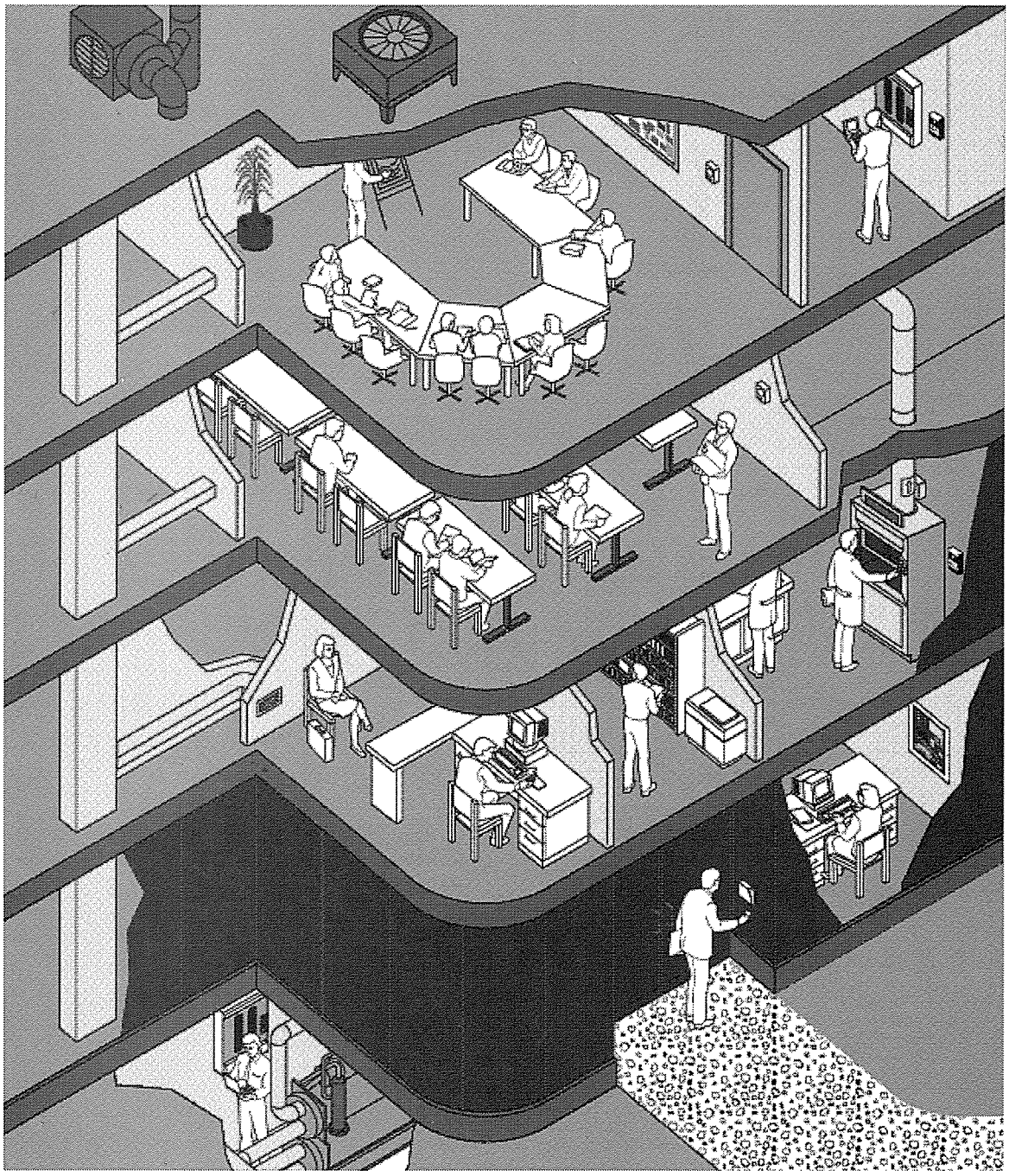
SIEMENS

Insight® 2.8 for Personal Computers



CUSTOMER TRAINING GUIDE

Insight® 2.8 for Personal Computers

Rev. 1 (04/99)

Printed in U.S.A

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Training Expectations

It is important that your instructor understand what you wish to learn during your training session.

1. Please list five (or more) topics you would like to learn about.

_____

_____

_____

_____

_____

2. Please list three of your major job responsibilities.

_____

_____

_____

Unit Training Objectives

At the end of this unit you should be able to:

1. Logon to Insight and connect to a network.
2. Logoff of a network.
3. Identify the components of a point log.
4. Run a point log report for:
   a. one point or point group
   b. all points
   c. a group of points using asterisk and question mark wild cards
   d. points with specific characteristics
5. Pause, continue, restart and cancel the scrolling of a report.
6. Create a Report Definition for a Point Log Report.
7. Create a Report Schedule for a Point Log Report.
8. Command points from Insight menus.
9. Explain the use of the Point Command History report.
10. Return commanded points to system control.
11. Command points globally.
12. Determine when to trend a point by time and when to trend a point by Change of Value (COV).
13. Explain the use of the various trend reports.
14. Display a dynamic graphic.
15. Command a point from a graphic.
15. Acknowledge alarms.
16. View messages for points in alarm.
17. View a point alarm history.
18. Print a point alarm history.
19. Erase alarms.

Technical Documentation

Your student binder appendix contains a list of System 600 technical documentation. Refer to the appropriate technical documentation for further information about your System 600 products.

For information on obtaining any of these documents, please contact your Siemens Building Technologies, Inc. representative.

Using Insight® for Personal Computers

- **Insight is a graphics-based software package that provides a visual interface between you and your System 600**
- **Helps you visualize what is happening in your facility**
- **Operates in a WindowsTM environment**

Insight® for Personal Computers is a graphics-based software package that provides a visual interface between you and your System 600. Insight allows you to operate your building, analyze building performance and solve many problems without leaving your Insight work station.

Insight 2.8 has been tested and updated to comply with the year 2000.

Here are a few of the tasks you can do using Insight:

- Monitor and control your building through graphics.
- Diagnose and troubleshoot problems through graphics and reports.
- Schedule and modify equipment operations.
- Analyze energy efficiency by monitoring equipment operation and temperature changes.
- Use alarms to immediately identify a problem in your building.
- Gather information and analyze the efficiency of your system through reports.
- Define and schedule reports to run automatically.
- Run Backup/Restore and Anti-Virus applications from the Program Manager.
- Run third party Windows desktop applications while Insight is on-line and communicating with the field panel network. (Microsoft applications are not supplied by Siemens Building Technologies, Inc.) The Insight alarm icon is always visible, regardless of which application is being used.*
- Import trended data into Microsoft Excel spread sheets**.

Many users find Insight's graphics make it easier for them to visualize what is happening in their facility.

Insight operates in a Windows 3.1™ or Windows 95™ environment***. You should have basic personal computer (PC) and Windows skills before you begin this training unit. If you do not have these skills, your instructor can provide you with some training options to develop and/or increase your skills.

* The alarm icon will not be visible during the operation of some screen savers.

** Topic not covered in this module.

***The screens shown in this manual are Windows 3.1 screens. Windows 95 screens may appear slightly different.

Operator Access Levels

- **Your access level determines what tasks you can perform**
- **If you are not logged on to Insight, your access level is 0**
- **If you are logged on to Insight, your access level can be 1-6**
- **Access levels 1-6 require passwords**

Anyone who uses Insight is an operator, and every operator is assigned an access level. The seven access levels (as detailed below) allow operator skills and responsibilities to be matched to the tasks to be performed. Each level gives access to the functionality associated with that level and all lower levels.

If you are not logged on to Insight, your access level is 0. This means you can view certain information but cannot enter commands or alter the system in any way. If you are logged on to Insight, your access level can be 1 through 6. Operator access levels and major features are as follows:

Insight Access Levels	Capabilities Capabilities assigned for each level are in addition to capabilities of the lower levels
6	Add system operators, assign password level access to operators, modify existing operator password levels (user accounts), and enable/disable Program Manager
5	Full system access, plus the ability to create, modify, and delete system components (Background Graphic editor, PPCL, databases, point groups, system setup)
4	Modify selected system components, and alarm levels (Add/remove points, Daylight Savings Time editors) Global commanding, Setup trend schedule
3	Command and override system components (point commands, network setup, TOD override) Modify a Dynamic Graphic, Disable, enable PPCL and TOD, convert trend data, Diagnostics reports
2	Alarm Acknowledgement, Define categories and run a report
1	Monitor System (change own password, logon/logoff, system status, and trend), create report definitions and schedules
0	Display minimal information (alarm messages, history, graphics, SCU point log and help, extended network report)

Operators assigned access levels 1-6 are also assigned passwords. You enter your password when you logon to Insight. Your Siemens Building Technologies, Inc. representative will initially set up your access levels and passwords for you.

For purposes of this module, we will assume you have an operator access level of 4.

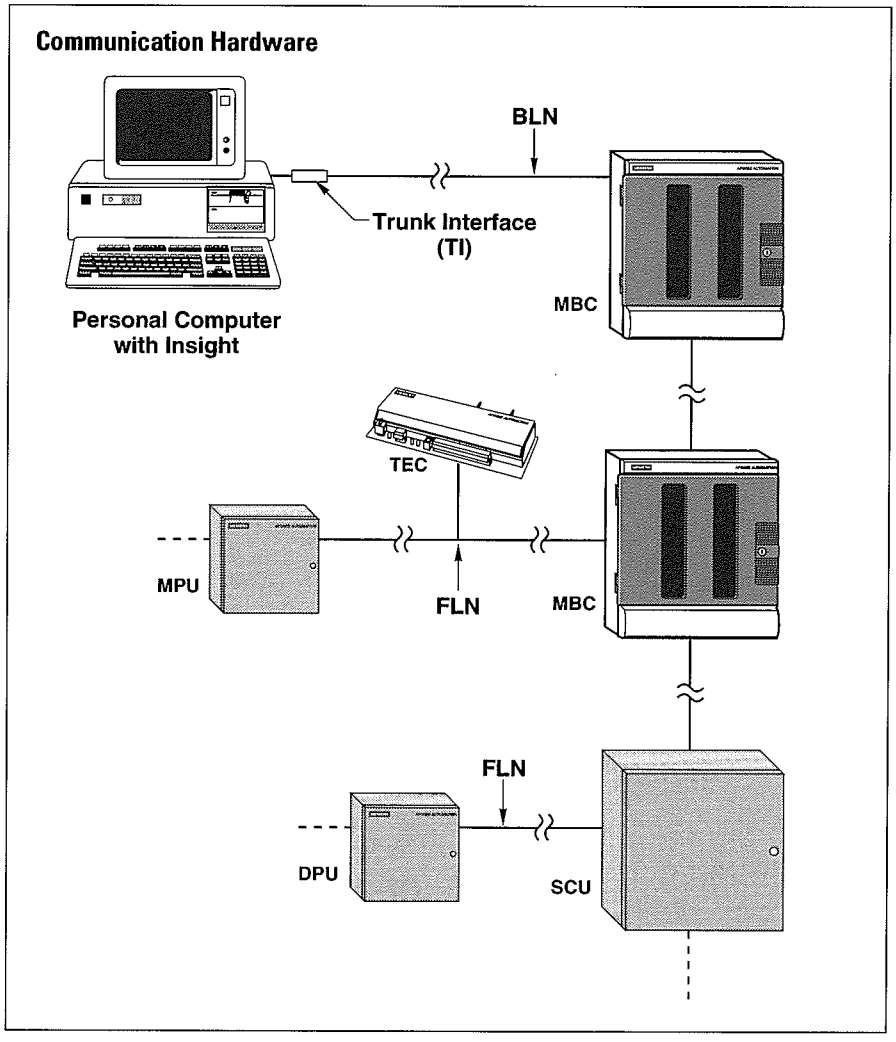
Communication Hardware

- **A trunk interface (TI) allows the PC to communicate with the field panels**
- **Field panels are connected to each other via a BLN**
- **The PC is connected to the field panels via the TI**
- **Optional software can expand and enhance your system**

Your PC is connected to a trunk interface (TI). This device links the PC to the field panels in your building. The transmit (TX) and receive (RX) lights on the trunk interface should always be blinking. If they are not blinking, the PC is not communicating with the field panels.

Field panels are connected to the PC and each other via the Building Level Network (BLN). Floor Level Network (FLN) devices are connected to the field panels via the FLN.

You can expand and enhance your system with software options. Two commonly used options are Dial-up and Trend Graph. Dial-up allows you to communicate with remotely located buildings over telephone lines. Trend Graph enables you to display point values in a graph format. For details on these and other options see the Options booklet in your Insight documentation set.



Windows Basic Screen Components

- Title Bar
- Menu Bar
- Control Menu Box
- Program Manager Display

Title Bar

The title bar displays the name of the application that is active. In the example on the next page, the application name is Program Manager.

Menu Bar

There are many ways to access Windows features. One way is to use the pull down menus in the menu bar. To use a pull down menu, use the mouse to click on the appropriate name in the menu bar. Then select your feature from the list that appears. Features which are unavailable to you are shaded gray.

Control Menu Box

The control menu box contains a pull down menu that allows you to manipulate a window. Some of the most commonly used pull down menu selections are minimize, maximize and close. To access this menu, click once on the control menu box. As a shortcut, you can double click on the control menu box in an active window to close the window. The control menu box is a feature of Windows.

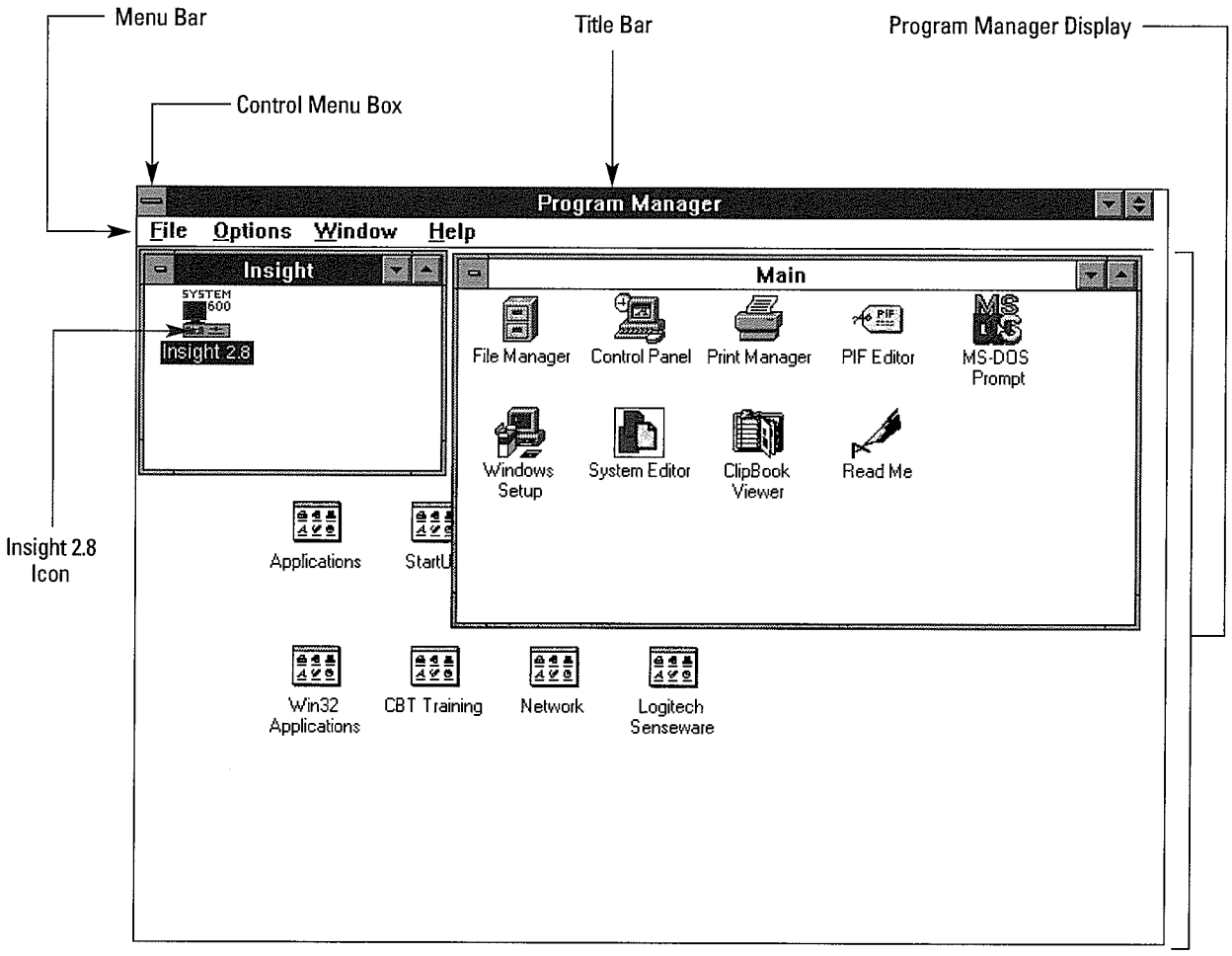
Program Manager Display

The Program Manager is the screen that appears when Windows is started from DOS. This screen will display the programs (shown as icons) that you can open from the Windows program manager. Since Insight 2.8 runs in Windows your screen will contain an Icon for Insight 2.8. To access Insight 2.8 (or any other program), double click on the icon for the program to open. Note: Windows 95 uses the start button on the task bar to start programs.

Windows 95

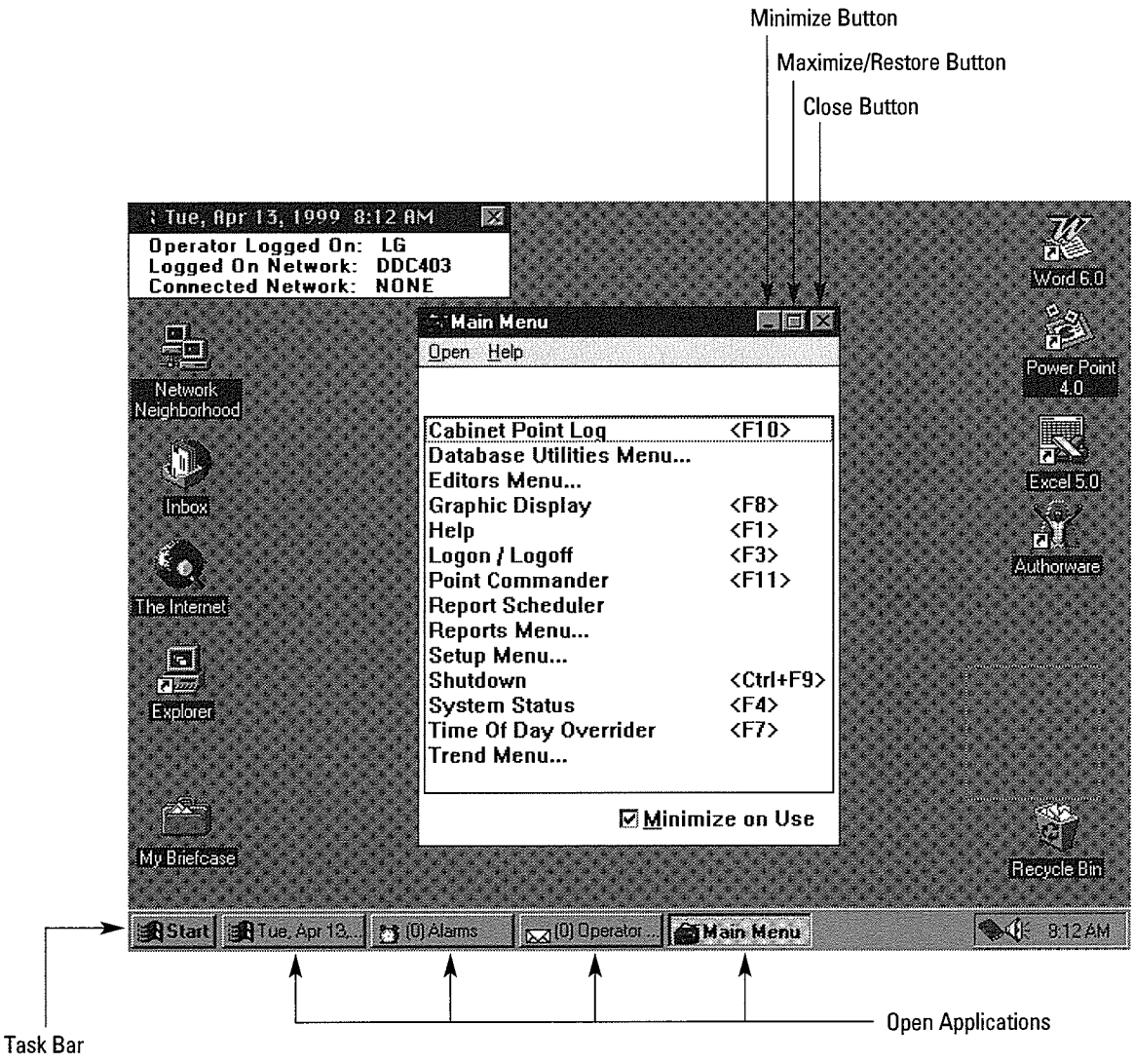
Insight 2.8 can be operated in the Windows 95 operating environment. Windows 95 uses many of the same elements that are seen in earlier versions of Windows. To learn more about the differences between Windows 3.1 and Windows 95, please refer to your Windows 95 documentation.

Windows 3.1
Basic Screen Components



Note: Your system's Program Manager display may look different from this one, depending on which programs have been loaded.

Windows 95
Basic Screen Components



Note: Your system's screen may look different depending on how it is setup.

Insight 2.8 Screen Components

- **Default Graphic**
- **Date/Time Box**
- **Insight Icons**

Default Graphic

The graphic that first comes up when you open Insight is called the default graphic. The default graphic can be a standard graphic in the Insight package or it can be a customized graphic of your facility.

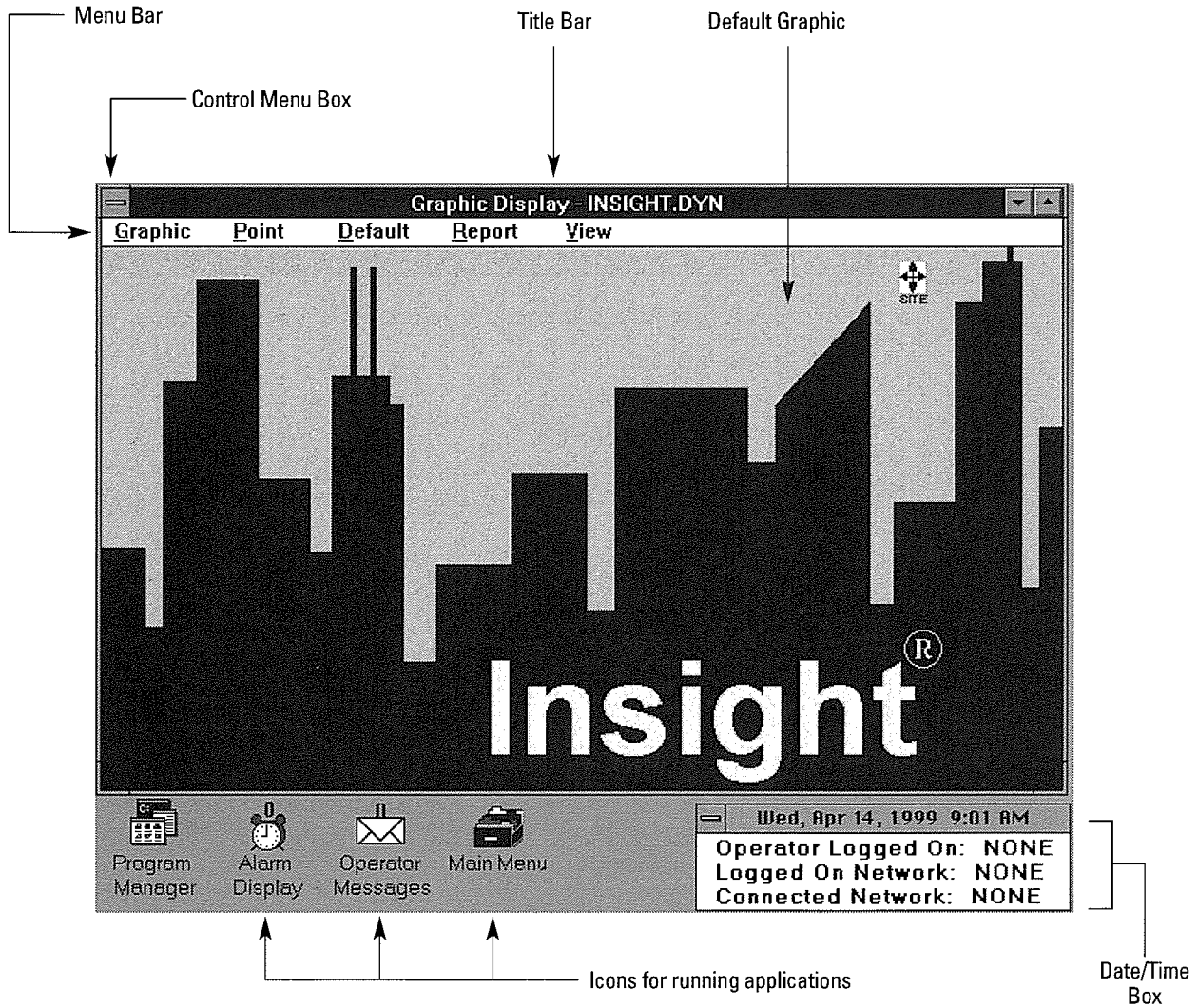
Date/Time Box

If you are logged on to Insight, the date/time box tells you the logged on operator's initials and what network you are logged on and connected to. The PCs current date and time also appear.

Icons

When Insight is started, it loads several applications that are always available when Insight is running. These applications show up as icons on the bottom left of the screen or on the taskbar for Windows 95. These icons are the Main Menu, Operator Messages, and the Alarm Display.

Insight 2.8 Screen Components



Note: Your system's default graphic may look different from this one, depending on which graphic was designated to be the default graphic.

Practice

☐ Start-up Insight.

☐ When Insight opens, identify the following Insight screen components:

a. default graphic
b. date/time box

☐ What is the name of your default graphic?

_____

☐ What operator initials (if any) are shown in the date/time box?

_____

☐ Identify the following Windows screen components.

a. title bar
b. menu bar
c. control menu box

☐ Click once on the Point pull down menu from the Graphic Display menu bar.

a. List which commands are available to you.

_____

b. Which commands (if any) are not available to you?

_____

_____

☐ Click once on the Control menu box. List the commands that are in this pull down menu.

_____

_____

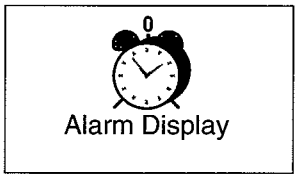
_____

Insight Icons

- **Alarm Icon**
- **Operator Messages Icon**
- **Main Menu Icon**

As in Windows, Insight PC uses icons to represent applications. There are three icons that always appear whenever you start Insight: the Alarm icon, the Operator Messages icon, and the Main Menu icon.

Alarm Icon



The number of received alarms appears above this icon. This icon can also flash and/or beep to indicate alarms. This alarm icon can be set to always be visible, regardless of what application you are in (Insight, Word or Excel).

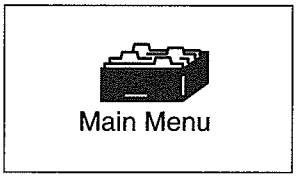
Double click on the Alarm icon to view, acknowledge or erase alarms.

Operator Messages Icon

The number of messages sent to you from other operators or field panels appears above this icon. This icon can also blink and beep if these features are turned on.

Double click on the Operator Messages icon to send, display and erase messages.

Main Menu Icon



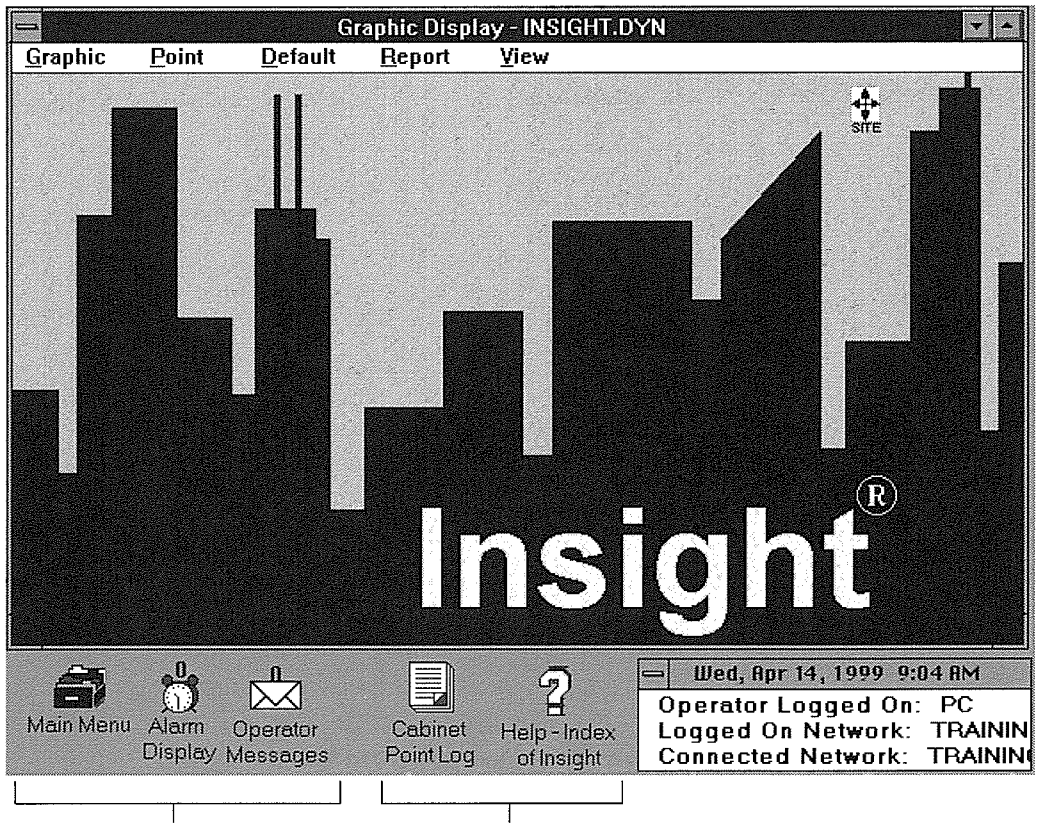
The starting point of most Insight activity.

The list of applications will vary depending on your operator access level and whether you are connected to the network. Double click the Main Menu icon to see a list of available applications. Three dots after an application means there is a submenu that lists additional applications.

When not in use, the Alarm, Operator Messages and Main Menu icons always appear at the bottom of your computer screen. You cannot close these icons. You can maximize or restore them to view information and minimize them to shrink them back to icons.

Note: In Windows 95, these icons appear as buttons on the task bar instead of icons. The task bar buttons do not blink and cannot be set to always be visible (however, they will always be visible when the task bar is visible). The number of alarms and messages appear in the task bar caption as shown below.

Insight Icons



Practice

To do this practice you should be looking at an Insight screen. You should not be logged on to Insight.

Alarm Icon

☐ Double click on the alarm icon.

☐ Try to close the alarm screen.
What happens?

_____

☐ Open the alarm screen again.

a. Use the up arrow (upper right corner) to maximize the screen.
b. Use the up/down arrow to partly minimize the screen.
c. Use the down arrow to minimize the screen.

Operator Message Icon

☐ Double click on the Operator Messages icon.

☐ Try to close the Operator Messages screen.
What happens?

_____

☐ Open the Operator Messages screen again.

☐ Minimize the Operator Messages screen.

Main Menu Icon

☐ Double click on the Main Menu icon.

☐ How many commands are available to you?_____

☐ Try to close the Main Menu.

Function Key Commands

- **The most commonly used "shortcut" function keys are:**

  F1 – Help

  F2 – Main Menu

  F3 – Logon/Logoff

  F8 – Display Graphics

  F10 – Point Log

- **This unit focuses on using pull down menus to open Insight applications.**

Another way to access Insight applications is to use function keys. Function keys require fewer keystrokes, so they open applications quicker than by clicking on icons or selecting from menus.

The following function keys work like toggle switches: F2, F4, F5, F6, F7 and F8. Press these function keys to open an application, then press it again to minimize (or iconize) it.

The other function keys open an application, and you must select "close" from the Control menu box pull down menu to close the application. If you press the function key a second time the system will think you want to open the application more than once.

See the chart on the next page for a list of Insight function key commands. These function key "shortcuts" are also listed on your Insight keyboard template.

Like Windows, there are multiple ways to perform Insight tasks. An example of this is opening Insight applications through pull down menus or function keys. For simplicity's sake, this unit will focus on using pull down menus. However, when a function key "shortcut" is available, it will be noted in the left margin.

Insight Function Key Command Shortcuts

Press this key:	To access:	
F1	Help	Displays help information for the application you are currently working on.
F2	Main Menu	Lists all Insight applications available for the current user level. Applications will vary depending on whether you are or are not logged on to Insight and if you are connected to a network.
F3	Logon/Logoff	Logon and logoff the network.
F4	System Status	Opens system information screen to view and modify system parameters.
F5	Alarms	Opens the Alarm icon to view, acknowledge or erase alarms.
Hold Ctrl **as you Press** F5	Silence Alarm Bell	Silences the alarm bell until the next alarm is received.
F6	Operator Messages	Opens the Operator Messages icon so you can send and receive messages.
Hold Ctrl **as you Press** F6	Silence Message Bell	Silences message bell until the next message is received.
F7	Time of Day Override	Opens the Time of Day overrider.
F8	Display Graphics	Displays dynamic graphics.
Hold Ctrl **as you Press** F9	Shut Down	Shuts down Insight and displays the Windows Program Manager
F10	Point Log	Looks at the current status and value of points.
F11	Point Commander	Command points.
Hold Ctrl **& Hold** tab **as you Press** F12	Disable/ Re-enable Insight function keys	Disables Insight function keys when you use third-party software (i.e., Microsoft Word or Excel). The same key combination re-enables Insight function keys when you return to Insight.

Practice

Use a function key to open and minimize the following applications. Your Insight default graphic should be on screen.

Remember applications are closed through the pull down menu under the Control menu box within the active window.

☐ Open the Main Menu.

☐ Minimize the Main Menu.

☐ Open the Alarm screen.

☐ Minimize the Alarm screen.

☐ Open the Operator Messages screen.

☐ Minimize the Operator Messages screen.

☐ Open the System Status screen.

a. Are you connected to a network? _____

b. If so, what is the network's name? _____

_____

☐ Close the System Status screen.

☐ Open Help. Note the information presented.

☐ Close Help.

☐ Open the Main Menu and then open Help. How is Help opened through a function key different than Help opened through the Main Menu?

_____

_____

_____

_____

Point Organization

- **Point groups are identified by an ampersand (&)**
- **Point groups with other point groups under them are called parent groups**
- **Points can exist in multiple groups**
- **Point groups can also be organized under a top group**

Insight points may stand alone or be placed into point groups. Point groups provide a means to classify points into easily recognizable categories. For example, you could use point groups to organize points by location or by type of equipment. Point groups are helpful when you are running reports or when you are trying to find a specific point.

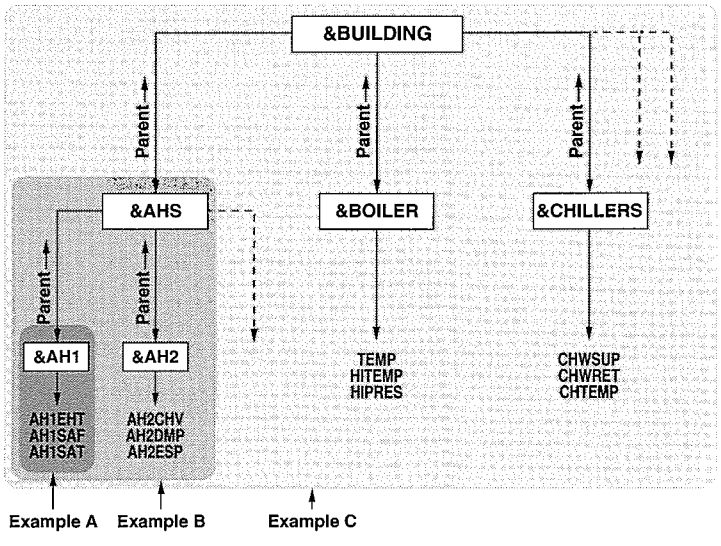
Point groups are identified by an ampersand (&) before their name. In Example A below, &AH1 is one point group.

A point group can contain other point groups or individual points. A point group that contains other point groups is called a parent group. In Example B, &AHS is a parent group containing the point groups &AH1 and &AH2. &AH1 and &AH2 are not parent groups because individual points, not point groups, are classified under it.

Points can exist in multiple groups. For example, the point FAN1 could exist both in group &AH1 and in &FANS. You can work with your Siemens Building Technologies, Inc. representative to group your system's points in ways that best suit your needs.

Point groups can also be organized under a top group. The top group is the main organizer for all point and point groups within the network. The top group is useful as a starting point when you have many groups. In Example C, &BUILDING is the top group. Top groups are not always used. The complexity of your facility determines whether or not a top group will be used. There cannot be more than one top group per network.

Point Organization



Practice

Answer the following questions based on the diagram below:

☐ List the top group _____

☐ List two parent groups _____

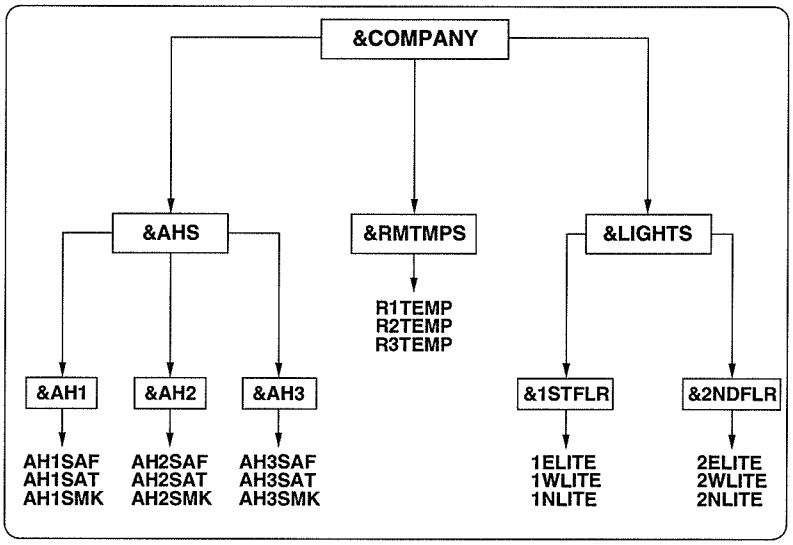
_____

☐ List one point group under one of the parent groups you listed in question two.

_____

_____

Point Organization



Logging On and Connecting to a Network

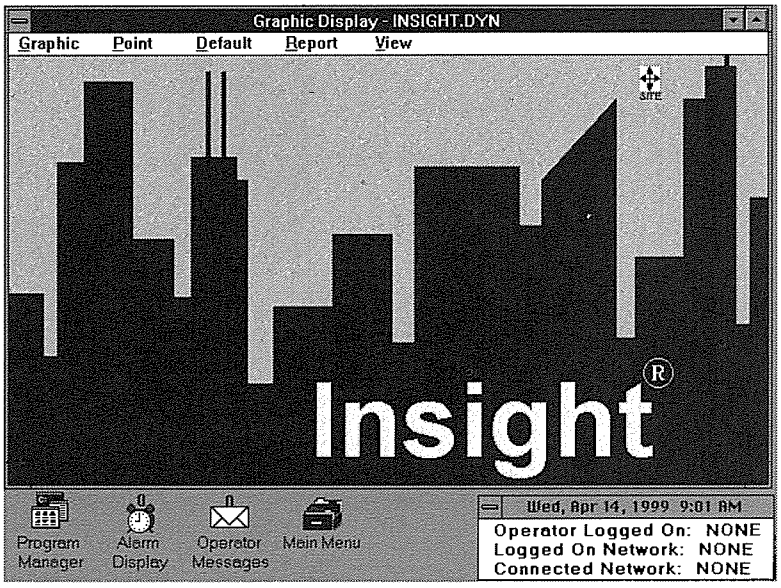
- **Logon Shortcut:** F3
- **You must logon to Insight and connect to a network to use the majority of Insight's applications**

You must logon to Insight and connect to a network to use the majority of Insight's applications. To do this, perform the following steps:

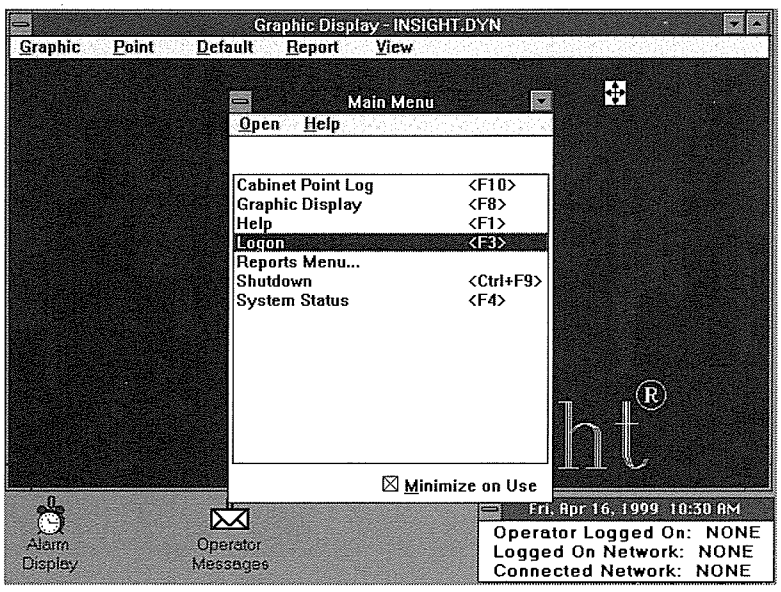
1. Turn on your PC, monitor and printer, and start Insight.

   Note: Depending upon how your system is set up, you may need to start Insight from DOS, Windows 3.1 Program Manager, or Windows 95. Your instructor will demonstrate this to you.

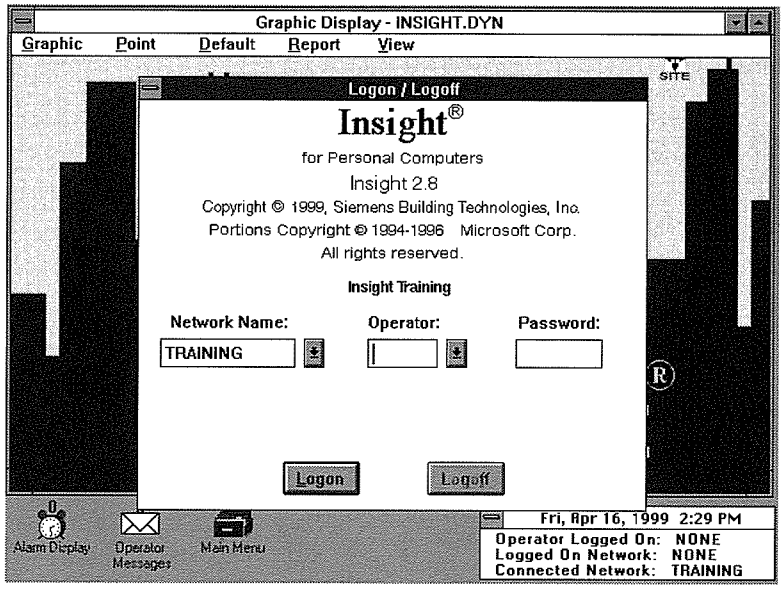
2. Double click on the **Main Menu** icon.



3. Double click on the **Logon** selection from the Main Menu.

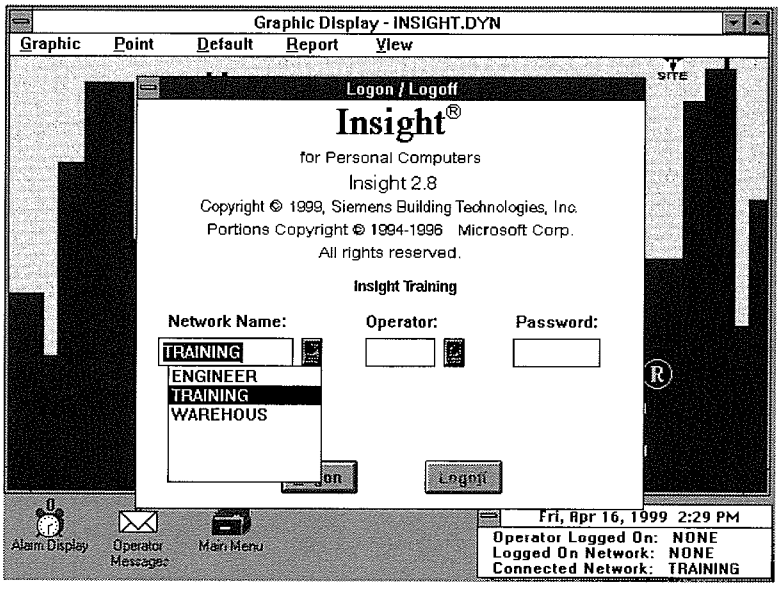


4. The Logon/Logoff Dialog box appears.



If a default network is defined, that network name appears in the network field. If there is no default network, the name of the last network you were logged on to appears in the network field. Most buildings will only have one network, and the name of the network will automatically appear in the network name field.

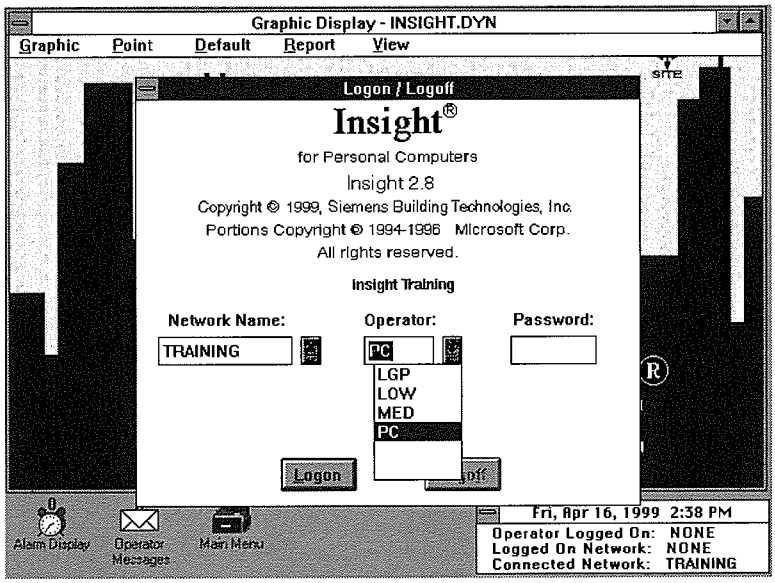
If your site has more than one network (i.e. remote dial-up networks), all network names can be accessed by clicking on the network down arrow, as shown below.



- **A Common error is to press <ENTER> instead of <TAB> to move to the next entry field**

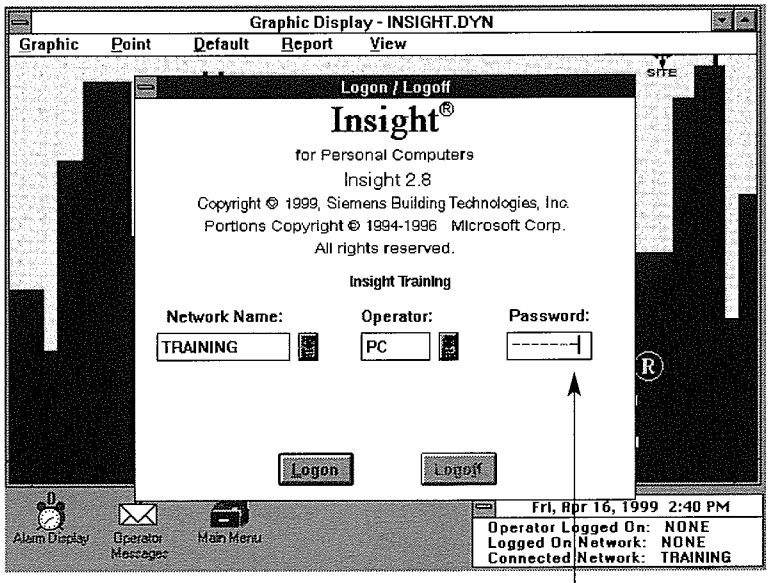
To change to a different network, click on the network you want to switch to. Or type the network name in the network field and press **<TAB>** to move to the operator field.

5. Enter your operator initials in the operator field.
   A list of operators will be displayed if you click on the operator down arrow.



6. Press **<TAB>** to go to the password field.

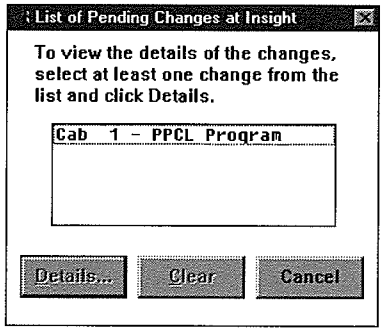
7. Enter your password in the password field.
   For security reasons your password appears as dashes.



- **To ensure you are connected to the network, select System Status from the Main Menu**
- **System Status Shortcut:** F4

8. If you are not already connected to the network, click on Connect To Network: **Yes** if you want to connect, or if you do not want to connect to the network choose Connect To Network: **No.** Then click on the **Logon** button, or press **<ENTER>.** You have logged onto the system. Note that your operator initials now appear in the date/time box operator field.

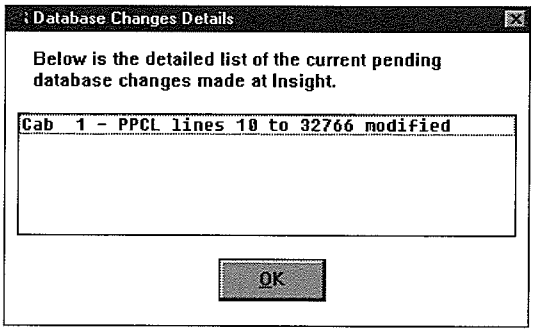
9. If any changes were made, that were not downloaded to the field panels since you last logged on, the list of Pending Changes at Insight window will display, showing the changes. See the screen below.



Note: The Connect to Network prompt will not appear if you are currently connected to the selected network. When you logoff from one network and logon to another network, Insight will prompt you as to whether you want to disconnect from the current network.

10. To view the details of a change, select a change from the list and click Details.

The database Changes Details window displays, as shown below.



11. To clear the record of PPCL changes for a cabinet, select a change from the list and click **Clear**.

Practice

☐ After accessing Insight but before you logon and connect, open the Main Menu. List the applications that are available to you. If the application has a function key shortcut, write that combination next to the application name.

_____

_____

_____

_____

_____

_____

_____

_____

☐ Logon to Insight and connect to a network. If you have more than one network, your instructor will tell you which network to connect to.

☐ Open the Main Menu. Notice how many more applications are available to you. List a few of those newly available applications. If the application has a function key shortcut, write that combination next to the application name.

_____

_____

_____

_____

☐ Scroll through the Main Menu commands. List one command with three dots after it.

_____

_____

☐ What happens when you double click on a command with three dots after it?

_____

_____

Logging Off of a Network

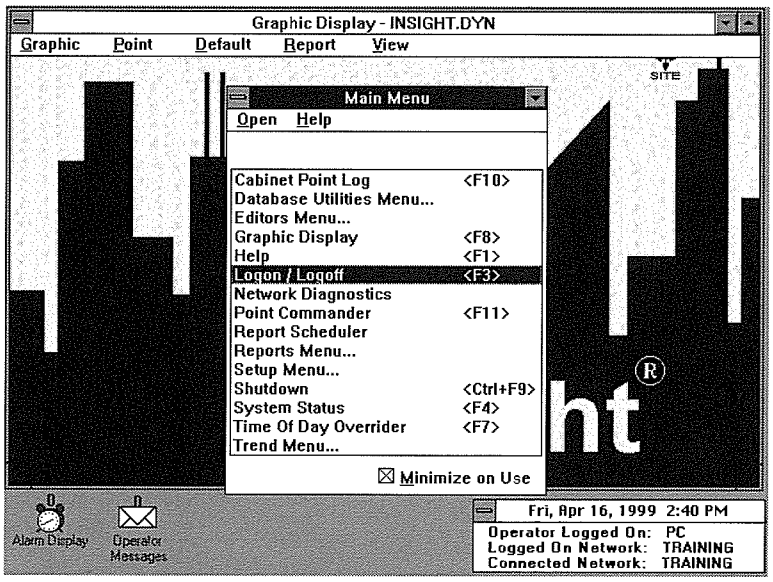
- **Shortcut:** F3
- **Logoff a network to protect the security of your operator access level**
- **Insight remains connected to your network, allowing alarms to be received even when an operator is not logged on**

The major reason to logoff of a network is to protect the security of your operator access level. Insight remains connected to your network, allowing alarms to be received even when an operator is not logged on.

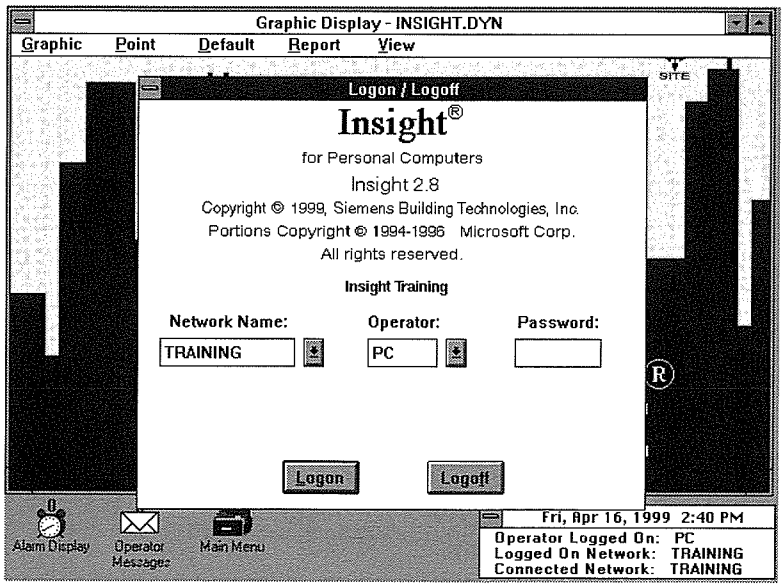
To logoff of a network:

1. Double click on the **Main Menu** icon.
2. Select **Logon/Logoff** from the Main Menu.

   The Logon/Logoff dialog box appears.



3. Click on the **Logoff** button.



Your operator initials are erased from the date/time box and you are logged off of the network.

Practice

☐ Logoff of the network you are logged on to.

☐ If appropriate, logon to a different network. Ask your instructor which network you should logon to.

Shutting Down Insight

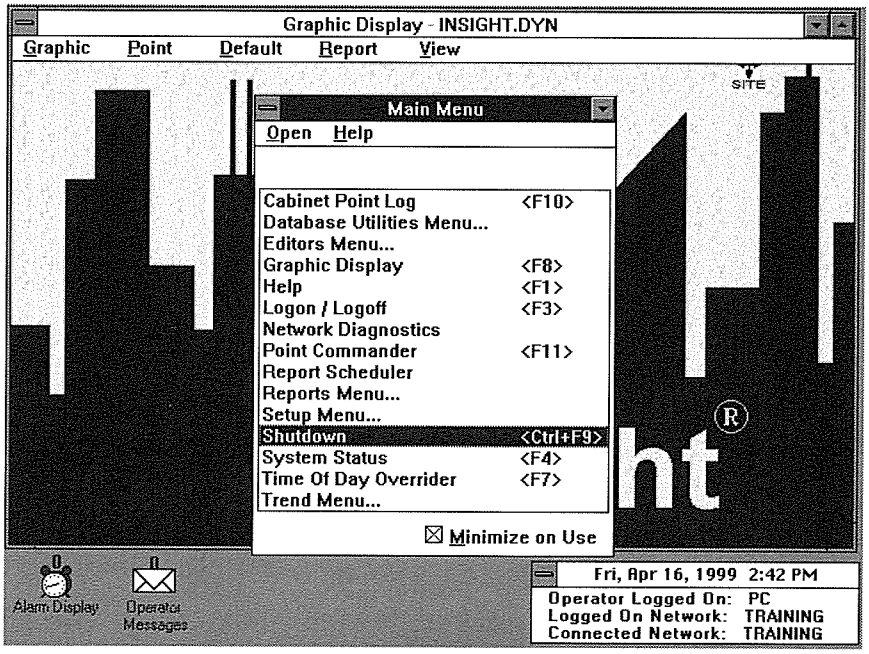
- **Shortcut:** Ctrl F9
- **Shut down Insight when you need to do tasks such as PC maintenance**
- **When you shut down Insight no data transfer will occur**

You will want to shut down Insight when you need to perform such tasks as PC maintenance.

Warning: When you shut down Insight you are automatically disconnected from your network. You will no longer have access to network information from the field panels. This includes alarms, messages from field panels, changes made at the field panels, and trend data collection.

To shut down Insight:

1. Select **Shutdown** from the Main Menu.



2. Click on **OK** or press **<ENTER>** when the message "This will terminate all Insight activity" appears.

   If you get a message that an upload or download is in progress, or that a trend collection is scheduled to occur before Insight will be up again, cancel the shutdown. Bring up the System Status screen (<F4>) to monitor the status of the upload, download or trend collection. When it is complete you can resume the shutdown.

   The system shuts down.

   Note: If you are using Windows 3.1 with the Program Manager disabled, you will return to the DOS start-up screen. If this is not the case, then Windows 3.1 will remain active.

Practice

☐ Shut down Insight.

☐ Restart Insight.

Point Log Report

- **Use a point log report to check the status of your building's operation**

Checking the status of your building's operation is one of the most frequent tasks you will perform. There are many ways to check building status. One of the most common ways is to run a point log report.

You can request a point log report for a single point, a group of points, or all points in your building. You can display the report on screen or print it out.

Look at the sample point log report on the next page to find out the types of information a point log can provide.

While the full name of this report is the Cabinet Point Log report, it is most commonly referred to as the Point Log report, and that is what it will be called in this unit.

Point Log Report: Terminology Definitions

Name Each point has a unique name (up to six characters) within the field panel and across the network.

Address Each point has a unique eight character address. Point addresses identify the physical location of points in the field panel. See your user manuals for a description of point addressing.

Descriptor Can be up to 12 alphanumeric characters long. Spaces are allowed.

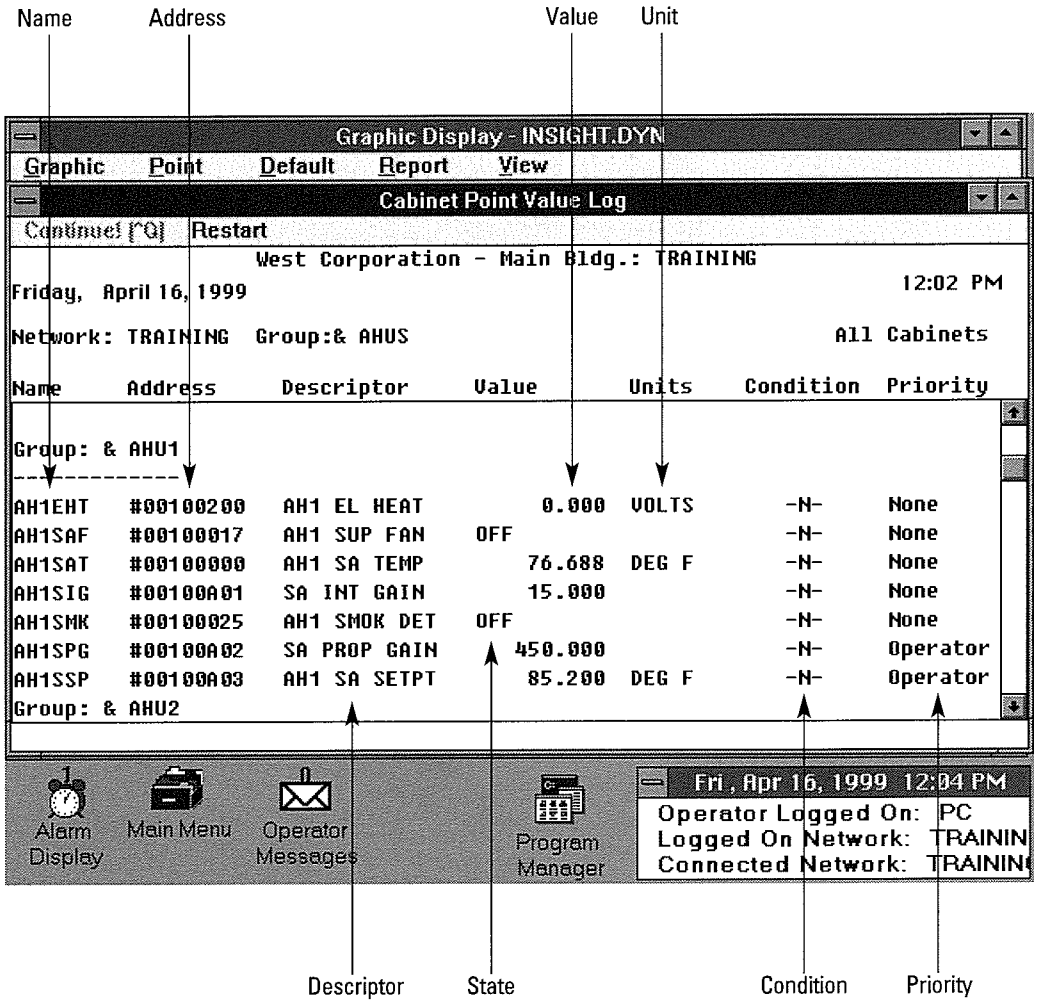
Value/State For analog points the value displays (for example: 15.000). For digital points the state is listed (for example: ON, OFF, or AUTO).

Unit Only applies to analog points. The engineering units the point is measured in (for example: DEG F, PSI, VOLTS, etc.).

Condition Describes how the point is operating. Some examples are normal (N), alarmed (A), and failed (F). See the chart in the unit appendix for specific descriptions of each condition.

Priority The two most common priorities are None (the field panel is controlling the point) and Operator (the operator is controlling the point). Three other priorities are also available: Smoke, Peak Demand Limiting (PDL) and Emergency. These priorities are usually used in PPCL programs and are not used often by operators.

Point Log Report

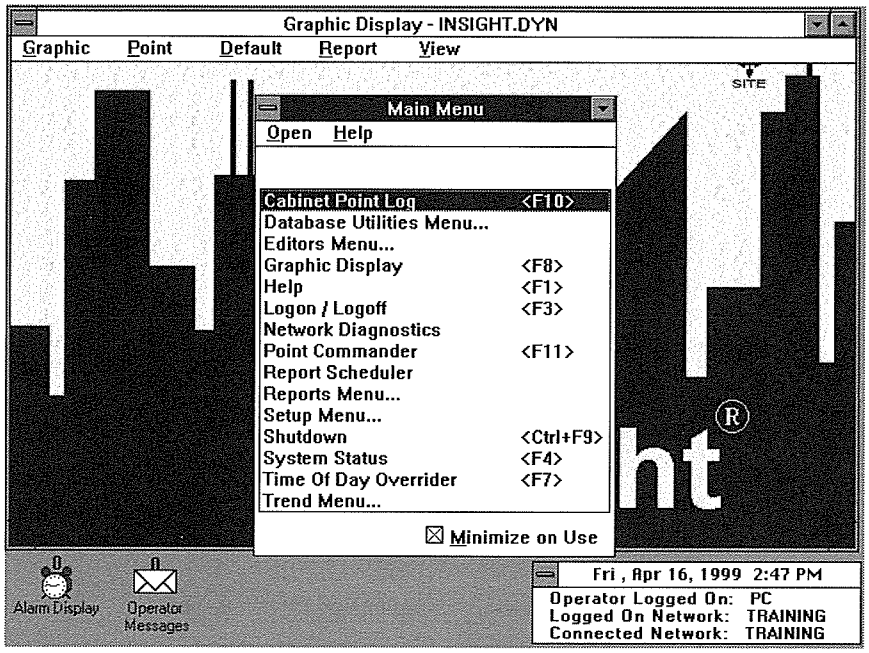


Running a Point Log Report for One Point or Point Group

- **Shortcut:** F10

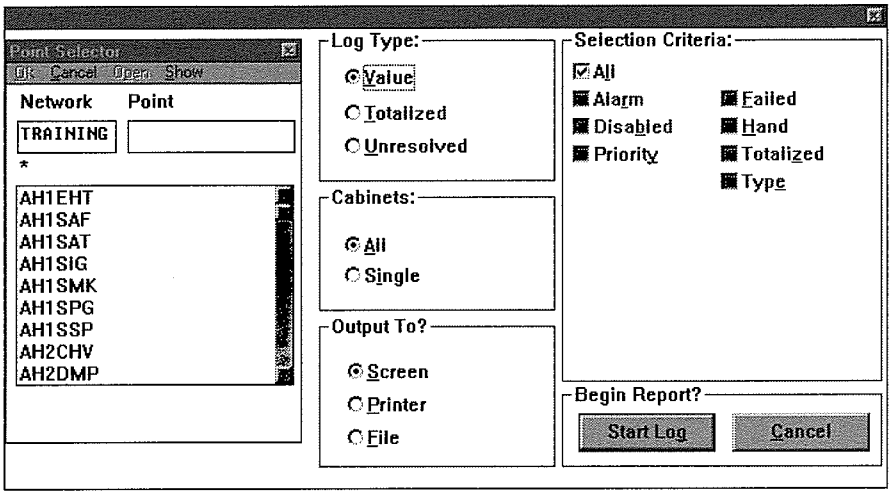
To run a point log report for one point or point group:

1. Select **Cabinet Point Log** from the Main Menu.

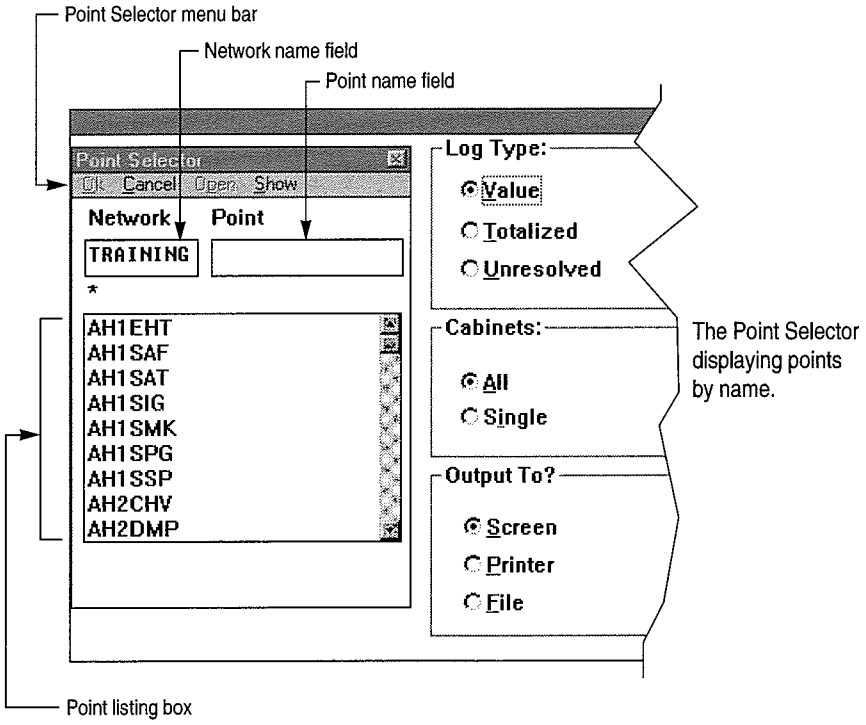


Note: All other Insight reports may be accessed through the Reports Subdirectory. To get to the reports subdirectory select **Reports Menu** from the Main Menu. It is also important to point out that many applications will provide direct links to relevant reports through the report menu bar option.

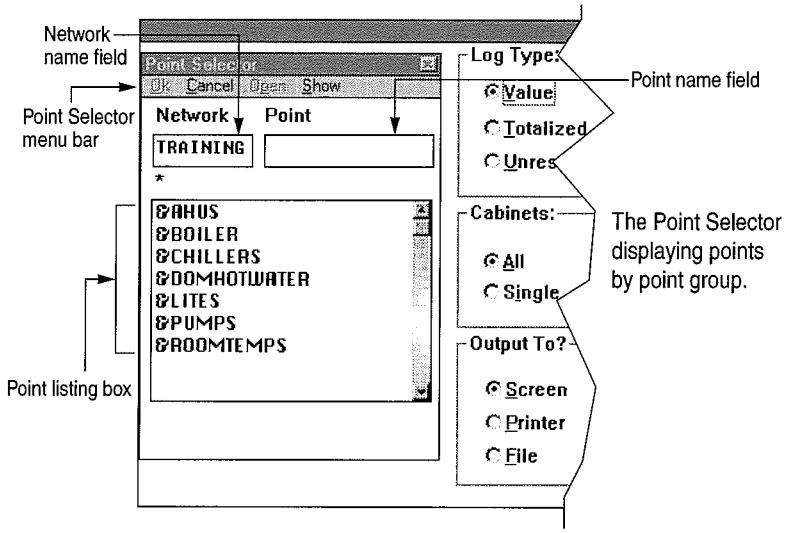
The Cabinet Point Log appears.



The first part of the Cabinet Point Log is the Point Selector. The Point Selector displays all point names defined for the network you are logged on to.

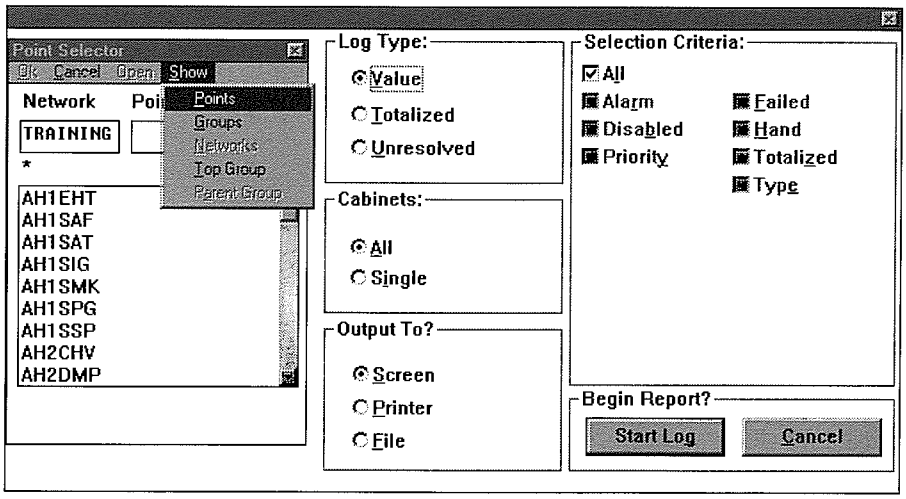


You may also have point groups. Recall point groups are identified by an ampersand (&) in front of their name.



Four choices are available in the Point Selector menu bar:

- ☐ Click on **OK** to indicate your point selector choice. The choice must be highlighted before you click **OK.**
- ☐ Click on **Cancel** to exit the Cabinet Point Log. You return to the menu from which you started the point log. You can also cancel by clicking on the cancel button in the lower right corner of the Cabinet Point Log screen.
- ☐ Use Open like a double click. Instead of clicking twice on a point group to see the points listed in it, click once on the group name and click on **Open.**
- ☐ Click on **Show** to jump between displays of points, groups, networks, top group and parent groups.



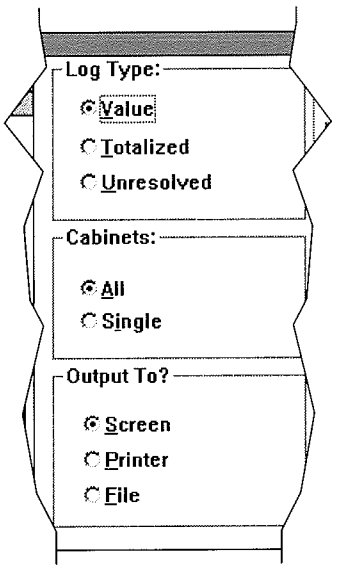
The Point Log Menu with the point AH1EHT selected and with the Show Menu displayed.

2. a. To run a point log for one point name, click on that point name. The point name appears in the point name field.
   b. To run a point log for a point group, click on the point group name. The point group name appears in the point name field.
   c. To run a point log for a point name within a point group, double click on the point group name to open it. The point names within that group are listed. Then single click on the desired point name. The point name appears in the point name field.

3. Click on **OK** in the Point selector menu.

   Note that the network and point name/group you selected now appear in the line below the Cabinet Point Log screen title.

4. Select the appropriate Log Type option.



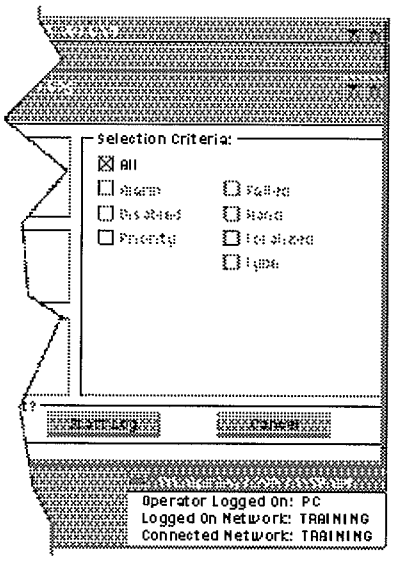
Value is the Log Type default. This will display the current value of points or a point group.

Totalized gives you the total amount of time the point(s) have been operating. What is totalized depends on what your point is measuring. For example, if you choose to totalize a fan, the totalized value of the point would be the total amount of hours or minutes that the fan has been running. Totalization is an option selected when points are first defined in your system. The system will have this information available *only* for points set up to totalize.

Unresolved Cabinet Point Log will assist you in diagnosing which points are currently non-existent at the field panel(s) and being referred to in the PPCL programs and/or enhanced alarm points (e.g., mode point, setpoint). This report capability shall be limited to the field panels with Firmware revisions (rev 1.4/12.4 and above). For example, if you have referred to a point in a line of PPCL code but have not yet entered it into the point database it would be unresolved. You can now locate Unresolved points using the point log.

5. Select the appropriate Cabinets option. **All** is the cabinets default. Specify a single cabinet to see information for that cabinet only. You would specify a single cabinet to do troubleshooting or isolate a problem you know exists in a certain cabinet. When you select single cabinet, a field appears where you can enter the cabinet number.

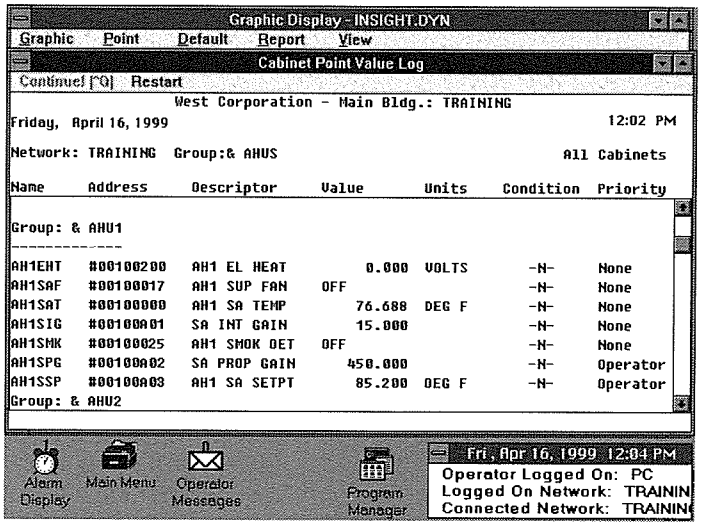
6. Select the appropriate "Output To" option. **Screen** is the output default. Click on **Printer** if you want a paper copy of the point log report, or click on **File** if you want to send the the output to a file.



7. Select the appropriate Selection Criteria option. **All** is the default, but you can also specify certain types of points to view. For example, you may want a log for all points that are currently in alarm. You will learn more about using this option later in this unit.

8. Click on the **Start Log** button. The Cabinet Point Log screen disappears and the point log report displays on the screen or starts printing at the printer, depending on the device option you chose in step 6.

If you want to stop the printing or screen display, press the **<Esc>** key.



A sample point log displayed on screen.

Practice

☐ Logon to Insight and connect to a network. If you have more than one network your instructor will tell you which network to connect to.

☐ Run a point log report for the _____ point. Display the report on screen. Accept the defaults in the point log fields.

☐ What is the point address? _____

☐ What is the point descriptor? _____

☐ What is the point value/state? _____

☐ What is the point's units? _____

☐ What is the point condition? _____

☐ What is the point priority? _____

☐ Run a point log report for the _____ point. This time print the log. Accept all other field defaults.

☐ Run a point log report for the _____ point group (if applicable). Accept the defaults in the point log fields.

☐ How many points are listed in the point log for this point group? List a few of them.

_____

_____

_____

Running a Point Log Report for All Points

- **Shortcut:** F10

To run a point log report for all points:

1. Select **Reports Menu** from the Main Menu.
2. Select **Cabinet Point Log** from the Reports Menu.
3. Enter an asterisk (*) in the point name field.
   The asterisk (*) is called a wild card. You will learn more about wild cards later in this unit.
4. Click on **OK** in the Point Selector menu bar.
5. Select the appropriate Log Type option.
6. Select the appropriate Cabinets option.
7. Select the appropriate "Output To" option.
8. Select the appropriate Selection Criteria option.
9. Click on the **Start Log** button.
   The point log begins to run.

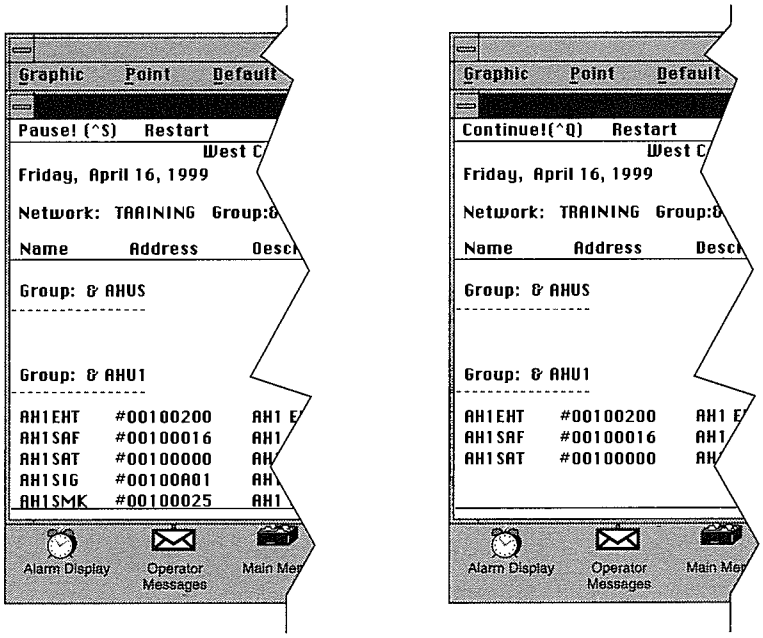
Pausing, Continuing, Restarting and Canceling Reports

If reports are lengthy, information will scroll off the top of the screen. That is why you need to be able to pause and continue report scrolling. You should also know how to cancel and restart reports.

Pause/Continue

To pause/continue report scrolling:

- Click on **Pause** or **Continue** in the report menu bar.

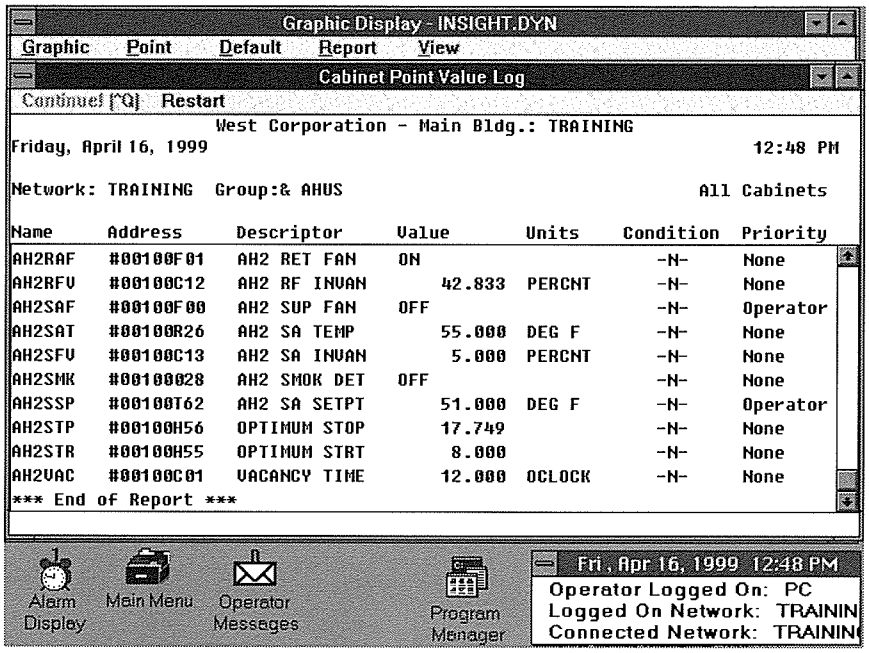


When you pause a report you can use the scroll bar on the right side of the screen to move line by line within the report. This scroll bar will not appear until a full screen of information has been displayed.

Restart

Use restart to redisplay a report or to exit an on-screen report so you can run a different report.

- Click on **Restart** in the report menu bar and then select **Same Selections** or **New Selections.**



Restart returns you to the screen you were on before you ran the report.

Cancel

To cancel a report:

1. Click on **Restart** in the report menu bar.
   You are returned to the Cabinet Point Log Menu.
2. Click on **Cancel** in the Point Selector menu bar.
   The report is canceled.

Practice

☐ Run a point log for all system points. Display the report on screen (do not print).

☐ Pause the point log.

☐ Use the scroll bar on the right side of the report to move line by line within the report.

Remember: This scroll bar will not appear until a full screen of information has been displayed.

☐ Continue the scrolling of the point log.

☐ Restart the point log.

☐ Cancel the point log.

Note: You can pause, continue, and cancel any Insight report. Point log was used here since you just learned about it.

Running a Point Log Report Using Wild Cards

- **Wild cards substitute for one or more characters**
- **The two wild cards are the question mark (?) and the asterisk (*)**
- **The ? takes the place of one character**
- **The * takes the place of one or more characters**

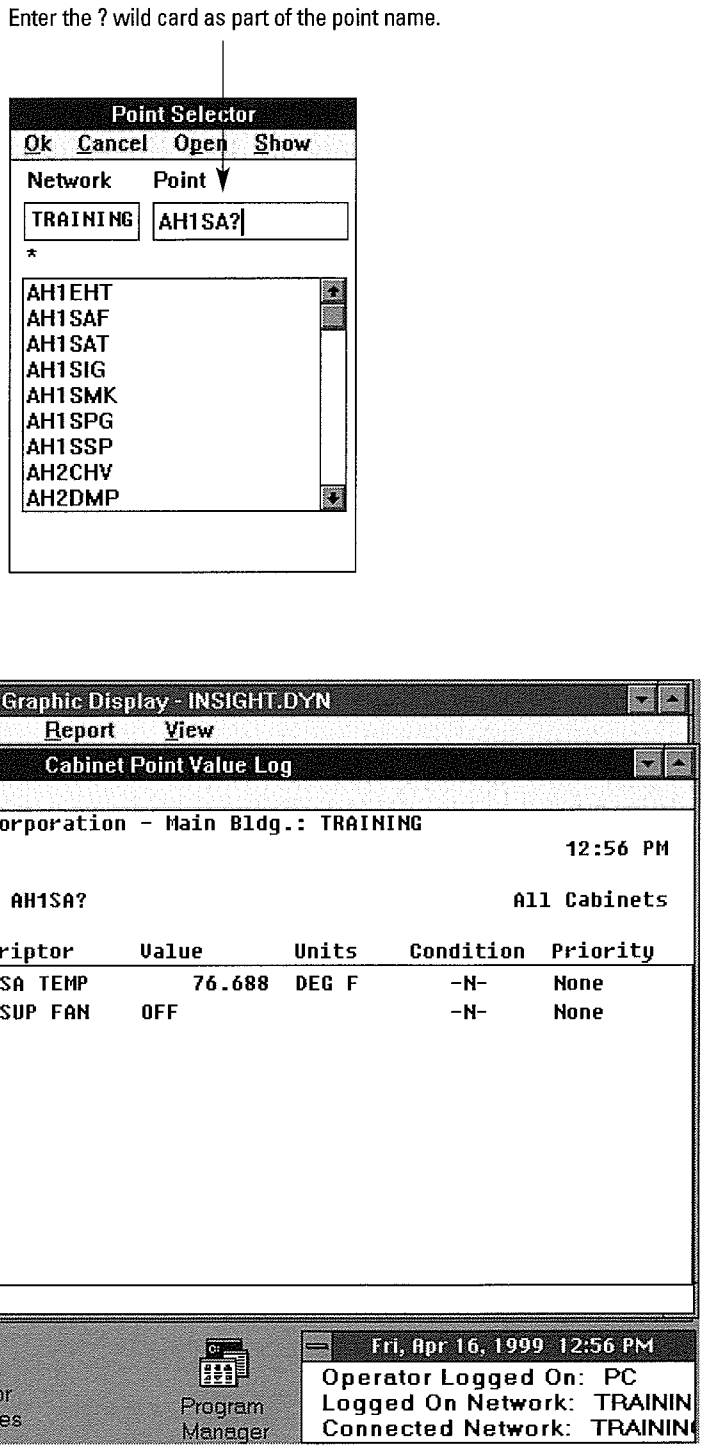
Many times you will want to run point logs on groups of points with related characteristics. For example: You want to check the status of all the points associated with air handling unit 1 in your building. You know all the points start with AH1, but they end differently (AH1SSP, AH1SAT, AH1EHT, etc.) You can use wild card characters to run a point log for all points that begin with AH1.

Insight uses two wild card characters: the question mark (?) and the asterisk (*).

The Question Mark (?) Wild Card

With your system, the question mark can take the place of one character. For example: You want to list all air handling unit 1 points that begin with AH1SA. You enter AH1SA? in the point field in the point selector, click on OK and Start Log, and you get the report shown in Example A on the next page.

Example A



The point log displays for all points beginning in AH1SA and ending in one letter or number.

The Asterisk (*) Wild Card

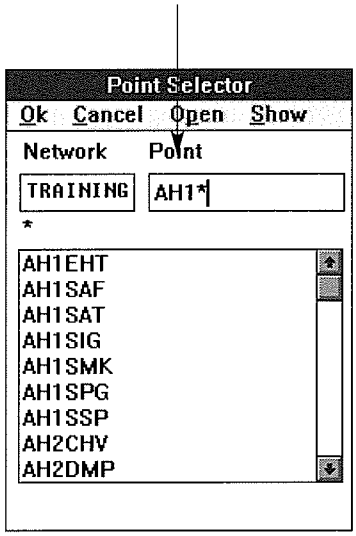
The asterisk (*) wild card takes the place of one or more characters. For example: You want to list points that begin with AH1 but end in one or more characters (number or letter). You enter AH1* in the point field of the point selector, click on OK and Start Log, and get the report shown in Example B.

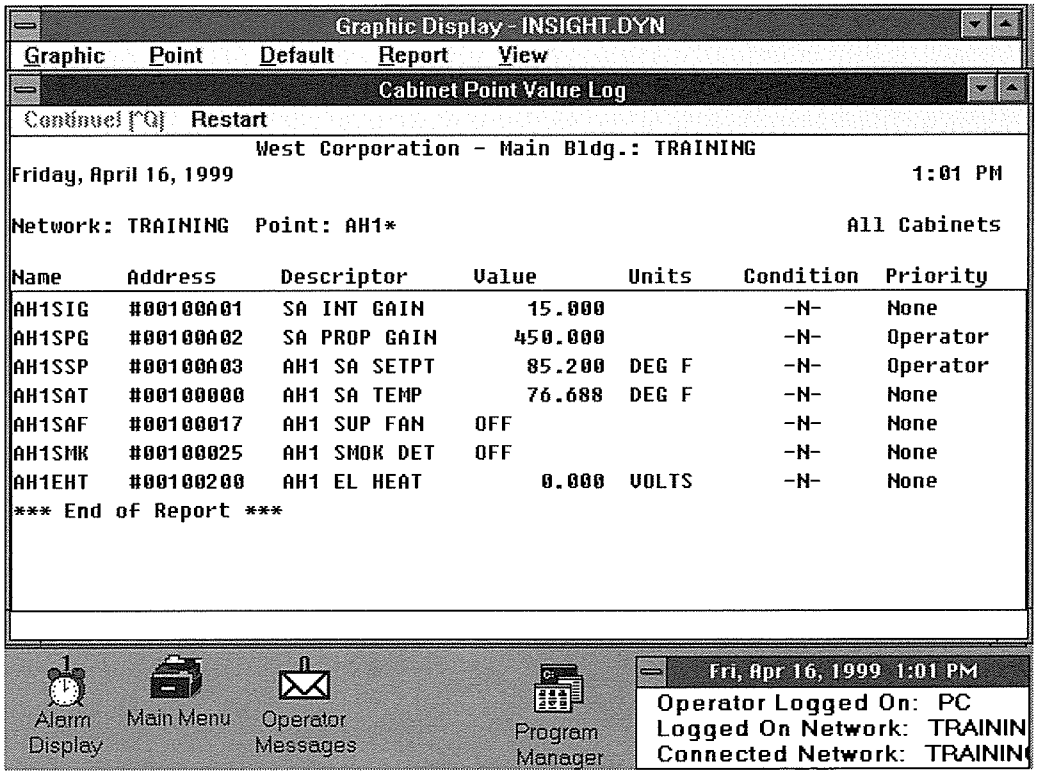
When you ran a point log for all points, you used an asterisk (*) in the point selector field. The asterisk produced a list of all points because it took the place of all the six character combinations that made up each point name in your system.

Wild cards can also be used at the beginning and in the middle of point names. For example: Entering *AT will give you all the point names that end in AT like AH1SAT and AH1MAT. You can also use more than one wild card in a statement, and you can use both wild cards together.

Example B

Enter the * wild card as part of the point name.





The point log displays for all points beginning with AH1 and ending in one or more letters or numbers.

Practice

☐ In the blanks below enter the wild card point name that would:

1. List all points that begin with P.

   _____

2. List all points that begin with two characters and end with 12.

   _____

3. List all points that end with 12.

   _____

4. List all points that start with TEMP and end with one other character.

   _____

☐ Run a point log for your system using one or more wild cards. Your instructor will tell you what points should be displayed on screen.

Running a Point Log Report for Points with Specific Characteristics

- **You can use the selection criteria section of the Cabinet Point Log menu to run reports on points with specific characteristics**
- **Selection criteria options are: All, Alarm, Disabled, Priority, Failed, Hand, Totalized and Type**
- **You can choose one or more selection criteria options**
- **Make sure you deselect the All default before you choose other options**

Now that you know how to run point logs for one point, groups of points, and all points, you are ready to use the point log to do some diagnostic reporting.

You can use the selection criteria section of the Cabinet Point Log menu to run a point log that only reports on points with specific characteristics. For example, you could choose to run a point log report just for points that are in alarm.

When you select options from the selection criteria section, you can choose more than one option. For example, you could run a point log report for all points in alarm, or for all points that are in alarm and failed, or for all points that are in alarm, failed, and in operator priority.

Just remember that All is the selection criteria default. You must deselect All before you make other selections, or you will still get a point log report for all points.

To deselect All, click on the box before All. The X in the box disappears. To reselect All click on the box again. The X reappears. This toggle selection/deselection technique applies to all options listed in the selection criteria section.

The following is a brief definition of all the selection criteria options:

Selection Criteria Option:	**Select to run a point log on:**
All	All Points
Alarm	All points in alarm. Alarms are discussed more fully later in this unit.
Disabled	All points that have been disabled by an operator. For example: An operator may disable a point so he can service a piece of equipment.
Priority	Certain types of point priorities. Recall from the Point Log Terminology section that the two most commonly used priorities are None and Operator. When you choose this option a menu appears asking which priorities you want to select.
Failed	All points that have failed due to a mechanical or human error.
Hand	Points on a Point Termination Module (PTM) that are in HAND position.
Totalized	All points that have been totalized and their totalized amounts.
Type	Certain types of points (i.e., analog input, analog output, etc.) When you choose this option a menu appears asking which type(s) of points you want to see.

One example of how the selection criteria section can help you troubleshoot follows:

- You logon to Insight in the morning and run a point log report to check for all points in Operator priority.
- The report shows that the point FAN1 is in Operator priority. This point was in system control (None priority) when you left work yesterday.
- You investigate the situation and discover the night operator commanded the fan off. This command put the point into Operator priority. He forgot, however, to return the fan to None priority so it could operate according to the control program.
- By running a point log for all points in Operator priority, you discovered this error and corrected it before it caused a problem.

To run a point log for points with certain criteria, you follow the same steps previously detailed for running a point log, but you must deselect All in the selection criteria field and then select the option(s) you want. Since you have performed these steps before, they will not be repeated here. To review the steps see page 38, Running a Point Log for All Points.

Practice

☐ Recall the wildcard character used to take the place of one or more point characters. What is it?

_____

☐ Run a point log for all points in alarm. How many points are in alarm?

_____

☐ Run a point log for all points that are in Operator priority. How many points are in Operator priority?

_____

☐ Run one point log that lists all points that have failed, are disabled and are in alarm. How many points meet these criteria?

_____

Report Scheduler

- **Use the Report Scheduler to create Report Definitions**
- **Use the Report Scheduler to run reports automatically**

Running reports is one of the many daily tasks for which you will use Insight. Insight provides many reports for the operator. Many of these reports can be tailored to your specific needs by inputting points, dates, cabinet ranges, etc. Insight 2.8 provides a way to create and schedule report definition for these reports so that all of the tailored information stays with the report definitions and does not have to be entered each time the report is run. Each time this definition is run, you will get the same report format with current data.

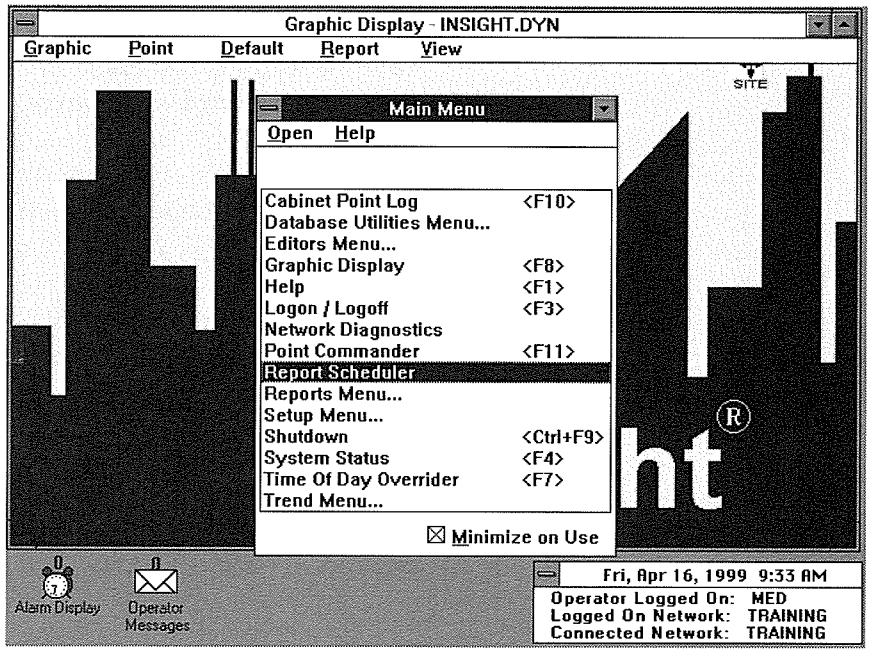
Report Schedules are used to run Insight Report Definitions at specific times. Reports can be scheduled to run daily, weekly, first of the month, or customized to fit your exact needs.

Reports that use date and time boxes will provide slightly different setup screens when entering the report definition. Instead of entering exact dates and times (i.e. 4-16-99 10:45 A.M.), these reports will ask for times relating to the actual time that the report is run (i.e. previous day, previous week). These dates and times that relate to the running of the report are called "relative times." Relative time reports give you the option of viewing all of the report's data or selecting a specific time range such as the past day, week, or month.

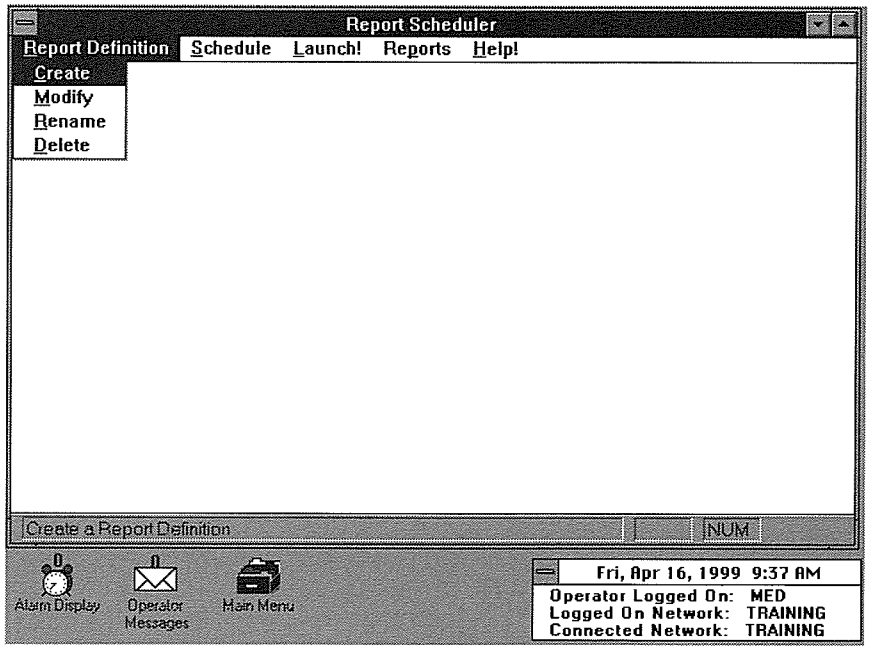
Creating a Report Definition

This example illustrates us how to create a report definition for a point log to show all points currently in operator priority.

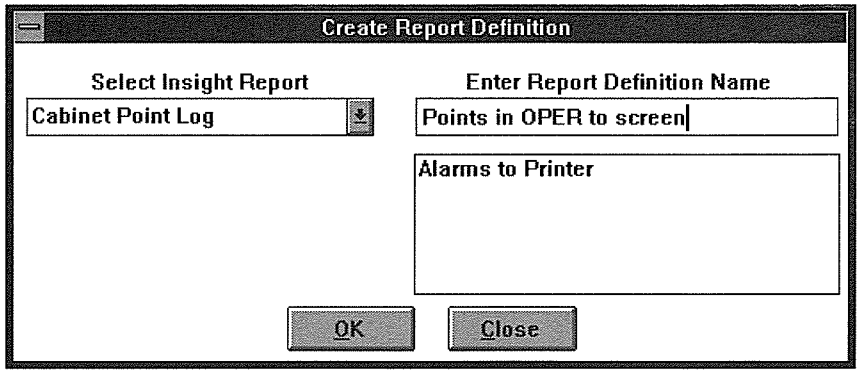
1. Select **Report Scheduler** from the Main Menu.



2. When the Report Scheduler appears, select **Report Definition** from the menu bar and then select **Create.**

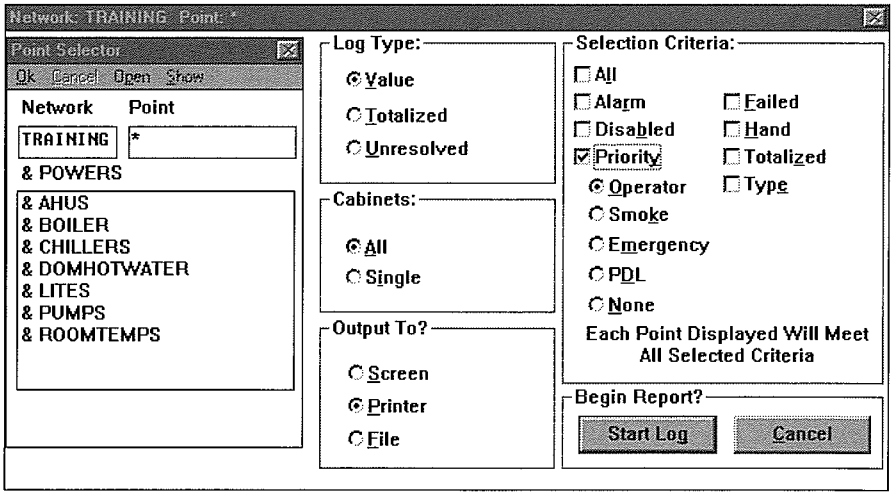


3. The Create Report Definition dialog box appears. From this box you select the Insight report and enter the report definition name (up to 30 characters). In this example, select **Cabinet Point Log** and name the definition **Points in OPER to screen.** Click on **OK** to accept the entries



4. Now the familiar Cabinet Point Log setup screen is displayed. The "*" wildcard is entered into the Point Selector, and the operator priority is chosen from the selection criteria.

5. Select the settings for Log Type, Cabinets, and Output To.



6. Now click **Start Log** to save the report definition. Note that the status bar on the bottom of the report scheduler window now reads "Report Definition successfully created."

Creating a Report Definition Using Relative Time

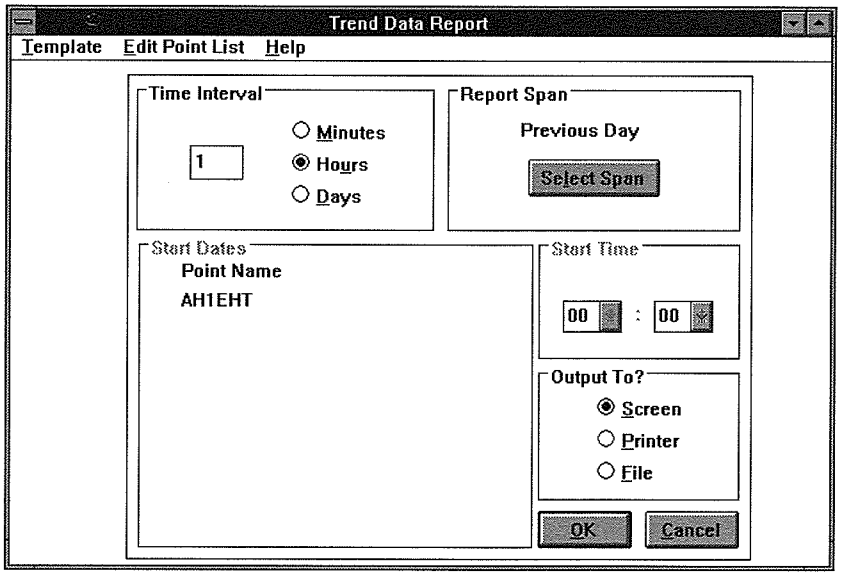
- **Relative time data relates ranges to the current date and time**
- **Ranges are selected for the previous day, week, month, etc. or for custom times**

Several Insight reports provide an option to display the data for a specific date and time range. Since report definitions can be run at any time, Insight provides relative times to relate the report's data to the time that the report is run.

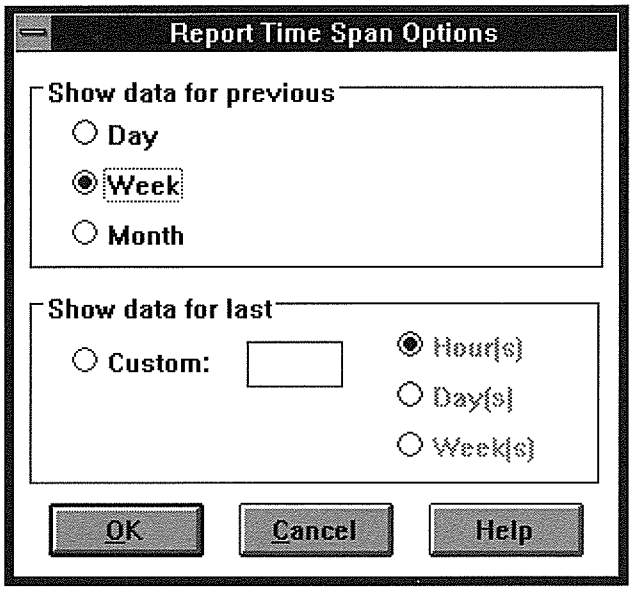
The following reports use relative time:

- Cabinet Trend Data
- Point Command History
- Trend COV
- Trend Data
- Trend Summary
- Trend Data Conversion
- Key Event
- Schedule Error Log

When running these reports, you are normally asked to specify start and stop dates and times for the data. When creating report definitions and scheduling these time dependent reports, the exact dates and times are not entered. Instead, relative times are given. These relative times relate to the current date and time when the report definition is run. The figure below shows the Trend Data Report setup screen. Note that in the Report Span box, the span is "Previous Day."



When the select span button is pushed, a timing options dialog box will appear to enter the report time span options. This box replaces the normal box to input ranges and is shown below.

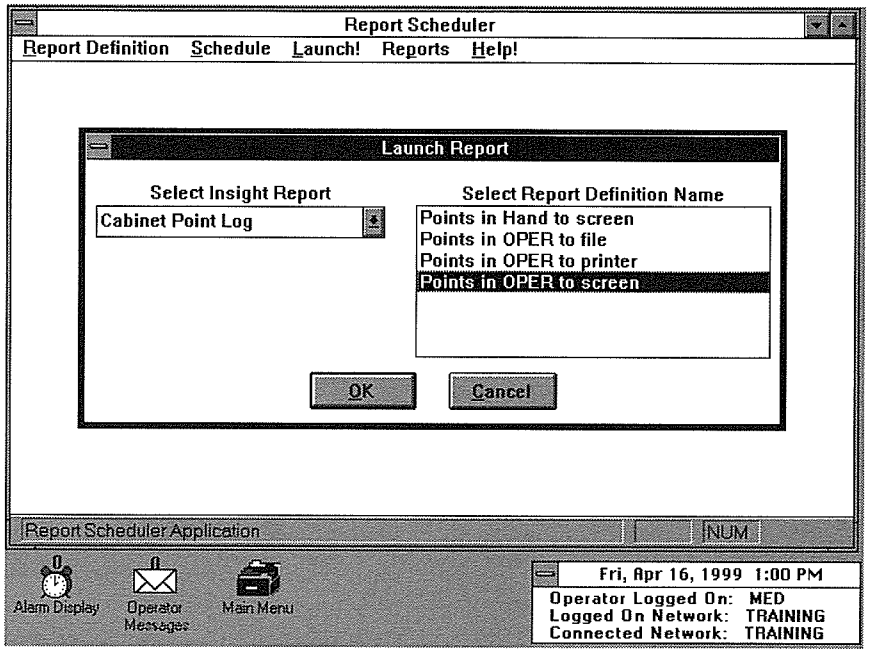


With relative time reports, you set up the report to include data over a range of the previous hour, day, month, etc., or custom times can be entered. Custom times allow you to enter how many hours, days, or weeks before the current time and date that the report will run for.

Running a Report Definition

Once a report definition is created, it is easy to run.

1. From the Report Scheduler screen, select Launch! from the menu bar to open the Launch Report dialog box.



2. Select the Insight Report and Report Definition name, and then click the OK button to launch the report.

Report Scheduler: Scheduling a Report to run automatically

- **Insight can schedule any report definition to run automatically**
- **You can create report definitions as you schedule them**

Report definitions allow you to create consistent reports that are easily accessed. Report scheduling allows you to schedule these reports to run automatically.

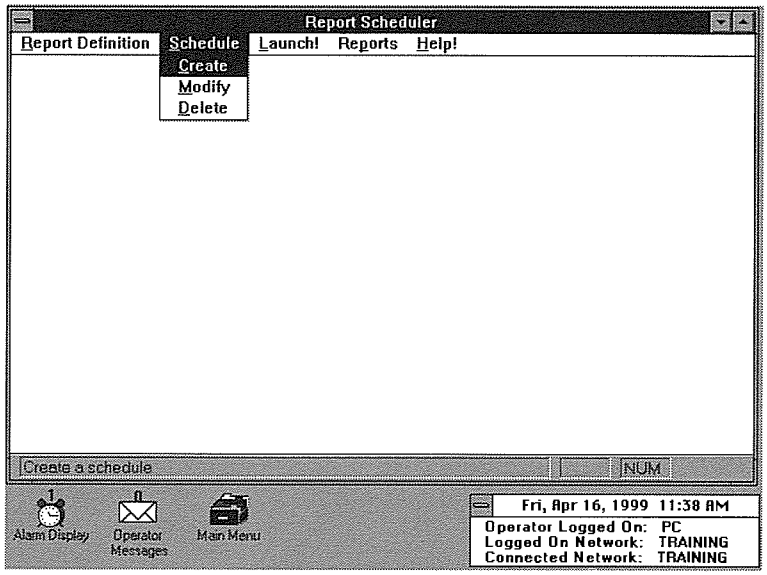
Report schedules are used to run Insight reports at specific dates and times. For example, reports can be run daily, weekly, at the first of the month, or at predetermined custom times. Report schedules run reports based upon report definitions. You can schedule any existing report definition or create a new definition while you are scheduling the report.

Note: The report scheduler will only run one report of each type at a time. If a scheduled report is unable to run (i.e., trying to run a point log report while another point log report is collecting data), it will be logged in an error file and will not run. The schedule error log report can be accessed through the **Reports** menu item in the Reports Scheduler screen or through the Reports Menu in the Main Menu.

Creating a Schedule

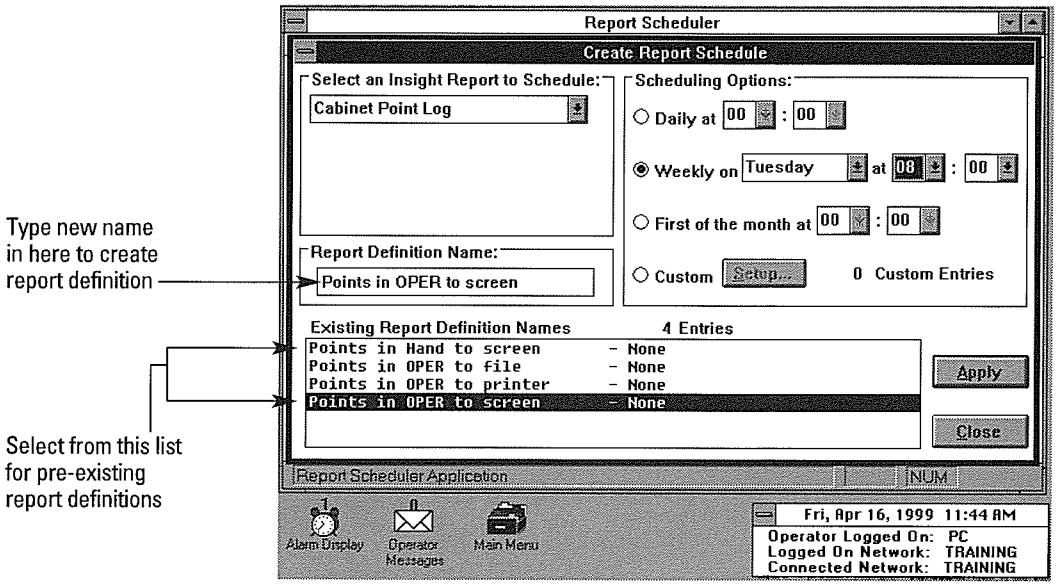
To create a report schedule, follow these steps.

1. Open the Report Scheduler, select **Schedule** from the menu bar and then select **Create.**



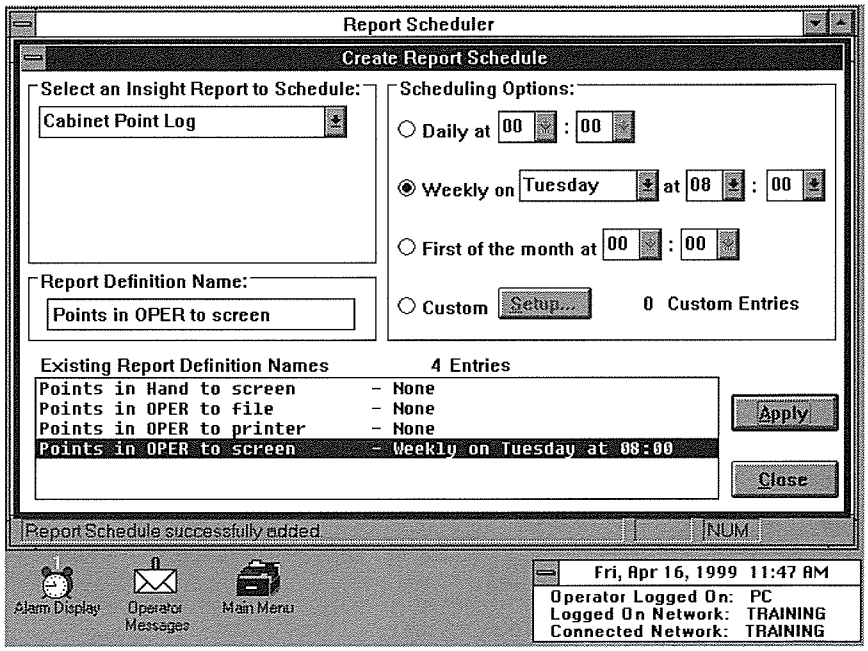
2. The Create Report Schedule dialog box appears on the screen. Select the **Insight Report to Schedule** and an **Existing Report Definition Name.** If the report definition does not exist, type the report's name into the **Report Definition Name** box to create the definition.

3. Select the **Scheduling Options.** Reports can be scheduled to run daily, weekly, on the first of the month, or at custom times.



4. Select the **Apply** button to accept the schedule. Notice that the report definition now has scheduled time displayed next to it. Also notice that the status bar at the bottom of the screen now reads "Report Schedule successfully added."

   Note: A single report definition can have multiple schedules. For example, the "Points in OPER to screen" report can also be scheduled to run on Thursday and Saturday.



5. To schedule another report, repeat steps 2 and 3. When finished scheduling, press the **Close** button.

Practice

☐ Create a report definition for a point log report displaying the totalized values for all points. Have the report displayed to the screen.

☐ What did you name your report? _____

☐ Run the report definition that you just created.

☐ How many points are displayed in the report?_____

☐ Which reports in your system would you like to create a report definition for? _____

_____

_____

☐ Schedule the report definition that you just created to run daily. For the time, enter five minutes later than it is now. Send the report output to the screen.

☐ Wait five minutes for the report to run.

☐ Did the report run as expected? Why or why not?

_____

_____

Commanding a Point from Menus

- **Shortcut:** F11
- **Command a point when you need to make a change to the standard control operation**
- **Commanding a point puts that point into Operator priority**
- **Do not use the command feature to make permanent system changes**

Your System 600 program was written to control points under normal daily operating conditions. However, there will be times when you will need to make a temporary change to the control operation. To do this, you must take control of a point. As discussed in the previous section, this is called commanding a point. When you command a point you put the point into operator control. Operator control overrides system control. When a point is in operator control the System 600 program cannot take action on it.

For example: To save energy, your System 600 is programmed to lower the heat in your building to 55 degrees at 7 P.M. Normally this is fine, since the building is vacated. Tonight there is a late meeting and you must keep the conference room temperature heated to 72 degrees until 10 P.M. You must command the conference room temperature set point to override the standard system program. After the meeting you must remember to return the point to system control. If you don't return the point back to system control the conference room set point temperature will stay at 72 degrees, negating your efforts to save energy.

It is inefficient to put a point into operator control to make a permanent control system change. If your building control program needs permanent changes, your Siemens Building Technologies, Inc. representative can assist you in making those changes.

To command a point:

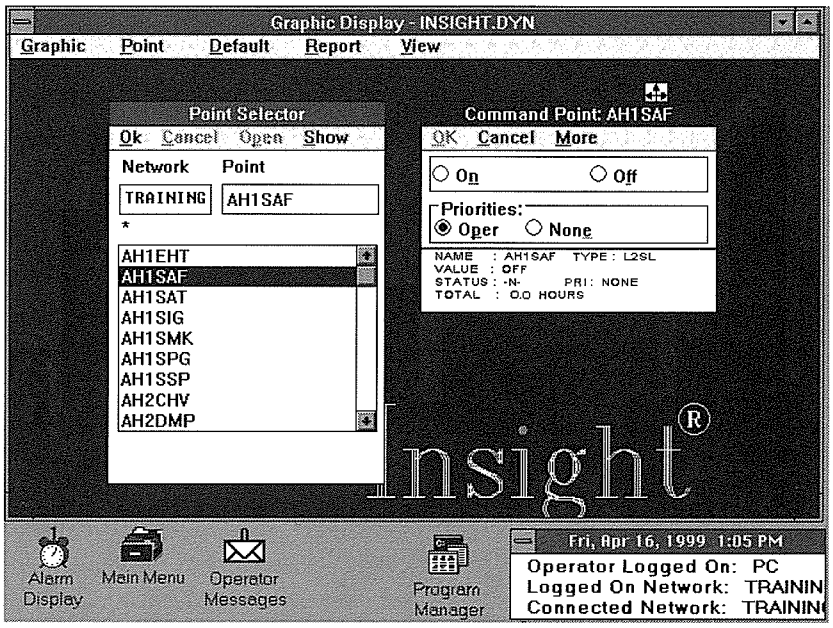
1. Select **Point Commander** from the Main Menu.

2. Enter the point name in the point name field of the Choose Point dialog box and click on **OK** in the menu bar.

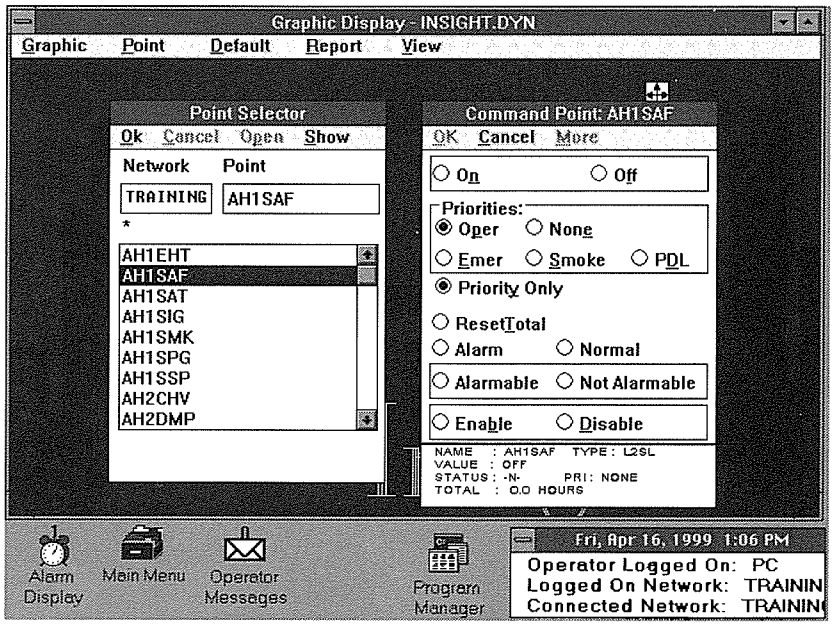
   To get a list of system points, click on List in the Choose Point dialog box menu bar. The Point Selector appears. Select the point to be commanded and click on **OK.**

3. When you click on **OK,** the Command dialog box appears. This box displays the commanding options available to you for the specified point. Options will vary depending on the type of point (i.e., LAO, LDO, etc). Current point information is listed below the command options.

When the command box first appears, it appears in a shortened form. To see a full list of available options, click on **More** in the menu bar.



The shortened version of the Command box.



The expanded version of the Command box.

Note: Either the Choose Point or Point Selector dialog box could appear in the above examples. Initially the Choose Point dialog box appears, but if you selected List from the Choose Point menu, the Point Selector dialog box would display.

- **Selecting certain command options eliminates incompatible command options**

4. Click on the action or actions you want to take on the point, and click on **OK** in the command box menu.

   Selecting certain command options eliminates other incompatible command options.

   When you click on **OK** the system responds with a command successful message box.

5. Click on the **OK** button in the message box.

   The message box disappears.

Practice

☐ Command a point in your building. Your instructor will tell you which point to command and what value or state to command that point to.

☐ Run a point log report to verify the command change.

☐ What is the priority for the point you commanded?

_____

☐ How will this priority affect point and/or system function?

_____

_____

_____

Returning a Commanded Point to System Control

- **Shortcut:** F11
- **Failure to return a point to system control is the most common cause of system malfunction & occupant complaints**

Recall from the previous section that as soon as practical you should return commanded points back to system control (None priority). Failure to return a point to system control is the most common cause of system malfunction and occupant complaints.

To return a point to system control:

1. Select **Point Commander** from the Main Menu.
2. Enter the name of the point you want to command and click on **OK** in the menu bar. The Command Point display dialog box appears.
3. Choose a command for the point. It does not have to be different from the current status/value of the point.
4. Click on **None** in the Priorities section of the Command Point box.
5. Click on **OK** in the Command Point menu bar.

   The point returns to system control.

Practice

☐ Return the point you commanded in the previous exercise to system control.

☐ Run a point log report to verify the point has returned to system control.

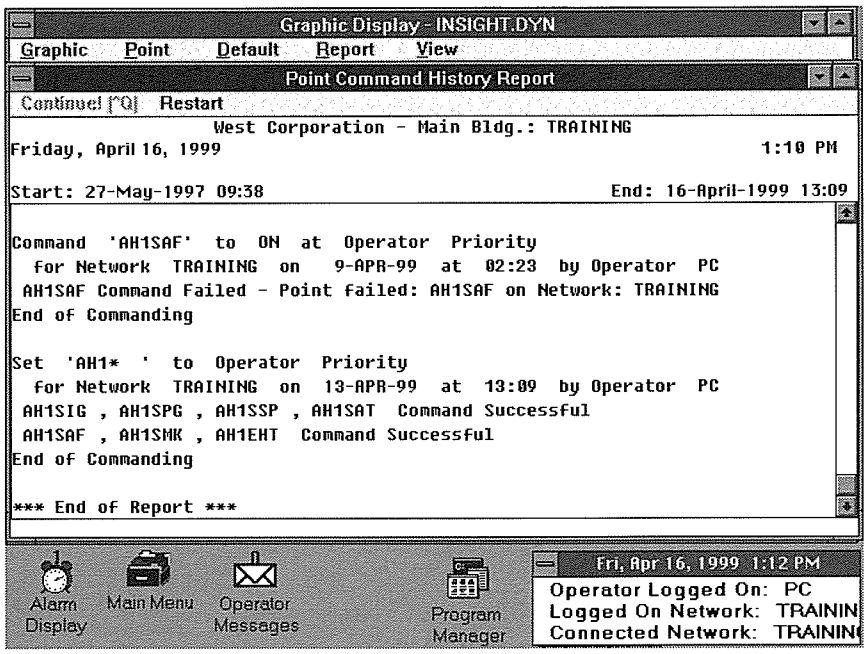
☐ Note if the point changed value or state now that it has returned to system control.

The Point Command History Report

- **Provides details about points commanded from your Insight console**
- **Does not report on commands issued from field panels, PPCL, or other Insight consoles**

The Point Command History report provides details about points commanded from your Insight console (the PC where you are currently running the report). The report lists such information as points commanded, the operator who initiated the commands and the date and time the commands occurred.

Note that the Point Command History report does not show point commands issued from field panels, PPCL, or from other Insight consoles.



A sample Point Command History report.

Practice (Optional)

☐ Review the Point Command History report section in your Insight owner's manual.

☐ Run a Point Command History Report for the points that have been commanded from your Insight console.

Commanding Points Globally

- **Shortcut:** F11
- **Use to change point priority for multiple points at one time**
- **You cannot use this function to globally change point values or states**

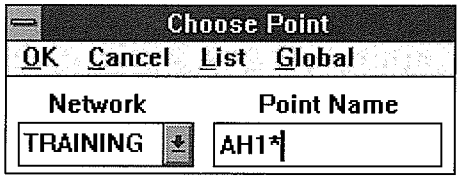
In the previous sections you have learned how to command a point and how to return that point to system control (None priority). You can also command multiple similar points using the Global Point Commander. This allows you to use wildcards in a point name to change point priority for many points at one time. You cannot use this function to globally change point values or states. These changes must still be done on an individual point basis.

For example, if you wanted to command all the FAN points in your building to system control, you would enter FAN*. All points beginning with FAN and ending in any other numbers or letters would be commanded to system control (None priority).

You can also use the Global Point Commander to command LAN controller subpoints (LCTLR points) that have the same application number. These points are discussed in detail in the Terminal Equipment Controller training module.

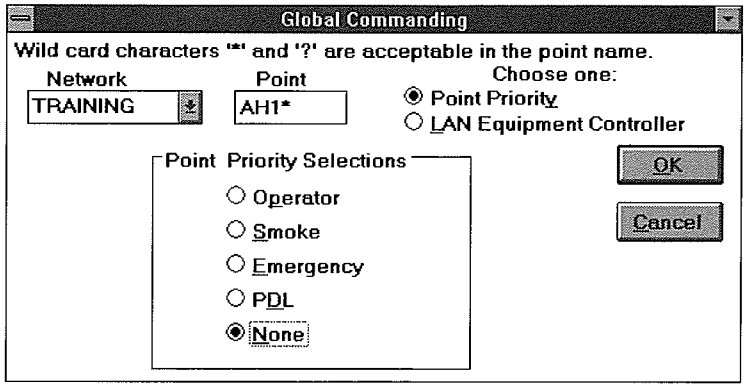
To change the point priority of multiple points at one time:

1. Select **Point Commander** from the Main Menu. The Choose Point dialog box appears.



2. Type the point name to be commanded in the Point Name field. The wildcards * and ? are allowed.

3. Select **Global** from the menu bar. The Global Commanding dialog box displays.



4. For ethernet systems: If you have more than one network, select the appropriate network by clicking on the down arrow in the network field box.

5. If it is not selected already, select Point Priority to display the five point priorities. Then select the point priority you want to command all the points to. Click on the **OK** button. The "Are you sure?" dialog box appears.

6. Click on the **OK** button to confirm the point priority you have selected. The Global Responses windows displays, listing all points that have changed priority.

   Note that four selections appear in the Global Responses menu bar. For details on these menu selections see your Insight owner's manuals.

7. When the priorities have all been changed, close the Global Responses and the Global Commanding windows. You are returned to the screen you were at before you began this procedure.

Practice

☐ Under your instructor's supervision, globally command the _____ points to Operator Control.

☐ Globally return the _____ points to System Control.

Note: Global commanding of point priorities must be carefully applied, as system function will be affected.

Trending

- **Use trending to see how equipment has operated over a period of time, or to monitor point value and state changes**
- **Trend by time or Change of Value (COV)**
- **All trend data is initially collected at the field panel. This data can be uploaded to Insight for long term storage**

Use the trending application to see how equipment has operated over a period of time or to monitor point value and state changes. Value and state changes are referred to as Change of Value (COV).

For example: You can tell the system to report a room's temperature every hour (trending by time), or you can tell the system to report whenever the room's temperature changes by a specified value (trending by COV).

Trend by COV if you want to closely monitor digital points. For example: A fan may turn on and off many times during an hour. But if you trend this point by one hour increments, you may not see the ON-OFF-ON cycling that occurs within the hour. In this case, you would trend by COV so you could see each time the fan turned on or off.

COV limits for analog points are defined when points are first entered into the system. A point's COV is a discrete value change that the point must undergo before its new value is broadcasted across the network.

When you add a point to trending you are asked to specify the number of samples to be stored at the field panel. If trending by time, you are also asked to specify the time interval. For example: If you wanted to trend the outdoor air temperature for the next 24 hours, you would tell the system you wanted 24 samples taken in 60 minute intervals.

Trending is a complex application and the details of it will not be covered in this beginning unit. If necessary, see the *Advanced Insight Training Module* or your user documentation for more detailed information. If you have a need for more advanced trending training now, your Siemens Building Technologies, Inc. representative can provide that to you on an individual basis.

Practice

☐ What kinds of points in your building would be good points to trend? Why?

_____

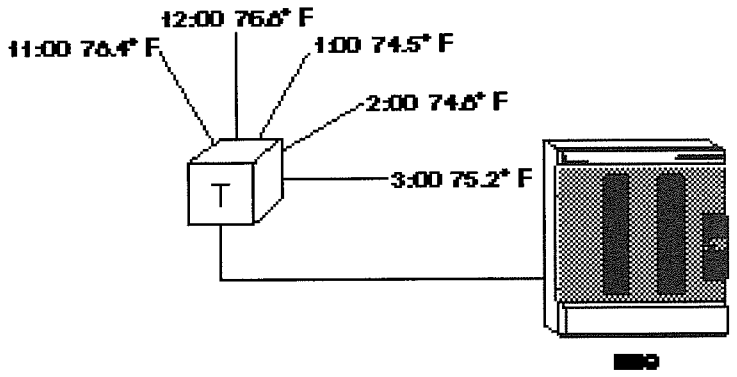
_____

☐ Would you trend these points by time or COV? Why?

_____

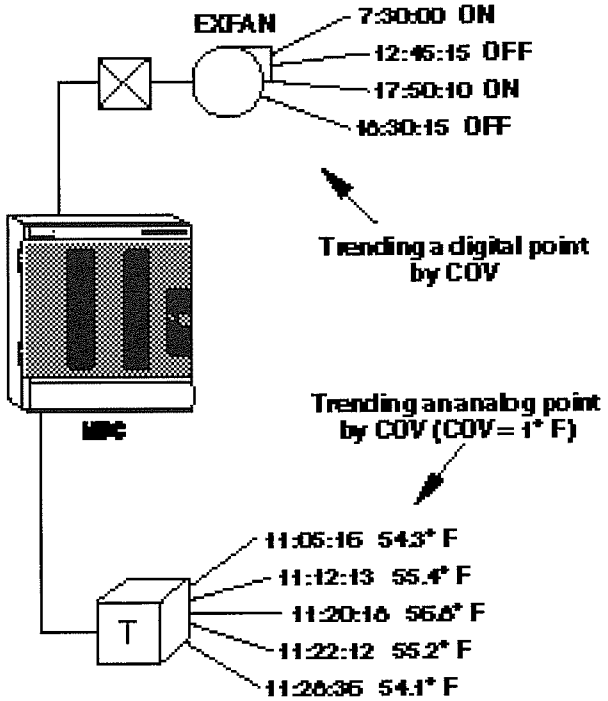
_____

Trending a Point by Time



The field panel collects temperature readings from the sensor every hour.

Trending a Point by COV



The field panel collects change of temperature information from the temperature sensor and change of state information from the fan.

Trend Reports

- **Trend Definition**
- **Trend Data**
- **Trend COV**
- **Trend Summary**
- **Cabinet Data**
- **Cabinet Definition**

You trend a point because you want to analyze equipment operation or point value and state changes. Six trend reports are available to you to help you analyze trend information.

Trend Definition
Lists trended points, indicates if they are trended by time or COV, notes how many samples can be stored at the field panels, how many samples have been uploaded to the PC, if there has been any data loss, and indicates which points are setup for automatic data collection at the PC.

For example: You could use this report to find out how points were trended (by time or COV) and if trend information is available at the PC or only at the cabinet.

Trend Data
Displays the values collected at the PC of a trended point over a period of time.

For example: You could use this report to see how a room's temperature has fluctuated over time.

Trend COV
Displays COV trend information collected at the PC for specified points. A sample is taken every time a point changes by the COV limit. This report allows you to see each of those samples over a period of time.

For example: You could use this report to monitor the changes of value for air temperature in a space.

Trend Summary
Displays the high, low and average values for specified trended points.

For example: You could use this report to analyze energy usage and peak times of energy consumption.

Cabinet Data
This report is similar to the trend data report, but information is gathered directly from the field cabinet.

Cabinet Definition
This report is similar to the trend definition report, but information is gathered directly from the field cabinet.

For specific information on how to run each of these reports see your Insight documentation.

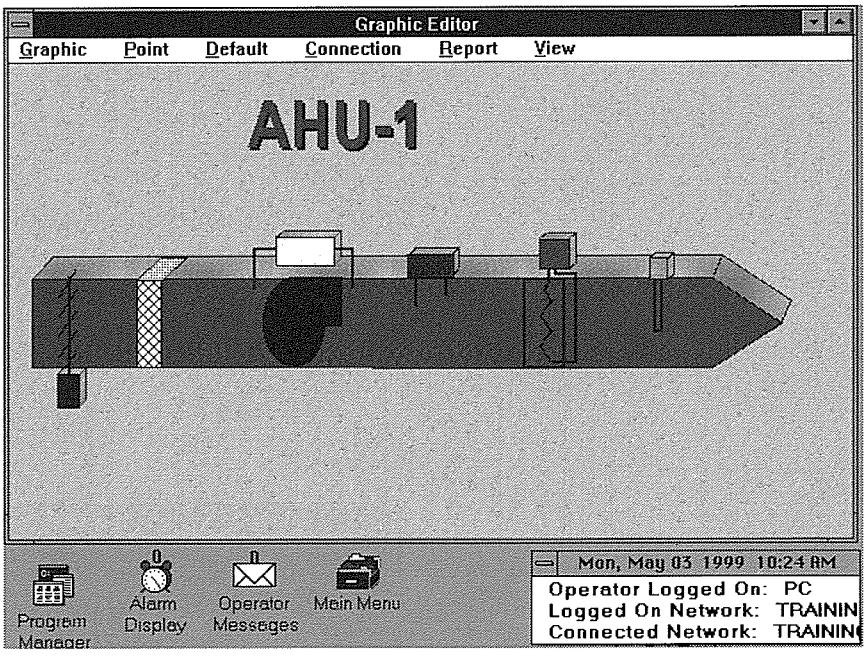
Background and Dynamic Graphics

- **The background graphic is the basic system drawing**

As mentioned earlier, Insight allows you to graphically monitor and control your building's operation. There are two parts to an Insight dynamic graphic: the background graphic and the dynamic components.

Background Graphics

The background graphic is the basic system drawing. It represents the physical parts of your system, such as ducts, mechanical equipment, and sensors. It may also include text, such as a graphic title.



Background Graphic

- **The dynamic graphic displays current values for points in your building**
- **Dynamic graphics have a .DYN extension as part of their graphic name**
- **Dynamic graphic information can be displayed using point information blocks, analog bars, associated symbols and graphic links**
- **Color changes and flashing indicate system changes**

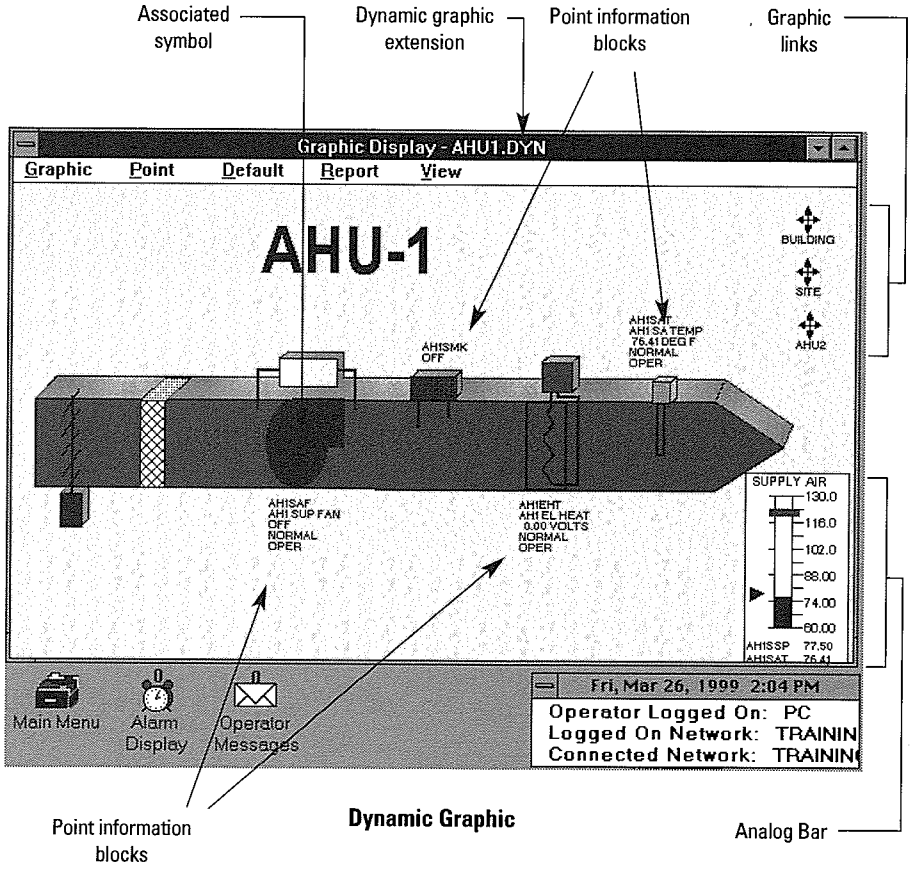
Dynamic Graphics

A dynamic graphic is a background graphic which is electronically connected to the points in your building. It displays the current values for points in your building.

You can click on areas on this graphic and enter information to cause physical changes to the actual building system represented by the graphic.

Dynamic graphics use such elements as color and flashing to indicate system changes. For example, your system can be set up so that when equipment is running the symbol associated with the equipment is colored green. When the equipment is off the symbol turns red. Likewise, when a system point is in alarm, the symbol or information block associated with that point can change color and flash to indicate an alarm condition.

An easy way to distinguish between a dynamic graphic and a background graphic is to look at the graphic name in the title bar. All dynamic graphics have the .DYN extension after their name.



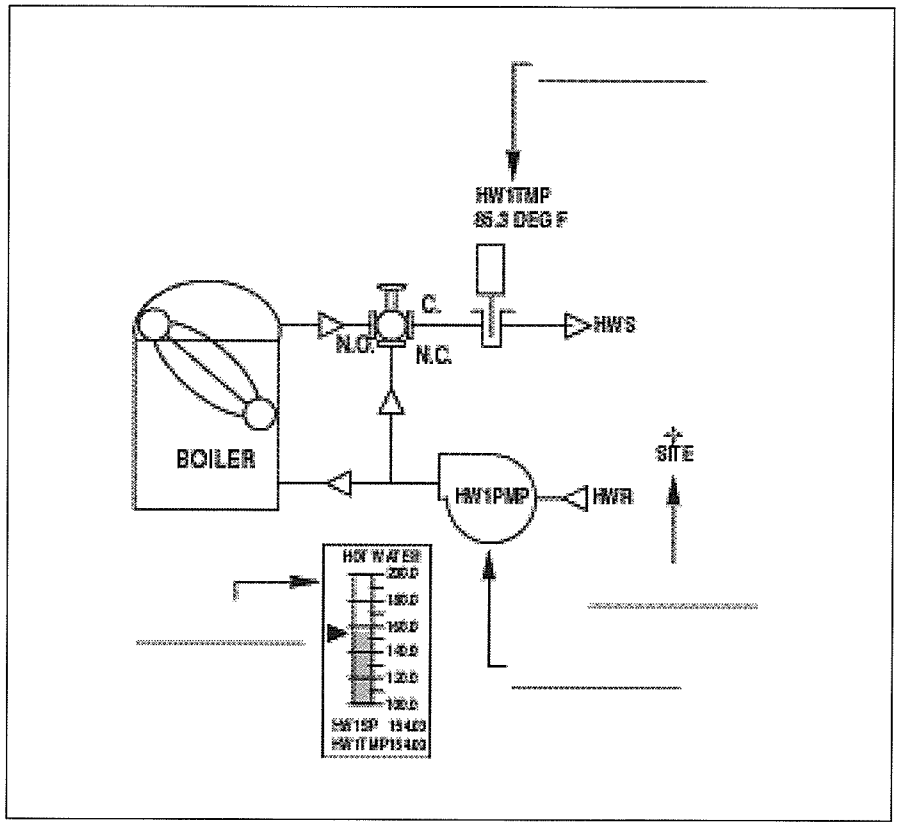
Dynamic Graphic

Dynamic graphic information can be displayed using point information blocks, analog bars, associated symbols, and graphic links.

Point Information Blocks	Point information blocks can supply the point name, point description, current status, value of the point, and other data.
Analog Bars	Analog bars monitor and/or command analog point values. A monitoring analog bar displays the current value of the point and updates information as the value changes. A commanding analog bar also monitors values but it has a command mark which can be moved to change the values.
Associated Symbols	An associated symbol is part of a graphic, such as a fan or a pump, which has been joined to or associated with a point in the system. This is done so the symbol can change color or flash when the point associated with it changes status. For example, if you associate the fan symbol on a graphic with a point, such as SFAN, when the SFAN turns on and off the fan symbol in the graphic can change colors.
Graphic Links	Graphic links are represented by this symbol . Graphic links allow you to quickly jump from one graphic to another in one step.

Practice

☐ Identify the following dynamic graphic components:



☐ Why would you link graphics?

_____

_____

☐ Which of your building graphics would be good graphics to link? Why?

_____

_____

Displaying a Dynamic Graphic

- **Shortcut:** F8

To display a dynamic graphic:

1. Select **Graphic Display** from the Main Menu.
   Your default graphic displays.

2. Click on **Graphic** in the menu bar and select **From List.**
   The Graphic File Selector appears.

3. Double click on the graphic you want to display, or click once on the name and then click on the **Load** button.
   The graphic selected displays on the screen.

Practice

☐ Display a few dynamic graphics for your building. Your instructor will tell you which graphics to display.

☐ Check off which dynamic components appear for the graphics you display:

Graphic Name _____

_____ Point information blocks
_____ Analog bars
_____ Associated symbols
_____ Linking symbols

Graphic Name_____

_____ Point information blocks
_____ Analog bars
_____ Associated symbols
_____ Linking symbols

☐ If your graphic has point information blocks or associated symbols, double click on them. Note what screen and what kind of information appears.

To exit the screen displayed, click once on the Cancel Selection in the menu bar.

☐ If your graphic has a link, double click on it.
What graphic is displayed?

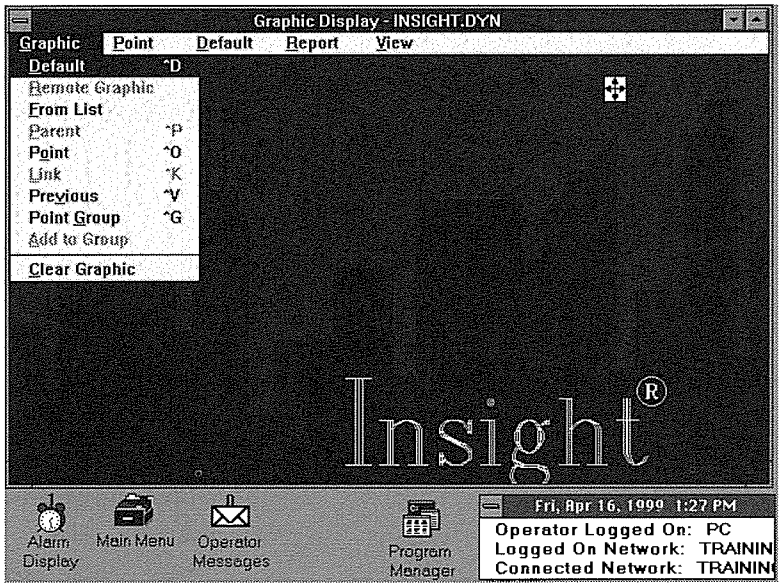
_____

The Graphic Display Window

- **All dynamic graphics are displayed within the Graphic Display window**
- **The Graphic pull down menu in the Graphic Display menu bar is a convenient place to go to perform many graphics tasks**
- **Five options are usually available from the Graphic pull down menu: Default, From List, Point, Point Group, and Clear Graphic**

All dynamic graphics are displayed within the Graphic Display window. The Graphic pull down menu in the Graphic Display menu bar bears a short discussion since it is a convenient place to go to perform many graphics tasks.

Under the Graphic pull down menu five options are usually available: Default, From List, Point, Point Group, and Clear Graphic.



These selections provide the following services:

Default	Select to display your site's default graphic.
From List	Select to get a list of all dynamic graphics.
Point	Select to display the graphic associated with a specific point. This is association is defined within the point database.
Point Group	Displays dynamic point information blocks. This is a way of doing dynamic point logs. Unlike the static point logs you ran earlier in the unit, a dynamic point log displays continuously updated information. Use the Point Selector which appears when you choose Point Group to select the point(s) or group(s) you want to display. When the point information blocks display you can change the value of an output point by double clicking on it. The Command dialog box displays.
Clear Graphic	Clears the graphic from your screen, but the graphic display window remains.

Practice

Use the options in the Graphic pull down menu to do the following tasks. Your instructor will provide you with any necessary graphic and point group names.

☐ Display the _____ graphic (a graphic other than your default graphic).

☐ Display your default graphic.

☐ Display dynamic point information blocks for the point group _____.

☐ Clear the point information block display from the graphic display window.

Commanding a Point from a Graphic

- **Shortcut:** F11
- **You can click on graphic illustrations of equipment to operate them**
- **You can command points from an associated symbol, a point information block or an analog bar**

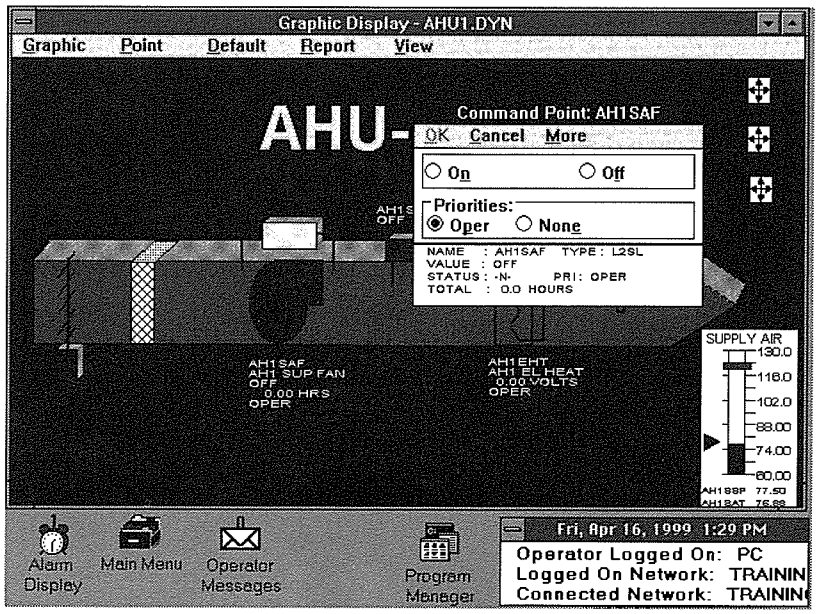
In a previous section you learned how to command a point using Insight menus. Now you will learn how to command a point from an Insight graphic.

Insight is a graphical interface. This means that if a point is associated with a symbol you can take action on the point by clicking on the symbol that represents the point. For example, you could click on a symbol of a fan and if that symbol and the fan point are associated, you can turn that fan on and off from the graphic. Initial point and symbol associations are usually set up by your Siemens Building Technologies, Inc. representatives.

There are three ways to command a point from a graphic. You can command a point from an associated symbol, a point information block, or an analog bar. All three ways follow the same general steps.

To command a point from a graphic:

1. Select **Graphic Display** from the Main Menu.
2. From the **Graphic** pull down menu in the menu bar select **From List.**
3. Double click on the graphic that contains the point you want to command.
4. Double click on the associated symbol, point information block or arrow on the analog bar that represents the point you want to command. The command dialog box appears.



5. Select or enter the appropriate options in the command dialog box and click on **OK.**

   The display changes to indicate the new setting or value.

   Note: If you are commanding a point from an analog bar you can also use the mouse to drag the analog pointer to the new value. You can do this instead of commanding the value through the command dialog box.

Practice

For the following practice your instructor will tell you what graphic to access, which point to command, and what value to change.

☐ Go to the _____ graphic.

Command the _____ point from an associated symbol.

Change the value to _____.

☐ Go to the _____ graphic.

Command the _____ point from an analog bar.

Change the value to _____.

☐ Go to the _____ graphic.

Command the _____ point from a point information block.

Command the value to _____.

Acknowledging Alarms

- **Shortcut:** F5
- **If it important that you receive a message when the status of a point changes, then that point should be made alarmable**
- **There are six alarm levels (1-6)**
- **Each alarm level is designated by a specific color**
- **When a point goes into alarm the Alarm icon flashes and can also beep**
- **The number of alarms appears above the Alarm icon (or on the task bar for Windows 95)**
- **Always check for new alarms when you logon to Insight**
- **Acknowledging an alarm does not fix the alarm or make it go away; you must still investigate what caused the alarm**

When points were defined in your system, some were made alarmable. This means that the System 600 will notify the PC when the point is in alarm.

Any point can be made alarmable. Points are made alarmable according to customer and building specific criteria. If it is important that you receive a message when the status of a point changes, then that point should be made alarmable.

There are six alarm levels (1-6). Alarm levels are defined when points are made alarmable. Level 1 is for the most important alarms and Level 6 is for the least important alarms. When alarms display in the alarm window they appear in order of the 1-6 level of priority. All Level 1 alarms appear at the top of the screen, then Level 2 alarms, and so on.

Each alarm level is designated by a specific color. For the color code key refer to the upper right corner of the Alarm Display screen.

Alarm levels can also be identified as critical, which will cause an additional alarm icon to appear when a point at that level goes into alarm.

Enhanced alarming is also an available option. If you are using enhanced alarming, ask your instructor to explain this feature in more detail.

When a point goes into alarm, the field panel sends the alarm to your PC. The alarm display icon flashes and may beep, depending on how it was defined in your system. The number of unacknowledged alarms the PC has received appears above the alarm icon. If the alarm level has been designated as critical, the critical alarm icon will also appear and flash. The number of unacknowledged critical alarms the PC has received appears above the critical alarm icon.

In the alarm window, the critical alarms also have a visual indication (double yellow arrows) pointing to the unacknowledged alarms of that priority. It is a good practice to always check for new alarms whenever you logon to Insight.

When an alarm appears, acknowledge it quickly. By acknowledging alarms you tell the system that you are aware that it exists. Acknowledging an alarm does not fix the alarm or make it go away. You must still investigate what caused the alarm. When you acknowledge an alarm, the alarm message changes from upper to lower case letters, and puts your operator initials next to it.

To acknowledge an alarm:

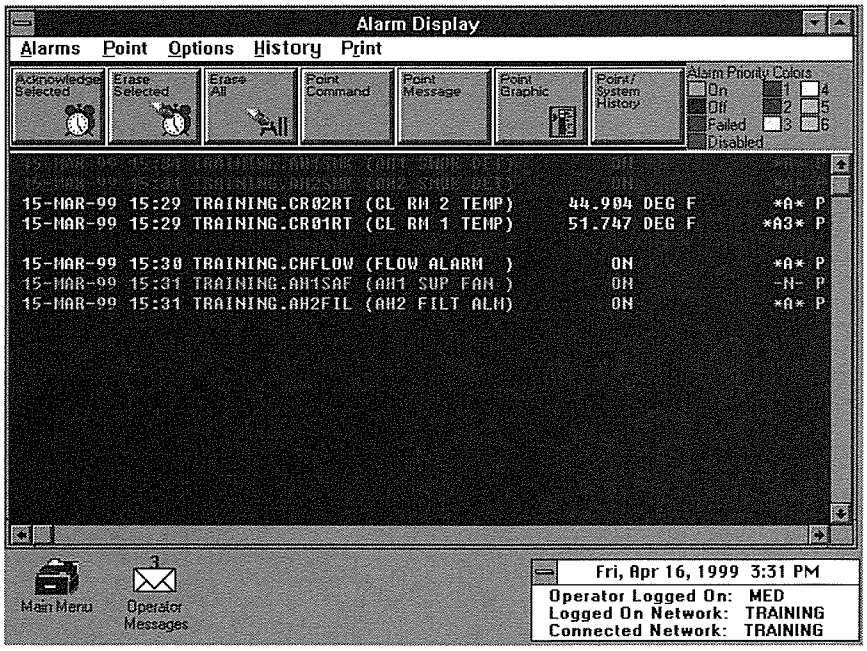
1. Double click on the **Alarm** icon.

2. Highlight the alarm you want to acknowledge.

   You can highlight more than one alarm by pressing the left mouse button and, while the left button is still pressed, dragging the mouse pointer over the alarms you want to highlight.

3. Click on the **Acknowledge Selected** button.

   When an operator acknowledges an alarm the alarm message changes from upper to lower case letters. *ack* also appears in the alarm field, and the initials of the acknowledging operator are placed on the far right side. Use the horizontal scroll arrow to see the initials.



Practice

Your instructor has put some points into alarm.

☐ Acknowledge one alarm.

☐ Acknowledge several alarms at one time.

Printing Alarms

- **Print all alarms**
- **Print selected alarms**

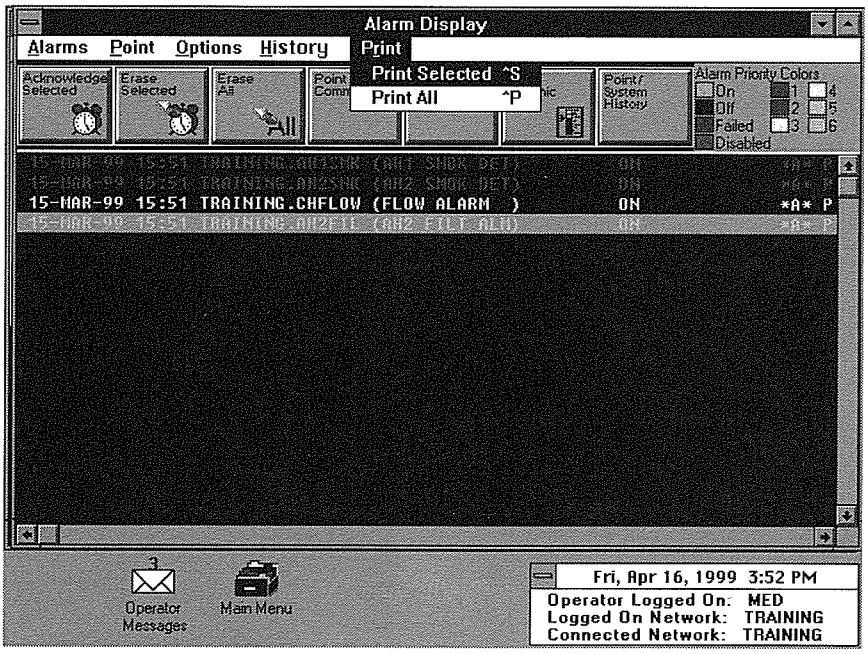
Insight provides an option that allows the user to send part or all of the contents of the alarm display to the printer. This feature allows you to print a hard copy of the current alarm conditions.

To print all alarms in the alarm display, select **Print** from the menus bar, and then select **Print All.**

To print only the selected alarms:

1. Click and drag select the alarms that you wish to print.

2. Select **Print** from the menu bar, and then select **Print Selected.**



Practice

☐ If available, print all alarms from the alarm display.

Viewing Alarm Messages for Points in Alarm

- **Usually only critical points have alarm messages**
- **Alarm messages are only available if they were entered into the system**

After acknowledging an alarm you should investigate what caused it. Alarm messages may contain information like contact people, emergency instructions, and troubleshooting procedures. Not all alarms will have messages. Messages are only available if they were previously created on the system. Either you or your Siemens Building Technologies, Inc. representative can enter alarm messages. Critical points are the points most likely to have alarm messages.

Note: If a point's alarm printing is enabled, then the message will also be sent to the printer with the alarm notification. The system can also be setup to print the alarm message on the "return to normal" notification.

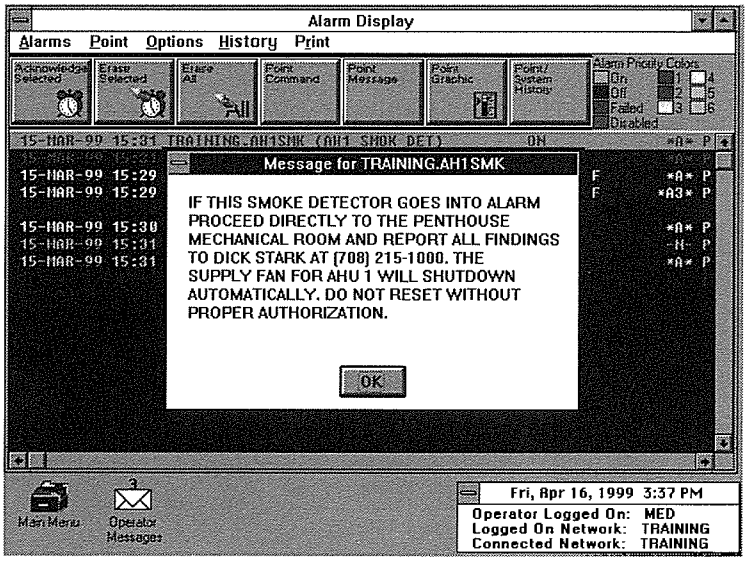
To view an alarm message for a point in alarm:

1. Double click on the **Alarm** icon.

2. Highlight the alarm you want to see a message for.

3. Click on the **Point Message** button.

   If an alarm message was entered for that point, the message will appear.



4. Click on the **OK** button when you have finished reading the message and the message box will disappear.

Practice

☐ If available, view an alarm message for a point in alarm.

Viewing/Printing a Point Alarm History

- **Use to see how many times a particular point has gone in and out of alarm**

You may view a point alarm history to see how many times a particular point has gone into alarm. For example: During the night a room temperature sensor goes out of its specified temperature range and goes into alarm. Later in the night the point returns to normal range and goes out of alarm. When you arrive in the morning you view a point alarm history to see when the point went in and out of alarm.

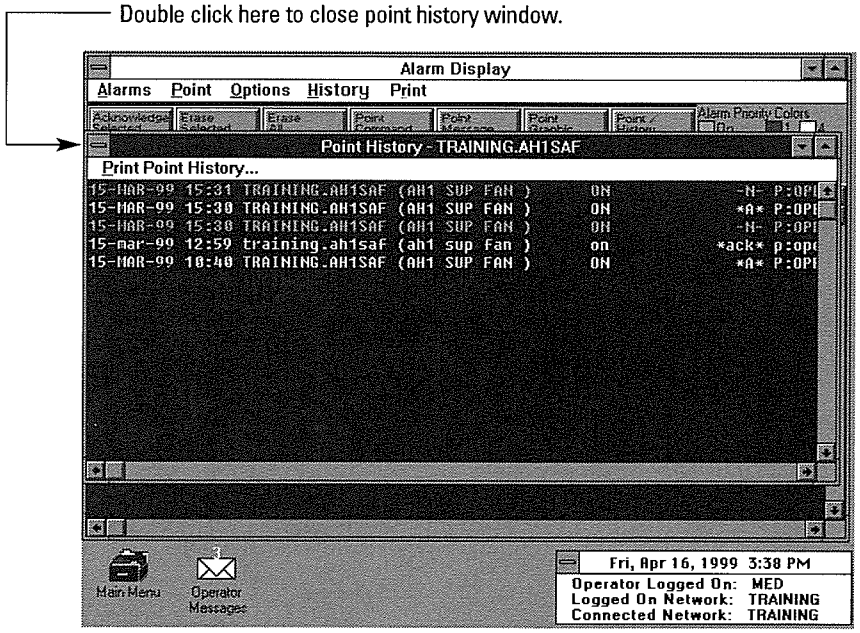
A point alarm history also records the date and time the alarms were received and whether or not they were acknowledged.

To display a point alarm history:

1. Double click on the **Alarm** icon.

2. Highlight the alarm you want to see a point history for.

3. Click on the **Point/System History** button.
   A point history for that point appears on screen.



   Note: You may need to use the horizontal and vertical scroll bars to see all of the information.

4. Use the control menu box at the upper left corner within the point history window to close the point history window.

You can also view a point alarm history for a point that is not currently on the alarm screen. You would do this if you wanted to see if that point had been in alarm recently.

To view a point alarm history for a point that is not currently on the alarm screen.

1. Double click the **Alarm** icon.

2. Click on the **Point/System History** button.

3. Enter the point name in the Point Selector and click on **OK.**

To print the point alarm history:

1. Select **Print Point History** from the point alarm history menu bar.

2. To print only the entries displayed on screen, click on **Entries from Screen.**

3. To print all of the entries for the point, click on **All Available Entries.**

Practice

☐ Display a point alarm history for the _____ point. Your instructor will tell you which point to look at.

☐ Print the entire point alarm history.

☐ Display a point alarm history for the _____ point (a point that is not currently in alarm). Your instructor will tell you which point to look at.

☐ Print only the point alarm entries displayed on screen.

Erasing Acknowledged Alarms

- **You cannot erase an alarm until you have acknowledged it**
- **You can erase one or more acknowledged alarms or can erase all acknowledged alarms**

You cannot erase an alarm until you have acknowledged it. If the Inhibit Alarm Erasing option is enabled, then the point needs to be acknowledged and have cleared the alarm state before it can be erased. After acknowledging and/or taking action on an alarm, you should erase it. You can erase one or more acknowledged alarms or can erase all acknowledged alarms.

To erase one or more acknowledged alarms:

1. Double click on the **Alarm** icon.
2. Highlight the acknowledged alarm(s) you want to erase.
3. Click on the **Erase Selected** button.
   The selected alarm(s) are erased.

To erase all acknowledged alarms:

1. Double click on the **Alarm** icon.
2. Click on the **Erase All** button.
3. A dialog box appears asking if it is OK to erase all acknowledged alarms. Click on **OK.**
   All acknowledged alarms are erased.

Practice

Your instructor has entered some alarms into your system. Perform the following tasks:

☐ Acknowledge all alarms.

☐ Erase one alarm.

☐ Erase all remaining alarms at one time.

Exercise

- **This exercise reviews the material covered in this unit**
- **Your instructor will provide you with the appropriate point name(s) needed for some questions**
- **Display all information on screen, unless directed otherwise by your instructor**

1. Logon to Insight and connect to a network. If you have more than one network your instructor will tell you which one to connect to.

2. Run a point log report for the _____ point.
   a. What is the point condition? _____
   b. What is the point address? _____
   c. What is the point priority? _____

3. Run a point log report for all points.
   a. Pause the log
   b. Continue the scrolling of the log
   c. Restart the log
   d. Cancel the log

4. a. Use a wild card character to run a point log report for all _____ points.
   b. Use a wild card character to run a point log report for all _____ points.

5. Run a point log report for all points in alarm.

6. Run a point log report for all points in operator priority.

7. Command the _____ point using Insight menus. Your instructor will tell you what action to take on the point.

8. Return the commanded point to system control.

9. Globally command the _____ points to operator control.

10. Globally return the _____ points to system control.

11. a. When would you trend a point by time? _____

_____

b. When would you trend a point by COV? _____

_____

c. What equipment in your building would be good to trend by time?

_____

d. What equipment in your building would be good to trend by COV?

_____

12. Display the graphic _____

13. How can you tell the difference between a background and dynamic graphic just by looking at their names?

_____

14. Command the _____ point from the graphic. Your instructor will tell you what action to take on the point.

15. Check your alarms. How many points are in alarm? _____

16. Acknowledge any points in alarm.

17. If available, view a message for a point in alarm.

18. View a point alarm history for a point in alarm.

19. Print the point alarm history.

20. With your instructor's approval, erase acknowledged alarms.

21. Logoff of the network.

Point Condition Types

Display	Condition	Definition
-N-	NORMAL	No non-normal (e.g., alarm, failure) conditions exist.
A	ALARM	A point will alarm if: 1. An analog point's value is outside its assigned high or low alarm limits. 2. A point's commanded value does not match its flow proof state. For example: You would get an alarm if the system commanded a supply fan on but the proof for that fan showed that the fan was still off. 3. You define a digital point as alarmable (it will alarm when it is on).
AC	ALARM-BY-COMMAND	A point has been commanded into alarm by the operator. A point in this state remains this way until the operator releases it. For example: You would put a point into alarm by command if you wanted to stop a nuisance alarm but still wanted to remind yourself of a problem.
F	FAILED	The PC cannot command or read any or all of the physical points associated with the logical point. Usually the result of a hardware or communications failure.
O	OPERATOR DISABLED	The operator has disabled the point.
P	PROOFING	A temporary condition that follows after the commanding of a point with a proof (like a fan). After the delay time has elapsed the point will go into alarm or normal condition.

More than one abnormal condition can occur at one time, such as *AF*, *AFO*, *FO*, and *FPO*. For example, if a point is in the alarmed state and is then disabled by the operator, the *AO* condition will appear for that point.

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