edited or changed later using the panel configuration screen.

1. Click on the **Site** in the Navigation tree.
2. Click **File: New: New Panel**.
3. You will be asked if you want to use the **Panel Wizard**. Click the **Yes** button.
4. You will see the **New Panel Wizard** window open. Click the **Next** button.
5. The first screen will be **Panel Text**. You will be asked to give the new panel a name (up to 15 characters). If you wish you can add some descriptive text that will be displayed on the panel's LCD screen when it is in the idle state (i.e. Second-floor lobby). Click the **Next** button when finished.



**NOTE:** When adding panels via the Panel Wizard, Loop Explorer will automatically assign addresses to the panels, starting from 1, and going up in order.

6. Choose the number of **Loops** the panel will have (2 or 4), and then click the **Next** button.
7. Choose the **General Alarm Mode** for the panel (Common, Zonal, 2-Stage), and then click the **Next** button.

8. A Review screen will appear. If your selected values from the previous screens are correct, click the **Next** button. If you wish to make changes, click on the Back button.
9. You will come to the Finish screen. You will be given three choices:
  - Edit location text using Quick Config
  - Edit the Advanced Panel Settings
  - Return to Explorer

Select the appropriate the choice and click the **Finish** button.

### 2.7.1.2 Using the Menu bar

1. Click on the **Site** in the Navigation tree.
2. Click **File: New: New Panel**
3. You will be asked if you want to use the **Panel Wizard**. Click the **No** button.
4. You will see a **Protocol Options** window; select the panel you wish to use.

**NOTE:** To select either a 2 Loop or a 4 Loop panel, select **Hochiki America Panel**.

5. You will immediately be asked to configure the panel using the **Configure Panel Settings** window.
6. Once the panel has been configured, press the **OK** button.

### 2.7.1.3 Using the Tool bar

1. Click the **New Panel** button on the toolbar
2. You will be asked if you wish to use the Panel Wizard. If you wish to use Panel Wizard, follow Steps 3-9 of 2.7.1.1. If you DO NOT wish to use Panel Wizard, follow Steps 4-6 of 2.7.1.2.



### 2.7.1.4 Using Navigation Tree

1. Right click over the site in the Navigation tree, and click New Panel.
2. You will be asked if you wish to use the Panel Wizard. If you wish to use Panel Wizard, follow Steps 3-9 of 2.7.1.1. If you DO NOT wish to use Panel Wizard, follow Steps 4-6 of 2.7.1.2.

### 2.7.1.5 Use the Items Pane

1. Select the icon that represents the panel you have selected
2. Drag-and-drop the icon on the Site at top of the Navigation tree.
3. (or) Double-click on the Icon to automatically place the panel in the Navigation Tree.

## 2.7.2 Configuring and Editing a Panel

In order to edit the features of a panel, select the appropriate panel icon either in the Navigation tree or in the Table (if Site is selected in the Navigation tree). To open the Configuration Node, either:

- In Menu bar, select **Edit: Edit Settings...**

Or

- Right click the panel icon and select **Edit Settings...**

Or

- Click the **Edit** icon on the Toolbar...

The Configuration Node will open, allowing you to add or change values in three tabs: Panel Data, Times, and Network Interface.

### 2.7.2.1 Configure Node: Panel Data

From the configuration window you can change any of the options from their current settings. The example shows a panel's default values.

#### Panel Name

The name of the panel does not have to be unique and it may contain any characters. It is suggested that panels be assigned meaningful names. If panels are not named they will be allocated sequential numbers.

#### Panel Address

The node number of a panel on a Multi-Panel Network. The panel address will be incremented every time you add a new panel. It is possible to set the address to a free address by using the drop down menu.

#### Access Level 3 passcode

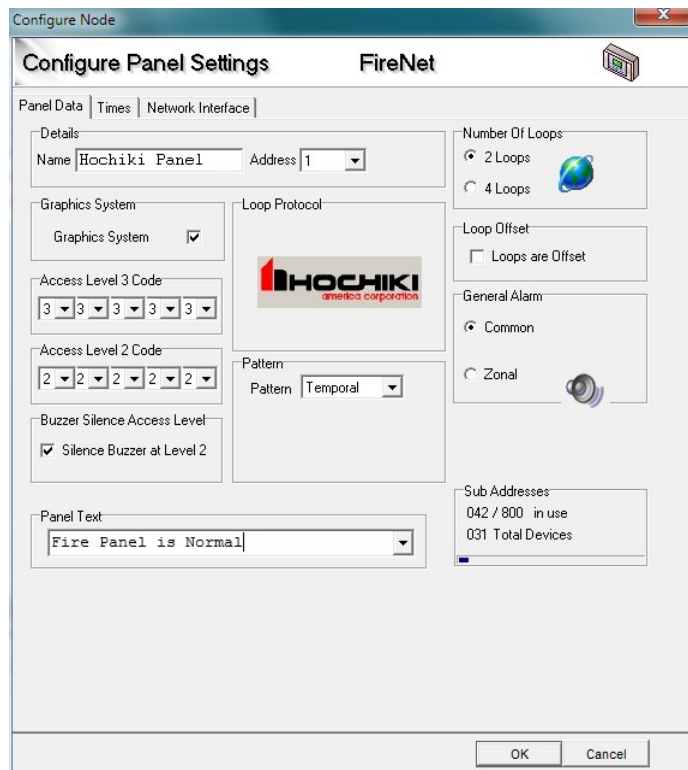
Passcode for high-level access to operate all functions of a FireNET panel (i.e. editing the configuration).

#### Access Level 2 passcode

Passcode for Intermediate access to operate commonly used functions of a FireNET panel, such as silencing an alarm, resetting an alarm, and operating primary panel functions.

#### Number of Loops

The panel can have 2 or 4 loops. You may not decrease the number of loops unless the loops to be removed have zero devices attached to them.



## Loop offset

This option will offset all panel loops by the total of the previous loop count. This is typically used when more than one panel is installed in a network, so that the loop numbering will be sequential across several panels.

The changes to the loop numbering will be shown in the Navigation tree, and all other places where loop numbers are mentioned throughout the program. So if a network had three panels, with 4 loops each at address 1 2 and 3, panels 2 and 3 could be offset, so their loops would change to loops 5,6,7,8 for panel 2, and 9,10,11,12 for panel 3.

## General Alarm Mode

There are three options for Gen. Alarm Mode: -

- **Common Alarm** - All NAC outputs activate from any fire input regardless of which zone they are in.
- **Zoned Alarm** – NAC outputs in the same zone as the input, which caused the alarm, will activate.
- **Two Stage Alarm** - Outputs that are in the same zone as the input which caused the alarm will activate while outputs in all other zones will pulse 1 second on - 1 second off.

The factory default setting for the panel General Alarm Mode is Common Alarm. This normally applies to notification appliances and would normally be accompanied by the Silenceable attributes.

**Note:** Panel outputs mapped to zone 0 will operate as common general alarm, regardless of the general alarm setting. Do not assign loop outputs to zone 0.

## Pattern

This option allows you to select the output Pattern for the panel's on-board NAC circuits. Available options are -

- **Continuous**- Continuous pattern is assigned to the NAC outputs
- **Temporal**- a Temporal pattern is assigned to the NAC outputs
- **March Code**- a March code is assigned to the NAC outputs.

The screenshot shows the 'Configure Node' dialog box for 'FireNet'. The 'Configure Panel Settings' tab is active. The 'Details' section shows 'Name: Hochiki Panel' and 'Address: 1'. The 'Number Of Loops' section has '2 Loops' selected. The 'Loop Offset' section has 'Loops are Offset' unchecked. The 'General Alarm' section has 'Common' selected. The 'Pattern' dropdown menu is open, showing 'Temporal', 'Continuous', and 'March Code' options. The 'Sub Addresses' section shows '042 / 800 in use' and '031 Total Devices'. The 'Panel Text' dropdown shows 'AUTO CONFIGURED PANEL'. The 'Hochiki America Corporation' logo is visible in the background.

**Graphics System**

If a Graphics system is connected to the panel, check this box (future feature).

**Panel Text**

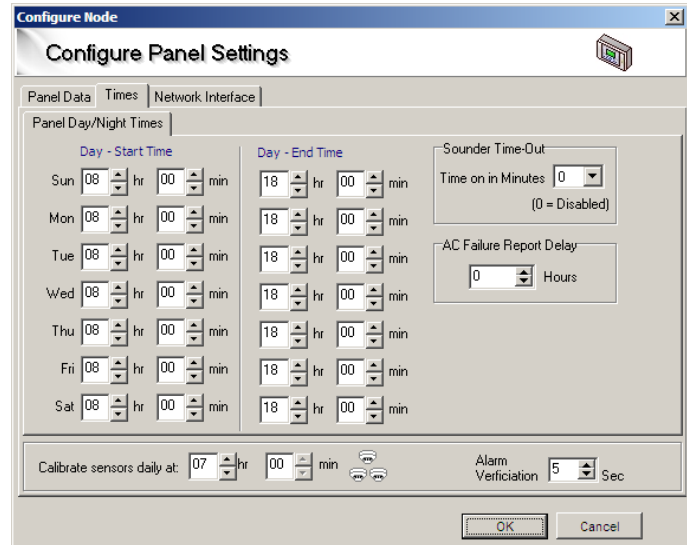
Panel Text is text displayed on the panel when there are no events showing on the LCD. The panel text is limited to 40 alpha/numeric characters max.

### 2.7.2.2 Configure Node: Times

This tab also allows you to set timed features common to panel operations. Click on the tab Times to reveal these settings.

#### Day/Night Start and End Times

The start and end times are used to define the Day and Night mode of the panel. During Day mode the sensors Day sensitivity is used, during Night mode, the Night sensitivity is used. All the default start times are set to 8:00, and the end time is 18:00 (6:00pm). The night-time is considered to be between these two times. You may change the minutes in increments of whole minutes. If you set a start and a finish time the same you will receive an error message. Click on an up or down arrow to change the number in the number box.



#### Daily Calibration Time

This is the time each day that the sensors will perform their calibration routine. Calibration occurs once per day and can only be set in increments of 30-minutes. Choose a Calibration time when building environmental conditions are most stable, for example, early in the morning before daily activities begin.

#### Sounder Time Out

The FireNET NAC circuits can be programmed to automatically silence after a period of time. The Sounder Time Out option allows you to set the NAC alarm time. The panel default is 00, which disables the feature. Valid selections are from 5 to 60 minutes, in 5-minute increments.

#### Alarm Verification

The alarm verification time value can be set between 5 and 60 seconds. This value must be to 60 seconds to be compliant with UL864 9<sup>th</sup> Edition. Default value is 60 seconds. (See the prefix of this manual for additional details).

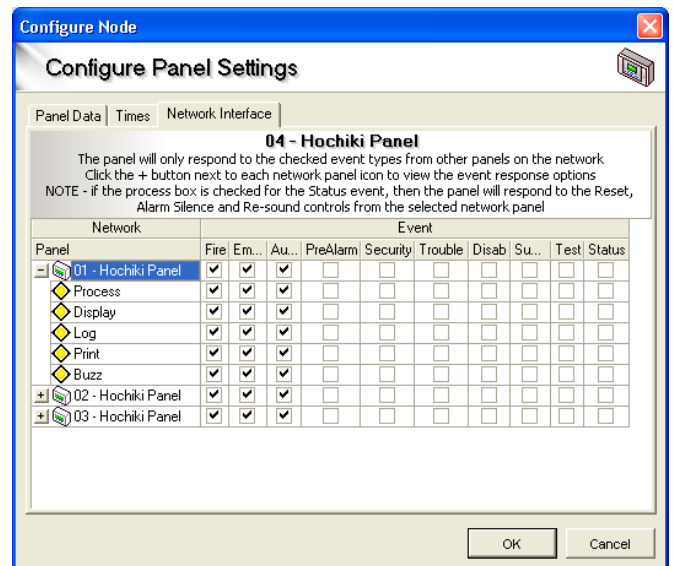
#### AC Failure Report Delay

The AC Fail report delay time value can be set between 0 and 24 hours. Default value is one (1) hour. This value must be set between 1 and 3 hours to be compliant with UL864 9<sup>th</sup> Edition. (See the prefix of this manual for additional details).



### 2.7.2.3 Configure Node: Network Interface

Up to 64 nodes (panels/network annunciators) can be networked together. The Network Interface tab allows you to select the network events that a panel will respond to, and define the way in which it will respond. All the panels, except the one you are editing, will be shown in the list. To expand the responses to the event types, click on the [+] next to the panel you wish to edit. The properties of the node will expand, and you can select how the panel will respond to network events. The Network Interface tab allows a given panel to have a unique profile that defines how it will respond to the rest of the nodes and event types on the network. Each network node can have a unique profile.



Types of node (panels/network annunciators):

#### Process

The process option instructs the node receiving a network event to behave exactly as it would if it were a local node event. For example, if a fire event activates, the panel would be expected to operate the NAC outputs and fire relays. Selecting the process option ensures that the panel does this from network fire events. If the process option was not selected, the panel would not process the event to actuate related inherent functionality...i.e. operate the NAC outputs or fire relays when a fire event is received from the network.

#### Display

The display 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 then print both local events and network events assigned to it. It may be that a master panel is 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 (panel/network annunciator) buzzer upon receipt of a network event.

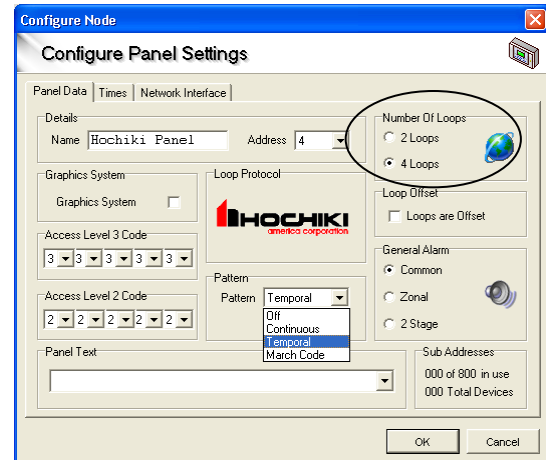
Types of events:

- **Fire** - All Fire events
- **Supervisory** - All Supervisory events
- **PreAlarm** - All PreAlarm events
- **Trouble** - All Trouble events
- **Disablingments** - All Disablingment (bypass) events
- **Auxiliary** - All Auxiliary events
- **Test** - All Test modes occurring.
- **Status** - All Status events occurring.

## 2.7.2.4 Editing the number of Loops on a Panel

### 2.7.2.4.1 Editing using the Configure Node

1. Open the Configure Node of the panel you wish to edit. For instruction on how to edit the Configure Node, see section 2.7.2.
2. To change the number of loops in a panel, edit the settings on the **Number of Loops**. If there are devices on a loop(s) you wish to delete, you must delete the loop devices first and then you can delete the loops themselves.
3. Click **OK** to accept the changes, and exit from the window. Or click **Cancel** to cancel all changes, and exit from the window



## 2.7.3 Editing a FN-LCD-N Network LCD Annunciator

The Network Annunciator editable attributes are exactly the same as a panel except there are no SLC loops or NAC pattern properties to edit. The numbers of loops, loop offset, and NAC pattern options are grayed out.

**NOTE:** See Section 2.7.2 for the proper method to access the Configure Node.

## 2.7.4 Reserved for Future Use

## 2.7.5 Editing a Local Panel I/O

Editing the Local I/O is slightly different from editing a panel. It is not possible to delete the Panel I/O; however each of its inputs and outputs can be edited using appropriate Configure Input or Output windows.

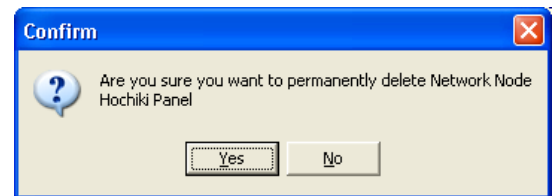
Inputs	Outputs
Trouble Input	Notification Output 1
Reset Input	Notification Output 2
Intermittent Input	Notification Output 3
Continuous Input	Notification Output 4
Silence Alarm Input	Supervisory Output (cannot be edited)
Input 1	Auxiliary
Input 2	Fire 1 Contact
Input 3	Fire 2 Contact
Fire Drill Input (cannot be edited)	Fire Routing
Programmable Function	Programmable Output
	Trouble Contact
	Trouble Routing

To learn more about the proper setting of Inputs, see section 2.9.2.1. For more information on the proper setting of Outputs, see section 2.9.2.2.

## 2.7.6 Removing a Panel

Deleting a component of your site is a simple process.

1. Just select the item you wish to delete
2. Click the **Delete** button in the toolbar *or* right click over the selected item and click the **Delete** option in the menu.
3. You will see this confirmation window when you delete a panel. Click **Yes** if you still want to delete it or click **No** to abort the deletion.



**NOTE:** If you try to delete a panel when it still has devices attached to it, you will see an error message telling you to delete all of the devices attached to the Loops before attempting to delete the panel.

## **2.8 Configuring Option Boards/Serial LCD Annunciators on a Panel**

### **2.8.1 Adding an Option Board/Serial LCD Annunciator**

1. To add an Option Board, click on a panel in the Navigation tree where you want the module to be added.
2. Choose the icon representing the appropriate Option board in the Items pane or select the option from the right-click menu.

**NOTE:** A maximum of 32 option boards may be added to a panel.

3. To add a FN-LCD-S Serial LCD Annunciator, click on the project level in the Navigation tree and select the Serial Annunciator. Once this is selected, choose which panel (or node) that the Serial Annunciator will be added to.

**NOTE:** A maximum of 15 FN-LCD-S Serial Annunciators may be added to a panel (or node).

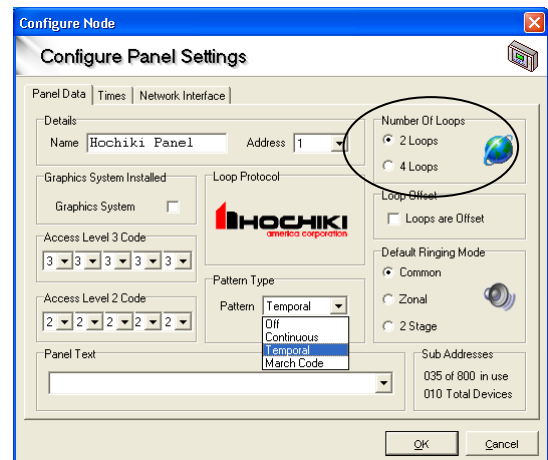
#### **2.8.1.1 Adding a SLC Board**

An SLC Expander board adds an additional two Loops to a Hochiki 2 Loop Panel. Follow the steps below to add an SLC expander to a 2 loop panel -

1. Open the Configure Node of the panel you wish to edit. For instructions on how to access the Configure Node, see section 2.7.2.
2. To add loops in a panel, change the **Number of Loops** from 2 Loops to 4 Loops

**NOTE:** If you are deleting Loops, you must delete all devices attached to the Loops first

3. Click **OK** to accept the changes, and exit from the window. Or click **Cancel** to cancel all changes, and exit from the window



### **2.8.2 Editing an Option Board/Serial LCD Annunciator**

To configure an Option Board/Serial LCD Annunciator, select the module you wish to configure, and select **Edit** from the toolbar or **Edit Settings...** from the right click menu.

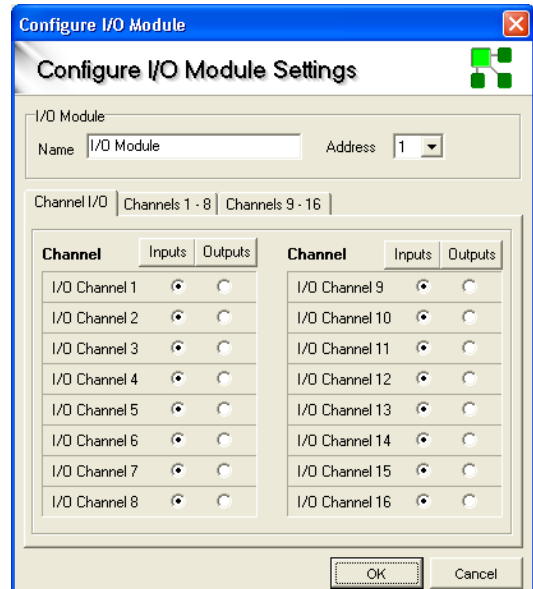
### 2.8.2.1 Editing an I/O Board

Standard I/O Modules have 16 Channels, which can each be configured to be an input or an output. The default for all channels is set to inputs. After creation, you may not delete individual channels, only the entire module. By editing the settings of the existing module, you may change:

- the name
- the address
- inputs to an output or vice versa

To edit the settings of a channel, click on an existing I/O module channel in the Navigation tree and select Edit settings. These settings will either be for an input or an output.

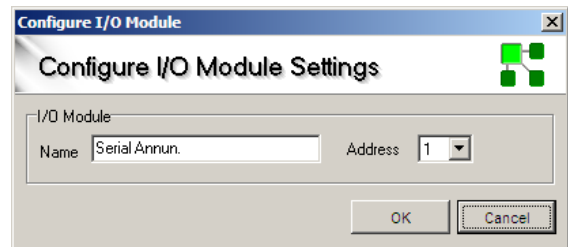
Also by using the tabs labelled 1-8 and 9-16, it is possible to configure the location text and zones of all the channels, and clear all text and zone settings at once.



### 2.8.2.2 Editing a FN-LCD-S Serial LCD Annunciator

The Serial LCD Annunciator window has only two programmable options:

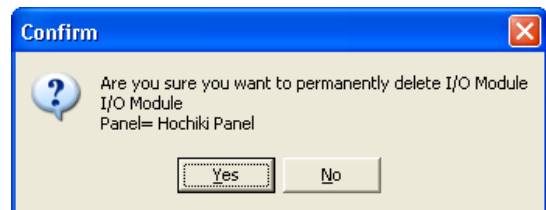
- Serial LCD Annunciator Name
- Serial LCD Annunciator Address



**NOTE:** A maximum of 15 FN-LCD-S Serial Annunciators may be added to a panel (or node).

### 2.8.3 Removing an Option Board/Serial LCD Annunciator

1. Select the Option board/Serial LCD Annunciator you wish to delete.
2. Click on the Delete button in the menu or the delete button from the right-click button.
3. You will be given a confirmation window. To complete the deletion, click the **Yes** button. To cancel, click the **No** button.



## ***2.9 Configuring Panel I/O and Devices on a Loop***

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### **2.9.1 Adding a Device on a Loop**

New devices can be added to the configuration in several different ways; using the main menus, toolbar, right click menu, or Items pane.

Click on a loop in the Navigation tree, then:

- Click File, New, New Device, or

- Click New on the toolbar, or

- Right click over the loop in the Navigation tree, and click New Device.

- Use the Items Pane to add a device.

Select a single device, by highlighting it, then select the Address using the drop down box, and choose a zone. Edit or add Location Text, this can be new text or previously entered, and click add. The device will have been added. Click on another device and add it, or click Close. You may edit the settings of the particular device after you have added it to the loop. You can also specify the number of devices to be added to allow multiple or “Block” device additions.

If you have reached the maximum number of devices on a loop, you will be prompted with a message that indicates you have reached the maximum addresses allowed.

**NOTE:** The maximum number of addresses and sub-addresses possible per panel is 800. To check the current total address usage for any panel, right-click on the desired panel in the Navigation tree and select Edit Settings. In the lower right hand corner of Configure Panel Settings screen, the total will be displayed.

### **2.9.2 Editing Panel I/O and Devices on a Loop**

#### ***2.9.2.1 Editing Devices on a Loop***

You may configure any device and all of its sub addresses using Loop Explorer. There are several ways to edit and configure a chosen device

To edit the settings of a device, click on the device you wish to configure in the Navigation tree and select the edit settings option from the toolbar. You may also right click and select Edit Settings from the option menu, or double-click on the device itself.

The item you initially select from the Navigation tree or Device Table will determine the configuration window that will appear. For example, the configuration window options for an FRCME input module will be different than those of an SOM module.

### 2.9.2.2 Setting inputs (Panel I/O and Devices on a Loop)

The input settings window can be accessed by right-clicking on the Navigation tree input item, and clicking on **Edit Settings...**

After making the changes click **OK** to accept the settings, and exit from the window. Or click **Cancel** to cancel all changes and exit from the window.

#### **Options: Fire**

Fire inputs activate outputs that are General Alarm mode in accordance with the rules of General Alarm mode. Control panel outputs will include the following:

- Common Fire LEDs
- Pulsing Buzzer
- NAC Outputs
- Fire 1 Contact
- Fire 2 Contact
- Fire Routing Output
- Outputs (if flag set)
- LCD Fire Message, Address And Location Text Of Input

#### **Options: Trouble**

Trouble inputs activate any output configured as a trouble output. Trouble inputs will be annunciated by the control panel as follows:

- General Trouble LED
- Continuous Buzzer
- Trouble Contact
- Trouble Routing Output
- Outputs (if flag set)
- LCD Trouble Message, Address And Location Text Of Input

#### **Options: Pre-Alarm**

Sensors or inputs can generate a Pre-Alarm. This activates any outputs configured to respond to a pre-alarm. The control panel will respond as follows to a Pre-Alarm:

- Pre-Alarm LED
- Continuous Buzzer
- Outputs (if flag set)
- LCD Pre-Alarm Message, Address And Location Text Of Input

#### **Options: Supervisory Alarm**

Input modules, sensors and duct sensors can be configured to create a Supervisory alarm when activated. A Supervisory alarm will produce the following response by the panel:

- Supervisory Alarm LED
- Continuous Buzzer
- Supervisory Contact
- Outputs (if flag set)
- LCD Supervisory Alarm Message, Address And Location Text Of Input

**Options: Auxiliary**

The Auxiliary action allows all sounder outputs to be activated from an input anywhere on the system when outputs have “Auxiliary” flag set with the following response at the panel:

- Continuous Buzzer
- Outputs (if flag set)
- LCD Fire Auxiliary Message, Address And Location Text Of Input

**Options: Silence**

When a Silence input activates, it is as if the Alarm Silence button had been pressed at the panel.

**Note:** A Silence Action will not latch. Therefore, input must be set to non-latching.

**Options: Reset**

Reset will be displayed on the LCD and recorded in the event log. When a reset input activates, it is as if the Reset button had been pressed at the panel.

**Note:** A Reset Action will not latch. Therefore, input must be set to non-latching.

**Options: Fire Drill**

This option is not programmable for the on-board panel input. The Fire Drill button activates SOM and NAC alarm outputs that are programmed for General Alarm mode. Panel relays are not activated during a Fire Drill.

**Note:** A Fire Drill Action will not latch. Therefore, input must be set to non-latching.

**Options: Transparent**

A transparent input will have no effect on the panel. The only result of a transparent input is to control outputs via cause and effects configuration. The input activity will not be recorded in the event log.

**Options: Disablement**

Disablement inputs are used to disable a part or parts of the system via cause and effects configuration (normally for testing or maintenance purposes).

When an input designated as a disablement is operated, the panel will display the following:

- General Disablement Indicator
- Continuous Buzzer For 5 Seconds
- Address (1-127)
- Zone (1-500)
- LCD Disablement Message, Address And Location Text Of Input



**Options: Test**

Inputs given the test mode attribute are used to activate a special type of cause and effect which enables the system to be placed in “Walk Test” Mode through a cause and effect action rather than from manually entering Walk Test Mode via the front panel menus.

When a test mode input is operated, the panel will execute the Cause and Effect action associated with it.

**Input Latch**

Input latch is used to “lock” an input into the ON state. Even if the input circuit restores to normal, the panel will still show the input to be ON. The input will remain latched until a reset event occurs.

**Note:** A latched input may not be set to reset type.

**Output Delay: Bypass**

When an input is operated with this attribute any outputs activated will bypass their delay time (if programmed) and switch on immediately. This attribute is useful if an input should respond immediately.

**Input Delay**

Input delay may be used to help prevent false alarms from inputs that fluctuate rapidly from alarm to normal state. The panel will not respond to the input until it has been activated for the programmed delay time. This feature is only available to “Non Fire” type inputs and other inputs allowed for delay per NFPA72/UL864. (Use of this feature may be subject to AHJ and other local requirements).

**Action message**

An Action message is the action related text displayed at the panel when the input is operated (i.e. Fire, Trouble etc). For some inputs, the message is user definable, such as a General Purpose input.

There are also nine user-defined messages that can be changed for specific use.

**Zone**

Each input can be assigned to a zone. It is useful to place inputs into zones if the output is required to respond in a zonal fashion, or is to be controlled by a cause and effect entry. Zones are also used to group devices into logical groups or per the building and code requirements.

**Note:** Do not assign SLC loop outputs to zone 0.

**Location Text**

Each input can be given location text of up to 40 characters. As well as being useful in identifying devices and locations, the location text can be useful in identifying the device when compiling cause and effects programs.

### **2.9.2.3 Setting Outputs (Panel I/O and Devices on a Loop)**

All outputs have a set of default attributes, which can be modified by using the edit window of an output. After making the changes, click **OK** to accept the settings and exit from the window. Or click **Cancel** to cancel all changes and exit from the window. Below is a list of programming options for outputs:

**Options: Gen. Alarm Mode (Common Fire Alarm)**

Normally applicable to NAC outputs, Gen. Alarm Mode will turn the output on upon a fire condition as defined by the global General Alarm Mode set on the **Configure Panel Settings** window, or as set via the **Edit Configuration** menus on the panel. Other outputs can be assigned to General Alarm Mode as well when this flag is selected.

**Options: Auxiliary**

The output will operate upon any auxiliary event.

**Options: Pre-Alarm Output**

The output will operate upon any pre-alarm event.

**Options: Supervisory Alarm**

The output will operate upon any supervisory event.

**Options: Trouble Output**

The output will operate upon any trouble event.

**Alarm Silence: Silenceable**

Silenceable is normally applicable to NAC, SOM, ASB, & R2M outputs and ensures that the output turns off when the alarm is silenced (acknowledged) by the front panel pushbutton or operation of an input that is configured as silence alarm.

**Delay: Stage one delay**

Outputs can be delayed from 0 to 5 minutes in half-minute steps by changing the default delay of zero to the desired setting (on-board relays, routing outputs, R2M, and DH98AR Relays only).

**Delay: Stage two delay**

If the output is Silenceable, the stage two delay option becomes available. The stage two delays gives additional time from 0 to 5 minutes in half-minute steps before the output operates after the alarm is acknowledged during the stage one delay period.

### **Strobe Output (NAC only)**

The panel NAC circuits have an additional option called Strobe Output. If this option is selected, it will change the NAC circuit to a continuous output during alarm, regardless of the panel's programmed output pattern. This allows for the connection of four-wire horn/strobes that require a Temporal or March pattern for the horn circuit, but a continuous pattern (steady) for the strobe circuit. It is also useful when driving strobe only circuits or speaker/strobe circuits when the audio power is being driven from a separate voice evacuation audio system, but the strobe power is being driven from the fire alarm system.

### **NAC Aux 24VDC (NAC only)**

The panel NAC circuits have an additional option called "NAC Aux 24VDC". By using this feature the NAC outputs can be alternatively programmed as an auxiliary power outputs rather than notification appliance circuits. This allows NAC outputs to function as 24VDC power outputs. Below is the list of power options:

- **OFF** – When set to this option, the NAC output functions as a standard NAC circuit and the Aux 24VDC options have no effect. This is the default setting.
- **Continuous Power** – When set to this option, the NAC output becomes a constant 24VDC output that always remains on.
- **Door Holder Power** – When set to this option, the NAC output releases when a fire event occurs or AC power is lost. The output returns after the panel is reset and the conditions are clear.
- **Reset-able Power** – When set to this option, the NAC output drops out upon panel reset and returns after 5 seconds. This is used for duct or 4-wire detectors that require power reset.

### **Zone**

Each output can also be put into a zone as required. It is useful to put outputs into zones if the output is required to respond to general alarm mode or is to be controlled by a cause and effect entry. Zones are also used to group devices into logical groups or per the building and code requirements.

**NOTE:** Do not assign SLC loop outputs to zone 0.

### **Location Text**

Each output can be given location text of up to 40 characters. As well as being useful in identifying devices and locations, the location text can be useful in identifying the device when compiling cause and effects programs.

**NOTE:** Panel Outputs can be programmed into three primary categories:

- Common
  - When output attribute flags are set for general event categories, the output operation will follow the common activation of that event type. General Alarm mode should be set to “common” for this operation.
- Zone
  - When outputs are assigned to zones, the output operation can be triggered on a zoned basis. General alarm mode should be set to “zonal” for this operation.
- Programmable
  - When outputs are not assigned to general event categories via output attributes, the output operation is programmable by using Cause and Effect.

### 2.9.3 Changing a Device on a Loop

You may change a device type using Loop Explorer very easily. Click on the device you wish to change and either click on the toolbar option Change or use the right click menu and select Change device type. Changing is quicker than deleting and adding another device because it will keep the universal settings of all devices, such as Zone and Location text.



### 2.9.4 Deleting a Device on a Loop

Deleting a component of your site is a simple process.

1. Just select the item you wish to delete
2. Click on the **Delete** button in the toolbar or right click over the selected item and click the **Delete** option in the menu.
3. You will see a confirmation window when you delete a device. It will have a list of all information that is attached to the device. Click **Yes** if you still want to delete it or click **No** to abort the deletion.

## 2.10 Loop Explorer Abilities

### 2.10.1 Reserved for Future Use

### 2.10.2 Cause & Effect Summary

The C&E Summary will show all cause and effect entries in the project, and the total number of inputs and outputs currently being used.

At the bottom of the window it will show you the totals for the Project, and how close to the maximum number of entries the Project is.

It is also possible to add Cause and Effects from the Summary, by clicking on the appropriate symbol. This will bring up the usual wizard, and from there you can view the input and output totals if a large number of Cause and Effects are going to be created. You may also copy a cause and effect, or delete it from here. Please see section 2.15 for more details on Cause and Effect programming.

### 2.10.3 Reserved for Future Use

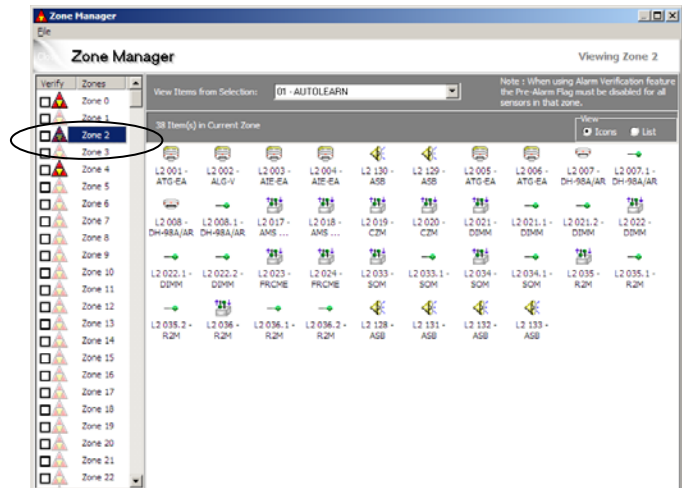
### 2.10.4 Zone Manager

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. Access the Zone manager by using the toolbar or the Edit menu.

The List on the left shows Zones 0 - 500, the highlighted icons contain items, where the shaded ones do not.

Select a Panel to start viewing the contents of the selected zone from the list on the left.

Select one or more items - to select multiple items hold Ctrl or Shift on the keyboard and click on the desired items. Next drag and drop them onto a new zone from the list of zones. This will remove the icon from the view on the right, as they have been moved to the new zone.



The Alarm Verification Feature is also enabled from this menu on a per zone basis. To enable Alarm Verification operation, you must select the “Verify” check box for that zone. Alarm Verification only applies to photo and ion smoke sensors in that zone.

For more information on using Zones, see section 2.13.

### 2.10.5 Reserved for Future Use

## **2.11 Loop Explorer Networking**

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### **2.11.1 Getting it working**

With all network cards allocated a unique address and all nodes (panels & network annunciators) connected and powered, it is now possible to get the panels communicating with each other by doing an AUTOLEARN at each one. In this default configuration all panels will respond to the default network settings. Default network settings are to process, display, log, print and operate the panel buzzer for all network events (except status events) from all other panels. This is fine for initial testing and getting the network talking, but may need to be updated to suit the specific project needs.

### **2.11.2 Using the Loop Explorer PC configuration**

To enable selection of which panels respond to which events it is necessary to configure panels using the Loop Explorer configuration program.

Loop Explorer allows extensive configuration of the system and the details of this are contained within the program help files and elsewhere in this manual. See section 2.7.2.3 for programming network attributes in Configure Panel Settings. For the purposes of this section, only network processing and event details are discussed.

There are five options for each network event type as to how it will be handled by the recipient node:

#### **Process**

The process option instructs the panel receiving a network event to inherently operate exactly as it would if it were a local panel event. For example, if a fire event activates, the panel would be expected to operate the NAC outputs and fire relays as programmed. Selecting the process option ensures that the network panel does this. If the process option were not selected, the panel would not operate the NAC outputs and fire relays as programmed.

#### **Display**

The display option instructs the panel receiving the network event to display the event exactly as it would be displayed if it were a local panel event.

#### **Log**

This gives the option to store the network event in the event log. For example if a panel is designated as a master panel, it may be required that the master panel logs all events on the network whereas other panels log only their own local events.

#### **Print**

This gives the option to print the network event. It may be that a master panel is required to print all events while the other panels print only local events.

#### **Buzz**

This gives the option to operate the panel buzzer upon a network event from other panels.

The ease and versatility of programming the network interface ensures that changing site requirements can be swiftly accommodated with a minimum of effort. A brief description of all network event types is listed below:

### **2.11.3 Fire action**

Being a fire control panel, the fire action will probably be the most widely used and a fire input will be announced by the following:

- COMMON FIRE LEDS
- PULSING BUZZER
- NAC OUTPUTS
- FIRE 1 CONTACT
- FIRE 2 CONTACT
- FIRE ROUTING OUTPUT
- LCD FIRE MESSAGE, ADDRESS AND LOCATION TEXT OF INPUT

### **2.11.4 Auxiliary action**

The Auxiliary action allows outputs to be activated from an input anywhere on the system with the Auxiliary flag set with the following response at the panel:

- CONTINUOUS BUZZER
- NAC OUTPUTS
- LCD FIRE AUXILIARY MESSAGE, ADDRESS AND LOCATION TEXT OF INPUT

### **2.11.5 Pre-alarm action**

Sensors or inputs can generate a pre-alarm. The control panel will respond as follows to a pre-alarm:

- PRE-ALARM LED
- CONTINUOUS BUZZER
- LCD PRE-ALARM MESSAGE, ADDRESS AND LOCATION TEXT OF INPUT

### **2.11.6 Trouble action**

Inputs attributed the trouble action, or panel trouble events such as AC Failure, will be announced by the control panel as follows:

- GENERAL TROUBLE LED
- CONTINUOUS BUZZER
- TROUBLE CONTACT
- TROUBLE ROUTING OUTPUT
- LCD TROUBLE MESSAGE, ADDRESS AND LOCATION TEXT OF INPUT OR EVENT

### **2.11.7 Disablement action**

Disablement inputs are used to disable a part or parts of the system via cause and effects configuration (normally for testing or maintenance purposes). When an input designated as a disablement is operated, the panel will respond as follows:

- POINT BYPASSED INDICATOR LED
- CONTINUOUS BUZZER
- CAUSE AND EFFECT ACTION
- LCD DISABLEMENT MESSAGE, ADDRESS AND LOCATION TEXT OF INPUT
- GENERAL TROUBLE LED

### **2.11.8 Supervisory Alarm action**

Supervisory Alarm input is available which produces the following response by the panel:

- SUPERVISORY ALARM LED
- CONTINUOUS BUZZER
- LCD SUPERVISORY ALARM MESSAGE, ADDRESS AND LOCATION TEXT OF INPUT
- SUPERVISORY RELAY

### **2.11.9 Test action**

Inputs given the test mode attribute activate a special type of cause and effect which enables the system to be placed in Walk Test Mode without having to manually invoke the Walk Test Mode through the front panel controls and menus. When a test mode input is operated, the panel will respond as follows:

- ON TEST LED
- LCD ON TEST MESSAGE
- CAUSE AND EFFECT ACTION
- GENERAL TROUBLE LED

### **2.11.10 Status**

If the Process Status event is enabled, then pressing Alarm Silence, Re-sound Alarm, and Reset controls from that panel will cause the same response on the selected panel as if the local buttons have been pressed. This allows panel controls to be sent over the network to other panels. Therefore if a panel is set to Process / Display a fire event from another panel, the local outputs cannot be silenced, resounded, or reset by that panel unless the Process Status event is set. The Display Status event allows the local panel to show Status events from other panels (Initializing etc). However, these events cannot be processed, as there is not a process associated with them.

- INITIALIZING A DEVICE
- INITIALIZING A PANEL
- AUTOLEARNING A PANEL
- RE-CONFIGURE BY PC
- SILENCE
- RESOUND
- RESET



### **2.11.10.0 Network Trouble Messages**

While commissioning a networked system there are various trouble messages which may appear. Listed below are the messages, which may appear, and a brief description of what they mean.

#### **2.11.10.1 Network open or short circuit trouble**

This is quite self-explanatory and indicates a cabling trouble between two nodes. However, by observing the green and red LEDs on the network card it is possible to see whether the trouble is on the upper two terminals of the network connector (incoming) or the lower two (outgoing). If the red LED is off then the trouble is on the cable connected to the upper two terminals and if the green LED is off the trouble is on the lower two terminals. Thus, if there are two panels with network LEDs not lit (a red on one and a green on the other) the trouble can be identified as between those two panels.

#### **2.11.10.2 Unexpected network card**

Should a network card be installed in a control panel that is already configured and working, the panel does not expect to have a network card installed, therefore this trouble message will appear. The panel must be re-configured by Autolearn or Loop Explorer to enable it to expect a network card.

#### **2.11.10.3 Unexpected network node**

If a new network panel is connected to an already working network, the rest of the network will not expect to see an additional node and will announce this trouble. The unexpected network panel will respond to network events as per the default configuration and all other panels will respond to events from the new network panel as per the default configuration. All panels must be configured to see the total number of panels connected to the overall panel network by using Loop Explorer or by Autolearn.

#### **2.11.10.4 Network node missing**

This message will be displayed on all panels if a network node they are expecting to communicate with does not answer within approximately 100 seconds. This may occur if a control panel loses all power or if both the in and out network connections are disconnected from the panel.

#### **2.11.10.5 Network card not installed**

If a control panel is configured to be part of a network by Autolearn or Loop Explorer, and a network card is not installed, the panel will display this message.

### **2.11.10.6 Network card address incorrect**

Once a panel is configured to expect a network card to be present it will also know which address (set on the network card DIP switch) to expect. If it detects that a card is installed but the address does not match the one expected, then this trouble message will be displayed. If the address of a network card must be changed then this should be done with both the AC and battery backup power off. Once the address is set and the panel is powered up, the panel must be re-programmed to see the new address via Autolearn or Loop Explorer software.

### **2.11.10.7 Network comms trouble**

Highly sophisticated error checking and filtering is used in the FireNET network protocol. It is possible under extreme conditions for data packets to become corrupted and not be received by a panel. In these circumstances this trouble message will be displayed. This indicates a very degraded transmission path and occurrence of this trouble should be investigated. Possible causes are cable lengths greater than those specified, cable specification other than that specified or high levels of electromagnetic interference.

### **2.11.10.8 Unknown network type**

As the FireNET product line is updated and newer versions of software, firmware, and hardware are released, when a network object detects other network objects with differing versions, this trouble message will be displayed. This mechanism has been put in place to enable a control panel to identify a network object with a differing version than its own.

### **2.11.10.9 Unspecified network event**

The development of the FireNET system is ongoing and new features and functionality will be added from time to time. This mechanism has been put in place to enable a control panel to identify a new or unknown network event type differing than its own.

## **2.12 Loop Explorer Networking - Keeping a record**

---

When a network has been configured, the configuration data file keeps a record of the configuration that can be copied into other documents as shown in the example below by using the Print/Pre View feature.

### **FIRENET NETWORK CONFIGURATION**

D:\Storage\storage\Laptop\_Sync\_Folder\FireNet-4127\_Software\Project Files\HC\_Seminar\_Example1.hsa  
02/07/2005 15:03

#### Panel - Facp #1

Panel Text	Hochiki Analog/Addressable Panel 1	
Network Address	1	
Default Pattern	Temporal	
First Node Address	0	
Last Node Address	0	
Access 2 Code	22222	
Access 3 Code	33333	
Number of Loops	2	
Number of Zones	500	
Calibration Time	07:00	
Day of week	Start	End
Sunday	08:00	18:00
Monday	08:00	18:00
Tuesday	08:00	18:00
Wednesday	08:00	18:00
Thursday	08:00	18:00
Friday	08:00	18:00
Saturday	08:00	18:00

Facp #1 - Network Interface

Panel	Fire	Aux.	Pre Al	Trouble	Disab.	Superv.	Test	Status
-------	------	------	--------	---------	--------	---------	------	--------

*02 - Facp #2*

Process	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Display	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Log	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Print	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Buzz	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

*03 - LCD Annun #3*

Process	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Display	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Log	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Print	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Buzz	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

Facp #1 - Loop 1 (3 Devices)

Device	Name	Type	Zone	Flags	Action	Setting	1st Delay	2nd Delay	Text
001.00	ALG-V	Sensor	01	L	Fire	D2.50 N2.50	00		1st Floor Lobby Smoke Detector
002.00	ATG-EA	Sensor	02	LP	Fire	D135 N135	00		Electrical Room Heat Sensor
003.00	AIE-EA	Sensor	03	LP	Fire	D-Hi N-Nrm	00		3rd Floor Kitchen Ion Sensor

Facp #1 - Loop 2 (0 Devices)

Facp #1 - Local I/O

I/O	Type	Zone	Flags	Action	1st Delay	2nd Delay	Text
Trouble Input	Input	00		Trouble	00		
Reset Input	Input	00		Reset	00		
Intermittent Input	Input	00		Auxiliary	00		
Continuous Input	Input	00		Auxiliary	00		
Silence Alarm Input	Input	00		Silence	00		
Input 1	Input	00		Transparent	00		
Input 2	Input	00		Transparent	00		
Input 3	Input	00		Transparent	00		
Fire Drill Input	Input	00		Fire Drill	00		
Programmable Func	Input	00		Transparent	00		
Notification Output 1	Output	01	M		0.00	0.00	Strobe Output 1st Floor
Notification Output 2	Output	01	MS		0.00	0.00	Bell/Horn Output 1st Floor
Notification Output 3	Output	500			0.00	0.00	C&E controlled NAC output - Special
Notification Output 4	Output	05	MS		0.00	0.00	Bell/Horn Output 5th Floor

Supervisory Output	Output	00		0.00	0.00
Auxiliary	Output	00		0.00	0.00
Fire 1 Contact	Output	00	EM	0.00	0.00
Fire 2 Contact	Output	00	EMS	0.00	0.00
Fire Routing	Output	00	EM	0.00	0.00
Programmable Out.	Output	00		0.00	0.00
Trouble Contact	Output	00	F	0.00	0.00
Trouble Routing	Output	00	F	0.00	0.00

Panel - Facp #2

Panel Text	Hochiki Analog/Addressable Panel 2		
Network Address	2		
Default Pattern	Temporal		
First Node Address	0		
Last Node Address	0		
Access 2 Code	22222		
Access 3 Code	33333		
Number of Loops	2		
Number of Zones	500		
Calibration Time	07:00		
Day of week	Start	End	
Sunday	08:00	18:00	
Monday	08:00	18:00	
Tuesday	08:00	18:00	
Wednesday	08:00	18:00	
Thursday	08:00	18:00	
Friday	08:00	18:00	
Saturday	08:00	18:00	

Facp #2 - Network Interface

Panel	Fire	Aux.	Pre Al	Trouble Disab.	Superv. Test	Status
-------	------	------	--------	----------------	--------------	--------

*01 - Facp #1*

Process	No	No	No	No	No	No	No	No	Yes
Display	No	No	No	No	No	No	No	No	Yes
Log	No	No	No	No	No	No	No	No	Yes
Print	No	No	No	No	No	No	No	No	Yes
Buzz	No	No	No	No	No	No	No	No	Yes

03 - LCD Annun #3

Process	No	No	No	No	No	No	No	No	No	Yes
Display	No	No	No	No	No	No	No	No	No	Yes
Log	No	No	No	No	No	No	No	No	No	Yes
Print	No	No	No	No	No	No	No	No	No	Yes
Buzz	No	No	No	No	No	No	No	No	No	Yes

Facp #2 - Loop 3 (6 Devices)

Device	Name	Type	Zone	Flags	Action	Setting	1st Delay	2nd Delay	Text
001.00	SOM	Common	01						SOM Module
001.01	SOM	Output	01	MS			0.00	0.00	SOM Bell Output 1st Floor
002.00	FRCME	Input	01	LB	Fire		00		1st Floor Lobby Pullstations
003.00	R2M	Common	13						R2M Module
003.01	R2M	Output	13				0.00	0.00	Relay 1: Elevator recall
003.02	R2M	Output	13				0.00	0.00	Relay 2: Air Handler Shutdown
004.00	CZM	Input	03	L	Fire		00		3rd Floor Conventional Devices
005.00	DIMM	Common	13						DIMM Module
005.01	DIMM	Input	13	L	Fire		00		Waterflow Switch PIV#1
005.02	DIMM	Input	13	L	Supervisory Al		00		Valve Position Tamper PIV#1
006.00	FRCME	Input	05	LB	Fire		00		5th Floor Lobby Pullstations

Facp #2 - Loop 4 (0 Devices)

Facp #2 - Local I/O

I/O	Type	Zone	Flags	Action	1st Delay	2nd Delay	Text
Trouble Input	Input	00		Trouble	00		
Reset Input	Input	00		Reset	00		
Intermittent Input	Input	00		Auxiliary	00		
Continuous Input	Input	00		Auxiliary	00		
Silence Alarm Input	Input	00		Silence	00		
Input 1	Input	00		Test Mode	00		Input to Start Walk Test Script
Input 2	Input	00		Disablement	00		Input to Start Disablement Script
Input 3	Input	00		Transparent	00		
Fire Drill Input	Input	00		Fire Drill	00		
Programmable Func	Input	00		Transparent	00		
Notification Output 1	Output	00	EMS		0.00	0.00	
Notification Output 2	Output	00	EMS		0.00	0.00	
Notification Output 3	Output	00	EMS		0.00	0.00	
Notification Output 4	Output	00	EMS		0.00	0.00	
Supervisory Output	Output	00			0.00	0.00	

Auxiliary	Output	00		0.00	0.00
Fire 1 Contact	Output	00	EM	0.00	0.00
Fire 2 Contact	Output	00	EMS	0.00	0.00
Fire Routing	Output	00	EM	0.00	0.00
Programmable Out.	Output	00		0.00	0.00
Trouble Contact	Output	00	F	0.00	0.00
Trouble Routing	Output	00	F	0.00	0.00

Facp #2 - I/O Module 32 - 32

Channel	Type	Zone	Flags	Action	1st Delay	2nd Delay	Text
Channel 01	Input	00		Trouble	00		
Channel 02	Input	00		Trouble	00		
Channel 03	Input	00		Trouble	00		
Channel 04	Input	00		Trouble	00		
Channel 05	Input	00		Trouble	00		
Channel 06	Input	00		Trouble	00		
Channel 07	Input	00		Trouble	00		
Channel 08	Input	00		Trouble	00		
Channel 09	Output	00	M		0.00	0.00	
Channel 10	Output	00	M		0.00	0.00	
Channel 11	Output	00	M		0.00	0.00	
Channel 12	Output	00	M		0.00	0.00	
Channel 13	Output	00	M		0.00	0.00	
Channel 14	Output	00	M		0.00	0.00	
Channel 15	Output	00	M		0.00	0.00	
Channel 16	Output	00	M		0.00	0.00	

Panel - LCD Annun #3

Panel Text	Shinagawa Hotel Project LCD #3
Network Address	3
First Node Address	0
Last Node Address	0
Access 2 Code	22222
Access 3 Code	33333
Number of Loops	0
Number of Zones	500

LCD Annun #3 - Network Interface

Panel	Fire	Aux.	Pre Al	Trouble Disab.	Superv. Test	Status
-------	------	------	--------	----------------	--------------	--------

*01 - Facp #1*

Process	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Display	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Log	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Print	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Buzz	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

*02 - Facp #2*

Process	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Display	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Log	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Print	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Buzz	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

LCD Annun #3 - Local I/O

I/O	Type	Zone	Flags	Action	1st Delay	2nd Delay	Text
Fire Drill Input	Input	00		Fire Drill	00		
Programmable Func	Input	00		Transparent	00		
Supervisory Output	Output	00			0.00	0.00	
Auxiliary	Output	00			0.00	0.00	
Fire 2 Contact	Output	00	EMS		0.00	0.00	
Trouble Contact	Output	00	F		0.00	0.00	

Action : Air Handler Shutdown Logic for Zone 10

Cause (OR)

- Facp #1 - Loop 1 Address 001.00
- Facp #1 - Input 1
- Facp #2 - I/O Module 32 32 - Channel 04
- Zone 10

Effect (Temporal)

- Facp #2 - Loop 1 Address 003.02
- Facp #2 - I/O Module 32 32 - Channel 12
- Zone 10

Action : Fire Pump Startup Logic from Waterflow

Cause (OR)

- Facp #2 - Loop 1 Address 005.01

Effect (Temporal)



Facp #1 - Programmable output  
Facp #2 - I/O Module 32 32 - Channel 16  
Zone 10

Disablement : Disable Script Lobby & 1st Floor

Cause (OR)

Facp #2 - Input 2

Effect (Disablement)

Facp #1 - Loop 1 Address 001.00

Facp #2 - Loop 1 Address 002.00

Facp #2 - Loop 1 Address 001.01

Facp #1 - Notification Output 1

Facp #1 - Notification Output 2

Facp #2 - I/O Module 32 32 - Channel 03

Facp #2 - I/O Module 32 32 - Channel 11

Facp #2 - Loop 4

Zone 1

Test Mode : Walk Test Script Zones 3, 6, 10, 13

Cause (OR)

Facp #2 - Input 1

Effect - (Test)

Sounders: Audible

Zone 3

Zone 6

Zone 10

Zone 13

Flags -

M = General Alarm

P = Pre Alarm

D = Day mode N = Night Mode

S = Silenceable

R = Resetable

L = Latching

O = Delayed Output

F = Trouble

A = PreAlarm Output

B = Output Delay Bypass

## ***2.13 Loop Explorer Networking - Using zones***

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The use of zones on a FireNET network is an important issue and employs a philosophy that may be unfamiliar to some. This page has been included to highlight the importance of understanding how zones are used on this system and should be fully understood before system design is started. Unlike some other networked systems, zones on the FireNET system are network wide.

This means that for example, device number 1 on loop 1 of panel 1 can be in the same zone as device number 126 on loop 4 of panel 64 and so on. This gives the system great flexibility where zones need to be shared across panels such as risers or elevator shafts but this philosophy must be understood from the outset to enable a system design to be implemented effectively.

The system can have up to 500 zones and any device or input, on any panel, can be placed in any zone. Identification of the alarm is by a unique address in the form: - *Event type, Device type, Zone, Address, Loop, Panel name, Location text.*

**NOTE:** Do not use Zone 0 for field devices. This is the panel's internal master zone.

System designers must be aware however that the entire system can only have one zone 1, one zone 2 etc. On smaller systems where the numbers of zones is likely to be much less than 500, spare zones can be used to good effect to simplify network wide cause and effects by using zones as groups and operating upon these rather than individual devices to achieve the required functionality.

See Section 2.10.4 for additional details regarding programming zones.

## **2.14 Loop Explorer Options**

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### **2.14.1 COM Port**

On some computers, it may be necessary to change the communications port used to transfer data to and from the panel.

The default is COM 1. Click File, Options. Select the COM port you wish to use. See section 2.4.2 for exact details on how to set COM ports.

### **2.14.2 Default Project Folder/ Memory Management**

The default project folder is the initial folder location offered for opening and saving Loop Explorer projects. To modify the folder location, click File, Options, then click the MISC tab.

Either type the path in or click Find, if you wish to change the folder location. Select the folder using the browser window, then click OK to continue, and click OK in the original screen, or click cancel to exit the window.

It is also possible from this screen to set the computer's RAM available to Loop Explorer. Be sure not to set this value larger than the computer's physical RAM memory size.

Under the Options/Misc screen it is possible to make Loop Explorer use less of the computer's RAM for use on older computer's with less RAM to utilize. The default will be set to medium, 32MB – 128 MB RAM installed which most computers have. If the computer is an older computer, using Windows 98, it may have a small amount of RAM to use, as Windows takes a lot by itself just to load. Upon changing the amount Loop Explorer has to use, the program will have to be closed and opened again, in order to free up the memory. If Loop Explorer is set to having Low RAM, you may only add up to approximately 12 panels, full of devices. If it is set to Medium, it may hold about 32 panels, and high, will be all 64. When a project file (\*.hsa) is first opened, the Quick Load option allows use of less RAM memory such that more panels are possible and the initial Loop Explorer start-up time may be reduced. If any problems are experienced using Loop Explorer, such as illegal operations or the system running low on resources, setting the RAM usage to Low may help as well.

### **2.14.3 Splash Screen**

The splash screen is a bitmap image file (.BMP), which is displayed when Loop Explorer initially starts. The default splash screen may not be altered, but you have the option to turn the default splash screen off. A custom splash screen may be used in place of default one. A custom splash screen can only be a file up to 2Mb in size, so as not to increase the loading time of the application.

#### **2.14.4 Other**

Within this screen it is possible to set whether Loop Explorer loads Location text in the Cause and Effect Action wizard. This is because this may be a lengthy operation for some computers, and may take some time to load the wizard, if it's a slow computer with a large site.

The Autosave feature is also enabled within this screen. Once enabled, you may also set the time interval in which the Autosave occurs.

## 2.15 Cause and Effect Programming

---

### 2.15.1 Cause & Effect Types

Cause and Effect programming allows you to link an input or group of inputs to an output or group of outputs. Cause and Effect is a powerful feature of the FireNET system, and is very flexible, allowing for very creative input and output mapping.

There are three basic types of C&E:

1. Action
2. Test Mode
3. Disablement

An **Action type C&E** will create some sort of 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.

A **Test Mode type C&E** allows you to create an input (with an Action of Test) that puts a zone or zones into Test Mode. This is very similar to the panel's 'Test Zones' feature, but is not subject to the same 15-minute time out (see section 10.1).

A **Disablement type C&E** allows you to create an input (with an Action of Disablement) that disables devices or loops or zones on a panel or panels.

All C&E types are created using OR, AND, or Coincidence logic.

To create a new C&E, select Cause and Effect on the Navigator Pane. You may then right-click and select New Cause and Effect from the right-click menu, or select New on the Toolbar. You may also double-click or drag and drop the type of C&E you wish to build from the Items Pane to the Device Table. Any of these actions will open the Cause and Effect Wizard.

First you must select the "Cause", the event that will stimulate the output. This could be a smoke sensor in an elevator lobby. It could be an analog duct detector. It can be any input on the system, including an entire zone. Notice across the top of the window that you may select from Loop Inputs, I/O Channel Inputs, Fire Zone Inputs, and Panel Inputs. These may be selected in any number and combination. Notice too that all inputs from all panels are available to you. This means that your C&E statements can operate across the network on any or all panels!

You must also choose an Action Operator for a C&E. There are three types of action operators:

- AND/All
- OR/Single
- Coincidence/Any Two

**AND logic** states that all inputs must be activated before the programmed output(s) will take place (input 1 AND input 2 AND input 3, etc.)

**OR logic** is also called Single, since a single input is all that is required to activate the desired output(s) (input 1 OR input 2 OR input 3, etc.)

**Coincidence/Any Two logic** says that any two inputs can activate the desired output(s), it does not matter which two it is.

After the 'Cause' has been selected along with the appropriate Action Operator, click on the Next button. This will move you to the 'Effect' screen, where you will select the output(s) that will be activated by this C&E. Depending on the type of C&E you are creating (Action, Test Mode or Disablement) you will see different things. For example:

- An **Action type C&E** will display Loop, I/O, Zone and Panel outputs that you may select. In addition, you must select the Output Type; Temporal, Continuous or March. The Output Type only applies to NAC circuits and SOM/ASB devices, as relays do not follow Temporal or March activation patterns.

**NOTE:** To activate an SOM module using a C&E, you must choose the zone that the SOM is assigned to. To do this, simply select Zone Outputs and check the zone box that the SOM is assigned to. Remember, older version SOM (v2.0 or earlier) are limited to zones 1-253. In later release SOM and FireNET, the upper zones will be supported.

- A **Test Mode type C&E** will display all 500 Zones – you may select one or more of them at this point. You must also choose the Test Type, either Silent or Audible. This selection determines if the notification circuits will momentarily activate to confirm that an input has been tested.
- A **Disablement type C&E** will display all items that can be disabled, including loops, zones and devices. You may choose one or more items that will be disabled when the C&E executes.

After you have selected the 'Effect', click on the Next button. You may now assign a name to your C&E. The name can be up to 40 characters long, including spaces. It is important to be as descriptive as possible when naming your C&E, particularly if your project has a lot of them.

When creating C&E statements remember that panel and loop outputs can be programmed to activate from various events.

**NOTE:** If you want an output to activate ONLY from a C&E, be sure that General Alarm and all other options are not selected in the Output's Properties. Otherwise your output may activate at unexpected times.

## 2.15.2 Cause & Effect Examples

To assist you in building C&E entries, some examples are provided below. Please note that these examples are given for instructional purposes only, and are not intended to be used for your actual application! In some cases, local code or other restrictions may apply. When in doubt, check with the Authority Having Jurisdiction for your project.

### Example #1 “Action” Type C&E

A four-story building with a single elevator needs two outputs to be used for elevator recall. The first-floor smoke detector in the elevator lobby will be used to recall the elevator to the alternate floor. The elevator lobby smoke detectors on floors 2 – 4 will be used for primary recall to the first floor (this example does not consider elevator machine room or shaft detectors, etc. If needed, they can simply be added to the appropriate C&E).

This application will require two C&Es to be created – one for Primary recall, and a second one for Alternate Recall. In our example one R2M module will be used to provide both outputs. To keep things simple, the smoke detector on the first floor is installed at loop 1, address 1. The second floor is address 2, third floor is 3 and fourth floor is 4. The R2M is at address 5, outputs are 5.01 and 5.02.

Both C&Es will be an Action type. For the first one, select address 1 (first floor elevator lobby smoke) as the ‘Cause’, with an Action Operator of OR. Click on Next, and select the ‘Effect’, the R2M output at 5.01. Click on Next, name the C&E ‘Alternate Elevator Recall’ and click Finish. This will link the first floor smoke detector to R2M 5.01, which can then be used to recall the elevator to the alternate floor in the event of a fire in the first floor elevator lobby.

Next, create the second Action C&E. Select addresses 2-4, with an Action Operator of OR (we want the elevator to recall on a single activation). Click Next, and select R2M 5.02. Click Next, name it ‘Primary Elevator Recall’ and click Finish.

The last thing to check is the Output Properties of the R2M relays. Be sure that General alarm and other output attributes are NOT checked.

System operation will be as follows – during a fire alarm, the panel will respond as it normally does, but the R2M at address 5 will do nothing UNLESS the alarm comes from one of the smoke detectors used in the C&E statement. In this case the panel will respond normally but one of the R2M relays will activate too.

## **Example #2 “Test Mode” type C&E with AND logic**

One of your FireNET installations is at a very large school, and they want to test the system on a monthly basis. This testing must be done outside of school hours, and since it requires access to locked classrooms, the school maintenance personnel have decided to do the testing themselves. They do have one request though – a set of security keyswitches that, when activated, will put the panel into Test Mode. This feature will require that both of them be present in order to test the system.

In order to set this up, you must program 2 panel or loop inputs with an Action of Test. Now, begin a Test Mode C&E. You will notice that only devices or inputs with an Action of Test will be displayed on the ‘Cause’ screen. Select both of the inputs and select AND as the Action Operator. Click Next to continue. Select all zones that must be included in the testing. If audible feedback is desired during the testing, select Audible. If not, select Silent, then click Next. Select a descriptive name for the C&E and click Finish.

Here is how it will work – The panel will recognize if any one of the inputs is activated, but will do nothing until BOTH of them are activated. At this time, the C&E will execute, and all selected zones will be put into Test Mode. The Test Mode will remain active until one (or both) keys are turned off.

## **Example #3 “Disablement” type C&E**

False alarms from smoke detectors in a commercial laundry have led to a request to be able to disable smoke detectors during working hours. The manager wants to use the Programmable Function button on the front panel to do this.

First you must edit the Programmable Function button and change the Action to Disablement. Also, be sure that Latching is selected. Now, begin a new Disablement-type Cause and Effect. Select the Programmable Function button from the Panel Inputs list, and select an Action Operator of OR/Single. Click Next, and select all of the smoke detectors that need to be disabled. Click Next, then name the C&E...that’s it.

Here’s how it will work – the manager pushes the Programmable Function button from the Access Level 2 menu, which disables the smoke detectors. At the end of the day, the panel is reset and the disablement clears immediately. This option allows the manager to disable many detectors with relatively few key presses at the panel.

As you can see from these examples, FireNET’s Cause and Effect statements open up many possibilities.



### 3. Troubleshooting

This section is currently being developed from data collected from installation sites and technical support inquiries.

The following is an example (in FAQ format) of the information being developed:

**Q – I am using a network annunciator and the Reset and Alarm Silence button don't work - Why?**

**A –** These features must be enabled in the Network Interface settings. Using Loop Explorer, right-click on the panel, select Edit Settings, then select the Network Interface tab. Check the Status event box.

**Q – I am using Cause and Effect to activate a relay for elevator recall, but the relay activates on all alarms. How do I get it to follow only the C&E?**

**A –** Check the Output Settings of the relay. Be sure that the General Alarm box is unchecked; otherwise, the relay will activate during a general alarm condition.

**Q – When I try to connect to the panel using Loop Explorer there are no panels found.**

**A –** Be sure the correct COM port is selected in Loop Explorer. Click on the File menu, and then select Options. Select the COM port that you are using on the computer.

**Q – I need to change an ALG-V smoke sensor to an ATG-EA heat sensor. Do I have to auto-learn the loops again?**

**A –** No, you can change the device type from smoke sensor to heat sensor. From the Access Level 3 menu choose Edit Configuration then Edit Device Attributes. Select the loop and address of the smoke sensor and then select Change Sensor Type. Select the new sensor type then press Enter. The change will take place immediately. You may also change the sensor type using Loop Explorer.

**Q – My strobes are not flashing correctly when there is an alarm.**

**A –** Check the output pattern; strobes usually require a Continuous (Steady) output pattern. From the Access Level 3 menu choose Edit Configuration then choose Edit I/O. Select Edit Panel I/O, then Edit Default Pattern. Use the up and down arrow keys to highlight the selected pattern, then press the Enter button. The Output pattern may also be configured using Loop Explorer

**Q – I am installing analog sounder bases (ASB) on my FireNET panel, but when I do an auto-learn the panel does not find them.**

**A –** Check the firmware revision of the panel. It must be 3.60238 or higher to use the ASB. Also be sure that each ASB is provided with 24 VDC auxiliary power.

**Q – When I try to change the input action of an FRCME or DIMM using Loop Explorer I am unable to make changes.**

**A –** Be sure the module is not assigned to any Cause and Effect programming. Input action must be changed before the device is assigned to C&E.

**Q – I am using the DH-98AR duct detector and I need reset-able aux power. How can I do this?**

**A –** The Auxiliary relay defaults to a reset relay when there is no programming assigned to it. Use the N/C and Common connections of the relay. When the reset button is pressed, the relay will reset power to the devices.

**Q – Is there a quick way to find out how many devices and sub-addresses are being used on a panel?**

**A –** Yes. Right-click on a panel in Loop Explorer and select Edit Settings. The device and sub-address count will appear in the bottom right-hand corner of the Configure Panel Settings window. You can also use the Battery Calculator spreadsheet software included on the Loop Explorer software CD.

**Hochiki America Corporation  
7051 Village Drive, Suite 100  
Buena Park, CA 90621-2268  
1-800-845-6692  
technicalsupport@hochiki.com**

End of Manual

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