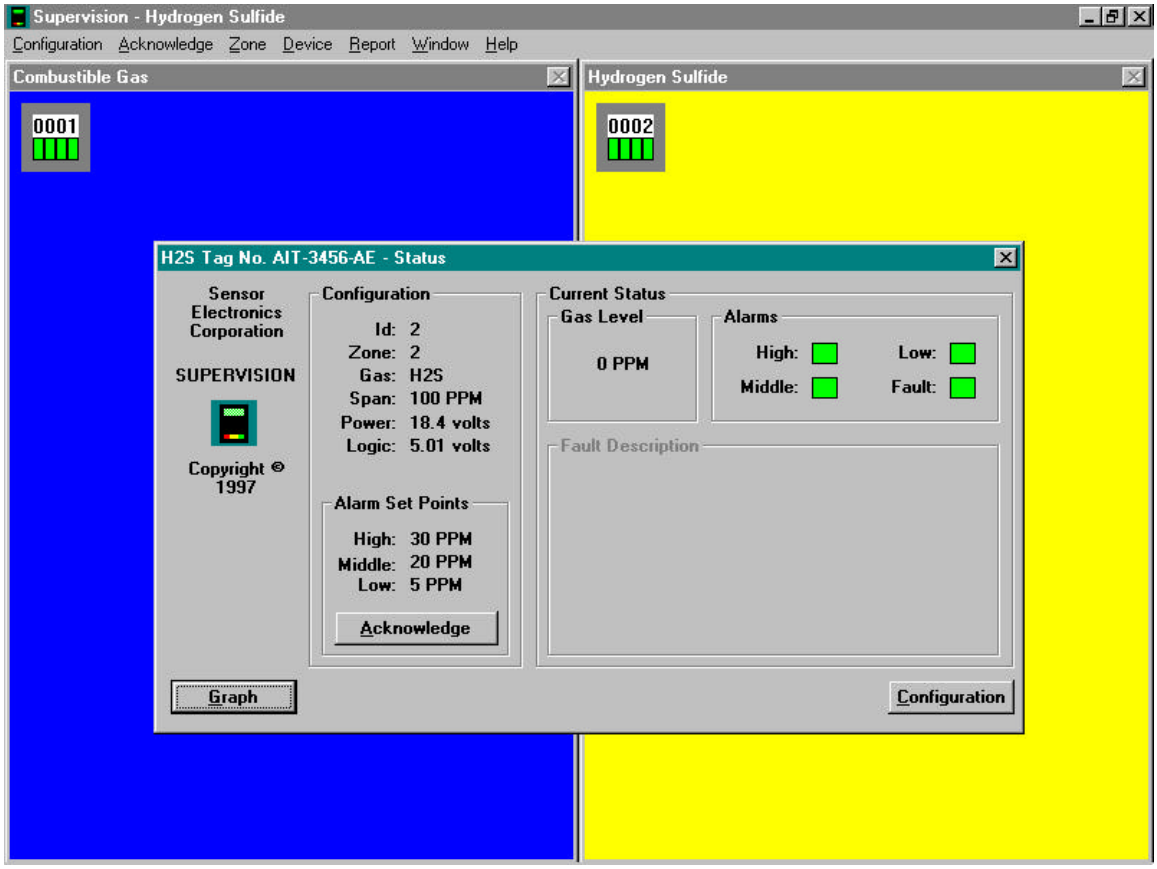
SUPERVISION PLUS SOFTWARE



INSTRUCTION MANUAL

Supervision Plus Software
Version 1.0.012

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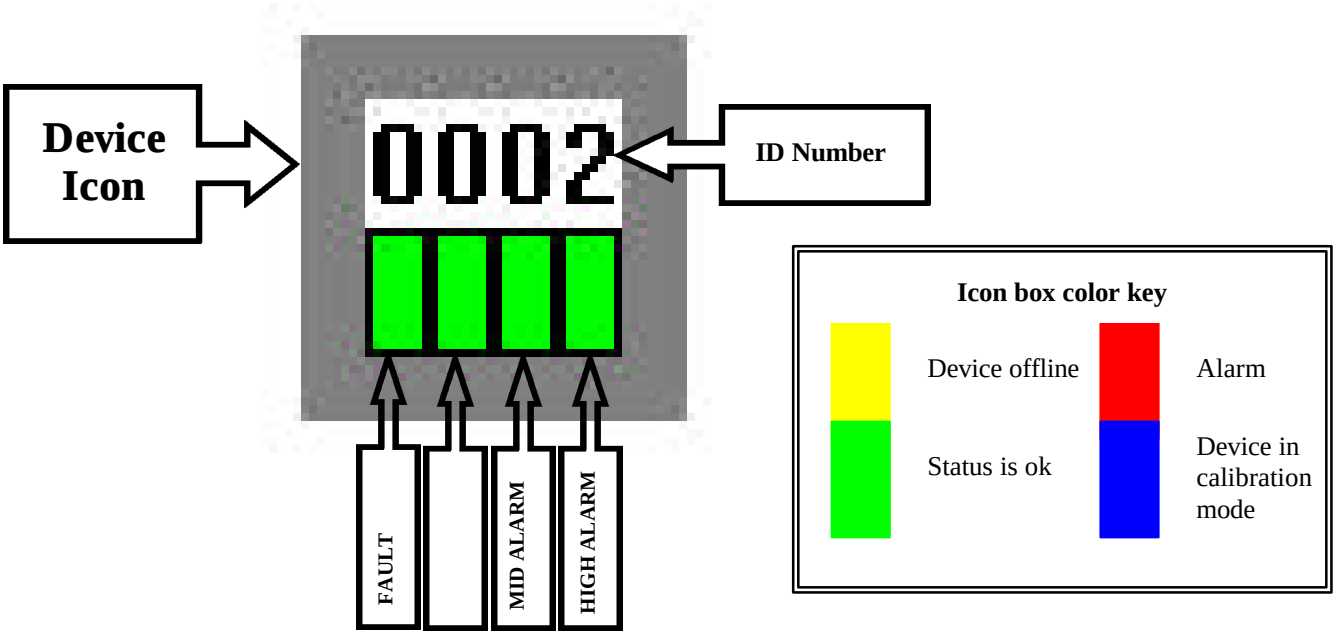
Table of Contents

I. Supervision Plus Overview

The Sensor Electronics (SEC) Supervision Plus is a software program that integrates SEC field devices into a hazard event monitoring system. Supervision Plus runs in the background of a computer running a Windows® based operating system. Supervision Plus provides a graphical operator interface. SEC field devices connected to the data highway are individually displayed as an icon.



Each icon has a unique identification number. The icon has four boxes that will change colors for various conditions allowing the operator to see at a glance if any device is in alarm or fault. Each device has a data file that is continuously updated and stores the information on the computer's hard drive. The stored information can be viewed, graphed and printed for hard copy reports.

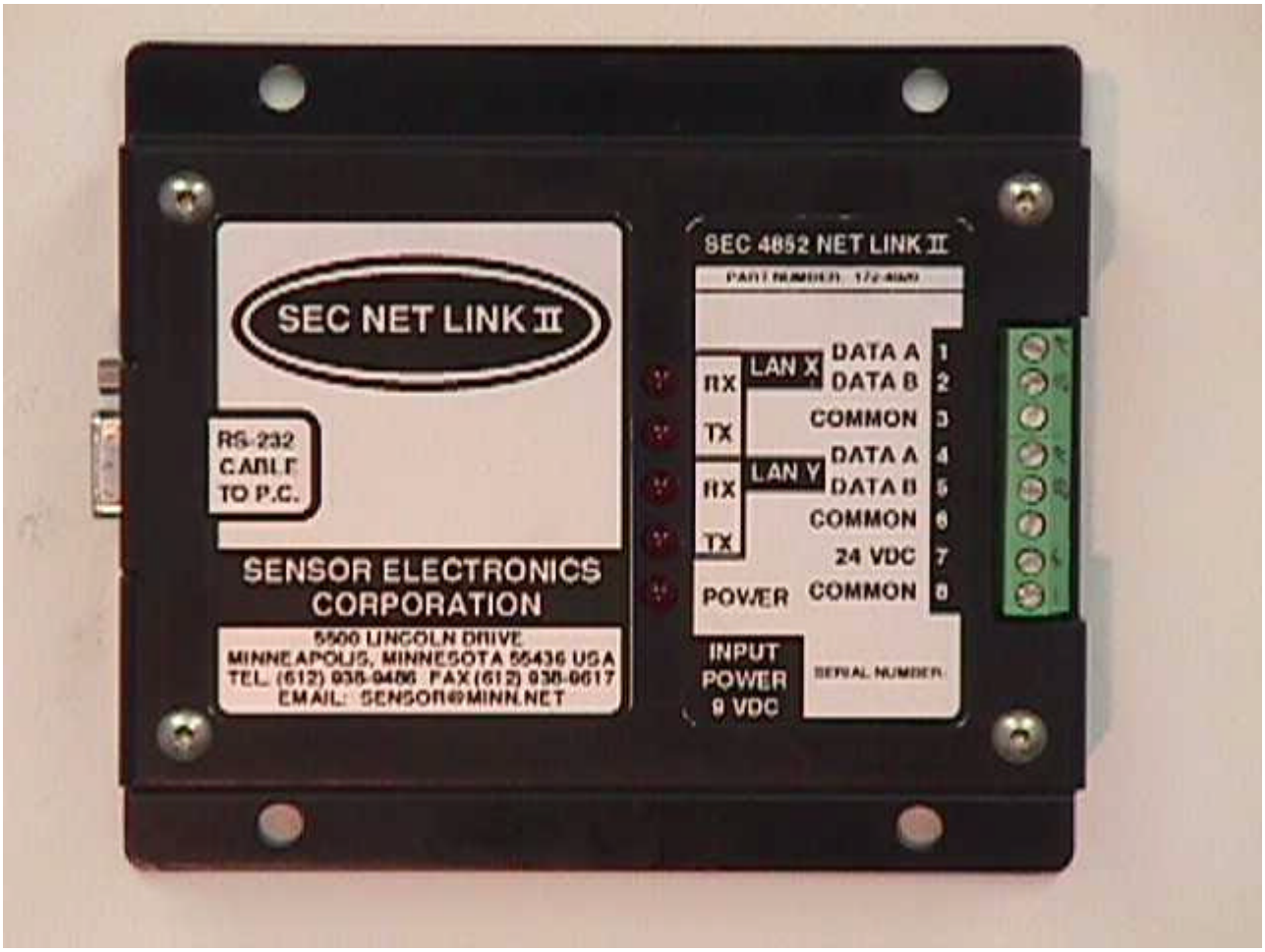
System Requirements:

- A personal computer running Windows 3.1®, Windows 95® or Windows NT® and a working knowledge of the operating system.
- One (1) SEC 4854 Net Link II Part Number 142-0146.
- SEC field devices (SEC 2000 gas detectors, SEC 1500 gas detectors, SEC 4853 DAIM, SEC 4850 Repeater) connected together on an RS-485 data highway. Data highway requires a shielded twisted pair of wire typically (24 to 16 AWG).

II. Installation

SEC 4854 Net Link II

The Net Link II is a device that interactively interfaces the PC running Supervision Plus with a string of SEC units.



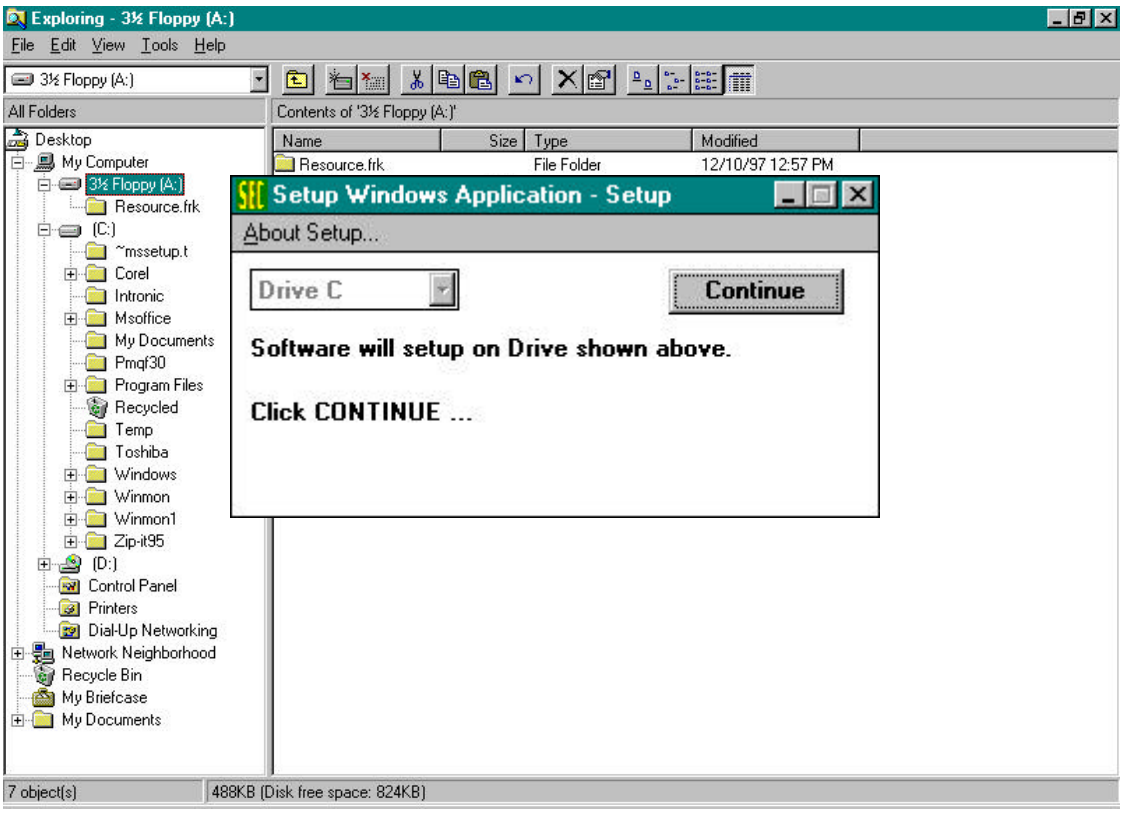
The Net Link II connects to a 9-Pin Din serial port on the PC and has two (2) RS-485 ports available for the SEC network units. The Net Link II can be connected to the data highway in various system configurations. Refer to the Net Link II data sheet for data highway connection and operation. The Net Link II can be powered from the same power source (24VDC) as the SEC field devices **or** with the 9-volt transformer.

Computer Connection

The Net Link II is connected to the computer with a 9 pin serial cable (P/N 147-1001).

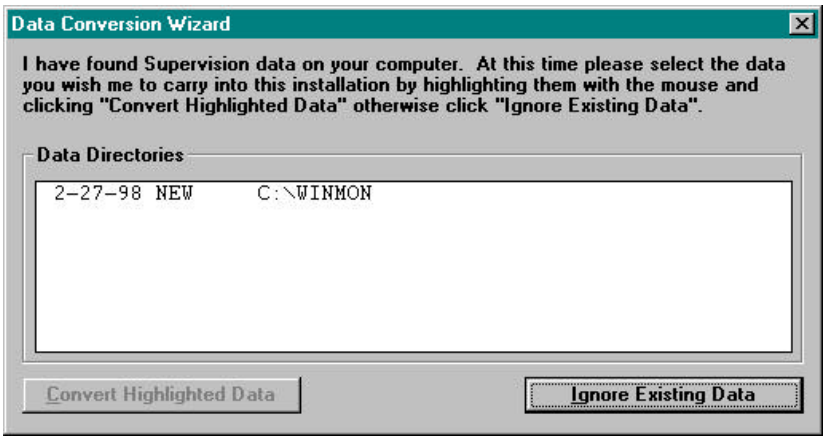
Supervision Plus Software Installation

Insert the Supervision Plus diskette into the computer's disk drive and run the SEC Setup.exe program.

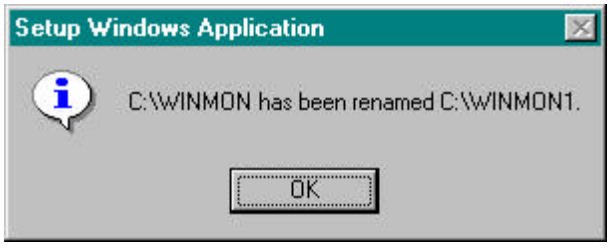


The Setup program makes a directory called Winmon. The Winmon directory will be installed on the drive selected in the above window. The Winmon directory will contain Winmon.exe (the Supervision Plus executable file) and the data files as they are established.

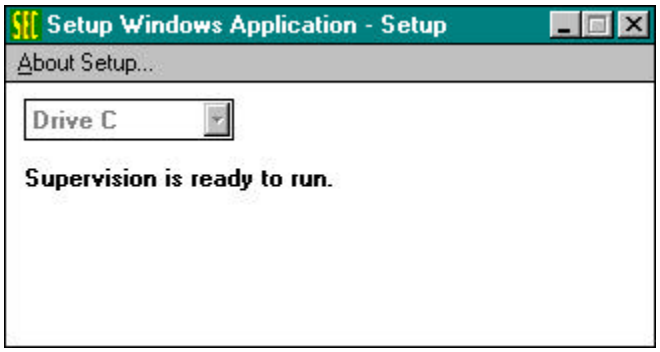
During installation the Setup program will search the hard drive for existing Supervision data files. If the computer had a version of Supervision installed, the program will display the Data Conversion Wizard box. If there is no data found on the computer the Data Conversion Wizard box will not appear.



Make the appropriate selection based on reading the information in the Data Conversion Wizard box. It is usually recommended to convert the existing data. The old program and data will also be filed in a new directory as shown below.

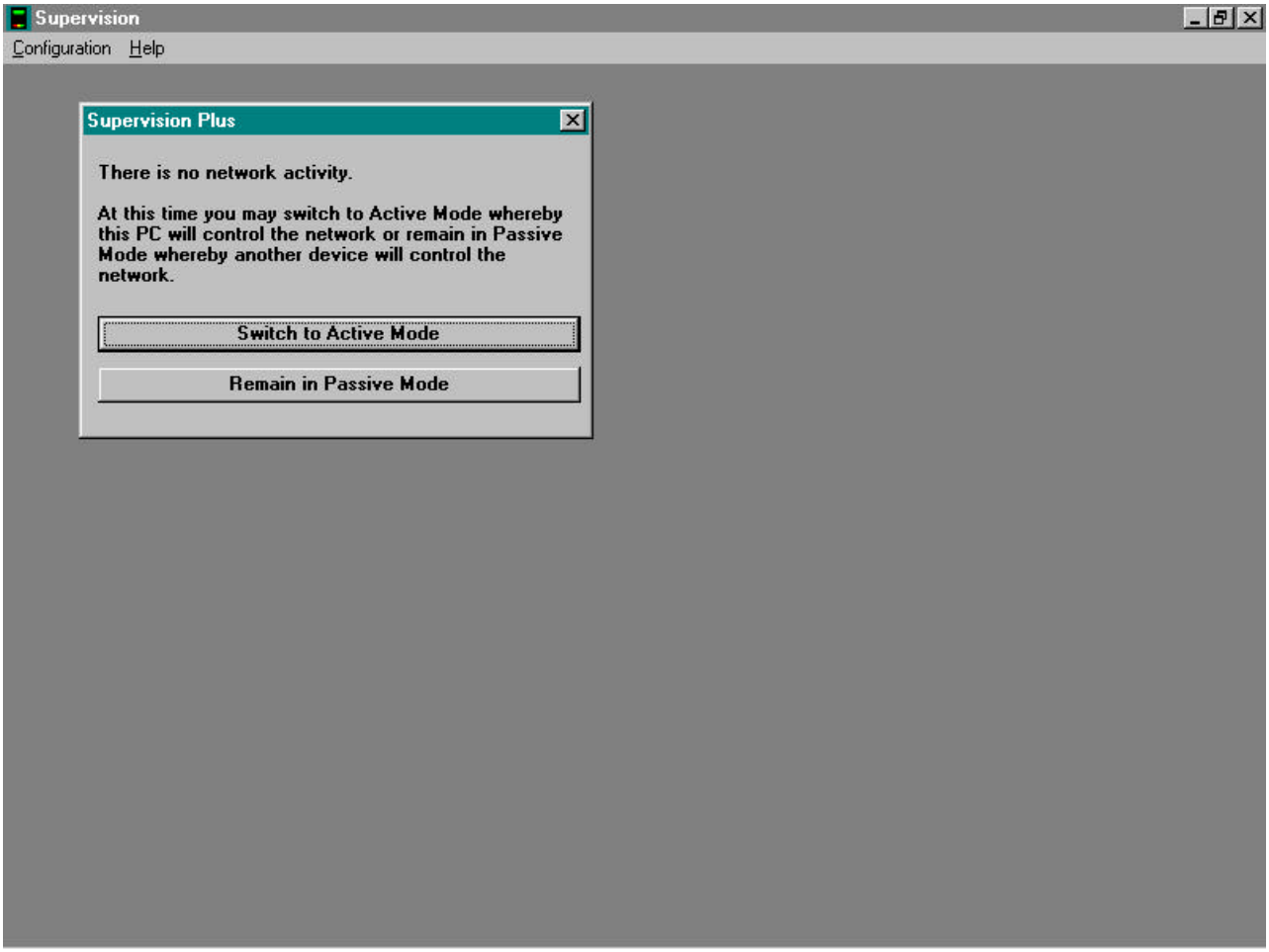


Click the OK button and the setup is complete.



Supervision Plus software installation is now complete.

The first time Supervision Plus is started on the computer the following screen may appear.



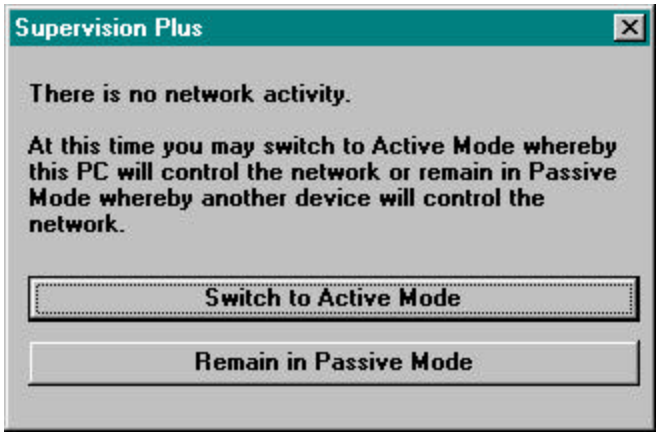
If there is a SEC 4100 System Monitor connected to the network and running, this screen should not appear. If this screen appears check your network mode configurations and verify that you have the correct port settings. With the SEC 4100 System Monitor Supervision should be set to the Passive Mode.

If there is no SEC 4100 System Monitor connected to the network select the Active Mode.

Network Mode

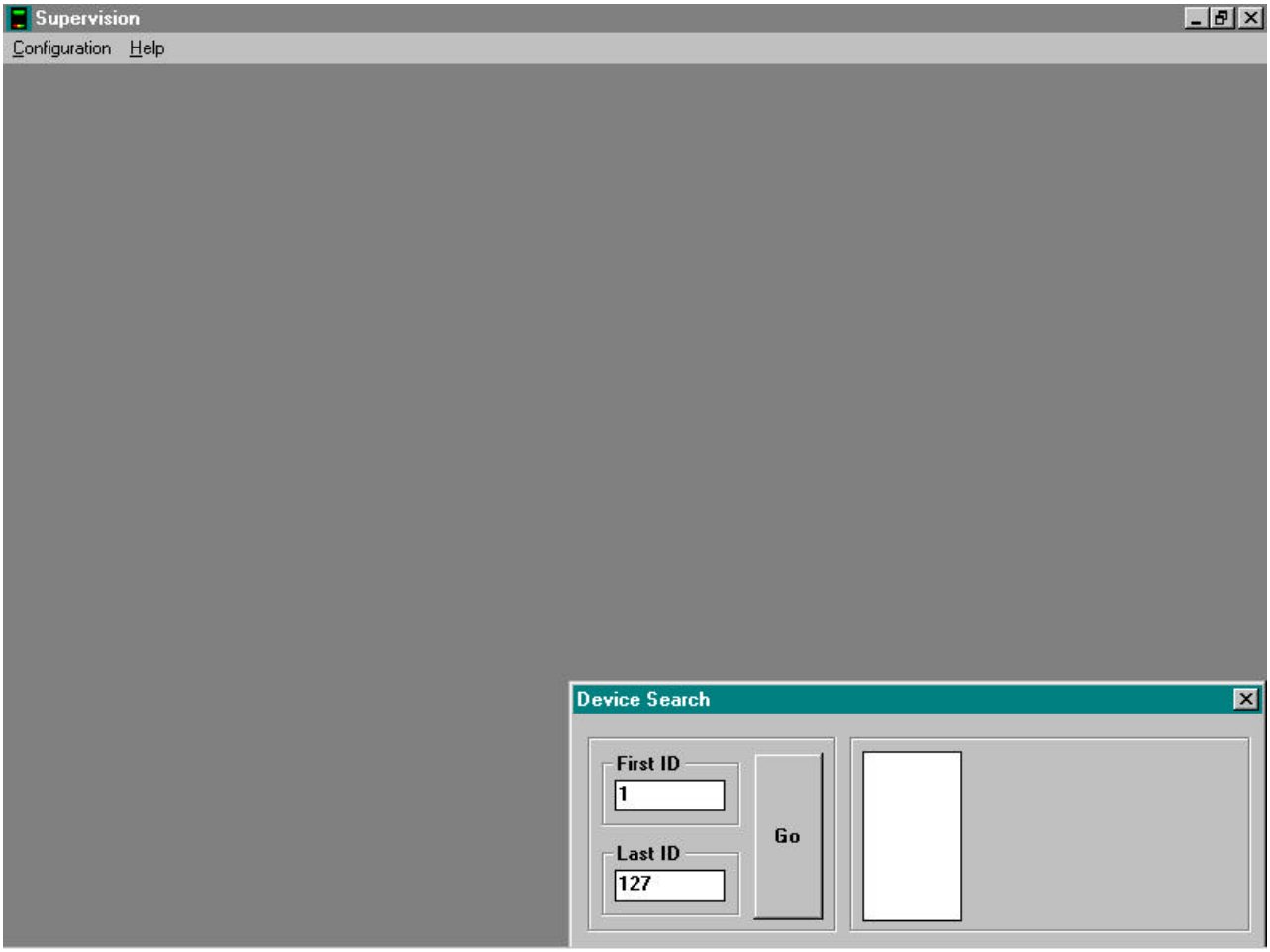
Allows the operator to select the mode of Supervision Plus. There are two modes of operation, Passive and Active. The Passive mode is used in conjunction with the SEC 4100 System Monitor. In the Passive mode, Supervision listens on the data highway to the information being sent between the SEC field devices and the SEC 4100. As the device state changes the Supervision screen is updated and information is data logged. In the Active mode, the PC interrogates the SEC field devices directly updating and data logging information.

Every time Supervision Plus is started (if the SEC 4100 System Monitor is not active on the highway) the following screen appears:



Upon startup, Supervision Plus listens on the data highway for any activity (information being gathered by the SEC 4100 System Monitor). If there is a SEC 4100 on the data highway, Supervision Plus should always be in the Passive mode and each device should be entered on to the data highway using the SEC 4100 keypad. Refer to SEC 4100 System Monitor Instruction Manual for operational instructions. If there is no SEC 4100 used with the system, Supervision Plus should be set to the Active mode.

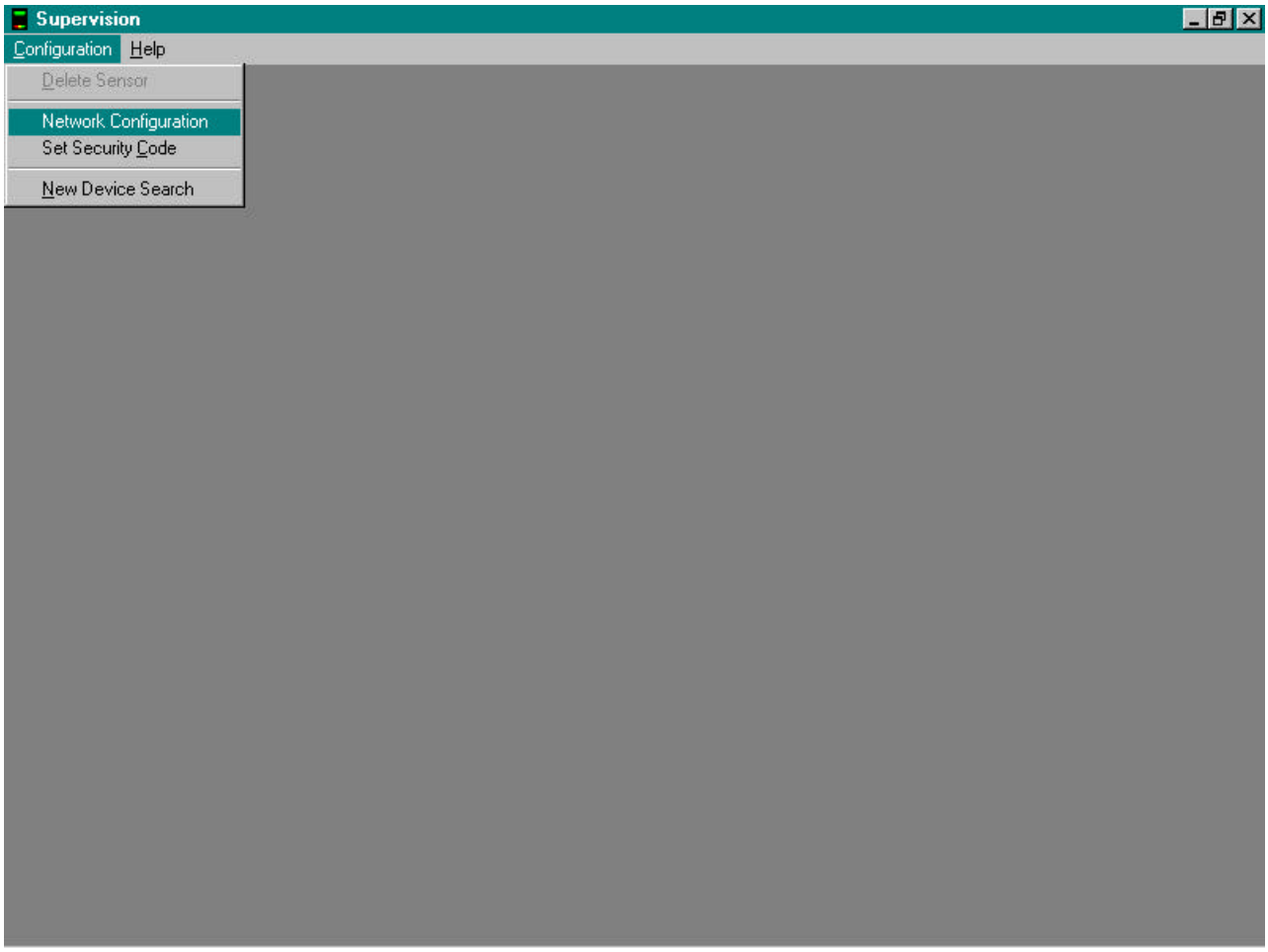
Upon selecting the Active mode of Supervision Plus the following screen will appear.



Enter the ID number of the first device that is located on the data highway. Move to the Last ID box using both the mouse pointer and button or the tab keys for movement between the First ID, Last ID and Go areas. Once the first and last ID numbers are entered select Go. Supervision will attempt to locate the field devices that have been selected. If a device is found, various parameters will be uploaded into Supervision Plus, briefly appearing in the gray area of the Device Search box.

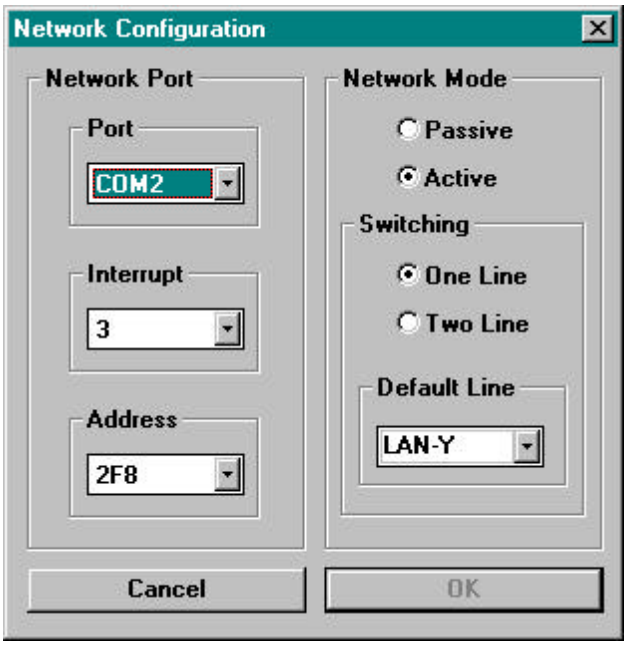
When the search is complete the number of sensors that were located will be briefly displayed and Supervision will begin running.

If Supervision Plus does not locate any devices choose the following pull down menu shown below.



Selecting the Network Configuration menu advances to the following operation.

After selecting Network Configuration the following Network Configuration box appears allowing for the Port and Network Mode to be changed.



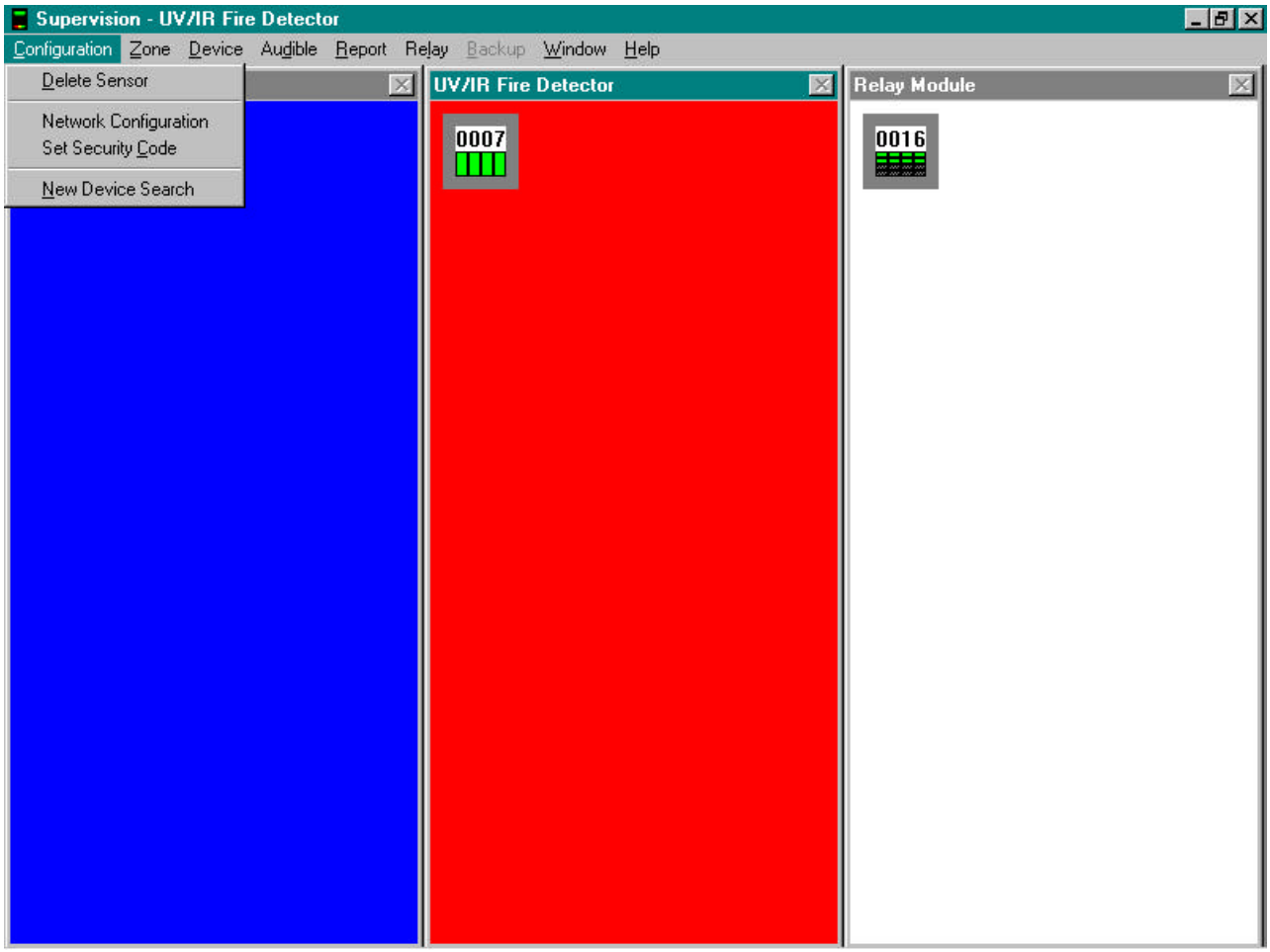
Modify the configurable points in the appropriate areas; click on the OK button to register the changes.

Selection	Description
Network Port	Changes the communication port of the PC to accept the Signals from the SEC Net Link
Network Mode	Passive – Used in-conjunction with Supervision Plus and the SEC 4100 System Monitor. Active – Used when the PC and Supervision Plus are operating.
Network Mode Switching	One Line – Select this mode when the data highway is only connected to LAN X **or** LAN Y. Two Line – Select this mode when the data highway is terminated on **both** LAN X and LAN Y.
Network Mode Default Line	This is only selectable when Network Mode Switching, One Line is selected. Select LAN X or LAN Y terminals the devices are connected.

After changes are made and the OK button is selected the Security Gate appears requiring the correct code to be entered. Enter the security code, go to the Configuration pull down menu and select New Device search when in the Active Mode.

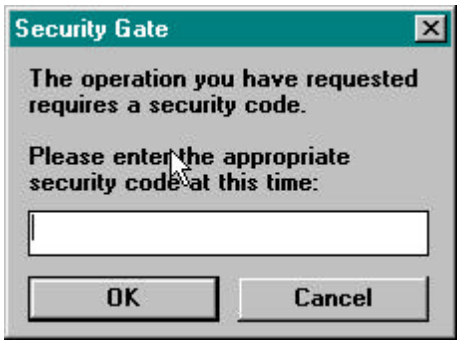
III. Supervision Plus Pull Down Menus

Configuration Menu



Delete Sensor

Upon selection of this menu the following box will appear.

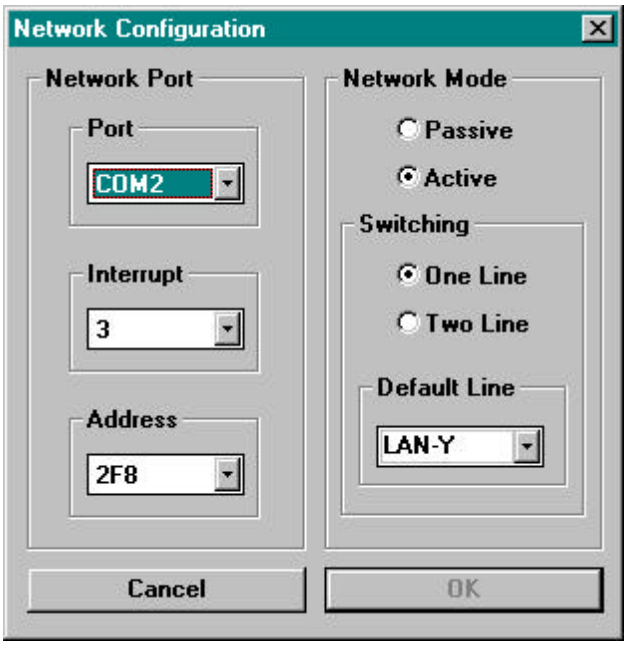


After entering the correct security code the following menu will allow for selecting and deleting a device. Use the mouse to select (highlight) the device that is to be deleted. The device ID number will appear in the box. Use the pointer and click on the OK button to delete the device from the highway.

The device will no longer be displayed on the main screen.

Network Configuration

Allows the operator to change the mode and settings of Supervision Plus. Upon selecting this pull down menu the following box will appear:



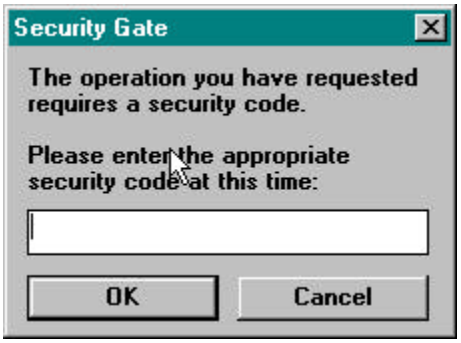
Modify the configurable points in the appropriate areas; click on the OK button to register the changes.

Selection	Description
Network Port	Changes the communication port of the PC to accept the Signals from the SEC Net Link
Network Mode	Passive – Used in-conjunction with Supervision Plus and the SEC 4100 System Monitor. Active – Used when the PC and Supervision Plus are operating.
Network Mode Switching	One Line – Select this mode when the data highway is only connected to LAN X **or** LAN Y. Two Line – Select this mode when the data highway is terminated on **both** LAN X and LAN Y.
Network Mode Default Line	This is only selectable when Network Mode Switching, One Line is selected. Select LAN X or LAN Y terminals the devices are connected.

After changes are made and the OK button is selected the Security Gate appears requiring the correct code to be entered. Enter the security code, go to the Configuration pull down menu and select New Device search when in the Active Mode.

Set Security Code

The default security code is SEC. To change the security code the old security code must be entered first. Once selected, the following box will appear:

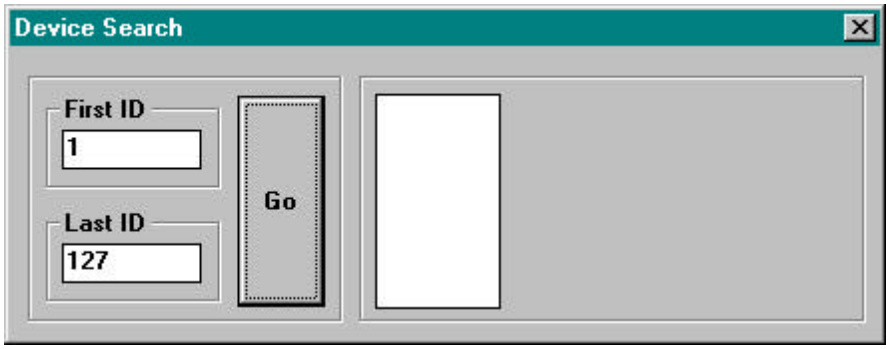


After entering the old security code (SEC) the following box will appear:

Enter and **remember** the new security code in this box.

New Device Search

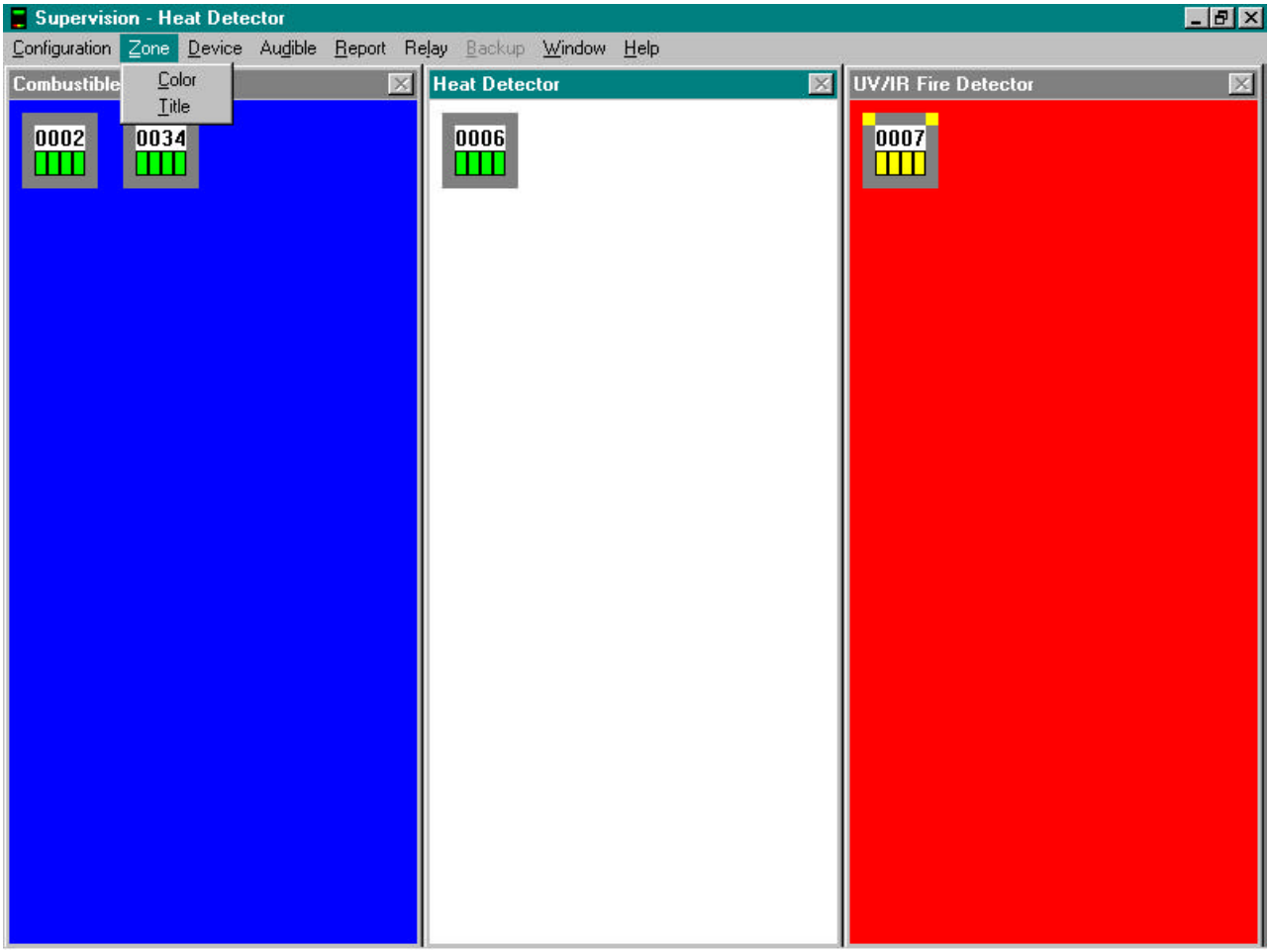
By selecting New Device Search the following box will appear in the lower right hand corner of the PC screen. This menu selection will only be active when Supervision Plus is in the Active mode.



Enter the ID number of the first device that is located on the data highway. To move to the Last ID box using either the mouse pointer and button or the tab keys for movement between the First ID, Last ID and Go areas. Once the first and last ID numbers are entered select Go. Supervision will attempt to locate the field devices that have been selected. If a device is found, various parameters will be uploaded into Supervision Plus, briefly appearing in the gray area of the Device Search box.
When the search is complete the number of sensors that were located will be briefly displayed and Supervision will begin running.

Zone Menu

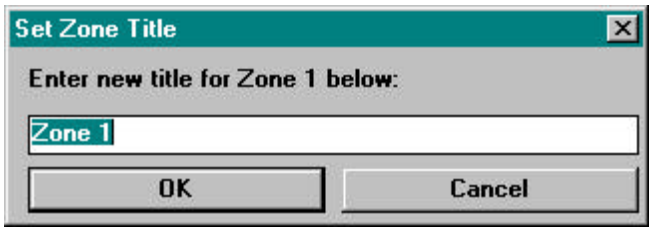
The Zone menu is used to set or change the Zone box colors and titles.



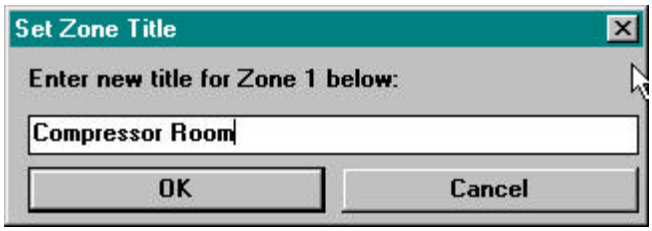
To change the background colors of the Zone first select the Zone by using the mouse button. Point and click once on the Zone to be selected. Once the Zone is selected go to the Zone menu and select Color. After Color is selected the following box will appear.

Use the mouse button to select the new Zone color. Once the color is selected click on the OK button. The Zone background will automatically change to the new color.

To change the Title of the Zone, first select the Zone by using the mouse button. Point and click on the Zone to be titled. Once the Zone is selected go to the Zone menu and select Title. After Title is selected the following text box will appear.



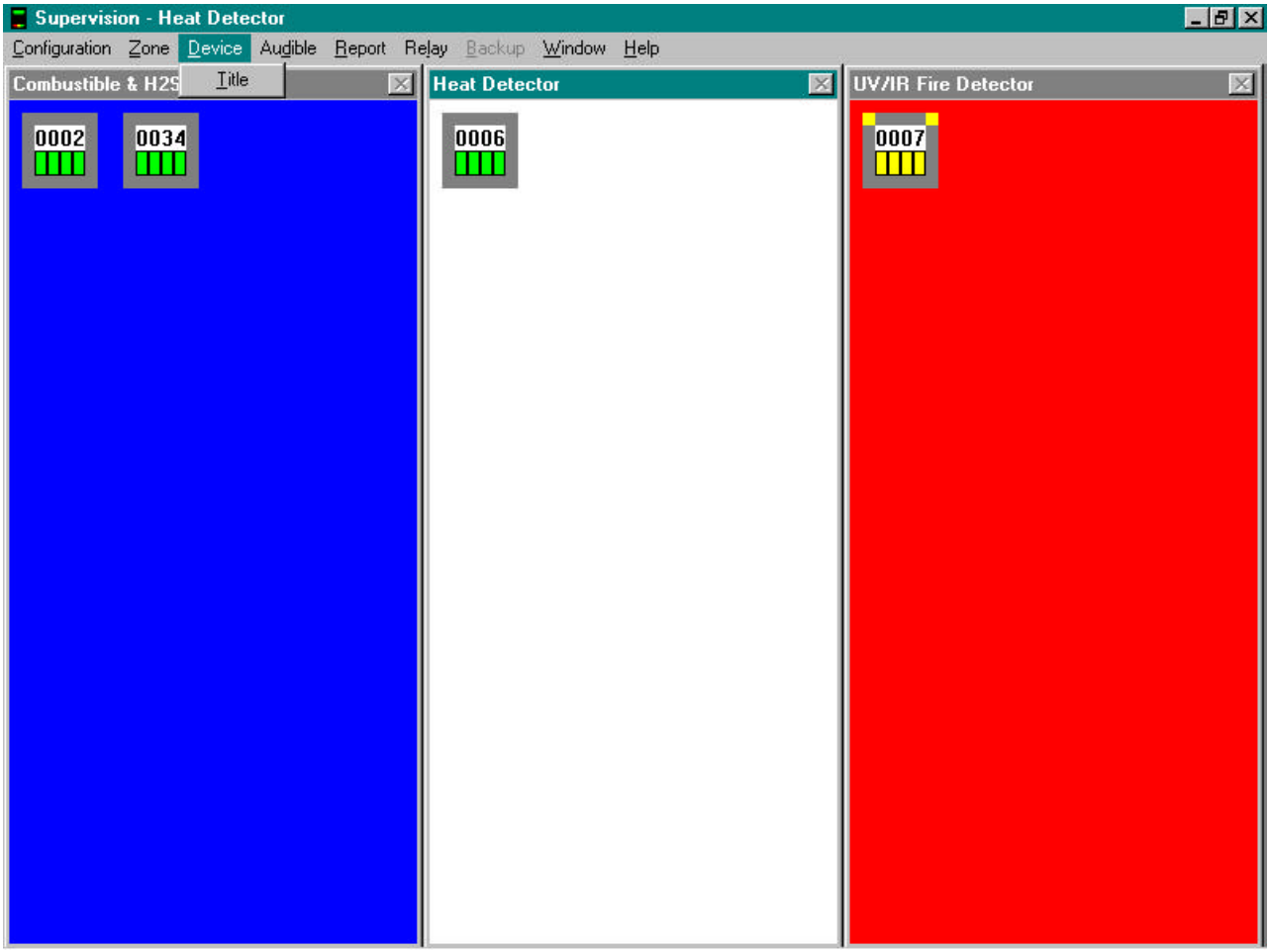
Using the keyboard enter the new Title for the Zone.
Example:



Select the OK button and the new Zone title is automatically entered.

Device Menu

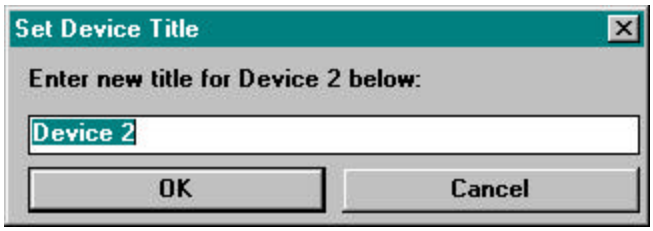
The Device Menu is used to Title or name the individual icons.



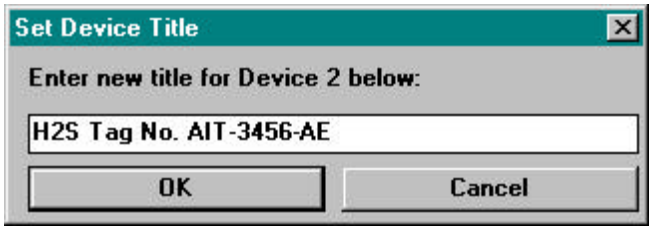
To change the device name first select the Device pull down menu by using the mouse. Use the mouse button to click on Title. Once Title is selected the following text box will appear.

To select the desired ID number of the icon that is to be titled, use the mouse pointer to highlight the selection.

Once the ID number is selected click on the OK button. The following box will appear:

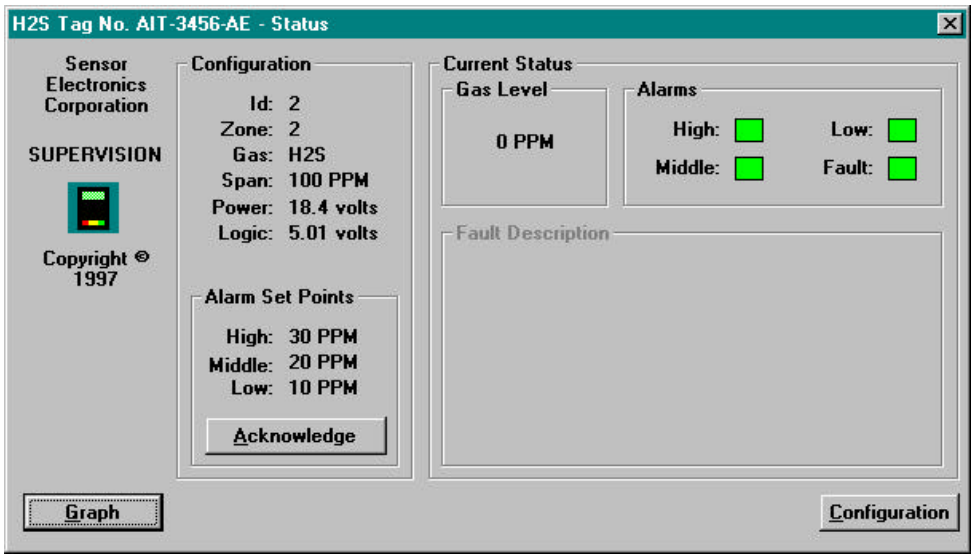


Use the keyboard to enter the new Device title.



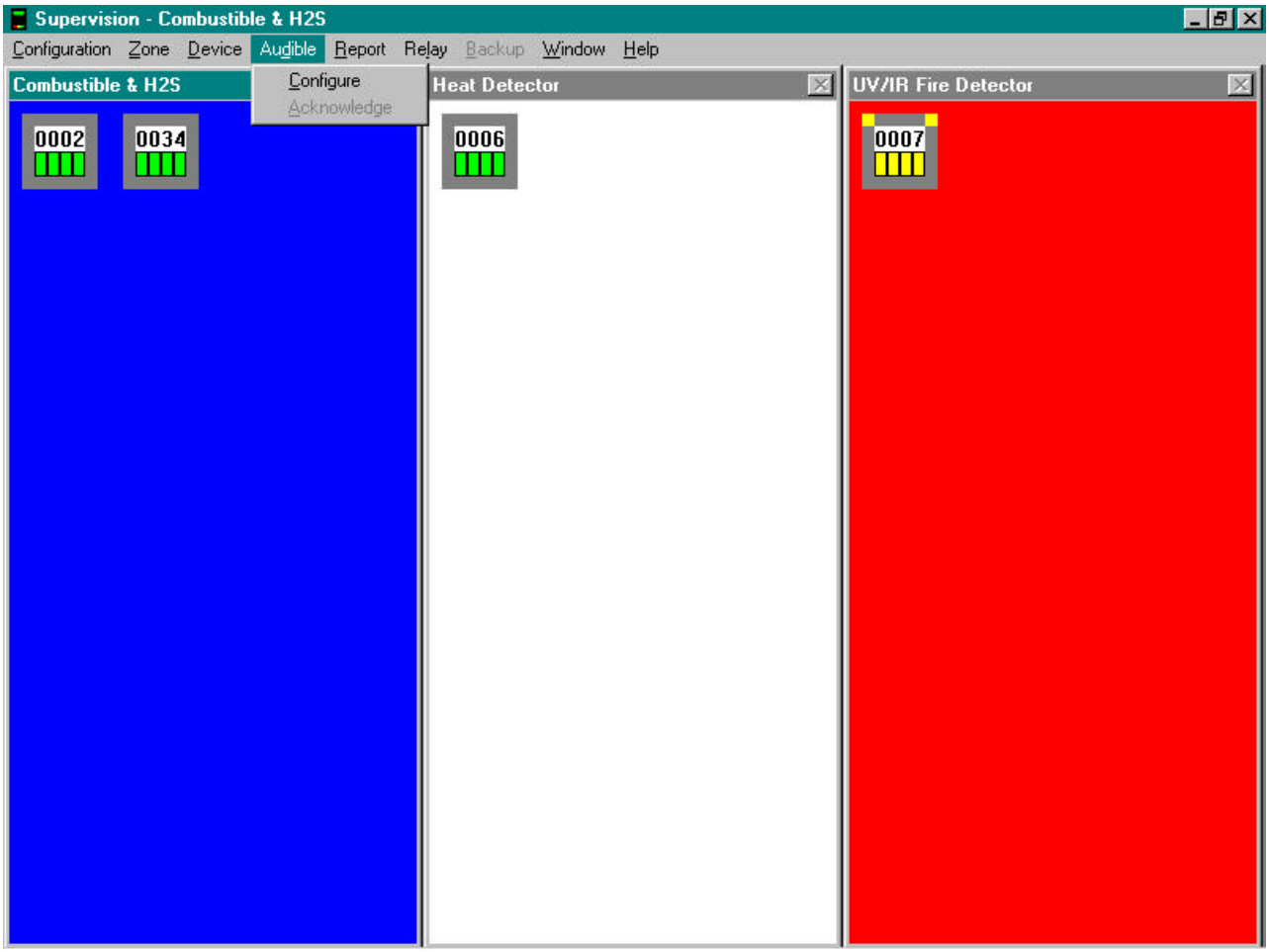
Example:

Once the new title is entered click on the OK button. The new title will appear for this icon until it is changed. As an example, with the mouse button double click on the icon in the main screen and the following box will appear:

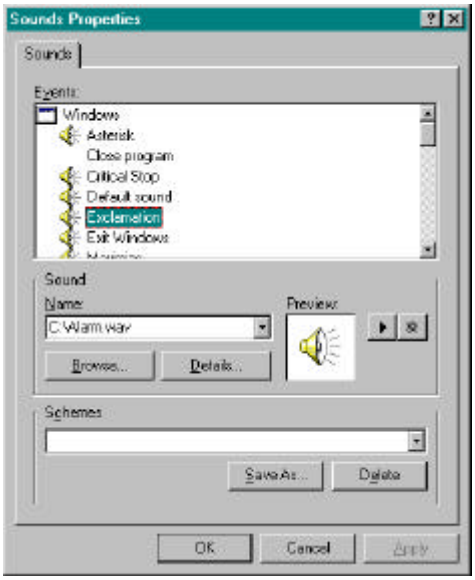


Audible Menu

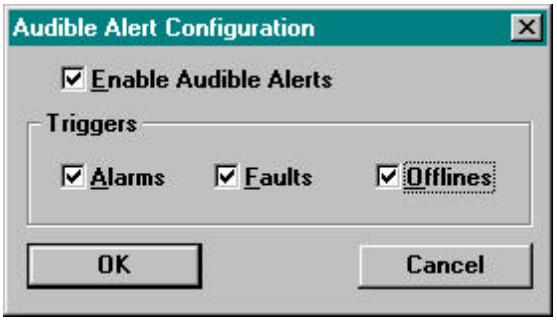
The Audible Menu is used to configure the audible alarms (sound generated from the computer) and Acknowledge (silence) the alarm sound.



The audible noise is linked the sound file located in the Control Panel, Sounds. Go to the Exclamation to change the audible sound.



The alarms can be enabled and selected using the Audible Alert Configuration box.

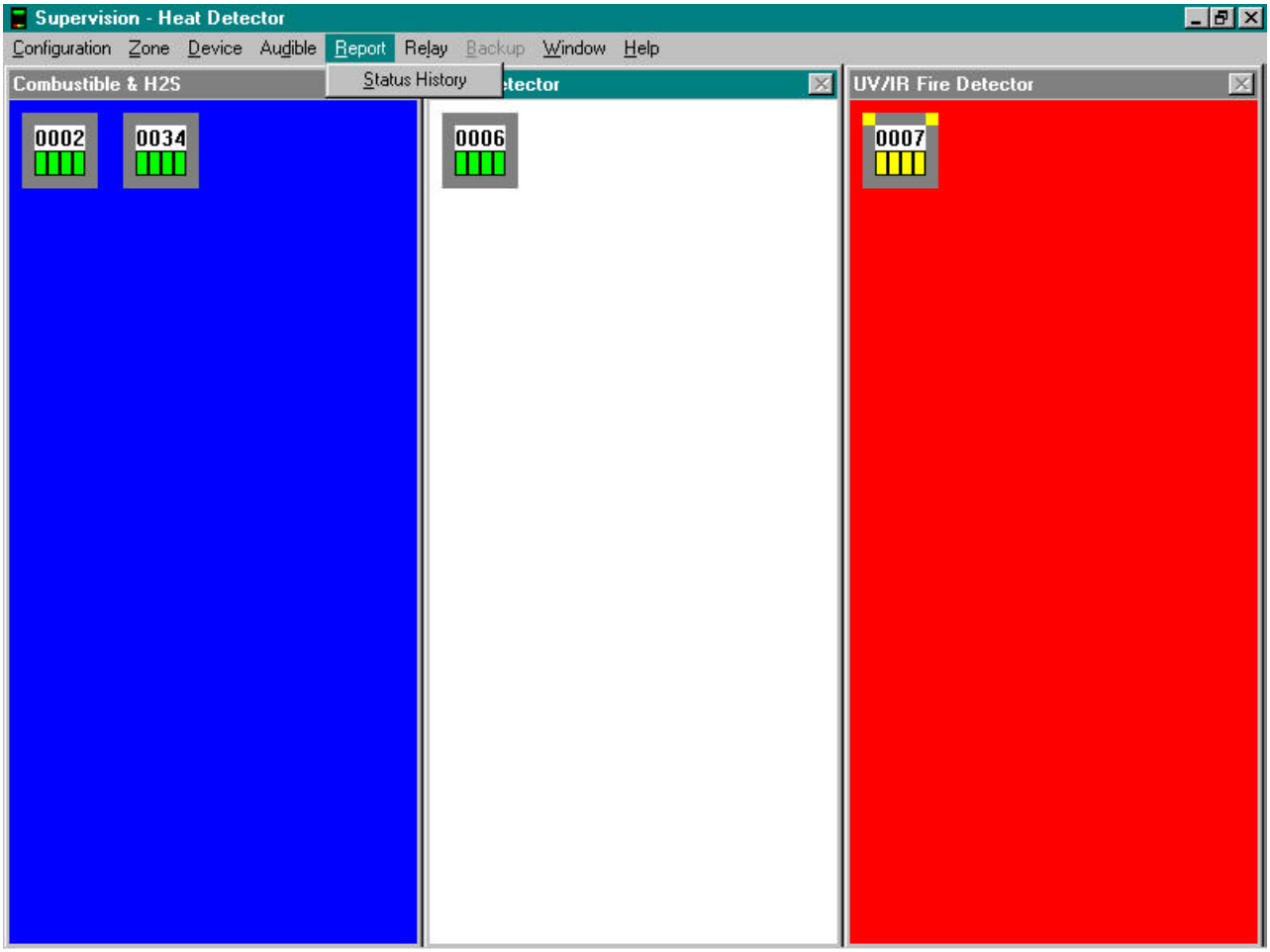


Use the mouse pointer to choose when the audible alarms are to be enabled.
Alarms will be active for any device in alarm condition.
Faults will be active when any device in a fault condition.
Offline will become active when any device does not respond for two (2) minutes.
Click on the OK button to complete the selection.

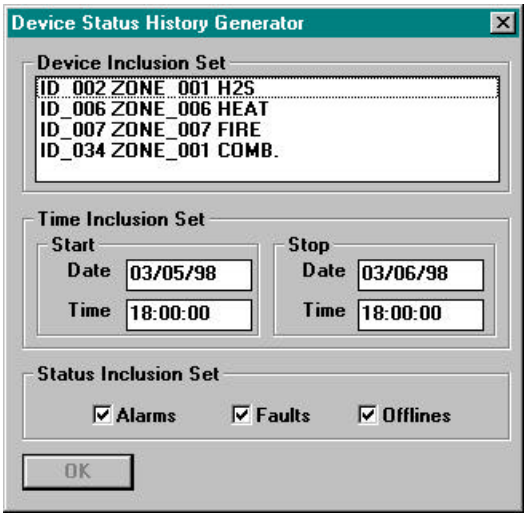
When at least one of the alarm triggers are satisfied, the PC sound will be generated (if the volume switch is turned up). The Acknowledge selection in the Audible pull down menu will be in dark text. To silence the sound, select Acknowledge from the Audible Menu. This will silence all current alarms. If new alarms occur the sound will be activated again. Repeat the process to silence the audible alarms.

Report Menu

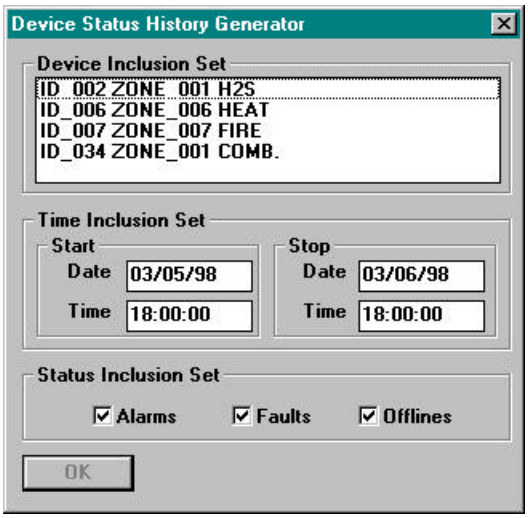
The Report menu is used to view and print individual device alarms and faults.



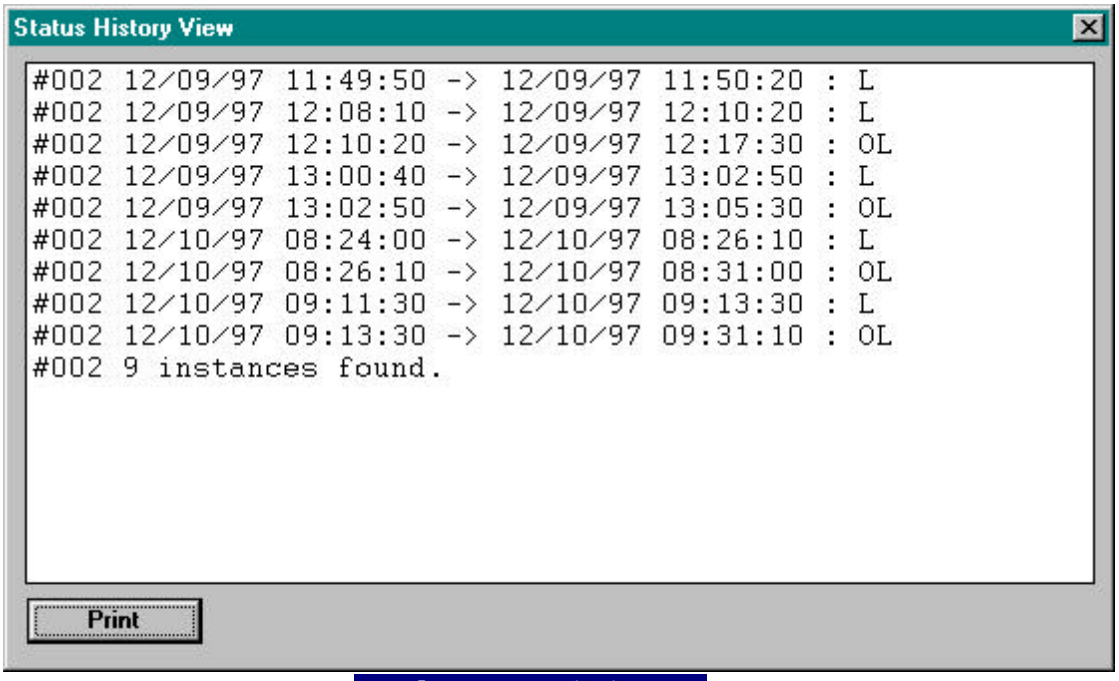
When Report, Status History is selected with the mouse pointer the following screen will appear.



The device history is capable of displaying certain dates and time periods. First, enter the time and date in the Start and Stop areas of the Time Inclusion Set. Next, use the pointer and mouse button to click on the status that is to be viewed in the Status Inclusion Set area. Select any combination of alarms, faults and offline. Select (highlight) the device that is to be viewed by clicking on the device in the Device Inclusion Set and clicking on the OK button.

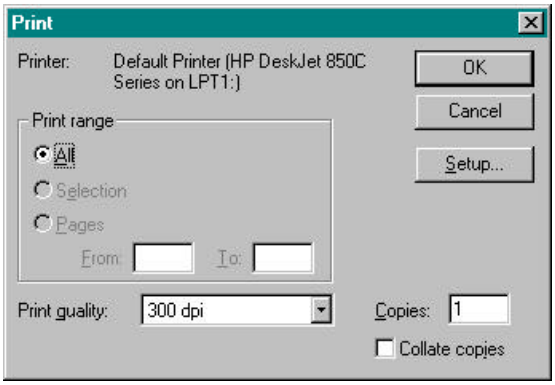


Device number 2 was selected. The following is an example of the status history for the device.



Code	Description
O	Offline
C	Calibrate
H	High Alarm
M	Mid Alarm
L	Low Alarm
F	Fault

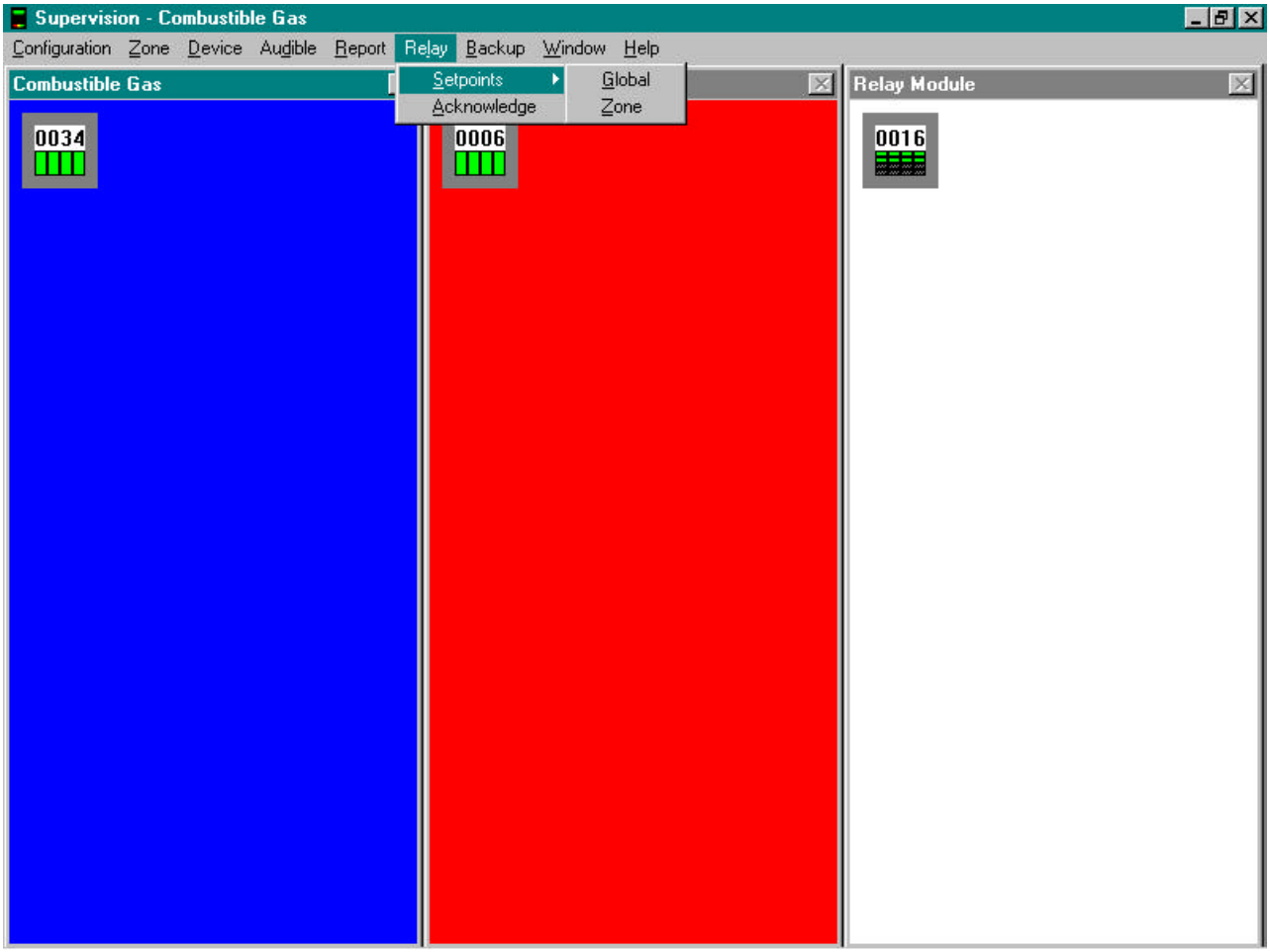
Supervision Plus can print from the Status History View screen. Selecting the Print button with the mouse pointer can print out the information displayed. When the Print button is selected a similar screen to the following will appear:



Make the appropriate selections in the Print box and choose OK to print the information.
The information that is printed out will be the text in the white area of the Status History View box (on previous page).

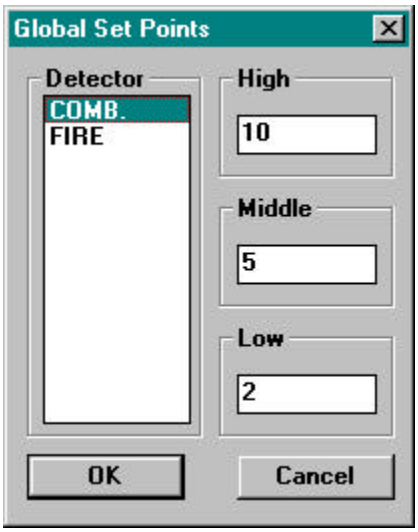
Relay Menu

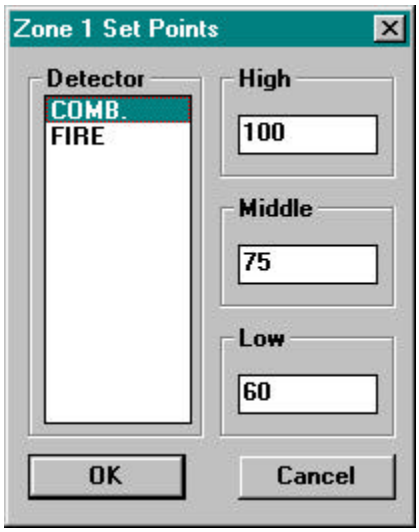
The Window menu can be used to configure the SEC 4855 Relay Module. Latched relays can also be acknowledged from this menu.



The Relay Module Set Points can be programmed to be energized from individual device relay alarm levels, zone alarm set points, or global set points.

Common alarm levels can be set from the Relay Menu. The following are boxes that appear once Global and Zone set points they are independently selected from the Relay pull down menu. Only one of the following boxes can appear on the screen at one time.



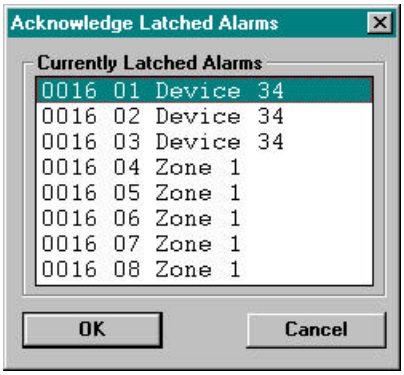


Selection	Description
Global	Allows the alarm set points to be programmed for all common (Global) devices on the network. If any Global device, i.e. any combustible gas detector on the network exceeds the alarm threshold the associated alarm relay will energize.
Zone	After selecting a zone from the main screen, common device relay alarm set points can be programmed. If more then one type of device is in a zone, the alarm set points (low, mid, high) can be independently programmed. If any device exceeds the programmed alarm threshold in a zone the associated alarm relay will energize.

First use the mouse pointer to choose and highlight the detector to set the alarm levels. Next use the mouse pointer to select the alarm level box (low, mid, high) to enter the alarm level set point. By entering in the alarm level and click on the OK button programs the alarm relays.

Resetting Latched Relays

If a relay is programmed to latch "on" once the alarm level is reached, selecting Acknowledge in the Relay pull down menu displays all relays that are latched on. The following is an example.

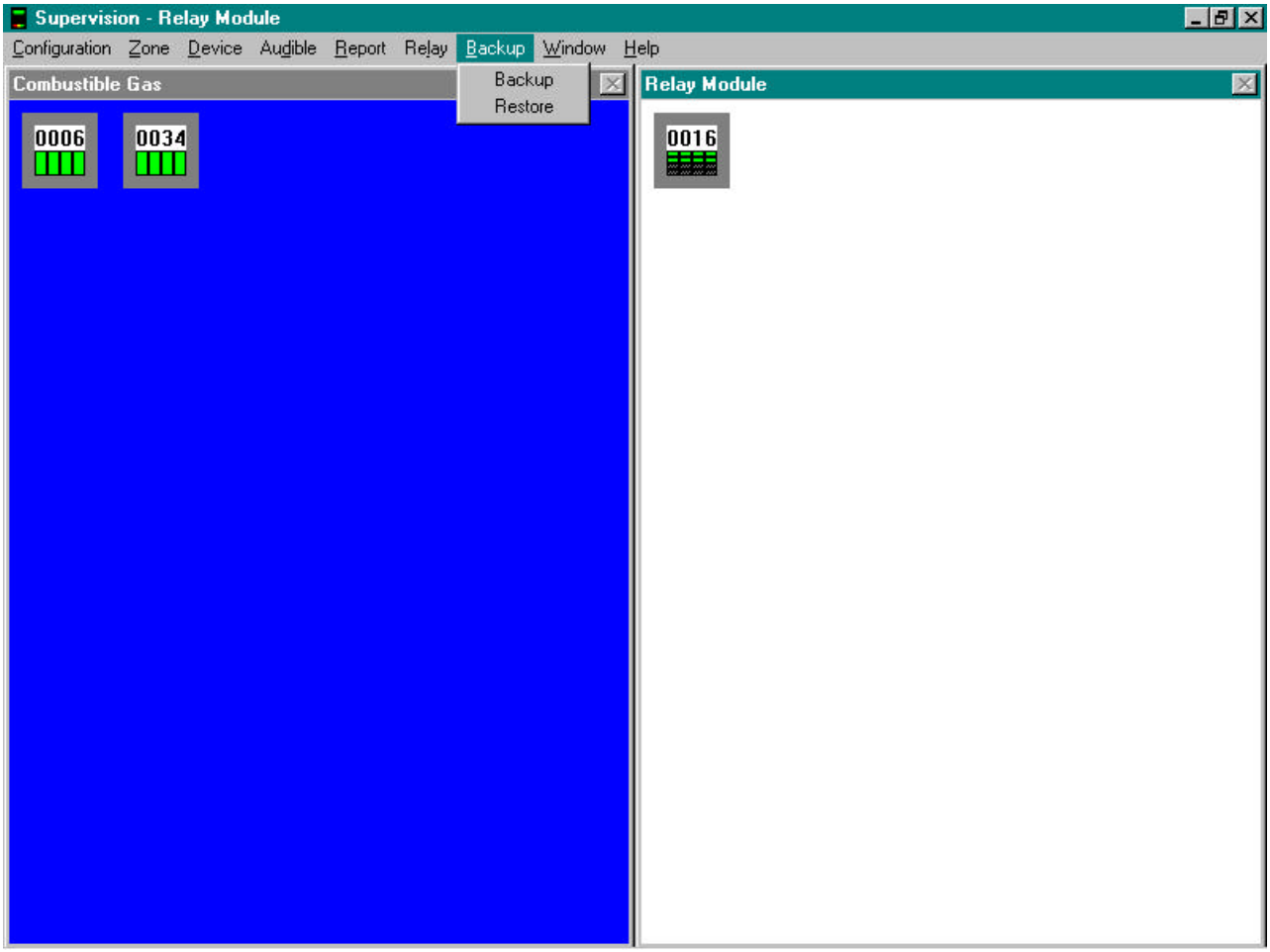


Using the mouse pointer highlight the relays that are to be reset and click on the OK button. If the latched relays are below the alarm set point the relays will be unlatched.

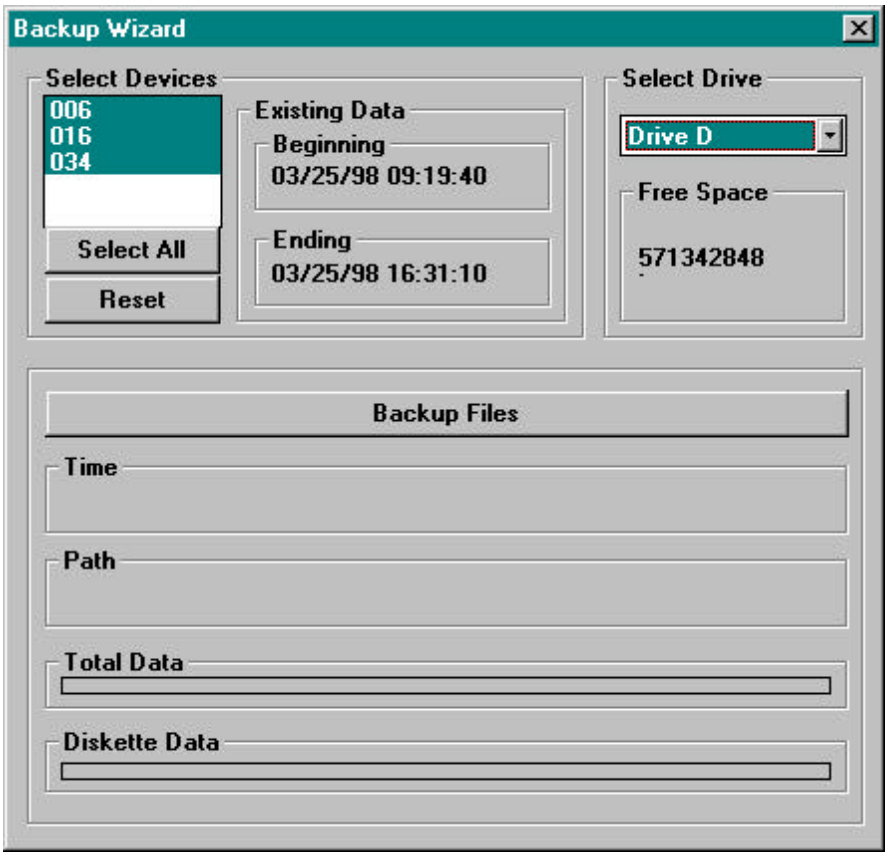
For information on how to program the individual relays refer to Section V. of this manual.

Backup Menu

The Backup menu allows the data files for the devices to be backed up on diskette or other storage devices. The Backup menu also allows the backed up data to be added back in to the data folder.



Upon selecting Backup the following box will appear.

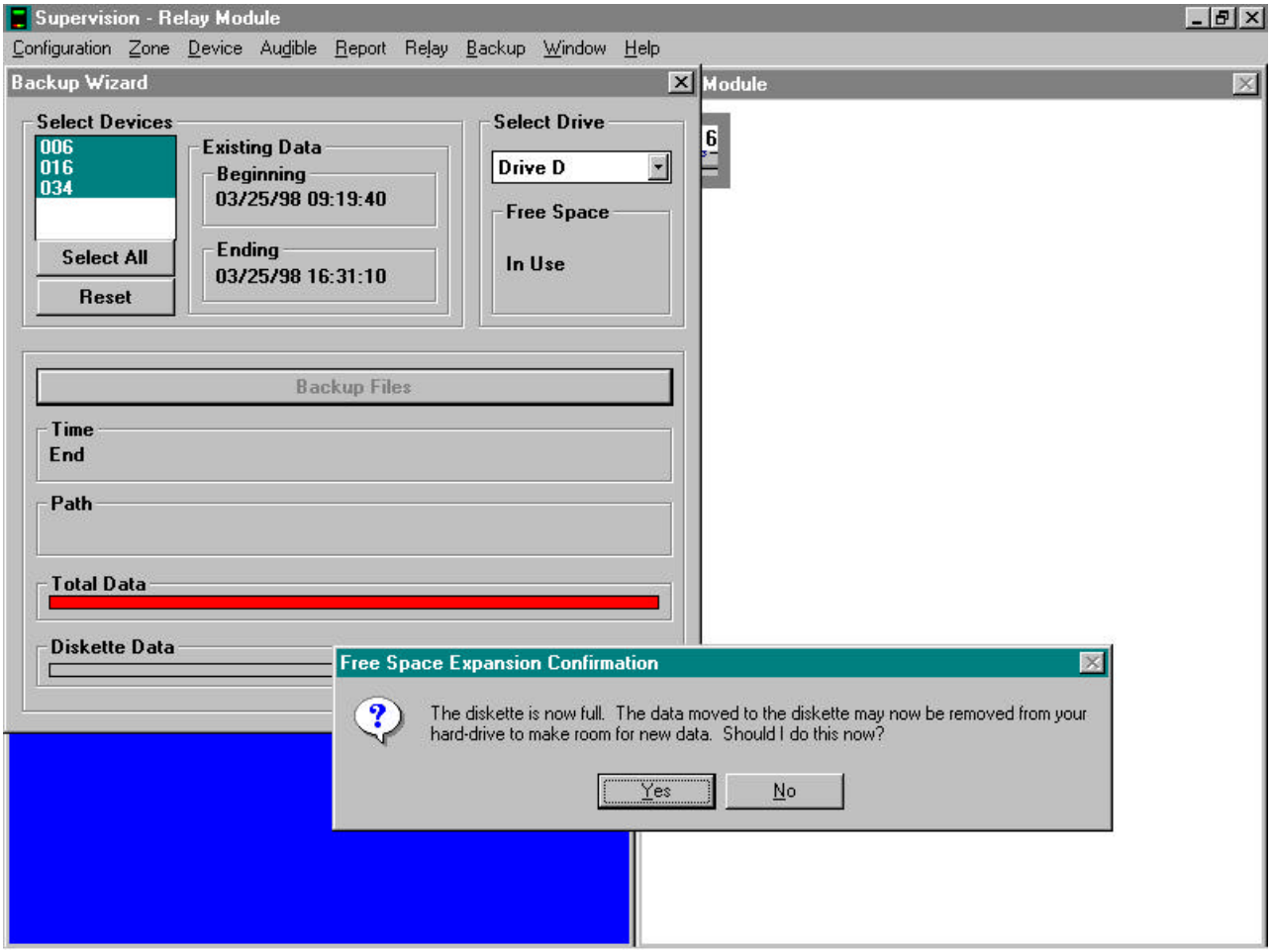


First choose the device (data) that is to backed up. Typically the Select All button is the correct choice. Next, select the destination drive to where the data is to be stored in the Select Drive area. If the floppy drive is selected there must be disk in the floppy disk drive. The Existing Data area displays the beginning data date and ending data date. Choose the Backup Files to begin the backup process. The Backup Wizard creates a folder on the selected drive called Winmon. Once the backup is complete the Winmon folder should be renamed (a possible suggestion for the data folder name is the data date period). If the data folder is not renamed the next time a backup is attempted to be saved on the same drive or diskette, a message in the Free Space area indicating "in use" will appear. Once the Winmon folder name is changed the Backup Wizard will allow the backup to proceed. The Free Space area will indicate the amount of disk space available on the selected drive.

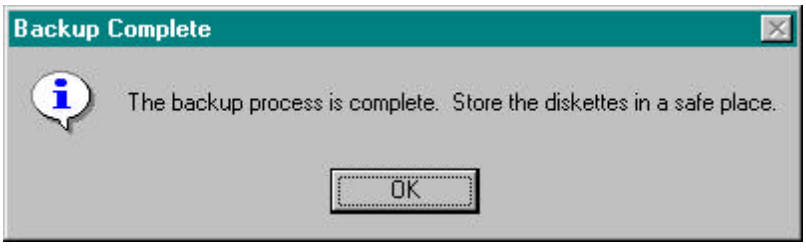
During the Backup various information is displayed in the Backup Wizard.

Area	Description
Time	Indicates the remaining time to complete the Backup procedure.
Path	Displays the directory and file information being sent.
Total Data	A bar graph indicating green initially for the amount of data to be backed up. Once the data is backed up the bar graph becomes red.
Diskette Data	A bar graph that turns red indicating the information is being written to the selected drive.

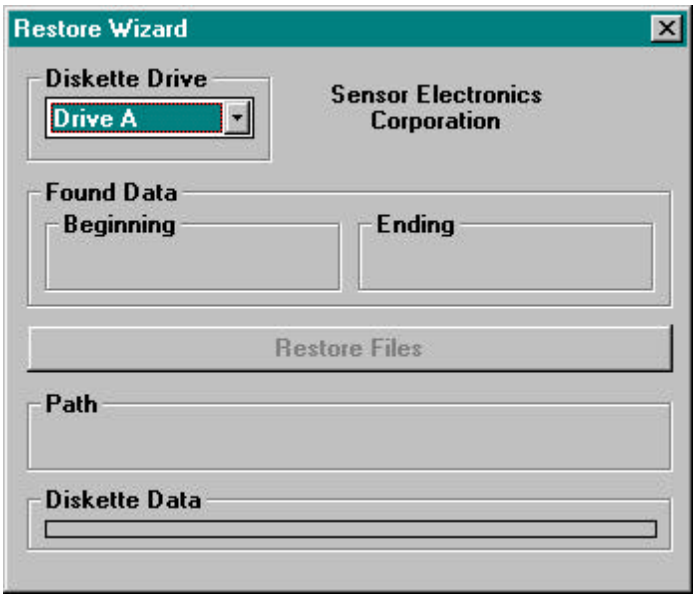
Once the data has been backed up the following screen will appear.



Selecting the Yes button will remove the data from the hard drive that has been backed up. If No is selected the old data will remain on the hard drive.
When the backup is complete the following message will appear.

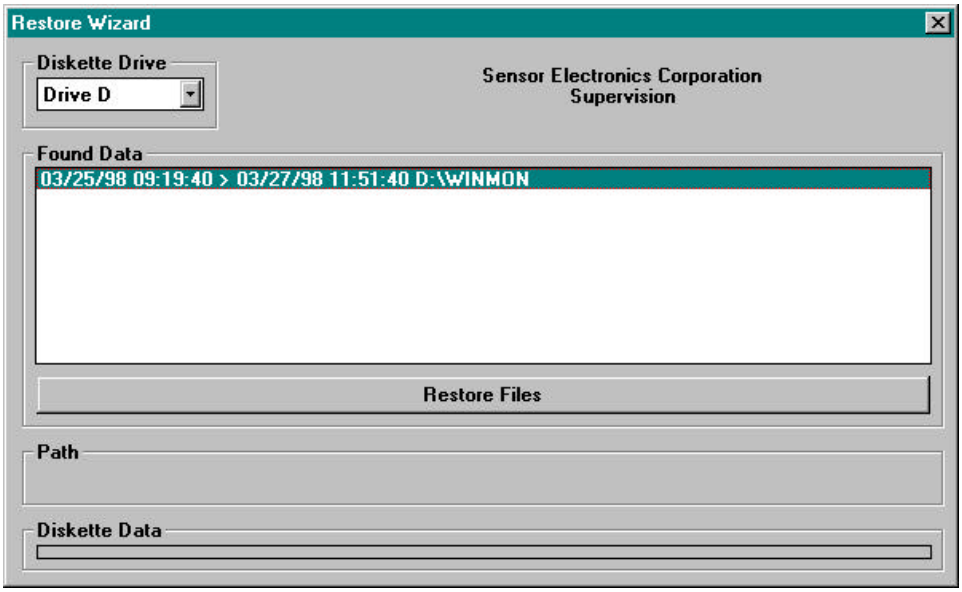


Upon selecting Restore the following box will appear if you have data files on the selected drive.



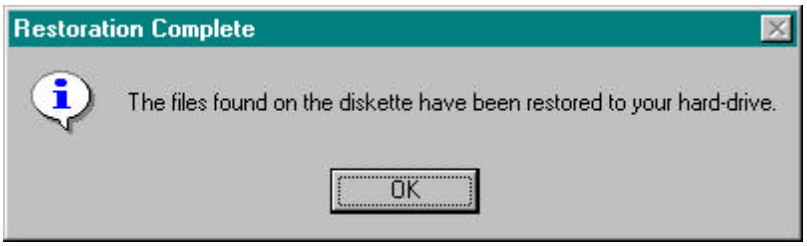
If there are no existing data files found on the drive selection, the following message will appear.

If this message appears, click on the OK button and the Restore Wizard box above will automatically appear allowing the Diskette Drive to be selected where the stored data can be found.



Once the data is located the Found Data areas indicate the time tags of the data. All data that is to be restored must be located in the Winmon folder of the Diskette Drive. Copy all data to be restored to

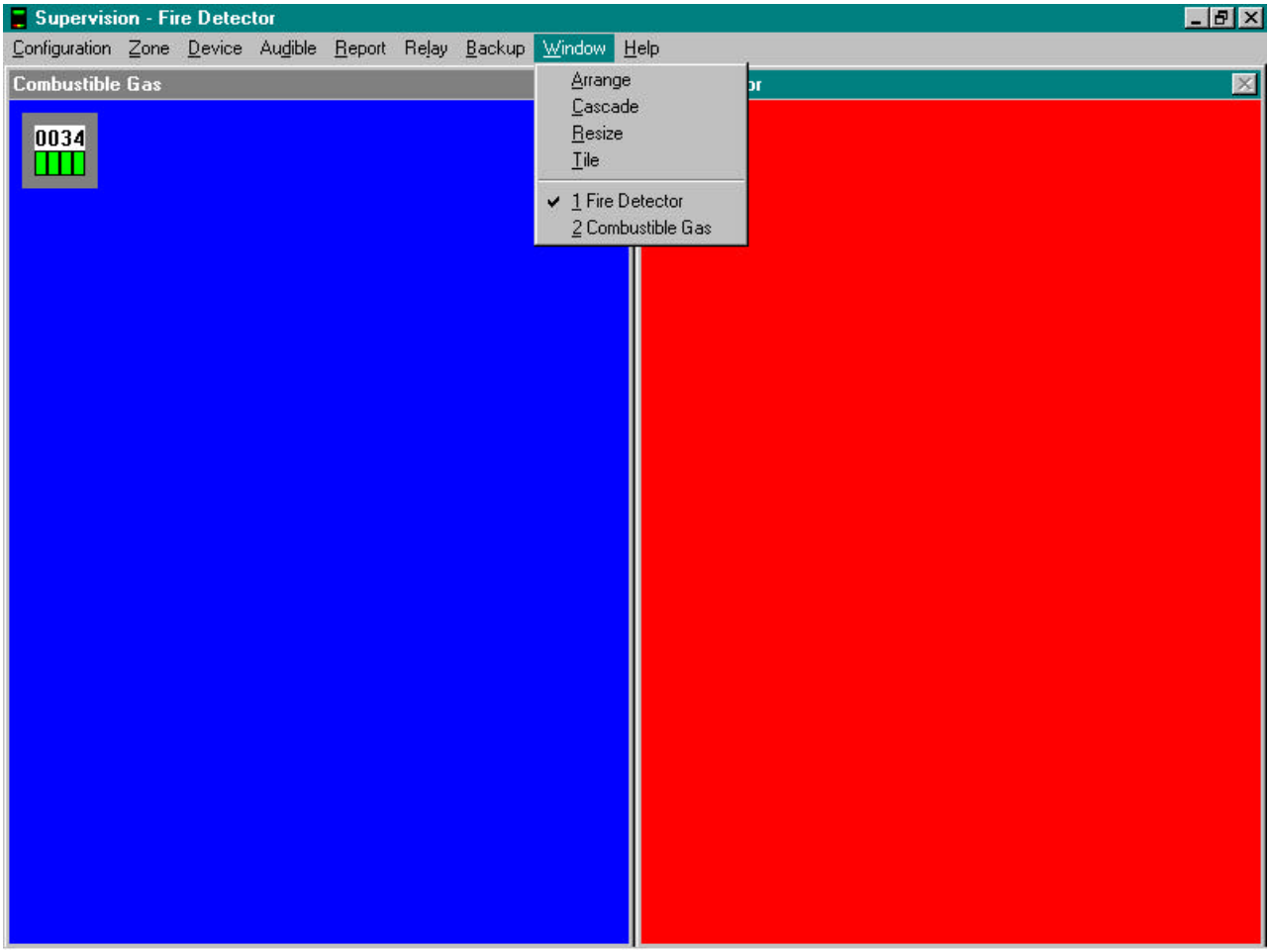
the Winmon file. Upon selecting Restore Files the Path area will indicate where the files are being restored. The diskette data will turn red as the files are being restored.
Once the restoration in complete the following message will appear.



Click on the OK button and this will complete the restore process.

Window Menu

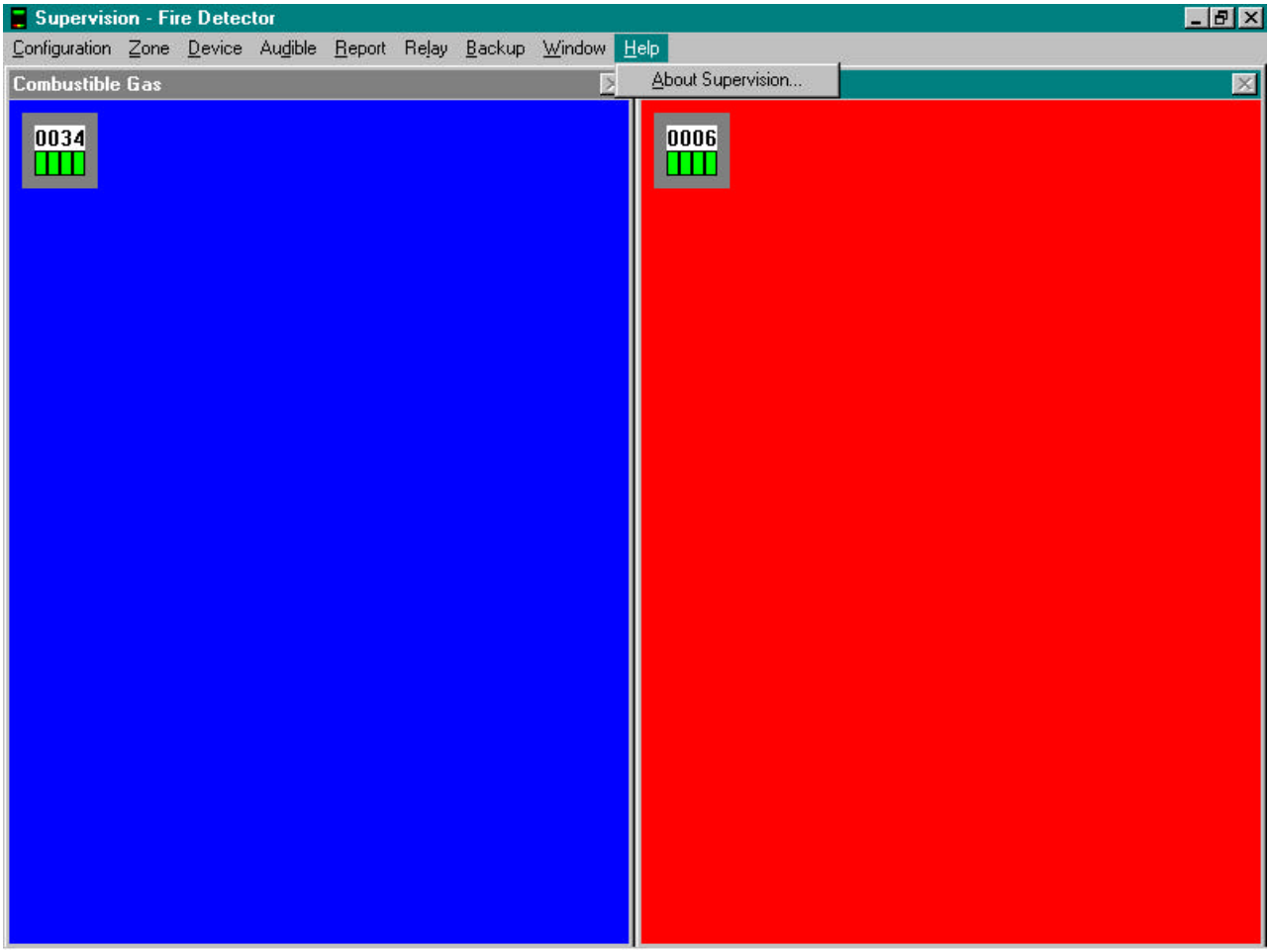
The Window menu can be used to change the views of the main screen.



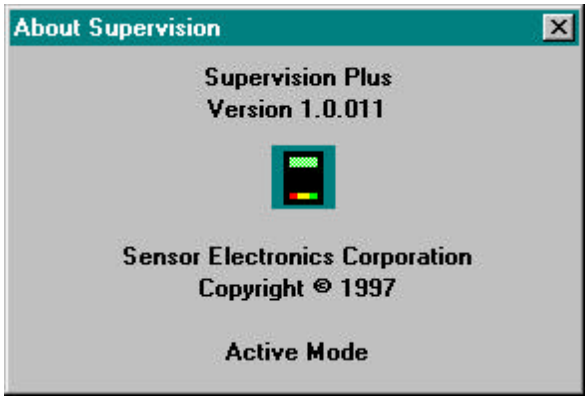
Choose the type of view with the mouse pointer.

Help Menu

The Help menu can be used to view the version of Supervision Plus installed on the computer.



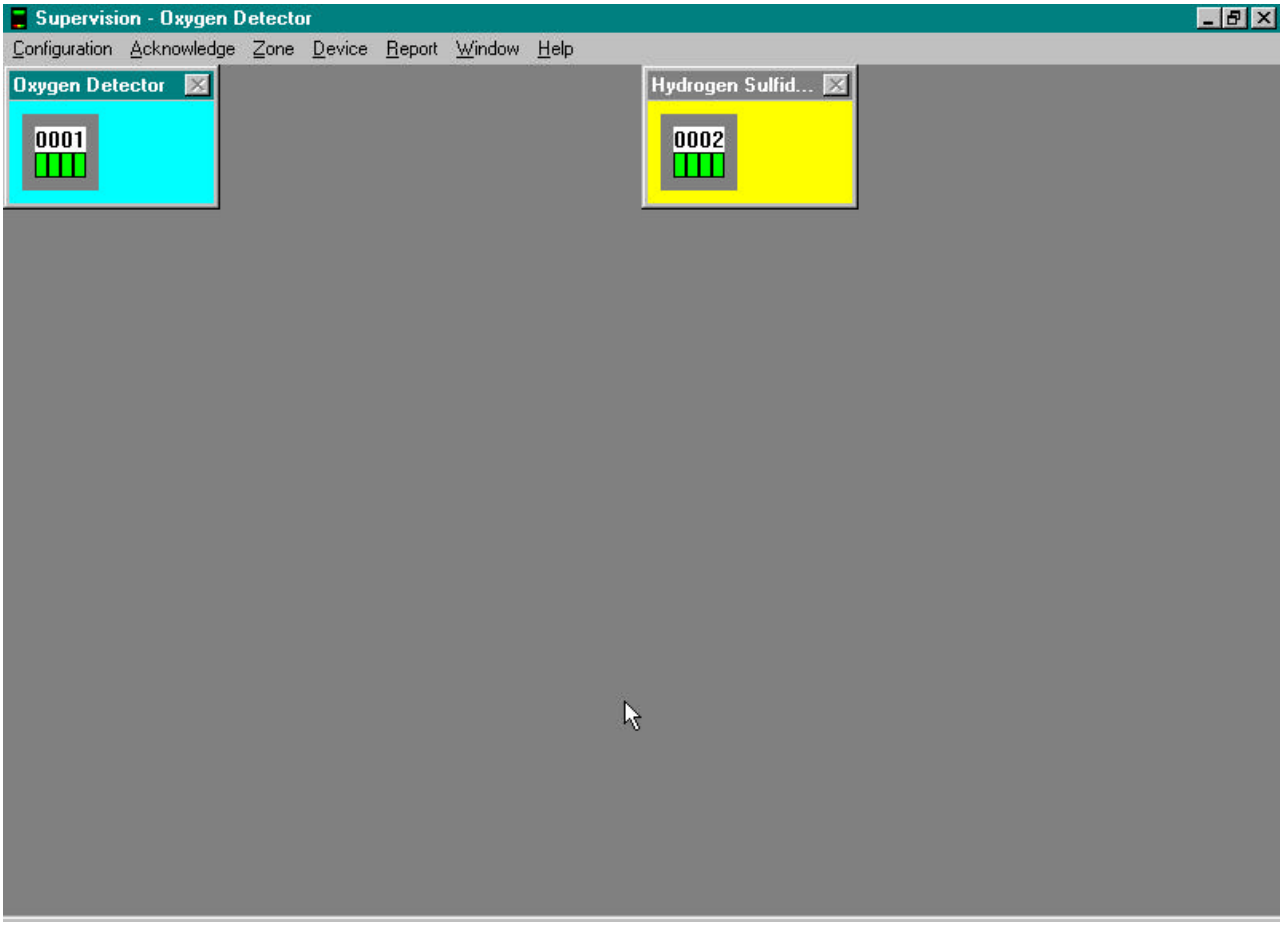
Once the Help, About Supervision is selected the following screen will appear.



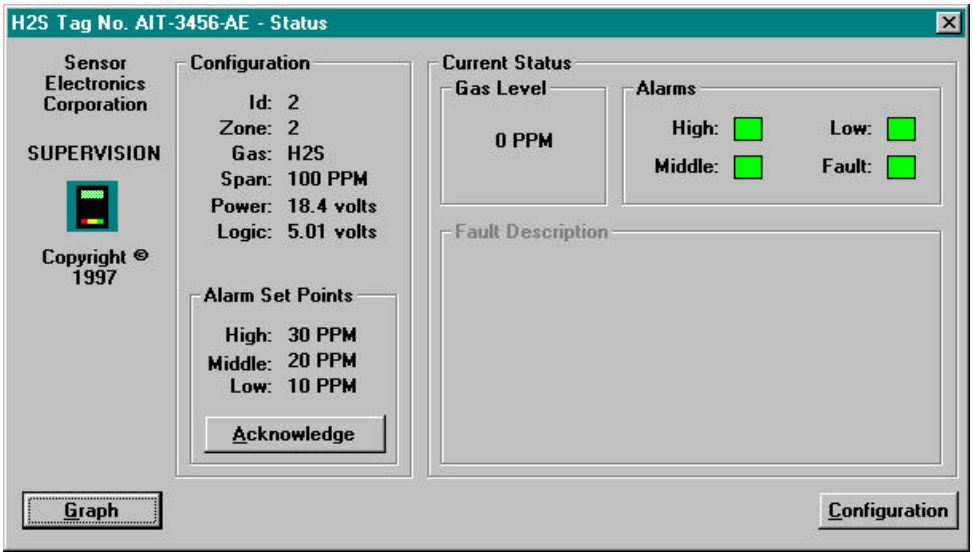
The current mode of operation that Supervision Plus is operating is displayed.

IV. Device Menus

Overview - Supervision Plus allows for the individual devices (screen icons) to be viewed, graphed, alarms acknowledged and silenced from the PC. Entering certain submenus requires the operator to enter a security code. The menus that are protected by a security code, once entered it will allow the device parameters to be changed by the operator. Device alarms can be acknowledged and silenced from the device screens, and do not require the security code to be entered. From the main overview screen below, select the device icon that is to be displayed by using the pointer and mouse button to select and double click on the device.



Once device number 2 is selected the following screen appears:



This window displays the current status and parameters of the device.

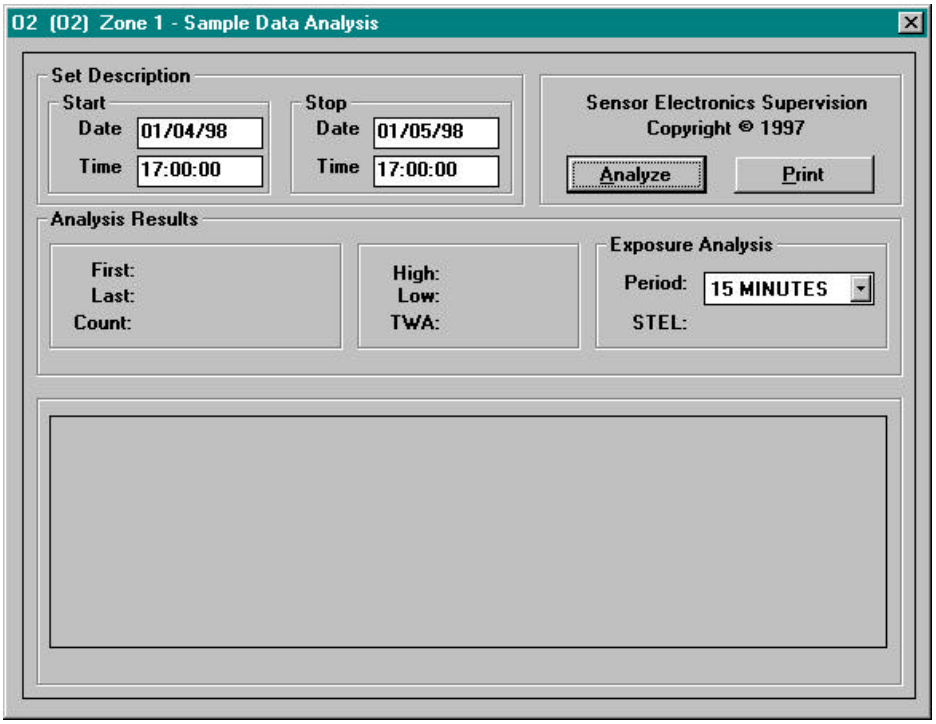
Title	Description
Id	Device identification number.
Zone	Device zone number.
Gas	Gas detector gas name abbreviation (H2S = Hydrogen Sulfide).
Span	Gas detector full-scale range.
Power	Input power measured at the device Note: SEC 1500 powered by 110 VAC will typically display 26 VDC.
Logic	Device logic voltage (typically 5.0 VDC).
Gas Level	Current gas level being sensed by gas detector (continuously updated).
Alarm Set Points	The alarm levels programmed in the gas detector.
Alarms	Alarm status in the gas detector (Green = OK, Red = Alarm)
Fault Description	Displays fault codes and fault description if any faults are present at the device.

The window also has three buttons that can be selected.

Button	Description
Acknowledge	The Acknowledge button can be used to reset latching relays in the gas detector.
Graph	The Graph button is used to enter the next screen, graph the device history and calculate gas exposures. (The following pages will describe this window in greater detail).
Configuration	The Configuration button is used to edit the configuration of the selected device. This selection requires the security code to be entered. Configuration will be described further in the following pages.

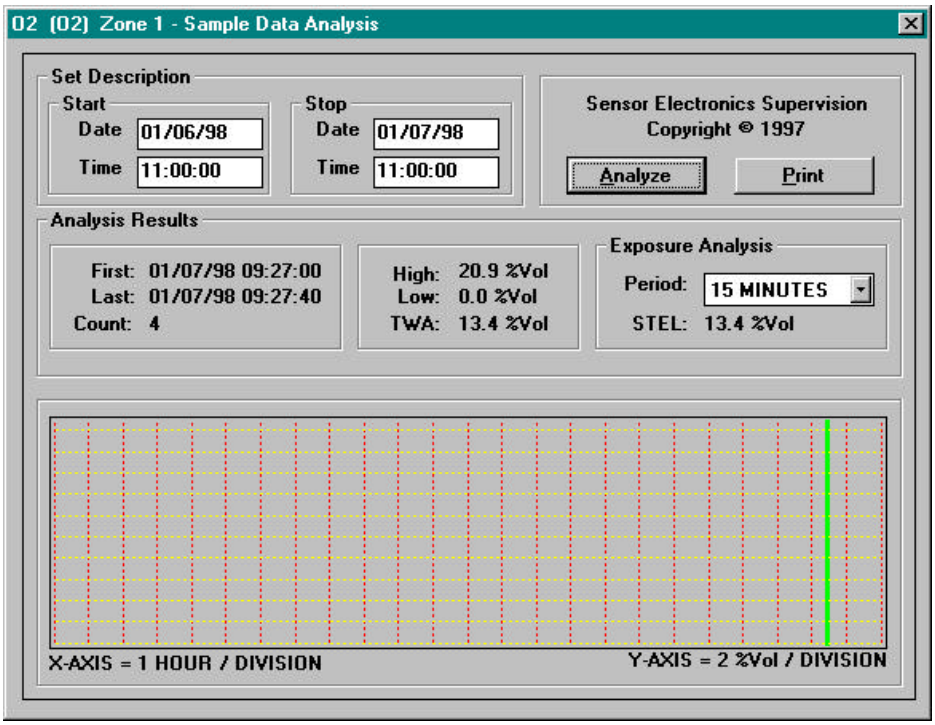
Acknowledge
The Acknowledge button is used to silence the computer alarm sound and reset and system latching relays (if the alarm levels are below the alarm threshold).

Graph
Once the Graph button is selected the following screen is displayed.

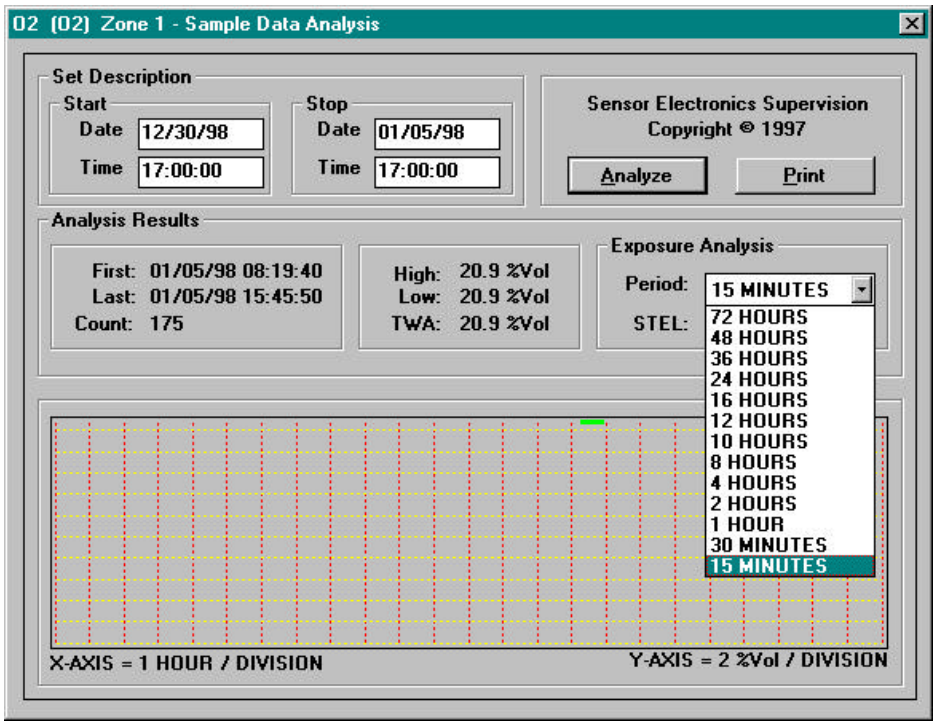


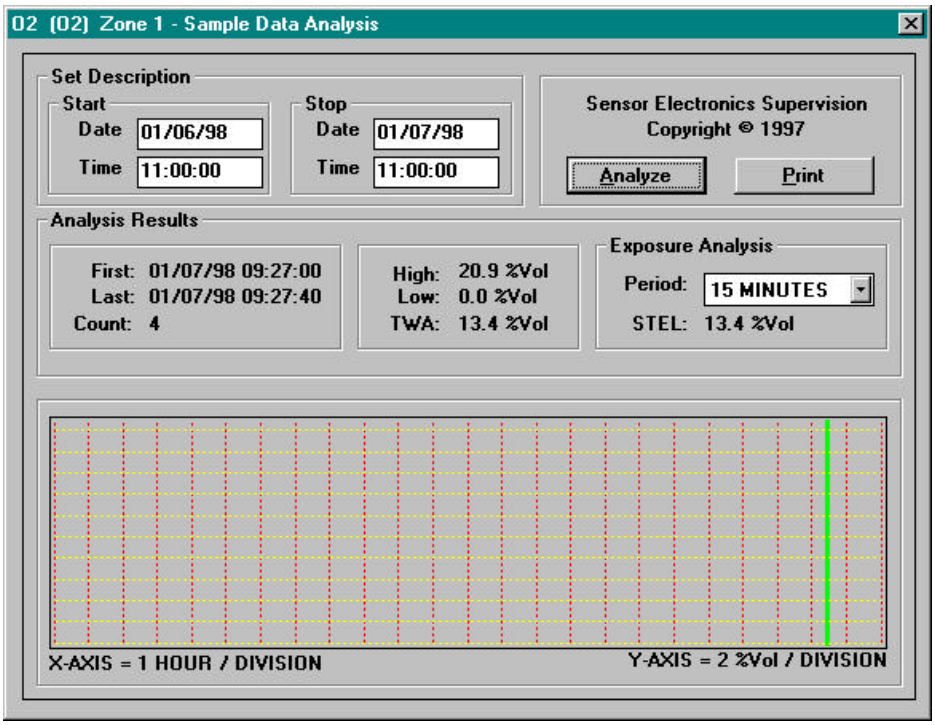
Analyze

The Start and Stop date and time are automatically entered once the Graph button is selected, but can be changed to graph the device output over any period of time. Once the desired date and time are entered, click on the Analyze button and a graph is automatically created. The Analysis Results and Exposure Analysis are automatically calculated for the selected Period.



The Exposure Analysis period can be changed using the pull down menu. Once the period is changed the TWA (Time Weighted Average) and STEL (Short Term Exposure Level) are automatically recalculated.





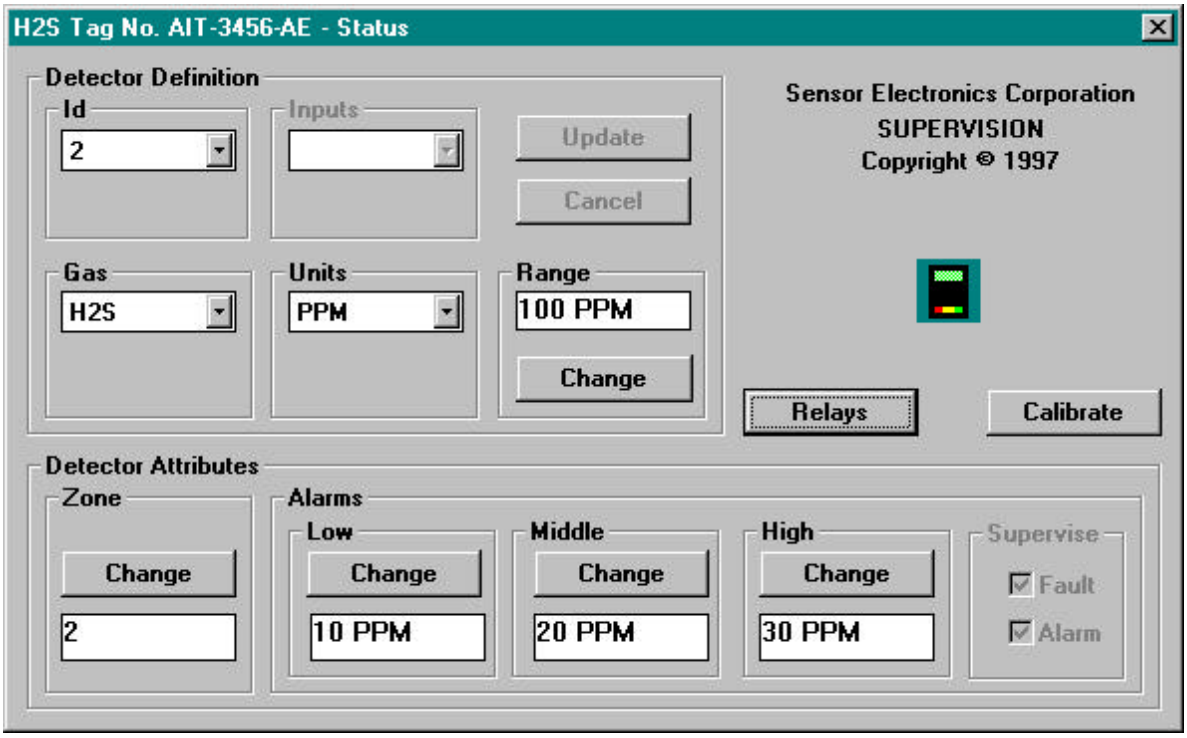
Item	Description
Analysis Results	Data samples that are included in the time frame entered under Set Description are used in this analysis (assuming that the chosen sample time has enough data to be properly analyzed).
First	First data point collected on Start Time and Date.
Last	Last data point collected on Start Time and Date.
Count	The quantity of sample points during the Start and Stop Time and Date.
High Level	The highest gas level of all samples analyzed.
Low Level	The lowest gas level of all samples analyzed.
Time Weighted Average (TWA)	The average gas levels of all samples analyzed.
Period	Sets the STEL time period.
Short Term Exposure Limit (STEL) Analysis	The entire STEL time period to be analyzed is broken into individual Short-term time periods (Period). The average gas level for each Short-term period is calculated. STEL reading is the highest level calculated for the selected Period.
Graph Area	The sample data is analyzed; a graph is generated for the user to view. The graph displays the gas levels for the chosen gas detector, over the selected Set Description Date and Time.

Print

Selecting the Print button will print this screen to the system printer.

Configure

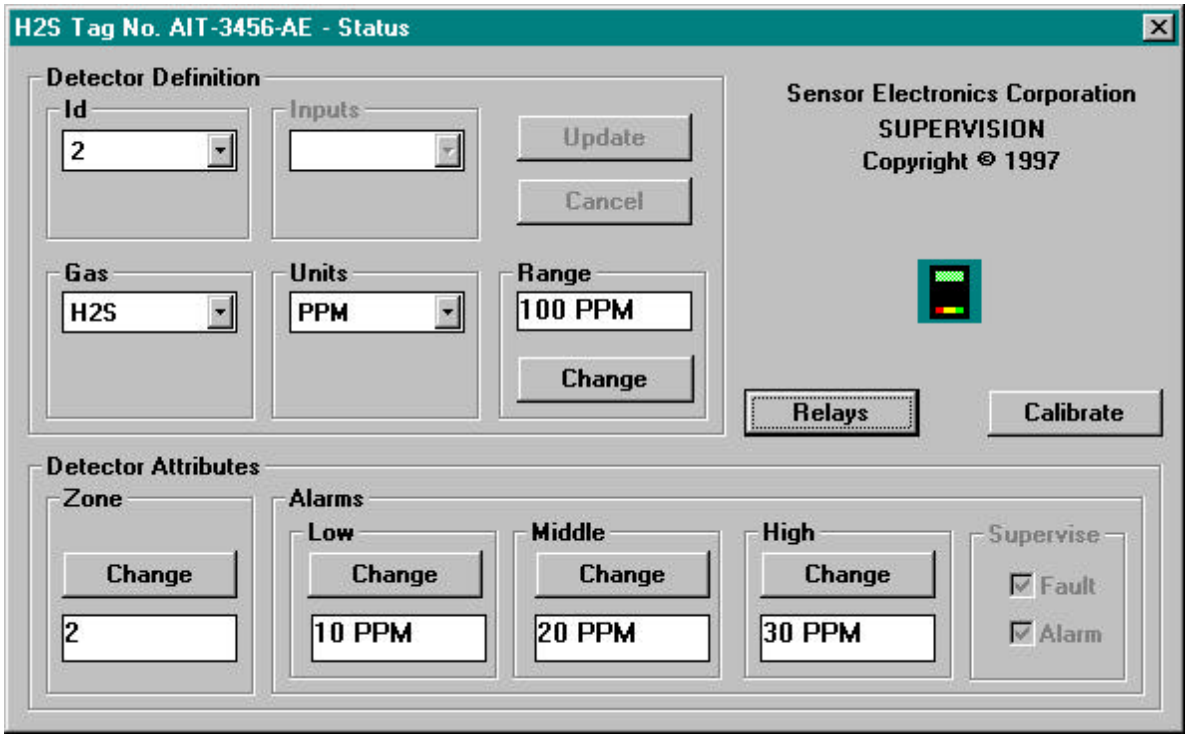
The Configure button is password protected. Once the correct password is entered, the following screen will appear.



Configure-Detector Definition

Item	Description
Id	Changes the identification number of the device. Use the pull down menu to select the new Id number. Only Id numbers that are not currently in use will be shown in the pull down menu.
Inputs	Change the type of input the SEC 4853 DAIM is programmed to accept.
Gas	Changes the name of the device. Use the pull down menu to select the new device name.
Units	Changes the measurement units of the device. Use the pull down menu to select the new measurement unit.
Range	Changes the range of the device. Click on the Change button and enter the new device range. Note: A Range change can also automatically change the alarm set points.

Whenever a parameter is changed in the Detector Definition area the device must be Updated with the new operating parameters. This is accomplished by tabbing to or double clicking on the Update button using the mouse pointer and button. Pressing the cancel button (or closing the box) will not update the device with any new parameters.



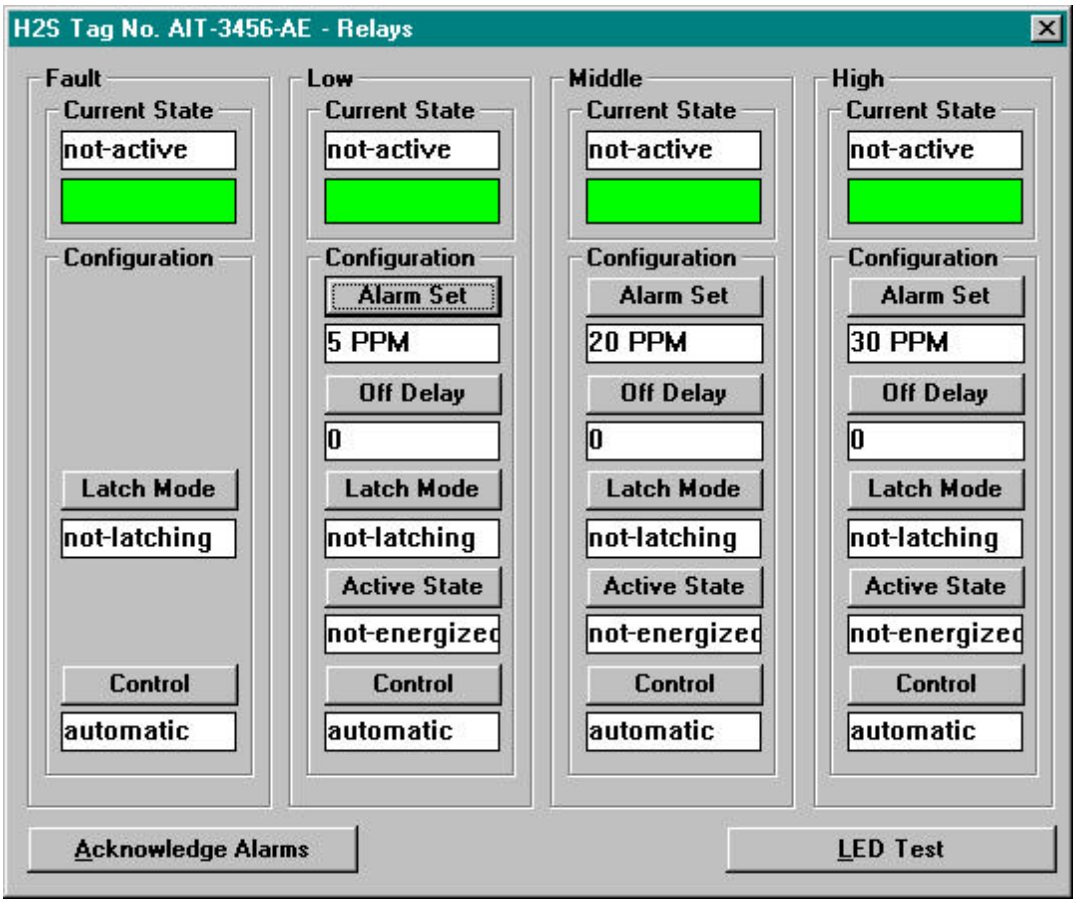
Configure-Detector Attributes

Item	Description
Zone	Changes the Zone number of the device.
Alarms	Section for configuring the device alarm set points.
Low	Changes the low alarm set point in the device.
Middle	Changes the mid alarm set point in the device.
High	Changes the high alarm set point in the device.
Supervise	Allows the relay contact of the SEC DAIM to operate in a supervised or unsupervised mode.

Whenever a parameter is changed in the Detector Attributes section the device will be updated with the new operating parameters automatically.

Relays

This screen enables the relays in the device to be configured or changed from Supervision Plus.



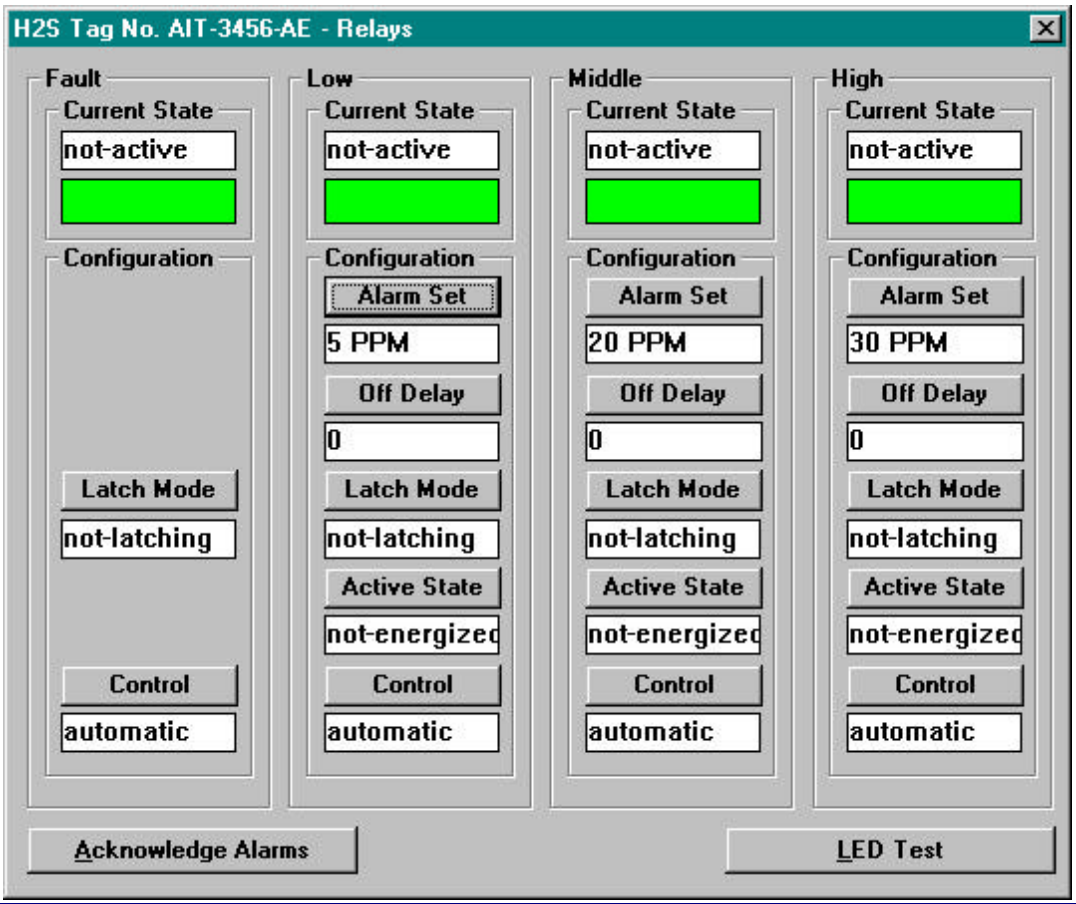
Relays - Current State

This is a visual indication of the current status of the device relays. The text and color will change automatically in this area.

State	Color
Not-active	Green
Active	Red
Latched (Alarm Cleared)	Orange

Relays - Configuration

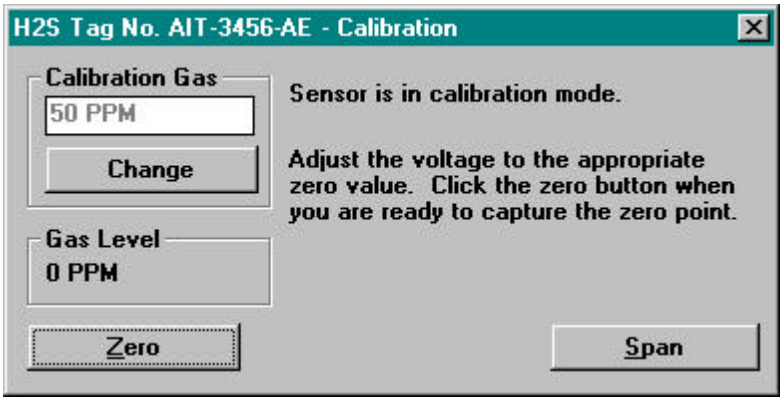
Navigate throughout this screen using either the mouse pointer/button or Tab and Enter keys on the keyboard. Once the selection is made the state change takes place immediately (unless the device is offline).



Parameter	Description
Alarm Set	Changes the device alarm set point.
Off Delay	Device relays programmed for non-latching operation can be programmed with time delays so the relay will remain energized for a specific time period after the level is below the alarm set point. The time can be 0 to 255 minutes.
Latch Mode	Each device relay can be programmed independently for latching or non-latching operation. **Latching** - Once the level exceeds the alarm set point the relay will remain active until the Acknowledge or Acknowledge Alarm buttons are selected and the level remains the alarm set point. Once the level falls below the alarm set point (and the Acknowledge or Acknowledge Alarm buttons have been selected) the relay will return to a not active state. **Non-latching** - Once the level exceeds the alarm set point the relay will become active. Once the level falls below the alarm set point the relay will automatically return to a not active state
Active State	Each device alarm relay coil can be programmed to be normally energized or normally de-energized. Upon reaching the alarm set point the relay coil will change states.
Control	Selecting this button can manually control each device relay (in not-active state). Selecting and de-selecting the Control button will change the current state and the color boxes associated with the relay.

Calibrate

The Calibrate menu is used to calibrate SEC gas detection devices in the field. Using Supervision Plus software to calibrate the field devices will take two people. One person to apply the calibration gas to the gas detector and one person to select the Zero and Span buttons at the computer. **It is strongly advised that the people performing the calibration are thoroughly familiar with the device calibration procedure prior to attempting a device calibration using Supervision Plus.** Once the Calibrate button is selected the following screen will appear.



Calibration Gas

The gas detector reports back to Supervision Plus the calibration gas it is programmed to accept for the span value (50 PPM). If the actual span gas to be used is different form the programmed value, use the Change button and enter the correct value of span gas.

Calibration procedures for gas detectors other then oxygen (O2).

Parameter	Description
Gas Level	Current gas level being sensed by gas detector.
Zero Button	Apply clean air to the gas detector click on Zero button.
Span Button	Apply span gas to the gas detector, the gas level should increase. Once the reading is stable click on the Span button. The current date from the computer will be entered in the gas detector for last calibration date storage. Remote span gas from gas detector.

Calibration procedure for oxygen (O2) detectors.

Parameter	Description
Gas Level	Current gas level being sensed by gas detector.
Zero Button	Apply nitrogen to the oxygen detector click on Zero button.
Span Button	Apply span gas to the gas detector, the gas level should increase. Once the reading is stable click on the Span button. The current date from the computer will be entered in the gas detector for last calibration date storage. Remote span gas from gas detector.

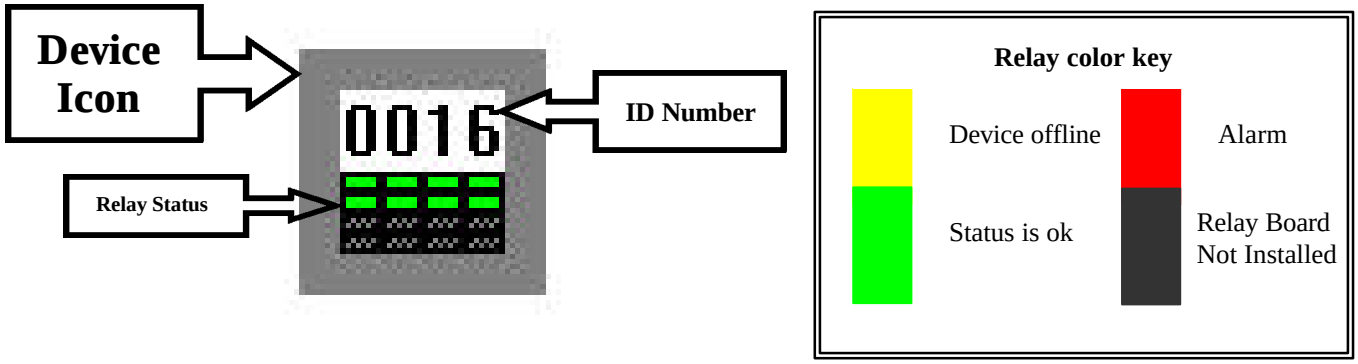
Once the Span button is selected the calibration routine will automatically close and return to the main screen.

If any faults are generated at the gas detector after calibration consult the device's instruction manual for trouble shooting assistance.

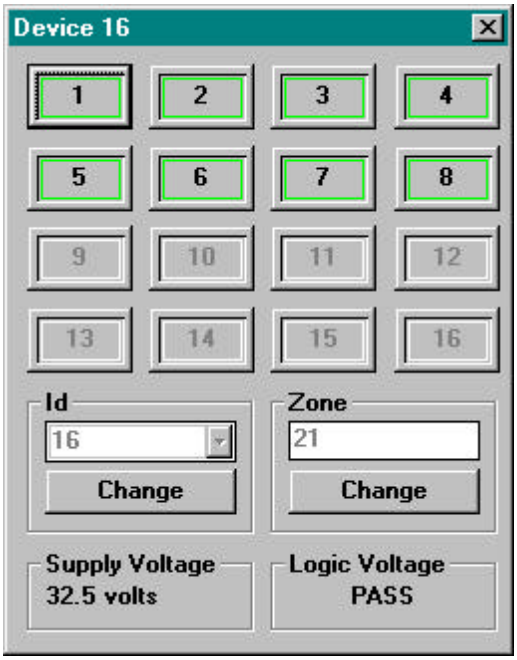
VI. SEC 4855 Relay Module Programming

The following describes how to program the individual of the SEC 4855 Relay Module. The SEC 4855 Relay Modules are powered by 24 VDC and can be connected anywhere on the SEC data. The SEC 4855-8 Relay Module has eight (8) programmable relays. The SEC 4855-16 has sixteen (16) programmable relays. Only the SEC 4855-8 can be supplied in an explosion-proof enclosure.

The following is the Supervision Plus screen icon for a SEC 4855 – 8 Relay Module.

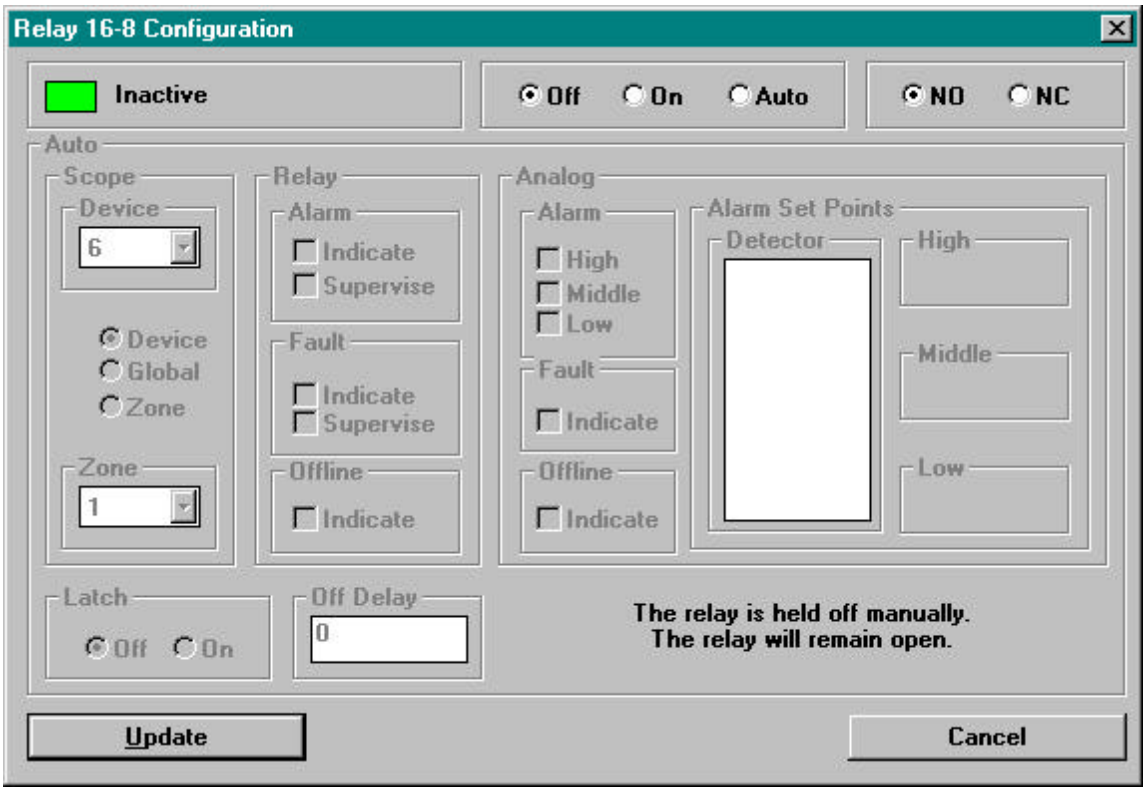


To program the individual relays double click on the device icon. The following box will appear.



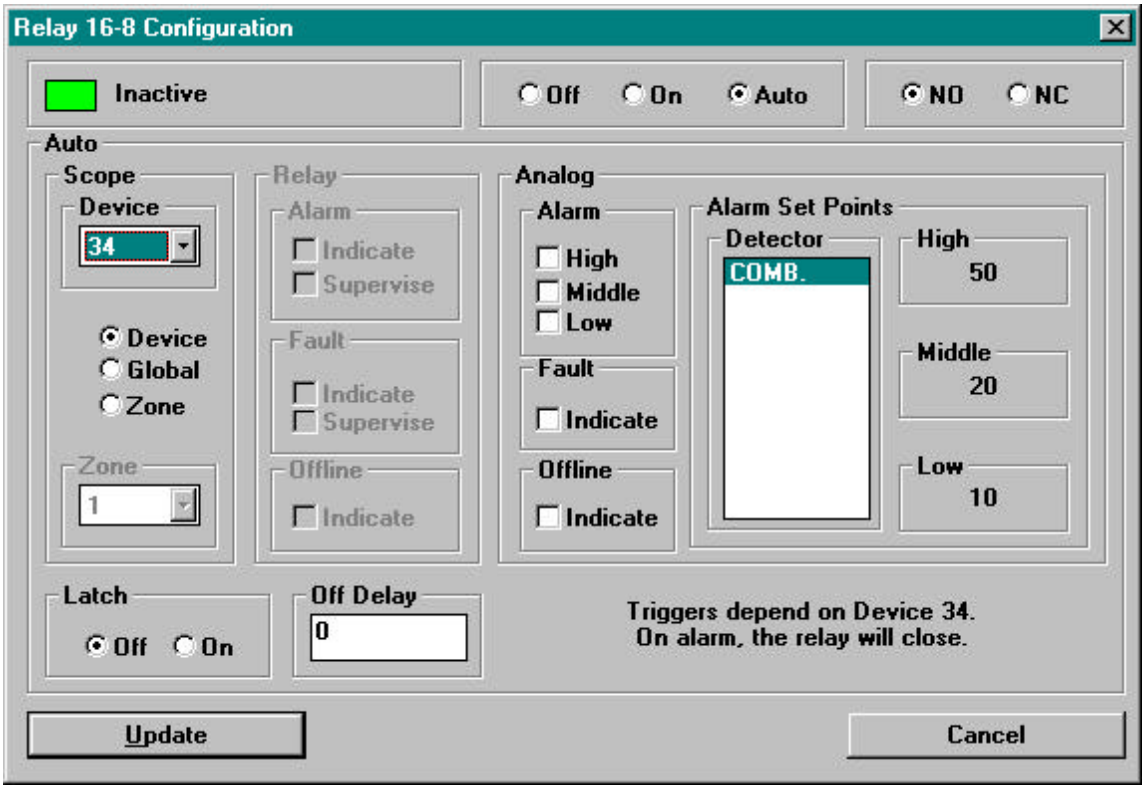
This box displays the relays that are present in the SEC 4855 relay module. From this box the individual relays (1-8 in this example) can be accessed with one click using the mouse pointer button. Once a relay number is clicked on, the security gate will appear requiring the correct security code to be entered before allowing access to the relay programming box. The security code is only required to be entered once until the above box is closed. This allows any and all relay programming parameters to be viewed or changed without have to enter the security code every time a relay is clicked on.

When a relay (not previously programmed) is clicked on and the correct security code is entered the following box will appear.



The title bar indicates 16-8. The number 16 is the ID number of the relay module and the number 8 is the relay number of the relay module. Presently all of the Auto areas are not selectable (gray in color). To enable the configuration of the Auto area the relay operation must be changed from "Off" to "Auto" at the top of the box. This will enable (turn the areas from gray to white) the configuration areas in the Auto section to be configured.

Once the relay operation is selected from Off to Auto the screen areas will become enabled.

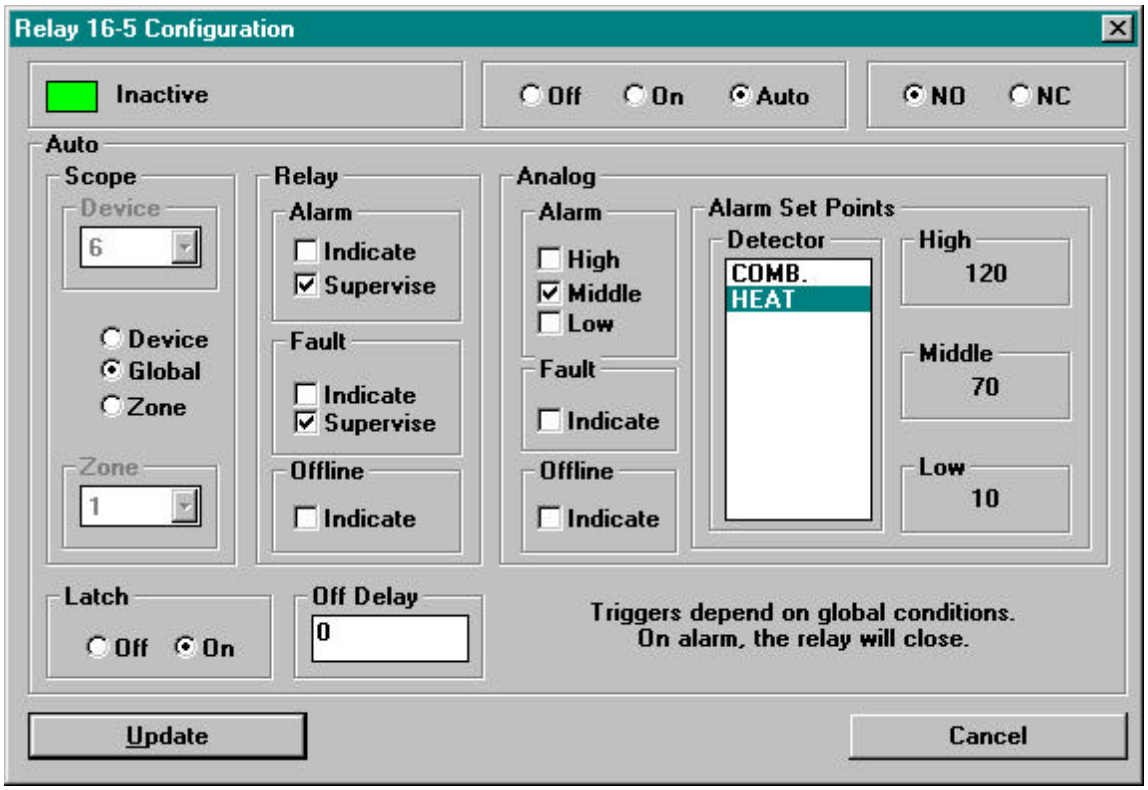


Using the mouse pointer button allows for the relay to be configured.
The green box above labeled "Inactive" indicates the current state of the relay coil. If a relay is in the "Active" state the adjacent box will be red.

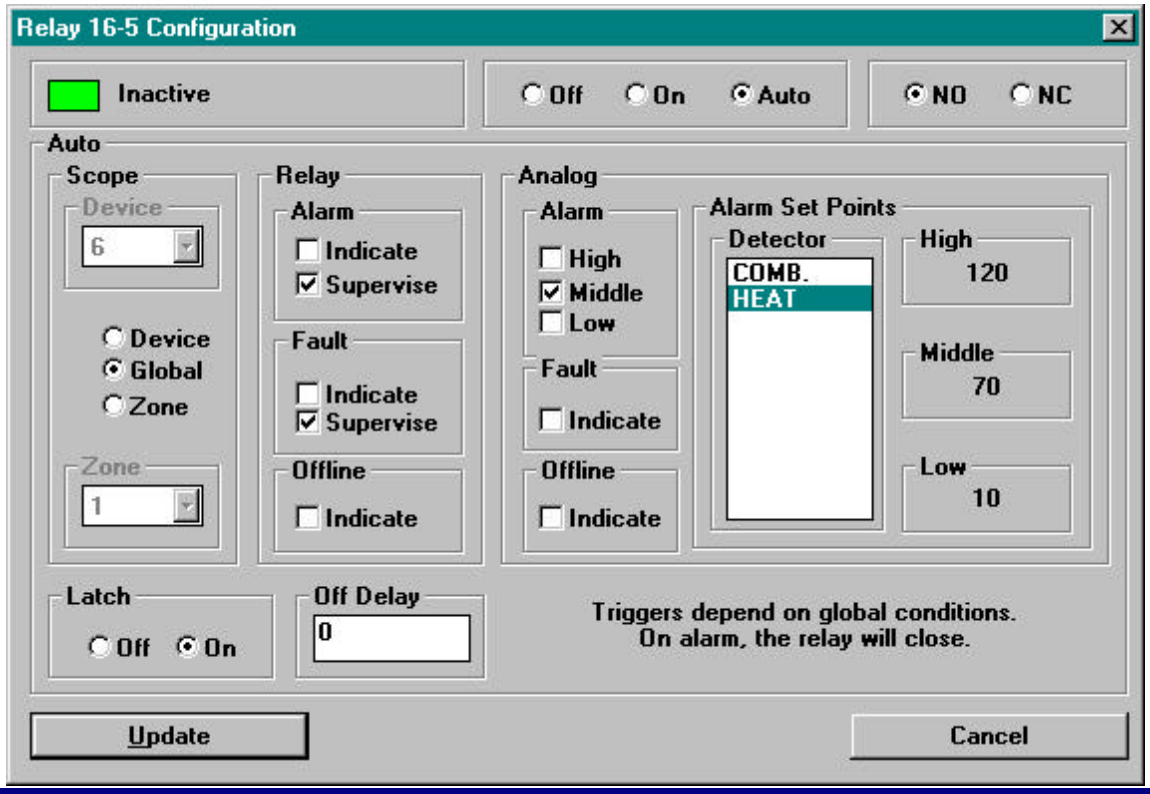
Parameter	Description
Off On Auto	**Off** – Disables the relay. **On** – Manually controls the relay if the relay is not active. **Auto** – The relay will automatically operate based on the relay configuration.
Parameter	**Description**
NO NC	**NO** – Normally Open relay contact. The relay coil will become energized when alarm condition exists. **NC** – Normally Closed relay contact. The relay coil will de-energize when alarm condition exists. (commonly referred to as fail safe mode)

Scope Area

Parameter	Description
Device	Device identification number.
Relay Trigger Selection	**Device** – Selects the Device ID number enabling the relay to trigger at the device relay alarm set points. **Global** – Selects any alarm set point (low, mid high) to trigger at the programmed Global alarm relay set points. **Zone** – Selects the zone number to trigger at the programmed Zone alarm relay set points.
Zone	The Zone pull down menu allows the Zone number to be selected when the Zone trigger is selected.



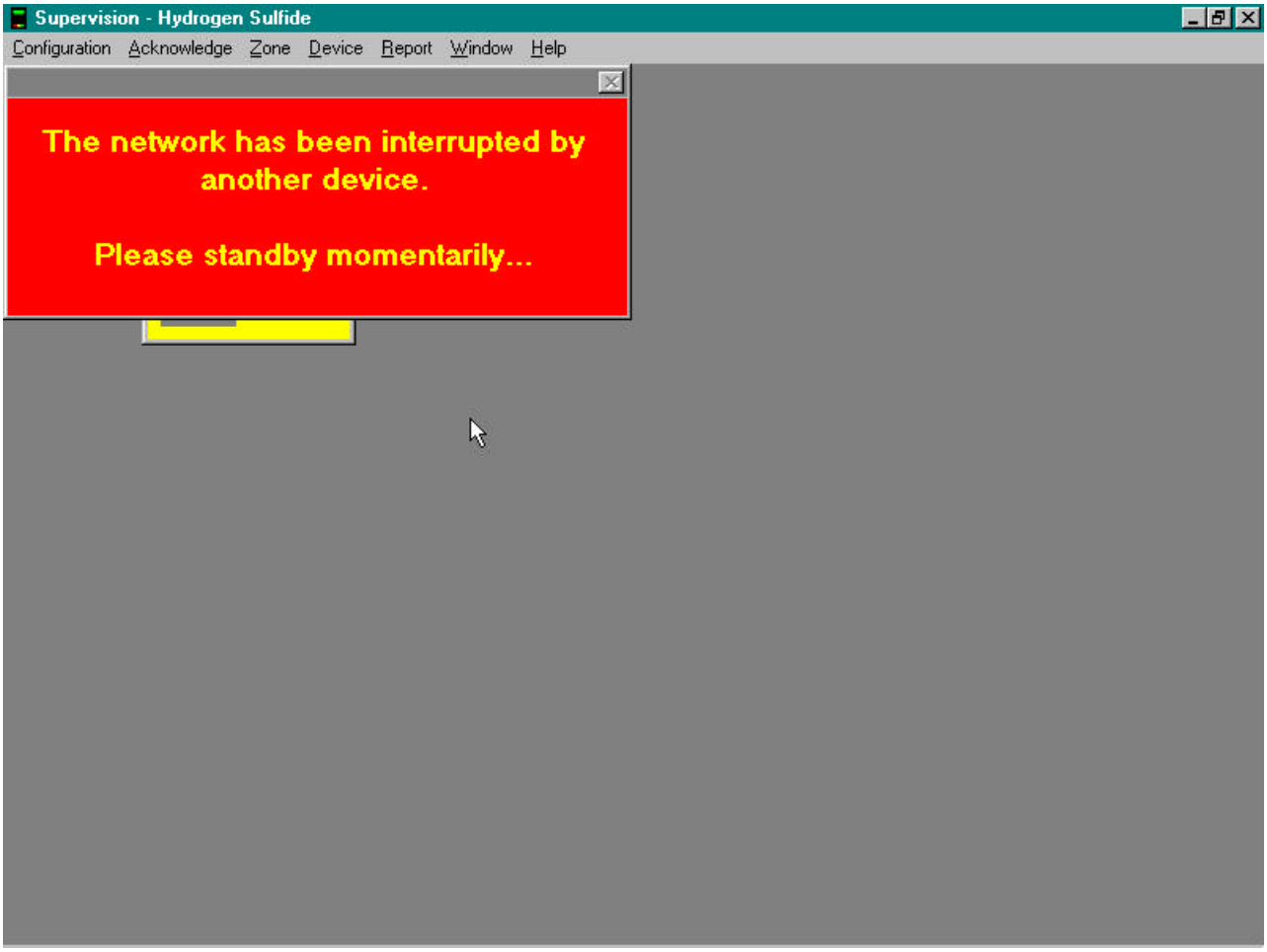
Parameter	Description
Latch	Each device relay can be programmed independently for latching or non-latching operation. **Off** - Once the level exceeds the alarm set point the relay will remain active until Acknowledge is selected and the level remains the alarm set point. Once the level falls below the alarm set point (and the Acknowledge or Acknowledge Alarm buttons have been selected) the relay will return to a not active state. **On** - Once the level exceeds the alarm set point the relay will become active. Once the level falls below the alarm set point the relay will automatically return to a not active state
Off Delay	Relays programmed for non-latching operation can be programmed with time delays so the relay will remain energized for a specific time period after the level is below the alarm set point. The time can be 0 to 255 minutes.
Relay Area	**Description**
Alarm	This is used to set the alarm triggers for the SEC 4853 DAIM module. Indicate – Select this box to trigger the SEC 4855 relay if the SEC 4853 DAIM is in alarm condition. Supervise – Select this box to trigger the SEC 4855 relay if the SEC 4853 DAIM supervised alarm relay contact is open (unsupervised).
Fault	Indicate – Select this box to trigger the SEC 4855 relay if the SEC 4853 DAIM is in fault condition. Supervise – Select this box to trigger the SEC 4855 relay if the SEC 4853 DAIM supervised fault relay contact is open (unsupervised).
Offline	Indicate – Select this box to trigger the SEC 4855 relay if the SEC 4853 DAIM is in an offline condition.



Analog Area	Description
Alarm	This is used to set the alarm triggers for the SEC gas detector device relay set points. Any combination of these selections can be selected. High – Select this box to trigger the SEC 4855 relay if the gas detector is in high alarm condition. Mid – Select this box to trigger the SEC 4855 relay if the gas detector is in mid alarm condition. Low – Select this box to trigger the SEC 4855 relay if the gas detector is in low alarm condition.
Fault	Indicate – Select this box to trigger the SEC 4855 relay if the gas detector is in fault condition.
Offline	Indicate – Select this box to trigger the SEC 4855 relay if the gas detector is in an offline condition.
Alarm Set Points	**Description**
Detector	This area is used to select the Detector (device type). Use the mouse pointer to highlight (select) the device that is to be used to trigger the SEC 4855 relay.
High	Set point for the selected scope and device.
Mid	Set point for the selected scope and device.
Low	Set point for the selected scope and device.

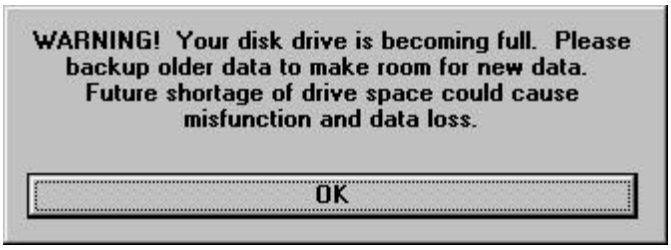
VI. Trouble Shooting

If the following message is displayed, another device such as a SEC 4100 System Monitor or SEC 2500 Hand Held Programmer could be communicating on the data highway.



Check to see if there is another device talking on the data highway. Once the other device stops communicating on the data highway this message should disappear.

If the following message appears, it is time to create some space on your hard drive.



SEC 4854 Net Link II

The Net Link II is a device that converts the SEC RS-485 data highway protocol to RS-232. The Net Link II can be connected to the data highway in various system configurations. The following pages provide examples and the correct Dip switch settings for using the SEC Net Link II. The Net Link II can be powered from the same power source as the SEC field devices or with the 9-volt transformer (120 VAC P/N 156-0105, 220 VAC P/N 142-0038).

Computer Connection

The Net Link II is connected to the computer with a 9 pin serial cable (P/N 147-1001).