

Operation Manual

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Manual Revisions

The *ComfortVIEW Operation Manual* is catalog number 808-239, Rev. 03/06. The following changes were made since the last version:

Section/Chapter

Changes

Introduction

1. On page 1 added "Windows 2003 Server" to the sentence: The software, designed to run under the Microsoft® Windows® 2000, Windows 2003 Server, or Windows XP Professional operating system, enables you to quickly identify information and intuitively perform all operator functions.

Introduction

Introduction

ComfortVIEW™ is the Carrier Corporation software that is the primary man/machine interface to the Carrier Comfort Network (CCN). The software, designed to run under the Microsoft® Windows® 2000, Windows 2003 Server, or Windows XP Professional operating system, enables you to quickly identify information and intuitively perform all operator functions.

ComfortVIEW provides the tools you need for monitoring, configuring, and analyzing your facility's daily HVAC operations. You can achieve optimum results using the following ComfortVIEW features and functions:

- **WorkSPACE Manager Application** — You can create customized displays of data that you care about most and save them as WorkSPACES. Each WorkSPACE can consist of multiple graphic displays of any type of data, including trending information.
- **Dynamic Trending** — You can elect to trend any available realtime data point, and store report output in a format compatible with spreadsheet industry standards.
- **Simultaneous Dynamic Displays** — You can simultaneously display data from multiple controllers — either controllers located in the same area or, using concurrent modem connections, data from controllers at remote areas.
- **Fast Alarm Response** — You can see and acknowledge incoming alarms, regardless of the application that you have running on your computer. With the click of the mouse, you can jump to the WorkSPACE that is pertinent to the given alarm condition. You can record the action you have taken in response to an alarm by attaching a note to the alarm entry. You can suppress the annunciation of specified alarm conditions to avoid interruption by known “nuisance-type” alarms.
- **Database** — Depending on how you set up your ComfortVIEW system, your database can be shared by other ComfortVIEW operators at other computers. Changes made by ComfortVIEW operators are stored in a central area to create a common source of data.
- **Logical Controller Groupings** — You can group controllers into user-defined buildings, floors, areas or regions, independent of your Carrier Comfort Network architecture.

About this Manual

Intended Audience

The *ComfortVIEW Operation Manual* is designed for use by individuals who have completed CCN training and have a working knowledge of Windows.

The manual is organized in a how-to functional format to help you readily locate the information you need.

Description of Chapters

This manual contains the following chapters:

- Introduction
- Carrier Network Manager
- Remote Access
- WorkSPACE Manager
- Alarm Manager
- Setup
- Report Panel
- Global Function Manager
- Appendix A
- Appendix B

The Introduction chapter consists of this description of the manual, login and logout instructions, and a description of ComfortVIEW window format, menus, and commands. The chapter also includes mouse and keyboard instructions, including an overview of the keys and mouse techniques that you will typically use in operating ComfortVIEW.

The Carrier Network Manager chapter provides instructions on adding ComfortVIEW operators, specifying alarm printers, connecting to remote CCNs and remote ComfortVIEW computers, and adding, viewing, and modifying controller data.

The Remote Access chapter provides instructions for connecting to and disconnecting from a remote ComfortVIEW server.

The WorkSPACE Manager chapter provides instructions on creating customized displays of data that you care about most and saving them as WorkSPACES, which are multiple graphic and tabular

displays of any type of data, including trending information.

The Alarm Manager chapter provides instructions on using ComfortVIEW alarm indication and alarm handling capabilities.

The Setup chapter provides information on defining local area network workstations and alarm printers. It also includes instructions on specifying global system parameters such as time of day for automatic report data retrieval, and the time period for retaining report data in your ComfortVIEW database.

The Report Panel chapter provides instructions on generating consumable, runtime, and history reports to view, print, export, or save on ComfortVIEW hard disk. Refer to the end of the Report Panel chapter for samples of ComfortVIEW reports.

The Global Function Manager chapter provides instructions on configuring ComfortVIEW to automatically force and auto groups of points, perform point data transfers onto the CCN Bus, create central occupancy schedules, and configure global holidays.

Appendix A provides instructions on generating additional ComfortVIEW reports. Current additional reports include the System Activity, Alarm Summary, Time Schedule, Tenant Billing Summary, and Tenant Billing Activity report.

Appendix B describes the CCN time and setpoint schedule, global occupancy schedule, and remote site connection DLL that is included with the standard ComfortVIEW installation.

Standards Used Throughout this Manual

Instructions Assume: All step-by-step instructions assume that each ComfortVIEW application is either inactive or minimized. The instructions begin by instructing you to double click on an icon to launch the application. For example, in Viewing the Alarm List, which appears in the Alarms chapter, the first step tells you to double click on the Alarm Manager icon. If, however, the Alarm Manager application is active, but hidden by another window, press Alt, and with this key held down, repeatedly press the Tab key to switch through all active applications until the Alarm Manager displays on your window.

Using the Mouse: The instructions in this manual assume you are using a mouse to operate your ComfortVIEW. For keyboard instructions, refer to Using the Keyboard, which appears under Using ComfortVIEW: An Overview, and To Select a Command Using Your Keyboard, which appears under ComfortVIEW Menus and Commands Lists.

Icon Illustrations: To help you locate and identify the various ComfortVIEW icons, the manual includes an illustration of each icon in the left margin next to the instructions describing the icon's use. Each chapter also includes a table displaying and describing each of the icons in the toolbar.

Menu Commands: To help you locate a description of each menu bar command, the last section of each chapter contains a command summary.

Dialog Boxes: All ComfortVIEW applications use dialog boxes, which are special windows containing options that you select to specify how ComfortVIEW should carry out a command. The numbered-step instructions that appear throughout this manual do not explain all dialog box options available to you. You can, however, find full summaries of all dialog box options in the tables that immediately follow the numbered steps. You can also access these tables while using ComfortVIEW by clicking on *Help* while displaying a dialog box. Thus, while performing some of the instructions in this manual, you may need to refer out of the numbered steps to these tables.

The sample instructions below illustrate the use of numbered steps and tables to explain dialog box options.

Sample — To Attach a Note to Multiple Alarms

1. Select the alarms to which you wish to attach a note by following the instructions found under Selecting Alarms.
2. Click on the *Functions* menu item and then click on *Note*.

ComfortVIEW displays the Operator Note dialog box.

3. Click in the Note text box and enter your text. You can enter up to 500 characters. Refer to Figure 1-1 and Table 1-1 for instructions on using this box.

Note: If any of the selected alarms currently has a note attached to it, ComfortVIEW appends this new note to the existing note text. You can enter up to 500 characters per note.

4. After you have entered the note text, click on *OK*. This closes the Operator Note dialog box and saves the new note text.

Figure 1-1
Operator Note Dialog Box

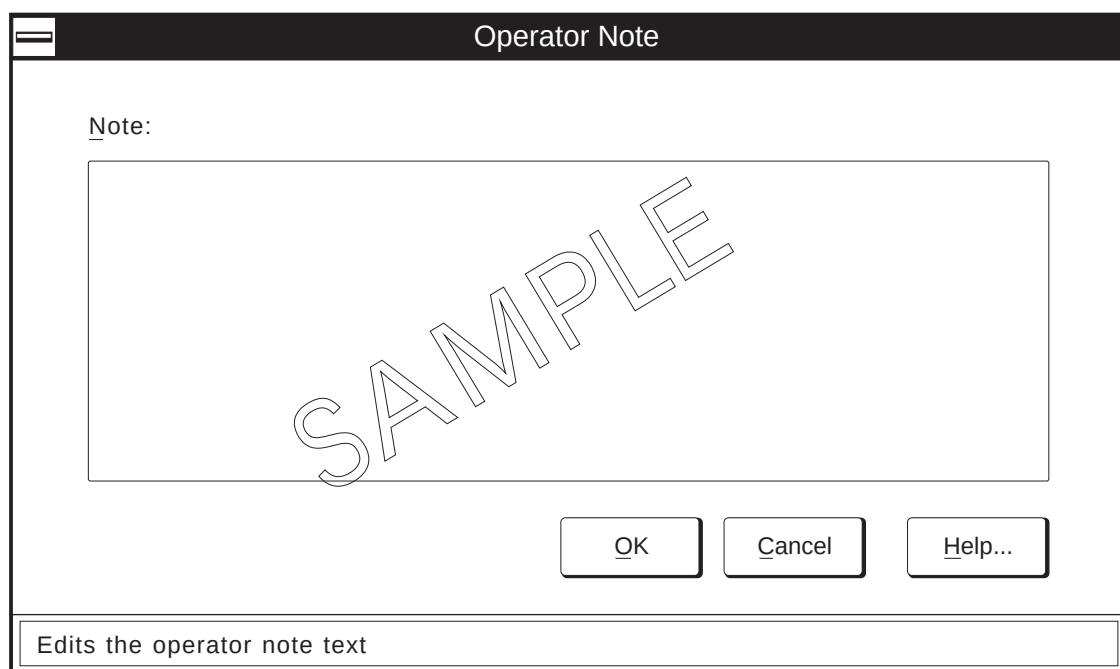


Table 1-1
Operator Note Dialog Box

Click on	To
the Note text box	enter, modify, or delete operator note text. You may enter up to 500 characters. If you have selected multiple alarms, this text appends to existing note text (up to a maximum of 500 characters).
Help	display help information.
OK	close the dialog box and save the settings.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.

Related Documentation

Other ComfortVIEW documentation includes:

ComfortVIEW Product Data Sheet (808-237)

ComfortVIEW Installation and Start-up Manual (808-238)

Instructions on operating the ComfortVIEW BEST++ application can be found in the appendix of the *BEST++ Programmer's Reference Manual* (808-893).

These documents are available from Carrier Literature Distribution.

Power Up

To use ComfortVIEW you should be familiar with how to power up and shut down your computer. If you need to review this information, refer to your computer's user's manual.

Logging In to Windows

After powering up your computer, you must enter your Windows username and password to log in to Windows.

Note: On computers running the Windows 2000 Server operating system, you must log in using an Administrator level user name and password.

Next, you must log in to ComfortVIEW. Follow the ComfortVIEW Logging In instructions that appear on the pages which follow.

Note: If the Auto-Login feature has been enabled for this ComfortVIEW workstation, you will be automatically logged into ComfortVIEW as part of Windows login. The ComfortVIEW Logout application will display in the Windows taskbar, which is typically located at the bottom of your screen. For more information on this Auto-Login feature, refer to Specifying Global System Parameters in the Setup chapter of this manual.

Logging Out of Windows

For Windows 2000:

1. Click on the Windows *Start* button and then click on *Shut Down*.
2. In the Shut Down Windows dialog box, select *Log off* (followed by your username).
3. Then, click on *Yes*.

For Windows XP:

1. Click on the Windows *Start* button and then click on *Log Off*.
2. In the Log Off Windows dialog box, click on *Log Off*.

After you log out of Windows, ComfortVIEW continues to run, and all network functions carry on. Report data is automatically retrieved and alarms continue to be received from the network as they occur. Alarms will be indicated as configured.

Windows XP and Fast User Switching

ComfortVIEW applications are accessible to a single Windows XP user account at a time - the first user to log in to Windows. If, on attempting to launch any ComfortVIEW application, you receive the message *ComfortVIEW is currently attached to another user session*, this means that ComfortVIEW is currently running in another Windows XP user's session.

In order to run ComfortVIEW do the following:

1. Log out of Windows XP.
2. Have the other ComfortVIEW user log out of both ComfortVIEW and Windows XP.
3. You can now log back in to Windows XP and will now be permitted to log in to ComfortVIEW and run all ComfortVIEW applications.



Logging In

ComfortVIEW software is normally left running. Each time you begin using ComfortVIEW, you must log in using the following procedure. This procedure can be ignored, however, if this workstation has been configured for automatic ComfortVIEW login as part of Windows login.

Follow the steps below to log in to ComfortVIEW:

1. Log in to Windows.

Note: On computers running the Windows 2000 Server operating system, you must log in using an Administrator level user name and password.



2. Double click on the ComfortVIEW Login icon which is shown at left.

ComfortVIEW displays the ComfortVIEW Login dialog box (shown and described in Figure 1-2 and Table 1-2).

3. In the Login name text box, enter your login name.

Note: Passwords are case sensitive.

4. In the Password text box, enter your password.

ComfortVIEW displays your password as asterisks.

5. Click on *Login*.

Note: If you enter an invalid username or password, ComfortVIEW displays an access denied message. Click on the *OK* button to close the message, then repeat Steps 3 and 4.

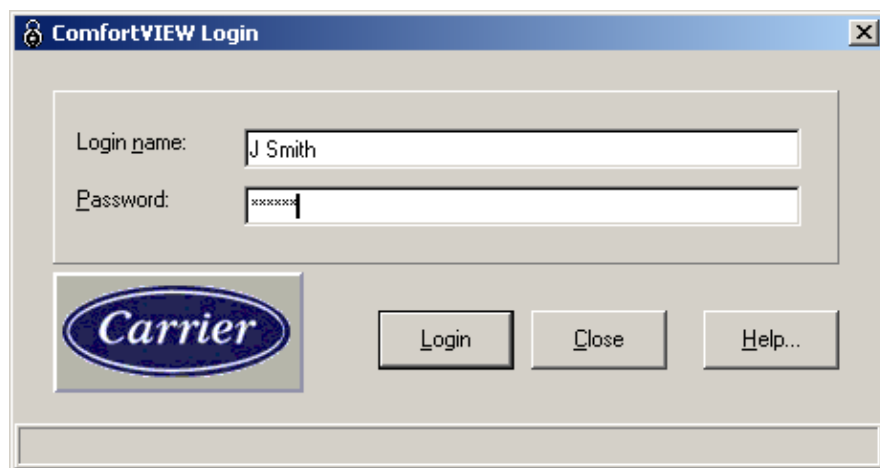
If you are successful in logging in, the message *Logging in. Retrieving operator profile.* displays in the dialog box.

6. When you have successfully logged in, the ComfortVIEW Login dialog box closes and the ComfortVIEW Logout application displays in the Windows taskbar, which is typically located at the bottom of the screen. If you have selected an application to automatically start up on login, ComfortVIEW opens this application. Refer to the Setting Up Operator Profiles Section of the Setup chapter of this manual for instructions on configuring the Start-up applications.

Table 1-2
ComfortVIEW Login
Dialog Box

Click on	To
Login name text box	enter your username. This name was set by your ComfortVIEW system administrator during ComfortVIEW software installation or when you were added as an authorized ComfortVIEW operator. The username box displays the name of the last ComfortVIEW operator who logged in.
Password text box	enter your password. To protect your password, only asterisks are displayed when you type. You must enter your password using the correct case. ComfortVIEW distinguishes between upper and lower case letters.
Login	log in using the username and password entered.
Help	display help information.
Cancel	exit the dialog box without logging in.

Figure 1-2
ComfortVIEW Login
Dialog Box



Logging Out

Logging out enables you to end your session with ComfortVIEW. After you log out, ComfortVIEW continues to run and all network functions carry on. Alarms continue to be received, all network functions continue, and report data retrieval continues.

1. Click on the *Logout* button, which is displayed in the Windows taskbar.
2. If there are any active remote CCN connections, the Active Remote CCN Connections dialog box will be displayed and all remotely-connected CCNs will be selected. Click on *Disconnect* to disconnect from the selected CCNs or on *Close* to close the dialog box without disconnecting. Refer to Figure and Table 1-3a for further instructions on using this dialog box.
3. If there are any active ComfortVIEW applications (Alarm Manager, Carrier Network Manager, etc.) you will be prompted to confirm logout with an indication that unsaved data will be lost. Clicking on *Yes* closes all open ComfortVIEW applications, proceeds with the logout, and replaces the dialog box with the ComfortVIEW Login dialog box. Clicking on *No* cancels the logout.

If there are no active ComfortVIEW applications or remote CCN connections, ComfortVIEW displays the Logout dialog box (shown and described in Figure and Table 1-3).

4. Click on *Logout* to log out of ComfortVIEW.

ComfortVIEW displays a confirmation dialog box asking if you really wish to log out.

5. Click on *Yes* to log out or click on *No* to prevent the log out.

The message *Logging out* displays in the confirmation dialog box. When log out is complete, this dialog box closes and is replaced with the ComfortVIEW Login dialog box. If there is an active RAS connection, the Remote Site Manager dialog box will be displayed as a reminder that this session is active and may need to be terminated.

Figure 1-3
ComfortVIEW Logout
Dialog Box

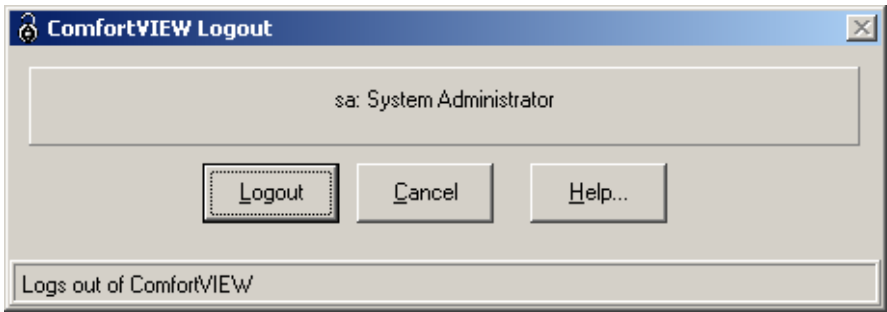


Table 1-3
ComfortVIEW Logout
Dialog Box

Click on	To
Logout	log off.
Help	display help information.
Cancel	exit the dialog box without logging off.

Figure 1-3a
Active Remote CCN
Connections Dialog Box

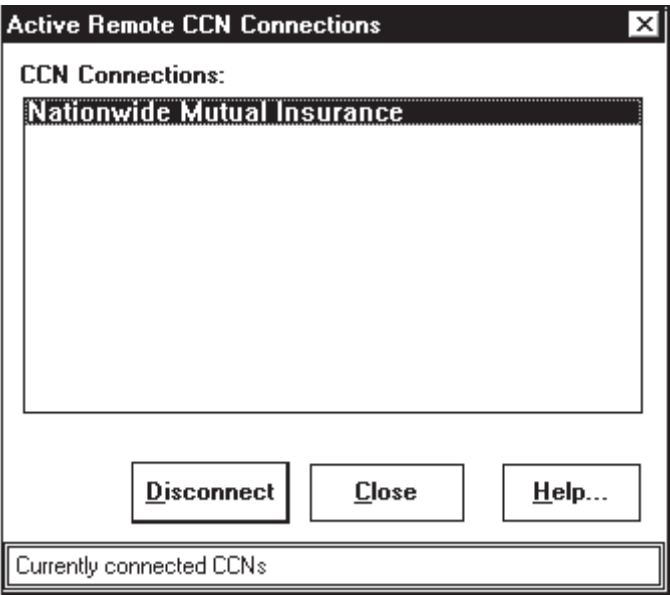


Table 1-3a
Active Remote CCN
Connections Dialog Box

Click on	To
a CCN in the CCN Connections: list	select the CCN(s) from which you wish to disconnect. On initial display, all CCNs will be selected.
Disconnect	disconnect from the selected remote CCN(s). Note: Remote CCNs that are currently in use by operators at other ComfortVIEW workstations will not be disconnected.
Close	exit the dialog box without disconnecting.
Help	display help information.

**Using
ComfortVIEW: An
Overview**

Using the Mouse

You can operate ComfortVIEW using your keyboard or your mouse.

The mouse is a pointing device that enables you to move around the ComfortVIEW window faster and easier than using the keyboard. Hold your mouse with the cable facing away from you (as shown in Figure 1-4). The mouse cursor takes on an arrow shape to indicate where you are pointing on the window. Table 1-4 explains the basic mouse techniques and terminology used throughout this manual.

Figure 1-4
Mouse



Table 1-4
Basic Mouse Terminology

Term	Meaning
Double click	Position the mouse cursor on the designated item and then quickly press and release the left mouse button twice.
Click on	Position the mouse cursor on the designated item and then quickly press and release the left mouse button once.
Drag or Drag and drop	Position the mouse cursor on the designated item. Press and hold down the left mouse button as you move the mouse and the item to the desired position. Then release the button.
Point	Position the mouse cursor on the designated item.

Using the Keyboard

Figure 1-5 and Table 1-5 provide an overview of the keys that you will typically use when operating ComfortVIEW. For information on using the keyboard to select menu items and commands, refer to the To Select a Command Using Your Keyboard section of this chapter. You should also refer to your Windows documentation.

Figure 1-5
Typical Keyboard

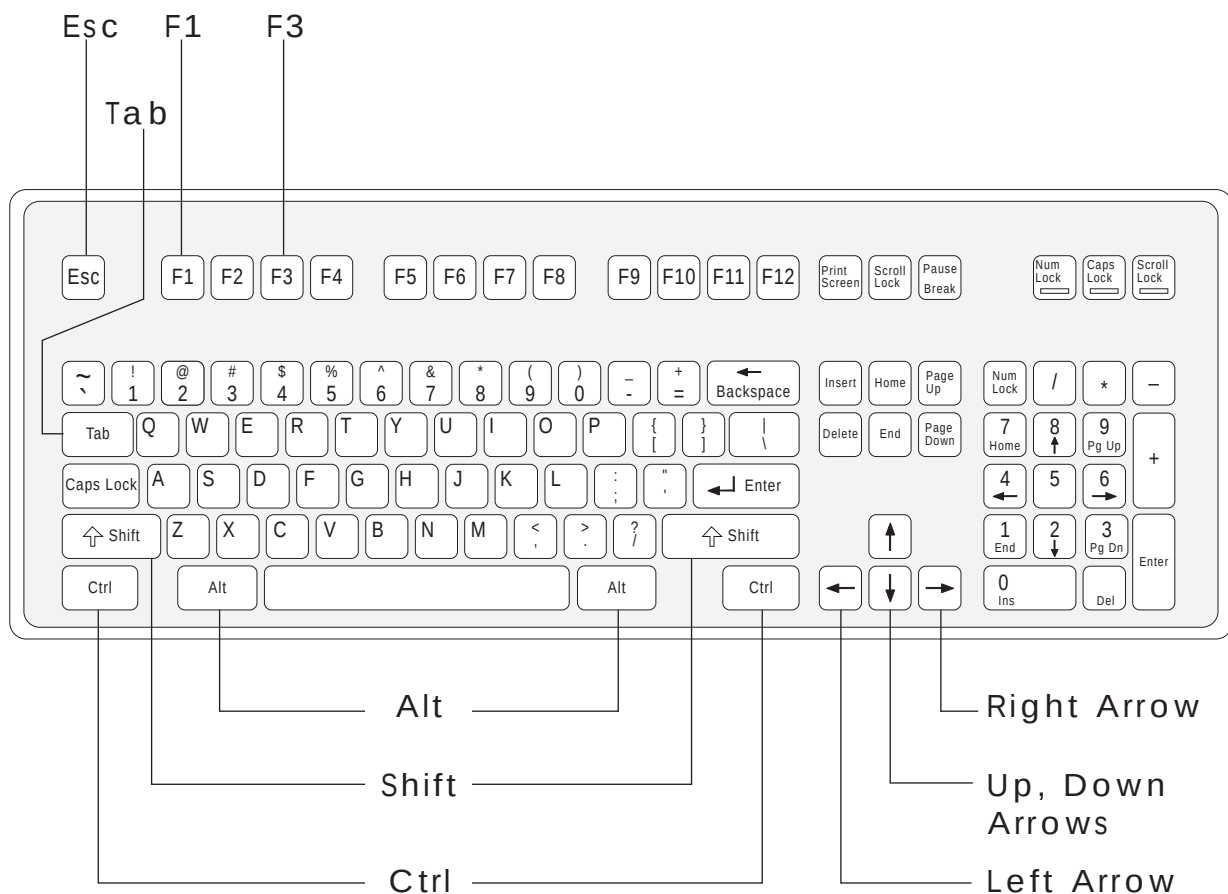


Table 1-5
ComfortVIEW Keys

Key	Function
Alt	Use Alt, and the underlined menu bar letter, to select a menu item and display the menu item's command list. Use Alt in dialog boxes to clear selected options. Use Alt in dialog boxes, in conjunction with an underlined letter, to select options. Use Alt, in conjunction with the Tab key, to jump to another active ComfortVIEW function. (For example, hold this key down and press Tab key to jump from Carrier Network Manager to Alarms.)
Ctrl	When a command list is not displayed, use Ctrl, in conjunction with the specified command list letter, as a short cut to select a specified command. The Ctrl key combinations are displayed after each command on the command list.

(continued)

Table 1-5
ComfortVIEW Keys
(continued)

Key	Function
Tab	Use Tab in dialog boxes to move to the next text box, button, or option. Use Tab, in conjunction with Alt key, to jump to another active ComfortVIEW function. (For example, hold down the Alt key and press Tab to jump from Carrier Network Manager to WorkSPACE Manager.)
Shift	Use Shift in dialog boxes in conjunction with Tab key to move to the previous text box, button, or option. When a command list is displayed, use Shift, in conjunction with an underlined command letter, to select a command.
Esc	Use Esc to close a command list, menu, or dialog box without making a selection or saving changes.
Up, Down arrows	Use up and down arrows to move up and down in lists.
Left, Right arrows	Use left and right arrows to move through menu items and lists.
F3	Use F3 in the Carrier Network Manager application to display help information on a selected configuration decision. ComfortVIEW displays a dialog box that describes the decision along with allowable entries. Press any key to close the dialog box.

Table 1-5
ComfortVIEW Keys
(continued)

Key	Function
F1	Use F1 to display help information about ComfortVIEW operation.

Interpreting ComfortVIEW Windows

ComfortVIEW windows use a standard Windows format. Figure 1-6 shows an example of a typical window. Table 1-6 describes the labelled parts.

Figure 1-6
ComfortVIEW Window

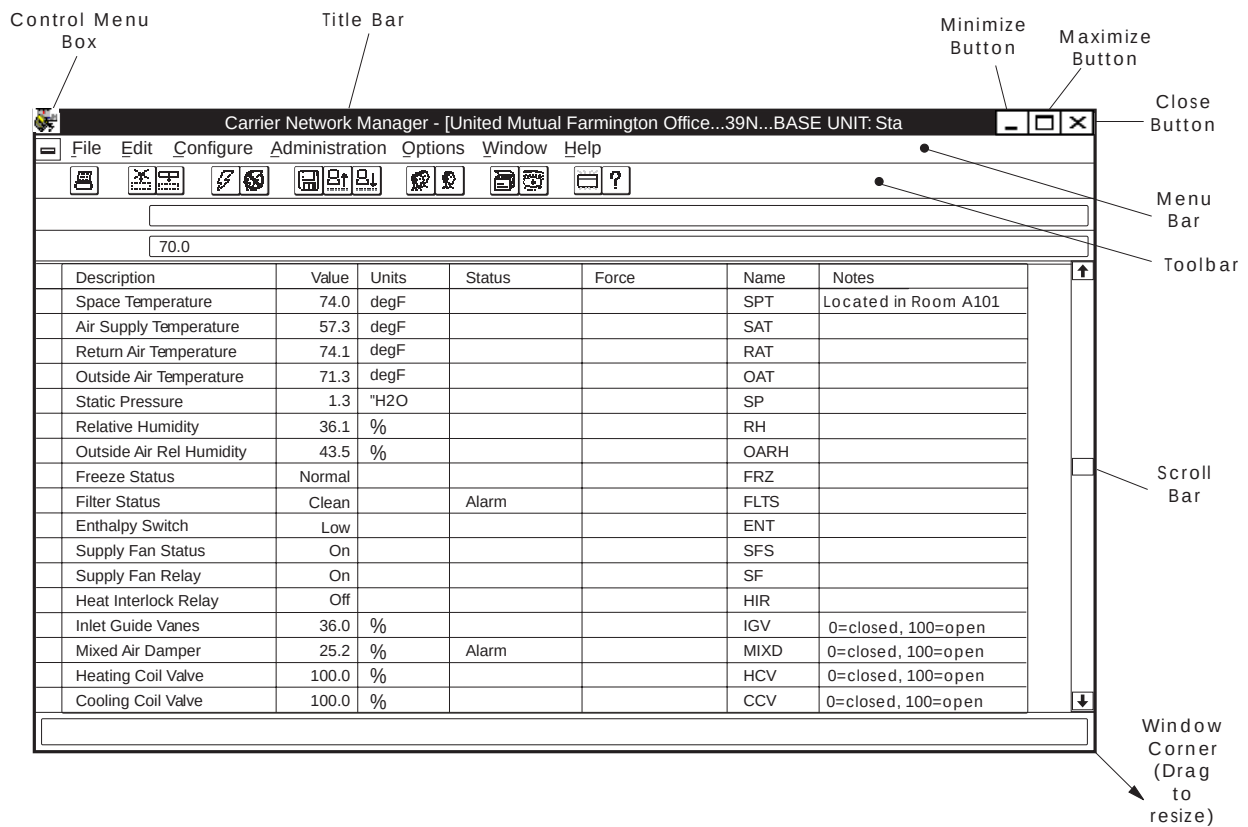


Table 1-6
ComfortVIEW Window
Elements

Element	Function
Title Bar	Displays the name of the ComfortVIEW function you have selected.
Control Menu Box	Displays a menu with commands for sizing and moving the ComfortVIEW window, switching to another ComfortVIEW application or to another PC application, and closing this ComfortVIEW application.
Maximize Button	Clicking on this button enlarges the ComfortVIEW window so that it fills the entire window. Clicking on this button performs the same result as the Maximize command under the Control Menu. When the window is maximized, this button is replaced with a Restore button. 
Minimize Button	Shrinks this ComfortVIEW application to a task on the taskbar. Clicking on this button performs the same result as the Minimize command under the Control Menu.
Close Button	Closes this ComfortVIEW application.
Menu Bar	Lists the available menus. Each menu contains a list of commands that you can perform with this ComfortVIEW function.
Restore Button	Returns the window to its previous size. This button is displayed when you click on the <i>Maximize</i> button.

(continued)

Table 1-6
ComfortVIEW Window
Elements
(continued)

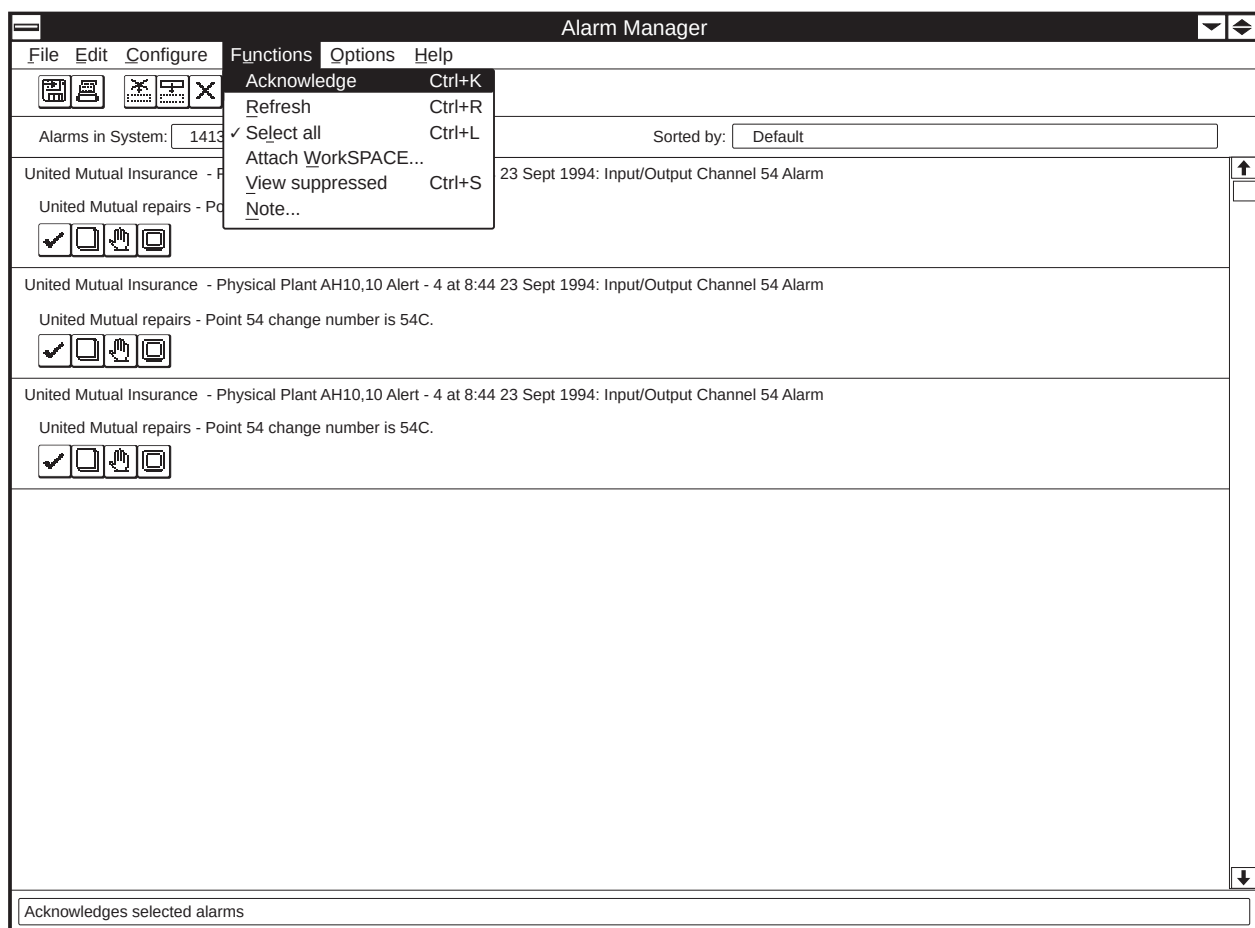
Element	Function
Scroll Bars	Clicking on the vertical or horizontal scroll bar or dragging the box in the scroll bar with the mouse allows you to move parts of the window into view when the entire contents of the window do not fit in the window. You can use the scroll bars to view unseen portions of lists and other information that cannot fit in the allotted space.
Tool Bar	Gives you instant access to the most frequently used commands.
Window Corner	Allows you to change the window size.

ComfortVIEW Menus and Command Lists

ComfortVIEW is mainly controlled by menus. The menus are listed on the menu bar at the top of the ComfortVIEW window. To operate ComfortVIEW, you select a menu item from those displayed.

Each menu contains commands in a command list that allow you to perform ComfortVIEW functions. Commands that perform similar actions are grouped on a menu. For example, in the Alarm Manager application, the Functions menu contains commands you use to acknowledge, refresh, or select all alarms. Refer to Figure 1-7 below.

Figure 1-7
Viewing Alarm Manager
Menu and Commands



Command Menu Conventions

You can choose menu items and commands using your mouse or the keyboard. For instructions, refer to *To Select a Command Using Your Mouse* and *To Select a Command Using Your Keyboard*. ComfortVIEW uses the following Windows command menu conventions:

Table 1-7
Command Menu Conventions

If the Command	Meaning
is dimmed (or not visible)	You cannot use this command at the current time. You may need to select another item before using this command.
is followed by an ellipsis (...)	A dialog box will appear when you choose the command. The dialog box contains options you need to select before ComfortVIEW can perform the command.
is followed by a check mark (✓)	The command is in effect. When you remove the check mark (by reselecting the command), the command will no longer be in effect.
is followed by a key combination	The key combination is a shortcut for this command. You can use this key combination as an alternative to clicking on this command.
is followed by a triangle (▶)	When you select this command, a cascading menu appears, listing additional commands.

To Select a Command Using Your Mouse

1. Point to the menu item and click the left mouse button.

ComfortVIEW displays the list of commands for this menu item.

Note: If you wish to close the menu without performing any command, click anywhere outside the menu.

2. Point to a command name and click the left mouse button.

ComfortVIEW carries out some commands right away. If an ellipsis follows the command, however, more information is needed to complete the command and a dialog box displays. You must then select options in the dialog box to control how ComfortVIEW performs the command.

To Select a Command Using Your Keyboard

1. Press the Alt key and then release. Then, type the underlined letter in the menu item name.

ComfortVIEW displays the list of commands for this menu item.

Note: If you wish to close the menu without performing any command, press Esc.

2. Type the underlined letter in the command name.

ComfortVIEW carries out some commands right away. If an ellipsis follows the command, however, more information is needed to complete the command and a dialog box displays. You select options in the dialog box to control how ComfortVIEW performs the command.

Dialog Boxes

A dialog box is a special window containing options that you select to tell ComfortVIEW how to carry out a command. The dialog boxes displayed in Figures 1-8, 1-9, and 1-10 illustrate some features common to all ComfortVIEW dialog boxes.

Figure 1-8
Colors Dialog Box

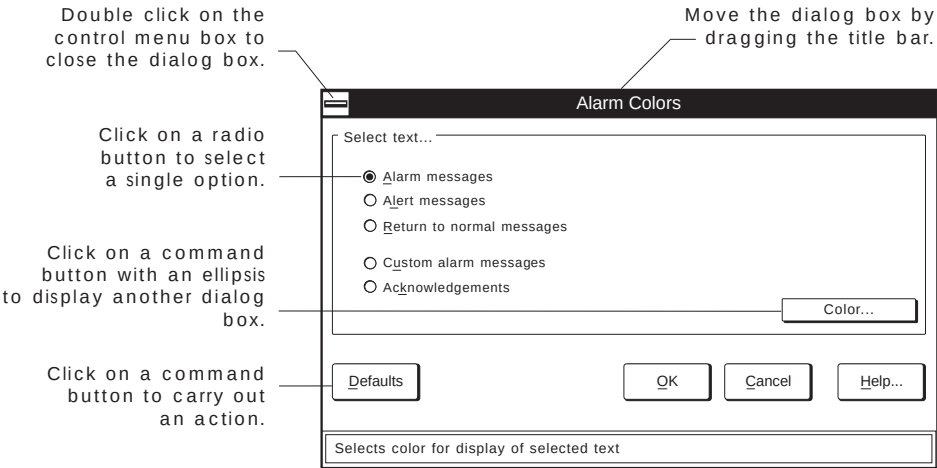


Figure 1-9
Operator Profile Dialog Box

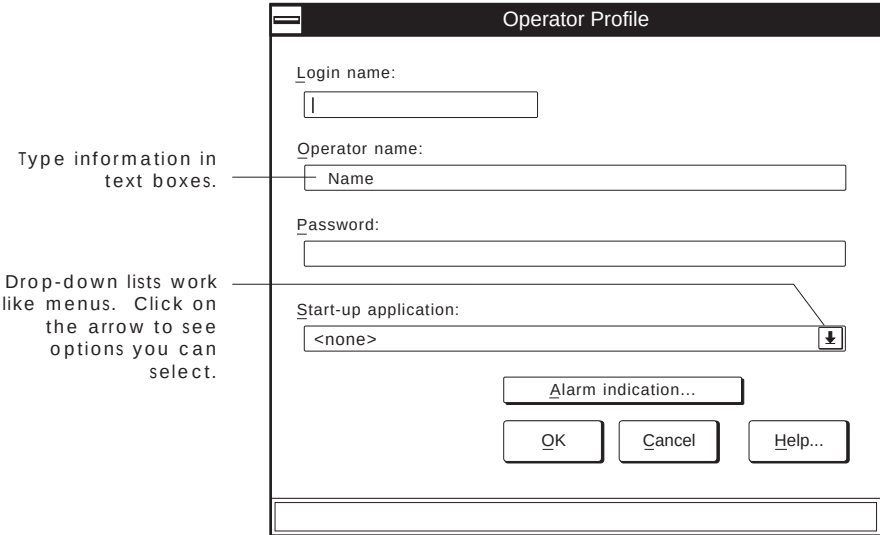
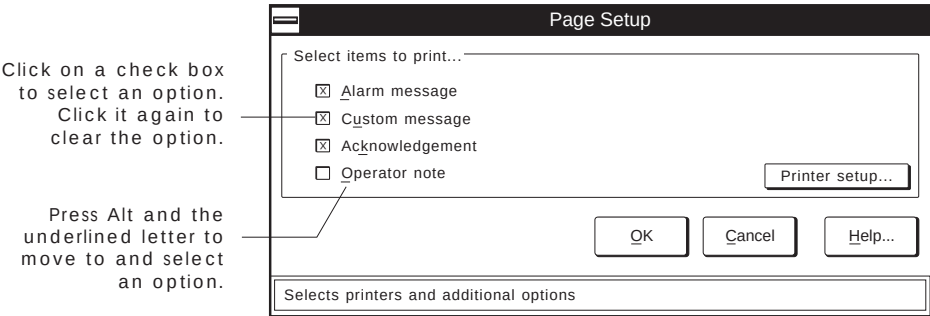


Figure 1-10
Page Setup Dialog Box



Using ComfortVIEW Help

Help information is available throughout ComfortVIEW. Here are the ways you can access help:

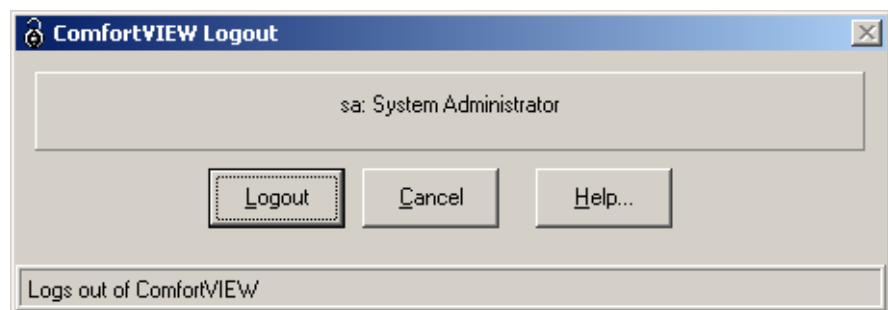
- Context-sensitive one-line help information based on your current window position automatically displays along the bottom of most ComfortVIEW windows. See Figure 1-11.
- Pressing the F1 key displays help information about ComfortVIEW operation.
- Pressing the F3 key while the cursor is positioned on a Carrier Network Manager configuration decision displays a dialog box that describes the decision and displays allowable entries. Pressing any key closes the dialog box.
- Operational help is also available on all ComfortVIEW functions by pointing to the Help menu item and clicking the left mouse button.
- Help can also be accessed while displaying a dialog box by clicking on the Help button.

Help Wizards

ComfortVIEW includes help wizards that assist you in performing the following functions:

- Creating consumable, runtime, and history report definitions
- Configuring alarms, including custom messages and Autodial Gateway capability
- Adding new ComfortVIEW operators
- Adding new trends
- Adding new ViewSPACE databoxes.

Figure 1-11
Context Sensitive 1-line
Help



Carrier Network Manager

Carrier Network Manager

This chapter provides instructions on ComfortVIEW Carrier Network Manager application.

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Terminology

The following terms are used throughout this Carrier Network Manager chapter.

Access Level — An operator privilege level. ComfortVIEW gives you the capability to create access levels and specify specific ComfortVIEW operations allowed for each level. You then assign access levels to ComfortVIEW operators on an area by area basis.

Access Parameters — How the new CCN will be accessed (physically wired to ComfortVIEW workstation or via an Autodial Gateway).

Active — Currently displayed on-screen or reduced to an icon.

Address — A unique two-part identification number for each system element on the CCN. Address consists of the communication bus number followed by the system element number.

Alarm Filters — ComfortVIEW gives you the capability to route alarms to specific ComfortVIEW operators. You set up alarm filters that specify families (area, element, and level) of alarms to be presented to each ComfortVIEW operator. You then assign alarm filters to ComfortVIEW operators. You can assign alarm filters to ComfortVIEW operators on an area by area basis. You can also use alarm filters to route ComfortVIEW alarms to specific printers.

Alarm Table — Any of the Comfort Controller's standard alarming routines. Current Comfort Controller alarm tables include the Limit, Setpoint, Limit, Discrete State, First Out, Runtime, and Number of Starts.

Algorithm — Any of the Comfort Controller's standard HVAC control routines.

Area — A logical grouping of system elements within a CCN. For example, an area could be a building, a floor, a wing, or a chiller plant.

Autoing a point — To remove a force and return a point to the controller's automatic control.

CCN — Carrier Comfort Network. A system of communicating, microprocessor-based controls for heating, ventilating and cooling (HVAC) equipment.

Client — A computer on a local area network running ComfortVIEW communication and user interface software, or ComfortVIEW user interface software only.

Configure — To specify to a controller the data that it needs to control and monitor HVAC devices in the desired manner.

Controllers — CCN system elements with addresses, status display, and configuration tables. Controllers perform the actual HVAC monitoring and control operations. The Carrier Comfort Network supports several types of controllers. These include PICs, FIDs, and Comfort Controllers, System Managers, and CCN Options.

Controller — A CCN system element with an address, status display, and configuration tables. A controller performs the actual HVAC monitoring and control operations. The Carrier Comfort Network supports several types of controllers. These include PICs, FIDs, and Comfort Controllers, System Managers (examples: TSM, FSM, CSM), and CCN Options.

Destination — The configuration table you are copying to when copying and moving controller configuration data.

Download — To copy configuration table data from the ComfortVIEW database to a controller. Performing a download overwrites the configuration at the controller.

Export — To back up an entire controller's database to a specified drive. The drive can be the ComfortVIEW floppy diskette drive, another ComfortVIEW hard drive partition, or another computer on the LAN. The information that will be copied includes the controller name, description, address, and all configuration data.

Force — To override a controller's automatic control and modify a point's value.

Function — Any of the Comfort Controller's supporting control routines for points and algorithms. Current Comfort Controller function tables include Analog Trace Point, Discrete Trace Point, Internal Consumable, Adaptive Optimal Start/Stop, Network Broadcast, Linkage/AOSS Schedule, Night Time Free Cooling, and Occupancy.

Gateway — Refers to either a CCN Autodial Gateway or TeLINK module. Both these modules enable the CCN to communicate over telephone lines with other similarly equipped CCNs enabling system elements in two networks to communicate as though they were connected directly.

Import — To copy configuration tables to a controller in the ComfortVIEW database from a .CWX file that was created using ComfortVIEW Export function.

Operators — ComfortVIEW users.

Object — A Comfort Controller hardware or software point, system table, algorithm, setpoint, alarm, or function.

Point — An input or output (hardware) channel on the controller or an internal (software) channel.

Server — A computer running ComfortVIEW communication, user interface, service, and database software.

Sort key — Numbers, assigned when adding controllers to the database, that give you the capability to customize the presentation of your controller list. In a controller list that is sorted by sort key, a controller assigned a sort key of 1 appears before a controller assigned a sort key of 2, and so on. Assigning a controller a sort key of 255 causes it to appear at the end of the controller list. The default sort key number is 1.

Source — The point status, maintenance, or time schedule table you are copying from when copying and moving controller configuration data.

System Element — A CCN controller with an address and configuration tables. A controller performs the actual HVAC monitoring and control operations. The Carrier Comfort Network supports several types of system elements. These include PICs, FIDs, and Comfort Controllers, System Managers (examples: TSM, FSM, CSM), and CCN Options.

System Table — A Comfort Controller Consumable, Runtime, Holiday, Network Time Schedule, Loadshed, or Language Conversion table.

Table — A logical grouping of data that a controller uses to display and specify information used to control and monitor HVAC devices in the desired manner. Examples of tables are status display tables, alarm history, configuration tables, and maintenance tables.

Upload — To copy all configuration table data from a controller to the ComfortVIEW database.



Accessing the Carrier Network Manager

The Carrier Network Manager graphically displays, through the use of a directory tree with a branching structure similar to the Windows File Manager, the CCNs, areas, controllers (system elements), and tables that make up your ComfortVIEW database.

You can use the Carrier Network Manager to add and configure CCNs and areas, which are logical groupings of system elements within a CCN (for example, buildings, floors, wings, chiller plants).

You can also perform other operations such as:

- adding controllers to and deleting controllers from your ComfortVIEW database.
- viewing and modifying controller configuration, maintenance, and status display data.
- exporting controller databases to diskette.
- connecting to remote CCNs and remote ComfortVIEW workstations.

Follow the steps below to launch the Carrier Network Manager application, open the System Overview window, and display a list of the database's CCNs and areas.

1. Double click on the Carrier Network Manager icon.

ComfortVIEW opens the Carrier Network Manager and displays a System Overview window (similar to the one shown in Figure 2-1) This window displays, in a directory tree fashion, the CCNs that make up your ComfortVIEW database.

The top line of the window contains the menu bar. Refer to the Carrier Network Manager Command Summary section of this chapter for a description of each menu bar command. The second line of the window contains the toolbar. Refer to Carrier Network Manager Toolbar, which appears later in this section, for information on using each toolbar button.

The third line of the window contains the status bar. This line displays in all Carrier Network Manager windows and supplies information on the path you have taken to arrive at the current window. (For example, it displays the CCN, area, and controller name that you have selected.)

Note: If desired, you can remove the status bar from the System Overview window by clicking on the *Options* menu item followed by clicking on *Status bar*. To return the status bar to the window, perform these two commands again.

You may also change the window's font and point size. Refer to the Changing the Font section of this chapter for instructions.

2. Double click on the System Overview icon to expand the directory tree and display the CCNs in your database.

Note: Double clicking on an expanded System Overview icon collapses the tree.

3. Double click on a CCN to expand the directory tree and display the areas in that CCN.

Note: If this is the first time you are accessing the Carrier Network Manager since installing ComfortVIEW, there will be no CCNs. Refer to Adding/Modifying CCNs. Double clicking on an expanded CCN collapses the tree.

Figure 2-1 shows an expanded System Overview window. Refer to Table 2-1 for an explanation of the System Overview tree icons.

The Controller List

Double-clicking on an area displays the list of controllers in that area. A controller is a CCN system element with an address, and status display and configuration tables. A controller performs the actual HVAC monitoring and control operations. The Carrier Comfort Network supports several types of controllers. These include PICs, FIDs, Autodial Gateways, Comfort Controllers, System Managers (examples: TSM, FSM, CSM), and CCN Options.

Step by step instructions for displaying the controller list and a description of the Controller List window can be found further on in the Displaying the Controller List section of this manual.

Short Cut

You may also launch the Carrier Network Manager and display a list of all areas in your ComfortVIEW database by double-clicking on the Carrier Network Manager icon, clicking on the *Access* menu item, and then clicking on *Open*. ComfortVIEW displays a list of all areas in the database. You can then double click on an area and display the area's controllers.

Figure2-1
System Overview Window

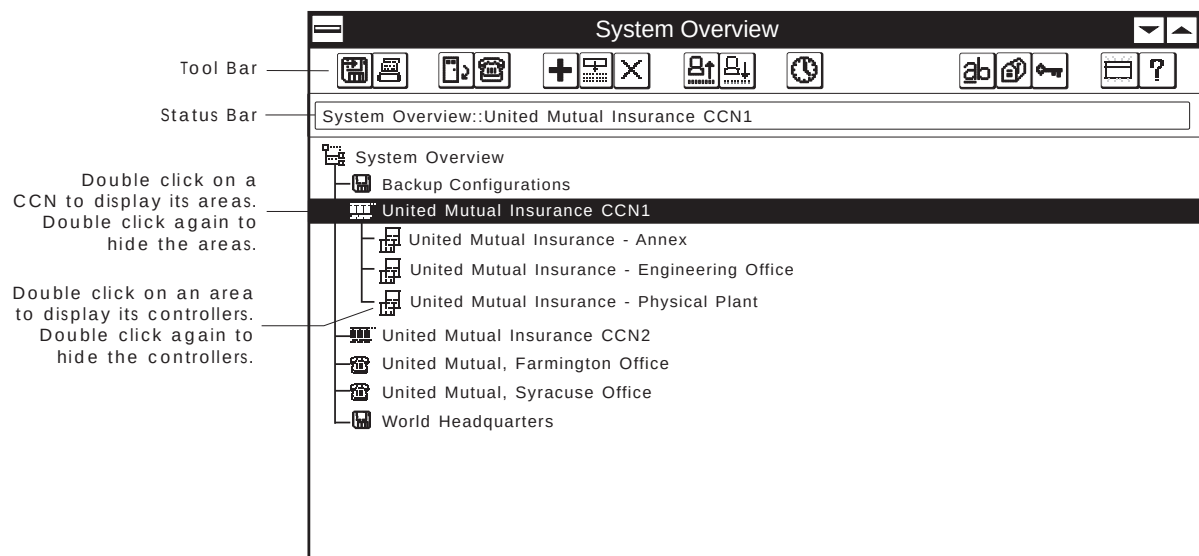


Table 2-1
System Overview Tree
Icons

The Icon	Represents
	A CCN that exists only in your computer's database. You cannot communicate with this CCN. This type of CCN would typically be used for off-line database configuration to hold your library of controller off-line configurations. Double click on a CCN to display its areas.
	A CCN that is physically wired to your PC. Double click on a CCN to display its areas.
	A CCN that you can communicate with using a CCN Autodial Gateway. Double click on a CCN to display the areas in this CCN.
	A CCN that you can communicate with using a CCN to Ethernet Converter. Double click on a CCN to display its areas.
	An area of a CCN. Double click on an area to display the controllers in this area.
	A controller within an area. Double click on a controller to display its tables.
	A Comfort Controller within an area. Double click on a Comfort Controller to display its tables.
	A Comfort ID controller within an area.
	A 33CS controller within an area.
	A status display, maintenance, configuration, or alarm history table category. Double click on a category to display the tables in that category.
	A status display, maintenance, alarm history, configuration table. Tables that are dynamically updating (status display or maintenance) have red icons. Tables that are not updating (configuration tables) have black and white icons.

**Carrier Network
Manager Toolbar**

The second line of the System Overview window contains the toolbar. If you use a mouse, the toolbar gives you instant access to the most frequently used Carrier Network Manager commands. By simply clicking the mouse button, you can perform operations such as adding, modifying, or deleting controllers, connecting and disconnecting from remote CCNs, and uploading and downloading controller configuration data.

Note: If desired, you can remove the toolbar from the System Overview window by clicking on the *Options* menu item and then by clicking on *Toolbar*. To return the toolbar the window, perform these two commands again.

Table 2-2 describes the buttons that appear on the Carrier Network Manager toolbars. Note that the toolbar changes depending on the Carrier Network Manager window that is currently displayed. The System Overview and Controller List window toolbars contains all of the buttons in the table. The Configuration Table window toolbar contains a subset of these buttons.

Table 2-2
Carrier Network
Manager Toolbar Icons

Click on	To
	export the selected controller to a file.
	print the active window or a database report of the selected controller or area.
	copy the selected cell's data to the Windows clipboard.
	paste data from the Windows clipboard to the selected cell.
	open a window displaying the names of all areas in the database.
	connect to a remote CCN.
	add a new CCN, area, or controller.
	force the selected point.

(continued)

Table2-2
Carrier Network
Manager Toolbar Icons
(continued)

Click on	To
	auto the selected point.
	save the configuration to the database.
	hide selected columns and rows.
	show hidden columns and rows.
	launch the report wizard and quickly and easily add a new consumable, history, or runtime report definition.
	launch the alarm wizard and quickly and easily configure an alarm for the selected point.
	launch the trend wizard and quickly and easily add a new trend.
	modify the selected CCN, area, controller, or table name.
	delete the selected CCN, area, or controller.
	upload the selected controller or configuration table display.
	download the selected controller or configuration table display.
	transmit time, date, and holiday information to the selected CCN.

Table 2-2
Carrier Network
Manager Toolbar Icons
(continued)

Click on	To
	examine a specified CCN bus and obtain a list of all system elements.
	sort the presentation of the controller list alphabetically by name.
	sort the presentation of the controller list by address.
	sort the presentation of the controllerlist by sort key.
	update the currently selected window with the most recent data that was written to the database.
	display help information.

Changing the Font

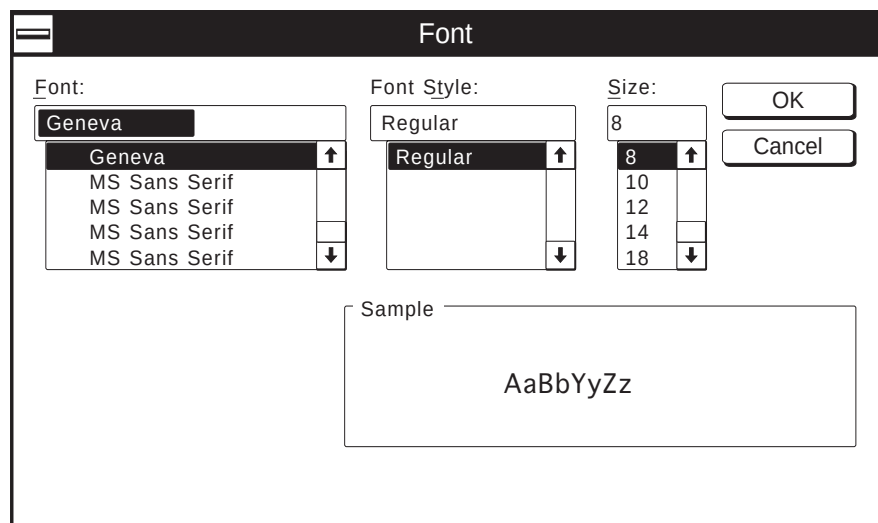
You can change the font that the Carrier Network Manager uses to display text. When you change the font, all Carrier Network Manager text is affected.

To change the font:

- Click on the *Options* menu item followed by clicking on *Font*.
ComfortVIEW displays the Font dialog box. Refer to Figure 2-3.
- In the Font box, select the font you want to use.
The text in the Sample box changes to reflect the font you select.
- In the Font Style box, select any style options you want to use (for example, bold or italic).
- In the Size box, select the point size you want to use: the larger the point size, the larger the characters appear on your screen.
- Click on *OK*.

Note: To make the font change permanent, click on the *Options* menu item and then click on *Save settings on exit*. A checkmark (3) appears before the command to indicate that it is enabled. The text will appear in this new font and point size the next time you start the Carrier Network Manager. This command also saves the size and position of all Carrier Network Manager windows. Follow the steps below to add a new CCN into the ComfortVIEW database.

Figure 2-3
Font Dialog Box



Adding/ Modifying CCNs



**To Add a
New CCN**

1. Display the Carrier Network Manager's System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.

Note: If you are creating a new database, there are no CCNs or areas in the database. The only visible icon is the System Overview icon.

2. Click on *System Overview*.
3. Click on *Configure* and then click on *New*.

Note: You may also perform this command by clicking on the Add New icon in the toolbar.

ComfortVIEW displays the Add New dialog box (shown in Figure 2-4 following these instructions). The Carrier Comfort Network (CCN) button will be selected.

4. Click on *OK*.

ComfortVIEW displays the New CCN Definition dialog box.

5. Enter the name of the new CCN in the CCN name edit box. Up to 48 characters are allowed.
6. You can modify the CCN Number if desired, or leave it set at the displayed default value, which is the lowest available CCN number. This number is used internally by ComfortVIEW Report Panel and Alarm Manager applications to identify CCNs. You must assign each CCN a unique number. Used CCN numbers can be viewed by clicking on the down arrow in the Used CCN number drop down list.

Note: If you are adding a remote CCN that will be accessed by Autodial Gateway, this number must match the Customer Number configured at the remote Autodial Gateway.

Refer to Figure 2-5 and Table 2-5 for instructions on using the New CCN Definition dialog box.

7. Click on *Access* to display the CCN Access Definition dialog box. This dialog box gives you the capability to specify access parameters for the new CCN.
8. Click on the *Method* drop down list and select the way this CCN will be accessed. Refer to Table 2-6 following these instructions for a definition of each CCN access method.
9. *If you are adding a Local - Direct Connection CCN:*

RS232/485: Click on the *Port* drop down list and select the computer serial port to which the CCN is attached.

CCN/Ethernet Gateway: Specify the IP address of this CCN's CCN-to-Ethernet converter.

Then click on the *Extended* button to display the Standard CCN Settings dialog box and select additional CCN parameters such

as address and baud rate. Refer to Table 2-7 following these instructions for an explanation of the fields in this dialog box.

If you are adding a Remote - Gateway or Modem Connection CCN:

Under *Phone number* select one of the following actions:

- Click on *Add* to add a new remote Gateway phone number and password to the phone number list, or
- Select a phone number and then click on *Modify* to change the number, or
- Select a phone number and then click on *Delete* to delete it.

10. Refer to Figure 2-6 and Table 2-6 for further instructions on using the CCN Access Definition dialog box.
11. Once you have entered all CCN access parameters, click on *OK*. This permanently saves the changes and closes the CCN Access Definition dialog box.
12. Click on *OK* to close the New CCN Definition dialog box.

ComfortVIEW re-displays the System Overview window. The new CCN appears in the window in alphabetical order.

Figure 2-4
Add New Dialog Box

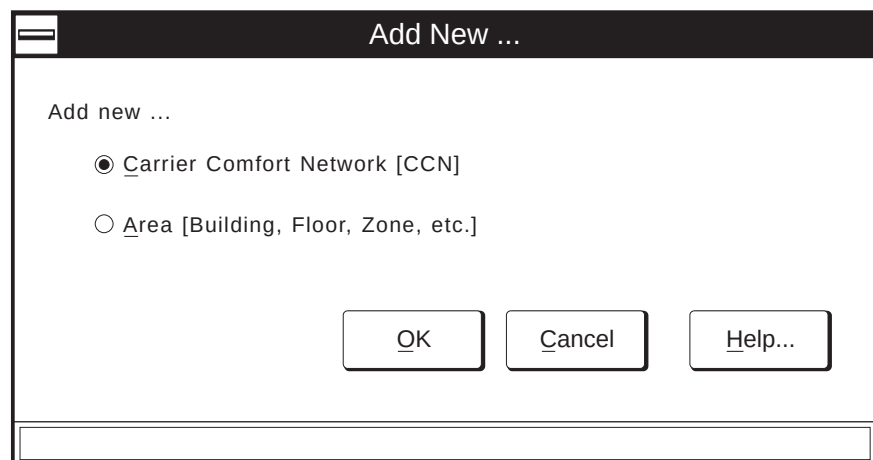


Table 2-4
Add New Dialog Box

Click on	To
Carrier Comfort Network	add a new CCN to the ComfortVIEW database.
Area	add a new area to the ComfortVIEW database.
OK	close the dialog box and save the changes made. Either the New Area Definition or the New CCN Definition dialog box displays, depending on whether you are adding a new Carrier Comfort Network or area. Instructions for using the New Area Definition dialog box can be found in the Adding/Modifying Areas section of this chapter. Refer to Figure 2-5 and Table 2-5 below for instructions for using the New CCN Definition dialog box.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 2-5
New CCN Definition
Dialog Box

New CCN Definition

CCN name:

CCN number:

1

Used CCN numbers:

100

Access ...

OK

Cancel

Help...

Sets CCN access parameters

Table 2-5
New CCN Definition
Dialog Box

Click on	To
CCN name edit box	enter the new CCN name. Up to 48 characters are allowed.
CCN number edit box	modify the displayed CCN number. You can modify the CCN Number if desired, or leave it set at the displayed default value, which is the lowest available CCN number. This number is used internally by ComfortVIEW Reports and Alarms functions to identify CCNs. You must assign each CCN a unique number. Used CCN numbers can be viewed by clicking on the down arrow in the Used CCN numbers drop down list. Note: If you are adding a remote CCN that will be accessed by Autodial Gateway, this number must match the Customer Number configured in the remote Gateway.
Used CCN numbers	view the highest number already in use. Click on the down arrow to view a complete list of all used CCN numbers.
Access	set the CCN access parameters. The CCN Access Definition Dialog Box displays. Refer to Figure 2-6 and Table 2-6 for instructions on using this dialog box.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 2-6
CCN Access Definition
Dialog Box

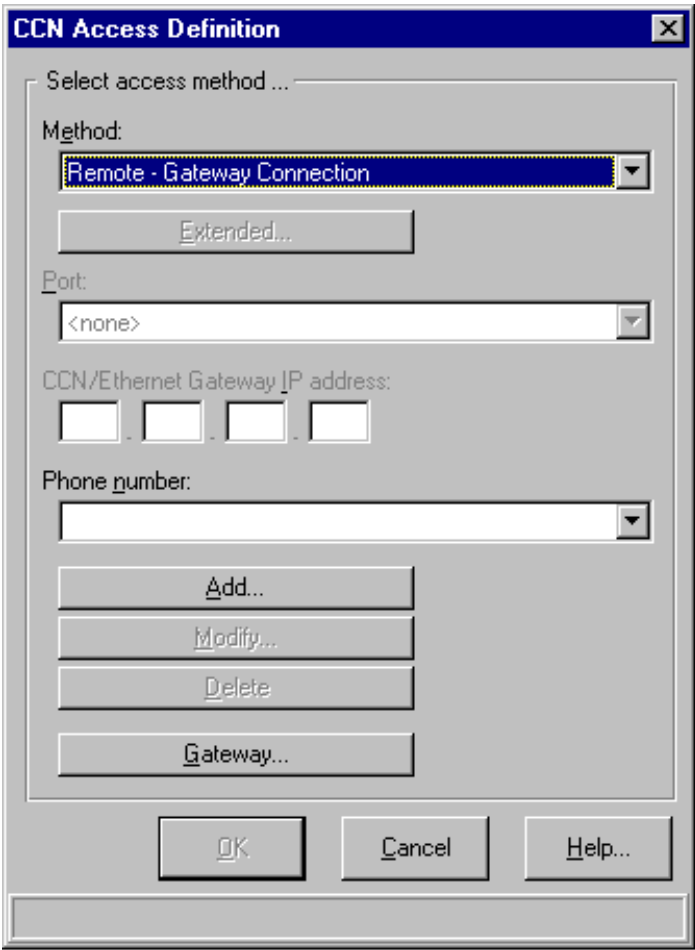


Table 2-6
CCN Access Definition
Dialog Box

Click on	To
Method	specify how this CCN will be accessed. Clicking on the down arrow gives you these choices: <i>None - Database Only.</i> Select this method if you are adding a CCN to your workstation’s database only. You cannot communicate with this CCN. This method of CCN access would typically be used for off-line database configuration to hold your library of controller off-line configurations. (continued)

Table 2-6
CCN Access Definition
Dialog Box
(continued)

Click on	To
	<i>Local - Direct Connection.</i> Select <i>RS-485</i> if you are adding a CCN that is physically wired to the local workstation using an internal RS-485 card or similar-type device. Select <i>RS-232</i> if the workstation's serial port is connected to an external RS-232/485 convertor (for example, a CCN Repeater). If you select either RS-485 or RS-232, you must now click on <i>Port</i> to specify the workstation name and associated serial port. Select <i>CCN/Ethernet Gateway</i> if the workstation is connected to the CCN over a building's Ethernet LAN using the CCN-to-Ethernet converter. You must now enter the IP address associated with the CCN-to-Ethernet converter. Notes: The Ethernet to CCN connection can only be associated with the ComfortVIEW server's network connection. ComfortVIEW only supports Ethernet connections through one network card. If you have multiple CCN-to-Ethernet connections, they all will be associated with the same network card. <i>Remote - Gateway Connection.</i> Select this method if you are adding a CCN that you will communicate with using a Gateway. If you select this method, you must click on <i>Phone Number</i> and specify the Gateway/modem telephone number of the remote CCN modem. Optionally, you can also click on <i>Gateway</i> to select a specific Gateway to use. If you do not select a Gateway, ComfortVIEW will search

Table 2-6
CCN Access Definition
Dialog Box
(continued)

Click on	To
<i>(continued)</i>	
Port	for and use one that is available. select the workstation and serial communication port to which the CCN Bus will be wired. The only time you are required to make this selection is if you selected Local - Direct Connection (either RS-232 or 485) from the Method list.
CCN/Ethernet Gateway IP address	enter the IP address of this CCN's CCN-to-Ethernet converter. The value that you enter into this field must match the value that is in the converter's Host IP Address decision.
Extended	set additional CCN parameters such as address and baud rate. The Standard CCN Settings dialog box displays. Refer to Figure 2-7 and Table 2-7 for instructions on completing this dialog box.
Phone Number	display the list of remote CCN phone numbers. Click on the down arrow. Any existing phone numbers will be displayed. You would typically only enter more than one phone number in this list if you have more than one Autodial Gateway at the remote CCN. To modify or delete an existing phone number, select a phone number and click on <i>Modify</i> or <i>Delete</i>. Note: If the phone number exceeds 15 characters, a TeLINK, rather than Autodial Gateway, must be used to make the connection.

Table 2-6
CCN Access Definition
Dialog Box
(continued)

Click on	To
Add	add a new phone number to the phone number list. The only time you are required to specify a phone number is (continued) if you selected Remote - Gateway Connection from the Method list. ComfortVIEW displays the Phone Number Configuration dialog box. Refer to Figure 2-8 and Table 2-8 for instructions on using the Phone Number Configuration dialog box.
Modify	modify an existing phone number. You must select the phone number prior to clicking on <i>Modify</i> . ComfortVIEW displays the Phone Number Configuration dialog box. Refer to Figure 2-8 and Table 2-8 for instructions on using the Phone Number Configuration dialog box.
Delete	delete an existing phone number. You must select the phone number prior to clicking on <i>Delete</i> .
Gateway	select a specific Autodial Gateway to use when establishing a connection to the remote CCN. ComfortVIEW displays the Select Autodial Gateway dialog box. Refer to Figure 2-6a and Table 2-6a for instructions on using the Select Autodial Gateway dialog box.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Table 2-6a
Select Autodial Gateway
Dialog Box

Click on	To
the Select a CCN: drop down list	select the CCN containing the Autodial Gateway.
an Autodial Gateway in the Select a gateway: list	select the Autodial Gateway to use to connect to the remote CCN.
<any gateway>	disable any previous Gateway selection.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 2-6a
Select Autodial Gateway
Dialog Box

Select Autodial Gateway

Select a CCN:

United Mutual Insurance

Select a gateway:

AUTODIAL: Autodial Gateway - 0, 51
<any gateway>

OK Cancel Help...



Modifying CCNs

Follow the steps below to modify an existing CCN's name, number, or access parameters:

1. Display the Carrier Network Manager's System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Click on the CCN you wish to change.
3. Click on *Configure* and then click on *Modify*.

Note: You may also perform this command by clicking on the Modify icon in the toolbar.

ComfortVIEW displays the Modify CCN Definition dialog box.

4. Modify the CCN name as desired. To modify the CCN's associated access parameters, click on *Access*. ComfortVIEW displays the CCN Access Definition dialog box. Refer to Figure 2-6 and Table 2-6 for further instructions on using this dialog box.

To modify additional CCN parameters such as address and baud rate, click on the *Extended* button. ComfortVIEW displays the Standard CCN Settings dialog box. Refer to Figure 2-7 and Table 2-7 for further instructions on using this dialog box.

5. Once you have modified the CCN name or access parameters, click on *OK*. This permanently saves the changes and closes the CCN Access Definition dialog box.
6. Click on *OK* to close the CCN Access Definition dialog box.

Figure 2-7
Standard CCN Settings
Dialog Box

Standard CCN Settings

Bus:

0

▲▼

Element:

237

▲▼

Retries:

5

▲▼

Baud rate:

9600 baud ▼

☐ Enable alarm acknowledgement

☐ Enable NDS diagnostics

☐ Enable Time Broadcast

OK

Cancel

Help...

Edits the element's address

Table 2-7
Standard CCN Settings
Dialog Box

Click on	To
Bus	specify the ComfortVIEW bus number. You can enter a value or click on the up or down arrow to increment or decrement the displayed number. Note: If you set the Bus number to a non-zero value, the Enable alarm acknowledgement and Enable NDS diagnostics functions will not be supported.
Element	specify the ComfortVIEW system element number. You can enter a value or click on the up or down arrow to increment or decrement the displayed number.
Retries	specify the number of times that ComfortVIEW will attempt to communicate with a system element if it fails to respond. You can enter a value or click on the up or down arrow to increment or decrement the displayed number.

Table 2-7
Standard CCN Settings
Dialog Box
(continued)

Click on	To
Enable alarm acknowledger	assign ComfortVIEW to be the CCN alarm acknowledger. You must specify only one alarm acknowledger on a CCN.
Enable NDS diagnostics	enable NDS diagnostic routine polling of all system elements in a local direct connect CCN (RS-232, RS-485, or Ethernet Gateway). The routine scans the CCN bus and checks for communication and clock errors. The routine generates alarms and alerts and corresponding return-to-normal messages that you can view using the Alarm Manager application. Diagnostics are performed on all controllers in the CCN, including "shadow controllers", which are those controllers for which ComfortVIEW has no database information.
Enable Time Broadcast	specify this ComfortVIEW server to act as time broadcaster to its locally-connected CCN (a CCN connected to the server or any of its clients). ComfortVIEW will broadcast time, date, day-of-week, and holiday indication (as indicated in the Global Function Manager's Holidays Table) at the following times: twice daily — at 10 to 15 minutes past midnight and past noon, within 1 minute of a change of date or time (either automatically initiated by daylight saving or manually), on ComfortVIEW server start-up, or in response to broadcast requests originating from a locally-connected CCN (for which broadcast is enabled).

(continued)

Table 2-7
Standard CCN Settings
Dialog Box
(continued)

Click on	To
the Baud rate drop down list	specify the baud rate of the ComfortVIEW communication port. Note : The most commonly used baud rate is (9600). This field will not display if the CCN Access Definition dialog box's Method drop down list is set to CCN/Ethernet Gateway.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 2-8
Phone Number
Configuration Dialog Box

Phone Number Configuration

Phone number:

Password:

Quiet time:  minutes

Edits the CCN's phone number

Table 2-8

Phone Number
Configuration Dialog Box

Click on	To
Phone Number	enter the phone number of the remote CCN's Autodial Gateway. Up to 128 characters are allowed.
Password	enter an up to 8-character password. This password must match the password that is configured in the remote Autodial Gateway. Valid characters are: upper case A-Z, 0-9, space, hyphen (-), and comma (,).
Quiet time	specify the number of minutes after which, if no communication occurs, the Autodial Gateway automatically hangs up. You can enter a new value or click on the up or down arrow to increment or decrement the displayed number. Allowable entries: 5-255 minutes. Default: 10 minutes.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Adding/ Modifying Areas



To Add a New Area

Follow the steps below to add a new area into the ComfortVIEW database.

An area is a logical grouping of system elements within a CCN. For example, an area could be a building, a floor, a wing, or a chiller plant.

1. Display the Carrier Network Manager's System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Click on the CCN in which the new area will appear.
3. Click on *Configure* and then click on *New*.

Note: You may also perform this command by clicking on the Add New icon in the toolbar.

ComfortVIEW displays the Add New dialog box (shown in Figure 2-4). The Area button will be selected.

4. Click on *OK*.

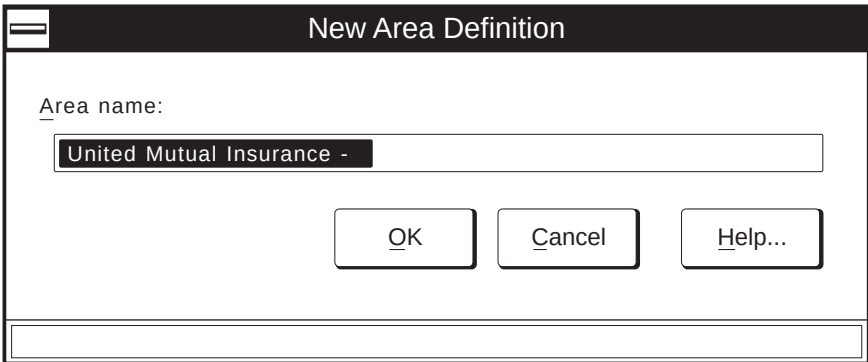
ComfortVIEW displays the New Area Definition dialog box (shown in Figure 2-9). The CCN name will be displayed in the Area name edit box.

Note: It is recommended that you append the area name to the CCN name. ComfortVIEW Alarm Manager and Report Panel applications identify alarms and points using the area name. Creating area names that consist of both the CCN and area name will assist you in identifying alarm and report points.

5. Click in the dialog box after the CCN name and enter the name of the new area in the Area name edit box. Up to 48 characters are allowed.
6. Click on *OK*.

The new area name displays in alphabetical order in the System Overview window under its associated CCN.

Figure 2-9
New Area Definition
Dialog Box



The dialog box has a title bar with a menu icon and the text "New Area Definition". Inside, there is a label "Area name:" followed by a text input field containing "United Mutual Insurance -". Below the input field are three buttons: "OK", "Cancel", and "Help...". At the bottom of the dialog is a status bar.



**To Modify an
Existing Area
Name**

Follow the steps below to modify an existing area name:

1. Display the Carrier Network Manager's System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Click on the area whose name you wish to change.
3. Click on *Configure* and then click on *Modify*.

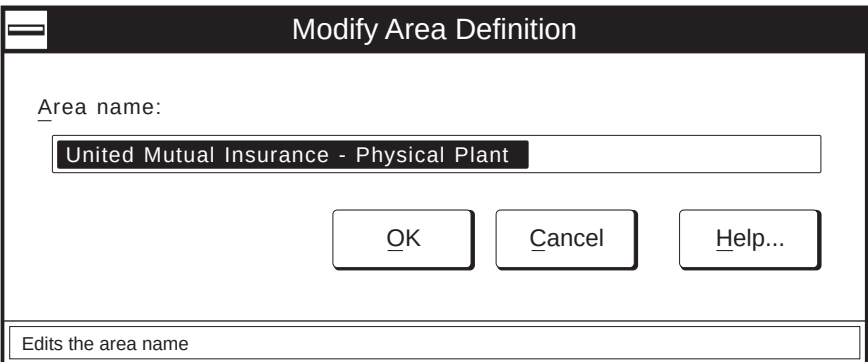
Note: You may also perform this command by clicking on the Modify icon in the toolbar.

ComfortVIEW displays the Modify Area Definition dialog box (shown in Figure 2-10).

4. Modify the Area name and click on *OK* to save your changes, or,

click on *Cancel* to exit the dialog box without saving any changes.

Figure 2-10
Modify Area Definition
Dialog Box



The dialog box has a title bar with a menu icon and the text "Modify Area Definition". Inside, there is a label "Area name:" followed by a text input field containing "United Mutual Insurance - Physical Plant". Below the input field are three buttons: "OK", "Cancel", and "Help...". At the bottom of the dialog is a status bar with the text "Edits the area name".

Deleting CCNs and Areas

Follow the steps below to delete a CCN or area from the ComfortVIEW database:

Note: Deleting a CCN also deletes all areas and controllers assigned to the CCN.



To Delete a CCN

1. Display the Carrier Network Manager's System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Click on the CCN to be deleted.
3. Click on the *Configure* menu item and then click on *Delete*.

Note: You may also perform this command by clicking on the Delete icon in the toolbar.

ComfortVIEW displays a dialog box asking for confirmation before deleting the CCN.

4. Click on *Yes* to initiate the deletion or click on *No* to prevent the deletion from taking place.

If you click on *Yes*, ComfortVIEW prompts you again before deleting the CCN.

5. Click on *Yes* to complete the deletion or click on *No* to prevent the deletion from taking place.

Note: If ComfortVIEW displays the message *CCN Is In Use*, you have attempted to delete a CCN containing a controller that is currently being accessed by you or another ComfortVIEW operator. Attempt the deletion again when the controller is available.



To Delete an Area

Follow the steps below to delete an area:

Note: Deleting an area also deletes all controllers assigned to the area.

1. Display the Carrier Network Manager's System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Click on the area to be deleted.
3. Click on the *Configure* menu item and then click on *Delete*.

Note: You may also perform this command by clicking on the Delete icon in the toolbar.

ComfortVIEW displays a dialog box asking for confirmation before deleting the area.

4. Click on *Yes* to initiate the deletion or click on *No* to prevent the deletion from taking place.

If you click on *Yes*, ComfortVIEW prompts you again before deleting the area.

5. Click on *Yes* or *No*.

Displaying the Controller List

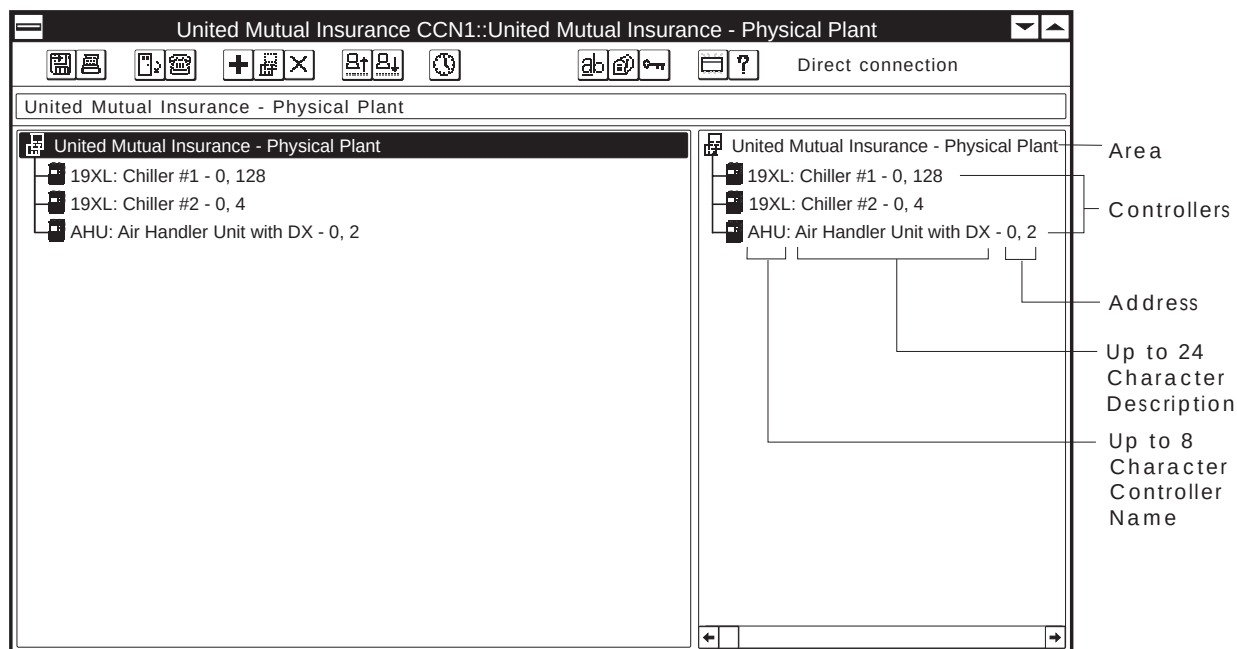
Controllers are CCN system elements with addresses, status display, and configuration tables. Controllers perform the actual HVAC monitoring and control operations. The Carrier Comfort Network supports several types of controllers. These include PICs, FIDs, and Comfort Controllers, System Managers, and CCN Options.

Follow the steps below to display the list of controllers in a selected area:

1. Display the System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Double click on an area to view the controllers in the area.

ComfortVIEW displays a split-screen Controller List window similar to the one shown in Figure 2-11. The window has a bar that splits it into two sections that each contain an identical list of the controllers in this area. This split window will aid you in getting to the controller information you want by way of a visual stepping stone. Included for each controller is its eight character name, 24 character description, and address.

Figure 2-11
Controller List Window



Displaying a Controller's Status Display Table or WorkSPACE



Sorting the Controller List



While viewing the controller list you can use the *Windows* menu's *Jump to Table/WorkSPACE* command to display a selected system element's status display table or linked WorkSPACE. For more information on this command, refer to the menu command summary at the end of this Carrier Network Manager chapter.

You can sort the presentation of the controller list alphabetically by controller name, numerically by ascending address, or by sort key number. By default on launching the Carrier Network Manager application, the controller list appears sorted by sort key.

1. Click on the *Options* menu item and then click on *Sort*.

Note: You may also sort the Controller List by clicking on the Sort by Name, Sort by Address, or Sort by Sort Key icons in the toolbar.

2. Perform one of the following actions:

- Click on *Name* to sort the list alphabetically by name.
- Click on *Address* to sort it in ascending numerical order by address.
- Click on *Sort* to sort the list in ascending numerical order by sort key.

Note: Sort keys are assigned when you add controllers to the ComfortVIEW database. For further information on sort keys, refer to the Adding/Modifying Controllers section of this chapter.

The Controller List window re-displays sorted accordingly. When sorted alphabetically, controller names beginning with numbers appear at the beginning of the list.

Moving the Split Bar

You can move the window's split bar so that you have more room to display information in either section.

1. Position the mouse on the split bar.

The mouse pointer turns into a double bar with two arrows.

2. Press and hold down the mouse button, and move the mouse left or right to re-position the split bar.
3. Release the mouse button when the split bar is in the desired location.

You can also resize and move the Controller List window. For more information about ComfortVIEW windows, see Interpreting ComfortVIEW Screens in the Introduction of this manual.

Adding/ Modifying Controllers



**To Add a New
Controller**

Follow the steps below to add a controller (CCN system element) to the ComfortVIEW database.

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Click on *Configure* and then click on *New*.

Note: You may also perform this command by clicking on the Add New icon in the toolbar.

ComfortVIEW displays the CCN Element Definition dialog box (shown in Figure 2-12).

3. Enter the Element name, description, address (bus and element number), and sort key for the new controller. Specify whether this controller should be assigned a high priority NDS diagnostic scan rate.

Refer to Figure 2-12 and Table 2-12 for instructions on using this dialog box.

4. Select the action that will add the controller's configuration tables by clicking on one of the following:
 - Upload
 - Copy from
 - Import from

Refer to Table 2-12 for information on each of these functions.

5. After entering all information, click on *OK*.

The new controller can be accessed when the *Ready for Use* message is displayed. Initially, the controller will appear dimmed in the controller list.

6. Click on the *Window* menu item and then click on *Refresh* to activate it.

Figure 2-12
CCN Element Definition
Dialog Box

CCN Element Definition

Element name:

Element description:

Bus:

Element:

Sort key:

☐ High priority element for NDS diagnostics

☒ Upload

☐ Copy from:

☐ Import from:

Table 2-12
CCN Element Definition
Dialog Box

Click on	To
the Element name edit box	enter the name of the new controller. The name can consist of up to eight characters.
the Element description edit box	enter the description for the controller. The description can consist of up to 24 characters.
the Bus: edit box	specify the controller's bus number (0 to 239). You can also click on the up or down arrow to increment or decrement the displayed value.
the Element: edit box	specify the element number (1 to 239). You can also click on the up or down arrow to increment or decrement the displayed value.
the Sort key: edit box	specify a sort key number for this controller (1 to 255). Sort keys give you the capability to customize the order of your controller list. A controller with a sort key of 1 appears before a controller with a sort key of 2, and so on. Assigning a controller a sort key of 255 causes it to appear at the end of the controller list. The default sort key number is 1. For instructions on sorting the presentation of the controller list, refer to <i>Sorting the Controller List</i> , which appears earlier in the <i>Displaying the Controller List</i> section of this chapter.
High priority element for NDS diagnostics	specify whether this element should be assigned a high priority NDS diagnostic routine scan rate (diagnostic polling takes place every 60 mins versus every 6 hours).

(continued)

Table 2-12
CCN Element Definition
Dialog Box
(continued)

Click on	To
Upload	copy all configuration tables from the actual CCN controller to the ComfortVIEW database.
Copy from:	duplicate the configuration tables from another similar controller. Click on the button to the right of the Copy from: edit box. ComfortVIEW displays the Areas dialog box. Refer to Figure 2-13 and Table 2-13 for instructions on using this dialog box. Click on the area containing the controller whose configuration you wish to copy and then click on <i>OK</i>. ComfortVIEW now displays the CCN Elements dialog box (shown in Figure 2-14 and Table 2-14). Click on the controller whose configuration tables you wish to copy and then click on <i>OK</i>. ComfortVIEW copies all configuration tables from the selected controller to the controller you are adding.
Import from:	copy the configuration tables to the ComfortVIEW database from a .CWX file that was created using the Export function. This method would typically be used by a Carrier representative during off-line preparation of a ComfortVIEW database. Either enter the file name (with extension .CWX)

Figure 2-13
Areas Dialog Box

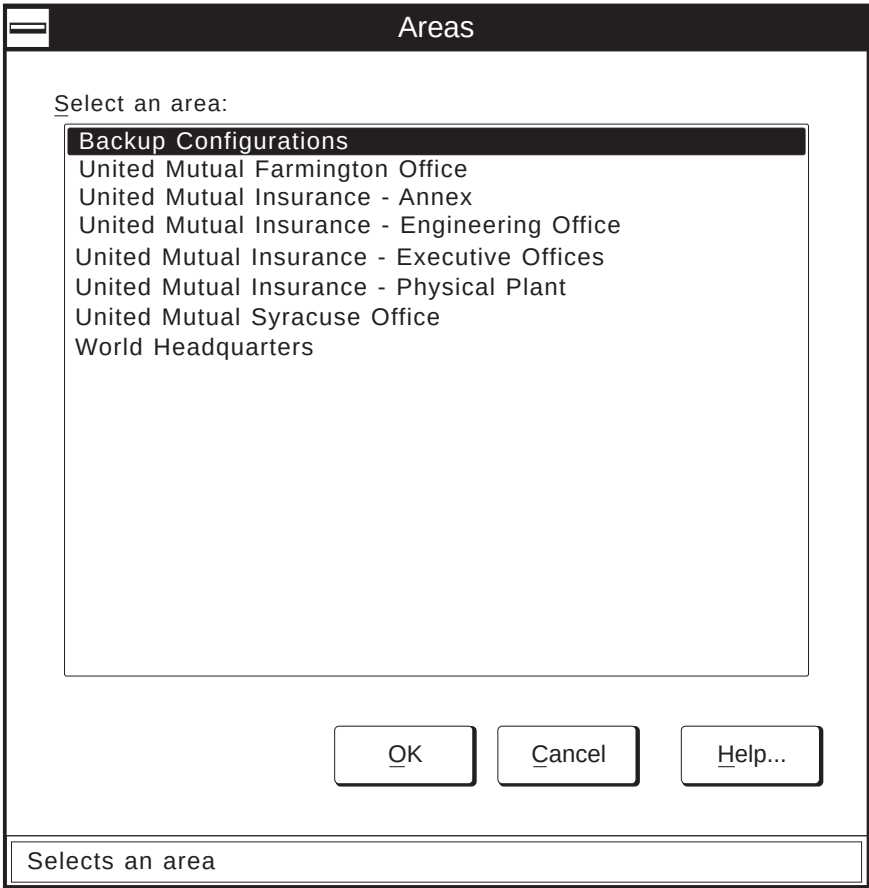


Table 2-13
Areas Dialog Box

Click on	To
the Select an area: list	with the appropriate path or click on the button to the right of the Import from edit box and select the file from the File Open dialog box. select the area containing the controller whose tables you wish to copy.
OK	close the dialog box and save the changes made. ComfortVIEW displays the CCN Elements Dialog Box. Refer to Figure 2-14 and Table 2-14 for instructions on using this dialog box.

(continued)

Table 2-13
Areas Dialog Box
(continued)

Click on	To
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 2-14
CCN Elements Dialog Box

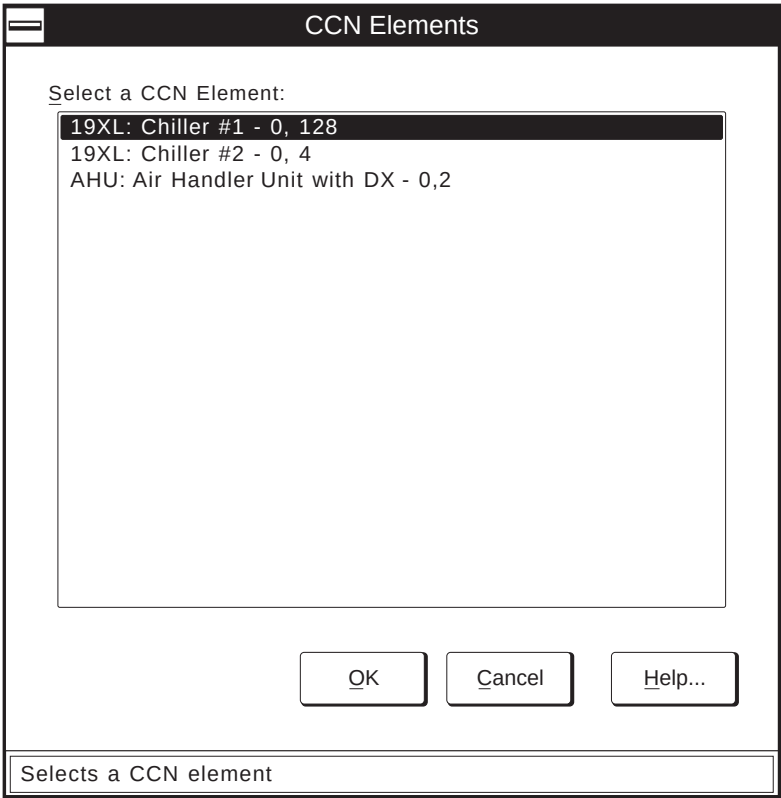


Table 2-14
CCN Elements Dialog Box

Click on	To
the Select a CCN Element: list	select the element whose tables you wish to copy.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.



To Modify an Existing Controller's Name or Sort Key

Follow the steps below to modify an existing controller name, description, or sort key:

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Click on the controller whose name you wish to change.
3. Click on *Configure* and then click on *Modify*.

Note: You may also perform this command by clicking on the Modify icon in the toolbar.

ComfortVIEW displays the CCN Element Definition dialog box (shown in Figure 2-15).

4. If desired, modify the following information for the selected controller:
 - Element name
 - Element description
 - Sort key
 - High priority NDS element
- Refer to Figure 2-15 and Table 2-15 for instructions on using this dialog box.
5. After modifying the desired information, click on *OK* to close the dialog box and save your modifications, or click on *Cancel* to exit the box and restore the previous settings.

Figure 2-15
CCN Element Definition
Dialog Box

Table 2-15
CCN Element Definition
Dialog Box

Click on	To
the Element name edit box	modify the controller name. The name can consist of up to eight characters.
the Element description edit box	modify the controller description. The description can consist of up to 24 characters.
the Sort key: edit box	specify a sort key number for this controller (1 to 255). Sort keys give you the capability to customize the order of your controller list. A controller with a sort key of 1 appears before a controller with a sort key of 2, and so on. Assigning a controller a

(continued)

Table 2-15
CCN Element Definition
Dialog Box
(continued)

Click on	To
	sort key of 255 causes it to appear at the end of the controller list. The default sort key number is 1. For instructions on sorting the presentation of the controller list, refer to <i>Sorting the Controller List</i> , which appears earlier in the <i>Displaying the Controller List</i> section of this chapter.
High priority element for NDS diagnostics	specify whether this element should be assigned a high priority NDS diagnostic routine scan rate (diagnostic polling takes place every 60 mins versus every 6 hours).
Linked WorkSPACE	display the WorkSPACES dialog box from which you can select a WorkSPACE to which to link this system element. The selected WorkSPACE will be displayed when you use the Window menu's <i>Jump to Table/WorkSPACE</i> command, which is available from the Bus Scan or System Summary window, CCN Option Table window, or Controller List. You can also display this WorkSPACE from the System Summary, Basic, or Detailed Bus Scan window by double clicking on a system element.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.



Deleting Controllers

Follow the steps below to delete a controller. If you remove a controller that contains CCN Options, ComfortVIEW deletes the options from the Options List that is displayed using the CCN Options command in the CCN Tools menu. If any option's configuration uses points from the deleted controller, modify the configuration of the affected option accordingly.

1. Display the Controller List window.
2. Click on the controller you wish to delete.

Note: ComfortVIEW allows you to delete multiple controllers. Use the Windows-standard mouse or keyboard techniques to select multiple controllers. You can, however, only select multiple controllers from the right side of the Controller List window.

3. Click on the *Configure* menu item and then click on *Delete*.

Note: You may also perform this command by clicking on the Delete icon in the toolbar.

ComfortVIEW displays a dialog box asking for confirmation before deleting the controller.

4. Click on *Yes* or *No*. If you have selected multiple controllers and wish to delete all, click on *Yes to All*.

Note: If ComfortVIEW displays the message *Controller Is In Use*, you have attempted to delete a controller that is currently being accessed by you or another ComfortVIEW operator. Attempt the delete again when the controller is available.

Viewing Status Display and Maintenance Tables

Status display and maintenance tables contain real-time data for all controller points. Follow the steps below to display a controller's status display or maintenance tables. For instructions on modifying (forcing) status display or maintenance table values, refer to the Modifying Status Display or Maintenance Table Values section of this chapter.

1. Display the System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Display the controller list. If necessary, follow the instructions listed under Displaying the Controller List.
3. Double click on a controller to view its table categories.
4. Double click on *Status Display* to view status display tables or on *Maintenance Display* to view maintenance tables.
5. Double click on the table you wish to view.

Certain table categories may contain additional sub-categories. If you select a table category of this type, another list of sub-categories will be shown, and you should click on a sub-category from this list. Refer to Figure 2-16.

Sample status display and maintenance tables appear in the following figures.

Table Jumps from Status Display and Maintenance Tables

The Carrier Network Manager provides you with a short cut to display and modify a selected point's associated configuration, maintenance, time schedule, or setpoint table while you are viewing status display or maintenance tables. To display a point's associated tables, click on the *Configure* menu item followed by clicking on *Configuration*, *Maintenance*, *Time Schedule*, or *Setpoint*.

Reference Jumps from Comfort Controller Status Display Tables

While you are viewing Comfort Controller status display tables, the Carrier Network Manager provides you with a means to list the names of all Comfort Controller objects that are using a selected status display point in their configuration. To display a point's associated objects, click on the *Configure* menu item followed by clicking on *Reference tables*. If desired, you can then display a selected object's associated configuration or maintenance table. These reference jumps are also available from magenta-highlighted Comfort Controller maintenance table points.

Figure 2-16
Sample Controller List
Window

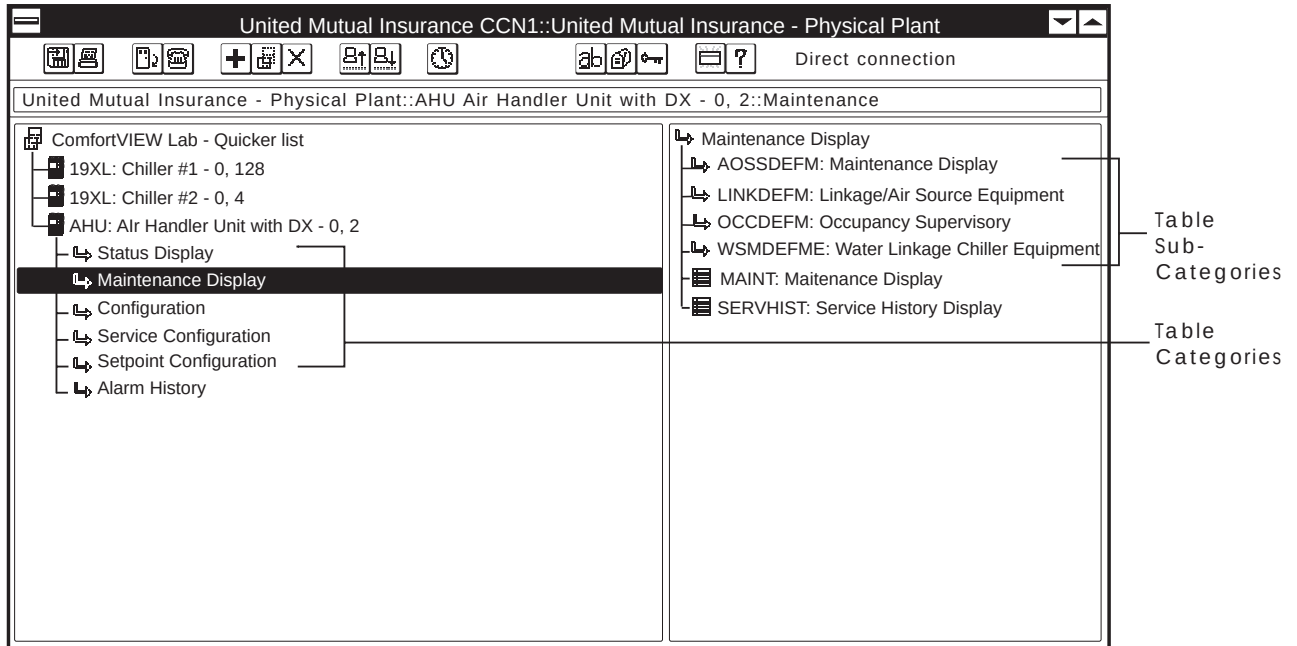


Figure 2-17
Sample Status Display
Table

The screenshot shows the 'Physical Plant::AHU::BASE UNIT: Status Display' window. The interface includes a menu bar (File, Edit, Configure, Administration, Options, Window, Help) and a toolbar with various icons for file operations and system control. Below the toolbar are two empty input fields. The main area contains a table with 7 columns: Description, Value, Units, Status, Force, Name, and Notes.

Description	Value	Units	Status	Force	Name	Notes
Space Temperature	74.5	°F			SPT	
Supply Air Temperature	-10.0	°F	Sensor failure		SAT	Sensor Not Installed
Return Air Temperature	74.1	°F			RAT	
Outside Air Temperature	55.0	°F		Supervisor	OAT	
Static Pressure	1.3	in H ₂ O			SP	
Relative Humidity	36.0	%			RH	
Outside Air Rel Humidity	44.1	%		Supervisor	OARH	
Freeze Stat	Normal				FRZ	
Filter Status	Dirty		Alarm		FLTS	
Enthalpy Switch	High				ENT	
Supply Fan Status	Off				SFS	
Supply Fan Relay	On				SF	
Heat Interlock Relay	Off				HIR	
Inlet Guide Vanes	0.0	%			IGV	
Mixed Air Damper	0.0	%			MIXD	
Heating Coil Valve	0.0	%			HCV	
Cooling Coil Valve	0.0	%			CCV	

Up to
24 Character
Description

Value	Units
-------	-------

Communication Status

Force
Status

Point
Name

Operator Notes

Figure 2-18
Sample Maintenance
Table

United Mutual Insurance - Physical Plant::AHU::MAINT: Maintenance Display							
File Edit Configure Administration Options Window Help							
       Direct connection							
Description	Value	Units	Status	Force	Name	Notes	
Heating Coil master ref.	40.0	°F			HCMR		
Heating Coil sub. ref.	40.0	°F			HCSR		
Heating Coil integ clamp	3				HCIC		
Cooling master ref.	50.0	°F			CCMR		
Cooling sub. ref.	150.0	°F			CCSR		
Cooling integ clamp	3				CCIC		
IG Vanes master ref.	0.0	in H2O			IGVMR		
IG Vanes submaster ref.	0.0	in H2O			IGVSR		
IG Vanes integ clamp	0				IGVIC		
Damper setpoint	45	°F			DPSP		
Mix Air Damp master ref.	59.0	°F			MIXDMR		
Mix Air Damp sub. ref.	120.0	°F			MIXDSR		
Mix Air Damp integ clamp	0				MIXDIC		
Outside Air Enthalpy	17.6				OAE		
Return Air Enthalpy	24.8				RAE		
Electric heat master ref.	0.0	°F			EHMR		
Electric heat sub. ref.	0.0	°F			EHSR		

**Status Display and
Maintenance Table
Format**

The table window is similar to most popular spreadsheet application worksheets in that it consists of a rectangular grid of columns and rows. The intersection of each column and row is a cell, the unit in which data is stored. The worksheet includes the up to 24 character description, value, units, eight character point name, alarm status, communication status, and force status for each point. It also includes a notes column where you can enter an optional up to 48 character note.

The appearance of one of the following messages in a point’s status column indicates the following:

Table 2-19
Message Descriptions

Message	Meaning
Sensor failure	the point is attached to a failed sensor
Software error	an internal failure has occurred
Alarm	the point is in alarm or alert
Limit exceeded	the point’s high or low limit has been exceeded
Comm failure	a communication failure has occurred
Port failure	ComfortVIEW cannot communicate with the computer’s communication port
Port busy	ComfortVIEW cannot communicate with the computer’s communication port

If a point is currently forced, one of the following abbreviations will appear in the force column:

Table 2-20
Abbreviation Descriptions

Abbreviation	Meaning
BEST	forced by BEST or BEST++ program
Control	forced by a CCN Option (PICs)
Fire	forced by fire override (PICs)
Interlock	forced by Permissive Interlock
Loadshed	forced by the Loadshed Option
Minimum-Off	forced by Loadshed minimum offtime (PICs)
Remote Monitor	forced by a remote ComfortVIEW (PICs)
NTFC	forced by Night Time Free Cooling
Owners	forced by the UT203 Owner's Module
Safety	forced by internal safety override (PICs)
Service	forced by the Network Service Tool (PICs)
Submaster	forced by a submaster reference force
Supervisor	forced by ComfortVIEW
Temp	forced by temperature override

If desired, you can create customized displays of point data. You can customize the look of your status display tables by doing such things as grouping similar points from different controllers together, changing the order in which points are displayed, etc. You do this by creating a ViewSPACE in ComfortVIEW WorkSPACE Manager application. Refer to the WorkSPACE Manager chapter of this manual for instructions.

Moving Around a Worksheet

The table below lists the keys that you can use to move around in a worksheet. Keys that must be pressed at the same time are separated with a plus sign. You can also use most keyboard shortcuts that are used in most popular spreadsheet applications.

Table 2-21
ComfortVIEW Worksheet
Keys

Press	To
the up, down, right or left arrow key	scroll one row up or down, or one column left or right
Page Up	scroll up one window
Page Down	scroll down one window
Ctrl+Page Up	scroll left one window
Ctrl+Page Down	scroll right one window
Home	move to the cell in the upper left corner of the window
End	move to the cell in the lower right corner of the window

Adjusting and Hiding Worksheet Columns and Rows

To Adjust a Column's Width: Drag the line to the right of the column heading. Clicking on the *Options* menu item and then clicking on *Best fit* gives you the ability to quickly adjust column widths to the best fit for the longer entry in each column.



To Hide a Column or Row:

1. Click on the header of the column or on the box to the left of the row you wish to hide.
2. Click on the *Options* menu item and then click on *Hide*.

Note: You may also perform this command by clicking on the Hide icon in the toolbar.

To Make Row Hides Permanent: Click on the *Configure* menu item and then click on *Save*. The row will not appear the next time you view this table.

To Make Column Hides Permanent: Click on the *Options* menu item and then click on *Save settings on exit*. A checkmark (✓) appears before the command to indicate that it is enabled. The column will not appear the next time you view this table.

Note: Row hides apply to specific tables and are hidden for all ComfortVIEW operators. Column hides apply to all tables in all controllers and are hidden for individual ComfortVIEW operators.

To Show Hidden Columns or Rows:



1. Click on the *Options* menu item and then click on *Show*.

Note: You may also perform this command by clicking on the Show icon in the toolbar.

2. Select the rows or columns to add from the Show Rows/Columns dialog box and click on *OK*.

Displaying Point IDs

If desired, you can display each point's item reference number along with the point name. This number is used when linking status display table data to other PC applications, such as commercially-available spreadsheet programs. Refer to the Sharing ComfortVIEW Dynamic Data Applications (DDE) section of this chapter for instructions on displaying Point IDs.

Trend Wizard



While viewing a status display or maintenance table, you can select any point and then click on the trend wizard toolbar icon (shown at left) to quickly and easily set up a trend of that point.

1. In the Trend Wizard dialog box, enter the new trend name, and then either click on *Finish* if you are satisfied with the trend's default 15 second scan rate, or click on *Modify* to display the Modify Current Trend dialog box and add other points to the same trend, or change the default scan rate. Refer to Table and Figure 4-18 in this manual's WorkSPACE Manager chapter for instructions on using this dialog box. Clicking on *Finish* saves the trend for later use with the WorkSPACE Manager application.

Note: To view and run the newly-created trend, enter the WorkSPACE Manager application. Then, use the *File* menu's *Open ViewSPACE/trend* command. To associate and save the trend in a WorkSPACE, enter design mode, open a WorkSPACE, open the trend, and then save the WorkSPACE.

Alarm Wizard



While viewing a status display or maintenance table, you can select any point and then click on the Alarm Wizard toolbar icon to quickly and easily configure an alarm for the selected point. Note that wizard operation will differ, depending on the type of point and CCN system element. For Comfort Controllers and UT203 FIDs, the wizard first guides you through point alarm creation and configuration, and then ComfortVIEW custom message creation. For all other CCN system elements, the wizard provides ComfortVIEW custom alarm creation only. Follow the steps as presented.

Report Wizard



While viewing a status display or maintenance table, you can click on the Report Wizard toolbar icon and quickly and easily add a new consumable, runtime, or history report definition to the ComfortVIEW system. Follow the steps presented:

1. Select the report type.
2. Specify the report name and description.
3. Select the points to be included in the report. Initially, the list of points presented will include those that were selected from the ViewSPACE or trend.
4. Select a specific Data Collection Module in which to allocate the Data Collection Tables. By default, the wizard locates an available module on the current CCN, but you also have the ability to identify a specific module, if desired.
5. From the next dialog box, click on *Report Options* to view or modify the default settings, if desired.

Viewing Configuration Tables

Configuration tables are used to specify operating parameters for control applications.

Follow the steps below to display a controller's configuration table. For instructions on modifying configuration table values, refer to the Modifying Configuration Table Values section of this chapter.

1. Display the System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.

2. Display the controller list. If necessary, follow the instructions listed under Displaying the Controller List.
3. Double click on a controller to view its table categories.
4. Double click on one of the following table types:
 - *Configuration* to display a configuration table
 - *Service Configuration* to display a service configuration table
 - *Setpoint Configuration* to display a setpoint configuration table.

ComfortVIEW displays the table names or sub-categories in the right half of the window.

5. Double click on the table or category you wish to view.

Certain table categories may contain additional sub-categories. If you select a table category of this type, another list of sub-categories will be shown, and you should click on a sub-category from this list.

A sample configuration table appears in Figure 2-22.

Figure 2-22
Sample Configuration
Table

Description	Value	Units	Name	Notes
Off-Network Location	Farmington		OFFNETLO	
Password Enable	YES		PSWDEN	
Standard Password	A2F		STDPSWD	

24-character Description
Value
Units
8-character Name
Operator Notes

Configuration Table Format

Like status display and maintenance tables, configuration table windows are similar to most popular spreadsheet application worksheets in that they consist of a rectangular grid of columns and rows. The intersection of each column and row is a cell, the unit in which data is stored. The worksheets include the 24 character description, value, units, eight character point name, and a notes column where you can enter an optional up to 48 character note.

You can move around the worksheet, adjust, hide and show columns and rows, and modify point descriptions in the same manner as when displaying status display or maintenance tables. For instructions, refer to Moving Around a Worksheet, Adjusting and Hiding Worksheet Columns and Rows, and Modifying Point Descriptions.

While you are viewing a setpoint or occupancy configuration table, you can select the Window menu's Graphical command to display the table in a graphical format. Refer to the Window menu explanation that appears in this chapter's Carrier Network Manager Command Summary section for further information on this display format.

<< and >> Buttons

Certain configuration tables contain multiple instances of table data. For example, the Autodial Gateway's Secured Password Table. If this is the case, the << and >> buttons display below the toolbar at the beginning of the window's status bar. Click on << to display the previous block of data or click on >> to display the next block of data. Refer to Figure 2-22.

Viewing UT203 FID Service Configuration Tables

Use of a UT203 FID service configuration table is not compatible with use of any other FID table. Concurrent use of the service configuration table with any other UT203 FID table (by you or any ComfortVIEW operator) will result in the display of a *Controller in use* or *Controller currently locked* message.

Table Jumps from Configuration Tables

The Carrier Network Manager provides you with a short cut to display and modify a selected configuration entry's associated configuration, maintenance, time schedule, or setpoint table while you are viewing a configuration table. To display a point's associated tables, click on the *Configure* menu item followed by clicking on *Configuration*, *Maintenance*, *Time Schedule*, or *Setpoint*. ComfortVIEW will display the Table Jump Selection dialog box, which lists the controller's configuration, maintenance, time, or setpoint schedule tables. If you select the *Configuration* or *Mainte-*

nance command from a magenta-shaded cell, ComfortVIEW will jump directly to the configuration entry's associated configuration or maintenance table.

Comfort Controller Reference Jumps

While you are viewing Comfort Controller configuration tables, the Carrier Network Manager provides you with a means to list the names of all Comfort Controller objects that are using a selected configuration point in their configuration. This feature is only available for magenta-highlighted configuration points. To display a point's associated objects, click on the *Configure* menu item followed by clicking on *Reference tables*. If desired, you can then display a selected object's associated configuration or maintenance table.

Viewing Alarm History Tables

Alarm history tables are used to display a controller's alarm history data. These tables exist in certain CCN controllers (such as Comfort Controllers and some PICs).

Follow the steps below to display a controller's alarm history tables.

1. Display the System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Display the controller list. If necessary, follow the instructions listed under Displaying the Controller List.
3. Double click on a controller to view the table categories.
4. Double click on *Alarm History*.

ComfortVIEW displays the table name *ALRMHIST* in the right half of the window.

5. Double click on the *ALRMHIST* Table.

ComfortVIEW reads the controller's alarm history data and displays the Alarm History dialog box. Clicking on the *Refresh* button retrieves and displays the latest alarm data, Clicking on *Close* closes the dialog box.

Note: If the selected controller does not contain alarm history tables, the message *This CCN element does not support the Alarm History feature* will be displayed.

Polling a CCN Bus

ComfortVIEW's Bus Services function examines a CCN Bus and produces a list of the bus's system elements and snapshot of activity. You can use the Bus Services command to perform an update poll or cold call, or to produce a basic or detailed bus scan. For CCS thermostats and ComfortID boxes, you can also produce a system summary, which searches for and produces a system summary of all the controllers that are part of a selected system.

Follow the instructions below to poll a CCN Bus:

1. Display the Carrier Network Manager's System Overview window and expand it to display the database's CCNs. If necessary, follow the instructions listed previously in this chapter under Accessing the Carrier Network Manager.
2. Click on the CCN or area that you wish to examine.
3. Click on the *CCN Tools* menu item and then click on *Bus Services*.



Note: You may also perform this command by clicking on the Bus Services toolbar button shown at left.

ComfortVIEW displays the Bus Services dialog box shown in Figure 2-22a.

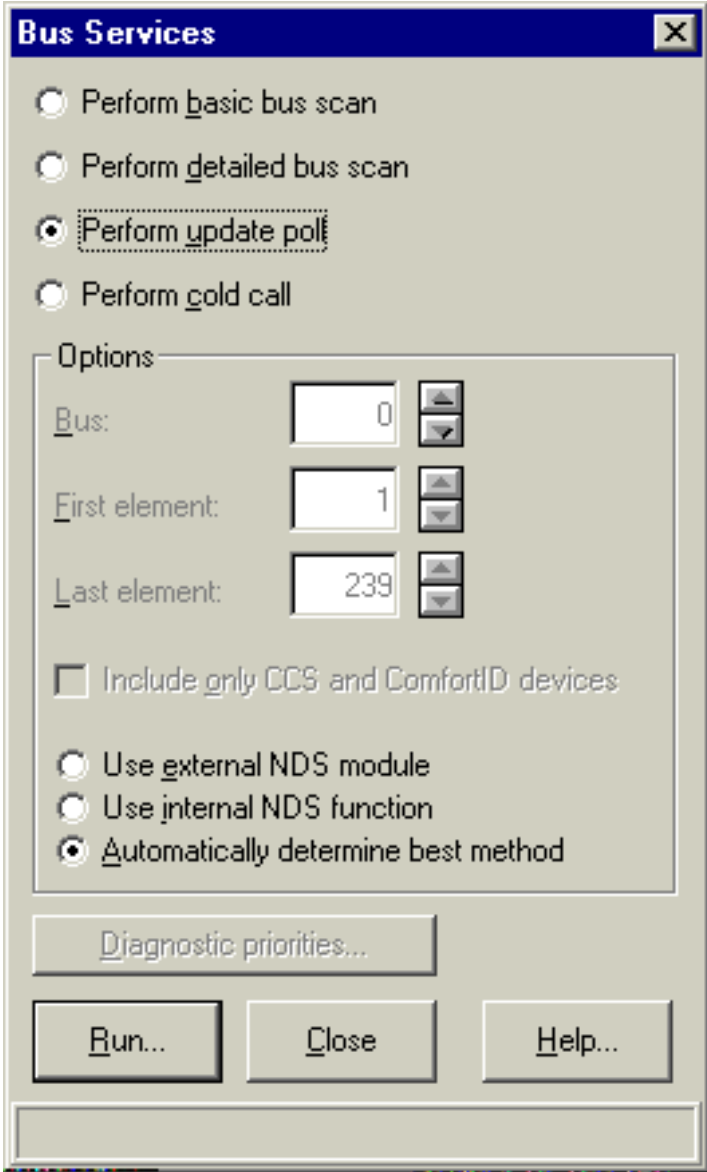
4. Select the activity that you wish to perform (basic or detailed bus scan, update poll, or cold call.)

Different dialog box options will then become available, depending on the activity you have selected. For example, when performing an update poll or cold call, you can specify whether to use ComfortVIEW's internal NDS function, an external NDS Module, or an automatically selected NDS method. When performing a bus scan, you can specify the bus number, range of elements, and whether to include only CCS and ComfortID devices.

5. Click on *Run* to close the Bus Services dialog box and perform the specified activity, or on *Close* to exit the dialog box without performing any activity.

Refer to Figure and Table 2-22a for additional information on the options in this dialog box and Figures 2-22b, c, and d for sample basic, detailed, and system summary bus scan displays.

Figure 2-22a
Bus Services Dialog Box



The image shows a Windows-style dialog box titled "Bus Services". It contains four radio buttons for selecting a service: "Perform basic bus scan", "Perform detailed bus scan", "Perform update poll" (which is selected), and "Perform gold call". Below these is an "Options" section containing three input fields with spinners: "Bus:" (value 0), "First element:" (value 1), and "Last element:" (value 239). There is also an unchecked checkbox labeled "Include only CCS and ComfortID devices". At the bottom of the options section are three radio buttons: "Use external NDS module", "Use internal NDS function", and "Automatically determine best method" (which is selected). Below the options section is a button labeled "Diagnostic priorities...". At the very bottom are three buttons: "Run...", "Close", and "Help...".

Bus Services

☐ Perform basic bus scan

☐ Perform detailed bus scan

☒ Perform update poll

☐ Perform gold call

Options

Bus:

First element:

Last element:

☐ Include only CCS and ComfortID devices

☐ Use external NDS module

☐ Use internal NDS function

☒ Automatically determine best method

Table 2-22a
Bus Services Dialog Box

Click on	To
Perform basic bus scan	examine the specified CCN, bus, and range of system elements and produce a Basic Bus Scan display. Click on <i>Run</i> to proceed with the scan. An activity indicator will be displayed during the scan. On completion, the Basic Bus Scan window will be displayed along with an accompanying menu bar. Refer to Figure 2-22b. Menu commands allow you to print, display status display tables and WorkSPACES, add system elements to the ComfortVIEW database, and copy configuration. You will also be able to use the File menu's System Summary command to search for and produce a list of all CCS and ComfortID monitor or master thermostats, and associated zone and bypass controllers. Refer to the Carrier Network Manager Command Summary at the end of this chapter for a description of each Bus Scan window command.
Perform detailed bus scan	examine the specified CCN, bus, and system element range and produce a Detailed Bus Scan display. Click on <i>Run</i> to proceed with the scan. An activity indicator will be displayed during the scan. On completion, the Detailed Bus Scan window will be displayed along with an accompanying menu bar. Refer to Figure 2-22c. All basic bus scan functions can also be performed from the Detailed bus Scan window. A complete description of each Bus Scan window menu command can be found under Carrier Network Manager Command Summary at the end of this chapter.

Table 2-22a
Bus Services Dialog Box
(continued)

Click on	To
Perform update poll	update the Network Directory Services (NDS) system element directory. Performing an update poll causes NDS to poll the primary CCN Communication Bus and identify all system elements on it. You should perform an Update poll to update the NDS Module (or, if using the internal NDS function, ComfortVIEW) before performing a Cold Call. After selecting <i>Perform update poll</i> , you must then select an NDS method: external NDS Module, internal NDS function, or allow ComfortVIEW to automatically determine the best method (external if available, otherwise internal). Click on <i>Run</i> to proceed. A message will be displayed to indicate successful completion of the update poll.
Perform cold call	obtain a list of all system elements on the selected CCN. Performing a cold call causes ComfortVIEW to read the NDS system element directory and to update the Controller List window with a list of all system elements and their addresses. You would typically use cold call after ComfortVIEW installation or after connecting to a remote CCN using the Access Menu's Connect command. Performing a cold call determines the system elements that are on a remote CCN (a CCN for which ComfortVIEW has no data-base.) From the information obtained from a cold call you can upload, import, or copy controllers to create

(continued)

Table 2-22a
Bus Services Dialog Box
(continued)

Click on	To
	the database for your CCN. After selecting <i>Perform cold call</i> you must select the NDS method (see update poll above) and then click on <i>Run</i>. The CCN Areas dialog box will be displayed (if in Step 2 an area was not selected). Select an area in which to place the system elements and click on <i>OK</i>. ComfortVIEW will present a confirmation dialog box asking if you wish to perform an update poll. Typically, before performing a cold call, you should update the NDS system element directory. Click on <i>Yes</i> to do so. An activity indicator displays during the update poll and cold call processes. On completion of the cold call, the Controller List window will be displayed. The names and addresses of all controllers in the NDS system element directory will be displayed in the Controller List. Note: Cold call does not update the ComfortVIEW database. It only includes the name and address of controllers in the Controller List window. Controllers for which ComfortVIEW has no database information will appear dimmed. You must use the Configure menu's Upload, Import, or Copy commands to add the controllers to the database.
Bus	enter the number of the CCN Bus for which you wish to perform a basic or detailed bus scan.

(continued)

Table 2-22a
Bus Services Dialog Box
(continued)

Click on	To
First element	enter the lowest system element address on the specified bus. The bus scan will examine those system elements beginning with this element number up to and ending with the element number specified in the Last element.
Last element	enter the highest system element address on the specified bus.
Include only CCS and ComfortID devices	scan only CCS and ComfortID system elements versus all CCN system elements on the specified bus.
Use external NDS Module	perform the update poll or cold call using an NDS Module that is physically connected to the CCN Bus.
Use internal NDS function	perform the update poll or cold call using ComfortVIEW's internal NDS function.
Automatically determine best method	use an external NDS Module, if found, to perform the update poll. If an external NDS Module is not found, ComfortVIEW will use its internal NDS function.
Diagnostic priorities	if desired, assign a high priority NDS diagnostic routine scan rate to CCN system elements that are displayed in the recently performed cold call's Controller List. This will cause ComfortVIEW internal diagnostic polling to take place every 60 minutes

(continued)

Table 2-22a
Bus Services Dialog Box
(continued)

Click on	To
	and whenever ComfortVIEW is started (i.e. during PC boot) versus every 6 hours. ComfortVIEW will display the Diagnostic Priorities dialog box. Those elements that are currently selected for high priority scanning will be highlighted. Select any other elements and click on <i>OK</i> . The Diagnostic routine scans all CCN Buses and checks for communication and clock errors. The routine generates alarms and alerts that you can view using the Alarm Manager application.
Run	close the dialog box and perform the specified operation (update poll, cold call, or bus scan.)
Close	exit the dialog box without performing any activity. Any changes made are not saved.
Help	display help information.

Figure 2-22b
Sample Basic Bus Scan

Name	Description	Adr	Type	Ver	Err	Mode
33CSZC	Zone Controller	2	033ZC	02.0	N	Cool
33CSVM	VVT Monitor	3	033VM	03.0	Y	Cool
33CSZC	Zone Controller	5	033PI	01.0	N	Cool
33CSZC	Zone Controller	6	033PI	02.0	N	Cool
33CSBC	Bypass Controller	7	033BC	03.0	N	N/A
33CSVM	VVT Monitor	8	033VM	03.0	N	Cool
33CSVM	VVT Monitor	33	033VM	03.0	Y	Cool
33CSZC	Zone Controller	34	033PI	02.0	Y	Cool
33CSVM	VVT Monitor	48	033VM	03.0	Y	Cool
33CSZC	Zone Controller	49	033PI	02.0	Y	Cool
33CSVM	VVT Monitor	60	033VM	03.0	Y	Heat
33CSVM	VVT Monitor	95	033VM	03.0	Y	Cool
CC6400	Comfort Controller	101	064CC	01.4		

Scan time: 12:02:30 11-14-2000

Basic Bus Scan

The Basic Bus Scan window shown above displays name, description, address (system element number), type and version data for all system elements identified on the specified bus. For CCS and ComfortID system elements, mode and error data will also be included.

Master stats are identified in blue. Those system elements that have not been added to the ComfortVIEW database will be preceded by a "dimmed" icon. You can add such elements to the database using the Configure menu's Add to database command. Refer to Carrier Network Manager Command Summary at the end of this chapter for a complete description of each Bus Scan window command.

Figure 2-22c
Sample Detailed Bus Scan

Name	Description	Adr	Type	Ver	Err	Mode	Zone	CoolSP	HeatSP	Dmd	Pos	Air
33CSZC	Zone Controller	32	001ZC	02.0	Y	Heat	0.0 °F	80.6 °F	73.4 °F	0.0 °F	6	N/A
1ZC		33	001ZC	02.0	N	Cool	79.9 °F	73.4 °F	60.8 °F	6.5 °F	14	N/A
1BP		35	001BP	02.0	Y	N/A	84.3 °F	N/A	N/A	N/A	0	N/A
1VM		36	001VM	02.0	N	Heat	80.6 °F	85.0 °F	62.0 °F	0.0 °F	5	N/A
33TM		43	033TM	03.0	N	Cool	72.5 °F	73.0 °F	68.0 °F	N/A	N/A	N/A
33ZC		44	033ZC	02.0	Y	Cool	72.2 °F	71.0 °F	69.0 °F	1.2 °F	0	N/A
33BC		45	033BC	03.0	Y	N/A	73.1 °F	N/A	N/A	N/A	0	N/A
33VM		46	033VM	03.0	N	Cool	74.2 °F	72.0 °F	68.0 °F	2.2 °F	0	N/A
33CSTM	Temp System Monitor	53	033TM	03.0	N	Heat	70.7 °F	92.0 °F	68.0 °F	N/A	N/A	N/A
33PI		54	033PI	02.0	Y	Heat	70.6 °F	97.0 °F	50.0 °F	0.0 °F	0	N/A
33CSBC	Bypass Controller	55	033BC	03.0	Y	N/A	71.3 °F	N/A	N/A	N/A	0	N/A
33CSVm	VVT Monitor	56	033VM	03.0	Y	Cool	70.6 °F	72.0 °F	69.0 °F	0.0 °F	15	N/A

Scan time: 10:33:41 02-28-2001

In addition to all basic bus scan data (name, description, address, type, version, error, and mode) the Detailed Bus Scan window also includes the following data (for CCS and ComfortID system elements only): zone temperature, cooling setpoint, heating setpoint, demand limit, damper position, and air flow.

Master stats are identified in blue. Those system elements that have not been added to the ComfortVIEW database will be preceded by a "dimmed" icon. You can add such elements to the database using the Configure menu's Add to database command. Refer to Carrier Network Manager Command Summary at the end of this chapter for a complete description of each Detailed Bus Scan window command.

System Summary

You can produce a System Summary from either a Basic Bus Scan or Detailed Bus Scan window. To produce a System Summary, first produce a basic or detailed bus scan. Then, from the Bus Scan window, select the *File* menu's *System Summary* command.

ComfortVIEW will search the Bus Scan window for the highest addressed monitor thermostat or linkage master device. If no such device is located, a message will be displayed indicating such, and the system summary will terminate. On locating one or more such devices, ComfortVIEW will begin with the monitor thermostat or linkage master device of highest address and then scan the bus to

Figure 2-22c
Sample System Summary

Bus: 86

Name	Description	Adr	Type	Mode	SH:123	Duct	Zone	CoolSP	HeatSP	Dmd	Pos	Air
33CSVM	W/T Monitor	56	033VM	Cool		0.0 °F	70.4 °F	72.0 °F	69.0 °F	0.0 °F	15 %	N/A
33CSBC	Bypass Controller	55	033BC	N/A		0.0 °F	71.0 °F	N/A	N/A	N/A	0 %	N/A
33PI		54	033PI	Heat	000	0.0 °F	70.4 °F	97.0 °F	50.0 °F	0.0 °F	0 %	N/A

Zone Summary

Cool Callers:	0	Heat Callers:	0
Max Cool Demand:		Max Heat Demand:	
Max Cool Demand Element:		Max Heat Demand Element:	

Scan time: 10:38:40 02-28-2001

locate all devices associated with the monitor thermostat or linkage master. On completion, the System Summary window is displayed. The System Summary window contains the same data as a Detailed Bus Scan window, but also includes the following zone summary data in the lower section of the screen: Cool Callers, Maximum Cool Demand, Maximum Cool Demand Element, Heat Callers, Maximum Heat Demand, and Maximum Heat Demand Element. The list of CCS or ComfortID devices will begin with the master or monitor stat displayed first, followed by all other CCS or ComfortID system elements in descending order by address. As in the Bus Scan windows, those elements that have not been added to the ComfortVIEW database will be preceded by a dimmed icon.

Double clicking on a system element will display the element's linked WorkSPACE (if one has been assigned) or the element's status display table. If the selected system element has no display table and has not been configured with a linked WorkSPACE, you will be given an opportunity to identify a WorkSPACE to link to the given system element.

Modifying (Forcing) Status Display or Maintenance Table Values



Forcing a Point

You can make the following modifications in status display or maintenance tables:

- Force, or modify a point's value by forcing or overriding a controller's automatic control of the point
- Auto, or clear a force and return a point to a controller's automatic control
- Modify any point's description
- Copy cell data to the Windows clipboard. This allows table data to be copied to other PC applications or other Carrier Network Manager tables
- Paste cell data from the Windows clipboard

Follow the instructions below to force a point's value or status.

Note: Points can also be forced and autoed by third party PC applications that support DDE poke. For further information on this function, refer to DDE Poke in the Sharing ComfortVIEW Dynamic Data With Other Applications (DDE) section of this chapter.

1. To modify a point's value, display the maintenance or the status display table. If necessary, follow the instructions listed under Viewing Status Display or Maintenance Tables.
2. Double click on the cell whose value you wish to override.

Note: You may also click on the cell, click on *Edit* and then click on *Force*. As another alternative, you may simply click on the Force icon in the toolbar.

ComfortVIEW displays the Force dialog box shown in Figures 2-23 and Figures 2-24.

3. *For analog points:*

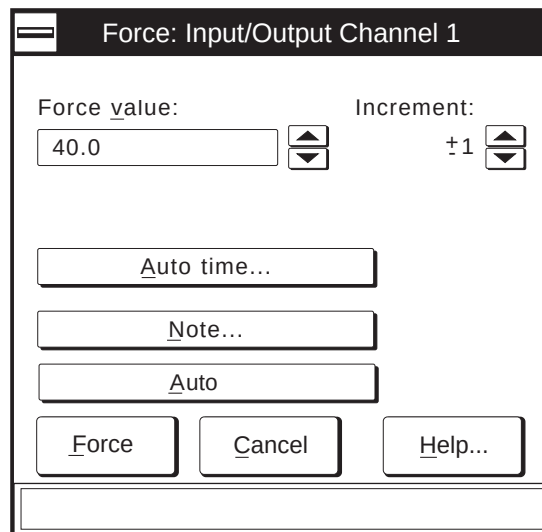
Enter the override value in the Force value edit box. You may also use the Force up or down arrow and the Increment up or down arrow to increase or decrease the displayed value. Refer to Table 2-23 for more information on using the Force dialog box.

For discrete points:

Click on the desired override state button (for example, *Clean, Dirty, On, Off*).

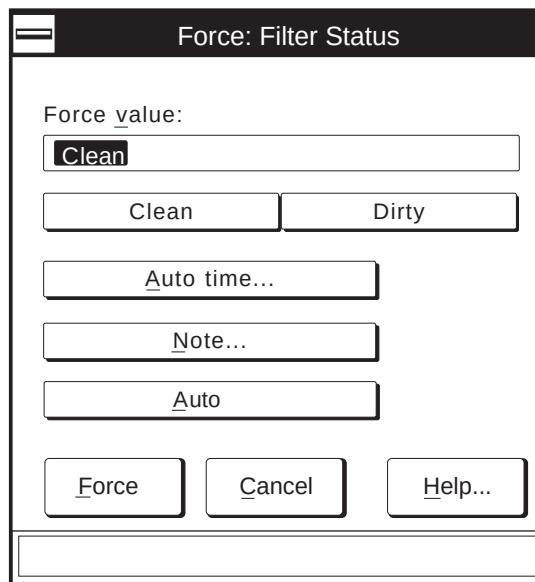
4. Click on OK.

Figure 2-23
Force Dialog Box -
Analog



The dialog box is titled "Force: Input/Output Channel 1". It contains a "Force value:" label with a text input field containing "40.0" and a vertical spinner button to its right. To the right of this is an "Increment:" label with a text input field containing "±1" and a vertical spinner button to its right. Below these are three buttons: "Auto time...", "Note...", and "Auto". At the bottom are three buttons: "Force", "Cancel", and "Help...". A status bar is at the very bottom.

Figure 2-24
Force Dialog Box -
Discrete



The dialog box is titled "Force: Filter Status". It contains a "Force value:" label with a text input field containing "Clean". Below this are two buttons: "Clean" and "Dirty". Below these are three buttons: "Auto time...", "Note...", and "Auto". At the bottom are three buttons: "Force", "Cancel", and "Help...". A status bar is at the very bottom.

The word *Supervisor* (for local ComfortVIEW forces) or *Remote Monitor* (for remote ComfortVIEW forces) appears in the points status column to indicate that a ComfortVIEW force is in effect.



Autoing a Point

Follow the instructions below to clear a force and return the point to the controller’s automatic control.

- 1. Display the status display or maintenance table. If necessary, follow the instructions listed under Viewing Status Display or Maintenance Tables.
- 2. Click on the cell whose force you wish to clear.
- 3. Click on *Edit* and then click on *Auto*.

Note: You may also perform this command by clicking on the Auto icon in the toolbar or by double clicking on the cell and, in the Force dialog box, clicking on *Auto*.

The force clears and the point returns to the controller’s automatic control.

Note: If more than one force exists on a point, perform Steps 2 and 3 until all force statuses are removed.

Table 2-23
Force Dialog Box

Click on	To
the override state button (Example: Clean, Dirty, On, Off)	select the desired override state (for discrete points only).
the Force value edit box	enter the desired override value (for analog points only).
the Increment: up or down arrow	select the increase or decrease granu- larity (For example, .1, 1, 100, 1000)

(continued)

Table 2-23
Force Dialog Box
(continued)

Click on	To
the Force value up or down arrow	increase or decrease the override value for analog points.
Auto time	indicate the time and date to remove the force. This option is only available for those PIC controllers that support a force expiration. ComfortVIEW displays the Auto Time and Date dialog box. Click on the day of the month and enter the time to remove the force. To change the month, click on the scroll bar's down or up arrow. Click on <i>OK</i> to close the dialog box and save your settings.
Note	add an operator note in the Force dialog box. The Force Note dialog box displays. In the Force note box, enter a new or edit the existing note. Click on <i>OK</i> to save the changes or click on <i>Cancel</i> to exit without saving changes. Force notes appear in the System Activity report.
Auto	remove any current force that may be on the point.
Force	transmit the force to the point.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

To Modify Point Descriptions

If desired, you can modify any point's description.

Note: These instructions do not apply to UT203 FIDs or Comfort Controllers. To modify point descriptions for these two system elements, refer to *Configuring UT203 FIDs* or *Configuring Comfort Controllers*, which appear later in this Carrier Network Manager chapter.

1. Click on the description cell and type the new name.

The text appears in the cell and in the edit bar, which is located below the window's status bar.



2. Press Enter or click on the edit bar's enter icon to enter the change.



Note: Clicking on the edit bar's cancel icon cancels the change.

3. Click on the *Configure* menu item and then click on *Save*.

To Copy and Paste Cell Data

If desired, you can copy selected cell data to the Windows clipboard. You can also paste clipboard data to a selected cell.

To Copy Cell Data:

1. Click on the cell or drag select multiple cells that you wish to copy.
2. Click on the *Edit* menu item and then click on *Copy*.



Note: You may also perform this command by clicking on the Copy icon in the toolbar.

The selected cell's data will be copied to the Windows clipboard. You can now paste this data into another Carrier Network Manager table or to another third party software application.

To Paste Cell Data from the Windows clipboard:

1. Display the table to which you wish to paste.
2. Click on the cell into which you wish to paste.
3. Click on the *Edit* menu item and then click on *Paste*.



Note: You may also perform this command by clicking on the Paste icon in the toolbar.

The selected cell's data will be copied from the Windows clipboard to the selected cell.

If you are attempting to paste data into a protected cell or are attempting to paste incompatible data, an error message box displays. Click on *OK* to close the message box.

Modifying Configuration Table Values

Follow the instructions below to modify, download, and write modified configuration table values to the ComfortVIEW database.

Note: ComfortVIEW now includes a dynamic-link library (DLL), which can be used to provide third party access to CCN time schedule and setpoint configuration tables. This DLL (CWACCESS.DLL) exposes read and write functionality, which can be utilized to create your own custom software applications. For further information and instructions on using this DLL, refer to Appendix B — CWACCESS DLL.

1. Display the configuration table. If necessary, follow the instructions listed under Viewing Configuration Tables.
2. For analog value or text entry cells:

Click on the cell you wish to change and type the new value.

Note: To modify cells containing point names, the Caps Lock key must be enabled.

For discrete values:

Click on the value cell you wish to change and press the space bar to toggle the discrete state.

The value appears in the cell and in the edit bar, which is located below the window's status bar.



3. Press Enter or click on the edit bar's enter icon to enter the change.



4. Click on *Configure* and then click on *Save* if you wish to save the new value in the ComfortVIEW database, or,

if you wish to cancel, click on *Window* and then click on *Refresh* to refresh the window with the most recent data that has been written to the database.



Note: You may also perform these commands by clicking on the Save or the Refresh icon in the toolbar.



5. Click on *Configuration* and then click on *Download* if you wish to send the new value to the controller.

Note: You may also perform this command by clicking on the Download icon in the toolbar.

If ComfortVIEW displays the message *CCN Currently Locked* or *CCN Is In Use*, you have attempted to download a controller table that is currently being accessed by you or another ComfortVIEW operator. Attempt the download again when the controller is available.

Drag and Drop

For certain types of controllers, the drag and drop feature is available to expedite the entry of configuration data. This feature allows you to use the Windows drag and drop technique to copy data from a points status, maintenance, or time schedule table to the configuration table you are modifying. The availability of drag and drop is indicated by the presence of green coloring on a configuration decision's description text. This technique can be a tremendous time saver in configuring controllers such as the Data Collection Option.

Follow the steps below to use drag and drop:

1. Display the source and destination tables. You can use the Cascade or Tile command in the Window menu to re-arrange windows.
2. Position the mouse pointer on the Value cell for the point that you wish to copy.
3. Press and hold down the Ctrl key.
4. Press and hold down the mouse button and drag the mouse to re-position it on the Value cell for the configuration table point that you wish to copy to.

A small square icon appears next to the mouse pointer. A plus sign appears inside the icon to indicate you are copying.

5. Release the Ctrl key and then release the mouse button when the square is positioned on the Value cell you are copying to.

The configuration table window updates with configuration data automatically completed for you.

A Drag and Drop Example:

You wish to configure the Data Collection Option to collect runtime data from the Supply Fan Status point in the 39N Air Handler.

To collect runtime data, you must configure the following tables:

- The Runtime Configuration Table in the 39N Air Handler
- The Runtime (RUNTM01S) Configuration Table in the Data Collection Option

Drag and drop saves you a significant amount of configuration time by automatically completing a large portion of the configuration table data entry for you.

Follow the steps below to use drag and drop to automatically complete the configuration required in this example.

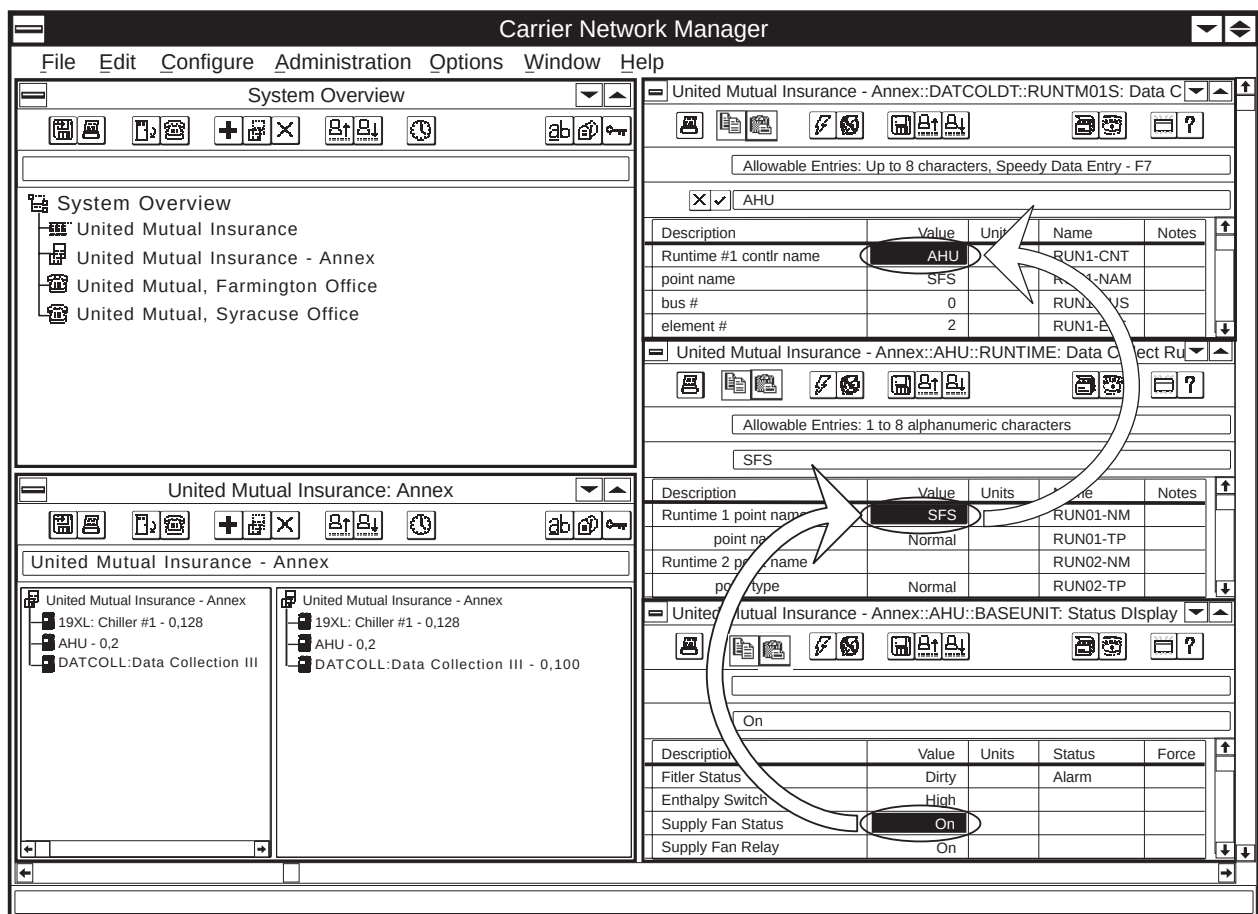
1. Simultaneously display the 39N Baseunit Status Display Table, the 39N Runtime Configuration Table, and the Data Collection Option Runtime Configuration Table.
2. Use the drag and drop technique described in Steps 2 to 4 under Drag and Drop to automatically complete 39N Runtime Configuration Table data entry. To do this, copy the 39N Baseunit Status Display Table's Supply Fan Status point to the Runtime 1 Point Name decision in the 39N Runtime Configuration Table.

ComfortVIEW automatically fills in the point name and point type configuration for you.

3. Now you can use drag and drop to automatically complete the Data Collection Option Runtime Configuration Table data entry. To do this, copy the 39N Runtime Configuration Table's Runtime 1 Point Name decision to the Runtime #1 Contlr Name decision in the Data Collection Option's Runtime Configuration Table, RUNTM01S.

ComfortVIEW automatically fills in all required configuration decisions for you. Refer to Figure 2-25.

Figure 2-25
 Dragging and Dropping
 Runtime Configuration
 Data



Speedy Data Entry

For certain types of controllers, the speedy data entry feature may be available to expedite the entry of configuration data. The availability of speedy data entry is indicated by the presence of green coloring on a configuration decision's description text.

To Use Speedy Data Entry:

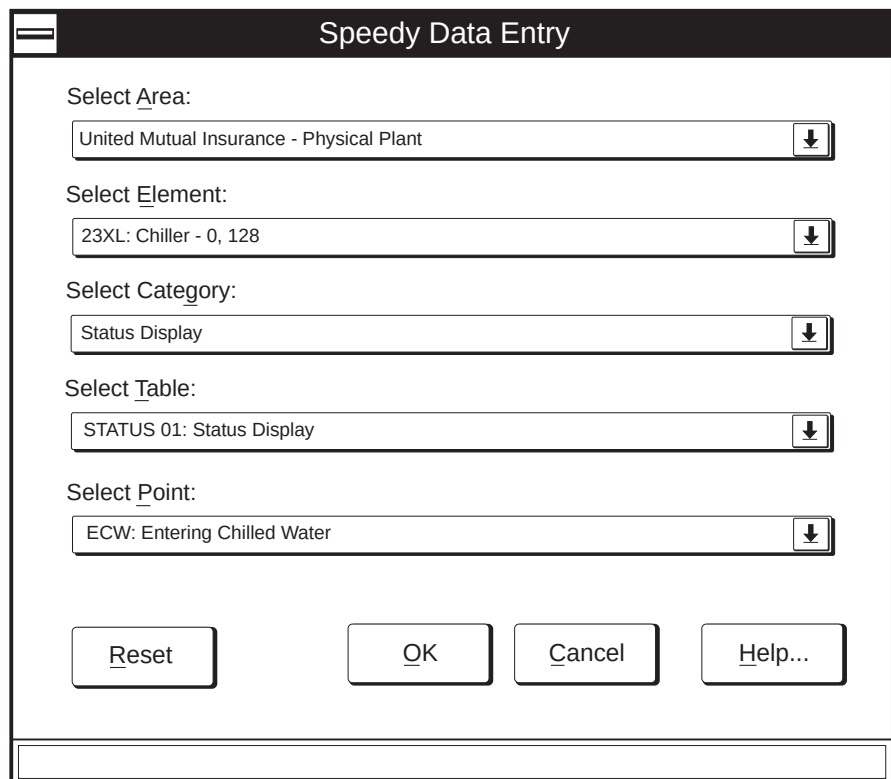
1. Position the mouse pointer on the green-highlighted Description cell and press F7.

The Speedy Data Entry dialog box will be displayed.

2. In the Speedy Data Entry dialog box, select the Area, system element, table category, table and point whose data you wish to copy, and then click on *OK*. Refer to Figure and Table 2-25a for instructions on using this dialog box.

The configuration table window updates with the configuration data automatically completed for you.

Figure 2-25a
Speedy Data Entry
Dialog Box



The image shows a screenshot of the 'Speedy Data Entry' dialog box. It has a title bar with a standard window icon and the text 'Speedy Data Entry'. The dialog contains five selection fields, each with a label, a text box, and a dropdown arrow button. The selections are: 'Select Area:' with 'United Mutual Insurance - Physical Plant'; 'Select Element:' with '23XL: Chiller - 0, 128'; 'Select Category:' with 'Status Display'; 'Select Table:' with 'STATUS 01: Status Display'; and 'Select Point:' with 'ECW: Entering Chilled Water'. At the bottom, there are four buttons: 'Reset', 'OK', 'Cancel', and 'Help...'. Below the buttons is a single-line text input field.

Field	Selected Value
Select Area:	United Mutual Insurance - Physical Plant
Select Element:	23XL: Chiller - 0, 128
Select Category:	Status Display
Select Table:	STATUS 01: Status Display
Select Point:	ECW: Entering Chilled Water

Buttons: Reset, OK, Cancel, Help...

Input Field:

Table 2-25a
Speedy Data Entry
Dialog Box

Click on	To
the Select Area drop down list	display a list of all areas in the currently-selected CCN. Click to select the area containing the point whose data you wish to copy.
the Select Element drop down list	display a list of all elements in the selected area. Click to select the controller (system element) containing the point whose data you wish to copy.
the Select Category drop down list	display a list of all table categories in the selected system element.
the Select Table drop down list	display a list of all tables in the selected category.
the Select Point drop down list	display a list of all points in the selected element and table. Click on a point to select it.
OK	select the specified point and close the dialog box.
Cancel	exit the dialog box without selecting the point.
Reset	clear all current selections.
Help	display help information.

Modifying Configuration Decision Descriptions

If desired, you can modify any configuration decision description.

1. Click on the description cell and type the new name.

The text appears in the cell and in the edit bar, which is located below the window's status bar.



2. Press Enter or click on the edit bar's enter icon to enter the change.



Note: Clicking on the edit bar's cancel icon cancels the change.



3. Click on *Configure* and then click on *Save* to save the new description in the ComfortVIEW database, or,

if you wish to cancel, click on *Window* and then click on *Refresh* to refresh the window with the most recent description that has been written to the database.



Note: You may also perform these commands by clicking on the Save or the Refresh icon in the toolbar.

If ComfortVIEW displays the message *CCN Currently Locked* or *CCN Is In Use*, you have attempted to modify a point description in a controller that is currently being accessed by you or another ComfortVIEW operator. Attempt the modification again when the controller is available.

Copying and Pasting Cell Data

If desired, you can copy selected configuration table cell data to the Windows clipboard. You can also paste clipboard data to a selected cell. You do this using the Edit menu's Copy and Paste commands.

For step-by-step instructions, refer to *To Copy and Paste Cell Data* in the *Modifying Status Display* or *Maintenance Table Values* section of this chapter.



Modifying Table Names and Descriptions

ComfortVIEW gives you the capability to modify all controller table descriptions and Loadshed and Occupancy table names. Note that you can also modify Comfort Controller table names and descriptions. To do this, however, you must follow the instructions in the Configuring Comfort Controllers section of this chapter.

Table names and descriptions appear in the controller list and as table headers throughout ComfortVIEW. You would typically modify table descriptions if you wished to customize your controller list displays. You would modify Loadshed and Occupancy table names to maintain a one to one correspondence between the table names in the option and the table names in the equipment that the option affects.

Note: Exercise caution when modifying Loadshed and Occupancy Option table names — modify only the numbers that appear in the table name. Do not modify other characters in the name. For example, you can change the name of the Loadshed Option's LDSHD01E Table to a name such as LDSHD02E. LODSH02E, however, would be an invalid modification.

Follow the steps below to change the name or description of a controller's configuration tables:

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Double click on a controller to view its table types.
3. Double click on the type of table whose name or description you wish to modify: *Status Display*, *Maintenance Display*, *Configuration*, *Service Configuration*, *Setpoint Configuration*.

ComfortVIEW displays the table names in the right half of the window.

4. Click to select the table whose name or description you wish to modify.

Certain tables may contain additional tables. If you select a table of this type, another list of tables will be shown and you should double click on a table from this list.

5. Click on *Configure* and then click on *Modify*.

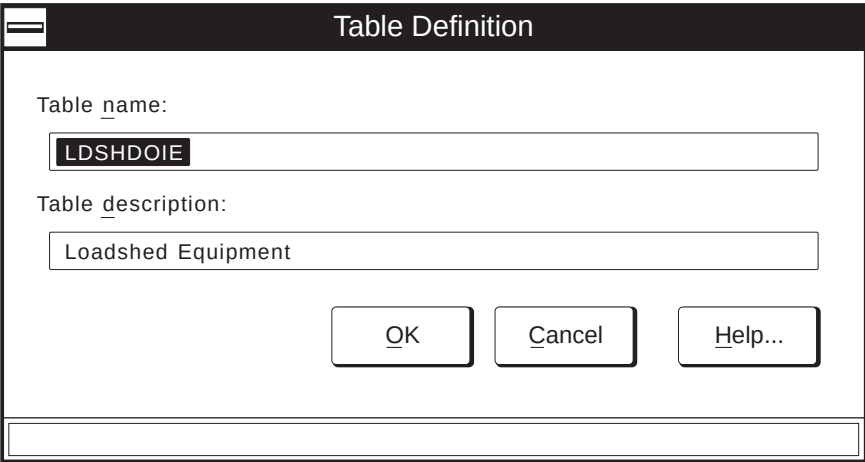
Note: You may also perform this command by clicking on the Modify icon in the toolbar.

ComfortVIEW displays the Table Definition dialog box shown in Figure 2-26.

This dialog box gives you the capability to modify the selected table’s name or description.

Refer to Table 2-26 for instructions on using this dialog box.

Figure 2-26
Table Definition Dialog
Box



6. After modifying the name and description, click on *OK* to close the dialog box and save your modifications, or click on *Cancel* to exit the box and restore the previous settings.

Table 2-26
Table Definition Dialog
Box

Click on	To
the Table name: edit box	modify the table name. The name can consist of up to eight characters.
the Table description: edit box	modify the controller description. The description can consist of up to 24 characters.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Alternate Method

You can also modify controller table names and descriptions by following the steps below:

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Click on the controller containing the table names and descriptions to modify.
3. Click on the *Configure* menu item and then click on *Table names*.

ComfortVIEW displays the Table Names list shown in Figure 2-27. This list displays the 8 character name and 24 character description of each table in the selected controller.

Refer to Table 2-27 for additional information about this list.

4. Click on the table you wish to modify.
5. Click on *Modify*.

ComfortVIEW displays the Table Definition dialog box. Refer to Figure 2-26 and Table 2-26 for instructions on using this dialog box.

6. After modifying the name and description, click on *OK* to close the dialog box and save your modifications, or click on *Cancel* to exit the box and restore the previous settings.

Figure 2-27
Table Names List Window

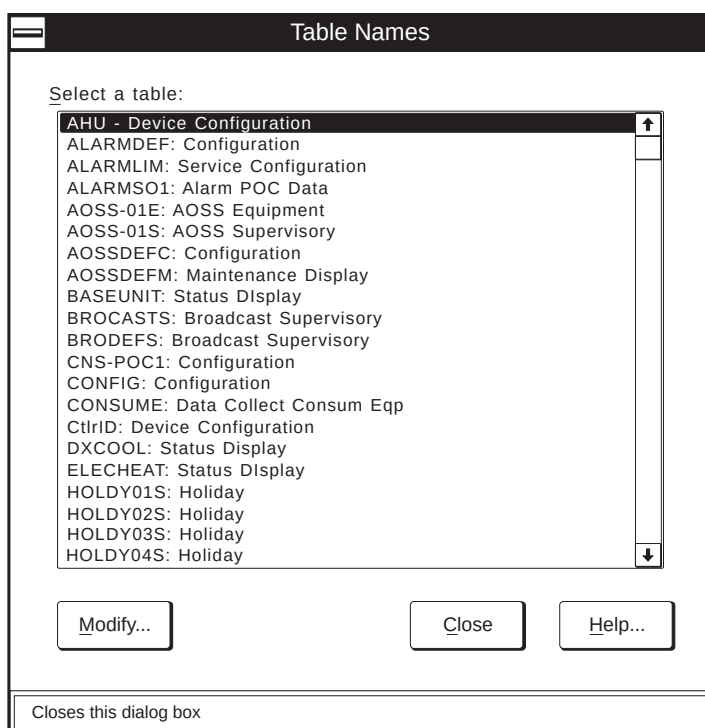


Table 2-27
Table Names Dialog Box

Click on	To
the Select a table: list	select a table to modify.
Modify	modify the selected table. ComfortVIEW displays the Table Definition dialog box described previously.
Close	close the dialog box and restore the previous settings.
Help	display help information.

Copying and Moving Controller Configuration Data

Copying Controllers

ComfortVIEW provides you with the capability to duplicate a controller's configuration data and copy it to another similar controller — either in the same area or in any other area in your ComfortVIEW database. When you copy a controller, ComfortVIEW copies all of the controller's configuration tables to the specified controller or area. You can use this feature to expedite the entry of configuration data.

In addition to copying an entire controller's-worth of configuration data, you can also copy individual configuration tables. For instructions, refer to Copying Individual Tables later in this manual section.

To Copy All Tables:

There are two ways to copy all controller configuration tables:

- Choosing the *Configure* and *Copy* commands from the menu
- Dragging and dropping the controller icon on top of another controller icon using the mouse

Table 2-28 summarizes the ComfortVIEW drag and drop copy process.

Table 2-28
Drag and Drop

Drag From	Drag To	
	Single Controller Icon	Area Icon
Single Controller Icon	Copies configuration data from source to destination.	Copies configuration data to create new controller with same address.
Multiple Controller Icons	Copies first controller's configuration list to destination controller. The data in the other controllers is not applied.	Copies all controller's configurations to create new controllers with same addresses.

To Copy All Tables by Dragging:

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.

Note: If you are copying controllers between areas, display both the source and destination controller lists. You can use the Cascade or Tile command in the Window menu to re-arrange controller list windows.

2. Position the mouse pointer on the controller that you wish to copy from.

Note: ComfortVIEW allows you to copy multiple controllers between areas. Use the Windows-standard mouse or keyboard techniques to select multiple controllers. You can however, only select multiple controllers from the right side of the Controller List window.

3. Press and hold down the Ctrl key.
4. Press and hold down the mouse button and drag the mouse to re-position it on the controller that you wish to copy to. If there is no specific controller that you wish to copy to, re-

position the mouse on the area icon. This will create a new controller in the area.

A small square icon appears next to the mouse pointer. A plus sign appears inside the icon to indicate that you are copying, not moving, the controller to another area.

5. Release the mouse button and then release the Ctrl key when the square is positioned on the controller or area you are copying to.

ComfortVIEW displays a dialog box asking for confirmation before copying the controller.

6. Click on *Yes* to complete the copy or click on *No* to prevent the copy from taking place. If you have selected multiple controllers and wish to copy all, click on *Yes to All*. Clicking on *Cancel* aborts the copy. If you have selected multiple controllers and wish to step through the copies one by one, click on *Yes*.

A Copy Status Box is displayed during the copy. This box displays each table and block number as it is being copied. Clicking on *Abort* will stop the copy.

To Copy All Tables with the Configure Menu's Copy Command:

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Click on the controller that you wish to configure (copy from).

Note: ComfortVIEW allows you to copy multiple controllers. Use the Windows-standard mouse or keyboard techniques to select multiple controllers. You can however, only select multiple controllers from the right side of the Controller List window.

3. Click on the *Configure* menu item and then click on *Copy*. ComfortVIEW displays the Areas dialog box.
4. In the Select target area: list, click on the area containing the controller whose tables you wish to copy to, and then click on *OK*.

ComfortVIEW displays the CCN Elements dialog box.

5. Click on the CCN element whose tables you wish to copy to, and then click on *OK*.

A confirmation dialog box displays re-confirming the source and destination controllers.

6. Click on *Yes* to complete the copy, or on *No* to prevent the copy. If you have selected multiple controllers and wish to copy all, click on *Yes to All*.

A Copy Status Box is displayed during the copy. This box displays each table and block number as it is being copied. Clicking on *Abort* will stop the copy.

To Copy and Paste Individual Tables:

There are three ways to copy individual tables:

- Dragging and dropping the table icon on top of another table icon using the mouse
- Choosing the Configure and Copy commands from the menu
- Cutting and pasting selected configuration table cells.

To Copy Individual Tables by Dragging:

1. Display the Controller List window and expand it to display the configuration table names. If necessary, follow the instructions listed under Displaying the Controller List and Viewing Configuration Tables.

Note: If you are copying tables between areas, display both the source and destination controller lists. You can use the Cascade or Tile command in the Window menu to re-arrange controller list windows.

2. Position the mouse pointer on the table that you wish to copy from.
3. Press and hold down the mouse button and drag the mouse to re-position it on the table that you wish to copy to.
4. Release the mouse button when the square is positioned on the table you are copying to.

ComfortVIEW displays a dialog box asking for confirmation before copying the table.

5. Click on *Yes* to complete the copy or click on *No* to prevent the copy from taking place. Clicking on *Cancel* aborts the copy.

To Copy Individual Tables with the Configure Menu's Copy Command:

1. Display the Controller List window and expand it to display the configuration table names. If necessary, follow the instructions listed under Displaying the Controller List and Viewing Configuration Tables.
2. Click on the table that you wish to configure (copy from).
3. Click on the *Configure* menu item and then click on *Copy*. ComfortVIEW displays the Areas dialog box.
4. In the Select target area: list, click on the area containing the controller whose tables you wish to copy to, and then click on *OK*.

ComfortVIEW displays the CCN Elements dialog box.

5. Click on the CCN element whose tables you wish to copy to, and then click on *OK*.

ComfortVIEW display the Tables Names dialog box.

6. Click on the table that you wish to copy to and then click on *OK*.

A confirmation dialog box displays re-confirming the source and destination controllers.

7. Click on *Yes* to complete the copy, or on *No* to prevent the copy.

To Copy Individual Cells with Cut and Paste:

ComfortVIEW gives you the capability to copy data from one configuration table and paste into another configuration table. You can copy selected or multiple cells.

1. To copy the configuration table data, click on the cell or cells you wish to copy. Only the Description, Value, and Notes cells are suitable for copying.

Note: To select an entire column of data, click on the column header (*Description*, *Value*, or *Notes*). To select an entire row, click on the box to the left of

the point description. To select multiple adjacent cells, drag the mouse.

2. Click on the *Edit* menu item and then click on *Copy*.



Note: You may also perform this command by clicking on the Copy icon in the toolbar.

The selected cell's data will be copied to the Windows clipboard. You can now paste this data into another configuration table.

3. To paste the data into another table, display the destination table.
4. Click on the destination cell or cells.

Note: To paste into an entire column of data, click on the column heading.

5. Click on the *Edit* menu item and then click on *Paste*.



Note: You may also perform this command by clicking on the Paste icon in the toolbar.

The selected cell's data will be copied from the Windows clipboard to the selected cell.

If you are attempting to paste data into a protected cell or are attempting to paste incompatible data, an error message displays. Click on *OK* to close the error message dialog box.

Moving Controllers

ComfortVIEW provides you with the capability to transfer controllers from one area to any other area in your ComfortVIEW database by dragging controller icons with the mouse.

When you move a controller, ComfortVIEW transfers the controller and all of its configuration tables to the specified area. The controller will now appear in the new area in the controller list. It will no longer appear in its previous area.

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.

Note: Moving controllers between areas, display both the source and destination controller lists. You can use the Cascade or Tile command in the Window menu to re-arrange controller list windows.

2. Position the mouse pointer on the controller that you wish to move.

Note: ComfortVIEW allows you to move multiple controllers between areas. Use the Windows-standard mouse or keyboard techniques to select multiple controllers. You can however, only select multiple controllers from the right side of the Controller List window.

3. Press and hold down the Shift key.
4. Press and hold down the mouse button and drag the mouse to re-position it on the destination area.

A small square icon appears next to the mouse pointer.

5. Release the mouse button and then release the Shift key when the square is positioned on the destination area.

ComfortVIEW displays a dialog box asking for confirmation before moving the controller.

6. Click on *Yes* to complete the move or click on *No* to prevent the move from taking place. Clicking on *Cancel* aborts the copy. If you have selected multiple controllers and wish to step through the moves one by one, click on *Yes*.

A Move Status Box is displayed during the move. Clicking on *Abort* will stop the move.

Note: If ComfortVIEW displays the message *Controller Currently Locked* or *Controller Is In Use*, you have attempted to move a controller that is currently being accessed by you or another ComfortVIEW operator. Attempt the move again when the controller is available.

Verifying Controller Configuration Against Your Database

You can compare a selected controller's configuration data with the associated configuration data that is stored in the ComfortVIEW database and receive a report of differences that exist.

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Click on the controller whose database you wish to compare.

Note: ComfortVIEW allows you to verify multiple controllers. Use the Windows-standard mouse or keyboard techniques to select multiple controllers.

3. Click on the *Configure* menu item and then click on *Verify*.

ComfortVIEW displays a dialog box asking for confirmation before beginning the controller verify.

4. Click on *Yes* to verify or click on *No* to prevent the verify from taking place. If you have selected multiple controllers and wish to verify all, click on *Yes to All*.

A Function Status Box is displayed during the verification. Clicking on *Abort* will stop the verify.

When the verification is complete, and the compared configurations match, the process concludes and the Controller List window re-displays. If the compared configurations do not match, a dialog box displays indicating that errors were encountered. If you wish to view an error report, click on *Yes* to view a list of differences. This opens the Windows Notepad application and displays the list of differences.

To Print the Verification Results:

Click on Notepad's *File* menu item and then click on *Print*.

To Close the Notepad File:

Click on Notepad's *File* menu item and then click on *Exit*.

Downloading ComfortVIEW Data to Controllers

You use the Download command to send configuration table data to a selected controller. You can download an entire controller or only a single configuration table. Performing a download overwrites the configuration at the controller.

When you download an entire controller, ComfortVIEW sends data from its database to the controller. When you download a single table, ComfortVIEW sends the on-screen data (which may be different from its database data) to the controller. You could, for example, edit table data and send it to the controller without saving the edited data in the ComfortVIEW database. Instructions on downloading data to the Comfort Controller can be found in the Configuring Comfort Controllers section of this chapter.



To Download an Entire Controller

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Click on the controller whose configuration you wish to download.

Note: ComfortVIEW allows you to download multiple controllers. Use the Windows-standard mouse or keyboard techniques to select multiple controllers. You can, however, only select multiple controllers from the right side of the Controller List window.

3. Click on the *Configure* menu item and then click on *Download*.

Note: You may also perform this command by clicking on the Download icon in the toolbar.

ComfortVIEW displays a dialog box asking for confirmation before downloading.

4. Click on *Yes* to complete the download or click on *No* to prevent the download from taking place. If you have selected multiple controllers and wish to download all, click on *Yes to All*. Clicking on *Cancel* aborts the download.

A function status box that indicates the table and block that are downloading is displayed during the process. The controller list re-displays on completion.

When the download successfully completes, the Controller List window re-displays. If there are errors encountered during the download, a dialog box displays indicating that errors were encountered. If you wish to view an error report, click on *Yes*. This opens the Windows Notepad application and displays the error report.

To Print the Notepad Download Error Report:

Click on Notepad's *File* menu item and then click on *Print*.

To Close the Notepad File:

Click on Notepad's *File* menu item and then click on *Exit*.



To Download a Specific Table

1. Display the Controller List window and expand it to display the list of controller tables.
2. Click once on the configuration table you wish to download or double-click to display the table whose configuration you wish to download.
3. Click on the *Configure* menu item and then click on *Download*.

Note: You may also perform this command by clicking on the Download icon in the toolbar.

ComfortVIEW sends the configuration from the selected or the currently-displayed table to the controller. It overwrites the controller's current configuration.

Uploading Controller Data to ComfortVIEW

You use the Upload command to copy configuration table data from a selected controller to the ComfortVIEW database. You can upload an entire controller or only a single configuration table.

Performing a controller upload overwrites the controller's configuration that is stored in the ComfortVIEW database. Performing a table upload displays the table on-screen for viewing or editing. If desired, you can save the displayed table data in the ComfortVIEW database.



To Upload an Entire Controller

Perform the steps below to copy a controller's configuration data from a specified controller to the ComfortVIEW database.

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Click on the controller whose configuration you wish to upload.
Note: ComfortVIEW allows you to upload multiple controllers. Use the Windows-standard mouse or keyboard techniques to select multiple controllers. You can, however, only select multiple controllers from the right side of the Controller List window.
3. Click on the *Configure* menu item and then click on *Upload*.

Note: You may also perform this command by clicking on the Upload icon in the toolbar.

ComfortVIEW displays a dialog box asking for confirmation before uploading.

4. Click on *Yes* to complete the upload or click on *No* to prevent the upload from taking place. If you have selected multiple controllers and wish to upload all, click on *Yes to All*. Clicking on *Cancel* aborts the upload.

A function status box that indicates the table and block that are copying is displayed during the upload. The controller list re-displays on completion.

When the upload successfully completes, the controller list re-displays.



To Upload a Specific Table

Perform the steps below to display a controller's configuration table on-screen for viewing or editing. If desired, you can save the displayed table data in the ComfortVIEW database.

Note: If uploading a UT203 FID, it is recommended that you upload the entire controller. Uploading individual tables may not update ComfortVIEW with all of the latest FID values.

1. Display the Controller List window and expand it to display the list of controller tables.

2. Click once on the configuration table you wish to upload or double-click to display the table whose configuration you wish to upload.
3. Click on the *Configure* menu item and then click on *Upload*.

Note: You may also perform this command by clicking on the Upload icon in the toolbar.

ComfortVIEW sends the specified table's configuration from the controller to the ComfortVIEW screen. If you have uploaded with the configuration table displayed, the table re-displays after the upload and the controller's configuration will be displayed on the screen. You must use the Configure menu's *Save* command to retain the uploaded data in the ComfortVIEW database.



Modifying and Sending Time and Date

Follow the steps below to modify and send the time of day, date, day of week, and holiday status to a selected controller or all controllers in a selected CCN. The holidays that will be sent are those that are specified using the ComfortVIEW Global Function Manager application.

1. Do one of the following depending on whether you want to broadcast to a CCN or a single controller:

To broadcast to a CCN:

Display the Carrier Network Manager's System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.

To broadcast to a single controller:

Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.

2. Click on the CCN or the controller to which you wish to send time and date information.
3. Click on the *CCN Tools* menu item and then click on *Time/Date*.

Note: You may also perform this command by clicking on the broadcast icon in the toolbar.

ComfortVIEW displays the Broadcast Time and Date dialog box shown in Figure 2-29.

4. To modify the displayed time and date, enter the new time in the Set time and date edit box. Valid entries range from 00:00 to 12:59, followed by *a* to indicate am or *p* to indicate pm.
5. To modify the displayed day of month, click on the new day in the calendar. To modify the displayed month, click on the scroll bar's down or up arrow.
6. Click in the Today is a holiday box if you wish to indicate the displayed date as a holiday.
7. Click on *OK* to close the dialog box and broadcast the time and date to the selected controller or CCN or,
click on *Cancel* to close the dialog box and restore the previous settings.

Figure 2-29
Broadcast Time and Date
Dialog Box

Broadcast Time and Date

Set time and date

02:30 p

March 1994

Su	M	Tu	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

☐ Today is a holiday

OK Cancel Help...

Table 2-29
Broadcast Time and Date
Dialog Box

Click on	To
the Set time and date edit box	modify the displayed time and date. Valid entries range from 00:00 to 12:59, followed by <i>a</i> to indicate am or <i>p</i> to indicate pm.
a day in the calendar	modify the displayed day of month.
the scroll bar's down or up arrow	modify the month.
the Today is a holiday box	indicate the displayed date as a holiday.
OK	close the dialog box and broadcast time and data.
Cancel	close the dialog box and restore the previous settings.
Help	display help information.

Displaying and Configuring CCN Options

Clicking on *CCN Options* in the CCN Tools menu gives you the capability to display and modify tables in all CCN Options.

In addition, the command gives you the capability to add and delete tables. This command is an alternative, shortcut method to displaying and modifying option tables by accessing each option module individually as described in the Viewing Configuration Tables and Modifying Configuration Table Values sections of this chapter.

Follow the steps below to display a list of all tables in a selected option and CCN:

Note: Prior to accessing the option's tables, you must add the option to the ComfortVIEW database. For instructions on adding options, refer to the Adding/Modifying Controllers section of this chapter.

1. Display the System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Click on the appropriate CCN from the list displayed in the System Overview window.
3. Click on the *CCN Tools* menu item, and then click on *CCN Options*.

ComfortVIEW displays the CCN Options dialog box shown in Figure 2-30. This dialog box enables you to select a specific CCN Option to access. Refer to Table 2-30 following these instructions for a description of each dialog box field.

4. From the dialog box, select the option you wish to access and then click on *OK*. ComfortVIEW displays the Option Table List window. This table displays the 8-character table name and the 24-character table description for each option table in the selected CCN. Figures 2-31 and 2-32 show example Consumable and History Option Table List windows.

Figure 2-30
CCN Options Dialog Box

Broadcast Time and Date

Set time and date
02:30 p

March 1999

Su	M	Tu	W	Th	F	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

☐ Today is a holiday

OK Cancel Help...

Table 2-30
CCN Options Dialog Box

Click on	To
an option in the Select a CCN Option: list	select the CCN Option whose tables you wish to access.
OK	close the dialog box and display your selection.
Cancel	exit the dialog box and restore the previous settings.
Help	display help information.

Figure 2-31
Sample Consumable
Option Table List Window

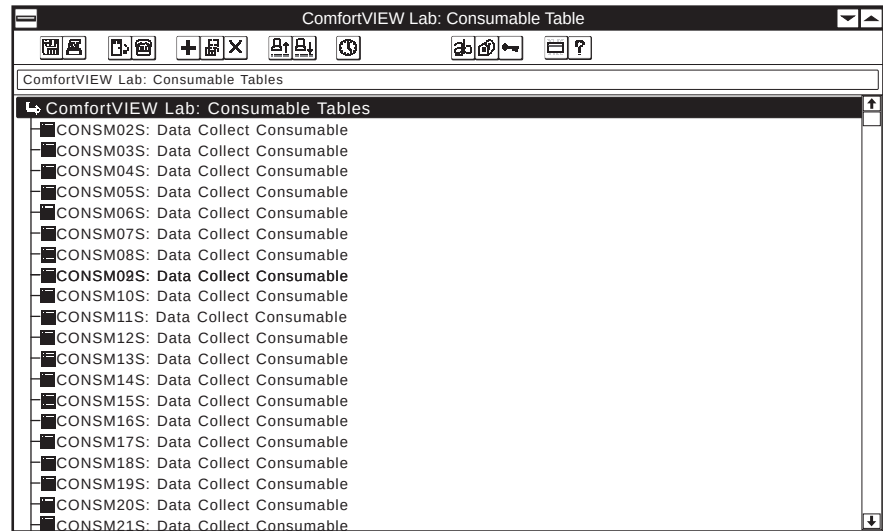
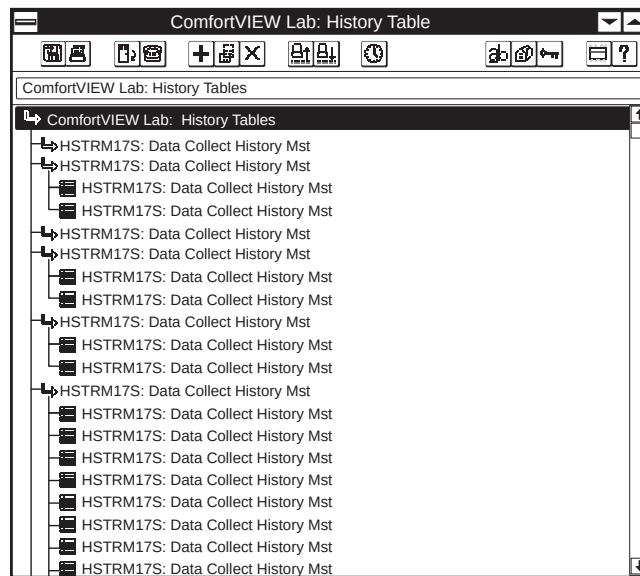


Figure 2-32
Sample History Option
Table List Window



**To Add a New
Consumable
or Runtime
Option Table**

Follow the instructions below to add Consumable and Runtime Tables to the Data Collection Option. For specific information on the Data Collection Option and its consumable and runtime configuration tables, refer to the *Data Collection Option Overview and Configuration Manual*.

1. Display the option table list using the instructions listed under Displaying and Configuring CCN Options.
2. Click on the *Configure* menu item, then click on *New*. In the dialog box displayed, click on *Yes* to create a new option table.



Note: You may also perform this command by clicking on the Enter icon in the toolbar.

ComfortVIEW creates the configuration table in the CCN's Data Collection Module, opens that table, and displays it on the screen.

3. Enter the necessary values as desired.
4. To send the data to the option module, click on the *Configure* menu item, then click on *Download*.
5. To save the new table in the ComfortVIEW database, click on the *Configure* menu item and then click on *Save*.
6. Edit the table description to make this table a unique entry in the option table list and to aid you in identifying the table when selecting points for ComfortVIEW reports. If necessary, refer to To Modify an Option Table Description, which appears later in this Displaying and Configuring CCN Options sections.



To Add a New History Option Table

Follow the instructions below to add History Tables to the Data Collection Option. For specific information on the Data Collection Option and its consumable, runtime, and history configuration tables, refer to the *Data Collection Option Overview and Configuration Manual*.

1. Display the Option Table list using the instructions listed under Displaying and Configuring CCN Options.
2. Click on the *Configure* menu item, then click on *New*.



Note: You may also perform this command by clicking on the icon in the toolbar.

3. In the dialog box displayed, enter the number of slave tables to be added and linked to the master history table that you are adding and click on *OK*.

ComfortVIEW creates the master and slave configuration tables in the CCN's Data Collection Module, and then opens the master table and displays it on the screen. You must open and configure the slave tables on your own. If necessary, refer to the instructions listed under To Display and Modify Option Configuration Tables.

4. Enter the necessary values as desired.
5. To send the data to the option module, click on the *Configure* menu item, then click on *Download*.
6. To save the new tables in the ComfortVIEW database, click on the *Configure* menu item and then click on *Save*.



Note: You may also perform this command by clicking on the Save icon in the tool bar.

7. Edit the table description to make this table a unique entry in the option table list and to aid you in identifying the table when selecting points for ComfortVIEW reports. If necessary, refer to To Modify an Option Table Description, which appears later in this Displaying and Configuring CCN Options section.

To Display and Modify Option Configuration Tables

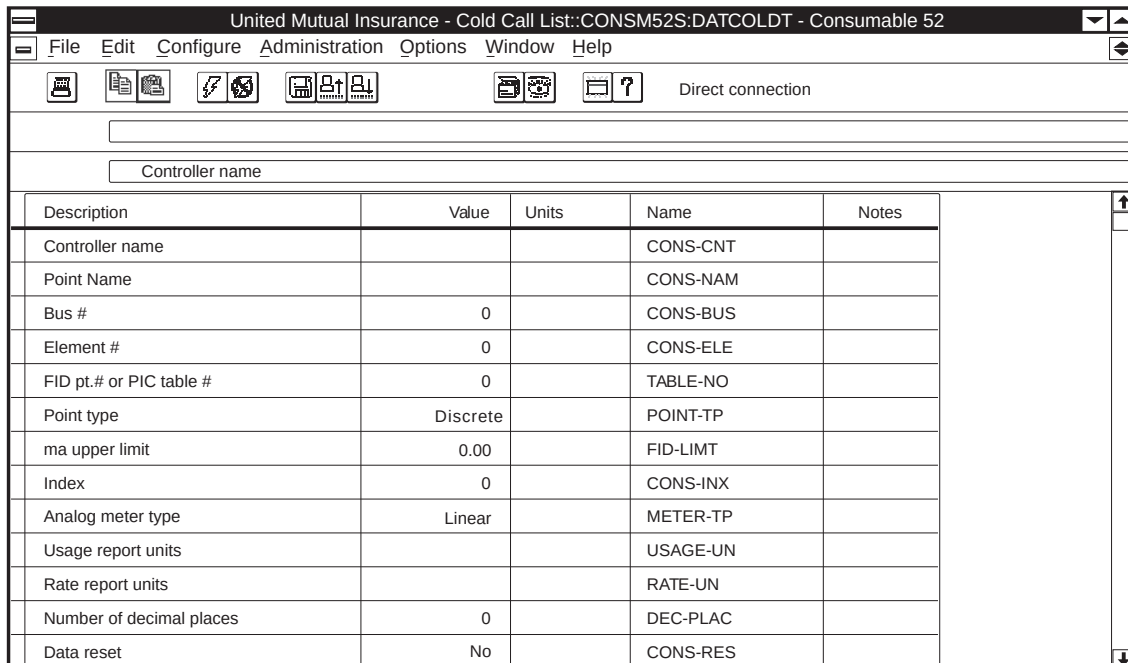
1. Display the option table list using the instructions listed under Displaying and Configuring CCN Options.
2. Double click on the table name that you wish to display or modify.

ComfortVIEW will display the selected configuration table.

In the example shown in Figure 2-33, ComfortVIEW displays the Consumable Configuration Table window.

3. Modify the table data as desired. For detailed instructions on modifying configuration tables, refer to the Modifying Configuration Table Values section of this chapter.

Figure 2-33
CCN Consumable
Configuration Table



Description	Value	Units	Name	Notes
Controller name			CONS-CNT	
Point Name			CONS-NAM	
Bus #	0		CONS-BUS	
Element #	0		CONS-ELE	
FID pt.# or PIC table #	0		TABLE-NO	
Point type	Discrete		POINT-TP	
ma upper limit	0.00		FID-LIMIT	
Index	0		CONS-INX	
Analog meter type	Linear		METER-TP	
Usage report units			USAGE-UN	
Rate report units			RATE-UN	
Number of decimal places	0		DEC-PLAC	
Data reset	No		CONS-RES	

To Modify an Option Table Description

Follow the instructions below to modify an option table description.

Caution: You can modify table descriptions only. Do not change table names. Doing so will cause the tables to be removed from subsequent Option Table List windows and ComfortVIEW Report Panel windows.

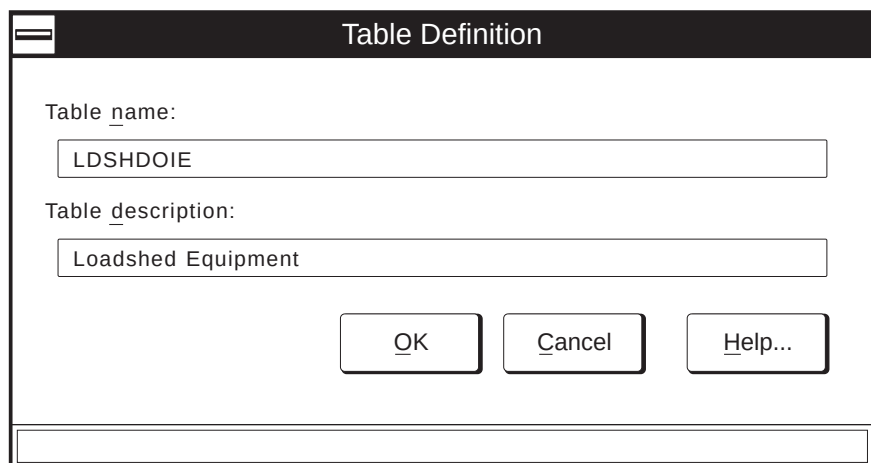
1. Display the option table list using the instructions listed under Displaying and Configuring CCN Options.
2. Click on the table whose description you wish to modify.
3. Click on the *Configure* menu item, then click on *Modify*.

ComfortVIEW displays the Table Definition dialog box shown in Figure 2-34.

4. Enter the new description. A description can consist of up to 24 characters.
5. Click on *OK* to close the dialog box and save the new table description, or

Click on *Cancel* to exit the dialog box and restore the previous settings.

Figure 2-34
Table Definition Dialog Box



The image shows a 'Table Definition' dialog box. It has a title bar with a minimize button and the text 'Table Definition'. Inside the dialog, there are two text input fields. The first is labeled 'Table name:' and contains the text 'LDSHDOIE'. The second is labeled 'Table description:' and contains the text 'Loadshed Equipment'. At the bottom right of the dialog, there are three buttons: 'OK', 'Cancel', and 'Help...'. The 'OK' button has the letters 'OK' underlined. The 'Cancel' button has the letters 'Cancel' underlined. The 'Help...' button has the letters 'Help...' underlined. There is a small icon in the top left corner of the dialog box.

Table 2-34
Table Definition Dialog
Box

Click on	To
the Table name: description box	enter or edit the table description.
OK	close the dialog box and save the new table description.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

To Delete any Option Table

- Follow the instructions below to delete an option table from the Data Collection Option.
1. Display the Option Table List using the instructions at the beginning of this section.
 2. Click on the table to delete.
 3. Click on the *Configure* menu item, then click on *Delete*. In the dialog box displayed, click on *Yes* to delete the table.
- ComfortVIEW relinquishes that table to the option module for another use.

Configuring UT203 FIDs

Follow the instructions below to configure a UT203 FID controller. If necessary, refer to the *UT203 FID Overview and Configuration Manual* for an explanation of the UT203 FID's algorithms and configuration decisions.

Note: ComfortVIEW is compatible with UT203 FID Phase IV and subsequent version controllers.

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Click on the UT203 FID controller that you wish to configure.
3. Activate the FID points:

- a. Click on the *Configure* menu item and then click on *Controller*.

ComfortVIEW displays the FID Point Selection dialog box shown in Figure 2-35.

- b. In the Data Points Available list, select the points that you wish to activate.

Note: You can select multiple points using the Windows-standard mouse or keyboard techniques.

- c. Click on *Add*. The points will appear in the Data Points in System list.

Note: Use of the Controller command (by you or any other operator) while displaying any FID table will result in the display of a *Controller in use* or *Controller currently locked* message.

4. Assign the point types:
 - a. In the Data Points in System list, click on the point that you wish to configure and then click on *Modify*.

ComfortVIEW displays the FID Point Assignment dialog box shown in Figure 2-36. The current point name and description display in the Name and Description text box.

- b. If desired, click on the point name and description text boxes to modify the point name and description.

- c. Click on the point type (Discrete Output, Analog Output, Analog Input, Discrete Input). The type's associated algorithms will display in the Select an algorithm list.
 - d. In the Select an algorithm list, click to select the point's algorithm (control type).
 - e. Click on *OK* to close the FID Point Assignment dialog box.
 - f. Click to enable the Download new point assignments option.
 - g. Click on *OK* to close the FID Point Selection dialog box. The Controller List window re-displays.
5. Configure each point's service configuration tables.
 6. Configure each point's configuration tables.

If necessary, refer to the Viewing Configuration Tables and Modifying Configuration Table Values sections of this chapter.

Figure 2-35
FID Point Selection Dialog
Box

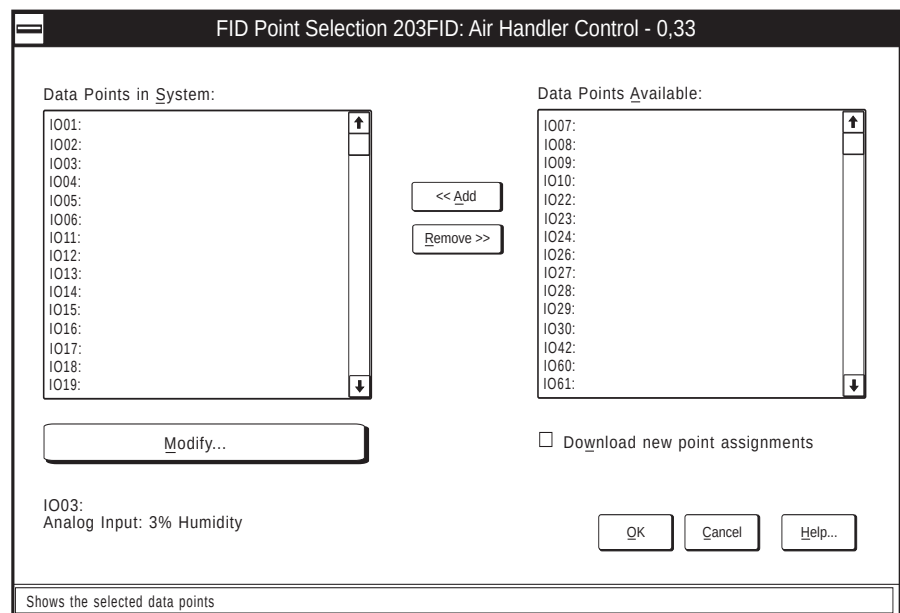


Table 2-35
FID Point Selection Dialog
Box

Click on	To
points in the Data Points Available list	select the FID points that you wish to activate.
Add	activate the selected points. The point names will display in the Data Points in System list.
Remove	de-activate the selected points. The point names will be removed from the Data Points in System list and returned to the Data Points Available list.
Download new point assignments	enable or disable downloading of point selections to the FID controller.
Modify	assign the point type and algorithm to the point currently selected in the Data Points in System list. ComfortVIEW displays the FID Point Assignment dialog box. Refer to Figure 2-36 and Table 2-36 for instructions on using this dialog box.
OK	close the dialog box and save settings.
Cancel	exit the dialog box and restore the previous settings.
Help	display help information.

Figure 2-36
FID Point Assignment
Dialog Box

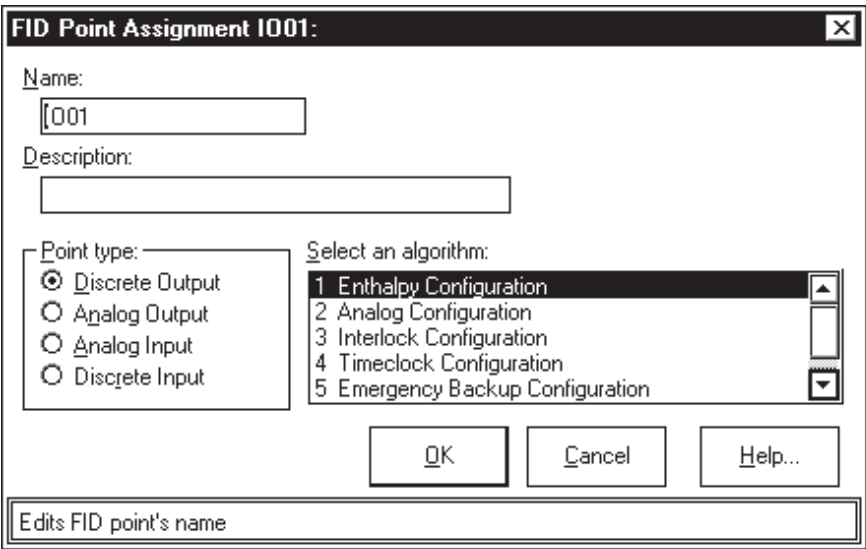


Table 2-36
FID Point Assignment
Dialog Box

Click on	To
Discrete Output	configure this point as a discrete output.
Analog Output	configure this point as an analog output.
Analog Input	configure this point as an analog input.
Discrete Input	configure this point as a discrete input.
an algorithm in the Select an algorithm list	select the point's control type.
the Name text box	modify the point name.
the Description text box	modify the point description.
OK	close the dialog box and save settings
Cancel	exit the dialog box and restore the previous settings.
Help	display help information.

Configuring Comfort Controllers

ComfortVIEW contains a programming interface for the Comfort Controller. Comfort Controller configuration consists of two phases:

- Creating database objects (hardware and software points, algorithms, setpoints, alarms, functions, and system tables) in the blank Comfort Controller database.
- Configuring the objects.

If necessary, refer to the *Comfort Controller Overview and Configuration Manual* (808-891) for a list of the Comfort Controller's database objects and a description of the accompanying configuration decisions.

The Comfort Controller receives commands from ComfortVIEW as you work to create and configure the database objects.

Note: The ComfortVIEW Comfort Controller configuration feature only applies to Comfort Controllers 1600 and 6400 Version 1.3 and greater.

The ComfortVIEW programming interface is very different from Carrier's Network Service Tool Quickstart and On-line Comfort Controller configuration tools. ComfortVIEW requires fewer interim steps for the creation of an object and offers an easier method of object configuration. Also, any object additions, deletions, or modifications made to the Comfort Controller are also simultaneously made to the ComfortVIEW controller database image.

Important Features and Considerations

As you use ComfortVIEW to create, delete, or modify objects and enable the download to Comfort Controller option, programming commands are sent (downloaded) from ComfortVIEW to the Comfort Controller. As this happens, ComfortVIEW creates an image of the controller in its own database. ComfortVIEW records and maintains all controller object changes made in this way. As a result, you never have to upload your Comfort Controller to the ComfortVIEW database, and any changes that are made to the number and types of controller objects are automatically synchronized with the contents of your ComfortVIEW database. You must still, however, save and manually download Comfort Controller table configuration changes.

As long as you enable the download to Comfort Controller option, and also download table configuration changes to the controller, the ComfortVIEW database remains synchronized with the actual

controller object database and configuration. If, however, you opt not to download an object or configuration table change from ComfortVIEW to the Comfort Controller, you will have a mismatch between the controller's and the ComfortVIEW database.

Recovering from Database Mismatch

If you suspect a mismatch between the Comfort Controller and the ComfortVIEW database, perform a controller verification by clicking on the *Configure* menu item and then clicking on *Verify* . Any differences will be detected and recorded for your viewing. If there are differences that you wish to rectify, either upload the existing Comfort Controller to ComfortVIEW or download the existing ComfortVIEW database to the Comfort Controller.

Use of Other User Interfaces to Program Comfort Controllers

If you have programmed and configured a new Comfort Controller using the Network Service Tool's Quickstart and On-Line configuration tools or some other user interface, simply upload the controller to ComfortVIEW. Once it is uploaded, you can use ComfortVIEW to make all future configuration changes.

If you use the Network Service Tool's Quickstart and On-Line configuration tools, or some other user interface to locally make object or configuration modifications to a Comfort Controller that already exists in the ComfortVIEW database, simply upload the controller to ComfortVIEW. There is no need to delete the Comfort Controller and re-add it to the ComfortVIEW database, as there was in previous ComfortVIEW versions. Uploading makes all the necessary changes to the ComfortVIEW database to keep ComfortVIEW and the Comfort Controller's database synchronized.

Note: Uploading a Comfort Controller to an existing Comfort Controller in the ComfortVIEW database will overwrite the ComfortVIEW database as necessary in order to create an exact image of the actual Comfort Controller database. It is recommended that you use the Verify command prior to performing the upload to note the differences in the two databases.

If you use ComfortVIEW to assign custom engineering units to a Comfort Controller point, the custom units will not display if you use another user interface to display the point.

Procedure Overview

This procedure provides instructions for creating, modifying, and configuring objects in the ComfortVIEW database, and optionally creating and configuring them in the Comfort Controller. Prior to beginning these instructions, you must add the Comfort Controller to your ComfortVIEW database. For instructions on adding controllers, follow the instructions in the Adding/Modify Controllers section of this Carrier Network Manager chapter.

If desired, you can perform this procedure without being physically connected to an actual Comfort Controller. Use the Comfort Controller Version 1.3 templates that are provided with your ComfortVIEW software for importing. These templates are named CC640013.CWX and CC160013.CWX and are located in the directory path \CCNPATH\TEMPLATE. This directory path will be located in the \CVIEW , \CWORKS or other directory in which you installed ComfortVIEW. Once your configuration is complete, you can export the file to disk in order to import it at another ComfortVIEW site, or you may connect a Comfort Controller to your ComfortVIEW PC and download the configuration to the Comfort Controller. For Comfort Controller downloading instructions, refer to Downloading ComfortVIEW data to a Comfort Controller, which appears later in this Configuring Comfort Controllers section.

1. Display the Controller List window. If necessary, follow the instructions listed in the Displaying the Controller List section of this chapter.
2. Click on the Comfort Controller that you wish to create.
3. Click on the *Configure* menu item and then click on *Controller*. ComfortVIEW displays the Configure Comfort Controller tabbed dialog box shown and described in Figure 2-36a and Table 2-36a. This dialog box contains a series of tabs, each of which provides access to the Comfort Controller's different database objects. When you initially display this dialog box, the Hardware tab will be selected.

Note: The tabs in this dialog box are arranged in the recommended order of configuration.

4. Create and configure the hardware and software points that your application requires by following the Creating and Modifying Hardware and Software Points procedure, which appears later in these Configuring Comfort Controllers instructions.

5. Create and configure the setpoint schedules that your application requires by following the Creating Other Database Objects: Setpoints, System Tables, Alarms, Functions, Algorithms procedure, which appears later in these Configuring Comfort Controllers instructions.
6. Create and configure the system tables (Consumable, Runtime, Holiday, Network Time Schedule, Loadshed, Language Conversion) that your application requires by following the Creating Other Database Objects: Setpoints, System Tables, Alarms, Functions, Algorithms procedure, which appears later in these Configuring Comfort Controllers instructions.
7. Create and configure the alarms (Limit, Setpoint Limit, Discrete State, First Out, Runtime, Number of Starts) that your application requires by following the Creating Other Database Objects: Setpoints, System Tables, Alarms, Functions, Algorithms procedure, which appears later in these Configuring Comfort Controllers instructions.
8. Create and configure the functions (Analog Trace Point, Discrete Trace Point, Internal Consumable, Adaptive Optimal Start/Stop, Network Broadcast, Linkage/AOSS Schedule, Night Time Free Cooling, Occupancy) that your application requires by following the Creating Other Database Objects: Setpoints, System Tables, Alarms, Functions, Algorithms procedure, which appears later in these Configuring Comfort Controllers instructions.
9. Create and configure the algorithms that your application requires by following the Creating Other Database Objects: Setpoints, System Tables, Alarms, Functions, Algorithms procedure, which appears later in these Configuring Comfort Controllers instructions.
10. After you create and configure all database objects, click on the Configure Comfort Controller dialog box's *Close* button. ComfortVIEW closes the dialog box and proceeds to build the status display tables. A message dialog box displays during this process.

Figure 2-36a
Configure Comfort
Controller Dialog Box

Configure CC6400: ComfortController 6400 - 0, 101

Hardware

Software

Setpoints

System

Alarms

Functions

Algorithms

Hardware points:

SPT_01: Space Temperature 01

SAT_01: Supply Air Temp 01

RAT_01: Return Air Temp 01

MAT_01: Mixed Air Temp 01

FAN_01: Fan Status 01

Channel 06: unconfigured

Channel 07: unconfigured

Channel 08: unconfigured

CCV_01: Cooling Coil Valve 01

Channel 10: unconfigured

Channel 11: unconfigured

Channel 12: unconfigured

Channel 13: unconfigured

Channel 14: unconfigured

New...

Modify...

Configure...

Clone...

Delete...

Temperature input

Hardware channel 01

Database status...

Delete marked...

Unmark_all...

Close

Help...

Table 2-36a
Configure Comfort
Controller Dialog Box

Click on	To
the Hardware, Software, Setpoints, System, Alarms, Functions, or Algorithms tab	select the category of object to create or modify. If necessary, refer to the Terminology section at the beginning of this Carrier Network Manager chapter for an explanation and list of tables in each of these categories.
a point in the Hardware or Software points list (available under Hardware or Software tab only)	select the point to create or modify.
a setpoint, system table, alarm, function, or control algorithm name (available under Setpoints, System, Alarms, Functions, or Algorithms tab only)	select the database object to modify.
New	create a new database object. ComfortVIEW will display the Object Definition dialog box. Refer to Figure 2-37 and Table 2-37 for instructions on using this dialog box.
Modify	modify the selected database object's name, description, and units. ComfortVIEW will display the Object Definition dialog box. Refer to Figure 2-37 and Table 2-37 for instructions on using this dialog box.
Configure	modify the configuration table for the selected database object. For detailed instructions on modifying configuration table values, refer to the Modifying Configuration Table Values section of this Carrier Network Manager chapter.

(continued)

Table 2-36a
Configure Comfort
Controller Dialog Box
(continued)

Click on	To
Clone	create a new database object by replicating the selected database object and its configuration. ComfortVIEW displays the Select Comfort Controller Objects dialog box. From the list of suggested objects, select the new object(s) that you wish to create. ComfortVIEW will create the selected objects and replicate the existing object's configuration. Refer to Figure 2-38 and Table 2-38 for detailed instructions on using this dialog box.
Delete	delete the selected object. ComfortVIEW displays a dialog box asking for confirmation before deleting the object.
Database status	check on the error status and available program space in your Comfort Controller database. ComfortVIEW displays the Database Status dialog box. If there is a database error, perform a controller verify to determine the differences between the Comfort Controller and the ComfortVIEW database. For additional information, refer to Recovering from Download Errors, which appears later in this Configuring Comfort Controllers section.
Delete marked	delete the currently-selected objects in all Configure Comfort Controller dialog box tabs.

(continued)

Table 2-36a
 Configure Comfort
 Controller Dialog Box
 (continued)

Click on	To
	Note: If there are objects selected in more than one tab, ComfortVIEW will display the Select Comfort Controllers Objects dialog box. This dialog box will display the names of all currently-selected objects. From the list displayed, select the objects that you wish to delete. Clicking on Select All will delete all listed objects. Clicking on Select None will delete none of the listed objects. ComfortVIEW displays a dialog box asking for confirmation before deleting any object.
Unmark all	de-select the currently-selected objects in all Configure Comfort Controller dialog box tabs.
Close	exit the dialog box and restore the previous settings.
Help	display help information.

**Creating and
 Modifying Hardware
 and Software Points**

Follow the instructions below to create a new Comfort Controller hardware or software point or to modify an existing point's sensor type, name, or description.

1. In the Configure Comfort Controller dialog box, click on the *Hardware* tab to create or modify a hardware point or, click on the *Software* tab to create or modify a software point. The list of configured and unconfigured hardware or software channels will be displayed. For hardware points, the channels list depicts the actual controller I/O channel point assignment. For software points, the channel list depicts internal software channel assignments.

If you are accessing a Comfort Controller that has been newly added to the ComfortVIEW database, all points will display *Unconfigured*. If you are modifying a previously configured Comfort Controller, the configured points will display in the

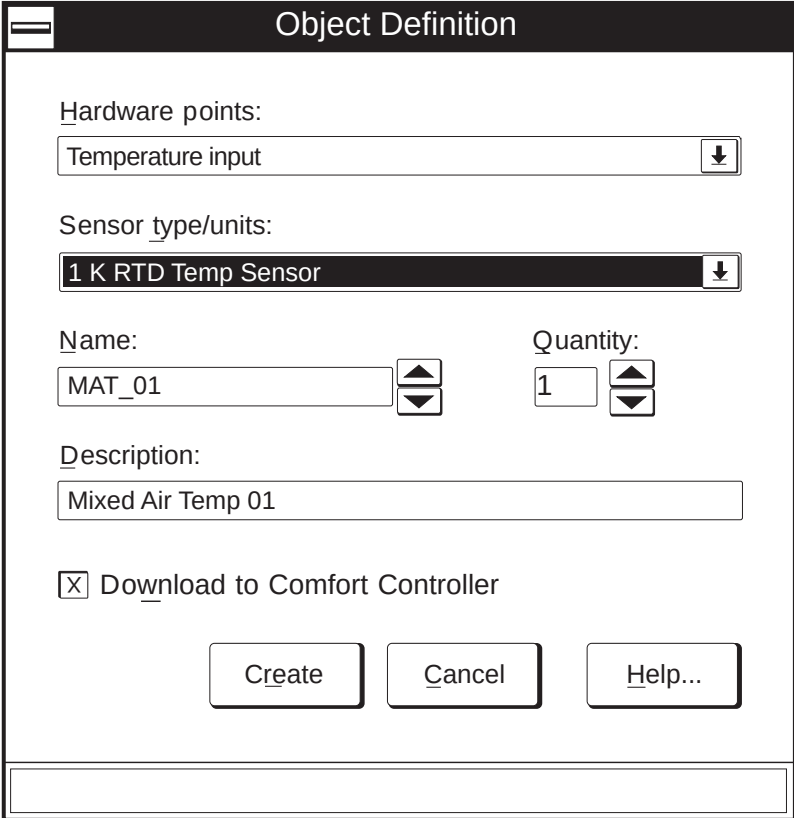
format *Channel Name: Description* where *Channel Name* consists of the up to eight-character user-selectable point name and *Description* is the up to 24-character point description.

2. Click in the Points list to select the point to create or modify.
3. Click on *New* to create a new point, or click on *Modify* to modify the selected existing point.

ComfortVIEW displays the Object Definition dialog box shown and described in Figure 2-37 and Table 2-37. If you are modifying an existing point, the channel type, sensor type, point name, and description display in the dialog box's corresponding fields. If the point is currently unconfigured, all fields will appear blank.

(Continue to Step 4.)

Figure 2-37
Object Definition
Dialog Box



The dialog box is titled "Object Definition". It contains the following fields and controls:

- Hardware points:** A text field containing "Temperature input" with a dropdown arrow on the right.
- Sensor type/units:** A text field containing "1 K RTD Temp Sensor" with a dropdown arrow on the right.
- Name:** A text field containing "MAT_01" with up and down arrow buttons on the right.
- Quantity:** A text field containing "1" with up and down arrow buttons on the right.
- Description:** A text field containing "Mixed Air Temp 01".
- Download to Comfort Controller:** A checkbox that is checked, with the label "Download to Comfort Controller".
- Buttons:** "Create", "Cancel", and "Help..." buttons at the bottom.

Table 2-37
Object Definition
Dialog Box

Click on	To
the Hardware points, Software points, Setpoints, System tables, Alarms, Functions, or Control Algorithms drop down list	select the object's type. The Name field will update to reflect the selected type. The selected type will also automatically display in the Description field.
the sensor type/units/state drop down list	select the object's sensor type, output units, or state. Note: The name of this list will vary depending on the type of database object. This list will display only those sensor types, units and states that correspond to the selected object type. Custom engineering units will appear at the bottom of the drop down list. You define custom units using the Setup application.
the Name text box	modify the displayed object name. You can enter an up to eight-character name. This name will display in the Configure Comfort Controller dialog box's Points list, in status display tables, and will also display in the expanded controller list. Note: If you will be creating multiple similarly-named objects (for example, hardware points SPT_01, SPT_02, SPT_03, etc.) adding the ** characters to the point name in place of the existing numbers expedites the creation process. For instructions on using this feature, refer to Creating

(continued)

Table 2-37
Object Definition
Dialog Box
(continued)

Click on	To
	Multiple Similarly-Named Database Objects, which appears later in this Configuring Comfort Controllers section.
the up or down arrow beside the Name text box	increment or decrement the numerical portion of the object name. This option is available for Comfort Controller System objects in which you can modify only the numerical portion of the table name (Consumable, Runtime, Network Time Schedule, Loadshed, Occupancy, and Holiday Tables). The text portion of the table name must remain as displayed. Clicking on the up or down arrow leaves the table name as is and only modifies the number. Note: Clicking on the up arrow when the uppermost table number is displayed causes ComfortVIEW to replace the numerical portion of the table name with the characters ** and to enable the Quantity field, which gives you the capability to simultaneously create multiple tables.
Quantity	create multiple similarly-named objects (for example, hardware points SPT_01, SPT_02, etc.). Enter the desired number of tables or click on the up or down arrow to increment or decrement the displayed value. This field is enabled only if you include the ** characters in the Name text box. For additional information on this feature, refer to Creating Multiple Similarly-Named Objects, which (continued)

Table 2-37
Object Definition
Dialog Box
(continued)

Click on	To
	appears later in this Configuring Comfort Controllers section of the manual. Note: ComfortVIEW limits the value that you are permitted to enter in the Quantity field depending on the object type and on the number of currently existent Comfort Controller objects. For example, if two occupancy tables currently exist, you will not be permitted to enter a value greater than 97 in this field. (Assuming that a maximum of 99 occupancy tables are available in the Comfort Controller.) After you click on <i>Create</i>, ComfortVIEW will create the specified number of tables and display the newly-created table names in the Select Comfort Controller Objects dialog box. In this dialog box you will have the opportunity to modify the table names and descriptions. Refer to Figure 2-38 and Table 2-38 for instructions on using this dialog box.
the Description text box	modify the displayed object description. You can enter an up to 24-character description. This description will display in the Configure Comfort Controller dialog box's Hardware points, Software points, Setpoints, System tables, Alarms, Functions, or Control Algorithms list. The description will also display in status display tables, and in the expanded controller list.

(continued)

Table 2-37
Object Definition
Dialog Box
(continued)

Click on	To
	Note: If you will be creating multiple similarly-named objects (for example, hardware points SPT_01, SPT_02, SPT_03, etc.) you can enter the ** characters in this field to expedite the channel creation process. For instructions on using this feature, refer to Creating Multiple Similarly-Named Database Objects, which appears later in this Configuring Comfort Controllers section of the manual.
Download to Comfort Controller	create or modify this object in the Comfort Controller as well as save it in the ComfortVIEW database. The download, however, does not actually occur until you click on <i>Create</i> .
Create	create the new Comfort Controller object. ComfortVIEW displays a message dialog box during the object creation.
Cancel	exit the dialog box and restore the previous settings.
Help	display help information.

4. In the Object Definition dialog box, select the point type by clicking in the Hardware or Software Points drop down list.

Note: For the Comfort Controller 1600, the displayed channel types are limited to correspond to the 1600's available channel type selection.

If you are modifying an existing point, ComfortVIEW will not permit you to modify the displayed point type. To do so, you must delete the point by clicking on the Configure Comfort Controller dialog box's *Delete* button and then create a new point of the desired type.

The Name field will update to reflect the selected point type. For example, if you are creating a point on Channel 8 and select the point type Milliamp Output, the point name *MAOUT08* will automatically display in the Name field.

The selected point type will also automatically display in the Description field.

5. If desired, you can modify the point name and description by clicking in the appropriate fields.

The point name and description will display in the Points list, in status display tables, and in the expanded controller list.

Note: If you will be creating multiple similarly-named channels (for example, SPT_01, SPT_02, SPT_03, etc.), you can enter the ** characters in the numeric fields of these names to expedite the channel creation process. For instructions on using this time saving feature, refer to Creating Multiple Similarly-Named Database Objects, which appears later in this Configuring Comfort Controllers section of the manual.

6. Select the sensor type or output units by clicking in the Sensor Type/Units drop down list.

Note: The sensor type list will display only those sensor types that correspond to the selected point type. To select custom engineering units, pull down to the bottom of the list. Custom units are defined using ComfortVIEW Setup application.

7. If you wish to create or modify this channel in the Comfort Controller as well as in the ComfortVIEW database, click on *Download to Comfort Controller*.

Note: If you do not select this option, ComfortVIEW will create the channel only in its database. The channel will not be created in the Comfort Controller. If desired, you can work off-line and create the configuration in the ComfortVIEW database only. Then, when you are ready to send the information to the Comfort Controller, you can simply perform a controller download of the entire configuration using the Configure menu's Download command. To Download an entire Comfort Controller instructions, refer to the instructions which appear later in this Configuring Comfort Controllers section.

When working off-line, however, be sure to keep track of the amount of Comfort Controller memory you will be using. Refer to the EEPROM Memory Usage Summary Sheet in the *Comfort Controller Overview and Configuration Manual* for approximate database object memory usages.

8. Click on *Create* to create the new or modified point information and display the configuration table, or

Click on *Cancel* to exit the dialog box and restore the previous settings.

ComfortVIEW displays a message dialog box during the creation process. At the conclusion, the point's configuration table is displayed.

9. You can opt to configure the point here, or you can exit the configuration table and return to configure the point at a later time using the Configure Comfort Controller dialog box's *Configure* button. For configuration instructions, refer to Configuring Database Objects, which appears later in this Configuring Comfort Controllers section.

**Creating and
Modifying Other
Database Objects:
Setpoints, System
Tables, Alarms,
Functions, Algorithms**

Follow the instructions below to create or modify the following Comfort Controller database objects:

- Setpoint schedules
- System tables (Consumable, Runtime, Holiday, Network Time Schedule, Loadshed, Language Conversion)
- Alarms (Limit, Setpoint Limit, Discrete State, First Out, Runtime, Number of Starts)
- Functions (Analog Trace Point, Discrete Trace Point, Internal Consumable, Adaptive Optimal Start/Stop, Network Broadcast, Linkage/AOSS Schedule, Night Time Free Cooling, Occupancy)
- Algorithms.

Note: ComfortVIEW gives you the capability to create up to 99 setpoint schedules. If you are using Carrier's Network Service Tool or Building Supervisor interface, however, you will only be able to access the first 16 of these schedules. The same situation holds true for alarms, functions,

and algorithms. ComfortVIEW allows you to create an unlimited number of these objects. If you are using the Network Service Tool or Building Supervisor, however, you will only have access to the first 96 objects of these types in the Comfort Controller 6400 and the first 24 in the Comfort Controller 1600. You will still, however, be governed by the amount of available Comfort Controller memory.

1. In the Configure Comfort Controller dialog box, click on the tab that corresponds to the type of database object you wish to create or modify:

Setpoint

System

Alarms

Functions

Algorithms

A list of existing database objects will be displayed in the format *Object Name: Description* where *Object Name* consists of the up to eight-character user-selectable name and *Description* is the up to 24-character description. If you are accessing a Comfort Controller that has been newly added to the ComfortVIEW database, this list will be empty.

2. Click on *New* to create a new object, or select an existing object and then click on *Modify* to modify the selected object's type/units/state, name, or description.

ComfortVIEW displays the Object Definition dialog box shown and described in Figure 2-37 and Table 2-37. If you are modifying an existing object, the object's identification information will display in the corresponding fields. If you are adding a new object, all fields will appear blank.

3. In the Object Definition dialog box, select the object type by clicking in the top most drop down list. Depending on the type of database object you are working with, this list will be labelled Setpoints, System tables, Alarms, Functions, or Control Algorithms drop down list.

Note: If you are modifying an existing object, ComfortVIEW will not permit you to modify the displayed object type. To do so, you must delete the object by clicking on the Configure Comfort Con-

troller dialog box's *Delete* button and then create a new one of the desired type.

The Name field will update to reflect the selected object type. For example, if you are creating a system table and select the system table type Holiday, the name *HOLDY01* will automatically display in the Name field.

Note: When naming new tables, ComfortVIEW keeps track of existing table instances. For example, If *HOLDY01* and *02* already exist, ComfortVIEW would name a new table *HOLDY03*.

The selected object type will also automatically display in the Description field.

4. If desired, you can modify the object name and description by clicking in the appropriate fields.

Note: You cannot modify the full name of system objects. You can only modify the numerical portion of the name. To do this, click on the up or down arrow that is located beside the Name text box.

The name and description will display in the expanded controller list.

Note: If you will be creating multiple similarly-named objects (for example, multiple Limit Alarm objects, *LMALM_01*, *LMALM_02*, *LMALM_03*, etc.), you can enter the **** characters in the numeric fields of these names to expedite the object creation process. For instructions on using this time saving feature, refer to *Creating Multiple Similarly-Named Database Objects*, which appears later in this *Configuring Comfort Controllers* section of the manual.

5. Select the sensor type, output units, or state by clicking in the Sensor Type/Units/State drop down list.
6. If you wish to create or modify this object in the Comfort Controller as well as in the ComfortVIEW database, click on *Download to Comfort Controller*.

Note: If you do not select this option, ComfortVIEW will create the object only in its database. The object will not be created in the Comfort Controller. If desired, you can work off-line in this way and create the configuration in the ComfortVIEW database only. Then, when you are ready to send the informa-

tion to the Comfort Controller, you can simply perform a controller download of the entire configuration using the Configure menu's Download command.

When working off-line, however, be sure to keep track of the amount of Comfort Controller memory you will be using. Refer to the EEPROM Memory Usage Summary Sheet in the *Comfort Controller Overview and Configuration Manual* for approximate database object memory usages.

7. Click on *Create* to create the the new or modified object and display the configuration table, or

Click on *Cancel* to exit the dialog box and restore the previous settings.

ComfortVIEW displays a message dialog box during the creation process. At the conclusion, the point's configuration table is displayed.

8. You can opt to configure the object here, or can exit the configuration table and return to configure the object at a later time using the Configure Comfort Controller dialog box's *Configure* button. For configuration instructions, refer to Configuring Database Objects, which appears later in this Configuring Comfort Controllers section.

ComfortVIEW includes a feature that is designed to expedite the creation of multiple similarly-named and/or similarly-described objects (For example, SPT_01 (Space Temperature 01), SPT_02 (Space Temperature 02), SPT_03 (Space Temperature 03)). You initiate this feature while creating or modifying an existing database object.

Creating Multiple Similarly-Named Database Objects

To create multiple objects:

1. Following the instructions listed under Creating and Modifying Hardware and Software Channels or Creating and Modifying Other Database Objects: Setpoints, System Tables, Alarms, Functions, Algorithms, display the Object Definition dialog box.
2. In the Object Definition dialog box's name and description fields, substitute the characters ** in place of the numerical portion. (For example, for a hardware point, enter *SPT_*** in the Name field and *Space Temperature *** in the Description field.)

Note: For System objects, you are not permitted to modify the name or description. You must display the ** by clicking on the up arrow that is located next to the Name field.

This enables the Quantity field.

3. In the Quantity field, enter the number of tables that you wish to create (For example, 3.)

After you click on the dialog box's *Create* button, ComfortVIEW will create the specified number of tables and will substitute the ** portion of the name with an instance number.

In the above example, ComfortVIEW would create the following tables (assuming you currently have Channel 01 selected in the Hardware Channels list):

SPT_01 (Space Temperature 01)
SPT_02 (Space Temperature 02)
SPT_03 (Space Temperature 03).

Note that if you have Channel 02 selected, ComfortVIEW would create SPT_02, SPT_03, and SPT_04.

ComfortVIEW will then display the Select Comfort Controller Object dialog box. This dialog box lists the newly-created table names and descriptions and gives you the opportunity to modify them.

4. In the Select Comfort Controller dialog box, make any desired modifications by selecting the object to modify and clicking on *Modify*. Refer to Figure 2-38 and Table 2-38 for instructions on using the Select Comfort Controller Objects dialog box.
5. Click on the individual objects that you wish to create or click on *Select all* to select all displayed objects.
6. Click on *OK* to create the objects or on *Cancel* to exit the dialog box.

ComfortVIEW displays the message *Create object(s) in Comfort Controller also?*.

7. Click on *Yes* to create (download) the object in both ComfortVIEW and the Comfort Controller. Click on *No* to create the object in the ComfortVIEW database only.

Figure 2-38
Select Comfort
Controller Objects
Dialog Box

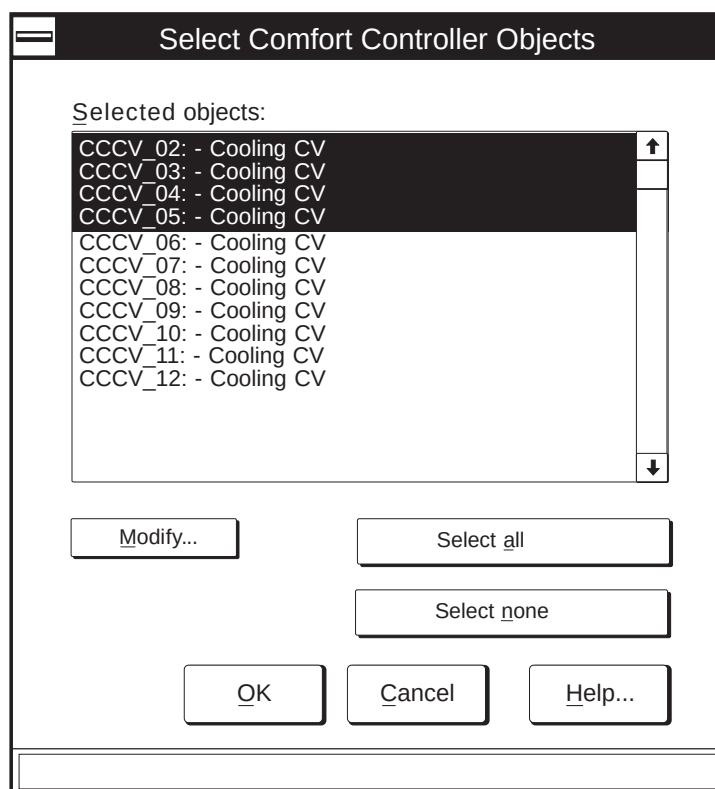


Table 2-38
Select Comfort
Controller Objects
Dialog Box

Click on	To
an object in the Selected objects list	select the object.
Select all	select all objects in the list.
Select none	de-select all objects.
Modify	modify the selected object's name and description. ComfortVIEW displays the Modify Object dialog box. Refer to Figure 2-39 and Table 2-39 for instructions on using this dialog box.
OK	exit the dialog box and save settings.
Cancel	exit the dialog box and restore the previous settings.
Help	display help information.

Figure 2-39
Modify Object
Dialog Box

Modify Object

Name:

Channel:

Description:

Table 2-39
Modify Object
Dialog Box

Click on	To
Name	edit the object's name. You can enter up to 8-alphanumeric characters.
Description	edit the object's description. You can enter up to 24-alphanumeric characters.
Channel	set a hardware or software point's channel number.
OK	exit the dialog box and save settings.
Cancel	exit the dialog box and restore the previous settings.
Help	display help information.

Configuring Database Objects

Follow the instructions below to configure a Comfort Controller object.

Prior to beginning this procedure, you must create the object. If necessary, refer to Creating and Modifying Hardware and Software Points or Creating and Modifying Other Database Objects: Set-points, System Tables, Alarms, Functions, Algorithms for instructions on creating objects. These instructions appear earlier in this Configuring Comfort Controllers section.

1. Display the object's configuration table.

Note: ComfortVIEW automatically displays the configuration table as the last step in the new point or object creation process. You can also display an object's configuration table at any time by clicking on the Configure Comfort Controller tabbed dialog box's *Configure* button, or by selecting the configuration table from the expanded controller list.

2. Modify the configuration table data as desired. For detailed instructions on modifying configuration tables, refer to the Modifying Configuration Table Values section of this chapter.

Note: Be sure to Save each table modification. If you are operating on-line with a Comfort Controller, download your table modifications to the Comfort Controller.

In certain configuration tables, you may notice a magenta (pink) shading on point names and descriptions. This shading indicates the availability of ComfortVIEW List Entry (F7) feature. List Entry is designed to expedite the configuration process. Refer below to List Entry for instructions on using this feature.

List Entry

The presence of magenta shading on a point name indicates that the List Entry feature is available. This feature helps expedite the configuration process by presenting a list of available entries for a configuration decision. If a configuration decision's point name and description text includes a magenta (pink) shading, you can use this timesaving feature by following the steps below.

1. In the configuration table worksheet, position the cursor on the magenta-shaded Name or Description cell.

2. Press the F7 key.

ComfortVIEW will display the Current Object Set dialog box, which will display a list of previously-created Comfort Controller objects that are eligible entries for the decision.

For example, if a magenta-shaded configuration decision is asking for a time schedule name, you can press the F7 key and display a list of the time schedules that are available in the controller. Note that you must have previously created the time schedules in the Comfort Controller.

3. In the Current Object Set dialog box, select the name of the object that you would like to enter into this configuration decision, and click on *OK*.

ComfortVIEW will place your selected object name in the selected Name cell.

Be sure to Save each table modification. If you are operating on-line with a Comfort Controller, download your table modifications to the Comfort Controller.

Figure 2-40
Current Object Set
Dialog Box

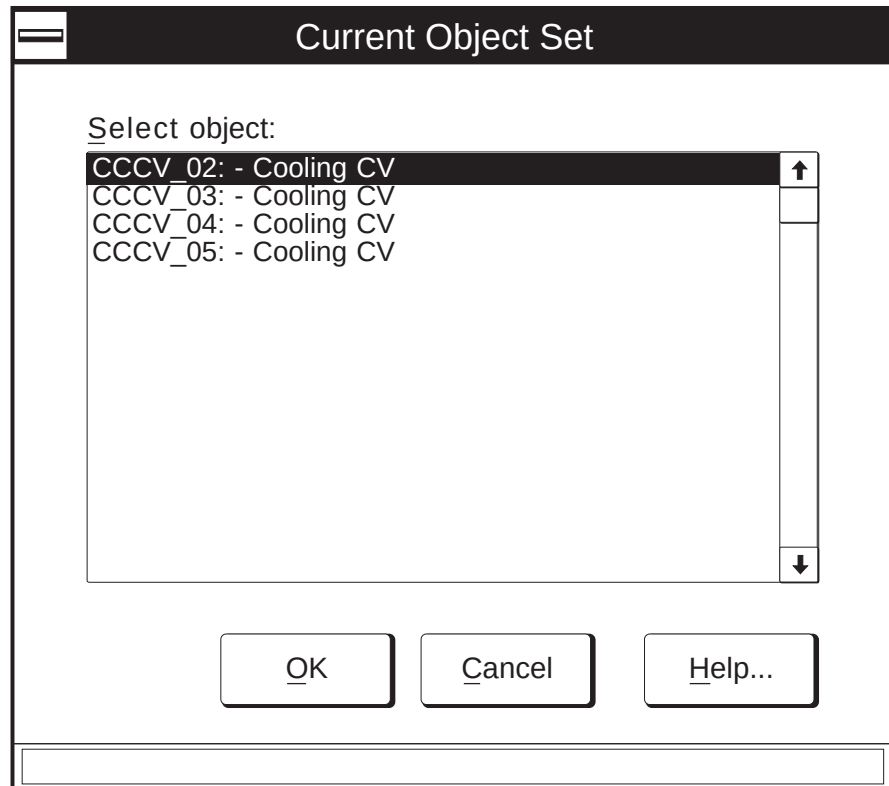


Table 2-40
Current Object Set Dialog
Box

Click on	To
an object name	select the desired Comfort Controller object.
OK	place the selected object name into the selected cell.
Cancel	exit the dialog box without making a selection.
Help	display help information.

Table Jumps from Configuration Tables

While viewing configuration tables, the Carrier Network Manager provides you with a short cut to display and modify a configuration entry's associated configuration, maintenance, time schedule, or setpoint table.

Follow the instructions below:

1. In the configuration table worksheet, position the cursor on a configuration decision's Name or Description cell.
2. Click on the *Configure* menu item and then click on one of the following commands, depending on the type of table you wish to display:

Configuration
Maintenance
Time Schedule
Setpoint

ComfortVIEW displays the Table Jump Selection dialog box, which contains a list of the controller's configuration, maintenance, time or setpoint schedule tables.

Note: If you select the *Configuration* or *Maintenance* command from a magenta-shaded cell, ComfortVIEW will jump directly to the configuration entry's associated configuration or maintenance table.

3. From the Table Jump Selection dialog box, select the table that you wish to display and then click on *OK*.

ComfortVIEW will display the selected table.

Reference Jumps from Configuration Tables

While viewing configuration tables, the Carrier Network Manager provides you with a means to list the names of all Comfort Controller objects that are using the selected configuration entry in their configuration. This feature, however, is available only for those configuration decisions that contain a magenta (pink) highlighting.

To display a configuration entry's associated objects:

1. In the configuration table worksheet, position the cursor on the magenta-highlighted Name or Description cell for the configuration decision.
2. Click on the *Configure* menu item and then click on *Reference tables*.
ComfortVIEW displays the Table Jump Selection dialog box, which contains a list of all Comfort Controller object tables that use the selected configuration point.
3. If desired, you can display a selected object's associated configuration or maintenance table by following the steps below:
 - a. Click on the object name.
 - b. Click on *Configuration* or *Maintenance*.
 - c. Click on *OK*.

ComfortVIEW will display the selected configuration or maintenance table.

Figure 2-41
Table Jump Selection
Dialog Box

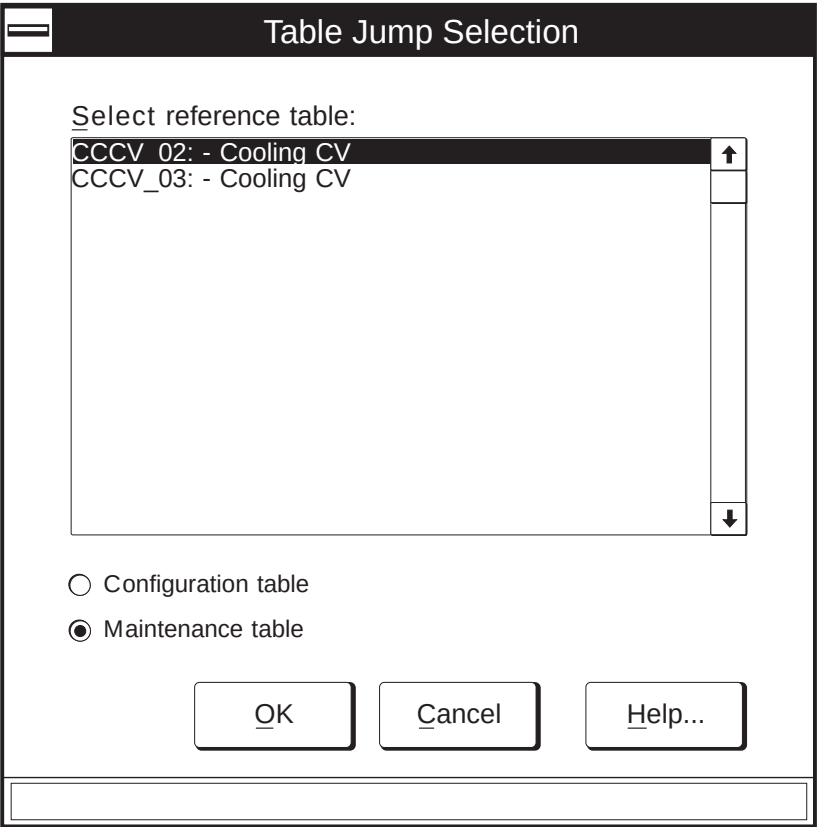


Table 2-41
Table Jump Selection
Dialog Box

Click on	To
a table or object name	select the Comfort Controller table or object.
Maintenance (available for the Reference table command only)	display the selected object's maintenance table.
Configuration (available for the Reference table command only)	display the selected object's configuration table.
OK	display the selected table.

(continued)

Table 2-41
Table Jump Selection
Dialog Box
(continued)

Click on	To
Cancel	exit the dialog box without making a selection.
Help	display help information.

Downloading ComfortVIEW Data to a Comfort Controller

As with all other controllers, you use the Download command to send configuration table data to the Comfort Controller. You can download the entire controller or only a single configuration table.

When you download an entire Comfort Controller, ComfortVIEW sends data from its database to the controller. You can optionally re-program the entire Comfort Controller with the ComfortVIEW database data, or preserve the Comfort Controller data and add only new or revised objects in the Comfort Controller database.

To Download a Specific Table: To download a specific Comfort Controller configuration table, display the configuration table and click on the *Configure* menu item and then click on *Download*.

Note: You may also perform this command by clicking on the Download icon in the toolbar.

ComfortVIEW sends the configuration shown on-screen to the controller. It overwrites the controller's current configuration.

To Download an Entire Comfort Controller:



1. Display the Controller List window and select the Comfort Controller whose configuration you wish to download.
2. Click on the *Configure* menu item and then click on *Download*.

Note: You may also perform this command by clicking on the Download icon in the toolbar.

ComfortVIEW displays a message dialog box with the question *Should the Comfort Controller be initialized?*

3. Clicking on *Yes* will cause the entire Comfort Controller database to be re-programmed with the configuration contained in the ComfortVIEW database.

Clicking on *No* will cause the existing Comfort Controller database to be preserved and will add only new or revised objects that do not yet exist in the Comfort Controller database.

Caution: If you answer *Yes*, all controller outputs will become unconfigured (disabled) for the period of time that it takes to complete the download and re-programming. If you answer *No*, all controller outputs will be held at their last commanded state as your new objects are added and as any object modification are made.

A function status box displays during the download process. The controller list re-displays on successful completion. If there are errors encountered during the download, a dialog box displays indicating that errors were encountered. If you wish to view an error report, click on *Yes*. This opens the Windows Notepad application and displays the error report.

Recovering from Download Errors:

A typical Comfort Controller download failure indicates that one or more Comfort Controller objects could not be created. Typically, these errors mean that you have run out of available memory space in the Comfort Controller. Follow the steps below to examine the database status of your Comfort Controller:

1. Display the Controller List window and click on the controller that you have just attempted to download.
2. Click on the *Configure* menu item and then click on *Controller*.

ComfortVIEW displays the Configure Comfort Controller dialog box.

3. Click on the dialog box's *Database status* button.

ComfortVIEW displays the Database Status dialog box. Refer to Table 2-42 for an explanation of the fields in this dialog box and recommended actions.

Table 2-42
Database Status Dialog
Box and Recommended
Actions

Field	Value	Recommended Action
Database error	Yes	Examine available bytes of memory. If the Comfort Controller is near 100% utilization for either category, it is likely that the objects that you have tried to create would not fit into available Comfort Controller memory space. ComfortVIEW discontinues the object creation process if you run out of controller memory. To clear this error, delete one of the existing objects. Free memory space for the creation of additional objects by deleting less important objects. If the Comfort Controller has an existing Database Error, do NOT upload the Comfort Controller to ComfortVIEW. You risk losing your last known good configuration.
EEPROM error	Yes	Follow instructions for Database error. If condition persists, reset the Comfort Controller using the RJ-14 reset jumper. If the Comfort Controller has an existing EEPROM Error, do NOT upload the Comfort Controller to ComfortVIEW. You risk losing your last known good configuration.
RAM error	Yes	Follow instructions for Database error. If condition persists, reset the Comfort Controller using the RJ-14 reset jumper. If the Comfort Controller has an existing RAM Error, do NOT upload the Comfort Controller to ComfortVIEW. You risk losing your last known good configuration.

Viewing or Modifying BEST++ Tables

Follow the instructions below to directly access and view BEST++ maintenance and configuration table program variables. You must be communicating (operating on-line) with the Comfort Controller in order to access these BEST++ tables.

1. Display the System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Display the controller list. If necessary, follow the instructions listed under Displaying the Controller List.
3. Double click on a controller to view its table categories.
4. Double click on *BEST++ Tables*.
5. In the right half of the window, double click on *BEST++ Program List*. ComfortVIEW displays the BEST++ Programs dialog box. Refer to Figure and Table 2-42A for instructions on using this dialog box.

Note: You must be communicating with the Comfort Controller to access these tables.

6. In the BEST++ Programs dialog box, select the BEST++ program and then click on *Configuration table* or *Maintenance table* and OK to display the corresponding BEST++ table.
7. You can modify BEST++ configuration table or force maintenance table data. If necessary, refer to the Modifying Configuration Table Values or Modifying (Forcing) Status Display or Maintenance Table Values section of this chapter for instructions.

Note: Be sure to Save and Download any configuration table modifications.

Figure 2-42A
BEST++Programs
Dialog Box

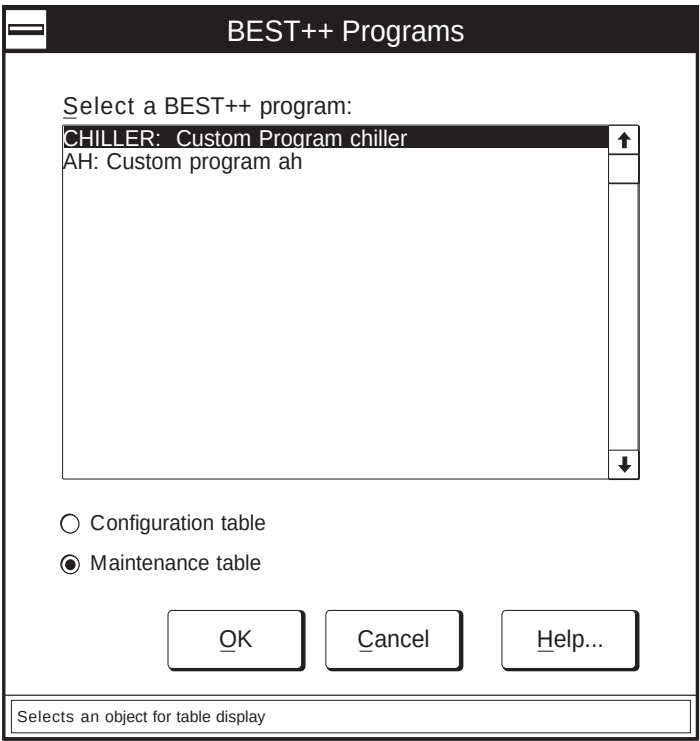


Table 2-42A
BEST++Programs
Dialog Box

Click on	To
a program in the Select a BEST++ program list	select the BEST++ program whose configuration or maintenance table you wish to display.
Configuration table	to display the configuration table for the selected BEST++ program.
Maintenance table	to display the maintenance table for the selected BEST++ program.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.



Exporting Controller Configuration Data

ComfortVIEW gives you the capability to back up an entire controller's database to another directory, sub-directory, or drive. You should make it a practice to periodically back up your controller database in the event that a malfunction should occur with your hard disk.

Export copies the selected controller's entire database to the specified drive. This drive can be the ComfortVIEW floppy diskette drive, another ComfortVIEW hard drive partition, or another computer on the local area network. The information that will be copied includes:

- the controller name, description, and address
- configuration data.

This database information can be copied back, or imported to ComfortVIEW at any time, using the Configure menu's New command. For additional information, refer to the Adding/Modifying Controllers section of this chapter.

ComfortVIEW also gives you the capability to back up an entire CCN's database. For instructions on this function, refer to Exporting CCNs in the Setup chapter of this manual.

Follow the instructions below to export a controller's database from the ComfortVIEW hard disk. You can export single or multiple controllers:

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Click on the controller you wish to export.

Note: You can also export multiple controllers. Use the Windows-standard mouse or keyboard technique to select multiple controllers from the right side of the window.

3. Click on *File* and then click on *Export*.

Note: You may also perform this command by clicking on the Export icon in the toolbar.

ComfortVIEW will display either the Save As dialog box or the Select Directory dialog box, depending on whether you have selected a single or multiple controllers.

4. Do one of the following depending on whether you wish to export a single or multiple controllers:

To export a single controller:

In the File Name edit box, enter a file name for the controller export file. Use the file extension .CWX, and select the directory and drive where you want the file saved. Refer to Table 2-43 for more information on using the Save As dialog box.

Note: If you want to save the file to another computer on the local area network, click on *Network*.

ComfortVIEW displays the Connect Network Drive dialog box. Select the pre-defined drive and path to where you wish to save the file, or double click on a computer in the Shared Directories list and select the desired directory.

To export multiple controllers:

Select the directory path where you wish to save the file. ComfortVIEW will save the export file to this directory using the following file naming convention: BxxxCyyy.CWX, where xxx is the bus number and yyy is the system element number.

5. Click on *OK* to save the file to the specified file name and location.

ComfortVIEW displays a dialog box asking for confirmation before copying the selected controller. Click on *Yes* to complete the export, or click on *No* to prevent the export from taking place. If you have selected multiple controllers and wish to export all, click on *Yes to All*.

Figure 2-43
Save As Dialog Box

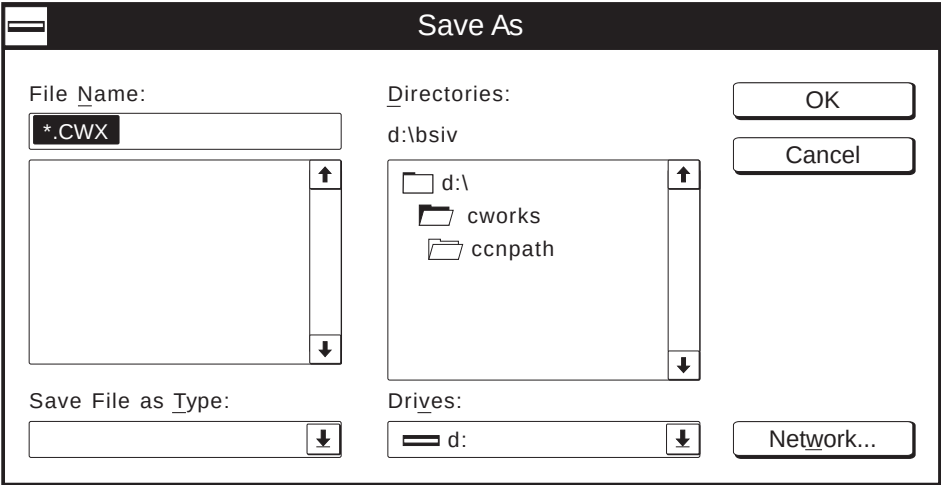


Table 2-43
Save As Dialog Box

Click on	To
the File Name: edit box	enter a file name for the file you are exporting.
Save File as Type	select the ComfortVIEW file type *.CWX.
Directories	select a directory where you want the file saved.
Drives	select a drive where you want the file saved.
Network	save the file to another computer on the local area network. ComfortVIEW displays the Connect Network Drive dialog box. Select the drive and path to where you wish to save the file, or double click on a computer in the Shared Directories list and select the desired directory. Click on Help to display Windows' help for further instructions on using this dialog box. Click on OK to save the settings. The Save As dialog box re-displays.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.

Dedicating Autodial Gateways to a Specific Operation

If you have more than one Autodial Gateway in a selected CCN, you can, if desired, reserve selected Gateways to perform the following operations:

- Timed data retrieval — Reserves the selected Gateway for use when connecting to remote CCNs to perform automatic timed data retrieval for ComfortVIEW reports.
- Standard connection — Reserves the selected Gateway for use when manually connecting to remote CCNs.
- Receipt of Incoming alarms — Reserves the selected Gateway for use when receiving incoming alarms.
- Transmission of Outgoing alarms — Reserves the selected Gateway for use when sending outgoing alarms.

Keep in mind that reserving an Autodial Gateway for a particular operation does not prevent ComfortVIEW from using the Gateway for other operations. It only allows ComfortVIEW to make the best possible selection under the given conditions.

This option is not available if you are using an internal Gateway for remote CCN communication.

Note: Reserving a Gateway for a particular operation is entirely optional. If you do not make specific operational assignments, ComfortVIEW automatically selects an idle Gateway for use.

Follow the steps below to assign operations to Autodial Gateways:

1. Display the Carrier Network Manager's System Overview window and expand it to display the database's CCNs and areas. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Click on the CCN whose Autodial Gateways you wish to assign.
3. Click on the *CCN Tools* menu item and then click on *Gateways*.

ComfortVIEW displays the Gateway Configuration dialog box (shown in Figure 2-44). This box lists the name and description of all Gateways in the selected CCN.

4. Click on an Autodial Gateway and then click on each function that you wish to assign to it.

Refer to Figure 2-44 and Table 2-44 for information on using this box.

5. Repeat Step 4 for each Autodial Gateway in the list.
6. Click on *OK* to close the dialog box and save the settings or, click on *Cancel* to close the dialog box and restore the previous settings.

Note: In the procedure above, you have reserved selected Gateways for particular operations. Keep in mind that you still must set up each Autodial Gateway's configuration tables in order for the Gateway to perform its specific alarm handling functions.

Figure 2-44
Gateway Configuration
Dialog Box

Gateway Configuration

Select a gateway:

AUTODIAL: Autodial Gateway - 0, 51
AUTODIAL: Autodial Gateway - 0, 50

☒ Standard connection
☒ Timed data retrieval [reports]
☐ Incoming alarms
☐ Outgoing alarms

OK Cancel Help...

Selects a gateway

Table 2-44
Gateway Configuration
Dialog Box

Click on	To
a Gateway in the Select a Gateway List	select a Gateway to which you wish to assign a function.
Standard connection	make this Gateway the one that will connect to remote CCNs to perform all ComfortVIEW functions, with the exception of timed data retrieval. Note: An Autodial Gateway assigned to perform this function in the CCN Access Definition Dialog Box will take precedence over this assignment. Refer to Figure and Table 2-6 for more information on the CCN Access Definition Dialog Box.
Timed data retrieval	make this Gateway the one that will connect to remote CCNs to perform timed data retrieval for ComfortVIEW reports.
Incoming alarms	reserve this Gateway to receive alarms.
Outgoing alarms	reserve this Gateway to send alarms.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.



Connecting to a Remote CCN Using an Autodial Gateway



Follow the steps below to establish a telephone connection to a remote CCN:

1. Display the Carrier Network Manager's System Overview window and expand it to display the database's CCNs. If necessary, follow the instructions listed under Accessing the Carrier Network Manager.
2. Click on the remote CCN with which you wish to communicate. In the System Overview window, remote CCNs are preceded by an icon as shown at left.
3. Click on the *Access* menu item and then click on *Connect*.

Note: You may also perform this command by clicking on the Connect icon in the toolbar.

ComfortVIEW displays a confirmation dialog box asking if you wish to connect to the selected CCN(s).

Note: If you have only one Autodial Gateway on your CCN and are currently connected to another remote CCN, ComfortVIEW displays a message indicating that you are unable to connect. Click on *OK* to close the message dialog box.

4. Click on *Yes* to connect or click on *No* to prevent the connect from taking place.

You are now connected to the remote CCN. The status area to the right of the toolbar displays the connect status. You can now use all ComfortVIEW applications and functions as if you were connected locally. If, in the Setup application, you have the Setup menu's Remote status command enabled, the names of all CCNs to which you are currently connected will display in the Setup's application's ComfortVIEW Remote Connections window.

You could now use the *CCN Tools, Bus Services* command to obtain a list of all system elements on the remote CCN. For further information on the Bus Services command, refer to the Carrier Network Manager Command Summary, which appears at the end of this chapter.

Disconnecting from Remote CCNs

Follow the steps below to disconnect from a remote CCN:

Note: You can disconnect while displaying either the System Overview or the Controller List window. If you are disconnecting from the System Overview window, however, you must click on the remote CCN from which you wish to disconnect prior to performing the instructions below.

1. Click on the *Access* menu item and then click on *Disconnect*.

Note: ComfortVIEW will display the message *CCN Is In Use* and you will not be permitted to disconnect if another operator is currently viewing a status display or maintenance table in the remote CCN.

ComfortVIEW displays a confirmation dialog box asking if you wish to disconnect to the selected CCN(s).

2. Click on *Yes* to disconnect or click on *No* to prevent the disconnect from taking place.

When you are disconnected from the remote CCN, the status line displays *Disconnect*.

Be aware that ComfortVIEW automatically disconnects you from a remote CCN if, after an operator-specified number of minutes, no communication occurs. The Autodial Gateway will generate an alarm to notify you of an automatic disconnect. For additional information on the automatic disconnect feature, refer to the explanation of the Phone Number Configuration dialog box in the Adding and Modifying CCNs section of this chapter.



Printing Carrier Network Manager Data

Table 2-45
Available Reports

The File menu's Print command provides you with the capability to print the following reports:

Report	Description
System Overview Window	A snapshot of the System Overview window.
Controller List	A list of all controllers in a selected area. Included for each controller is its 8 character controller name, address, and a list of all tables in the controller.
Controller Database	A list of all configuration tables in a selected controller. Included for each configuration table is its 8 character table name, the description, current value, high and low allowable entries, and name of every configuration decision.
Table Window	A snapshot of the currently-displayed Points Status, Maintenance, or Configuration Table window.

To Print the System Overview or Table Window Report

The report will print on the printer that you have specified using the File Menu's Print setup command.

1. Display the window you wish to print: System Overview, Point Status, Maintenance, or Configuration Table.
2. Click on the *File* menu item and then click on *Print*.

Note: You may also perform this command by clicking on the Print icon in the toolbar.

ComfortVIEW displays a confirmation box asking if you wish to print the system overview.

3. Click on *Yes* to print the currently-displayed window or click on *No* to prevent the print.

To Print a Controller List Report

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Click on the area name in the window.
3. Click on the *File* menu item and then click on *Print*. ComfortVIEW displays a confirmation box asking if you wish to print the area element list.

Note: You may also perform this command by clicking on the Print icon in the toolbar.

4. Click on *Yes* to print the list of all controllers in the selected area, or click on *No* to prevent the print. The controller list report prints on your ComfortVIEW printer. Figure 2-46 displays a sample controller list report.

To Print a Controller Database Report

1. Display the Controller List window. If necessary, follow the instructions listed under Displaying the Controller List.
2. Click on the controller whose database you wish to print.

Note: You can also select and print reports on multiple controllers. Use the Windows-standard mouse or keyboard techniques to select multiple controllers. You can, however, only select multiple controllers from the right side of the Controller List window.

3. Click on the *File* menu item and then click on *Print*. ComfortVIEW displays a confirmation box asking if you wish to create the database report.

Note: You may also perform this command by clicking on the Print icon in the toolbar.

4. Click on *Yes* to create the report, or click on *No* to prevent report creation. ComfortVIEW creates the report and displays it using the Windows Notepad application.
5. To print the report, click on Notepad's *File* menu item and then click on *Print*.
6. To close the report file, click on Notepad's *File* menu item and then click on *Exit*.

Figure 2-46
Sample Controller List
Report

United Mutual Insurance - Quicker List
39N: Air Handler Unit - 0, 2
19XL: Chiller #1 - 0,128
AHU - 0,2
DATCOLL: Data Collection III - 0,100

Figure 2-47
Sample Database Report

Device Configuration Report					
AHU: - 0, 2					
CONFIG: Configuration					
=====					
Description	Value	Units	LoLim	HiLim	Name
Humid(0=no,1=anlg,2=dis)	1		0	2	HUEN
Occupied Heating	Disable		Disable	Enable	OHEN
Night Time Free Cool	Disable		Disable	Enable	NTEN
NTFC Lockout Temperature	55	dF	40	70	NTLO
Space Temperature Reset	Enable		Disable	Enable	RSEN
Reset Ratio	3	^F	0	10	RTIO
Reset Limit	10	^F	0	20	LIMT
Demand Limiting	Enable		Disable	Enable	DLEN
Loadshed Group Number	2		1	16	LSGP
Demand Limit Setpoint 1	23	%	0	100	DL1
Demand Limit Setpoint 2	55	%	0	100	DL2
Timed Override Schedules	2		1	3	TSCH
Timed Override Value	1	hours	0	4	TOVR
Fan Tracking	Enable		Disable	Enable	FTEN
Night Purge	Enable				NPEN
Night Purge Duration	15	min	5	240	NPMN
Night Purge Damper - Lo	12	%	0	100	NPDL
Night Purge Damper - Hi	35	%	0	100	NPDH
Constant Outside Air CFM	Enable				OAEN
Indoor Air Quality	Enable				AQEN
IAQ Type	2		1	2	IAQT
(1=Diff gas,2=2 gases)					
IAQ Priority level	2		1	3	IAQP
(1=Hi,2=Lo,3=None)					
AHU: - 0, 2					
!CtrlID: Device Configuration					
AHU: Device Configuration					
=====					
Description	Value	Units	LoLim	HiLim	Name
Description: AIR HANDLER UNIT					DevDesc
Location: United Mutual Insurance					Location
Software Part Number: CESR-121498-05					PartNum

Sharing ComfortVIEW Dynamic Data with Other Applications (DDE)

You can send real time CCN system element data from ComfortVIEW to other PC software applications that are running on your ComfortVIEW workstation. This is accomplished using ComfortVIEW Dynamic Data Exchange (DDE) feature. The PC software application to which you intend to send data must support DDE. You set up DDE links between ComfortVIEW and the other PC software application in order to send the data.

You can also use another PC application that supports DDE "poke" to override forceable CCN point values. Refer below to DDE Poke for further information on this feature.

What Data can be Sent?

- Controller point data

The following controller point data will be sent any time there is a change in the data:

Point description
Point value
Point units
Point status
Point force status

- The most recently received Carrier Comfort Network alarm

The following alarm data can be sent:

Alarm message and associated custom alarm message
Alarm message only
Custom alarm message only

Required Conditions for Successful Data Sharing

- The application that is to receive the data must be linked to the appropriate ComfortVIEW data point. See Linking Controller Point Data to Applications that Support Paste Link, Linking Controller Point Data to Applications that Do Not Support Paste Link, and Linking Alarm Messages to Other Applications below.
- You must be logged in to ComfortVIEW
- The dynamic data must be changing in order to receive an update in the linked application.

Linking Controller Point Data to Applications that Support Paste Link

One application that supports DDE, is Microsoft's Excel spreadsheet program. To send data from ComfortVIEW to Excel you must establish a DDE link between the two applications. This link is

easily established using commands available in the ComfortVIEW and Excel menu structures.

To establish a DDE link, use each application's Copy and Paste commands as follows:

1. Launch your Excel spreadsheet program and open a new worksheet.
2. Launch the Carrier Network Manager application and access the controller whose data you wish to share.
3. Select the controller's status or maintenance display table and open the table for display.
4. Find the point that you wish to use.
5. Use the mouse to select the point's description, point value, units, or force status.

Note: You can select one, or all of the point's fields. To select all of the fields and to include the time of the last point update, click on the button to the left of the point description and select the entire row. You can only select one point at a time.

6. Click on the *Edit* menu item and then click on *Copy*.
7. Simultaneously press the Alt and Tab keys to switch to your Excel application.
8. Select the cell that you wish to link to your selected ComfortVIEW point data. When pasting an entire row, select a range of cells equal to the number being copied from ComfortVIEW.
9. Click on Excel's *Edit* menu item and then click on *Paste Special and Link*.
10. Your selected ComfortVIEW point data will appear in the appropriate worksheet cells.

**Linking Controller
Point Data to
Applications that Do
Not Support Paste Link**

If the application to which you are linking does not support the Paste Link function, you must specify the ComfortVIEW DDE link information manually. Use your application's specified method for creating programmed DDE links.

To link ComfortVIEW data, you must specify the following link information in the DDE-supported application for each piece of

ComfortVIEW data you wish to read:

- ComfortVIEW application name — *ComfortWORKS*
- Topic Name — See Table 2-47 for topic names of available ComfortVIEW point information. You will notice that there are two topic names included in this table. Use the name shown in parentheses if the ComfortVIEW table is not currently open for display.
- Item Reference Number — Point ID Number

To display the point ID number, click on the Carrier Network Manager's *Options* menu item and then click on *Point IDs*. The number will display in the Name column following the 8 character point name.

Table 2-47
ComfortVIEW Topic
Names

Data	Topic Name
Description	PntDesc (CCNPntDesc)
Point Value	PntValue (CCNPntValue)
Units	PntUnits (CCNPntUnits)
Status	PntStatus (CCNPntStatus)
Force Status	PntFrcStatus (CCNPntFrcStatus)
All of the above	PntAll (CCNPntAll)

Example of Excel's requirements for creating programmed DDE point data links.

You would enter DDE point data link information in an Excel cell in the format shown below. Note that this format varies dependent on the PC application to which you are linking.

=ComfortWORKS|*Topic Name*!'Item Reference Number'

Example of Excel's actual cell formula (where the ComfortVIEW table from which you are linking is currently open): =ComfortWORKS|PntAll!'35304'

Explanation:

The Excel spreadsheet will be able to read the following data for the ComfortVIEW point that corresponds to item number 35304: Description, Point Value, Units, Status, and Force Status.

Linking Alarm Messages to Other Applications

To link ComfortVIEW alarm messages to other PC applications, use your application’s specified method for creating programmed DDE links.

To link ComfortVIEW alarm messages, you must specify the following link information in the DDE-supported application:

- ComfortVIEW application name — *ComfortWORKS*
- Topic Name — *AlmNew*
- Item Reference — See Table 2-48 for names of available alarm data

Table 2-48
ComfortVIEW Item
Reference Names

Data	Item Reference
Alarm Message and Associated Custom Message	AlmAll
Alarm Message Only	AlmMsg
Custom Message Only	AlmCMsg

Example of Excel’s requirements for creating programmed DDE alarm message links.

You would enter DDE alarm data link information in an Excel cell in the format shown below. Note that this format varies dependent on the PC application to which you are linking.

=ComfortWORKS|Topic Name!’Item Reference ‘

Example of Excel’s actual cell formula:
=ComfortWORKS|AlmNew!’AlmMsg’

Explanation:
The Excel spreadsheet will be able to read the most current alarm message received by ComfortVIEW.

DDE Poke

Using an established link from a third party application that supports DDE poke, you can override (force) any forceable dynamic CCN point by establishing a DDE link to either the PntValue or CCNPntValue topic name. The exact method to use to accomplish this varies, based on the third party application. If the target CCN point is analog, the "poked" value must be an ASCII string representation of a number within the point's forceable limits. The CCN

point will be forced with a priority equal to that of a ComfortVIEW force. If the target CCN point is discrete, the value can take on several formats: it can be an ASCII string representing a number, in which case 0 will force the point to its *off* state and a non-zero value will force the point to its *on* state, or it can be an ASCII string equivalent to one of the two possible discrete states. To auto (remove a poked force), poke a null value (empty string) or a carriage return-line feed string to the DDE point.

**Carrier Network
Manager
Command
Summary
File Menu**

Table 2-49
File Menu

This section describes each of the commands that appear in the Carrier Network Manager menus.

Command	Use this command to
Import	copy a .CWX configuration table file to a controller in the ComfortVIEW database. Either enter the file name (with extension .CWX) with the appropriate path or click on the button to the right of the <i>Import from</i> edit box and select the file from the File Open dialog box. You could use this command after performing a Cold call to copy data to a controller that appears dimmed in the Controller List window, or to overwrite configuration data in an existing controller.
Export	copy the selected controller's database to the specified drive. This drive can be the ComfortVIEW floppy diskette drive, another ComfortVIEW hard drive partition, or another computer on the local area network.

(continued)

Table 2-49
File Menu
(continued)

Command	Use this command to
Print (continued)	take a snapshot and print the contents of the currently displayed System Overview or Status Display, Maintenance, or Configuration Table window. You can also use this command to print the following database reports: A controller list report This report lists all controllers in a selected area. Included for each controller is its up to 8 character controller name, address, and a list of all tables in the controller. To generate this report, you must display the Controller List window and click on the desired area prior to selecting the <i>Print</i> command. A controller database report This report lists all configuration tables in a selected or multiple controllers. Included for each configuration table is its 8 character table name, and the description, current value, high and low allowable entries, and name of every configuration decision. To generate this report, you must display the Controller List window and click on the desired controller(s) prior to selecting the <i>Print</i> command.
Print setup	select a printer and set up your print characteristics. Print requests made using the File Menu's Print command will print to this printer.

(continued)

Table 2-49
File Menu
(continued)

Command	Use this command to
Print setup (continued)	ComfortVIEW will display the Print Setup dialog box, where you can select another printer and additional print characteristics such as page size, orientation, and two sided printing. Clicking on the Print Setup dialog box's <i>More</i> button displays the Advanced document Properties dialog box, where you can specify additional print characteristics. Click on the <i>Help</i> button to display Windows' help information. Clicking on the Print Setup dialog box's <i>Network</i> button displays the Connect to Printer dialog box, which gives you the capability to print to another printer on the local area network. Click on the <i>Help</i> button to display Windows' help information.
Exit	exit the Carrier Network Manager function.

File Menu

The following table describes each of the commands for the File menu that displays when you are viewing a Basic Bus Scan, Detailed Bus Scan, or System Summary window.

Table 2-49a
File Menu

Command	Use this command to
System summary	search the Bus Scan window for the highest addressed CCS or ComfortID monitor or master thermostat. If no such stat is located, ComfortVIEW will display a message and the system summary will be terminated. When such a stat is located, ComfortVIEW will perform a scan to locate all zone and bypass controllers in the master thermostat's system and will then display the System Summary window. Refer to Figure 2-22c.

(continued)

Table 2-49a
File Menu
(continued)

Command	Use this command to
Print	print the bus scan, detailed bus scan, or system summary results. The printout will include all scanned data with a time/date stamp. Monitor stats and linkage masters will be preceded by >>.
Print Setup	select a printer and set up your print characteristics. Print requests made using the File Menu's Print command will print to this printer.
Exit	exit the Carrier Network Manager function.

Edit Menu

The following table describes each of the commands in the Edit menu.

Table 2-50
Edit Menu

Command	Use this command to
Copy	copy selected ComfortVIEW configuration table data from one cell to another. Click on the cell or cells you wish to copy, click on the <i>Edit</i> menu item, and then click on <i>Copy</i> . To copy an entire column, click on the column header (<i>Description</i> , <i>Value</i> , or <i>Notes</i>). To copy an entire row, click on the box to the left of the point description. The data is copied to the Windows Clipboard. You can then click on a destination cell and use the Paste command to paste the copied data. The destination cell can be in the same or another CCN table.

(continued)

Table 2-50
Edit Menu
(continued)

Command	Use this command to
	You can also copy CCN table data to other PC applications such as Windows Notepad, and link CCN table data to other PC applications that support dynamic data exchange (DDE) — for example, third party spreadsheet programs. When the ComfortVIEW table is active and point data changes, the data will automatically update in the other application. For more information on linking table data, refer to the Sharing ComfortVIEW Dynamic Data with Other Applications (DDE) section of this chapter.
Paste	paste ComfortVIEW table data from the Windows clipboard to a table. Copy the data to the Windows Clipboard using the Copy command. Then click on a destination cell, click on Edit and then click on Paste. The data that you are pasting overwrites the data that is currently in the destination cell. The data you are pasting must conform to the allowable entries for the destination cell. If you attempt to paste incompatible data, ComfortVIEW displays an error message indicating that the data target is not available or incompatible. You cannot paste data into status display table's Value cells or into any ComfortVIEW table's Names cells.
Modify	edit configuration table cell data. Click on the cell you wish to modify. Then click on <i>Edit</i> and <i>Modify</i>. Type (continued)

Table 2-50
Edit Menu
(continued)

Command	Use this command to
	the new value or text. The value appears in the cell and in the edit bar, which is located below the window's status bar. Click on the edit bar's checkmark (✓) or press Enter to complete the entry. Click on the X to cancel the entry.
Force	override status display table point values. Forcing overrides a controller's automatic control of a selected point.
Auto	clear a force and return a point to a controller's automatic control.
Submaster force	transmit a submaster reference force to the selected point in the selected UT203 FID controller. When you force the submaster reference, ComfortVIEW will disregard the submaster reference value that was calculated in the master control loop. Note: You cannot use Submaster force if the selected point already has a Supervisor force.

Access Menu

Table 2-51
Access Menu

The following table describes each of the commands in the Access menu.

Command	Use this command to
Open	display a list of all areas in your database. You can then double click on an area and display the list of controllers. This is an alternative to displaying the list of areas and controllers by double clicking on a CCN in the System Overview window.

Table 2-51
Access Menu
(continued)

Command	Use this command to
Connect	establish a remote telephone connection to the selected CCN. When the connection is established, the message <i>Remote: Connected</i> displays in the status area to the right of the toolbar.
Disconnect	disconnect from the selected remote area. ComfortVIEW automatically disconnects you from a remote CCN if, after an operator-specified number of minutes, no communication occurs. Notification of an automatic disconnect will be by an alarm from the Autodial Gateway. For additional information on the automatic disconnect feature, refer to the explanation of the Phone Number Configuration dialog box in the Adding and Modifying CCNs section of this chapter.

Configure Menu

The following table describes each of the commands in the Configure menu. Note that from CCN Option windows, only the New, Modify, Delete, and View commands are available.

Table 2-52
Configure Menu

Command	Use this command to
New	add a new CCN, area, or controller to your ComfortVIEW database. To add a new CCN, the System Overview window must be displayed. To add a new area, the System Overview window must be expanded to display the database's CCNs, and you must select the CCN in which the new area will appear. To add a new controller, you must display the controller list into which you wish to add the new controller.

(continued)

Table 2-52
Configure Menu
(continued)

Command	Use this command to
	The dialog box that displays depends on whether you are adding a new CCN, area, or controller. For an explanation of each dialog box option, refer to the Adding/Modifying CCNs, Adding/Modifying Areas, or Adding/Modifying Controllers sections of this chapter.
Modify	modify the selected CCN (name, number, or access parameters), area name, or controller (name or sort key). The dialog box that displays depends on whether you selected a CCN, area, or controller. For an explanation of each dialog box option, refer to the Adding/Modifying CCNs, Adding/Modifying Areas, or Adding/Modifying Controllers sections of this chapter.
Copy	copy the selected controller's or table's database to one or more similar controllers or tables. The Areas dialog box will be displayed. Select the target area. The CCN Elements dialog box will then be displayed. Select one or more system elements as the target to the copy. If desired, you can also enable this dialog box's download option, which will download the source element's configuration to the target system element as part of the configuration copy. Note: You can also use drag and drop to move (or transfer) a selected controller from one area to another.
Delete	delete the selected CCN, area, or controller from the ComfortVIEW database. <i>(continued)</i>

Table 2-52
Configure Menu
(continued)

Command	Use this command to
Upload	copy the selected controller's data-base from the controller to ComfortVIEW database. You can upload an entire controller, in which case you get all configuration tables, or you can upload only a selected configuration table. Performing a controller upload overwrites the controller's configuration that is stored in the ComfortVIEW database. Performing a table upload displays the table on-screen for viewing or editing. If desired, you can save the displayed table data in the ComfortVIEW database.
Download	send configuration table data to a selected controller. You can download an entire controller or only a single configuration table. Performing a download overwrites the configuration at the controller. When you download an entire controller, ComfortVIEW sends data from its database to the controller. When you download a single table, ComfortVIEW sends the on-screen data (which may be different from its database data) to the controller.
Verify	compare the selected controller's database as it is stored in the controller with the associated database that is stored in the ComfortVIEW database.
Table names	modify controller table names and descriptions.

(continued)

Table 2-52
Configure Menu
(continued)

Command	Use this command to
Controller	Note: You can modify the description of all tables. You can only, however, modify the names of CCN Option tables. Exercise caution when modifying these names. You must only change the numbers that appear in the table name. For example, only change the name of the Loadshed Option's LDSHD01S Table to a name such as LDSHD02S. Do not modify any other characters in the name. You can also modify table names and descriptions using the Configure menu's Modify command. For additional information, refer to the Modifying Table Names/Descriptions section of this chapter. configure the selected UT203 FID or Comfort Controller. Selecting this command with a UT203 FID selected presents the FID Point Selection dialog box, where you select the FID points that you wish to activate, select point types (DO, AO, AI, DI), and then select each point's algorithm (control type). Selecting this command with a Comfort Controller selected presents the Configure Comfort Controller tabbed dialog box, where you select the tab that corresponds to the database object that you wish to create and configure.

Table 2-52
Configure Menu
(continued)

Command	Use this command to
View	display an area's Controller list or to display a controller or CCN Option table. This is an alternative to displaying the Controller list by double-clicking on an area name or to displaying a table by double-clicking on the table name.

Configure Menu

The following table describes each of the commands for the Configure Menu that displays when you are viewing a configuration, maintenance, or status display table.

Table 2-53
Configure Menu

Command	Use this command to
Save	save point description, values, and notes modifications in the ComfortVIEW database.
Upload	copy the selected table's database from the controller to ComfortVIEW database.
Download	copy the selected table's database from the ComfortVIEW database to the controller.
Verify	compare the selected table's database as it is stored in the controller with the associated database that is stored in the ComfortVIEW database.
Configuration table	display the selected point's associated configuration table.
Maintenance table	display the selected point's associated maintenance table.
Time schedule	display the selected point's associated time schedule configuration table.
Setpoint table	display the selected point's associated setpoint configuration table.
Reference tables	display object tables that reference that use the selected Comfort Controller point in their configuration.

Table 2-53a
Configure Menu

The following table describes each of the commands for the Configure Menu that displays when you are viewing a Basic Bus Scan, Detailed Bus Scan, or System Summary window.

Command	Use this command to
Modify	when viewing a Bus Scan window, modify the selected controller's name, sort key, or linked WorkSPACE. The CCN Element Definition dialog box will be displayed. For an explanation of each dialog box option, refer to the Adding/Modifying Controllers section of this chapter.
Copy	copy a selected system element's database to one or more similar system elements. The Areas dialog box will be displayed. Select the target area. The CCN Elements dialog box will then be displayed. Select one or more system elements as the target for the copy. If desired, you can also enable this dialog box's download option, which will download the source element's configuration to the target system element(s) as part of the configuration copy.
Add to database	add the selected system elements to the ComfortVIEW database. In the Bus Scan and System Summary windows, those system elements that have not been added to the ComfortVIEW database will be preceded by "dimmed" icons. You can use the <i>Add to database</i> command to add all such system elements to the database.

(continued)

Table 2-53a
Configure Menu
(continued)

Command	Use this command to
	The Areas dialog box will be displayed. Select the target area and click on <i>OK</i> .
	On completion of the add process the Controller List will be displayed. You can then upload the shadow controller configuration to the ComfortVIEW database if desired. To incorporate the new database statuses into the Bus Scan or System Summary window, you must use the <i>Refresh</i> command that is located in the Bus Scan or System Summary window's Window menu.

CCN Tools Menu

The following table describes each of the commands in the CCN Tools menu.

Table 2-54
CCN Tools Menu

Command	Use this command to
Time/Date	modify and send the time of day, date, day of week and holiday status to all controllers or a selected controller in a CCN. You can use this command to synchronize all CCN controllers to the same time and date or to change a single controller's time and date. ComfortVIEW displays the Broadcast Time and Date dialog box.
Bus Services	scan a specified CCN Bus and obtain a list of the system elements and snapshot of activity. The Bus Services dialog box will be displayed. Refer to Figure and Table 2-22a. From this dialog box you can perform an update poll or cold call, or

Table 2-54
CCN Tools Menu
(continued)

Command	Use this command to
	produce a basic or detailed bus scan display. From either bus scan display, you can produce a system summary, which searches the specified bus for CCS and ComfortID thermostats, zone, and bypass controllers.
Gateways	use this command to reserve selected Gateways to perform the following operations: Timed data retrieval — Reserves the selected Gateway for use when connecting to remote CCNs to perform automatic timed data retrieval for ComfortVIEW reports. Standard connection — Reserves the selected Gateway for use when connecting to remote networks to perform other ComfortVIEW monitoring functions. Receipt of incoming alarms — Reserves the selected Gateway to receive incoming alarms. Transmission of outgoing alarms — Reserves the selected Gateway to send outgoing alarms. Keep in mind that reserving an Auto-dial Gateway for a particular operation does not prevent ComfortVIEW from using the Gateway for other operations. It only allows ComfortVIEW to make the best possible selection under the given conditions.

Table 2-54
CCN Tools Menu
(continued)

Command	Use this command to
	Note: Reserving a Gateway for a particular operation is entirely optional. If you do not make specific operational assignments, ComfortVIEW automatically selects an idle Gateway for use.
CCN Options	display, modify, add, and delete CCN Option tables on a selected CCN. This command is an alternate to accessing CCN Option tables by accessing each option module individually as described in the Viewing Configuration Tables and Modifying Configuration Table Values sections of this chapter.

Options Menu

The following table describes each of the commands for the Options Menu that displays when you are displaying the System Overview window.

Table 2-55
Options Menu

Command	Use this command to
Font	change the font that ComfortVIEW uses to display Carrier Network Manager text. When you change the font, all Carrier Network Manager text is affected. Dialog Box Options: <i>Font:</i> Select the font to use. <i>Font Style:</i> Select any style options (for example, bold or italic) <i>Size:</i> Select the point size. The larger the point size, the larger the characters appear on your screen. <i>Sample:</i> The text in this box changes to reflect the font, font style, and size you select.

(continued)

Table 2-55
Options Menu
(continued)

Command	Use this command to
	<i>OK</i>: Closes the dialog box and save changes made. <i>Cancel</i>: Exits the dialog box and restores the previous settings.
Toolbar	hide or display the Carrier Network Manager toolbar.
Status bar	hide or display the status bar that appears in the third line of Carrier Network Manager windows. In the System Overview and Controller List window, this status bar displays the path you have taken in the Carrier Network Manager to arrive at the current window selection. (For example, the CCN, area, and controller name that you have selected.) In a status display, maintenance, or configuration table window, the status bar displays help information that is peculiar to a controller point or configuration decision.
Sort	sort the presentation of the controller list. You can sort the controller list alphabetically by name, ascending address (bus and system element) number, or numerically by sort key. A controller with a sort key of 1 appears before a controller with a sort key of 2, and so on. For further information on sort keys, refer to the Adding/Modifying Controllers section of this manual. You may also sort the controller list by clicking on the appropriate icon in the toolbar.
Save settings on exit	save any changes you make by using commands on the Options menu. For example, if you change the font and then

(continued)

Table 2-55
Options Menu
(continued)

Command	Use this command to
	exit the Carrier Network Manager, the text appears in the new font the next time you start the Carrier Network Manager. This command also saves the size and position of all Carrier Network Manager windows. The command does not however, save sorts. Settings are saved for individual operators.

Options Menu

The following table describes each command for the Options Menu that displays when you are viewing a configuration, maintenance, or status display table.

Table 2-56
Options Menu

Command	Use this command to
Font	change the font that ComfortVIEW uses to display Carrier Network Manager text. When you change the font, all Carrier Network Manager text is affected. Dialog Box Options: <i>Font:</i> Select the font to use. <i>Font Style:</i> Select any style options (for example, bold or italic) <i>Size:</i> Select the point size. The larger the point size, the larger the characters appear on your screen. <i>Sample:</i> The text in this box changes to reflect the font, font style, and size you select. <i>OK:</i> Closes the dialog box and save changes made. <i>Cancel:</i> Exits the dialog box and restores the previous settings.

(continued)

Table 2-55
Options Menu
(continued)

Command	Use this command to
Toolbar	hide or display the Carrier Network Manager toolbar.
Status bar	hide or display the status bar that appears in the third line of Carrier Network Manager windows. In the System Overview and Controller List window, this status bar displays the path you have taken in the Carrier Network Manager to arrive at the current window selection. (For example, the CCN, area, and controller name that you have selected.) In a status display, maintenance, or configuration table window, the status bar displays help information that is peculiar to a controller point or configuration decision.
Hide	hide rows and columns in status display, maintenance, or configuration table worksheets. Click on the header of the column you wish to hide or click on the box to the left of the row you wish to hide. Click on the <i>Options</i> menu item and then click on <i>Hide</i>. The highlighted column or row will be removed from the worksheet. To Make Row Hides Permanent: Click on the <i>Configure</i> menu item and then click on <i>Save</i>. The row will not appear the next time you view this table. To Make Column Hides Permanent: Click on the <i>Options</i> menu item and then click on <i>Save settings on exit</i>. A checkmark (✓) appears before the command to indicate that it is enabled. The column will not appear the next time you view this table.

(continued)

Table 2-55
Options Menu
(continued)

Command	Use this command to
	Note: Row hides apply to specific tables. Column hides apply to all tables in all controllers. Also, row hides are hidden for all operators. Column hides are hidden for individual operators.
Show	show hidden rows and columns in status display, maintenance, or configuration table worksheets. Click on the <i>Options</i> menu item and then click on <i>Show</i>. The Show Rows/Columns dialog box displays. The dialog box (continued) shows any hidden rows or columns. Select the rows or columns to add and click on <i>OK</i>. Any hidden columns will be added to the worksheet.
Point IDs	display each point's item reference number along with the point name. This number is used when linking table data to other PC applications, such as third party spreadsheet programs.
Best fit	set each column to a width that best fits the data.
Save settings on exit	save any changes you make by using commands on the Options menu. For example, if you change the font and then exit the Carrier Network Manager, the text appears in the new font the next time you start the Carrier Network Manager. This command also saves the size and position of all Carrier Network Manager windows. The command does not however, save sorts. Settings are saved for individual operators.

Window Menu

Table 2-57
Window Menu

The following table describes each of the commands in the Window menu. Note that the Graphical command is only available from the Setpoint and Time Schedule windows.

Command	Use this command to
Cascade	arrange open Carrier Network Manager windows to overlap so that each title bar is visible.
Tile horizontally	arrange open Carrier Network Manager windows in smaller sizes so that they fit next to each other horizontally and are all visible on your desktop.
Tile vertically	arrange open Carrier Network Manager windows in smaller sizes so that they fit next to each other vertically and are all visible on your desktop.
Arrange icons	evenly arrange all minimized Carrier Network Manager window icons.
Refresh	update the information displayed in open Carrier Network Manager windows. ComfortVIEW updates the currently selected window with the most recent data that has been written to the database.
Graphical	when viewing an occupancy or setpoint configuration table, display data in either a tabular (worksheet) or graphic format. To use the Setpoint Table graphical format: Enter the desired setpoint in the edit box below the sidebar, or simply drag the sidebar to display the desired setpoint. You can click on the sidebar's < or > buttons to decrement and increment the displayed setpoint in increments of .1 or 1.0. Each

(continued)

Table 2-57
Window Menu
(continued)

Command	Use this command to
	graphic screen displays up to 9 decisions-worth of table data. Use the << or >> buttons that are located at the bottom of the screen to display the first or last 9 decisions. Use << or >> to move through the up to 9 decision display, decision by decision. To use the Occupancy Table graphical format: Click to enable/disable days of the week, and enter the Occupied From and To times in the corresponding edit boxes. The bar graph will update to display the occupied times.
Jump to Table/WorkSPACE	when viewing a Bus Scan or System Summary window, CCN Option Table window or Controller List, to display the status display table for a selected system element. If the system element has multiple display tables (for example, an AHU PIC) you will be presented with the Display Tables dialog box, from which you can select the desired table. If the system element also has a configured WorkSPACE, that WorkSPACE will be displayed. If the selected system element has no display table and has not been configured with a linked WorkSPACE, you will be given an opportunity to identify a WorkSPACE to link to the given system element.

Help Menu

The following table describes each of the commands in the Help menu.

Table 2-58
Help Menu

Command	Use this command to
Contents	display the help table of contents.
Search	search for a help topic by typing a keyword.
About	display program information, version information on all ComfortVIEW components, and copyright.

Remote Site Manager

Remote Site Manager

This chapter provides instructions on ComfortVIEW Remote Site Manager application.

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The following terms are used throughout this chapter.

Server — A computer running ComfortVIEW communication, user interface, service, and database software.

Client — A computer on a local area network running ComfortVIEW communication and user interface software, or ComfortVIEW user interface software only.

Introduction

You can use the ComfortVIEW Remote Site Manager application to dial in to a remote ComfortVIEW Server. You can dial in from a computer that is running either ComfortVIEW Server or ComfortVIEW Client software. When you dial in to a ComfortVIEW Server, your computer and the Server to which you are connected operate as if they were connected on a local area network. All of the capabilities that you would have as a local Client computer are yours when you dial in as a remote Client computer.

Note: The Remote Site Manager application is not available for the ComfortVIEW Stand-alone installation option.

When you connect to a remote ComfortVIEW Server from a local ComfortVIEW Server, the operation of your local Server is unaffected. However, any alarms received from the local CCN will not be visually or audibly indicated. They will still, however, be printed and logged to the database. Your local Server will remain active and will continue to operate as a Server for the other ComfortVIEW Clients on your system.

Note: ComfortVIEW Remote Site Manager application gives you access to the ComfortVIEW applications of the remote Server. If you want to directly access the Server's disk, registry, event log or any other Windows networking features, you should use the more powerful Windows Network and Dial-up Connections application.

Required Conditions for a Successful Connection

The following conditions must exist for you to successfully dial in and log on to a remote ComfortVIEW Server.

Note: You cannot dial to a remote Server that is running a ComfortVIEW version that is greater than the source workstation version.

Source ComfortVIEW Workstation (the Workstation Placing the Call):

Verify that the conditions listed below exist at the workstation that is placing the call. If they do not, perform the listed instructions at this workstation.

1. If you wish to dial into a remote Server that is running an earlier version of ComfortWORKS software, you must create a separate bootable partition on your workstation onto which you will install the earlier version of ComfortWORKS Client.

For example, to dial into ComfortWORKS Version 4.1 from a ComfortWORKS Version 5.0 workstation, you must create a separate partition and install ComfortWORKS Version 5.0 Client.

2. Windows Remote Access Connection Manager Service (Dial-up Networking) software must have been installed along with the appropriate modem device driver. Refer to your Windows Remote Access Connection Manager installation instructions.
3. Windows Remote Access Connection Manager (Dial-up Networking) must be configured to dial out calls (as a minimum). See your Windows Remote Access Connection Manager (Dial-up Networking) setup instructions.
4. The ComfortVIEW Remote Site Manager application must have been installed. This application is automatically installed when you install your ComfortVIEW software on a computer that has the Windows Remote Access Connection Manager (Dial-up Networking) installed. You can perform the ComfortVIEW installation procedure at any time if you need to load the ComfortVIEW Remote Site Manager application.
5. The modem must be operational. You can verify this by attempting to dial the remote Server using the Windows Remote Access Connection Manager feature.

Verify that you are using compatible source and remote modems. It is recommended that you use the same make and model modem for both source and remote workstations.

6. The remote ComfortVIEW Server computer name, and the remote Server modem phone number must be added to the ComfortVIEW Remote Site Manager dialog box's ComfortVIEW Remote Site list. For instructions, refer to the Adding a Site to the ComfortVIEW Remote Site List section of this chapter.
7. You must have a valid login name and password to log on to the remote Server's Windows operating system.

Remote ComfortVIEW Server (the Workstation Receiving the call):

Verify that the conditions listed below exist at the workstation that is receiving the call. If they do not, perform the listed instructions at the workstation that is receiving the call.

1. The remote Server must be turned on and running Windows XP/2000.
2. Windows Remote Access Connection Manager Service (Dial-up Networking) software must have been installed along with the appropriate modem device driver. Refer to your Windows Remote Access Connection Manager Service (Dial-up Networking) installation instructions.
3. The Windows Remote Access Connection Manager (Dial-up Networking) must be configured to dial out and receive calls. See your Windows Remote Access Connection Manager Service (Dial-up Networking) setup instructions.
4. You must grant dial-in access permissions to all or selected users via the Windows Remote Access Connection Manager Service (Dial-up Networking). See your Windows Remote Access Connection Manager Service (Dial-up Networking) setup instructions.
5. The Windows Remote Access Connection Manager Service (Dial-up Networking) must be running.

You can start and run the Remote Access Connection Manager Service using the Windows Remote Access Connection Manager, or you can configure the Remote Access Connection Manager Service (Dial-up Networking) to automatically start on XP/2000 boot-up.

To start the service automatically on boot-up:

- a. Click on the *Start* menu, then select *Settings*, and click on *Control Panel*.
- b. In the Control Panel window, double click on *Administrative Tools* and then double click on *Services*. In the Services list, find and double click on *Remote Access Auto Connection Manager*.

- c. In the Remote Access Connection Manager Properties dialog box, select the *General* tab, and then under *Startup Type*, select *Automatic*. Then click on *Apply* and *OK* to close the dialog boxes.
6. The modem must be operational when operating under the Windows XP/2000 operating system.

You can verify this by attempting to dial out to another Windows XP/2000 computer using the Windows Network and Dial-up Connections feature, or by dialing out to an active phone number using the HyperTerminal application in Windows Accessories.

7. The computer names of any users who will be dialing in from other locations must be entered into the Setup Workstations dialog box, which appears in the ComfortVIEW Setup application.
8. The Windows login names and passwords of any users who will be logging in from other locations must be entered into the Windows operating system.
9. The ComfortVIEW login names and passwords of any users who will be logging in from other locations must be registered in this ComfortVIEW Server. If necessary, refer to the Adding, Modifying, Deleting Operators section in this manual's Setup chapter.



Connecting to a Remote ComfortVIEW Server

Follow the instructions below to use the ComfortVIEW Remote Site Manager application to dial from a ComfortVIEW Server or Client to a remote ComfortVIEW Server.

1. Close all active ComfortVIEW applications, and log out of ComfortVIEW.
2. Double click on the ComfortVIEW Remote Site Manager icon.

Note: It is not necessary to log in to ComfortVIEW before running this application.

ComfortVIEW launches the Remote Site Manager application and displays the ComfortVIEW Remote Site Manager dialog box. Refer to Figure 3-1.

3. In the ComfortVIEW Remote Sites list, click on the remote site and then click on *Connect*.

ComfortVIEW displays two message dialog boxes followed by the Authentication dialog box.

4. Enter the remote Server's Windows XP/2000 user name and password, and then click on *OK*.

ComfortVIEW begins the connection process. The status of the connection process will be displayed in a status message box and by a series of messages on the bottom of the Remote Site Manager dialog box.

Once the telephone connection is successfully established, ComfortVIEW attempts to log in to the remote site's Windows operating system using your specified user name and password. If the user name or password are not valid, you will be so notified. Click on *Retry* to enter a new user name and password or on *Cancel* to terminate the connection.

Once ComfortVIEW has successfully logged in to the remote site's Windows operating system, you can begin your ComfortVIEW session. Successful connection is indicated by the presence of the word *Connected* in the Remote Site Manager dialog box's status bar.

Note: If you receive an *Access Denied* message at any time during the connection process, one of the following conditions exists:

- Your computer name does not exist in the remote Server's database. See Condition #8 under Required Conditions for a Successful Connect.
- There are too many logged in users at the remote site.
- The remote site does not have an access key attached to the Server workstation's parallel port.

5. Begin your session by logging in to ComfortVIEW.

If the message *RPC Server Unavailable* is displayed during ComfortVIEW operation, the remote connection has been lost. If this situation occurs, disconnect from the remote Server and then re-connect.

Figure 3-1
ComfortVIEW Remote Site
Manager Dialog Box

Remote Site Manager

Comfort VIEW Remote Sites:

progcentral

New...

Modify...

Delete

Connect...

Disconnect...

Remote Site Name:

progcentral

Remote server computer name:

\\progcentral

Remote modem phone number:

3345

Help

Close

Not Connected

Disconnecting from a Remote ComfortVIEW Server Workstation

1. End your current remote ComfortVIEW session by closing all current ComfortVIEW applications (except the ComfortVIEW Remote Site Manager application), then log out of ComfortVIEW.
2. Switch to the ComfortVIEW Remote Site Manager application.
3. In the ComfortVIEW Remote Site Manager dialog box, click on *Disconnect*.

A confirmation dialog box will be displayed.

4. Click on *Yes*.
5. At the second confirmation dialog box, click on *OK* to proceed with the disconnect.

ComfortVIEW begins the disconnect process. A status message box shows the status of the disconnect process.

6. The connection has been successfully terminated when the Remote Site Manager dialog box's status bar displays *Not Connected*.

**Adding a Site
to the
ComfortVIEW Remote
Site List**

Follow the instructions below to add a new or modify an existing ComfortVIEW site.

Note: Modifying an existing remote site name maintains the existing site name and adds a new site with the modified site name. If desired, you can delete the existing site by following the Deleting a Site from the ComfortVIEW Remote Site List instructions below.

1. Double click on the ComfortVIEW Remote Site Manager icon to launch the application.

Note: It is not necessary to log in to ComfortVIEW before running this application.

ComfortVIEW launches the Remote Site Manager application and displays the ComfortVIEW Remote Site Manager dialog box. Refer to Figure 3-1.

2. Do one of the following depending on whether you wish to add a new or modify an existing site:
 - Click on *New*.
ComfortVIEW displays the Add Remote Site dialog box. See Figure 3-2.
 - Click on an existing remote site name and then click on *Modify*.
ComfortVIEW displays the Modify Remote Site dialog box. See Figure 3-3.
3. Enter the new or modify the existing remote site and remote Server computer name in the appropriate text boxes.

You can either enter the remote modem phone number, or enable the Phone Book Entry option to use the telephone number that is specified using the Windows NT/2000 RAS function.

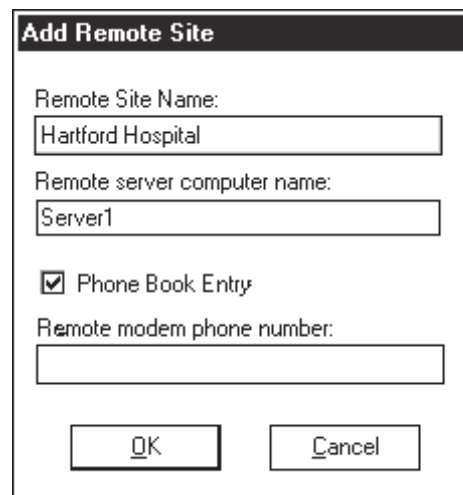
Note: Commas may be used in the phone number as pauses between numbers so that internal building telephone exchanges can be accommodated.

4. Click on *OK* to accept the entries as entered or click on *Cancel* to exit the dialog box without saving.

If you enabled the Phone Book Entry option, you will be presented with either the Windows XP/2000 New Phone Book Entry Wizard or the Windows NXP/2000 Remote Action service configuration series of dialog boxes, depending on whether you are adding a new or modifying an existing site.

Note: Be sure that the Windows XP/2000 phonebook entry name matches the ComfortVIEW Add or Modify Remote Site dialog box's Remote Site Name exactly.

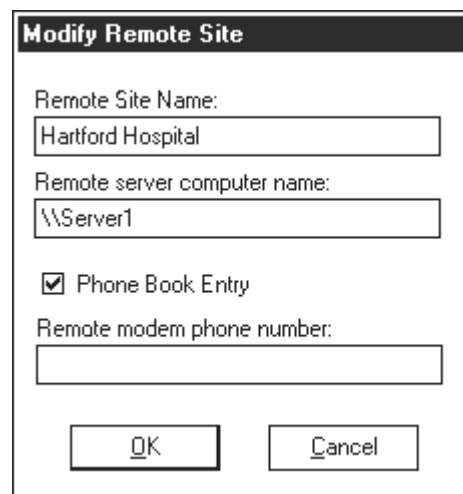
Figure 3-2
New Remote Site
Dialog Box



The 'Add Remote Site' dialog box contains the following fields and controls:

- Remote Site Name:** A text box containing 'Hartford Hospital'.
- Remote server computer name:** A text box containing 'Server1'.
- Phone Book Entry:** A checked checkbox.
- Remote modem phone number:** An empty text box.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

Figure 3-3
Modify Remote Site
Dialog Box



The 'Modify Remote Site' dialog box contains the following fields and controls:

- Remote Site Name:** A text box containing 'Hartford Hospital'.
- Remote server computer name:** A text box containing '\\Server1'.
- Phone Book Entry:** A checked checkbox.
- Remote modem phone number:** An empty text box.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.



Deleting a Site from the ComfortVIEW Remote Site List

1. Double click on the ComfortVIEW Remote Site Manager icon to launch the application.

Note: It is not necessary to log in to ComfortVIEW before running this application.

ComfortVIEW launches the Remote Site Manager application and displays the ComfortVIEW Remote Site Manager dialog box. Refer to Figure 3-1.

2. In the ComfortVIEW Remote Sites list, click on the remote site that you wish to delete and then click on *Delete*.

WorkSPACE Manager

WorkSPACE Manager

This chapter provides instructions on ComfortVIEW WorkSPACE Manager application.

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Terminology

The following terms are used throughout this WorkSPACE Manager chapter.

Animated Data Box — A graphic that displays an animated (moving) picture of the discrete point it is representing. For example, a fan circulating air or a filter with air passing through it.

Auto — To remove a force and return a point to the controller's automatic control.

Bookmark — A tag, which you place on a WorkSPACE while operating in run mode, to allow you to quickly jump to and display it using the File menu's Open bookmark command. The presence of a bookmark icon in the lower right corner of a WorkSPACE window indicates that the WorkSPACE is currently bookmarked.

Controller — A CCN system element with an address, status display, and configuration tables. A controller performs the actual HVAC monitoring and control operations. The Carrier Comfort Network supports several types of controllers. These include PICs, FIDs, Comfort Controllers, System Managers (examples: TSM, FSM, CSM), and CCN options.

Data Box — A rectangular box, which is superimposed on a ViewSPACE's graphic background, that contains the following user-configurable information: configuration, status display, or maintenance point's name, 24 character description, value and units, communication or alarm status, and/or force state. Data boxes for discrete points can also appear as animated graphics.

Design Mode — The WorkSPACE Manager mode that you enter to create or modify ViewSPACES and trends. While in design mode you perform operations such as selecting a graphic background, assigning data points to display on the ViewSPACE or trend, and establishing links to other WorkSPACES. You enter design mode by clicking on the run mode's *Run* menu item and then clicking on *Enter design mode* (or by pressing the F6 key).

Download — To copy configuration table data from the ComfortVIEW database to a controller. Performing a download overwrites all configuration at the controller.

Force — To override a controller’s automatic control and modify the point’s value.

Global — A WorkSPACE, ViewSPACE, or trend that can be used, modified, or deleted by any user. You designate whether a WorkSPACE, ViewSPACE, or trend will be “Global” during the save process.

Link areas — Boxes, which you add to ViewSPACES, to provide a quick jump to another WorkSPACE. You can create up to 15 link areas in a ViewSPACE window. Double-clicking on a link area while in run mode closes the current ViewSPACE and WorkSPACE and displays the linked WorkSPACE.

Object — A Comfort Controller hardware or software point, system table, algorithm, setpoint, alarm, or function.

Owned — A WorkSPACE, ViewSPACE, or trend that can be displayed by any user, but can only be modified or deleted by the creator. You designate whether a WorkSPACE, ViewSPACE, or trend will be “Owned” during the save process.

Run Mode — The WorkSPACE Manager mode that you enter to display ViewSPACES and trends. While in this mode, ViewSPACE and trend plot values dynamically update. You perform operations such as forcing and autoing point values and statuses, modifying configuration table values, and displaying linked WorkSPACES. You enter run mode by clicking on the design mode’s *Run* menu item and then clicking on *Start run mode* (or by pressing the F5 key).

System Element — A CCN controller with an address and configuration tables. A controller performs the actual HVAC monitoring and control operations. The Carrier Comfort Network supports several types of system elements. These include PICs, FIDs, Comfort Controllers, System Managers (examples: TSM, FSM, CSM), and CCN options.

Trend — A window consisting of a dynamic plot of up to six points-worth of data.

Upload — To copy configuration table data from a controller to the ComfortVIEW database.

ViewSPACE — A window consisting of a graphic background (for example, a chiller or an air handler graphic) with up to 60 dynamic or animated data boxes, which display point value or status information, and up to 15 link areas, which provide a quick jump to another WorkSPACE. ViewSPACES may also contain data boxes only, without a graphic background.

WorkSPACE — A collection of up to ten ViewSPACE and up to ten trend windows.

Accessing the WorkSPACE Manager

The WorkSPACE Manager application gives you the ability to create and use customized graphic and trend displays of critical ComfortVIEW data. These graphic and trend displays are referred to respectively as ViewSPACES and trends. The data that can be displayed in a ViewSPACE or trend can be of any type — status display, maintenance, and configuration, and can include information from any controller in one, or multiple CCNs.

You create and save ViewSPACES and trends in collections or groupings known as WorkSPACES. A WorkSPACE can contain up to ten individual ViewSPACE windows and up to ten individual trend windows.

You can create a WorkSPACE to simultaneously see all the critical information about your system on a single screen. For example, you can create a WorkSPACE with a ViewSPACE graphic of your main chiller and air handler, plus trends plotting key operating data for your chilled water system. You can then save the WorkSPACE so it is available to access time and again. WorkSPACES containing trends and ViewSPACES displaying data from multiple controllers are troubleshooting time-savers, allowing you to adjust the operation of one parameter and see how it affects another part of the system — all on the same screen.

Design Mode Versus Run Mode

You operate the WorkSPACE Manager in one of two modes: design mode or run mode. Design mode is for creating or modifying ViewSPACES and trends, while run mode is for displaying ViewSPACES and trends with their data dynamically updating. You can, for example, work in the WorkSPACE Manager's design mode to create a WorkSPACE containing a ViewSPACE window that

displays data from your main chiller, a ViewSPACE window that displays data from your main air handler, and a trend window that samples space temperatures. You can then switch to the WorkSPACE Manager's run mode and view the data in these ViewSPACE and trend windows dynamically updating. You can force and auto display points, and modify configuration point values.

 To Launch the WorkSPACE Manager Application and Open an Existing WorkSPACE

1. Double click on the WorkSPACE Manager icon.

ComfortVIEW displays the Open WorkSPACE dialog box shown and described in Figure 4-1 and Table 4-1.

Note: If, however, you have identified a default WorkSPACE using the Configure menu's Set default WorkSPACE command (in Design mode), the selected default WorkSPACE window opens and its associated ViewSPACES and trends display in run mode.



To Open a Different WorkSPACE: Display the Open WorkSPACE dialog box by clicking on the *File* menu item and then clicking on *Open WorkSPACE*, or click on the Open WorkSPACE icon in the toolbar.

2. In the Select WorkSPACE list, click on the WorkSPACE that you wish to open and then click on *OK*.

Figure 4-1
Open WorkSPACE
Dialog Box

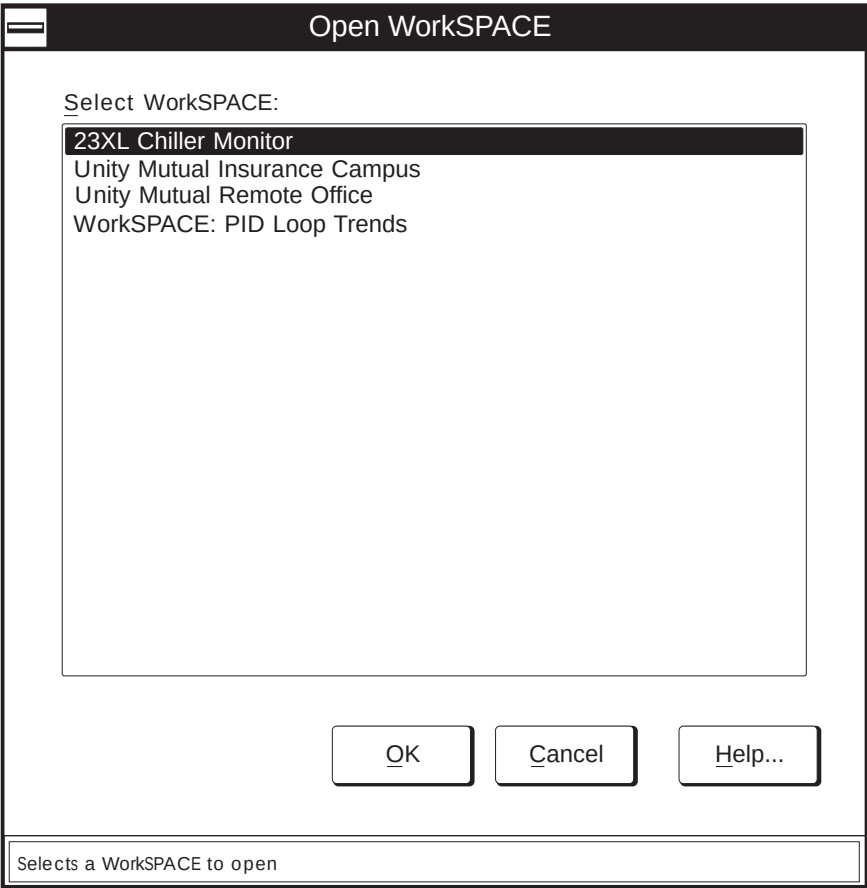


Table 4-1
Open WorkSPACE
Dialog Box

Click on	To
a WorkSPACE in the Select WorkSPACE list	select the WorkSPACE to open.
OK	close the dialog box and open the selected WorkSPACE.
Cancel	exit the dialog box and restore the previous settings.
Help	display help information.

General Operation

ComfortVIEW opens the selected WorkSPACE window in run mode. The ViewSPACES and trends that have been assigned to the WorkSPACE open sequentially inside the WorkSPACE window. The messages *Loading background screens* and *Loading data* display in the lower left corner of the WorkSPACE window during the load process.

For instructions on using ViewSPACES and trends, refer to the Displaying and Using a ViewSPACE and Displaying and Using Trends sections of this chapter.

Figure 4-2 shows a sample WorkSPACE window containing two ViewSPACES and a trend. The trend's legend is also displayed.

Menu Bar

The top line of the WorkSPACE window contains the menu bar. Note that this menu bar changes when you switch between the WorkSPACE Manager's run and design modes. Refer to WorkSPACE Manager Menu Command Summary at the end of this WorkSPACE Manager chapter for a description of each run and design mode menu item and command.

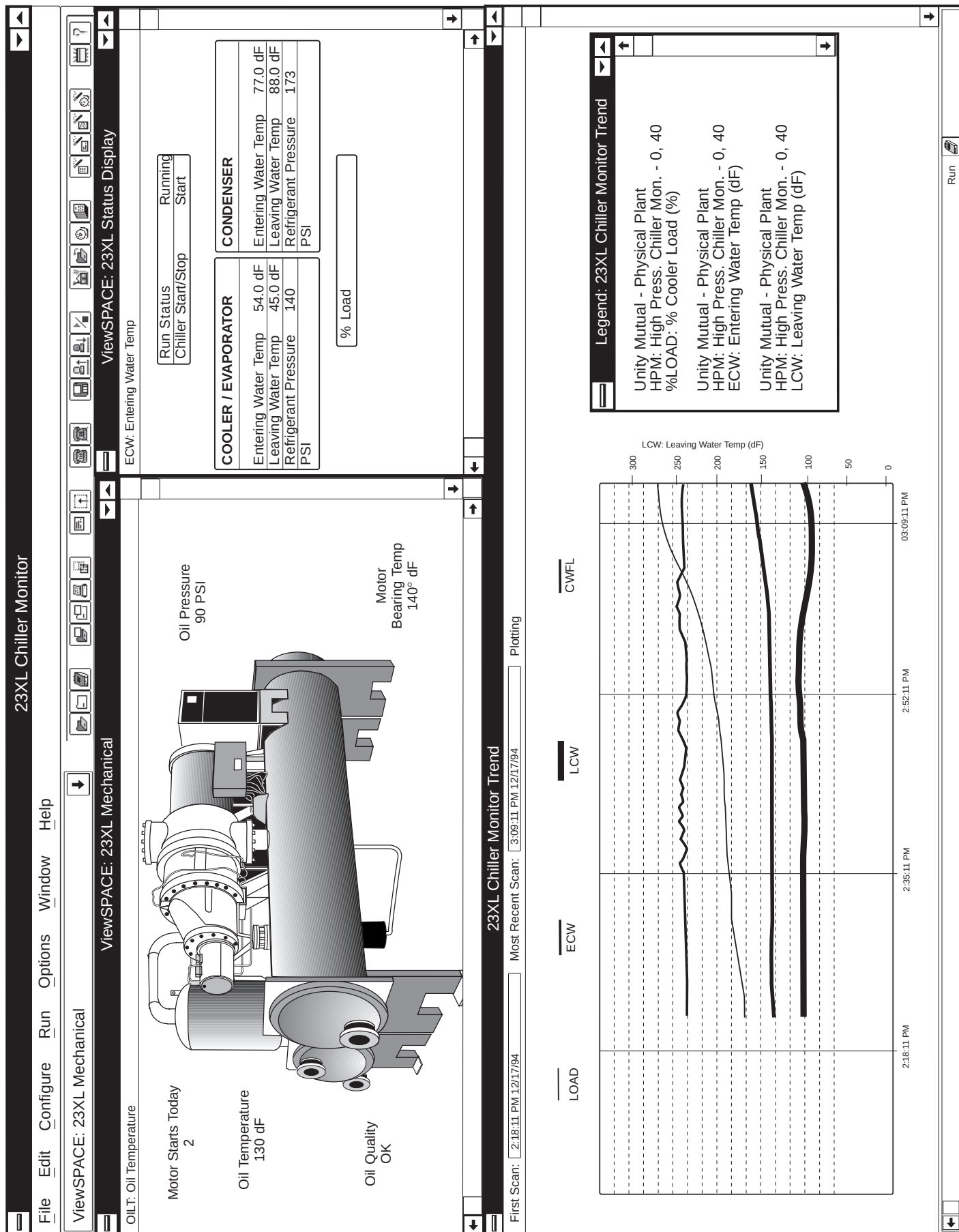


Figure 4-2 Sample WORKSPACE Window

Drop Down List

Clicking on the drop down list to the left of the window’s toolbar displays the names of the WorkSPACE’s associated ViewSPACEs and trends. Selecting a ViewSPACE or trend from this list while you are in run mode opens the ViewSPACE or trend for viewing of dynamic data. Selecting a ViewSPACE or trend while you are in design mode displays the ViewSPACE or trend for modification.

**WorkSPACE Manager
Toolbar**

The second line of the WorkSPACE window contains the toolbar. If you use a mouse, the toolbar gives you instant access to the most frequently used WorkSPACE Manager commands. By simply clicking the mouse button, you can perform operations such as opening a WorkSPACE, opening a ViewSPACE or trend, and downloading configuration data to the controller.

Note: If desired, you can remove the toolbar from the WorkSPACE window by clicking on the *Options* menu item followed by clicking on *Toolbar*. To return the toolbar to the window, perform these two commands again.

Table 4-2
WorkSPACE Manager
Toolbar Icons

The table below describes the buttons that appear on the WorkSPACE Manager toolbar.

Click	To
	open an existing WorkSPACE
	save the WorkSPACE
	open a bookmarked WorkSPACE
	open an existing ViewSPACE or trend
	save the ViewSPACE or trend

(continued)

Table 4-2
WorkSPACE Manager
Toolbar Icons
(continued)

Click	To
	print the contents of a ViewSPACE or trend window or print a WorkSPACE, ViewSPACE, or trend definition report
	modify the ViewSPACE or trend
	create a new data box
	create a new link area
	connect to a remote CCN
	disconnect from a remote CCN
	save configuration data displayed in the ViewSPACE to the database
	upload configuration data from the CCN
	download configuration data to the system element(s)
	start/stop trend scanning
	return to the first WorkSPACE you displayed on launching the WorkSPACE Manager application.

(continued)

Table 4-2
WorkSPACE Manager
Toolbar Icons
(continued)

Click	To
	display the WorkSPACE that you jumped from
	jump to the Alarm Manager application
	jump to the Report Panel application
	launch the report wizard and quickly and easily add a new consumable, history, or runtime report definition.
	launch the data box wizard and add a new data box to an existing ViewSPACE.
	launch the trend wizard and and quickly and easily add a new trend.
	launch the alarm wizard and configure an alarm for the currently-selected point.
	update the current WorkSPACE with the most recent data from the ComfortVIEW database.
	display help



Bookmarks

Bookmarks give you the capability to tag a WorkSPACE in run mode so that you can quickly jump to it using the File menu's Open bookmark command.

To Place or Remove a Bookmark

In run mode:

1. Click on the *Configure* menu item and then click on *Set bookmark*.

A checkmark (✓) appears before the Set bookmark command to indicate that it is enabled.

The presence of the bookmark icon in the lower right corner of a WorkSPACE window also indicates that the WorkSPACE is currently bookmarked.

2. To remove a bookmark, perform these two commands again.



To Jump to a Bookmarked WorkSPACE

In run mode:

1. Click on the *File* menu item and then click on *Open bookmark*.

Note: You may also perform this command by clicking on the Open Bookmark icon in the toolbar.

If there is only one bookmarked WorkSPACE in your ComfortVIEW database, the WorkSPACE Manager displays the bookmarked WorkSPACE in run mode.

If there is currently more than one bookmarked WorkSPACE in your database, the WorkSPACE Manager displays the Open WorkSPACE dialog box. This dialog box lists the names of all WorkSPACES that have been bookmarked by you and other ComfortVIEW operators.

2. In the Select WorkSPACE list, click on the WorkSPACE that you wish to open and then click on *OK*.

The WorkSPACE Manager closes the currently-displayed WorkSPACE and opens the selected WorkSPACE.

Displaying and Using Trends

While displaying a trend in run mode, you can perform the following functions:

- View the trend dynamically plotting data
- View, modify, upload, download, or save the following trend point parameters:
 - Value
 - Description
 - Operator note
- Stop (pause) and start the trend
- Re-start the trend (re-initialize values)
- Jump to and display a point's associated configuration, maintenance, time schedule, or setpoint table.
- Display the names of all Comfort Controller objects (hardware and software points, algorithms, setpoints, alarms, functions, and system tables) that are using the selected trend point in their configuration.
- Jump to and display a trend point's table of origin (status display, maintenance, or configuration table).

A trend will run until one of the following conditions is met:

- You stop the trend
- 1000 scans have been completed
- You remove the trend from the current WorkSPACE
- You leave run mode and enter design mode
- You close the WorkSPACE (via a linked jump to another WorkSPACE or by exiting the current WorkSPACE Manager application entirely).

Note: You can simultaneously run a trend while viewing other WorkSPACES by running another instance of the WorkSPACE Manager application. Use the second WorkSPACE Manager to view other WorkSPACES while the first WorkSPACE Manager is running your trend.

**To Launch the
WorkSPACE Manager
Application and
Display a Trend in Run
Mode**

- Note:** If the WorkSPACE Manager application is already running, you can display a trend at any time by:
- if necessary, entering run mode (by clicking on the *Run* menu item and then clicking on *Start run mode*).
 - opening the trend (by clicking on the *File* menu item and then clicking on *Open ViewSPACE/Trend*).
 - proceeding to Step 2 in the following list.
1. Launch the WorkSPACE Manager application and select the WorkSPACE containing the trend you wish to display. If necessary, refer to Accessing the WorkSPACE Manager.

ComfortVIEW opens the selected WorkSPACE window. The ViewSPACES and trends that have been assigned to the WorkSPACE open sequentially inside the WorkSPACE window. The messages *Loading background screens* and *Loading data* display in the lower left corner of the WorkSPACE window during the load process.

Trends display in run mode and, if the auto start option was enabled, will begin plotting data when opened. The presence of the message *Plotting* in the top right corner of the trend window indicates that the trend is sampling data.

Note: If the trend you wish to display is not currently displayed on the screen, click on the drop down list to the left of the window's toolbar to display the name of each of the WorkSPACE's associated ViewSPACES and trends. Then, click on the trend that you wish to display.

If the trend you wish to display is in another WorkSPACE, you can display a list of all ViewSPACES and trends by clicking on the *File* menu item and then clicking on *Open ViewSPACE/Trend*. The Open ViewSPACE/Trend dialog box is displayed. Select the trend that you wish to display and then click on *OK*.

2. If any trend contains points from a remote CCN, and the trend has not been configured to automatically establish remote connection on display (refer to Figure and Table 4-16), you must connect to the remote CCN in order to sample the remote point data. To connect to a remote CCN, click on Connect toolbar icon shown at left.



3. If necessary, start the trend by clicking on the *Run* menu item and then click on *Start trend*.



Note: You may also perform this command by clicking on the Start/Stop Trend icon in the toolbar.

The sample trend shown in Figure 4-3 is plotting the value or status of the following points: %LOAD, ECW, LCW, CWFL. The trend started at 2:18:11 pm. The X-axis (horizontal axis) displays the time, and the Y-axis (vertical axis) displays the point value range. The currently-displayed Y-axis displays the range for the %LOAD point. The legend, which is displayed to the right of the trend plot, displays the area name, controller name and description, and point name and description for each trend point.

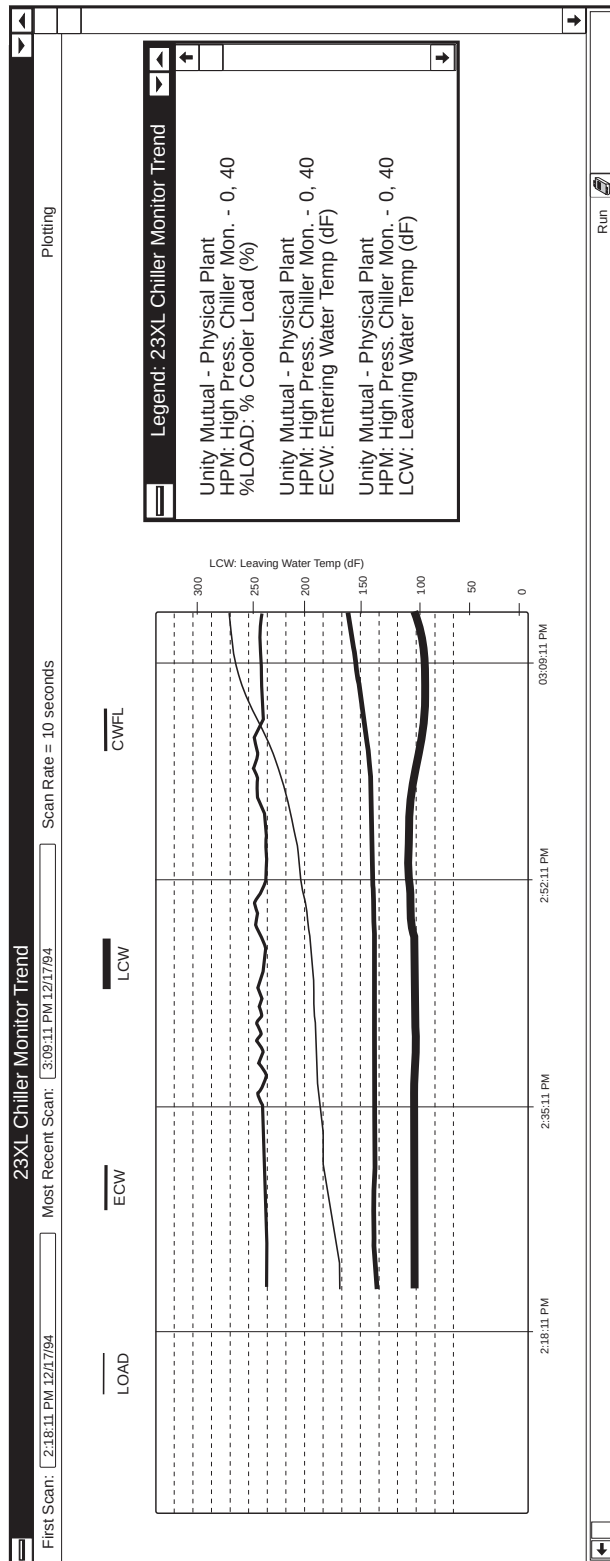


Figure 4-3 Sample Trend Window

Status Bar

The second line of the trend window contains the status bar. This status bar displays the time the displayed trend started (First Scan), the most recent scan time, and the trend status (Not Active or Plotting).

Note: If desired, you can remove the status bar from the window by clicking on the *Options* menu item followed by clicking on *Status bar*. To return the status bar to the window, perform these two commands again.

To Display a Point's Range in the Y-Axis

Trend point names display above the trend.

To activate the Y-axis to display a point's range, click on the point name as it is displayed above the trend.

The minimum and maximum values that are displayed in the plot's Y-axis change to display the selected point's range.

To Display a Trend Value at a Selected Time

1. Display the range for the point in question in the Y-axis. See above.
2. Point to a location on the trend line and hold down the left mouse button.

To Stop (Pause) a Trend

The point value will be displayed along with its corresponding trend sample time and date.



1. Click on the *Run* menu item and then click on *Stop Trend*.

Note: You may also perform this command by clicking on the Start/Stop Trend icon in the toolbar.

The message *Paused* displays in the window's status bar to show that the trend is stopped.

To Start or Re-start a Trend

You can start or re-start a trend at any time. Starting a trend causes it to resume trending data from the point it was at when you stopped it. Re-starting a trend clears out (initializes) all previous trend data and starts the trend again.

Once you've started a trend, the trend keeps running until one of the following conditions is met:

- You stop the trend by clicking on the *Run* menu item and then clicking on *Stop Trend*
- You close the WorkSPACE (by double-clicking on a ViewSPACE's link area, by opening a new WorkSPACE, or by exiting the WorkSPACE Manager application entirely)
- 1000 scans have been completed
- You remove the trend from the current WorkSPACE
- You leave run mode and enter design mode

To Start a Trend:

Click on the *Run* menu item and then click on *Start Trend*.

The message *Plotting* displays in the window's status bar to show that the trend has been started.

To Re-start a Trend:

Click on the *Run* menu item and then click on *Re-Start Trend*.

The message *Plotting* displays in the window's status bar to show that the trend has been started.

To View or Modify Trend Data Point Parameters and Trend History

Follow the instructions below to modify a trend point's value, description, or operator note, or to view the last 50 trend data samples for the point. For configuration points, you can upload configuration data from the controller, download data to the controller, and save configuration data changes in the ComfortVIEW database. For point status or maintenance table points, you can force and auto point values and save changes.

You can also use ComfortVIEW table jump feature to display and modify a trend point's associated configuration, maintenance, time schedule, or setpoint table. In addition, you can display the names of all Comfort Controller objects that are using a selected trend point in their configuration. For other CCN system element points, you can display the point's table of origin (status display, maintenance, or configuration table).

1. Double click on the point name corresponding to the point whose parameters or history you wish to view. These point names are displayed above the plot.

The WorkSPACE Manager displays the Point Data dialog box. This box displays the point's value, description, operator note, and trend history.

If there is an alarm or force condition currently in effect, an alarm or force status indication message is displayed in the lower half of the dialog box.

2. Make point description, value, or operator note changes as desired. Refer to Figure 4-6 and Table 4-6, which appear later in this WorkSPACE Manager chapter, for an explanation of the fields in the Point Data dialog box.
3. To view the last 50 trend data samples, click on the History drop down list box. If you wish to view all trend data samples, you can do so by saving your trend data to a file. Refer to To Save Trend Data to a File.
4. To display a point's associated configuration, maintenance, time schedule, or setpoint table, click on *Configuration table*, *Maintenance table*, *Time schedule*, or *Setpoint table*.
5. Clicking on *Reference table(s)* with a Comfort Controller point selected will display a list of all Comfort Controller objects that are using the trend point in their configuration. Clicking on *Table of Origin* with a point from any CCN system element selected will display the point's table of origin (status display, maintenance, or configuration table).
6. Click on *Close* to exit the dialog box and save any modifications.

To Save Trend Data to a File

There are two ways to permanently save your trend data samples:

- In run mode, use the *File* menu's *Save trend data to file* command. This command takes a snapshot of the current data and writes the data to a file name that you specify in the File Save As dialog box. This tab-separated file will contain all data that's been gathered since the trend was started for your current WorkSPACE session. You can then examine this trend data file at a later time, by reading it into a third party spreadsheet, word processor, or the Windows Notepad application.
- In design mode, select the *Edit* menu's *Modify ViewSPACE/Trend* command to display the Modify Current Trend dialog box (refer to Figure and Table 4-18). In that dialog box, specify an archive file directory path and file name. When the trend is activated in run mode, the data will be written to this file as it is plotted. You can then re-display the archived trend data in an inactive WorkSPACE Manager trend window using the *File* menu's *Open Archived Trend* command. This command is available in run mode.

Be aware that these are the only methods in which to permanently save trend data. Trend data is lost under the following conditions:

- You remove the trend from the current WorkSPACE
- You leave run mode and enter design mode
- You exit the WorkSPACE (by double-clicking on a ViewSPACE's link area, by opening a new WorkSPACE, or by exiting the WorkSPACE Manager application entirely).

Displaying and Using a ViewSPACE

While displaying a ViewSPACE in run mode, you can perform the following functions:

- Connect to a remote CCN to view dynamic remote values. To connect to a remote CCN, click on the Connect toolbar icon.
- View, modify, upload, download, and save the following data point parameters:
 - Value
 - Description
 - Operator note
- Jump to and display a linked WorkSPACE.
- Jump to and display a point's associated configuration, maintenance, time schedule, or setpoint table.
- Display the names of all Comfort Controller objects that are using a selected Comfort Controller point in their configuration.
- Jump to and display a point's table of origin (status display, maintenance, or configuration table).
- Use the trend wizard to quickly and easily create a new trend.
- Use the report wizard to quickly and easily add a new consumable, runtime, or history report definition.
- Use the alarm wizard to quickly and easily configure an alarm for the currently-selected point.
- Use the data box wizard to quickly and easily add a new data box to the ViewSPACE.

To Launch the WorkSPACE Manager Application and Display a ViewSPACE in Run Mode



Note: If the WorkSPACE Manager application is already running, you can display a ViewSPACE at any time by:

- if necessary, entering run mode (by clicking on the *Run* menu item and then clicking on *Start run mode*)
- opening the ViewSPACE (by clicking on the *File* menu item and then clicking on *Open ViewSPACE/Trend* or by clicking on the Open ViewSPACE/Trend icon in the toolbar.)

Launch the WorkSPACE Manager application and, in the Open WorkSPACE dialog box, select the WorkSPACE containing the ViewSPACE you wish to display. If necessary, refer to the Accessing the WorkSPACE Manager section of this chapter.

The ViewSPACES and trends that have been assigned to the WorkSPACE open sequentially inside the WorkSPACE window. The messages *Loading background screens* and *Loading data* display in the lower left corner of the WorkSPACE window during the load process.

Note: *If the ViewSPACE you wish to display is not currently displayed on the screen:*

Click on the drop down list to the left of the window's toolbar to display the name of each of the WorkSPACE's associated ViewSPACES and trends. Then, click on the ViewSPACE that you wish to display.

If the ViewSPACE you wish to display is in another WorkSPACE:

You can display a list of all ViewSPACES by clicking on the *File* menu item and then clicking on *Open ViewSPACE/Trend*.



You may also perform this command by clicking on the Open ViewSPACE/Trend icon in the toolbar.

The Open ViewSPACE/Trend dialog box is displayed. Select the ViewSPACE that you wish to display and then click on *OK*.

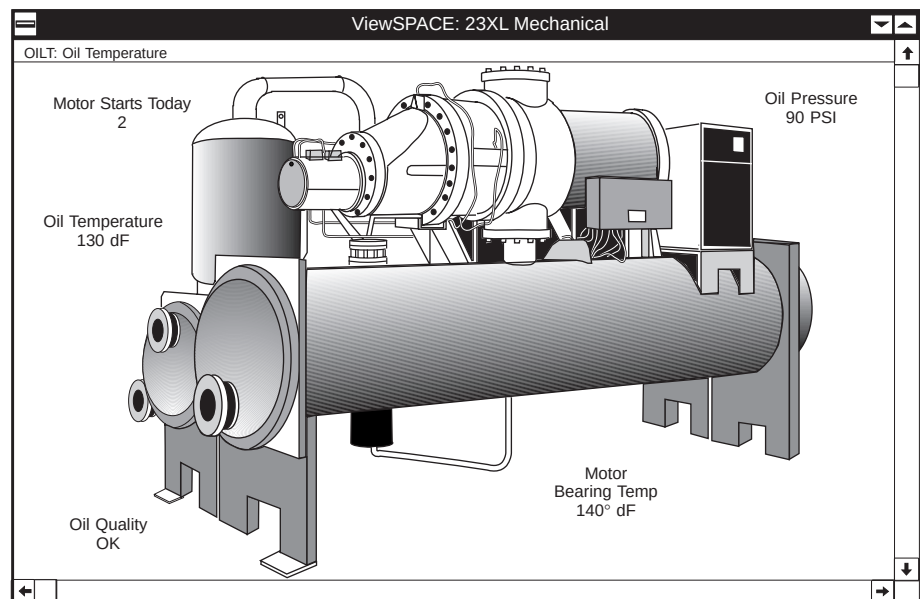
General Operation: ViewSPACES display in run mode. Data boxes displaying status display table values dynamically display the controller's latest values and statuses. Data boxes displaying configuration table values display configuration data as it is stored in the ComfortVIEW database. If desired, you can click on the *Configure* menu item and then click on *Upload ViewSPACE data* to display configuration values that are stored in the controller.

The sample ViewSPACE shown in Figure 4-4 displays a 23XL Chiller graphic with five data boxes.



If any ViewSPACE contains points from a remote CCN, and the ViewSPACE has not been configured to automatically establish remote connection on display (refer to Figure and Table 4-16), you must connect to the remote CCN in order to view the remote point data. To connect to a remote CCN, click on the Connect toolbar icon shown at left.

Figure 4-4
Sample ViewSPACE
Window



**To View a Data Box's
Point Name and
Description**

Position the mouse on any data box and click the left mouse button. The point name and description display in the ViewSPACE window's status bar, which is the second line of the window. This feature can be used to view point names of animated data boxes.

**To View or Modify Data
Point Parameters and
Values**

Follow the instructions below to view or modify CCN data point parameters and values. For instructions on modifying Dynamic Data Exchange (DDE) point parameters, refer to To Share ViewSPACE Data with Other Applications (DDE), which follows Figure and Table 4-7.

1. Double click on the data box corresponding to the point you wish to view or change.

The WorkSPACE Manager displays the Point Data dialog box. Refer to Figure 4-5. From this box you can modify the point's value, description, or operator note, and, if the point is currently being sampled in a trend, view the last 50 trend samples. For configuration points, you can also upload configuration data from the controller, download data to the controller, and save configuration data changes to the ComfortVIEW database. For point status or maintenance table points, you can also force, submaster force (for UT203 FID controllers) and auto point values, and save changes.

If there is an alarm or force condition currently in effect, an alarm or force status indication message will be displayed in the lower half of the dialog box.

2. Make point description, value, or operator note changes as desired. Refer to Figure 4-5 and Table 4-5 for an explanation of the fields in this dialog box.
3. To save configuration data changes in the ComfortVIEW database, click on the *Save* button.
4. To send configuration data changes to the controller, click on the *Download* button.
5. To display a point's associated configuration, maintenance, time schedule, or setpoint table, click on *Configuration table*, *Maintenance table*, *Time schedule*, or *Setpoint table*.
6. Clicking on *Reference table(s)* with a Comfort Controller point selected will display a list of all Comfort Controller objects that are using a point in their configuration.
Clicking on *Table of Origin* with a point from any CCN system element selected will display the point's table of origin (status display, maintenance, or configuration table).
7. Click on *Close* to exit the dialog box.

If desired, you can save and download all configuration data changes simultaneously using the Configure menu's Save ViewSPACE data and Download ViewSPACE data commands.



Note: You may also perform these commands by clicking on the Save and Download icons in the toolbar.

To Add a New Data Box



While viewing a ViewSPACE in run mode, you can use the new data box wizard to quickly and easily create a new data box.

1. While viewing a ViewSPACE in run mode, click on the toolbar's New Data wizard icon (shown at left).

The WorkSPACE Manager switches you to design mode and displays the Modify Data Box dialog box (refer to Table and Figure 4-12).

Note: If you select an existing data box prior to invoking the wizard, the Modify Data Box dialog box settings will default to those for the selected data box.

2. Select the new data point, style, colors, etc. and when finished, click on *OK* to close the Modify Data Box dialog box.
3. Once you have re-positioned and re-sized the data box as desired, click on the ✓ button in the lower left corner of the WorkSPACE Manager window to save the new ViewSPACE and return to run mode, or on the X button to exit the ViewSPACE without saving and return to run mode.

Figure 4-5
Point Data Dialog Box

Point Data

Mutual Of Farmington - Cold Call

AHU - 0.2

SPT [dF]

Point description:

Space Temperature

Point value:

75.0

Operator note:

Sensor Broken

History:

No alarm condition

Force in effect: Supervisor

Force...

Auto

Submaster

Save

Upload

Download

Configuration table...

Maintenance table...

Time schedule...

Setpoint table...

Reference table(s)...

Table of origin...

Close

Help...

Modifies this point's description

Table 4-5
Point Data Dialog Box

Click on	To
Point description edit box	modify the point’s description. Up to 24 characters are allowed.
Point value edit box	modify the displayed point value. This edit box is available for configuration points only. To modify a status display or maintenance point’s value or status, click on <i>Force</i> .
Operator note edit box	add a new or modify the existing operator note.
History drop down list	if the point is currently being sampled in a trend, display a tabular display of the point’s last 50 trend samples.
Force	override the controller’s automatic control and modify the point’s value. The Force dialog box is displayed. Refer to Figures 4-6 and 4-7 and Table 4-7 for instructions on using this dialog box.

(continued)

Table 4-5
Point Data Dialog Box
(continued)

Click on	To
Submaster	transmit a submaster reference force value to an analog out data point in a UT203 FID controller. When you force the submaster reference, ComfortVIEW will disregard the submaster reference value that was calculated in the FID's master control loop. For more information on the FID's submaster reference value, refer to the <i>UT203 FID Overview and Configuration Manual</i>. Note: You cannot transmit this submaster force if the selected data point already has a Supervisor force.
Auto	remove a force and return the point to the controller's automatic control.
Save	save point changes in the ComfortVIEW database.
Upload	copy configuration data point values from the controller to the ComfortVIEW database.
Download	send modified data to the controller. Note: Clicking on this Download button sends this specific configuration change to the controller. To send all ViewSPACE configuration data point changes to the controller, click on the <i>Configure</i> menu item and then click on <i>Download</i>.
Configuration table	display the point's associated configuration table.

(continued)

Table 4-5
Point Data Dialog Box
(continued)

Click on	To
Maintenance table	display the point's associated maintenance table.
Time schedule	display the point's associated time schedule configuration table.
Setpoint table	display the point's associated setpoint configuration table.
Reference tables	if the point is in a Comfort Controller, display the names of all Comfort Controller objects that are using the point in their configuration.
Table of origin	display the point's table of origin (status display, maintenance, or configuration table).
Close	close the dialog box.
Help	display help information.

Figure 4-6
Force Dialog Box —
Analog

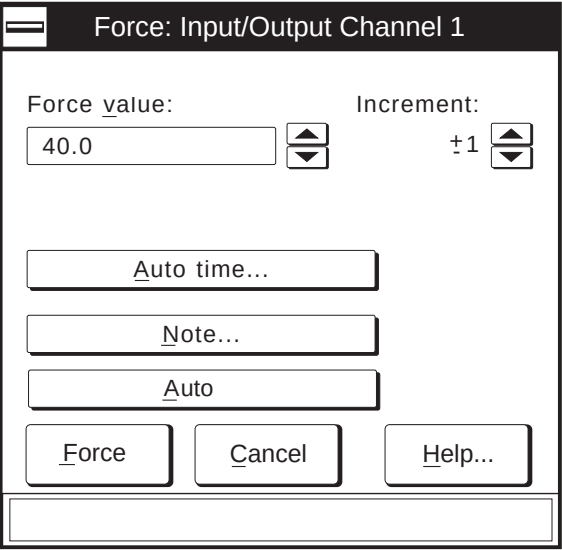


Figure 4-7
Force Dialog Box —
Discrete



Table 4-7
Force Dialog Box

Click on	To
the override state button (Example: <i>Clean</i> , <i>Dirty</i> , <i>On</i> , <i>Off</i>)	select the desired override state (for discrete points only).
the Force value edit box	enter the desired override value (for analog points only).
the Increment: up or down arrow	select the increase or decrease granu- larity (for example, .1, 1, 100, 1000).
the Force value up or down arrow	increase or decrease the override value for analog points.
Auto time	indicate the time and date to remove the force. This option is only available for those PIC controllers that support a force expiration. ComfortVIEW displays the Auto Time and Date dialog box. Click on the day of the month and enter the time to remove the force. To change the month, click (continued)

Table 4-7
Force Dialog Box
(continued)

Click on	To
	on the scroll bar’s down or up arrow. Click on <i>OK</i> to close the dialog box and save your settings.
Note	add an operator note in the Force dialog box. The Force Note dialog box displays. In the Force note box, enter a new or edit the existing note. Click on <i>OK</i> to save the changes or click on <i>Cancel</i> to exit without saving changes.
Auto	remove any current force that may exist on the point.
Force	transmit the force to the point.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

To Jump to a Linked WorkSPACE

- Position the mouse within the boundaries of the ViewSPACE’s link area.
The cursor pointer changes shape to indicate that you are positioned on a link area.
- Double click the left mouse button.
ComfortVIEW will close the existing WorkSPACE and open the linked WorkSPACE.
Note: If you plan on returning to the original WorkSPACE, you can hold down the Ctrl key when double-clicking. This will leave the current WorkSPACE open, and open the linked WorkSPACE in a new instance of the WorkSPACE Manager application.



Home or Previous WorkSPACE: You can click on the Home or Previous toolbar icon shown at left to quickly return to the first WorkSPACE that you displayed when the WorkSPACE Manager was launched, or to the WorkSPACE that you jumped from.

To Share ViewSPACE Data with Other Applications (DDE)

To View ViewSPACE Data in a DDE-supported Application: You can link ViewSPACE data to a Dynamic Data Exchange (DDE)-supported third party spreadsheet application. If the application to which you wish

to link supports the Paste Link command, click on the ViewSPACE data box containing the value you wish to link, click on the *Edit* menu item and then click on *Copy*. ComfortVIEW automatically copies the data (and its DDE link information) to the Windows Clipboard. You can then open the DDE-supported application, and use the application's Paste Link command to insert and link the selected ComfortVIEW data. When the ViewSPACE is active and point data changes, the data will automatically update in the other application. For further information on sharing ComfortVIEW dynamic data, and a list of the data elements that can be sent, refer to Sharing ComfortVIEW Dynamic Data with Other Applications, which appears in the Carrier Network Manager chapter of this manual.

To View or Modify DDE-supported Application Data in a ViewSPACE: You can display DDE-supported application data in a ComfortVIEW ViewSPACE. You can also modify DDE data. When you create the ViewSPACE, specify the appropriate DDE point information in the Create Data Box dialog box. To modify the DDE data: In Run mode, double-click on the DDE point data box. The DDE Source Interface dialog box is displayed. Enter any desired point modification in the Data to send edit box and click on Send data. Refer to Figure and Table 4-8 for instructions on using this dialog box.

Figure 4-8
DDE Source Interface
Dialog Box

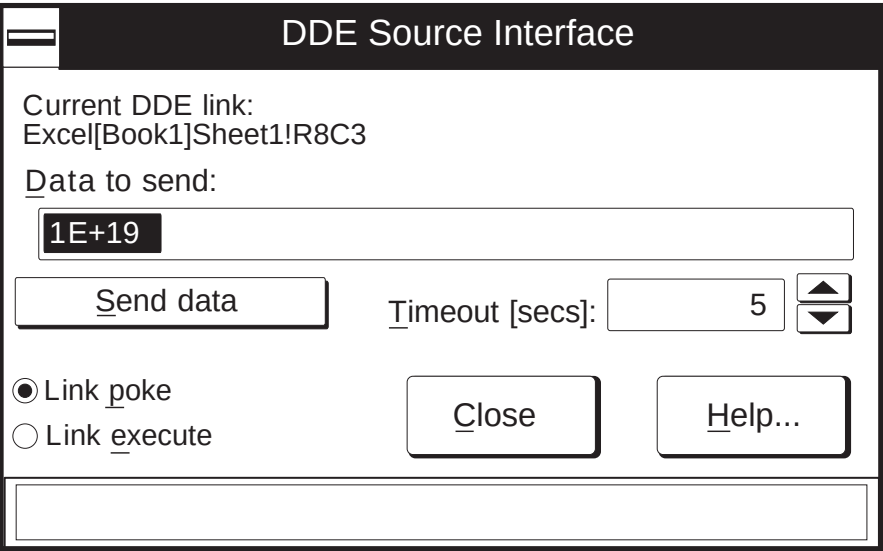


Table 4-8
DDE Source Interface
Dialog Box

Click on	To
the Data to send edit box	enter the new value to send to the DDE-linked application.
Link poke	update the data in the DDE-linked application. For example, if the DDE link represents a cell in an Excel spreadsheet, Link Poke will update the data in that cell.
Link execute	trigger functions in the DDE-linked application. For example, in the DDE link represents a cell in an Excel spreadsheet, Link Execute could be used to save or close the spreadsheet.
the Timeout edit box	indicate the number of seconds that the process should wait after initiating a Poke or Execute before reporting that no response was received from the DDE source.
Send Data	send the specified data back to the DDE-linked application.
Close	close the dialog box.
Help	display help information.

Alarm Wizard



While displaying a ViewSPACE in run mode, you can select a data box and then click on the Alarm Wizard toolbar icon to quickly and easily configure an alarm for the selected point. Note that wizard operation will differ, depending on the type of point and CCN system element. For Comfort Controllers and UT203 FIDs, the wizard first guides you through point alarm creation and configuration, and then ComfortVIEW custom message creation. For all other CCN system elements, the wizard provides ComfortVIEW custom alarm creation only. Follow the steps as presented.

Trend Wizard



While displaying a ViewSPACE, you can select any data box and then click on the trend wizard toolbar icon (shown at left) to quickly and easily set up a trend of that point.

1. In the Trend Wizard dialog box, enter the new trend name and click on *Finish* if you are satisfied with the trend's default 15 second scan rate, or click on *Modify* to display the Modify Current Trend dialog box and add other points to the same trend, or change the default scan rate. Refer to Table and Figure 4-18 for instructions on using this dialog box. Clicking on *Finish* saves the trend for later use.

Note: To view and run the newly-created trend, use the WorkSPACE Manager's *File* menu's *Open ViewSPACE/trend* command. To associate and save the trend in a WorkSPACE, enter design mode, open a WorkSPACE, open the trend and then save the WorkSPACE.

Report Wizard



While viewing a ViewSPACE in run mode, you can click on any data box and then on the Report Wizard toolbar icon to quickly and easily add a new consumable, runtime, or history report definition to the Report Panel. Follow the steps presented:

1. Select the report type.
2. Specify the report name and description.
3. Select the points to be included in the report. Initially, the list of points presented will include those that were selected from the ViewSPACE.
4. Select a specific Data Collection Module in which to allocate the Data Collection Tables. By default, the wizard locates an available module on the current CCN. But you also have the ability to identify a specific module, if desired.
5. From the next dialog box, click on *Report Options* to view or modify the default settings, if desired.

Creating a New WorkSPACE

Follow the steps below to launch the WorkSPACE Manager application and create a new WorkSPACE.

Note: If the WorkSPACE Manager application is already running and is operating in run mode, start with Step 3 below. When in design mode, you can create a new WorkSPACE at any time by clicking on the *File* menu item and then clicking on the *New WorkSPACE* command.

1. Double click on the WorkSPACE Manager icon to launch the WorkSPACE Manager application.

The Open WorkSPACE dialog box is displayed.

2. In the Open WorkSPACE dialog box, click on *Cancel*.

The dialog box closes and ComfortVIEW displays a new blank WorkSPACE window in run mode.

3. Switch to design mode. To do this, click on the *Run* menu item and then click on *Enter design mode*.
4. Click on *No* if asked whether you wish to load the current WorkSPACE for design.

The WorkSPACE Manager enters design mode and displays a blank WorkSPACE. The message *Design* displays in the lower right corner of the window to indicate that you are in design mode.

5. You can now create new or add existing ViewSPACES and trends to your new WorkSPACE.

To do this, click on the *File* menu item and then click on one of the following commands:

- *New ViewSPACE/Trend* — to create a new ViewSPACE or trend.

For instructions on using this command, refer to the Creating a New ViewSPACE or Creating and Modifying Trends section of this chapter.

- *Open ViewSPACE/Trend* — to open an existing ViewSPACE or trend window. ComfortVIEW displays

the Open ViewSPACE/Trend dialog box. Refer to Table 4-9 and Figure 4-9.

Note: You may also perform this command by clicking on the Open ViewSPACE/Trend icon in the toolbar.



Select the ViewSPACE or trend that you wish to use and then click on *OK*. The WorkSPACE Manager displays the selected ViewSPACE or trend on your screen.

6. After adding and saving all of the ViewSPACES and trends, save the WorkSPACE by clicking on the *File* menu item and then clicking on the *Save WorkSPACE* command.



Note: You may also perform this command by clicking on the Save WorkSPACE icon in the toolbar.

The Save Current WorkSPACE As dialog box is displayed. Refer to Figure 4-10 and Table 4-10 for instructions on using this dialog box.

7. Indicate the WorkSPACE's ownership designation by clicking on *Owned* or *Global* to enable or disable these options.
8. Click on *OK* to close the dialog box and save the WorkSPACE, or on *Cancel* to close the dialog box without saving.

The WorkSPACE Manager saves the WorkSPACE and all associated ViewSPACES and trends with their current window locations and sizes. When you display the WorkSPACE in run mode, all ViewSPACES and trends display with the window location and size that they had when the WorkSPACE was saved.

WorkSPACE Cloning

If you have a WorkSPACE containing ViewSPACES and trends with points from a single controller, you can use the cloning feature to quickly create another WorkSPACE containing identical points from another controller of the same type and version. This feature would be particularly useful when designing WorkSPACES for a zoned system, for example.

Follow the instructions below to clone a WorkSPACE:

Note: You can only clone a WorkSPACE if all its points are from a single controller.

1. In design mode, open an existing, or create and save a new WorkSPACE.
2. Click on the *File* menu item and then click on *Save WorkSPACE as*.
3. In the Save WorkSPACE As dialog box (refer to Figure 4-10), click on the *Clone* button.

The Clone WorkSPACE dialog box is displayed. Refer to Figure and Table 4-10a.

4. Enter the name of the new WorkSPACE and click on *OK*.

The Select Element dialog box will be displayed.

In the Select Element dialog box, select the new system element's area and element name and address, and click on *OK*.

Note: If all of the original ViewSPACE and trend points are from a single table, the Select Table dialog box will be displayed in place of the Select Element dialog box. In this dialog box you can select the area, element, table category, and table name for the new WorkSPACE's points. Then, click on *OK* to save your selection and close the dialog box.

ComfortVIEW will create a new WorkSPACE and copy all existing ViewSPACES and trends along with all associated points to it.

A dialog box, titled with the name of your new WorkSPACE and listing the names of all of the cloned ViewSPACES and trends, will now be displayed.

5. Click on *Close* to close the dialog box.

Figure 4-9
Open ViewSPACE/Trend
Dialog Box

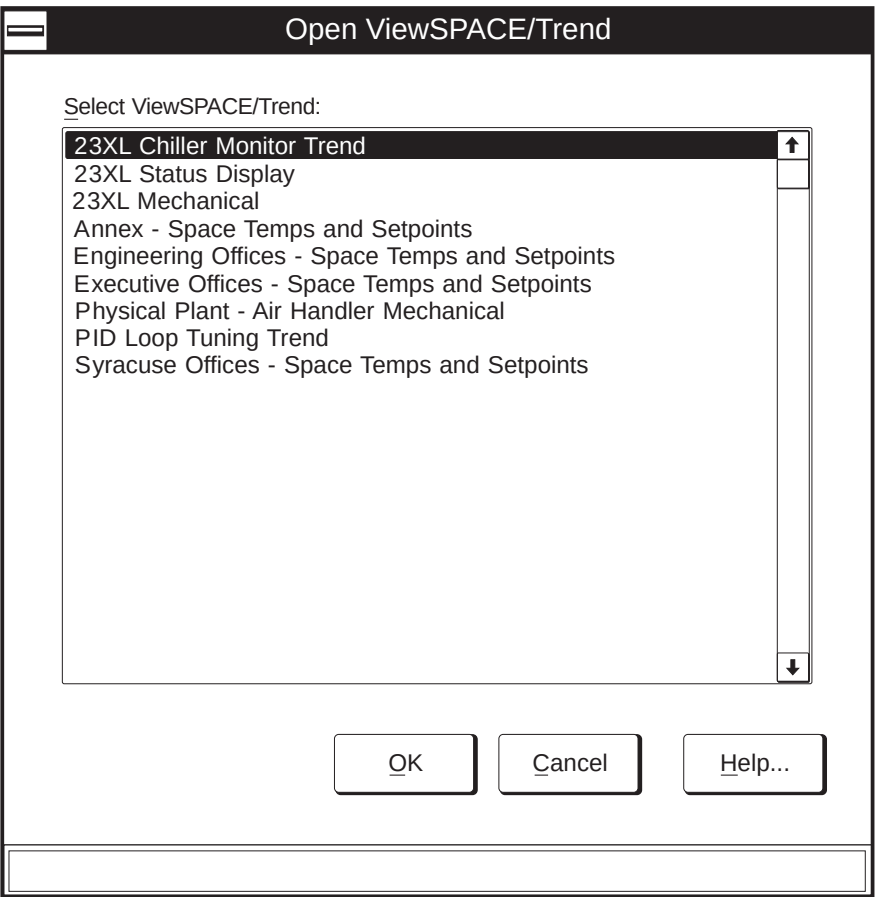


Table 4-9
Open ViewSPACE/Trend
Dialog Box

Click on	To
a ViewSPACE or trend in the Select ViewSPACE/Trend list	select the ViewSPACE or trend to open.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 4-10
Save Current WorkSPACE
As Dialog Box

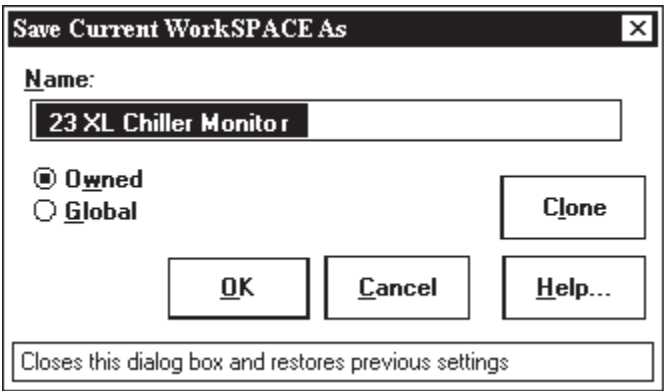


Table 4-10
Save Current WorkSPACE
As Dialog Box

Click on	To
the Name edit box	enter the new WorkSPACE name. Up to 48 characters are allowed.
Owned	allow this WorkSPACE to be displayed by any user, but only modified or deleted by you (the creator).
Global	allow this WorkSPACE to be displayed, modified, or deleted by any user.
Clone	copy all ViewSPACES, trends, and associated points to a new WorkSPACE. The Clone WorkSPACE dialog box will be displayed. Refer to Figure and Table 4-10a.
OK	close the dialog box and save current settings.
Cancel	exit the dialog box without saving.
Help	display help information.

Figure 4-10a
Clone WorkSPACE Dialog
Box

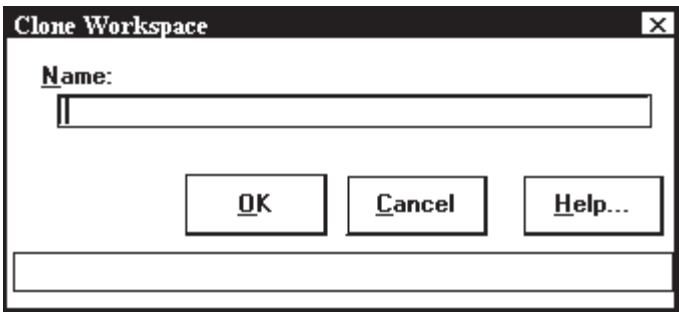


Table 4-10a
Clone WorkSPACE Dialog
Box

Click on	To
the Name edit box	enter the new WorkSPACE name. Up to 48 characters are allowed.
OK	close the dialog box and save current settings.
Cancel	exit the dialog box without saving.
Help	display help information.

Modifying an Existing WorkSPACE

Follow the instructions below to launch the WorkSPACE Manager application and modify an existing WorkSPACE. You can modify the WorkSPACE name and its owned/global designation. If desired, you can also modify or delete the WorkSPACE's existing ViewSPACES and trends, or add new ViewSPACES and trends to the WorkSPACE.

Note: If the WorkSPACE Manager application is already running and in design mode, you can modify an existing WorkSPACE at any time by:



- clicking on the *File* menu item and then clicking on the *Open WorkSPACE* command (or by clicking on the Open WorkSPACE icon in the toolbar).
- selecting the WorkSPACE that you wish to modify.
- proceeding to Step 6 in the following list.

1. Double click on the WorkSPACE Manager icon to launch the WorkSPACE Manager application.

The Open WorkSPACE dialog box is displayed.

2. In the Open WorkSPACE dialog box, click on *Cancel*.

The dialog box closes and ComfortVIEW displays a new blank WorkSPACE window in run mode.

3. Switch to design mode. To do this, click on the *Run* menu item and then click on *Enter design mode*.

4. Click on *Yes* when asked whether you wish to load the current WorkSPACE for design.

The WorkSPACE Manager enters design mode and displays a blank WorkSPACE. The message *Design* displays in the lower right corner of the window to indicate that you are in design mode.

5. Open the WorkSPACE that you wish to modify. To do this, click on the *File* menu item and then click on *Open WorkSPACE*.



Note: You may also perform this command by clicking on the Open WorkSPACE icon in the toolbar.

6. To modify the WorkSPACE name, click on the *Edit* menu item and then click on *Modify WorkSPACE*.

The Modify Current WorkSPACE dialog box is displayed. Refer to Figure 4-11 and Table 4-11.

7. Modify the WorkSPACE name as desired, and then click on *OK*.

The name change will be made permanent when you save the WorkSPACE.

8. You can now modify or delete existing ViewSPACES and trends, or add new ViewSPACES and trends to the WorkSPACE.

Instructions on performing these operations can be found in the following sections of this chapter:

- Modifying an Existing ViewSPACE
- Displaying and Using Trends
- Creating and Modifying Trends
- Deleting/Removing ViewSPACES
- Deleting/Removing Trends

9. Save the modified WorkSPACE as follows:

- *To save the WorkSPACE and overwrite previous modifications:* Click on the *File* menu item and then click on the *Save WorkSPACE* command.

This command will overwrite the existing WorkSPACE.



Note: You may also perform this command by clicking on the *Save WorkSPACE* icon in the toolbar.

- *To save the WorkSPACE with a new name:* Click on the *File* menu item and then click on the *Save WorkSPACE as* command.

This command saves a new version of an existing WorkSPACE. The *Save Current WorkSPACE As* dialog box is displayed. Refer to Figure 4-10 and Table 4-10 for instructions on using this dialog box.

The WorkSPACE Manager saves the WorkSPACE and all associated ViewSPACES and trends with their current window locations and sizes. When you display the WorkSPACE in run mode, all ViewSPACES and trends display with the window location and size that they had when the WorkSPACE was saved.

Figure 4-11
 Modify Current
 WorkSPACE Dialog Box

Modify Current WorkSPACE

Name:

23XL Chiller Monitor

☐ Owned
 ☒ Global

OK

Cancel

Help...

Modifies the window's name

Table 4-11
 Modify Current
 WorkSPACE Dialog Box

Click on	To
the Name edit box	modify the existing WorkSPACE name. Up to 48 characters are allowed.
OK	close the dialog box and save the current settings.
Cancel	exit the dialog box without saving settings.
Help	display help information.

Deleting a WorkSPACE

Follow the instructions below to launch the WorkSPACE Manager application and delete a WorkSPACE from the ComfortVIEW database. Note that deleting a WorkSPACE does not delete its associated ViewSPACES and trends. You can display these ViewSPACES and trends by opening them from another WorkSPACE window.

Note: If the WorkSPACE Manager application is already running and is operating in run mode, it is not necessary to perform the instructions below. Instead, you can delete a WorkSPACE at any time by:

- entering design mode (by clicking on the Run menu item and then clicking on *Enter design mode*).
 - clicking on the *Edit* menu item and then clicking on the *Delete WorkSPACE* command.
 - proceeding to Step 6 in the following list.
1. Double click on the WorkSPACE Manager icon to launch the WorkSPACE Manager application.

The Open WorkSPACE dialog box is displayed.

2. In the Open WorkSPACE dialog box, click on *Cancel*.

The dialog box closes and ComfortVIEW displays a new blank WorkSPACE window in run mode.

3. Switch to design mode. To do this, click on the *Run* menu item and then click on *Enter design mode*.

The WorkSPACE Manager displays a dialog box asking if you wish to reload the current WorkSPACE for design.

4. Click on *Yes*.

The WorkSPACE Manager enters design mode and the message *Design* displays in the lower right corner of the window.

5. Click on the *Edit* menu item and then click on *Delete WorkSPACE*.
6. In the confirmation dialog box displayed, click on *Yes* to delete the WorkSPACE or on *No* to prevent its deletion.

The WorkSPACE Manager closes any currently-displayed ViewSPACE and trend windows, deletes the WorkSPACE from the ComfortVIEW database, and displays a new undefined WorkSPACE window.

Creating a New ViewSPACE

Overview of the Process

To create a new ViewSPACE, you must perform the tasks listed below. Step-by-step instructions for completing each task follow.

- Enter design mode.
- Create a new or open an existing WorkSPACE into which you wish to include the new ViewSPACE graphic.
- Create the new ViewSPACE and select the pre-drawn graphic display background. Refer to Graphic Background Drawing Specifications on the following page.
- Create data boxes and assign the data points on the display. Depending on how you configure them, data boxes can appear as rectangular boxes or as animated graphics. A rectangular data box can contain a configuration, status display, or maintenance point's name, 24 character description, value and units, communication or alarm status, and/or force state. An animated graphic data box displays an animated picture of a discrete point (for example, a fan circulating air). A data box can also display data from a Dynamic Data Exchange (DDE)-linked application.
- Establish links to other WorkSPACES. Link boxes give you the capability to jump to another WorkSPACE by double clicking within a ViewSPACE's link box boundaries.
- Save the new ViewSPACE and/or WorkSPACE in your ComfortVIEW database.

Graphic Background Drawing Specifications

Graphic backgrounds should be created using a third party drawing package that supports one of the following file formats:

File Extension	Type
.BMP	Windows bitmap
.DIB	Windows bitmap
.GIF	Compuserve
.JPG	JPEG
.PCX	PC Paintbrush (ZSoft format only)
.TIF	TIFF
.TGA	Truevision Targa

Recommended graphic dimensions for use with a 1024 x 768 super VGA display are as follows:

- Full Screen ViewSPACE Window Size — 1022 x 648 pixels

Multiple full-screen ViewSPACES can be in one WorkSPACE. However, only one ViewSPACE will be seen in its entirety at a time.

- Cascaded ViewSPACE Window Size — 791 x 421 pixels

A cascaded ViewSPACE window size permits a ViewSPACE to be seen in its entirety when ViewSPACE windows are displayed using the cascaded window option.

- Tiled ViewSPACE Window Size — Dimensions dependent on number of ViewSPACES

A tiled ViewSPACE window size permits all ViewSPACES to be seen in their entirety when ViewSPACE windows are displayed using the tiled window option. The size of tiled windows will vary dependent on the number of open ViewSPACE windows.

Step-by-step Instructions

Follow the steps below to launch the WorkSPACE Manager application and create a new ViewSPACE graphic.

Note: If the WorkSPACE Manager application is already running, you can create a new ViewSPACE at any time by:

- if necessary, entering design mode (by clicking on the *Run* menu item and then clicking on *Enter design mode*).
- opening an existing WorkSPACE (by clicking on the *File* menu item and then clicking on *Open WorkSPACE*) or opening a new WorkSPACE (by clicking on the *File* menu item and then clicking on *New WorkSPACE*).
- proceeding to Step 6 in the following list.

1. Double click on the WorkSPACE Manager icon to launch the WorkSPACE Manager application.

The Open WorkSPACE dialog box is displayed.

2. In the Open WorkSPACE dialog box, click on the *Cancel* button.

The dialog box closes and ComfortVIEW displays a blank WorkSPACE window in run mode.

3. Switch to design mode. To do this, click on the *Run* menu item and then click on *Enter design mode*.

The WorkSPACE Manager displays a dialog box asking if you wish to reload the current WorkSPACE for design.

4. Click on *Yes*.

The WorkSPACE Manager enters design mode and the message *Design* displays in the lower right corner of the window.

5. Open the WorkSPACE into which you wish to add this new ViewSPACE by clicking on the *File* menu item and then clicking on *Open WorkSPACE*.



You may also perform this command by clicking on the Open WorkSPACE icon in the toolbar.

Note: If you wish to open a new WorkSPACE for the ViewSPACE, click on the *File* menu item and then click on *New WorkSPACE*.

6. Open the new ViewSPACE window by clicking on the *File* menu item and then clicking on *New ViewSPACE*.

A blank ViewSPACE window is displayed.

7. Select the Graphic Background:

- a. Click on the *Configure* menu item and then click on *Background*.

The File Open dialog box is displayed.

- b. Select the graphic background file you wish to display or type the file name in the File Name box. You can select a different drive by making your selection from the Drives drop down list. You can also select a file that is resident on another network computer by clicking on the *Network* button. The selected graphic background loads and displays in the ViewSPACE window. The message *Loading background image* displays in the lower left corner of the window during the load process.

8. Create the First Data Box:

- a. Click on the *Configure* menu item and then click on *New Data Box*.



Note: You may also perform this command by clicking on the Create New Data Box icon in the toolbar.

The WorkSPACE Manager creates a data box on your graphic background screen and displays the Modify Data Box tabbed dialog box. Refer to Figure and Table 4-12.

- b. In the Data selection tab, click on *CCN point* (if the data you wish to display originates from the CCN), or, click on *DDE point* if the point is being DDE linked to ComfortVIEW from another application. For example, Excel.
- c. If, in Step 8b above, you selected *DDE point*, you must now specify the DDE application, topic, and item names. If, however, the application from which you are linking supports the Paste link function (and you have copied the cell while in the application), you can click on the *Paste link* button and the WorkSPACE Manager will automatically fill in this information for you. Then, skip to Step 8f and select the data box style.

If, in Step 8 above, you selected *CCN point*, you must now click on *Select point* to select the CCN point to assign to the data box.

The Data Point Selection dialog box is displayed.

- d. From the Select Area, Select Element, Select Category, Select Table, and Select Point drop down lists, select the area, controller table category, table, and name of the point that you wish to display on this new ViewSPACE. Refer to Figure 4-13 and Table 4-13 for instructions on using the Data Point Selection dialog box.
- e. Click on *OK* to select the currently-displayed point and close the dialog box, or

Note: If you press the Ctrl key while you click on *OK*, you will select the point, and keep the dialog box open so that you can make additional point selections.

or click on *Cancel* to close the dialog box without saving the point selection.

The Modify Data Box dialog box is re-displayed.

- f. In the Modify Data Box dialog box, select the *Databox style* tab. Then, specify the desired databox display style — *Normal* or *Animated* (Animated is for discrete points

only), and the box's background and alarm colors. If you select an animated (moving picture) data box style, you must assign graphics that have been pre-drawn using a third party drawing package and named according to the frame creation guidelines listed in this chapter's Animated Data Box Frame Creation Guidelines section.

Refer to Table 4-12 for an explanation of the options in the Modify Data Box tabbed dialog box.

- g. Now, in the Modify Data Box tabbed dialog box, select the *Font and colors* tab. Select the font and the data elements that you wish to display (point name, description, etc.) You can also specify an associated display color for each element.
- h. Clicking on the Modify Data Box dialog box's *Layout* tab brings up a sample databox that displays your current databox style and element selections. You can further customize your databox presentation by using the Windows drag and drop technique to move data elements around in the sample data box.
- i. After all Modify Data Box dialog box tabs have been selected and your sample data box appears as desired, click on *OK* to close the dialog box and save the data box settings, or

click on *Cancel* to close the dialog box without saving settings.

The ViewSPACE window re-displays with the newly configured data box placed on the graphic background screen.

- j. Drag the data box to re-position it as desired.

If desired, you can also re-size the box by dragging a corner.

9. Create Additional Data Boxes:

Once you've designed your first data box, you can copy and paste it to quickly and easily create additional data boxes. Follow the steps below:

- a. Click on the data box that you created in Step 8.
- b. Click on the *Edit* menu item and then click on *Copy*.
- c. Click on the *Edit* menu item again and then click on *Paste*.

The WorkSPACE Manager copies the selected data box and pastes the copy on the graphic background screen. The new data box will be placed partially on top of the original.

- d. Drag the data box to re-position it as desired.
 - e. Double click on the data box to display the Modify Data Box dialog box and modify the point selection and other dialog box options accordingly. Refer to Step 8 of this list and to Table 4-12 for instructions on using the Modify Data Box dialog box.
10. Create your link areas. You can place up to fifteen link areas on a ViewSPACE.
- a. Click on the *Configure* menu item and then click on *New link area*.



Note: You may also perform this command by clicking on the New Link Area icon in the toolbar.

The Modify Link Area dialog box is displayed. Refer to Figure 4-15.

- b. Select the WorkSPACE to which you wish to link, click on *Border* to enable or disable display of a border around the link area, and then click on *OK*.

The WorkSPACE Manager displays the link area box on your graphic background screen.

- c. You can re-size the link area by dragging the box corner.
 - d. You can re-position the link area by dragging it.
11. If desired, you can "lock" the ViewSPACE so that its window

size and position, and its link areas, databoxes, and background graphic cannot be inadvertently altered. To do this, click on the *Options* menu item and then click on *Lock window*.

If desired, you can also select the Options menu's *Size image to window* command to force the background graphic to re-size itself dynamically based on the size of the ViewSPACE. This allows you to display large graphics in their entirety inside a ViewSPACE and eliminates the need for use of scroll bars.

12. Save the ViewSPACE:

- a. Click on the *File* menu item and then click on *Save ViewSPACE/Trend*.



Note: You may also perform this command by clicking on the Save ViewSPACE/Trend icon in the toolbar.

The Save Current ViewSPACE As dialog box is displayed. Refer to Figure and Table 4-16.

- b. Enter a ViewSPACE name.
- c. Click on *Owned* to allow this ViewSPACE to be displayed by any user, but only modified or deleted by you (the creator) or,
click on *Global* to allow this ViewSPACE to be displayed, modified, or deleted by any user.
- d. Click on *OK* to close the dialog and save the ViewSPACE.
The ViewSPACE window re-displays.

13. Save the WorkSPACE:

- a. Click on the *File* menu item and then click on *Save WorkSPACE*.



Note: You may also perform this command by clicking on the Save WorkSPACE icon in the toolbar.

If the WorkSPACE has not been previously saved, the Save WorkSPACE As dialog box is displayed. Refer to Figure 4-10 and Table 4-10.

If the WorkSPACE has already been saved, the WorkSPACE Manager simply saves the WorkSPACE under the current name and ownership.

- b. Enter a WorkSPACE name.
- c. Click on *Owned* to allow this WorkSPACE to be displayed by any user, but only modified or deleted by you (the creator) or,
 click on *Global* to allow this WorkSPACE to be displayed, modified, or deleted by any user.
- d. If desired, you can also click on *Clone* to quickly create another WorkSPACE containing identical points from another controller of the same type and version.
- e. Click on *OK* to close the dialog and save the WorkSPACE.

The WorkSPACE Manager saves the WorkSPACE and all ViewSPACES and trends in their current locations and sizes. When you display the WorkSPACE in run mode, all ViewSPACES and trends display in the location and size that they were on performing the WorkSPACE save.

You can now display the ViewSPACE in run mode and view its data dynamically updating. For instructions on Displaying ViewSPACES, refer to the Displaying and Using a ViewSPACE section of this chapter.

Figure 4-12
Modify Data Box
Dialog Box

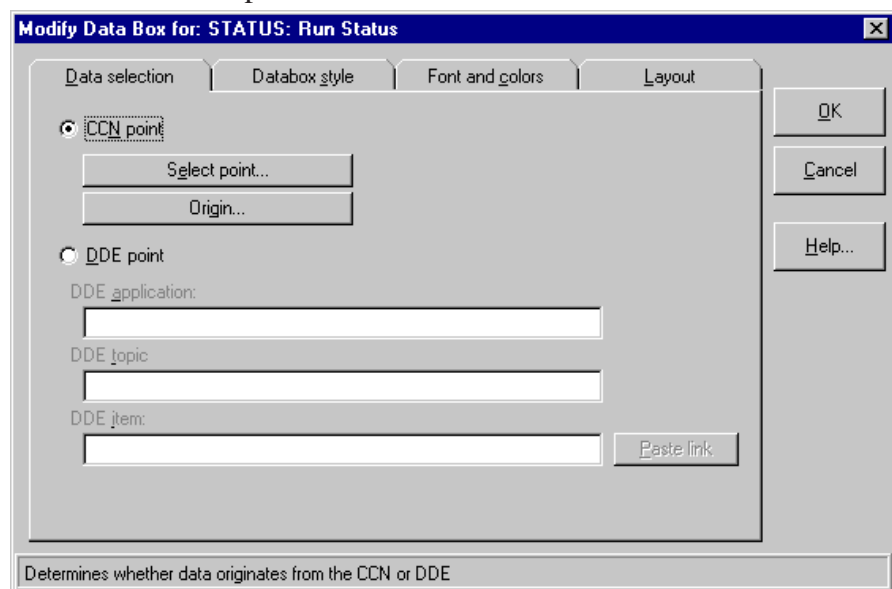


Table 4-12
Modify Data Box Dialog
Box

Click on	To
Data selection tab:	
CCN point	specify that the point to be displayed is from the CCN.
Select point	select the CCN point to assign to the data box. The Data Point Selection dialog box displays. Refer to Figure 4-13 and Table 4-13 for instructions on using this dialog box.
Origin	Origin display a message dialog box that displays the point's area, element, address, table, and point name.
DDE point	specify that the point to be displayed is being DDE linked to ComfortVIEW from another application. For example, Excel.
DDE application	specify the name of the DDE application that is linking to ComfortVIEW. If the DDE application does not support the Paste link function, you must specify this information, as well as the DDE topic and item. If the application does support Paste link, you can simply click on this dialog box's <i>Paste link</i> button.
DDE topic	specify the DDE topic name.
DDE item	specify the DDE item name.
Paste link	decipher the DDE link and automatically fill in the DDE application, topic, and item information.

(continued)

Table 4-12
 Modify Data Box Dialog
 Box
 (continued)

Click on	To
	Note: For you to use the Paste link option, the application must support the Paste link function.
Databox style tab:	
Normal	select the text data box style versus the animated data box style.
Background	
Transparent	select a clear data box background.
Opaque	select a solid data box background. Click on the <i>Color</i> button to select the opaque box's background color. Click on the <i>Alarm Color</i> button to select a background color that will display when this point is in an alarm or alert state.
Animated	select an animated data box style. An animated data box is one that includes a graphic that dynamically changes based on data point value. For example, a fan with turning blades. This option is available for discrete data points only.
Frames	select the graphics for the animated data box. The Frame Family Selection dialog box displays. Refer to Figures 4-14 and Table 4-14 for instructions on using this dialog box. The selected graphics display in the dialog box's State 0 and State 1 boxes.

(continued)

Table 4-12
Modify Data Box
Dialog Box
(continued)

Click on	To
Font and colors tab:	
Border	enable or disable display of the data box border.
Point name	include or remove the point name in the data box. Click on the corresponding <i>Color</i> button to select the point name text color.
Description	include or remove the 24 character point description in the data box. Click on the corresponding <i>Color</i> button to select the description text color.
Value	include or remove the value in the data box. Click on the corresponding <i>Color</i> button to select the value text color. Clicking on <i>Alarm color</i> selects the value text color that will display when the value is in alarm. Clicking on <i>Force color</i> selects the value text color that will display when the value is Forced (the controller's automatic control is being overridden.)
Units	include or remove the units in the data box. Click on the corresponding <i>Color</i> button to select the units text color.
Comm/alarm status	include or remove the communication/ alarm status in the data box. Click on the corresponding <i>Color</i> button to select the communication/alarm status text color.
Force status	include or remove the force status in the data box. Click on the corresponding <i>Color</i> button to select the force status text color.
Color	select the color of the corresponding data element (point name, description, value, units, etc.).
Font	Select the font of the databox text.

(continued)

Table 4-12
 Modify Data Box
 Dialog Box
 (continued)

Click on	To
Layout tab:	view a sample databox that displays your current databox style and element selections. You can further customize your databox presentation by using the Windows drag and drop technique to move data elements around in the sample data box.
OK	close the dialog box and save the data box settings.
Cancel	exit the dialog box and without saving the settings.
Help	display help information.

Figure 4-13
 Data Point Selection
 Dialog Box

Data Point Selection

Select Area:

United Mutual Insurance - Physical Plant

Select Element:

23XL: Chiller - 0, 128

Select Category:

Status Display

Select Table:

STATUS 01: Status Display

Select Point:

ECW: Entering Chilled Water

Reset

OK

Cancel

Help...

Table 4-13
Data Point Selection
Dialog Box

Click on	To
the Select Area drop down list	display a list of all areas in your ComfortVIEW database. Click to select the area containing the point to display or trend.
the Select Element drop down list	display a list of all elements in the selected area. Click to select the controller (system element) containing the point to display or trend.
the Select Category drop down list	display a list of all table categories in the selected system element.
the Select Table drop down list	display a list of all tables in the selected category.
the Select Point drop down list	display a list of all points in the selected element and table. Click on a point to select it.
Reset	erase any drop down list selections. Note: You will reset the selections, even if you click on Cancel before exiting the dialog box.
OK	select the specified point and close the dialog box. Note: If you press the Ctrl key while you click on OK, you will select the point, and keep the dialog box open so that you can make additional point selections.
Cancel	exit the dialog box without selecting the point.
Help	display help information.

Figure 4-14
Frame Family Selection
Dialog Box

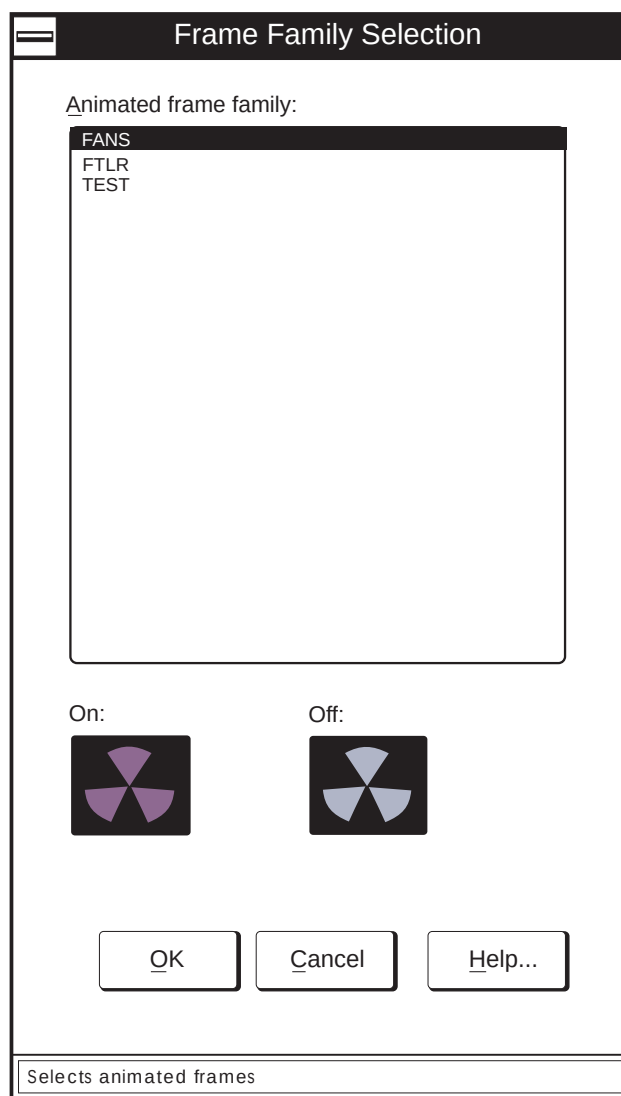


Table 4-14
 Frame Family Selection
 Dialog Box

Click on	To
the name of an animated frame family	select the graphics that will display in the selected point's data box. The family's associated graphics display in the lower half of the dialog box. Refer to the Animated Data Box Frame Creation Guidelines section of this chapter for frame creation guidelines.
OK	select the graphic and close the dialog box.
Cancel	exit the dialog box without saving selections.
Help	display help information.

Figure 4-15
 Modify Link Area Dialog
 Box

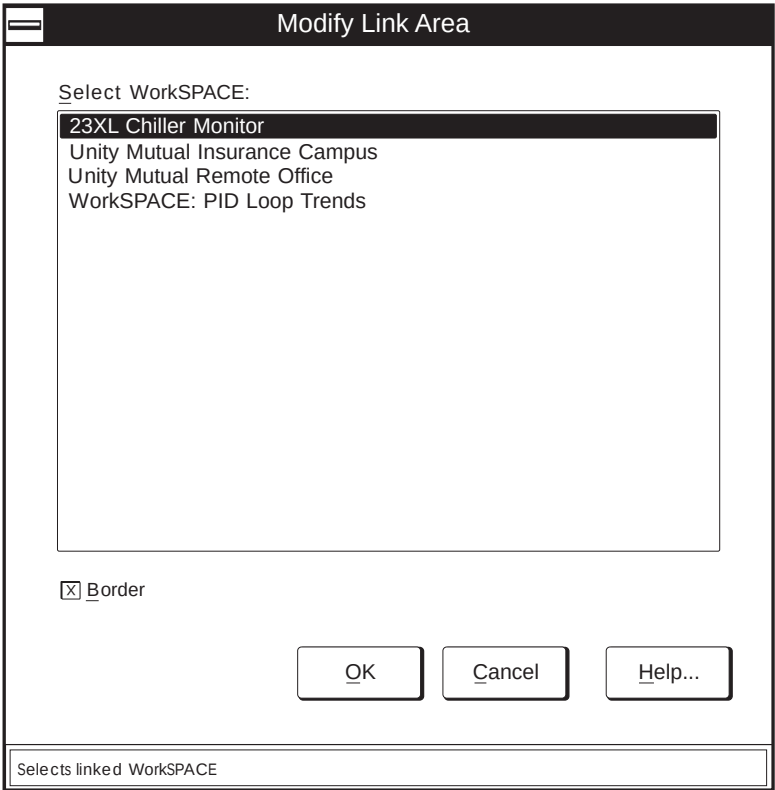


Table 4-15
Modify Link Area Dialog
Box

Click on	To
the name of a WorkSPACE	select the target WorkSPACE to which this link will jump.
Border	enable or disable display of the link area border.
OK	select the WorkSPACE and close the dialog box.
Cancel	exit the dialog box without saving selections.
Help	display help information.

Figure 4-16
Save Current
ViewSPACE/Trend As
Dialog Box

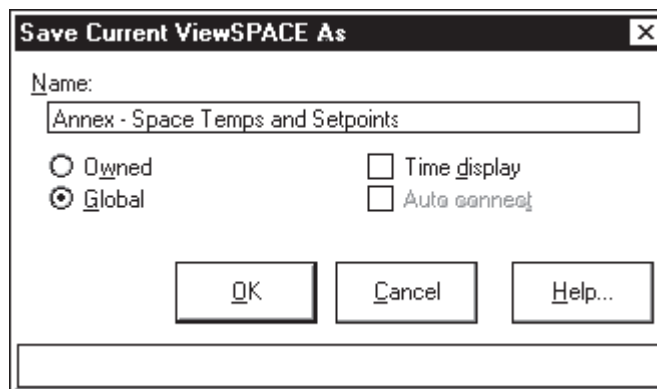


Table 4-16
Save Current
ViewSPACE/Trend As
Dialog Box

Click on	To
the Name edit box	enter the new ViewSPACE or trend name. Up to 48 characters are allowed.
Owned	allow this ViewSPACE or trend to be displayed by any user, but only modified or deleted by you (the creator).
Global	allow this ViewSPACE or trend to be displayed, modified, or deleted by any user.
Auto connect	when displaying this ViewSPACE or trend in run mode, automatically attempt to establish a connection to all remote CCNs containing points from this ViewSPACE or trend.
Auto start	on displaying this trend in run mode, cause the trend to automatically start.
Time Display	on displaying this ViewSPACE in run mode, include time and date on the display.
OK	close the dialog box and save current settings.
Cancel	exit the dialog box without saving.
Help	display help information.

Modifying An Existing ViewSPACE

Follow the instructions below to modify an existing ViewSPACE. You can modify the ViewSPACE name, and all data box parameters, including data box locations and sizes. You can also add new and delete existing data boxes and link areas.

1. If necessary, enter design mode by clicking on the *Run* menu item and then click on *Enter design mode*.

The WorkSPACE Manager displays a dialog box asking if you wish to reload the current WorkSPACE for design.

2. Click on *Yes*.

The WorkSPACE Manager displays the selected WorkSPACE in design mode. The message *Design* will display in the lower right corner of the window.

3. Display the ViewSPACE that you wish to modify by clicking on the *File* menu item and then clicking on *Open ViewSPACE/Trend*.



Note: You may also perform this command by clicking on the Open ViewSPACE/Trend icon in the toolbar.

To Modify the ViewSPACE Name

1. Click on the *Edit* menu item and then click on *Modify ViewSPACE/trend*, or click on the *Modify* button in the ViewSPACE window.

The WorkSPACE Manager displays the Modify Current ViewSPACE dialog box. Refer to Figure 4-17 and Table 4-17.



Note: You can also display this dialog box by clicking on the Modify ViewSPACE/Trend icon in the toolbar, or, by double clicking anywhere within the ViewSPACE window. Do not, however, click on a data or link box.

2. In the Name edit box, modify the ViewSPACE name as desired.
3. Click on *OK* to close the dialog box and save modifications, or on *Cancel* to close the dialog box and restore the previous settings.

Figure 4-17
Modify Current
ViewSPACE Dialog Box

Modify Current ViewSPACE

Name:

23XL Chiller Monitor

☒ Owned

☐ Auto start

☐ Global

☐ Auto connect

OK

Cancel

Help...

Modifies the window's name

Table 4-17
Modify Current
ViewSPACE Dialog Box

Click on	To
the Name edit box	enter a new or modify the existing ViewSPACE name. Up to 48 characters are allowed.
Owned	specify that this ViewSPACE can only be modified by the operator who created it.
Global	specify that this ViewSPACE can be modified by any operator.
Time display	have this ViewSPACE include time and date display.
Auto connect	if this ViewSPACE contains points from a remote CCN, automatically connect to the remote CCN on displaying the ViewSPACE.
OK	close the dialog box and save the current settings.
Cancel	exit the dialog box without saving settings.
Help	display help information.

**To Modify Data Box
Parameters, Location,
and Size**

Follow the instructions below to modify an existing data box's display parameters, location, or size. Note that if the Option's menu's Lock window command is enabled, you will not be permit-

ted to modify a databox's or link area's location or size. You can select and modify the display parameters and size of multiple data boxes by holding down the Ctrl key and clicking on each data box that you wish to change. Then, follow the instructions below.

To Modify Data Box Parameters

Follow the instructions below to modify the point selection or other display parameters.

1. Double click on the data box you wish to modify.

Note: If you have selected multiple data boxes, double click on the first data box you selected. You must continue to press and hold the Ctrl key while double clicking.

The Modify Data Box dialog box is displayed.

Note: You may also display this dialog box by clicking on the data box, clicking on the *Edit* menu item, and then clicking on *Modify Object*. However, if you have enabled the Options menu's Lock window command, you will not have access to the Modify Object command.

2. Modify the data box parameters as desired. Refer to Figure 4-12 and Table 4-12 for an explanation of each data box parameter.
3. Click on *OK* to close the dialog box and save modifications, or on *Cancel* to close the dialog box and restore the previous settings.

The data box re-displays with the newly-selected parameters.

To Modify the Data Box Location and Size

1. Click on the data box you wish to modify.

Note: If you have selected multiple data boxes, double click on the first data box you selected. You must continue to press and hold the Ctrl key while double clicking.

2. To re-size the box, drag a corner.
3. Drag the box to re-position it within the ViewSPACE.

To Delete a Data Box or Link Area

1. Click on the data box or link area you wish to delete.

Note: If you have enabled the Option's menu's Lock window command, you cannot delete data boxes or link areas.

2. Click on the *Edit* menu item, then click on *Delete*.

The WorkSPACE Manager deletes the selected data box or link area.

Note: If desired, you can place the data box or link area on the clipboard before deleting it, by clicking on the *Edit* menu item, then clicking on *Cut*. This gives you the capability to delete a data box or link area from one location and place it in another.



To Add a New Data Box

You can create new data boxes by copying an existing box and modifying its parameters. You may also create new data boxes by clicking on the Create New Data Box icon in the toolbar.

Note: If you have enabled the Options menu's Lock window command, you cannot create new data boxes.

1. Click on the data box you wish to copy.
2. Click on the *Edit* menu item and then click on *Copy*.
3. Click on the *Edit* menu item and then click on *Paste*.
4. Drag the data box to re-position it as desired.



To Add a New Link Area

1. Click on the *Configure* menu item and then click on *New link area*. You may also perform this command by clicking on the New Link Area icon in the toolbar.

Note: If you have enabled the Options menu's Lock window command, you cannot add new link areas.

The Modify Link Areas dialog box is displayed. Refer to Figure 4-15.

2. Select the WorkSPACE to which you wish to link, click on *Border* to enable or disable the box border display, and then click on *OK*.

The WorkSPACE Manager displays the link area box on your graphic background screen.

3. You can re-size the box by dragging the box corner or, can drag the box to re-position it within the ViewSPACE.

To Modify a Link Area

Follow the instructions below to modify a link area. You can modify the WorkSPACE to which a link will jump, or you can enable or disable box border display. If desired, you can modify the border display for multiple link areas by holding down the Ctrl key and clicking on the link areas. Note that if the Options menu's Lock

window command is enabled, you will not be permitted to modify or delete a link area using the Edit menu's Modify command.

1. Double click on the link area you wish to modify.

Note: If you have selected multiple link areas, you must click on the first link area that you selected. You must continue to press and hold the Ctrl key while double clicking.

The Modify Link Areas dialog box is displayed.

Note: You may also display this dialog box by clicking on the data box, clicking on the *Edit* menu item, and then clicking on *Modify Object*. However, if you have enabled the Options menu's Lock window command, you will not have access to the Modify Object command.

2. Click on the name of the WorkSPACE to which you wish this link to jump.
3. Click on *Border* to enable or disable display of the box border.
4. Click on *OK* to close the dialog box and save modifications, or on *Cancel* to close the dialog box and restore the previous settings.

To Save the Modified ViewSPACE

Save the modified ViewSPACE as follows:

1. Click on the *File* menu item and then click on one of the following commands depending on whether you wish to save the ViewSPACE under the same or under a new name:

- *To save the ViewSPACE and overwrite previous modifications:* Click on the *File* menu item and then click on the *Save ViewSPACE* command.



Note: You may also perform this command by clicking on the Save ViewSPACE/Trend icon in the toolbar.

This command will overwrite your existing WorkSPACE.

- *To save the ViewSPACE with a new name:* Click on the *File* menu item and then click on the *Save ViewSPACE as* command.

This command allows you to save a new version of an existing WorkSPACE.

The Save Current ViewSPACE As dialog box is displayed. Enter the ViewSPACE name and specify its ownership designation (Owned or Global). Refer to Figure 4-16 and Table 4-16 for instructions on using this dialog box.

2. If, in Step 1, you saved the ViewSPACE under a new name, you must also save the WorkSPACE.
 - *To save the WorkSPACE under the same name:* Click on the *File* menu item and then click on the *Save WorkSPACE* command.



Note: You may also perform this command by clicking on the Save WorkSPACE icon in the toolbar.

- *To save the WorkSPACE under a new name:* Click on the *File* menu item and then click on the *Save WorkSPACE as* command.

The Save Current WorkSPACE As dialog box is displayed. Refer to Figure 4-10 and Table 4-10 for instructions on using this dialog box.

The WorkSPACE Manager saves the WorkSPACE and all associated ViewSPACES and trends with their current window locations and sizes. When you display the WorkSPACE in run mode, all ViewSPACES and trends display with the window location and size that they had when the WorkSPACE was saved.

Creating Tabular Data Box Displays

Follow the instructions below to re-arrange any ViewSPACE's databoxes in a tabular display format.

Note: If the Options menu's Lock window command is currently enabled, you will not be permitted to perform this function.

1. Display the ViewSPACE in design mode. If necessary, refer to Modifying an Existing ViewSPACE.
2. Click on the *Options* menu item and then click on *Tabularize Data Boxes*.

To Exit the Tabular Display and Re-Size Data Boxes

The WorkSPACE Manager displays a dialog box asking if you wish to tabularize the data boxes.

3. Click on *Yes*.

The WorkSPACE Manager will remove the graphic background and re-size and re-arrange all data boxes to appear in a tabular format.

1. Click on the *Options* menu item and then click on *Cascade Data Boxes*.

The WorkSPACE Manager will re-size all data boxes and display them in a cascaded format.

2. You can now re-display the graphic background by clicking on the *Configure* menu item and then clicking on *Background*.
3. After displaying the desired graphic background, you can re-position the data boxes by dragging them to the desired location.

Deleting/ Removing ViewSPACES

To Delete a ViewSPACE

Follow the instructions below to delete a ViewSPACE from the ComfortVIEW database.

1. Display the ViewSPACE that you wish to delete. If necessary, refer to Displaying and Using a ViewSPACE.
2. If necessary, switch to design mode. To do this, click on the *Run* menu item and then click on *Enter design mode*.

The WorkSPACE Manager displays a dialog box asking if you wish to reload the current WorkSPACE for design.

3. Click on *Yes*.

The WorkSPACE Manager displays the selected WorkSPACE in design mode. The message *Design* will display in the lower right corner of the window.

4. Click on the *Edit* menu item and then click on *Delete ViewSPACE/Trend*.
5. In the confirmation dialog box displayed, click on *Yes* to delete the ViewSPACE or on *No* to prevent its deletion.

To Remove a ViewSPACE

The WorkSPACE Manager closes the ViewSPACE window and deletes the ViewSPACE from the ComfortVIEW database.

Follow the instructions below to permanently remove a ViewSPACE from a WorkSPACE. Note that this function does not delete the ViewSPACE from the ComfortVIEW database. It only removes the selected ViewSPACE from the selected WorkSPACE.

1. Display the ViewSPACE that you wish to delete. If necessary, refer to *Displaying and Using a ViewSPACE*.
2. If necessary, switch to design mode. To do this, click on the *Run* menu item and then click on *Enter design mode*.

The WorkSPACE Manager displays a dialog box asking if you wish to reload the current WorkSPACE for design.

3. Click on *Yes*.

The WorkSPACE Manager displays the selected WorkSPACE in design mode. The message *Design* will display in the lower right corner of the window.

4. Click on the *Edit* menu item and then click on *Remove ViewSPACE/Trend*.
5. In the confirmation dialog box displayed, click on *Yes* to remove the ViewSPACE from the WorkSPACE or on *No* to prevent its deletion.
6. Save the WorkSPACE by clicking on the *File* menu item and then clicking on the *Save WorkSPACE* command.



Note: You may also perform this command by clicking on the Save WorkSPACE icon in the toolbar.

Creating and Modifying Trends

The trending function is best suited for loop tuning and short-term performance tracking. If you wish to perform extended trending, use the CCN Data Collection Option Module in coordination with the ComfortVIEW history report with automatic data retrieval. If necessary, refer to the Report Panel chapter of this manual.

You can trend data from any controller table. Each trend will scan up to 1000 samples of data for each point. For example, setting your trend scan rate to 15 seconds will cause your trend to record data for 4 hours 10 minutes. When 1000 samples of each point are reached, the trend will stop.

Follow the steps below to launch the WorkSPACE Manager application and create a new or modify an existing trend.

Note: If the WorkSPACE Manager application is already running you can create a new or modify an existing trend at any time by:

- if necessary, entering design mode (by clicking on the *Run* menu item and then clicking on *Enter design mode*).
- opening an existing WorkSPACE (by clicking on the *File* menu item and then clicking on *Open WorkSPACE*) or opening a new WorkSPACE (by clicking on the *File* menu item and then clicking on *New WorkSPACE*).
- proceeding to Step 6 in the following list.

1. Double click on the WorkSPACE Manager icon to launch the WorkSPACE Manager application.

The Open WorkSPACE dialog box is displayed.

2. In the Open WorkSPACE dialog box, click on the *Cancel* button.

The dialog box closes and ComfortVIEW displays a blank WorkSPACE window in run mode.

3. Switch to design mode. To do this, click on the *Run* menu item and then click on *Stop run mode*.

The WorkSPACE Manager displays a dialog box asking if you wish to reload the current WorkSPACE for design.

4. Click on *Yes*.

The WorkSPACE Manager enters design mode and the message *Design* displays in the lower right corner of the window.

5. Open the WorkSPACE into which you wish to add this new trend by clicking on the *File* menu item and then clicking on *Open WorkSPACE*.



You may also perform this command by clicking on the Open WorkSPACE icon in the toolbar.

Note: If you wish to open a new WorkSPACE for the trend, click on the *File* menu item and then click on *New WorkSPACE*.

6. Do one of the following depending on whether you wish to create a new or modify an existing trend:

- *To create a new trend:*

Open the new trend window by clicking on the *File* menu item and then clicking on *New Trend*.

A blank trend window is displayed.

- *To modify an existing trend:*

Click on the *File* menu item and then click on *Open ViewSPACE/Trend*.

In the Open ViewSPACE/Trend window, click on the trend that you wish to modify and then click on *OK*.



Note: You may also perform this command by clicking on the Open ViewSPACE/Trend icon in the toolbar.

7. Add or modify trend points and configure or modify the trend operating characteristics. You can trend up to six points:

- a. Click on the *Edit* menu item and then click on *Modify ViewSPACE/Trend*.



Note: You may also perform this command by clicking on the Modify ViewSPACE/Trend icon in the toolbar or on the Modify button in the trend window.

The Modify Current Trend dialog box is displayed. Refer to Figure 4-18 and Table 4-18.

- b. Click in the Name edit box to specify a new or modify the existing name.
- c. Click on *Select point* to select a new or modify an existing trend point.

The Data Point Selection dialog box is displayed.

- d. From the Select Area, Select Element, Select Category, Select Table, and Select Point drop down lists, select the area, element and table, and name of the point that you wish to display on this new trend. Refer to Figure 4-13 and Table 4-13, which appear earlier in this chapter, for instructions on using the Data Point Selection dialog box.

- e. Click on *OK* to select the currently-displayed point and close the Data Point Selection dialog box, or click on *Cancel* to close the dialog box without saving the point selection.

The Modify Current Trend dialog box is re-displayed.

- f. Repeat Steps c to e to select each trend point.
8. In the Scan rate box, enter the rate at which you would like to sample data. You may also click on the up or down arrow to increment or decrement the displayed value.
9. Enable the Auto start option if you would like the trend to start every time the trend is displayed in run mode.
10. If you wish to save trend data to a file which you can then open and display at a later time, enter an Archive file name.
11. Click on *Quick select* to display the Data Point Selection dialog box with the area, element, and point drop down lists in their previously sorted state. Enabling this option expedites the point selection process.
12. Click on *OK* to close the Modify Trend dialog box and save your trend point selections, or on *Cancel* to exit the dialog box without saving point selections.

To Save the Trend

1. Click on the *File* menu item and then click on one of the following commands depending on whether you wish to save a new trend or save a modified trend under a new name:
 - *To save a new trend, or to save a modified trend and overwrite previous modifications:* Click on the *File* menu item and then click on the *Save Trend* command.



Note: You may also perform this command by clicking on the Save ViewSPACE/Trend icon in the toolbar.

This command will overwrite your existing trend.

- *To save a modified trend with a new name:* Click on the *File* menu item and then click on the *Save Trend as* command.

This command allows you to save a new version of an existing trend.

The Save Current Trend As dialog box is displayed. Enter the trend name and specify its ownership designation (Owned or Global). Refer to Figure 4-20 and Table 4-20 for instructions on using this dialog box.

2. If, in Step 1, you saved a new trend or a modified trend under a new name, you must also save the WorkSPACE.

- *To save the WorkSPACE and overwrite previous modifications:* Click on the *File* menu item and then click on the *Save WorkSPACE* command.



Note: You may also perform this command by clicking on the Save WorkSPACE icon in the toolbar.

This command will overwrite your existing WorkSPACE.

- *To save the WorkSPACE with a new name:* Click on the *File* menu item and then click on the *Save WorkSPACE as* command.

This command allows you to save a new version of an existing WorkSPACE.

The Save Current WorkSPACE As dialog box is displayed. Refer to Figure 4-10 and Table 4-10 for instructions on using this dialog box.

If desired, you can click on the Save Current WorkSPACE As dialog box's Clone button to quickly create another WorkSPACE containing identical points from another controller of the same type and version.

The WorkSPACE Manager saves the WorkSPACE and all associated ViewSPACES and trends with their current window locations and sizes. When you display the WorkSPACE in run mode, all ViewSPACES and trends display with the window location and size that they had when the WorkSPACE was saved.

To Display the New or Modified Trend in Run Mode

You can now display the trend in run mode and view the trend data dynamically plotting:

Click on the *Run* menu item and then click on *Start run mode*.

For further instructions, refer to the Displaying and Using Trends section of this chapter.

Figure 4-18
Modify Trend Dialog Box

Table 4-18
Modify Trend Dialog Box

Click on	To
Name	up to 48 characters are allowed.
Owned	specify that this this trend can be displayed by any operator, but only modified or deleted by the creator.
Global	specify that this trend can be used, modified, or deleted by any operator.
Select point	select the trend point. The Data Point Selection dialog box is displayed. Refer to Figure 4-13 and Table 4-13 for instructions on using this dialog box.

(continued)

Table 4-18
Modify Trend Dialog Box
(continued)

Click on	To
Color	select the color for the corresponding point's trend line.
Range	select the range of values within which to plot the corresponding point. These are the minimum and maximum values that will display on the trend's Y axis. The Trend Range dialog box is displayed. Refer to Figure 4-19 and Table 4-19 for instructions on using this dialog box.
Auto start	specify that this trend should automatically start whenever it is displayed in run mode.
Auto connect	when displaying this trend in run mode, automatically attempt to establish a connection to all remote CCNs containing points from this trend.
Scan rate	select the rate at which the trend samples data. The default is every 15 seconds. You can enter a value or click on the up or down arrow to increment or decrement the displayed value.
Archive filename	specify the name of a file to which data will be written when the trend is active. When the trend is activated in run mode, the data will be archived to this file as it is plotted. The data can then be re-displayed in a trend window from run mode using the <i>File</i> menu's <i>Open Archived Trend</i> command.
Quick select	display the Data Point Selection dialog box with the area, element, category, table, and point drop down lists in their previously sorted state. Enabling this option expedites the point selection process.

Table 4-18
 Modify Trend Dialog Box
 (continued)

Click on	To
Origin	display a message dialog box that displays the point's area, element, address, table, and point name.
OK	close the dialog box and save the trend point selections.
Cancel	exit the dialog box without saving the trend point selections.
Help	display help information.

Figure 4-19
 Trend Range Dialog Box

Trend Range

Mutual Of Farmington - Cold Call

HPM: High Press. Chiller Mon. - 0, 48

%LOAD (%)

Low limit:

0

High limit:

150

OK

Cancel

Help...

Table 4-19
Trend Range Dialog Box

Click on	To
the Low limit edit box	set the low trend limit. This is the plot's Y axis minimum value.
the High limit edit box	set the high trend limit. This is the plot's Y axis maximum value.
OK	close the dialog box and save your selections.
Cancel	exit the dialog box without saving selections.
Help	display help information.

Figure 4-20
Save Current Trend As
Dialog Box

Save Current Trend As

Name:

23XL Chiller Monitor Trend

☒ Owned

☐ Global

☐ Auto start

☐ Auto connect

OK

Cancel

Help...

Modifies the trend's name

Table 4-20
Save Current Trend As
Dialog Box

Click on	To
the Name edit box	enter the new trend name. Up to 48 characters are allowed.
Owned	allow this trend to be displayed by any user, but only modified or deleted by you (the creator) or,
Global	allow this trend to be displayed, modified, or deleted by any user.
Auto Start	start the trend when it is displayed in run mode.
Auto connect	when displaying this trend in run mode, automatically attempt to establish a connection to all remote CCNs containing points from this trend
OK	close the dialog box and save current settings.
Cancel	exit the dialog box without saving.
Help	display help information.

Deleting/ Removing Trends

To Delete a Trend

Follow the instructions below to delete a trend from the ComfortVIEW database.

1. Display the trend that you wish to delete. If necessary, refer to the Displaying and Using Trends section of this chapter.
2. If necessary, switch to design mode. To do this, click on the *Run* menu item and then click on *Enter design mode*.

The WorkSPACE Manager displays a dialog box asking if you wish to reload the current WorkSPACE for design.

3. Click on *Yes*.

The WorkSPACE Manager enters design mode and the message *Design* displays in the lower right corner of the window.

4. Click on the *Edit* menu item and then click on *Delete ViewSPACE/Trend*.

5. In the confirmation dialog box displayed, click on *Yes* to delete the trend or on *No* to prevent its deletion.

The WorkSPACE Manager closes the trend window and deletes the trend from the ComfortVIEW database.

To Remove a Trend

Follow the instructions below to permanently remove a trend from a WorkSPACE. Note that this function does not delete the trend from the ComfortVIEW database. It only removes the selected trend from the selected WorkSPACE.

1. Display the trend that you wish to remove. If necessary, refer to the *Displaying and Using Trends* section of this chapter.
2. If necessary, switch to design mode. To do this, click on the *Run* menu item and then click on *Enter design mode*.

The WorkSPACE Manager displays a dialog box asking if you wish to reload the current WorkSPACE for design.

3. Click on *Yes*.

The WorkSPACE Manager enters design mode and the message *Design* displays in the lower right corner of the window.

4. Click on the *Edit* menu item and then click on *Remove ViewSPACE/Trend*.
5. In the confirmation dialog box displayed, click on *Yes* to remove the trend from the WorkSPACE or on *No* to prevent its deletion.
6. Save the WorkSPACE by clicking on the *File* menu item and then clicking on the *Save WorkSPACE* command.



Note: You may also perform this command by clicking on the *Save WorkSPACE* icon in the toolbar.

Connecting to/ Disconnecting from a Remote CCN

Follow the steps below to establish a telephone connection to or terminate a telephone connection from a remote CCN.

1. Display the ViewSPACE or trend containing the remote CCN points you wish to view. If necessary, refer to the Displaying and Using a ViewSPACE or Displaying and Using Trends sections of this chapter.
2. If necessary, enter run mode.
3. Click on the *Run* menu item and then click on *Connect*, or click on the Connect toolbar icon shown at left.



The Connect to dialog box is displayed. This dialog box displays the names of all CCNs associated with points in the active ViewSPACE or trend. Refer to Table 4-21 and Figure 4-21.

Note: If you have only one Autodial Gateway on your CCN and are currently connected to another remote CCN, ComfortVIEW displays a message indicating that you are unable to connect. Click on *OK* to close the message dialog box.

4. In the Select Remote CCNs list, click on the CCN to which you wish to connect.
5. Click on *OK* to connect or click on *Cancel* to prevent the connect from taking place.

You are now connected to the remote CCN. The status area to the right of the toolbar displays the connect status. You can now view all ComfortVIEW data as if you were connected locally.

Figure 4-21
Connect To Dialog Box

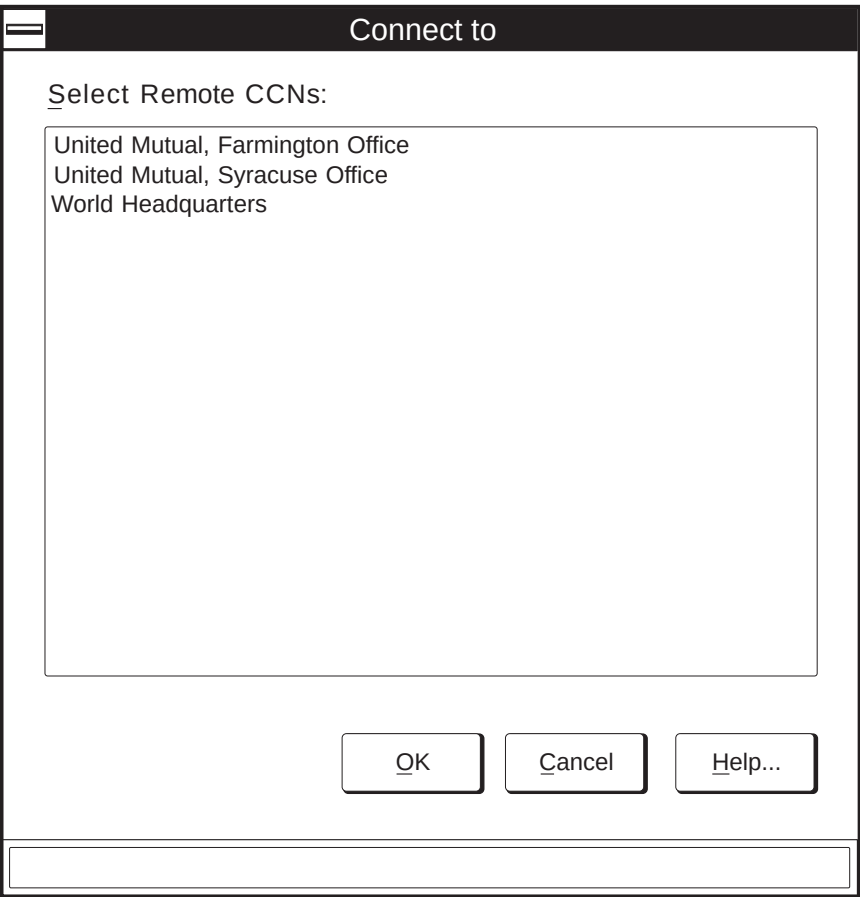


Table 4-21
Connect To Dialog Box

Click on	To
the Select Remote CCNs list	select the CCN to which you wish to connect.
OK	close the dialog box and connect.
Cancel	exit the dialog box without connecting.
Help	display help information.

To Disconnect from a Remote CCN

1. Click on the *Run* menu item and then click on *Disconnect*.

The Disconnect From dialog box is displayed. This dialog box displays the names of all CCNs to which you are currently connected. Refer to Figure 4-22 and Table 4-22.

2. In the Select Remote CCNs list, click on the CCN from which you wish to disconnect.
3. Click on *OK* to disconnect or click on *Cancel* to prevent the disconnect from taking place.

You are now disconnected from the remote CCN. The status area to the right of the toolbar displays the connect status.

Be aware that ComfortVIEW automatically disconnects you from a remote CCN if, after an operator-specified number of minutes, no communication occurs (quiet time). The Autodial Gateway will generate an alarm to notify you of an automatic disconnect. For additional information on the automatic disconnect feature, refer to the explanation of the Phone Number Configuration dialog box in the Adding and Modifying CCNs section of this manual's Carrier Network Manager chapter.

Figure 4-22
Disconnect From Dialog
Box

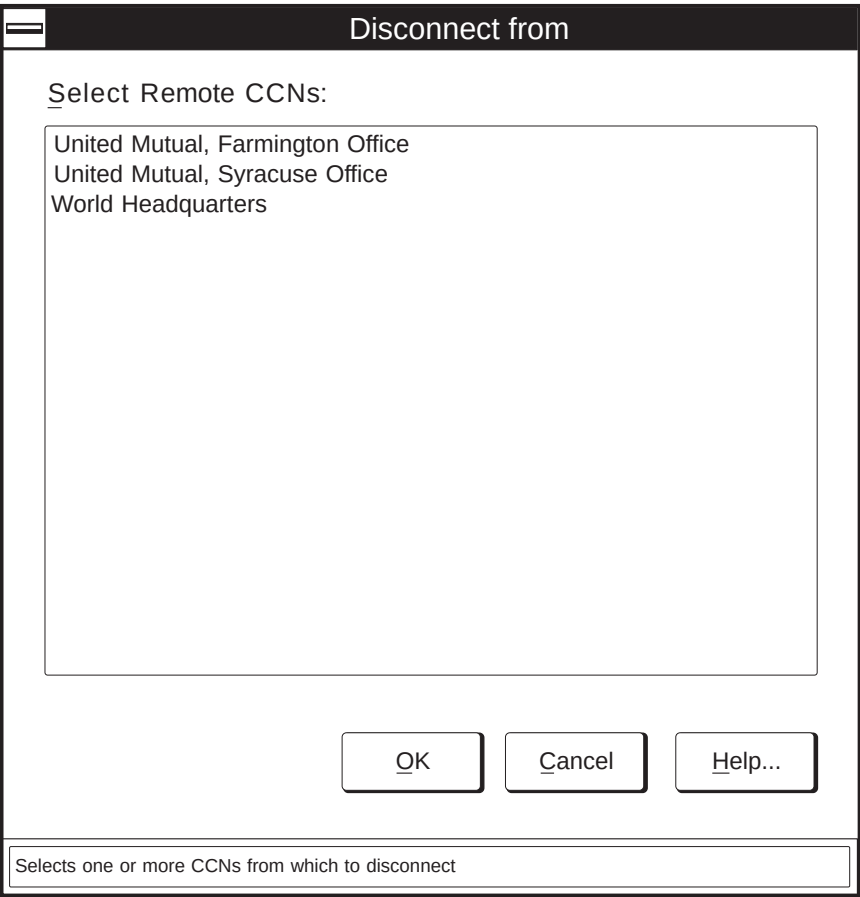


Table 4-22
Disconnect From Dialog
Box

Click on	To
the Select Remote CCNs list	select the CCN from which you wish to disconnect.
OK	close the dialog box and disconnect.
Cancel	exit the dialog box without disconnecting.
Help	display help information.

Printing ViewSPACES and Trends

The File menu's Print command provides you with the capability to print ViewSPACE and trend windows and definition reports.

Print operation differs depending on whether you select the print command from run or from design mode. Selecting the print command from run mode prints a screen captured image of the active ViewSPACE or trend window. Selecting the print command from design mode either prints a screen captured image of the active ViewSPACE or trend window, or prints a WorkSPACE, ViewSPACE, or trend definition report.

Run Mode — Printing a ViewSPACE or Trend Window

Follow the instructions below to print a screen captured image of a selected ViewSPACE or trend.

1. If necessary, enter run mode by clicking on the *Run* menu item and then clicking on *Start run mode*.
2. Display the ViewSPACE or trend that you wish to print. If necessary, refer to the Displaying and Using a ViewSPACE or Displaying and Using Trends section of this chapter.

Note: If you have several ViewSPACES or trends opened, click on the title bar of the window that you wish to print.

3. Click on the *File* menu item and then click on *Print*.



Note: You may also perform this command by clicking on the Print icon in the toolbar.

A confirmation dialog box is displayed asking if you wish to print the active ViewSPACE or trend.

4. Click on *Yes*.

The ViewSPACE or trend will print on the printer that you have designated using the File menu's Print setup command.

**Design Mode —
Printing a ViewSPACE
or Trend Window or
Printing a WorkSPACE,
ViewSPACE, or Trend
Definition Report**

Follow the instructions below to print a screen captured image of a selected ViewSPACE or trend window, or to print a definition report. You can also print definition reports for a WorkSPACE, ViewSPACE or trend.

1. If necessary, enter design mode by clicking on the *Run* menu item and then clicking on *Stop run mode*.
2. Display the WorkSPACE, ViewSPACE, or trend that you wish to print. If necessary, refer to Accessing the WorkSPACE Manager, Displaying and Using a ViewSPACE, and Displaying and Using Trends.

Note: If you have several ViewSPACES or trends opened, click on the title bar of the window that you wish to print.

3. Click on the *File* menu item and then click on *Print*.



Note: You may also perform this command by clicking on the Print icon in the toolbar.

The Print Options dialog box is displayed.

4. Click on *Selected ViewSPACE/Trend* if you wish to print the selected ViewSPACE or trend window.
5. To print a definition report, click on *Custom Print* and then click on one of the following to enable or disable the definition you wish to print: *WorkSPACE*, *ViewSPACE*, or *trend*.
6. Click on *OK* to print the selected ViewSPACE, trend, or report definition, or on *Cancel* to exit the dialog box without printing.

The image or report definition will print on the printer that you have designated using the File menu's Print setup command. Sample WorkSPACE, ViewSPACE, and trend definitions appear in Figures 4-24, 4-25, and 4-26.

Table 4-23
Print Options Dialog Box

Click on	to
Selected ViewSPACE/Trend	print the ViewSPACE or trend window.
Custom Print	print the WorkSPACE, ViewSPACE, or trend definition report.
WorkSPACE	enable/disable printing of the WorkSPACE report definition.
ViewSPACE	enable/disable printing of the active ViewSPACE report definition.
Trend	enable/disable printing of the trend definition.
OK	close the dialog box and print the report.
Cancel	exit the dialog box without saving.
Help	display help information.

Figure 4-24
Sample WorkSPACE
Definition

ComfortVIEW Definition for 23XL Chiller Monitor	_____	Title
01/05/99	_____	Current Date
23XL Chiller Monitor	_____	WorkSPACE Name
Owned	_____	Ownership
ViewSPACE:23XL Mechanical	_____	ViewSPACE Name
ViewSPACE:23XL Status Display	_____	ViewSPACE Name
23XL Chiller Monitor Trend	_____	Trend Name

Figure 4-25
Sample ViewSPACE
Definition

ComfortVIEW Definition for ViewSPACE:23XL Mechanical	_____	Title
01/05/1999	_____	Current Date
ViewSPACE:23XL Mechanical	_____	ViewSPACE Name
Global	_____	Ownership
C:\CWORKS\MEDIA\GRAPHICS\23XL.PCX	_____	Location and Name of Graphic Background
United Mutual Insurance - Physical Plant 23XL:Chiller - 0,128 OILPRESS: Oil Pressure	_____	Point in ViewSPACE
United Mutual Insurance - Physical Plant 23XL:Chiller - 0,128 MBTEMP: Motor Bearing Temp	_____	Point in ViewSPACE
United Mutual Insurance - Physical Plant 23XL:Chiller - 0,128 OILQUAL: Oil Quality	_____	Point in ViewSPACE

Figure 4-26
Sample Trend Definition

ComfortVIEW Definition for 23XL Chiller Monitor Trend	_____	Title
01/05/1995	_____	Current Date
23XL Chiller Monitor Trend	_____	Trend Name
Owned	_____	Ownership
Scan Rate: 60 seconds	_____	Scan Rate
United Mutual Insurance - Physical Plant	_____	Point in Trend
HPM: High Press. Chiller Mon. - 0,40		
%LOAD: % Cooler Load		
United Mutual Insurance - Physical Plant	_____	Point in Trend
HPM: High Press. Chiller Mon. - 0,40		
ECW: Entering Water Temp (dF)		
United Mutual Insurance - Physical Plant	_____	Point in Trend
HPM: High Press. Chiller Mon. - 0,40		
LCW: Leaving Water Temp (dF)		

Animated Data Box Frame Creation Guidelines

You can create your own animated discrete point graphics using nothing more than the third party drawing package that you used to create your WorkSPACE Manager graphic backgrounds.

To create animated graphics, generate a series of graphic files using the animated graphic specifications described below. These graphics will be used as frames for the animation. To achieve maximum visual effect, each frame in the animation series should be a graphic depicting either an incremental motion change of an image or an image color or texture change. The frames that you create are overlayed on the ViewSPACE's graphic background when you define the animated data box style. Refer to the Creating a New ViewSPACE section of this chapter.

Animated Graphic Specifications

Create and save each graphic in the animation series in a uniquely named file using the following specifications:

Graphic Dimensions:	Any size
Graphic File Format:	Windows .BMP (bitmap)
File Naming Convention:	XXXX_Y_Z.BMP

where: XXXX is a unique 4 character frame family identifier for the animation sequence. You must assign each graphic that is part of a particular animation sequence the same 4 character identifier. You specify this identifier when creating animated ViewSPACE data boxes.

Y is the discrete point state that the graphic represents. Enter 0 for the off state, or 1 for the on state.

Z is a number from 0 to 9, which represents the position that the graphic holds in the animation sequence. If there are nine frames of animation the first graphic (Frame 1) would be named with Z equal to 0 and the last graphic would be named with Z equal to 9. The animation sequence will repeat continuously using the Z values assigned.

Directory Path:	Store all animation graphic files on your ComfortVIEW server workstation in the directory path MEDIA\FRAMES. This directory will be located in the \CVIEW, \CWORKS, or other directory in which you have installed ComfortVIEW.
-----------------	---

Example:

To depict a fan as On or Off, you could create and save the family of graphic files described in the example below. Please note that the files used in this example are included and installed along with your ComfortVIEW software.

FANS_0_0.BMP - Fan Off condition, animation Frame 1. Fan blades in a fixed position.

FANS_1_0.BMP - Fan On condition, animation Frame 1. Fan blades in Position 1.

FANS_1_1.BMP - Fan On condition, animation Frame 2. Fan blades rotated to Position 2.

FANS_1_2.BMP - Fan On condition, animation Frame 3. Fan blades rotated to Position 3.

FANS_1_3.BMP - Fan On condition, animation Frame 4. Fan blades rotated to Position 4.

FANS_1_4.BMP - Fan On condition, animation Frame 5. Fan blades rotated to Position 5.

FANS_1_5.BMP - Fan On condition, animation Frame 6. Fan blades rotated to Position 6.

**WorkSPACE
Manager Menu
Command
Summary**

**File Menu — Design
Mode**

Table 4-27
File Menu - Design Mode

This section describes each of the commands that appear in the WorkSPACE Manager window menus. Refer to Figure 4-2 in the Accessing the WorkSPACE Manager section of this chapter to view a copy of the WorkSPACE Manager window. Note that the menu changes depending on whether you are in run or design mode.

The table below describes each of the commands that appear in the WorkSPACE Manager's File menu in design mode.

Click on	To
New WorkSPACE	create a new WorkSPACE. If a WorkSPACE, ViewSPACE, or trend is currently displayed, the WorkSPACE Manager will prompt you to save any unsaved changes, and will display a blank undefined WorkSPACE window in run mode.
Open WorkSPACE	open an existing WorkSPACE. The Open WorkSPACE dialog box is displayed. Select a WorkSPACE and then click on <i>OK</i> .
Save WorkSPACE	save the displayed WorkSPACE.
Save WorkSPACE As	save the displayed WorkSPACE under a new name. The Save Current WorkSPACE As dialog box is displayed. Enter a WorkSPACE name, specify the WorkSPACE's ownership designation (owned or global), and click on <i>OK</i> . If desired, you can use this dialog box's <i>Clone</i> button to quickly create another WorkSPACE containing identical points from this one.

(continued)

Table 4-27
File Menu - Design Mode
(continued)

Click on	To
New ViewSPACE	create a new ViewSPACE. The WorkSPACE Manager displays a blank ViewSPACE window. You can now select the graphic background, create your data boxes and link areas, and save the new ViewSPACE. For step by step instructions on creating new ViewSPACES, refer to the Creating a New ViewSPACE section of this chapter.
New Trend	create a new trend. The WorkSPACE Manager displays a blank trend window. You can now select the trend points, configure the trend operating characteristics, and save the new trend. For step by step instructions on creating new trends, refer to the Creating and Modifying Trends section of this chapter.
Open ViewSPACE/Trend	open and display an existing ViewSPACE or trend. The Open ViewSPACE/Trend dialog box is displayed. Select the ViewSPACE or trend that you wish to display and then click on OK. The selected ViewSPACE or trend displays in design mode. You can now modify the displayed window as desired.

(continued)

Table 4-27
File Menu - Design Mode
(continued)

Click on	To
Remove ViewSPACE/Trend	remove the active ViewSPACE or trend from the displayed WorkSPACE. In the confirmation dialog box displayed, click on <i>Yes</i> to remove the ViewSPACE or trend from the WorkSPACE or on <i>No</i> to prevent the deletion. Note that this function does not delete the ViewSPACE or trend from the ComfortVIEW database. It only removes the selected item from the displayed WorkSPACE.
Save ViewSPACE/Trend	save the active ViewSPACE or trend in the ComfortVIEW database.
Save ViewSPACE/Trend As	save the active ViewSPACE or trend under a new name. The Save Current ViewSPACE or Trend As dialog box is displayed. Enter a ViewSPACE or trend name, specify the ownership designation (owned or global), enable or disable the auto start and connect options, and click on <i>OK</i> .
Print	print selected ViewSPACE and trend screen captures, or to print WorkSPACE and trend definition reports. The Print Options dialog box is displayed. Click on <i>Selected ViewSPACE/Trend</i> if you wish to print the selected ViewSPACE or trend window. Click on <i>Custom Print</i> and then click on one of the following to enable or disable the definition you wish to print: <i>WorkSPACE</i> , <i>ViewSPACE</i> , or <i>trend</i> .

(continued)

Table 4-27
File Menu - Design Mode
(continued)

Click on	To
Print setup	configure the output and select printers. The Print Setup dialog box is displayed. Select the printer to which you wish to print ViewSPACE and trend screen captures and definition reports, select additional print characteristics such as page size, orientation, and two-sided printing. Clicking on the Print Setup dialog box's <i>More</i> button displays the Advanced document Properties dialog box, where you can specify additional print characteristics. Click on the <i>Help</i> button to display Windows' help information. Clicking on the Print Setup dialog box's <i>Network</i> button displays the Connect to Printer dialog box, which gives you the capability to print to another printer on the local area network. Click on the <i>Help</i> button to display Windows' help information.
Exit	exit the WorkSPACE Manager application.

File Menu — Run Mode

The table below describes each of the commands that appear in the WorkSPACE Manager's File menu in run mode.

Table 4-28
File Menu - Run Mode

Click on	To
Open WorkSPACE	open and display an existing WorkSPACE. The Open WorkSPACE Trend dialog box is displayed. Select the WorkSPACE that you wish to display and then click on <i>OK</i> . The selected WorkSPACE opens and its ViewSPACES and trends open and display sequentially in run mode.

(continued)

Table 4-28
File Menu - Run Mode
(continued)

Click on	To
Open Bookmark	open and display a bookmarked WorkSPACE. If there is only one bookmarked WorkSPACE in your ComfortVIEW database, the WorkSPACE Manager displays the bookmarked WorkSPACE in run mode. If there is currently more than one bookmarked WorkSPACE in your database, the WorkSPACE Manager displays the Open WorkSPACE dialog box. This dialog box lists the names of all WorkSPACES that have been bookmarked. In the Select WorkSPACE list, click on the WorkSPACE that you wish to open and then click on <i>OK</i>. The WorkSPACE Manager closes the currently-displayed WorkSPACE and opens the selected WorkSPACE. The WorkSPACE's ViewSPACES and trends will display in run mode. You can view and, if desired, modify displayed point values.
Open ViewSPACE/trend	open and display an existing ViewSPACE or trend. The Open ViewSPACE/Trend dialog box is displayed. Select the ViewSPACE or trend that you wish to display and then click on <i>OK</i>. The selected ViewSPACE or trend displays in run mode. You can view and, if desired, modify displayed point values.

(continued)

Table 4-28
File Menu - Run Mode
(continued)

Click on	To
Open Archived trend	open and display a previously-archived trend. The data will be displayed in an inactive trend window. Scrolling, re-sizing, and printing are supported in this window, but you cannot re-activate the trend. You also cannot load the archived version of a currently-active trend.
Remove ViewSPACE/trend	remove the active ViewSPACE or trend from the displayed WorkSPACE. In the confirmation dialog box displayed, click on <i>Yes</i> to remove the ViewSPACE from the WorkSPACE or on <i>No</i> to prevent its deletion. Note that this function does not delete the ViewSPACE from the ComfortVIEW database. It only removes the selected ViewSPACE from the selected WorkSPACE.
Save Trend data to file	If desired, you can save trend data to a file in your ComfortVIEW database and then read the file into a third party spreadsheet application. ComfortVIEW takes a snapshot of the current data and creates a tab-delimited file containing your trend data. The file will contain all data that has been gathered since the trend was originally started for your current WorkSPACE session.
Print	prints a screen captured image of the active ViewSPACE or trend window.

(continued)

Table 4-28
File Menu - Run Mode
(continued)

Click on	To
Print setup	configure the output and select printers. The Print Setup dialog box is displayed. Select the printer to which you wish to print ViewSPACE and trend screen captures, select additional print characteristics such as page size, orientation, and 2-sided printing. Clicking on the Print Setup dialog box's <i>More</i> button displays the Advanced document Properties dialog box, where you can specify additional print characteristics. Click on the <i>Help</i> button to display Windows' help information. Clicking on the Print Setup dialog box's <i>Network</i> button displays the Connect to Printer dialog box, which gives you the capability to print to another printer on the local area network. Click on the <i>Help</i> button to display Windows' help information.
Exit	exit the WorkSPACE Manager application.

Edit Menu — Design Mode

The table below describes each of the commands that appear in the WorkSPACE Manager's Edit menu in design mode.

Table 4-29
Edit Menu - Design Mode

Click on	To
Cut	delete the selected data box or link area after placing it on the clipboard. Click on the data box or link area you wish to delete. Then, click on the <i>Edit</i> menu item, and click on <i>Delete</i> . The WorkSPACE Manager places the data box or link area on the clipboard and deletes it from the ViewSPACE.

(continued)

Table 4-29
Edit Menu - Design Mode
(continued)

Click on	To
Copy	copy the selected data box or link area to the clipboard.
Paste	paste a data box or link area that has been previously cut or copied to the clipboard on a ViewSPACE or trend window.
Delete	delete the selected data box or link area.
Delete WorkSPACE	close any currently-displayed ViewSPACE and trend windows, delete the WorkSPACE from the ComfortVIEW database, and display a new undefined WorkSPACE window. Note that deleting a WorkSPACE does not delete its associated ViewSPACES and trends. You can display these ViewSPACES and trends by opening them from another WorkSPACE window.
Delete ViewSPACE/Trend	close the active ViewSPACE or trend window and delete the ViewSPACE or trend from the ComfortVIEW database.
Modify WorkSPACE	modify a selected WorkSPACE name and its owned/global designation. The Modify Current WorkSPACE dialog box is displayed.
Modify ViewSPACE/Trend	modify the active ViewSPACE or trend name and ownership designation.
Modify Object	modify the selected data box or link area parameters. The Modify Data Box Dialog Box is displayed. Refer to Figure 4-12 and Table 4-12, which appear in the Creating a New ViewSPACE section of this chapter, for instructions on using this dialog box.

Edit Menu — Run Mode

The table below describes each of the commands that appear in the WorkSPACE Manager's Edit menu in run mode.

Table 4-30
Edit Menu - Run Mode

Click on	To
Copy	copy data from a selected ViewSPACE data box to the Windows clipboard. This command could be used to copy values from one data box to another. This command could also be used if you wish, for example, to link ViewSPACE data to a DDE-supported third party spreadsheet application. If the application to which you wish to link supports the Paste Link command, click on the data box containing the data you wish to link, click on the <i>Edit</i> menu item and then click on <i>Copy</i> . ComfortVIEW automatically copies the data (and its DDE link information) to the Windows Clipboard. You can then open the DDE-supported application, and use the application's Paste Link command to insert and link the selected ComfortVIEW data. When the ViewSPACE is active and point data changes, the data will automatically update in the other application. For further information on sharing ComfortVIEW dynamic data, and a list of the data elements that can be sent, refer to Sharing ComfortVIEW Dynamic Data with Other Applications, which appears in the Carrier Network Manager chapter of this manual.

(continued)

Table 4-30
Edit Menu - Run Mode
(continued)

Click on	To
Paste	paste configuration point data from the Windows clipboard to a data box. Copy the point value data from a data box to the Windows Clipboard using the Copy command. Then click on a destination data box (which can be in the same or another ViewSPACE or trend), click on <i>Edit</i> and then click on <i>Paste</i> . The data that you are pasting overwrites the data that is currently in the destination data box. The data you are pasting must conform to the allowable entries for the destination data box. If you attempt to paste incompatible data, ComfortVIEW displays an error message indicating that the data target is not available or incompatible.
Modify	change a selected data box's point value, description, or operator note. For configuration points, you can also upload configuration data from the controller, download data to the controller, and save configuration data changes in the ComfortVIEW database. For point status or maintenance table points, you can also force and auto point values and save changes. You can also perform this command by double clicking on a data box.
Force	override the selected dynamic point value. Forcing overrides a controller's automatic control of a selected point.
Auto	clear a force and return a point to a controller's automatic control.

(continued)

Table 4-30
 Edit Menu - Run Mode
 (continued)

Click on	To
Submaster force	transmit a submaster reference force to the selected point in the selected UT203 FID controller. When you force the submaster reference, ComfortVIEW will disregard the submaster reference value that was calculated in the master control loop. For more information on the UT203 FID's submaster reference value, refer to the UT203 FID Overview and Configuration Manual. Note: You cannot use Submaster Force if the selected point already has a Supervisor force.

**Configure Menu —
 Design Mode**

Table 4-31
 Configure Menu - Design
 Mode

The table below describes each of the commands that appear in the WorkSPACE Manager's Configure Menu in design mode.	
Click on	To
Background	select the active ViewSPACE’s graphic background. The File Open dialog box is displayed. Select the graphic background file that you wish to display or type the file name in the File Name box. You can select a different drive by making your selection from the Drives drop down list. You can also select a file that is resident on another network computer by clicking on the <i>Network</i> button. The selected graphic background loads and displays in the ViewSPACE window. The message <i>Loading background image</i> displays in the lower left corner of the window during the load process.
New Data Box	create a data box on the active

(continued)

Table 4-31
Configure Menu - Design
Mode
(continued)

Click on	To
	ViewSPACE. The Modify Data Box dialog box is displayed. Select the data box style (<i>Normal</i> or <i>Animated</i> - discrete points only), background, font, and the data elements that you wish to display (point name, description, etc.). You can also select a color for the data box background and for each data element. The sample data box that is displayed in the lower half of the dialog box displays your current dialog box style and element selections. If you select an animated (moving picture) data box style, you must assign graphics that have been pre-drawn using a third party graphics application and named according to the frame creation guidelines listed in this chapter's Animated Data Box Frame Creation Guidelines section.
New Link Area	place a new link area on the active ViewSPACE. The Modify Link Areas dialog box is displayed. Select the WorkSPACE to which you wish to link, click on <i>Border</i> to enable or disable the box border display, and then click on <i>OK</i>. The WorkSPACE Manager displays the link area box on your graphic background screen. You can re-size the box by dragging the box corner or, can drag the box to re-position it within the ViewSPACE.
Set Default WorkSPACE	specify the currently-displayed WorkSPACE to be the default WorkSPACE. On launching the WorkSPACE Manager application, this selected default WorkSPACE window will open and its associated ViewSPACES and trends will display in run mode.

Configure Menu — Run Mode

The table below describes each of the commands that appear in the WorkSPACE Manager's Configure Menu in run mode.

Table 4-32
Configure Menu - Run Mode

Click on	To
Save ViewSPACE data	save all ViewSPACE configuration changes in the ComfortVIEW database.
Upload ViewSPACE data	to display controller configuration table values on-screen for viewing or editing. If desired, you can save the displayed table data in the ComfortVIEW database using the Save ViewSPACE data command.
Download ViewSPACE data	send ViewSPACE configuration data from the ComfortVIEW database to the controller(s).
Set Bookmark	place or remove a bookmark on the active WorkSPACE. A checkmark (✓) appears before the Set bookmark command to indicate that it is enabled. A bookmark icon displays in the lower right corner of bookmarked WorkSPACES.
Configuration table	display the selected point's associated configuration table.
Maintenance table	display the selected point's associated maintenance table.
Time schedule	display the selected point's associated time schedule configuration table.
Setpoint table	display the selected point's associated setpoint configuration table.

(continued)

Table 4-32
Configure Menu - Run
Mode (continued)

Click on	To
Reference tables	display the names of all Comfort Controller objects that are using the point in their configuration.

Run Menu — Run Mode

The table below describes each of the commands that appear in the WorkSPACE Manager's Run menu in run mode.

Table 4-33
Run Menu - Run Mode

Click on	To
Enter design mode	terminate run mode for the active WorkSPACE. The WorkSPACE Manager displays a confirmation dialog box asking if you wish to re-load the current WorkSPACE in design mode.
Connect	establish a remote CCN connection. You must connect to a remote CCN to view dynamic status display values. The Connect to dialog box is displayed. Select the CCN to which you wish to connect and click on <i>OK</i> .
Disconnect	disconnect from a remote CCN. The Disconnect from dialog box is displayed. Select the CCN from which you wish to disconnect and click on <i>OK</i> .

(continued)

Table 4-33
Run Menu - Run Mode
(continued)

Click on	To
Start trend	start the plotting process for the active trend. The message <i>Plotting</i> displays in the trend window's status bar to show that the trend has been started. Selecting this command after selecting the Stop trend command resumes the stopped trend.
Stop trend	stop the trend plotting process. The message <i>Paused</i> displays in the trend window's status bar to show that the trend has been stopped.
Re-start Trend	initialize the trend and re-start the trending process for the active trend. The message <i>Plotting</i> displays in the window's status bar to show that the trend has been started.

Run Menu — Design Mode

The table below describes each of the commands that appear in the WorkSPACE Manager's Run menu in design mode.

Table 4-34
Run Menu - Design Mode

Click on	To
Enter run mode	activate the run mode for the displayed WorkSPACE. The WorkSPACE Manager displays a confirmation dialog box asking if you wish to re-load the current WorkSPACE in run mode.

Options Menu — Run Mode

The table below describes each of the commands that appear in the WorkSPACE Manager's Options menu in run mode.

Table 4-35
Options Menu - Run Mode

Click on	To
Toolbar	hide or display the WorkSPACE Manager toolbar.
Status bar	hide or display the status bar that appears in the second line of WorkSPACE Manager windows.
Legend	enable/disable display of a legend window for the active trend. This window displays the following information for each trend point: area name, controller name and description, and point name and description for each trend point.
Show link areas	display all of a ViewSPACE's link areas, including the name of the WorkSPACE to which each area is linked.
Hide	hide rows and columns in status display, maintenance, or configuration table worksheets. Click on the header of the column you wish to hide or click on the box to the left of the row you wish to hide. Click on the <i>Options</i> menu item and then click on <i>Hide</i>. The highlighted column or row will be removed from the worksheet. To Make Row Hides Permanent: Click on the <i>Configure</i> menu item and then click on <i>Save</i>. The row will not appear the next time you view this table. To Make Column Hides Permanent: Click on the <i>Options</i> menu item and then click on <i>Save settings on exit</i>. A

(continued)

Table 4-35
Options Menu - Run
Mode (continued)

Command	Use this command to
Hide (<i>continued</i>)	checkmark (✓) appears before the command to indicate that it is enabled. The column will not appear the next time you view this table. Note: Row hides apply to specific tables. Column hides apply to all tables in all controllers. Also, row hides are hidden for all operators. Column hides are hidden for individual operators.
Show	show hidden rows and columns in status display, maintenance, or configuration table worksheets. Click on the <i>Options</i> menu item and then click on <i>Show</i>. The Show Rows/Columns dialog box displays. The dialog box shows any hidden rows or columns. Select the rows or columns to add and click on <i>OK</i>. Any hidden columns will be added to the worksheet.
Point IDs	display each point's item reference number along with the point name. This number is used when linking table data to other PC applications, such as third party spreadsheet programs.
Best fit	set each column to a width that best fits the data.
Save settings on exit	save any changes you make by using commands on the Options menu. For example, if you hide the hide the status bar, it will be hidden the next time you start the WorkSPACE Manager. This command also saves the size and position of all WorkSPACE Manager windows.

Options Menu — Design Mode

The table below describes each of the commands that appear in the WorkSPACE Manager's Options menu in design mode.

Table 4-36
Options Menu - Design
Mode

Click on	To
Toolbar	hide or display the WorkSPACE Manager toolbar.
Status bar	hide or display the status bar that appears in the second line of WorkSPACE Manager windows.
Lock window	lock a ViewSPACE's window size and position, as well as lock the size and position of all data boxes and link areas. You will also not be permitted to add or delete data boxes or link areas, or to modify the graphic background selection. You will not be permitted to make any modifications using the Edit menu's Modify command.
Size image to window	dynamically re-size a ViewSPACE's background graphic based on the ViewSPACE window size. Note: To improve performance, if your ViewSPACE background image is larger than your screen dimensions, you should resize the background as required using a third party graphics utility rather than using this command.
Tabularize data boxes	remove a ViewSPACE's graphic background and re-size and re-arrange all data boxes to appear in a tabular format.
Cascade data boxes	re-arrange and display a ViewSPACE's data boxes in a cascaded format.

(continued)

Table 4-36
Options Menu - Design
Mode

Click on	To
Save settings on exit	save any changes you make by using commands on the Options menu. For example, if you hide the status bar, it will be hidden the next time you start the WorkSPACE Manager. This command also saves the size and position of all WorkSPACE Manager windows.

**Window Menu — Run
Mode**

The table below describes each of the commands that appear in the WorkSPACE Manager's Windows menu in run mode.

Table 4-37
Window Menu - Run
Mode

Click on	To
Cascade	arrange open WorkSPACE Manager windows to overlap so that each title bar is visible.
Tile	arrange open WorkSPACE Manager windows in smaller sizes so that they fit next to each other and are all visible on your desktop.
Arrange icons	evenly arrange all minimized WorkSPACE Manager window icons.
Refresh	update the information displayed in open WorkSPACE Manager windows. ComfortVIEW updates the currently selected window with the most recent data that has been written to the database.
Home WorkSPACE	return to the first WorkSPACE that you accessed (in run mode) after you logged in to ComfortVIEW.
Previous WorkSPACE	jump back to the WorkSPACE whose link caused the display of the current WorkSPACE.

(continued)

Table 4-37
Window Menu - Run
Mode
(continued)

Click on	To
Graphical	when viewing an occupancy or setpoint configuration table, display data in either a tabular (worksheet) or graphic format. To use the Setpoint Table graphical format: Enter the desired setpoint in the edit box below the sidebar, or simply drag the sidebar to display the desired setpoint. You can click on the sidebar's < or > buttons to increment or decrement the display setpoint in increments of .1 or 1.0. Each screen displays up to 9 decisions-worth of table data. Use the << or >> buttons that are located at the bottom of the screen to display the first or last 9 decisions. Use << or >> to move through the up to 9 decision display, decision by decision. To use the Occupancy Table graphical format: Click to enable/disable days of the week, and enter the Occupied From and To times in the corresponding edit boxes. The bar graphic will update to display the occupied times.

**Window Menu —
Design Mode**

The table below describes each of the commands that appear in the WorkSPACE Manager's Window menu in design mode.

Table 4-38
Window Menu - Design
Mode

Click on	To
Cascade	arrange open WorkSPACE Manager windows to overlap so that each title bar is visible.
Tile	arrange open WorkSPACE Manager windows in smaller sizes so that they fit next to each other and are all visible on your desktop.
Arrange icons	evenly arrange all minimized WorkSPACE Manager window icons.

**Help Menu — Run
and Design Mode**

The table below describes each of the commands that appear in the WorkSPACE Manager's Help menu in both run and design modes.

Table 4-39
Help Menu— Run
and Design Mode

Click on	To
Contents	display the help table of contents.
Search	search for a help topic by typing a keyword.
About	display program information, version information on all ComfortVIEW components, and copyright.

Alarm Manager

Alarm Manager

This chapter provides instructions on ComfortVIEW alarm viewing and alarm indication features.

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Terminology

Alarm — The occurrence of an abnormal condition such as a value outside specified limits or a communication failure detected by the NDS Module. Alarms can originate from a CCN system element such as FID, a CCN option, a PIC, an NDS Module, or an Autodial Gateway.

Alert — The occurrence of an abnormal condition such as a value outside specified limits or a communication failure detected by the NDS Module. Alarms can originate from a CCN system element such as a FID, a CCN Option, a PIC, an NDS Module, or an Autodial Gateway.

Autodial Gateway — A Communications Input/Output (CIO) Module containing software that enables it to communicate by means of a modem over telephone lines with other Autodial Gateway-equipped CCNs.

CCN Option — A Communications Input/Output (CIO) Module that contains a special purpose algorithm and accompanying communication software designed to provide a function for the entire CCN or a designated portion of it.

Comfort Controller — A micro-processor-based control module that provides general purpose HVAC control and monitoring capability in a standalone or network environment using closed-loop, direct digital control. The Comfort Controller can monitor or control up to 64 field points.

NDS Module — The NDS (Network Directory Services) Module is a Communications Input/Output (CIO) Module that contains software to enable it to maintain a directory of system elements on the CCN Communication Bus and to perform periodic diagnostic checks on those system elements.

PIC — A PIC (Product Integrated Control) is an electronic control that is factory installed on specific Carrier HVAC equipment. PIC controls provide standalone operation and can also be connected as a system element on the CCN Communication Bus.

WorkSPACE — A group of windows containing graphics (known as ViewSPACES) and trend plots of CCN data. You use the ComfortVIEW WorkSPACE Manager application to create and view WorkSPACES. For example, you could set up a WorkSPACE to include a temperature trend and a graphic of the associated chilled water system. You could then display all of these windows simultaneously.

Introduction

An alarm or alert is the occurrence of an abnormal condition such as a value outside specified limits or a communication failure detected by the Network Directory Service (NDS) Module. An alarm can originate from a CCN system element such as a UT203 FID, a Comfort Controller, a CCN option, a PIC, an NDS Module, or an Autodial Gateway.

When a condition arises on the Carrier Comfort Network that causes an alarm or alert, the system element that is in alarm sends a notification message along the communication bus to ComfortVIEW. ComfortVIEW receives and stores the message in its alarm list, and depending on how you set up the alarm indication function, produces an audible “beep”, plays a .wav sound file, and displays a flashing alarm symbol on the screen. When the value returns to within specified limits, the CCN system element generates a return-to-normal message and sends this message to ComfortVIEW. ComfortVIEW receives and stores return-to-normal messages in the same fashion as it does for alarms and alerts.

Alarms and alerts can be received from remote CCNs using Carrier's CCN Autodial Gateway, TeLINK, or NAM products.

Alarms and alerts are indicated in the Carrier Network Manager's CCN displays as well.

ComfortVIEW enables you to:

- view, acknowledge, print, and delete the alarm messages.
- sort the presentation of the alarm list (by alarm level, time/date, or alphabetically by area, zone, element, or point name).
- create custom messages and operator notes for attachment to alarms or groups of alarms.
- suppress the audible and visual indication of “nuisance” alarms.
- assign WorkSPACES to alarms or groups of alarms.
- filter the indication or display of alarms for a logged on user.

Note: Alarm filtering is done using ComfortVIEW Setup function. Refer to the Setup chapter of this manual for instructions.

Alarm Indication Methods

You can configure the manner in which ComfortVIEW notifies you of the existence of new and unacknowledged CCN alarms and alerts. ComfortVIEW can notify you in one of three manners:

- An audible beeping sound occurs or a .wav sound file plays with no visual indication.

You must view the Alarm List to see the alarm or alert. The alarm/alert is displayed in the list along with all other CCN alarms and alerts.

- A flashing alarm icon displays along with the word *alarm*, *alert*, or *return to normal* and the level (0 to 6).

The level indicates the highest level unacknowledged alarm/alert in the system. The icon displays on top of the current window and continues to flash until you double click on it and acknowledge receipt of the alarm/alert. This option also produces an audible beep or plays a .wav sound file on initial alarm reception. Additional information on this option is in the Flashing Icon Alarm Viewing section of this chapter.

- A pop-up window displays on top of the current window.

If you close the window without acknowledging the alarm/alert, it immediately re-displays until you acknowledge receipt of the alarm/alert. This option also produces an audible beep or plays a .wav sound file on initial alarm reception. Additional information on this option is in the Pop-up Window Alarm Viewing section of this chapter.

Note: If you are logged out of ComfortVIEW and an alarm/alert occurs, you are notified in the manner that you have selected using the Setup application's Log out state command. Refer to the Specifying Operator Alarm Indication Preferences section of this manual's Setup chapter for additional information on this command.

Critical Alarm Indication Option

ComfortVIEW also includes a critical alarm indication feature that you can apply to any of these three alarm indication options. If you select this option, ComfortVIEW displays a full-screen pop-up window on top of the current window. ComfortVIEW displays this full-screen window when it receives any alarm with an alarm level that is less than or equal to the critical alarm threshold value you enter in the Setup application's Alarm Indications Preferences dialog box. Alarm levels range from 0 to 7, with Level 0 alarms being more severe than Level 7 alarms. Functionally, this pop-up window is the same as the window described in the Pop-up Window Alarm Viewing section of this chapter. This window, however, occupies your entire screen and its background displays in your selected Windows highlight color.

Double clicking on the title bar reduces the window and subsequent non-critical alarm indication windows to the normal pop-up window size.

Note: You should do this to prevent future non-critical alarm pop-up windows from occupying the full screen.

Specifying Your Alarm Indication Preference

You select a form of indication using ComfortVIEW's Setup application. For instructions, refer to Specifying Alarm Indication Preferences in the Setup chapter of this manual.

Viewing New and Unacknowledged Alarms

Flashing Icon Alarm Viewing

You view new and unacknowledged alarms in one of the following ways:

- By clicking on the flashing alarm icon
- By viewing a pop-up alarm window

Follow the steps below to view alarms indicated by the flashing icon:

1. Double click on the flashing alarm indication icon.

ComfortVIEW displays a pop-up alarm window similar to the one shown in Figure 5-1 below. The window displays on top of the current window and shows the highest priority unacknowledged alarm/alert.

The alarm window displays individual alarm messages in a format nearly identical to that seen when viewing the Alarm List. Refer to Figure 5-1 and Table 5-1 for instructions on using the alarm indicator window.

2. After completing the desired operation, click on the *Minimize* button in the top right corner of the alarm window. It is the left button in the set of three: .

Unlike other windows, you cannot close this alarm window by clicking on its control menu box.

Note: When the pop-up alarm window is displayed, you will only receive audible indication of the receipt of any new alarms. For this reason, it is recommended that you close the pop-up window after viewing the alarm. If you fail to close the window, ComfortVIEW automatically closes the alarm window for you 15 minutes after it is opened.

Figure 5-1
Alarm Indicator Window

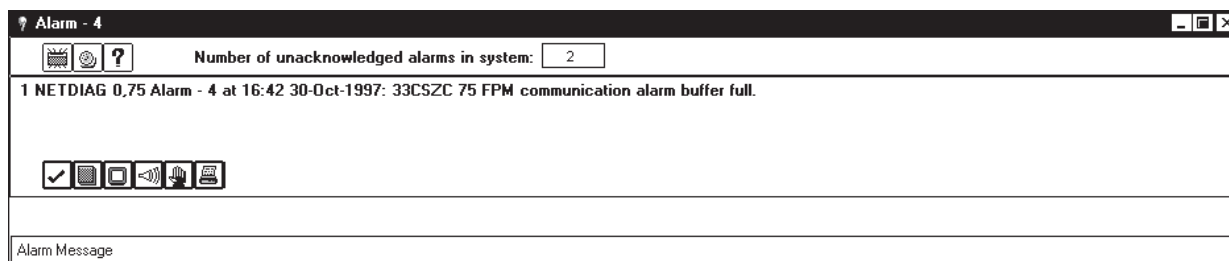


Table 5-1
Alarm Indicator
Window Functions

Click on	To
	update the window with the most critical unacknowledged alarm.
	display the Alarm List.
	display help information.
	acknowledge this alarm.
	attach or display an operator note.
	jump to this alarm's pre-configured WorkSPACE.
	play this alarm's pre-assigned audio .wav file.
	after acknowledging an alarm, disable the audible and visual alarm indication for selected re-occurring alarms.
	print this alarm.

Note : If desired, you can copy the alarm to the Windows clipboard by pressing and holding down the Ctrl key and then typing C.

Pop-up Window Alarm Viewing

If you select this alarm indication option, a pop-up window displays on alarm/alert reception. The window displays on top of the current window. This pop-up window is the same pop-up window as the one described previously under Flashing Icon Alarm Viewing. If you close the window without acknowledging the alarm/alert, the window immediately re-displays until you acknowledge receipt of the alarm/alert. If you overlay the window with another window, the alarm window is brought to the foreground 15 minutes after being hidden. Critical alarm pop-up windows will not display if there is an unacknowledged pop-up alarm window.



Viewing the Alarm List

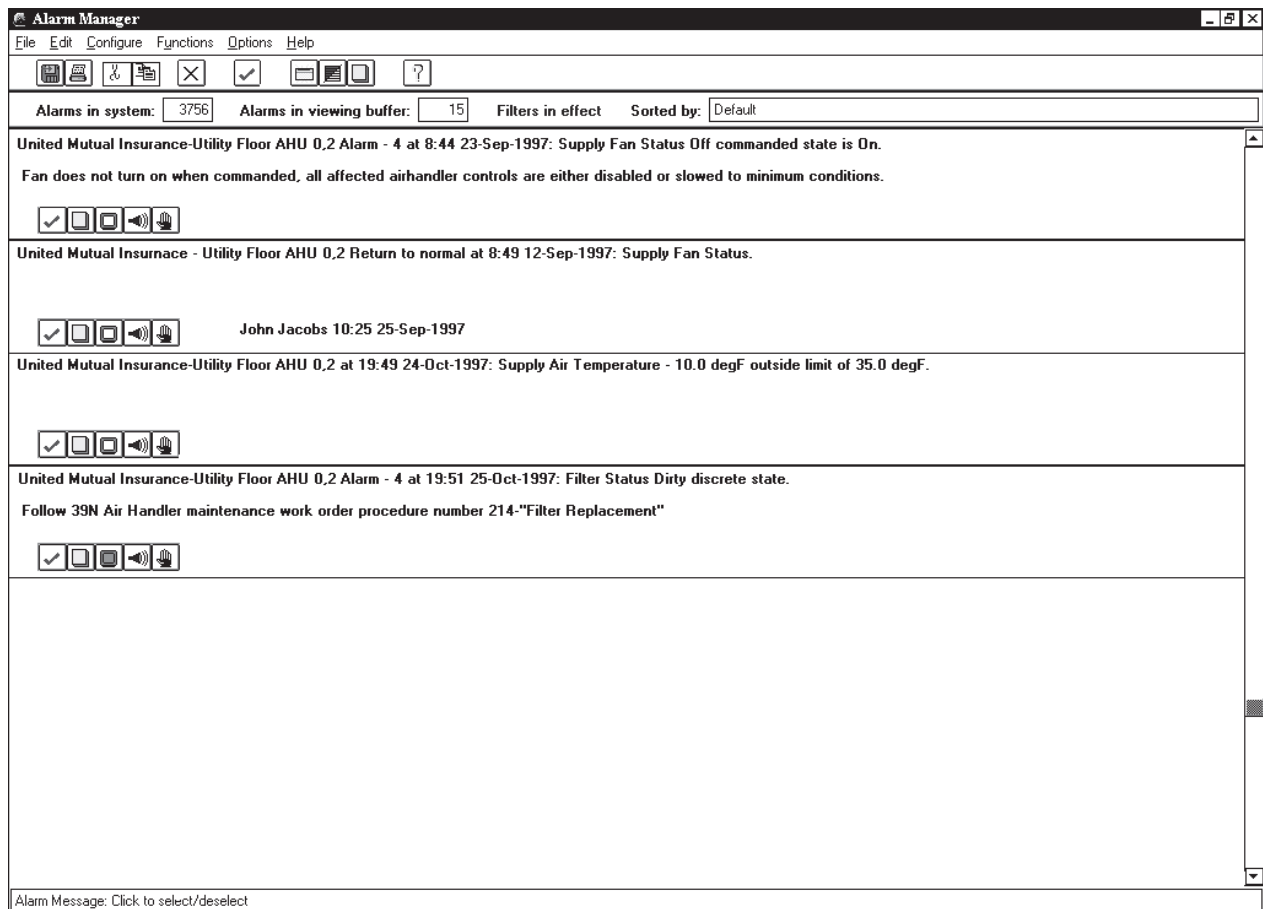
To view a list of all alarm, alert, and return to normal messages:

Double click on the Alarm Manager icon.

Note: You may also display the alarm list by following the Flashing Icon Alarm Viewing or Pop-up Window Alarm Viewing instructions. Then click on the alarm window's Alarm List icon to display the alarm list.

ComfortVIEW displays the Alarm List window. If you are initially starting up the Alarm Manager application, you see messages in the alarm list sorted according to time/date received. If the Alarm Manager is running, but was minimized, alarms appear sorted in the last order defined. For more information on alarm sorting, refer to the Sorting the Alarm List section of this chapter. A sample Alarm List window is shown in Figure 5-2 below.

Figure 5-2
Sample Alarm List



The Alarm Menu

The top line of the Alarm List window contains the alarm menu. This menu contains the alarm viewing commands that allow you to perform functions such as acknowledging, sorting, and deleting alarms. The Alarm Menu Commands section of this chapter describes each of the commands that appear in the alarm menu.

The Toolbars

The second line of the Alarm List window contains a toolbar. The toolbar gives you instant access to the most frequently used alarm viewing commands. By simply clicking the mouse button, you can print, delete, or acknowledge alarms, update the alarm list, select or de-select all alarms, or display on-line help.

Note: If desired, you can remove the toolbar from the window by clicking on the *Options* menu item and then clicking on *Toolbar*. To return the toolbar to the window, perform these two commands again.

The bottom line of each individual alarm message contains an alarm-specific toolbar. By clicking the mouse on one of the tools in this toolbar, you can acknowledge this individual alarm, display or modify this alarm's operator note, or invoke the WorkSPACE Manager and view this alarm's assigned WorkSPACE.

The following table describes the buttons that appear on the alarm list and alarm-specific toolbars.

Table 5-2
Alarm Toolbar Buttons

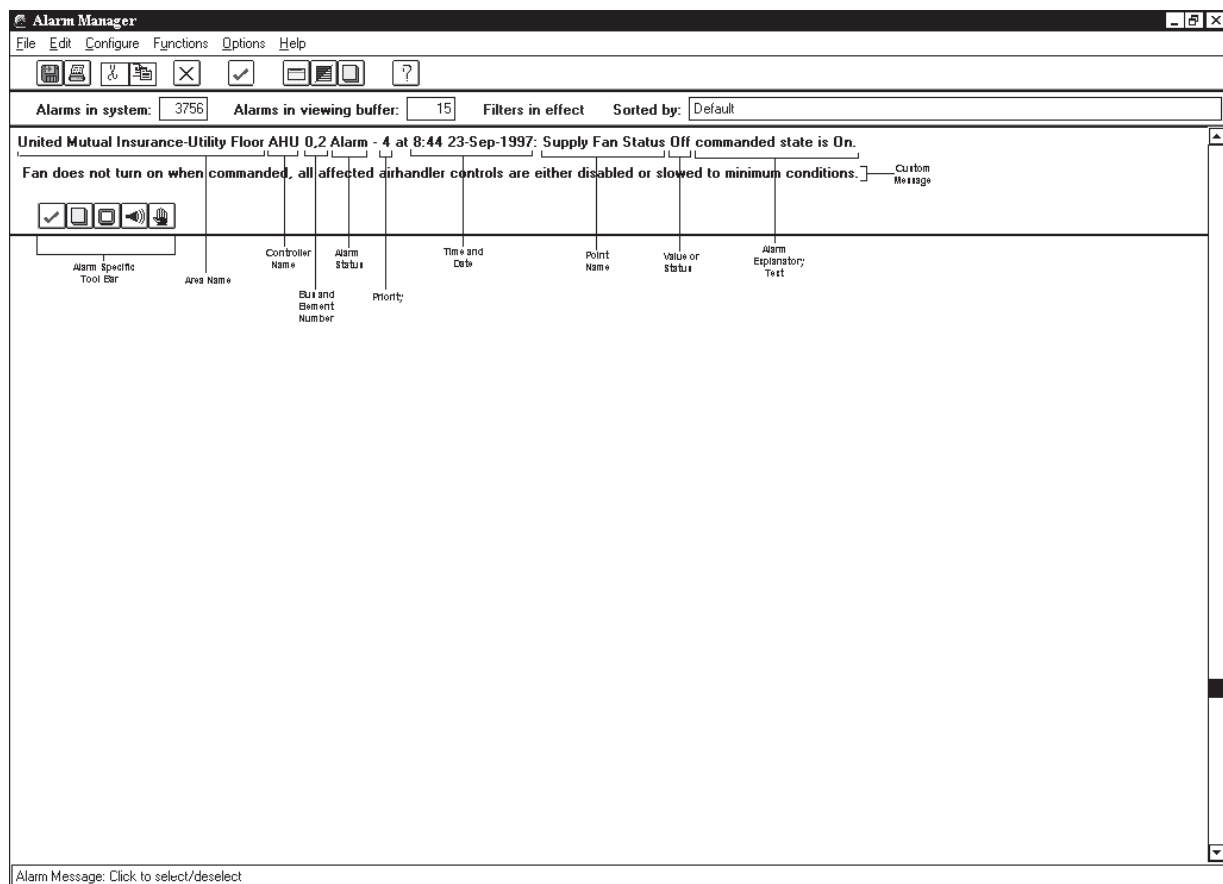
Click on	To
	export selected alarms to a file.
	print all or selected alarms.
	delete selected alarms and copy them to the Windows clipboard.
	copy selected alarms to the Windows clipboard.
	delete selected alarms.
	acknowledge selected alarms.
	update the alarm list to include the latest alarms received.
	select/de-select all alarms.
	attach, view, or edit the selected alarm's operator note.
	display on-line help.

Click on	To
	jump to a pre-configured WorkSPACE or attach a WorkSPACE to this alarm.
	play this alarm's pre-configured .wav audio file.
	suppress future indication of this alarm.

Alarm Message Format

A sample alarm message is shown below. Note that if ComfortVIEW receives an alarm from a point that is not in its database, it displays the 8 character zone and point name that are stored in the system element, as well as the CCN number.

Figure 5-3
Sample Alarm Message



An alarm message contains the following information:

- Area name
- Controller name (CCN Options, PICs, Comfort Controller)
- System name (UT203 FIDs only)
- Bus and element number of the system element generating the alarm
- Alarm status (alarm, alert, return to normal)
- Alarm priority (0 to 7, 0 = the highest; 7 = the lowest). See Table 5-3.
- Time and date of alarm
- Zone name (System Manager-type products only. Ex.: TSM)
- Point name
- Value or status of point causing alarm — including engineering units (FIDs, Comfort Controllers, PICs, CCN Options only)
- Alarm explanatory text
- Custom message (if any)
- Operator note indication (if any)
- Name of acknowledging operator (if alarm is acknowledged)
- Time and date of acknowledgement (if alarm is acknowledged)
- Alarm-specific toolbar
- Number of Alarms received since invoked suppression. For more information, see the Suppressing Nuisance Alarms section of this chapter.

If you have enabled the Alarm Suppression feature, the bottom line of each alarm message also displays the number of times that an identical alarm has been received but not annunciated. Refer to the Suppressing Nuisance Alarms section of this chapter for more information on this feature.

Table 5-3
Alarm/Alert
Levels

Level	Meaning
0	Fire/life safety
1	Critical
2	Service
3	Reserved
4	Maintenance
5	Reserved
6	Point control out of range
7	Return to normal

The Status Bar

The third line of the alarm window displays the following status information:

- Alarms in system — the total number of alarms ComfortVIEW has received.
- Alarms in viewing buffer — the number of alarms that you are currently seeing. Note that this number may differ from the Alarms in System number dependent on whether any operator filters are in effect. It also could differ if alarms have been received while you have been viewing the alarm list. To view new alarms, click on the Update icon.
- Filters in effect — these words will be displayed if any alarm filters are in effect. ComfortVIEW gives you the capability to "filter" or specify families of alarms that will be presented to each user. For more information on filters, refer to Specifying Operator Alarm Indication Preferences in the Carrier Network Manager chapter of this manual.
- Sorted by — an indication of how the alarm list is currently sorted (for example, default (time/date received), alphabetically, time/date, alarm/alert level). For more information on sorting alarms, refer to Sorting the Alarm List.

Note: If desired, you can remove the status bar from the window by clicking on the *Options* menu item then clicking on *Status bar*. To return the status bar to the window, perform these two commands again.

Changing the Font

You can change the font that ComfortVIEW uses to display alarm list text. When you change the font, all alarm list text is affected.

To change the font:

1. Display the alarm list. If necessary, refer to the instructions listed under Viewing the Alarm List.
2. Click on the *Options* menu item and then click on *Fonts*.

ComfortVIEW displays the Font dialog box. Refer to Figure 5-4.

3. In the Font box, select the font to use.

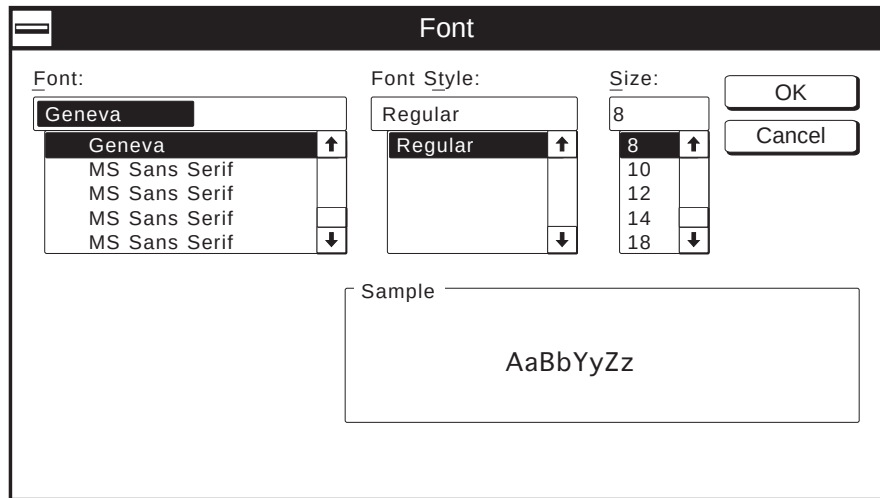
The text in the Sample box changes to reflect the font you select.

4. In the Font Style box, select any style options to use (for example, bold or italic).
5. In the Size box, select the point size to use: the larger the point size, the larger the characters appear on your screen.
6. Click on *OK*.

All alarm list text displays in the new font.

Note: To make the font change permanent, click on the *Options* menu item and then click on *Save settings on exit*. A checkmark (✓) appears before the command to indicate that it is enabled. The text will appear in the new font, style, and point size the next time you display the alarm list.

Figure 5-4
Font Dialog Box



Updating the Alarm List

While the alarm list is displayed, it is not dynamic. New alarms that occur while you are viewing the alarm list will not be included in the list. They will, however, be annunciated.

To include new alarm messages in the alarm list:

Click on the Update Alarm List icon in the toolbar, or click on the *Functions* menu item and then click on *Refresh*.

The Alarm List window refreshes and any new alarm messages display at the bottom of the list.

Note: Any sorts that may have previously been selected will no longer be in effect. Any alarms that may have previously been selected will no longer be highlighted.

Sorting the Alarm List

You can sort the presentation of the alarm list:

- alphabetically by area, zone, element, or point name
- by alarm/alert level from zero down to six followed by return to normals.
- chronologically by time/date (beginning with those alarms that occurred earliest.)

You can use sorts in combination with each other. The last sort chosen will have precedence. For example, if you select Area, Alarm level, then Time/Date, ComfortVIEW sorts the file first according to time/date, then by alarm level, and then alphabetically by area name.

To sort the alarm list:

1. Display the alarm list. If necessary, follow the instructions listed under Viewing the Alarm List.
2. Click on the *Options* menu item and then click on *Sort*.

ComfortVIEW displays the sorts list. The sorts that are currently active are indicated with a checkmark.

3. Click on one or more of the following menu items: *Default*, *Time/Date*, *Area*, *Zone*, *Element*, *Point*, or *Alarm Level*.

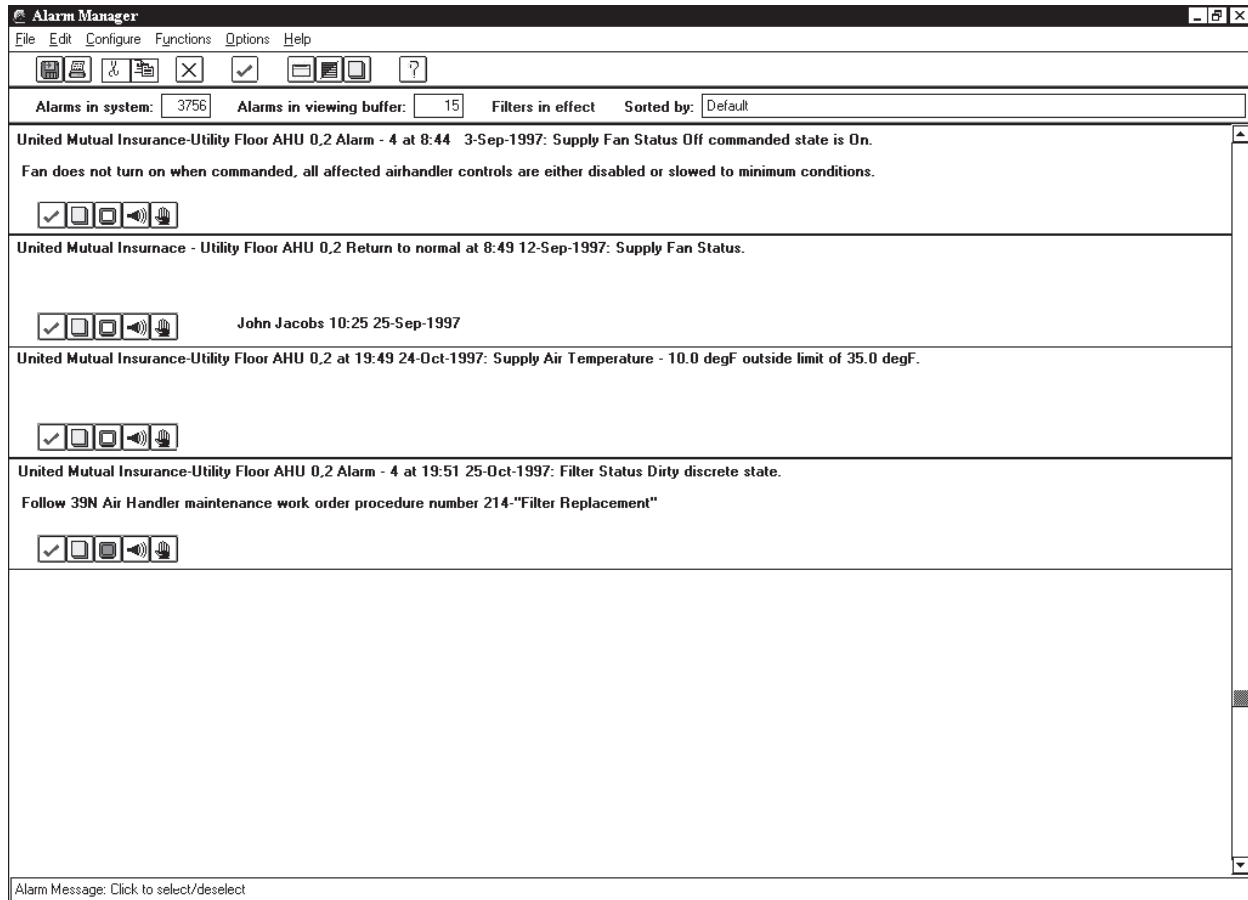
Note: Clicking on an active sort de-selects it.

Clicking on *Default* removes all sorts currently in effect and sorts alarms by time and date of reception beginning with those alarms received earliest.

The alarm list updates and re-displays, sorted accordingly. An indication of the currently-selected sorts displays in the status bar, which displays on the third line of the alarm list window.

Figure 5-5 shows an alarm list sorted by time and date.

Figure 5-5
Alarm List Sorted
by Time and Date





Selecting Alarms

Some of ComfortVIEW alarms operations require you to select alarm/alert/return to normal messages. For example, you must specify which alarms you wish to print or delete. You can select one, more than one, or all alarm messages.

Selecting One or More Messages

To select one or more alarm messages:

1. Display the alarm list.

For instructions, turn to Viewing the Alarm List.

2. Click on the alarm message or messages you wish to select.

When you select an alarm message, its background becomes highlighted with the highlight color that you have selected in your Windows control panel. This indicates that a message is “selected.” Clicking on a “selected” alarm message un-highlights the background and “de-selects” the message.

Note: When in the alarm list, you can select multiple alarms using the standard Windows Ctrl-Click or Shift-Click technique.

Selecting All Messages

To select all alarm messages:

1. Display the alarm list. If necessary, follow the instructions listed under Viewing the Alarm List.
2. Click on the toolbar’s Select All icon, or click on *Functions* then click on *Select all*.

The background of all alarm messages becomes highlighted with the highlight color that you have selected in your Windows control panel. This indicates that a message is “selected.” Clicking on a “selected” alarm message un-highlights the background and “de-selects” the message.

Acknowledging Alarms

You can acknowledge receipt of alarm messages. You can acknowledge one, multiple, or all alarm messages. Once you've acknowledged an alarm message, ComfortVIEW adds your user name and a time and date stamp to the selected alarm message.

Note: You may also acknowledge alarms by following the instructions listed under Viewing New and Unacknowledged Alarms and then clicking on the Alarm Window's Alarm Acknowledge icon.

Acknowledging One Alarm Message

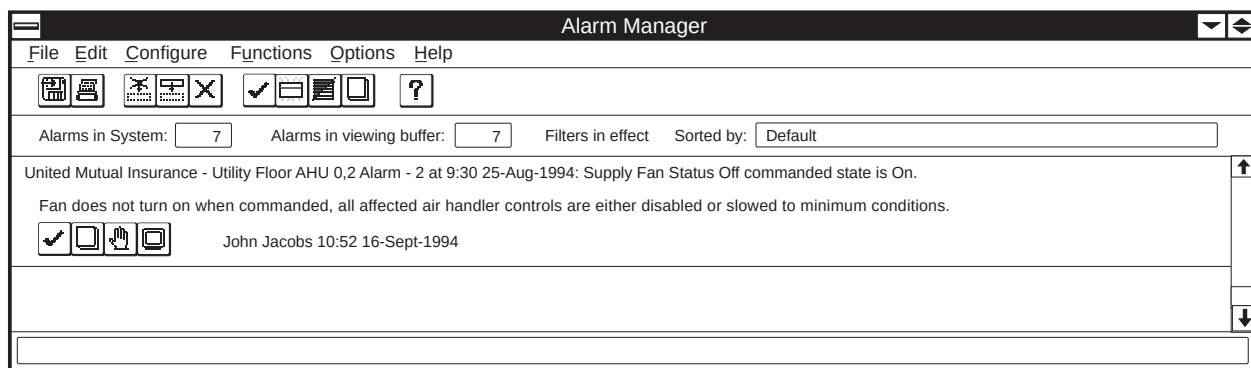
1. Display the alarm list. If necessary, refer to the instructions listed under Viewing the Alarm List.
2. Click on the Alarm Acknowledge icon that appears in the alarm-specific toolbar below the alarm message you wish to acknowledge.

Note: You may also acknowledge a single alarm message by selecting the alarm that you wish to acknowledge (Refer to Selecting Alarms) and clicking on the *Functions* menu item and then clicking on *Acknowledge*, or by clicking on the Alarm Acknowledge icon in the toolbar.

The alarm list re-displays, and your user name and the time and date of acknowledgement display along with the acknowledged alarm.

Refer to Figure 5-6 below.

Figure 5-6
Acknowledging a Single Alarm

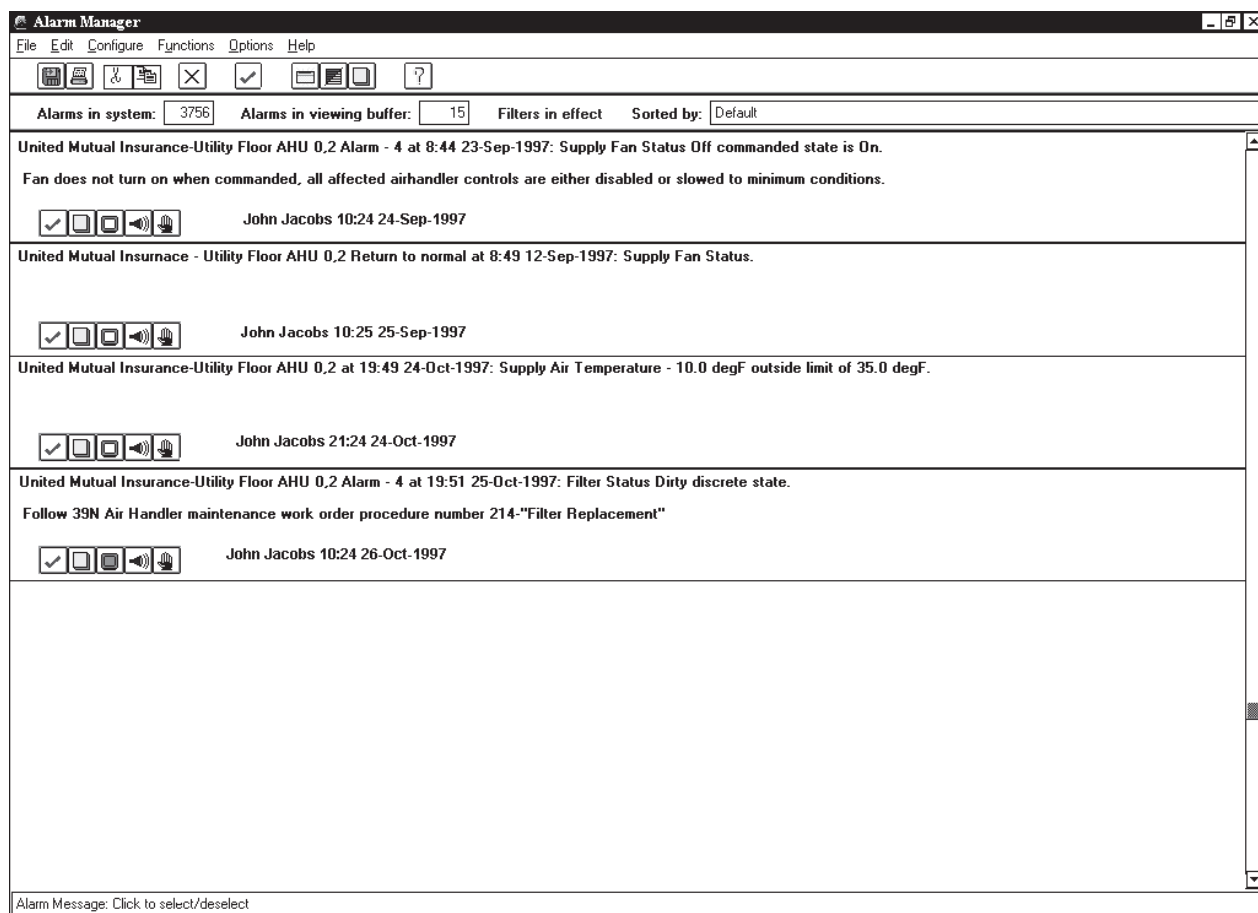


Acknowledging More Than One or All Alarm Messages

1. Display the alarm list. If necessary, refer to the instructions listed under Viewing the Alarm List.
2. Select the alarms that you wish to acknowledge by following the instructions listed under Selecting Alarms.
3. Click on the Alarm Acknowledge icon that appears in the alarm list toolbar in the second line of the screen or click on the *Functions* menu item and then click on *Acknowledge*.

The alarm list re-displays, and your name and the time and date of acknowledgement display along with the acknowledged alarm. See Figure 5-7 below.

Figure 5-7
Alarm List with
Acknowledged Alarms



Attaching an Operator's Note to an Alarm

You have the option to enter an operator's note for each alarm. This note can be viewed, printed along with the standard alarm message, or copied to the Windows clipboard.



Alarms that currently have an operator's note attached to them appear with a toolbar icon as shown at left.



Alarms that do not have an operator's note appear with a plain yellow note icon as shown at left.

To View, Modify, or Attach a Note to One Alarm

1. Display the alarm list. If necessary, follow the instructions listed under Viewing the Alarm List.
2. Click on the Note icon that appears in the alarm-specific toolbar below the alarm message.

ComfortVIEW displays the Operator Note dialog box, which allows you to view, modify, delete, or add a note.

Note: You may also display the Operator Note dialog box by clicking on *Functions* and then clicking on *Note*.

3. Click in the Note text box and make any desired additions or changes. You can enter up to 500 alphanumeric characters.

Refer to Figure 5-8 and Table 5-8 for instructions on using this box.

4. After you have completed any changes, click on *OK*. This closes the Operator Note dialog box and saves the new note text.

To Attach the Same Note to Multiple Alarms

1. Select the alarms to which to attach a note. If necessary, follow the instructions found under Selecting Alarms.
2. Click on the *Functions* menu item and then click on *Note*.

ComfortVIEW displays the Operator Note dialog box.

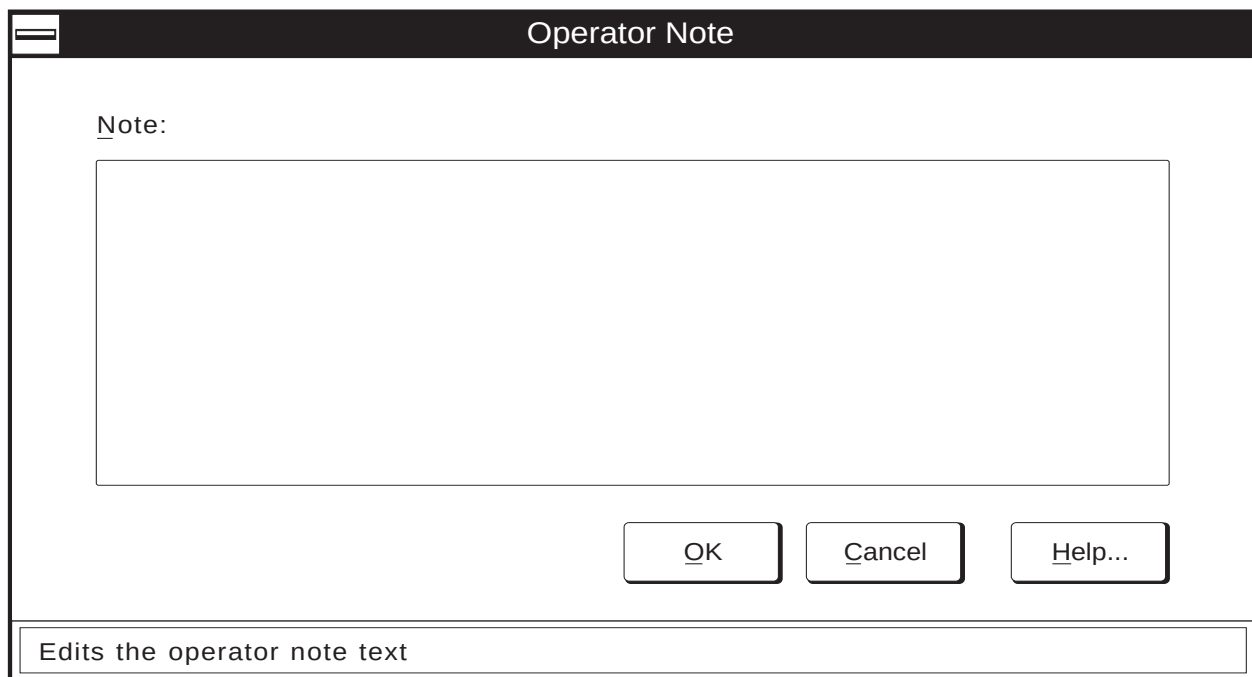
3. Click in the Note text box and enter your text. You can enter up to 500 characters.

Note: If any of the selected alarms currently has a note attached to it, ComfortVIEW appends this new note to the existing note text. You can enter up to 500 characters per note.

Refer to Figure 5-8 and Table 5-8 for instructions on using this box.

4. After you have entered the note text, click on *OK*. This closes the Operator Note dialog box and saves the new note text.

Figure 5-8
Operator Note Dialog Box



The image shows a dialog box titled "Operator Note". It has a standard Windows-style title bar with a minimize button. Inside the dialog, there is a label "Note:" followed by a large, empty rectangular text box for entering text. At the bottom of the dialog, there are three buttons: "OK", "Cancel", and "Help...". Below the dialog box, there is a status bar that reads "Edits the operator note text".

Table 5-8
Operator Note
Dialog Box

Click on	To
The Note text box	enter, modify, or delete operator note text. You may enter up to 500 characters. If you have selected multiple alarms, this text appends to any existing note text.
Help	display help information.
OK	close the dialog box and save the settings.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.



Suppressing Alarms

ComfortVIEW alarm suppression feature gives you the capability to disable the audible and visual alarm indication for selected re-occurring alarms. This feature can be useful for “nuisance-type” alarms for which you do not want re-indication upon each subsequent receipt.

Note: You can only suppress acknowledged alarms.

When ComfortVIEW initially receives an alarm, it stores the alarm in the alarm list, produces an audible signal and, depending on the alarm indication option you select, produces an accompanying visual signal. If you enabled alarm suppression, and ComfortVIEW receives this same alarm again, audible (and visual, if selected) indication does not occur. ComfortVIEW displays the number of subsequent receipts of the alarm that has been suppressed in the *Suppressed* field, which appears in the alarm-specific toolbar below the alarm message.

To Enable or Disable Alarm Suppression

1. Display the alarm list. If necessary, refer to the instructions listed under Viewing the Alarm List.
2. Acknowledge the alarm that you wish to suppress (if not already acknowledged).
3. Click on the Suppression icon in the alarm-specific toolbar below the alarm whose re-occurrences you wish to suppress. ComfortVIEW displays the Alarm Suppression dialog box.

Note: If the icon appears dimmed, the alarm has not been acknowledged. You must first acknowledge the alarm before you can suppress it. Refer to Acknowledging Alarms.

4. Click on *Allow* to disable alarm suppression, or click on *Suppress* to enable alarm suppression.
5. Indicate the suppression duration (in hours) and click on *OK*.

Refer to Figure 5-9 and Table 5-9 that follow for further instructions on using this dialog box.

To View Suppressed Alarms

Follow the steps below to update the alarm list and include suppressed alarms:

1. Display the alarm list. If necessary, refer to the instructions listed under *Viewing the Alarm List*.
2. Click on the *Functions* menu item and then click on *View Suppressed*.

The alarm list updates to include all suppressed alarms and any new alarms that may have been received while you were viewing the list. The suppressed alarms do not contain a Suppression icon in their alarm-specific toolbar.

Figure 5-9
Alarm Suppression
Dialog Box

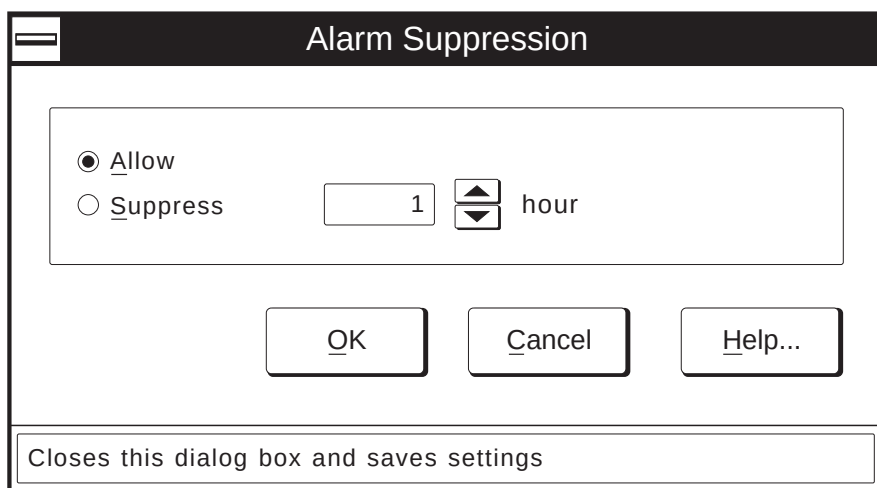


Table 5-9
Alarm Suppression
Dialog Box

Click on	To
Suppress	prohibit visual, audible, and alarm list indication for subsequent receipts of selected alarm.
The Hours text box	specify the number of hours (1 to 168) for suppression of selected alarm. When you display this dialog box again, this field displays the number of suppression hours remaining.
Allow	allow visual, audible, and alarm list indication for selected alarm. This cancels alarm suppression.
Help	display help information.
OK	close the dialog box and save the settings.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.



Deleting Alarms

You can delete all or selected alarms from the alarm list to remove any unnecessary alarms. For example, you should remove an alarm that was generated during preventive maintenance that may reflect a false condition. You can only remove acknowledged alarms.

Note: You can also delete alarms using the Cut command, which appears under the Edit menu item. This command differs from the Edit Menu's Delete command, in that it copies alarms to the Windows clipboard before deleting them. This could be useful, for example, if you wish to use alarms in a report that you are creating using another Windows application.

To delete an alarm:

1. Display the alarm list. If necessary, follow the instructions listed under Viewing the Alarm List.
2. Select the alarm message or messages you wish to delete by clicking on them. The background of a selected message is highlighted. This indicates that a message is "selected." For additional information, refer to the Selecting Alarms section of this chapter.
3. Click on the *Edit* menu item and then click on *Delete*.

Note: You may also perform this command by clicking on the Delete icon in the toolbar.

ComfortVIEW displays a dialog box asking for confirmation before actually deleting any messages.

4. Click on *Yes* to cause the removal to take place, or click on *No* to prevent the removal from taking place.

Printing the Alarm List

To Select Which Alarm Message Components to Print

You can print selected or all alarm messages. ComfortVIEW can automatically print alarms on occurrence, or on operator request. You can also specify which alarm message components ComfortVIEW prints (standard alarm message, custom message, acknowledgement, operator note).

1. Click on the *File* menu item and then click on *Page Setup*.

ComfortVIEW displays the Page Setup dialog box.

2. Click on the items you wish to include with printed alarm messages, and then click on *OK*. Refer to Figure 5-10 and Table 5-10 for instructions on using this box.

The specified alarm components print when you print selected or all alarm messages.

Note: ComfortVIEW uses the alarm components specified in the Page Setup dialog box when it copies alarms to the Windows clipboard using the Edit menu item's Cut and Copy commands.

Figure 5-10
Page Setup
Dialog Box

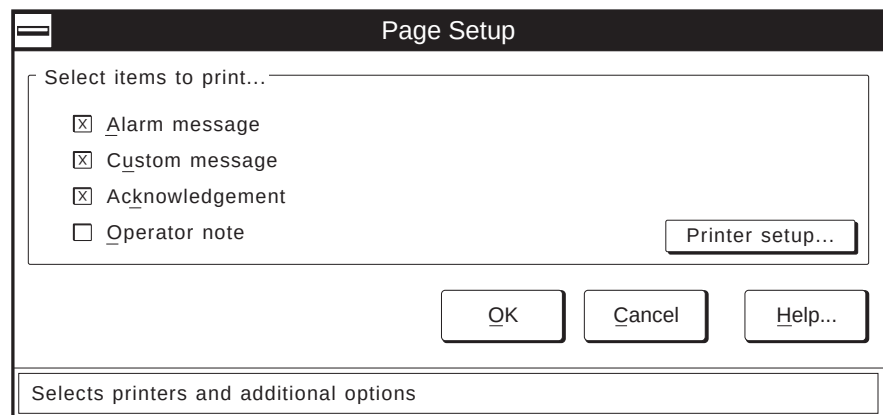


Table 5-10
Page Setup
Dialog Box

Click on	To
Alarm message	print the standard alarm message.
Custom message	print the custom message along with the standard alarm message and any other selected items.
Acknowledgement	print the acknowledgement message along with the standard alarm message and any other selected items.
Operator note	print the operator note along with the standard alarm message and any other selected items.
Printer setup	display another dialog box where you specify the number of copies and print quality. Click on this dialog box's <i>Setup</i> button to specify the printer, paper size, and page orientation.
Help	display help information.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.



**To Print
Selected
Alarm
Messages**

1. Display the alarm list. If necessary, refer to the instructions listed under Viewing the Alarm List.
2. Click on the alarm message or messages you wish to print. The background of the selected message highlights to indicate that it is "selected." For additional information on selecting alarm messages, refer to Selecting Alarms.

3. Click on the *File* menu item and then click on *Print*.

Note: You may also print the selected alarms by clicking on the toolbar's Print icon.

ComfortVIEW displays a dialog box asking for confirmation before printing.

4. Click on *Yes* to print the messages, or click on *No* to prevent printing from taking place.

ComfortVIEW prints the selected alarm messages. The alarm message components to be included (alarm message, custom message, acknowledgement, operator note) are those that you specify using the File menu's Page Setup command.

To Print All Alarm Messages

1. Display the alarm list. If necessary, follow the instructions listed under Viewing the Alarm List.

2. Click on the *File* menu item and then click on *Print*.

Note: You may also print all alarms by clicking on the toolbar's Print icon.

ComfortVIEW displays a dialog box asking for confirmation before printing.

3. Click on *Yes* to print the messages, or click on *No* to prevent printing from taking place.

ComfortVIEW prints all alarm messages. The alarm message components to be included (alarm message, custom message, acknowledgement, operator note) are those that you specify using the File menu's Page Setup command.

To Automatically Print Alarms on Occurrence

You can set up ComfortVIEW to print alarm messages on occurrence. You do this using ComfortVIEW's Setup function. Refer to the Setup chapter of this manual for instructions.

Assigning Custom Messages to Incoming Alarms

You can add a custom alarm message to the ComfortVIEW custom alarm message list and set the criteria for attaching it to incoming alarms. Custom alarm messages can provide additional information, geared to a specific alarm, that ComfortVIEW displays or prints along with a standard alarm message.

You can also use the custom alarm message interface such that ComfortVIEW will override a specific alarm's default audible indication and instead play a user-specified .wav sound file on reception of specific alarms.

Rules for Custom Message Attachment

You set criteria (Area, Zone, Element, Point, and Precedence) for attaching custom messages to incoming alarms. ComfortVIEW compares incoming alarms to your specified criteria and establishes alarm-custom message links using the following rules:

ComfortVIEW begins by identifying criteria that might qualify the message for attachment. One possibility that will qualify a custom message for attachment to an alarm is an exact match between your user-defined criteria and the incoming alarm. Other possibilities involve any wildcards that you use to specify criteria. An incoming alarm must satisfy each of the six user-defined criteria before the custom message can qualify for attachment to the incoming alarm. If ComfortVIEW does not find any set of criteria that qualify for attachment, then the alarm will not have a custom message attached.

For example, you may have one generic custom message that is configured for attachment to every air handler alarm, and another custom message that is configured for attachment to air handler fan status alarms specifically. To ensure that the fan status custom message gets attached to the air handler fan status alarms, you should assign a higher precedence to the fan status custom message than to the generic air handler custom message. You would assign the fan status custom message a precedence of Very High, and the air handler message a precedence of Medium. If more than one custom message qualifies for attachment, ComfortVIEW uses the one with the highest user-specified precedence.

Adding, Modifying, or Deleting a Custom Message

Follow the steps below to add, modify, or delete a custom message:

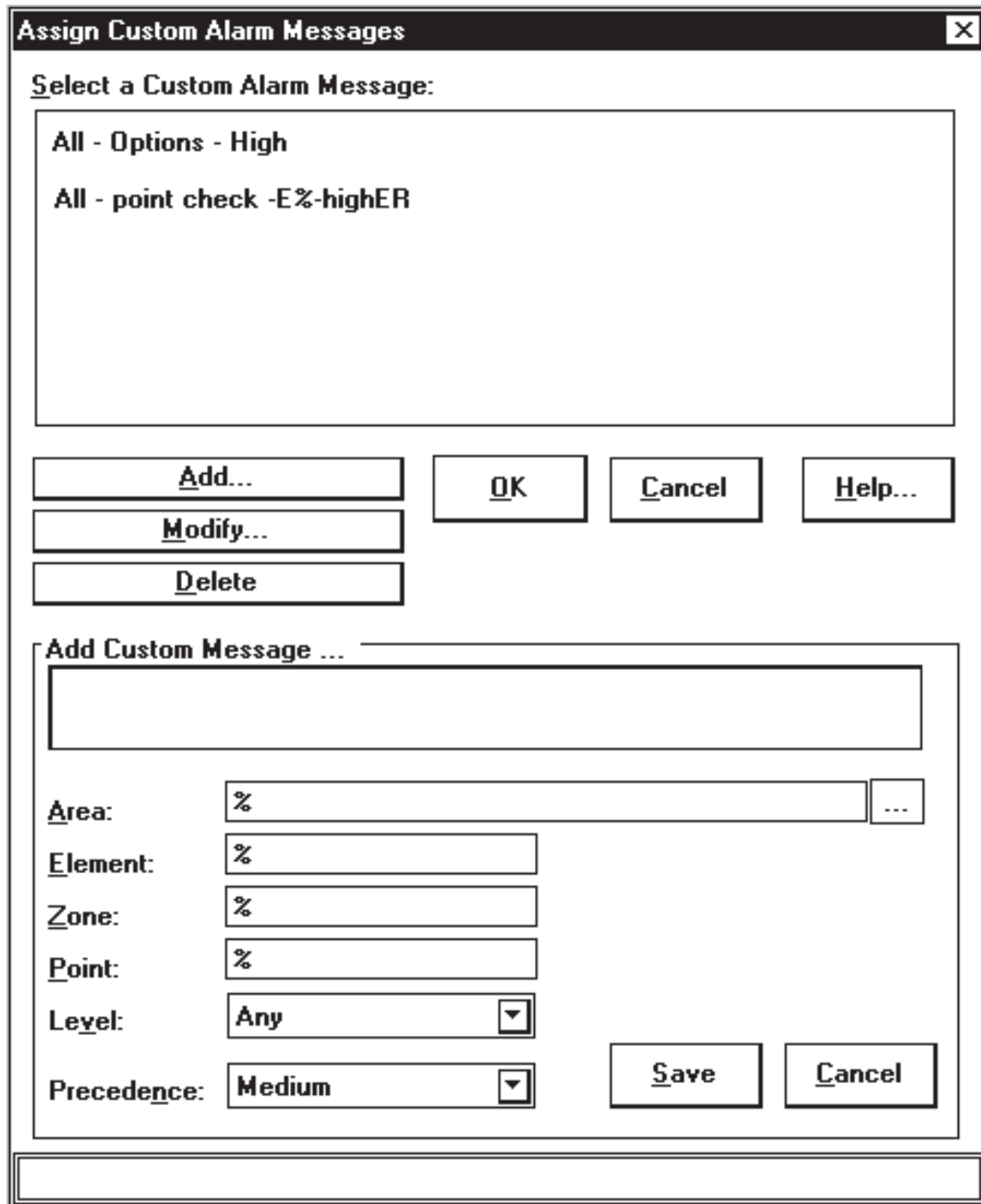
1. Display the alarm list. If necessary, refer to the instructions listed under Viewing the Alarm List.
2. Click on *Configure* then click on *Custom messages*.

ComfortVIEW displays the Assign Custom Alarm Messages dialog box. This dialog box allows you to add, modify, or delete a custom alarm message. It also enables you to identify the criteria for those incoming alarms to which you want the custom alarm message attached.

The existing messages appear in the box below *Select a Custom Alarm Message*. As you scroll down the list and highlight each message, you can see its associated Area, Zone, Element, Level, Point, and Precedence on the bottom of the window.

3. Do one of the following, depending on whether you want to add, modify, or delete a message:
 - Click on *Add* to add a new custom alarm message to the list of messages, or
 - Select a message and then click on *Modify* to change the message or its associated incoming alarm criteria, or
 - Select a message and then click on *Delete* to delete it.
4. Refer to Figure 5-11 and Table 5-11 for further instructions on using the fields in this dialog box. Use the Tab or Enter key to move between fields.
5. Once you have made your changes click on *OK*. This permanently saves the change and closes the Assign Custom Alarm Messages dialog box.

Figure5-11
Assign Custom Alarm
Messages Dialog Box



The dialog box is titled "Assign Custom Alarm Messages" and features a close button (X) in the top right corner. It is divided into two main sections. The top section, titled "Select a Custom Alarm Message:", contains a list box with two entries: "All - Options - High" and "All - point check -E%-highER". Below this list box are four buttons: "Add...", "Modify...", "Delete", and "OK". To the right of the "Add...", "Modify...", and "Delete" buttons are two more buttons: "Cancel" and "Help...". The bottom section, titled "Add Custom Message ...", contains a large text input field. Below this field are several labeled input fields: "Area:" with a text box containing "%" and a browse button "..."; "Element:" with a text box containing "%"; "Zone:" with a text box containing "%"; "Point:" with a text box containing "%"; "Level:" with a dropdown menu showing "Any"; and "Precedence:" with a dropdown menu showing "Medium". At the bottom right of this section are two buttons: "Save" and "Cancel".

Assign Custom Alarm Messages [X]

Select a Custom Alarm Message:

All - Options - High
All - point check -E%-highER

Add... **OK** **Cancel** **Help...**
Modify...
Delete

Add Custom Message ...

Area: % ...
Element: %
Zone: %
Point: %
Level: Any ▼
Precedence: Medium ▼

Save **Cancel**

Table 5-11
Assign Custom
Alarm Messages
Dialog Box

Click on	To
Add	add a new custom alarm message to the list of existing messages that are displayed in the <i>Select a Custom Alarm Message</i> box. Type the message in the <i>Add Custom Message</i> text box. Up to 128 characters are allowed. To add a message that will play an audible .wav file on alarm reception, enter the text <i>CWPLAY:</i> followed immediately by the name of the sound file. For example, <i>CWPLAY:Fanalm</i>. To add a message that can be re-played at a later time, enter the text <i>CWWAVE:</i> followed by the sound file name. The <i>CWPLAY</i> and <i>CWWAVE</i> codes can be hidden from the displayed custom message text by preceding the codes with the characters <i> </i>, (which are also known as pipe characters). You can add both <i>CWPLAY</i> and <i>CWWAVE</i> files to a single message. Remember that the sound file must reside in the <i>MEDIA\WAVES</i> directory in the <i>\CWORKS</i>, <i>\CVIEW</i>, or other directory in which you installed ComfortVIEW on your server machine. Note: Sound files must not have a file name in excess of 8 characters. A ComfortVIEW alarm .wav file will not interrupt the playing of another non-ComfortVIEW .wav file. Then specify the Area, Zone, Element, Point, Level, and Precedence of incoming alarms to assign to this new message. Each field is described below. Use the Tab or Enter key to move between fields.

Table 5-11
Assign Custom
Alarm Messages
Dialog Box
(continued)

Click on	To
	Note: If you leave a field blank, ComfortVIEW automatically fills this field with the % (wildcard). Refer to Table 5-12 for a list and explanation of allowed wildcards. Click on <i>Save</i> to display the new message in the list of alarm messages. You must click on <i>OK</i> to exit this dialog box and and save the new message.
Modify	modify an existing custom message or its associated incoming alarm criteria. You must select the message you wish to modify before clicking on <i>Modify</i> .
Delete	delete an existing custom message. You must select the message you wish to delete before clicking on <i>Delete</i> . ComfortVIEW does not remove the message until you click on <i>OK</i> .
	display the Speedy Data Entry dialog box where you can quickly and easily select the area, element, table, and point whose alarms you wish to attach to the specified custom message. This dialog box is described in the Speedy Data Entry section of this manual's Carrier Network Manager chapter.
Area	enter the up to 48 character name of the area whose alarms you wish to attach to the specified custom message. Note: You can specify the Area, Zone, Element, Point, or Level criteria using wildcards. Refer to Table 5-12 that follows for a list and explanation of allowed wildcards.

Table 5-11
Assign Custom
Alarm Messages
Dialog Box
(continued)

Click on	To
Zone	enter the up to 48 character name of the zone whose alarms you wish to attach to the specified custom message. This criterion is applicable only to CCN system manager-type products (for example TSM, HSM, PSM, FSM, CSM).
Element	enter the up to 8 character element name of the CCN system element whose alarms you wish to attach to the specified custom message. This name can be found in the Carrier Network Manager's controller list (Ex: AHU).
Point	enter the up to 8 character name of the point whose alarms you wish to attach to the specified custom message.
Level	enter the level of alarms you wish to attach to this custom message. Clicking on the down arrow gives you these choices: Alarm, Alert, Return to Normal, Any. Click on the desired level, or on <i>Any</i> to select all levels.
the Precedence drop-down list	assign a priority level to this custom message. Note: You could potentially have more than one custom message that meets the criteria for attachment to an alarm. ComfortVIEW will look at the precedence level and assign the message with the higher precedence level to the alarm. In general, you should give a high precedence to custom alarm messages that have very specific incoming alarm criteria. Give a lower precedence to custom alarm messages that have more general criteria.

(continued)

Table 5-11
Assign Custom
Alarm Messages
Dialog Box
(continued)

Click on	To
Save	save the new or modified custom message and its attachment criteria in the custom message list. The save will not apply until you click on <i>OK</i> .
OK	close the dialog box and save the settings.
Cancel	close the dialog box and restore previous settings.

Table 5-12
Wildcards

Wild card Symbol	Meaning
_	takes the place of any single character. Example: Specifying <i>TEMP_</i> for the point name means that any incoming alarm's point name that has five characters, where the first four are the letters <i>TEMP</i>, will be acceptable as a match for the point name. Acceptable matches for this example: TEMP1 or TEMPS.
%	takes the place of one or more characters. Example: Specifying <i>TEMP%</i> for the point name means that any incoming alarm message's point name that has <i>TEMP</i> as its first four letters will be acceptable as a match for the point name. Acceptable matches for this example: TEMP1, TEMP99, or TEMP534.



Displaying an Existing Alarm's WorkSPACE

This section provides information on:

- the definition of a WorkSPACE.
- how to determine if an alarm has a WorkSPACE.
- how to assign a WorkSPACE to an existing alarm.

What is a WorkSPACE?

A WorkSPACE is a group of windows containing graphics and trend plots of CCN data. You use the ComfortVIEW WorkSPACE Manager application to create and view WorkSPACES. For example, you could set up a WorkSPACE to include a temperature trend, and a graphic of the associated chilled water system. You can then display these windows simultaneously.

As part of the ComfortVIEW Alarm Manager application, you set up links between alarms and WorkSPACES. This gives you the ability to jump from the Alarm List window to the WorkSPACE Manager application and view the graphic, or trend plot that pertains to the selected alarm.

Determining if an Alarm Has an Associated WorkSPACE

You will know if an alarm has an associated WorkSPACE by looking at the WorkSPACE icon that appears in the alarm-specific toolbar below the alarm message. If the icon does not appear to be activated (is not a blue color), a WorkSPACE has not been assigned to this alarm. To assign a WorkSPACE to an alarm, refer to the Assigning a WorkSPACE to an Existing Alarm section that follows.



Displaying WorkSPACES

Follow the steps below to display an existing alarm's associated WorkSPACE.

Note: You may also display an alarm's WorkSPACE by following the Flashing Icon Alarm Viewing instructions, which can be found in the Viewing New and Unacknowledged Alarms section of this chapter. Then click on the alarm window's WorkSPACE icon.

1. Display the alarm list. If necessary, refer to the instructions listed under Viewing the Alarm List.
2. Click on the blue WorkSPACE icon that appears in the alarm-specific toolbar below the alarm message.

ComfortVIEW will invoke the WorkSPACE Manager application and display the WorkSPACE that has been assigned to this alarm.

Assigning a WorkSPACE to an Existing Alarm

Follow the steps below to assign a WorkSPACE to an existing alarm:

1. Display the alarm list. If necessary, refer to the instructions listed under Viewing the Alarm List.
2. Select the alarm message or messages to which you wish to attach a WorkSPACE. If you need additional information, refer to the Selecting Alarms section of this chapter.
3. Click on the *Functions* menu item and then click on *Attach WorkSPACE*.

Note: You may also perform this command by clicking on the non-blue WorkSPACE icon that appears in the alarm-specific toolbar below the alarm message.

ComfortVIEW displays the Attach WorkSPACE Dialog Box, which allows you to select a pre-configured WorkSPACE and assign it to the selected existing alarm(s). Refer to Figure 5-13 and Table 5-13 for further instructions on using this dialog box.

Note: You are assigning a WorkSPACE to this specific, existing alarm. This WorkSPACE-alarm assignment is not valid for any subsequent occurrences of this alarm.

Figure 5-13
Attach WorkSPACE
Dialog Box

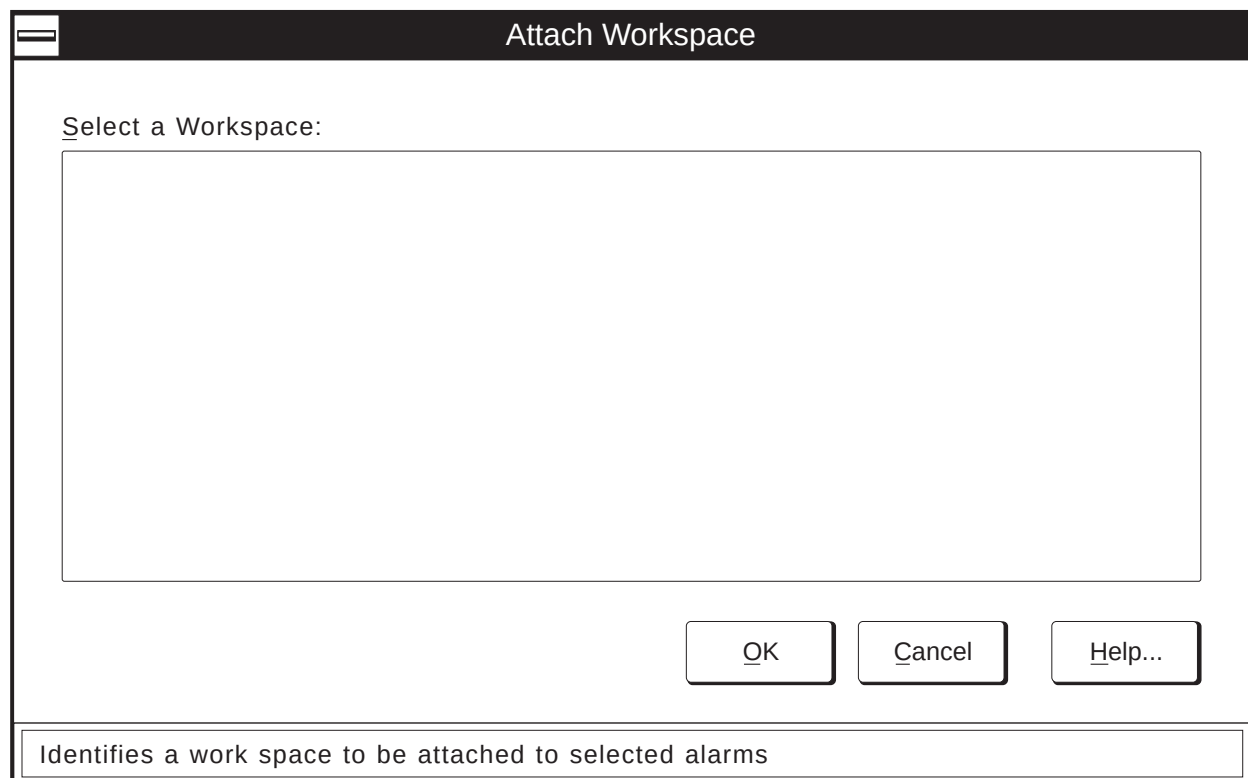


Table 5-13
Attach WorkSPACE
Dialog Box

Click on	To
A WorkSPACE in the list	select it.
Help	display help information.
OK	close the dialog box and attach the selected WorkSPACE to the selected alarm.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.

Modifying an Existing Alarm's WorkSPACE

Follow the steps below to change an alarm's WorkSPACE assignment:

1. Display the alarm list. If necessary, refer to the instructions listed under Viewing the Alarm List.
2. Select the alarm message or messages whose WorkSPACE link you wish to modify by clicking on the appropriate messages. The background of the selected messages is highlighted. This indicates that a message is "selected." If you need additional information on selecting alarms, refer to the Selecting Alarms section of this chapter.
3. Click on the *Functions* menu item and then click on *Attach WorkSPACE*.

ComfortVIEW displays the Attach WorkSPACE Dialog Box, which allows you to assign a WorkSPACE to this alarm. Select a WorkSPACE from the list of pre-configured WorkSPACES, and click on *OK*.

Note: You are assigning a WorkSPACE to this specific existing alarm. This WorkSPACE-alarm assignment is not valid for any subsequent occurrences of this alarm. Refer to Figure 5-13 and Table 5-13 for further instructions on using this dialog box.

Assigning WorkSPACES to Incoming Alarms

What is a WorkSPACE?

A WorkSPACE is a group of windows containing graphics and trend plots of CCN data. You use the ComfortVIEW WorkSPACE Manager application to create and view WorkSPACES. For example, you could set up a WorkSPACE to include a plot of temperature, and a graphic of the associated chilled water system. You could then display these windows simultaneously.

As part of the ComfortVIEW Alarm Manager application, you set up links between alarms and WorkSPACES. This gives you the ability to jump from the Alarm List window to the WorkSPACE Manager and view the graphic or trend plot that is pertinent to the selected alarm.

Rules for WorkSPACE Assignment

You set the criteria (Area, Zone, Element, Point, and Precedence) for attaching WorkSPACES to incoming alarms. ComfortVIEW compares incoming alarms to your specified criteria and establishes alarm-WorkSPACE links using the following rules:

ComfortVIEW begins by identifying any criteria that might qualify the WorkSPACE for attachment. One possibility that will qualify a WorkSPACE for attachment to an alarm is an exact match between your user-defined criteria and the incoming alarm. Other possibilities involve any wildcards that you use to specify criteria. If ComfortVIEW does not find any set of user-defined criteria that qualify for attachment, then the alarm will not have a WorkSPACE attached.

For example, you may have one generic WorkSpace that is config-

ured for attachment to every air handler alarm, and another WorkSPACE that is configured for attachment to air handler fan status alarms specifically. To ensure that the fan status WorkSPACE gets attached to air handler fans status alarms, you should assign a higher precedence to the fan status WorkSPACE than to the generic air handler WorkSPACE. You would assign the fan status WorkSPACE a precedence of Very High, and the air handler WorkSPACE a precedence of Medium. If more than one WorkSPACE qualifies for attachment, ComfortVIEW uses the one with the highest user-specified precedence.

Follow these steps to assign a WorkSPACE to an incoming alarm or to modify an existing WorkSPACE-incoming alarm assignment:

1. Display the alarm list. If necessary, refer to the instructions listed under Viewing the Alarm List.
2. Click on *Configure* and then click on *WorkSPACES*.

ComfortVIEW displays the Assign WorkSPACES dialog box. This dialog box gives you the capability to select a WorkSPACE. It also enables you to identify the criteria for those incoming alarms to which you want the WorkSPACE attached.

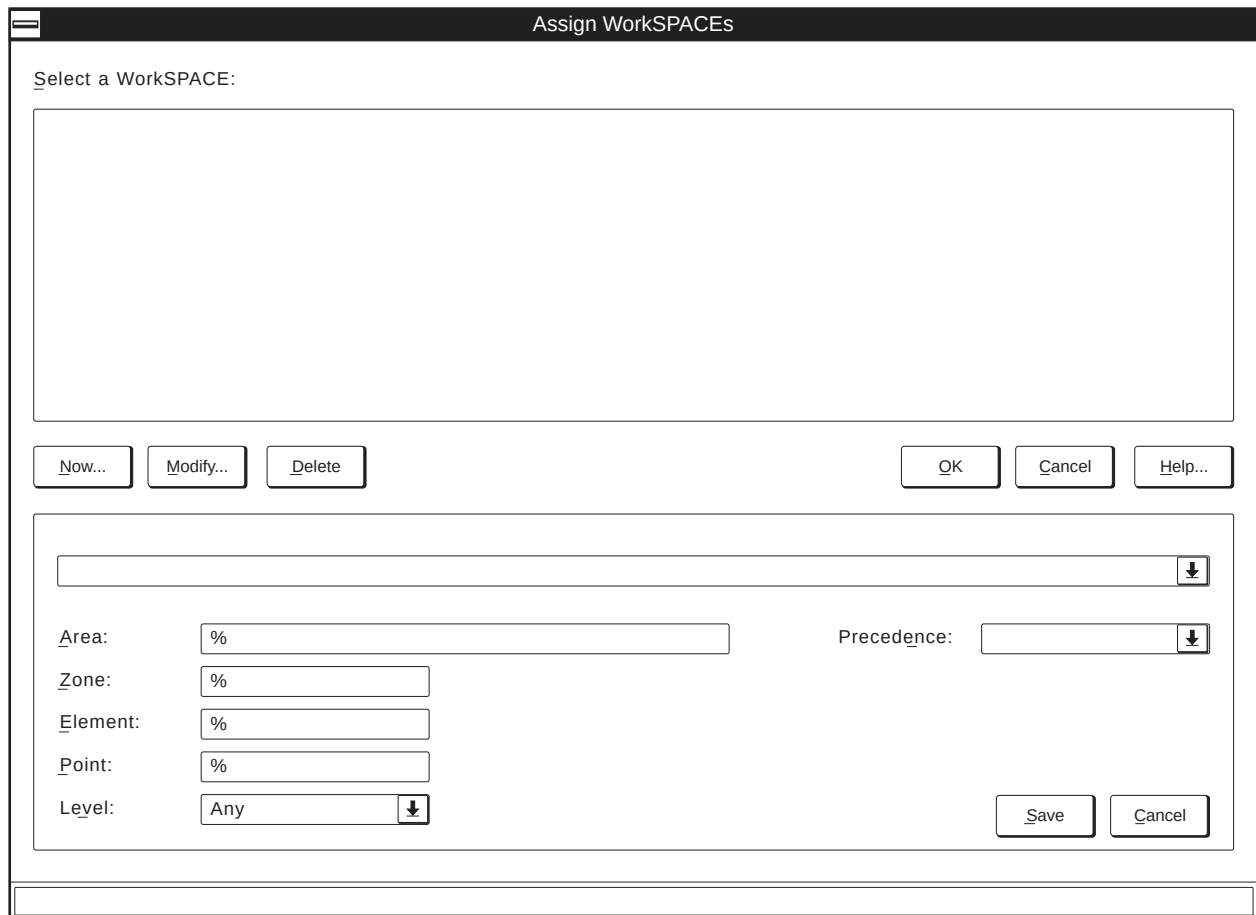
The names of all currently-assigned WorkSPACES appear in the box below *Select a WorkSPACE*. As you scroll down the list and highlight each WorkSPACE, you can see its associated Area, Zone, Element, Level, Point, and Precedence on the bottom of the window.

3. Do one of the following, depending on whether you want to add, modify, or delete a WorkSPACE:
 - Click on *Add* to establish a new WorkSPACE-incoming alarm assignment, or
 - Select a WorkSPACE and then click on *Modify* to change a WorkSPACE or its associated incoming alarm criteria, or
 - Select a WorkSPACE and then click on *Delete* to remove

it from the list and to delete the existing WorkSPACE-alarm assignment.

4. Refer to Figure 5-14 and Table 5-14 that follow for further instructions on using the fields in this dialog box. Use the Tab or Enter key to move between fields.
5. Once you have made your changes, click on *OK*. This closes the Assign WorkSPACES dialog box.

Figure 5-14
Assign WorkSPACES
Dialog Box



The dialog box is titled "Assign WorkSPACES". It features a large empty rectangular area at the top for selecting a workspace. Below this area are three buttons: "Now...", "Modify...", and "Delete". To the right of these are "OK", "Cancel", and "Help..." buttons. Below the buttons is a section with several input fields: a long text field with a dropdown arrow, "Area:" with a text field containing "%", "Zone:" with a text field containing "%", "Element:" with a text field containing "%", "Point:" with a text field containing "%", and "Level:" with a text field containing "Any" and a dropdown arrow. To the right of these fields is a "Precedence:" label with a text field and a dropdown arrow. At the bottom right of this section are "Save" and "Cancel" buttons.

Table 5-14
Assign WorkSPACES
Dialog Box

Click on	To
Add	establish a new WorkSPACE-incoming alarm assignment. The Add WorkSPACE Assignment line displays the names of existing WorkSPACES. Use the down arrow to display the list of all WorkSPACES. Then specify the Area, Zone, Element, Point, Level, and Precedence of incoming alarms to attach to this WorkSPACE. Each field is described below. Use the Tab or Enter key to move between fields. Note: If you leave a field blank, ComfortVIEW automatically fills this field with the _ (wildcard). Refer to Table 5-15 that follows for a list and explanation of allowed wildcards. Click on <i>Save</i> to display the newly-assigned WorkSPACE in the list of WorkSPACES on the top of the window. You must click on <i>OK</i> to exit this dialog box and and save the new WorkSPACE-incoming alarm assignment.
Modify	identify a new WorkSPACE to be assigned to the displayed incoming alarm criteria, or to modify the displayed incoming alarm criteria. You must select the WorkSPACE you wish to modify before clicking on <i>Modify</i>.

(continued)

Table 5-14
Assign WorkSPACES
Dialog Box
(continued)

Click on	To
Delete	delete an existing WorkSPACE-incoming alarm assignment. You must select the WorkSPACE you wish to delete before clicking on <i>Delete</i> . ComfortVIEW does not remove the WorkSPACE until you click on <i>OK</i> .
Area	enter the up to 48 character name of the area whose alarms you wish to attach to the specified WorkSPACE. Note: You can specify the Area, Zone, Element, Point, or Level criteria using wildcards. Refer to Table 5-15 that follows for a list and explanation of allowed wildcards.
Zone	enter the 8 character name of the zone whose alarms you wish to attach to the specified WorkSPACE. This criterion is applicable only to CCN system manager-type products (for example TSM, HSM, PSM.)
Element	enter the up to 8 character element name of the CCN system element whose alarms you wish to attach to the specified WorkSPACE.
Point	enter the 8 character name of points whose alarms you wish to attach to the specified WorkSPACE.

(continued)

Table 5-14
Assign WorkSPACES
Dialog Box
(continued)

Click on	To
Level	enter the level of alarms you wish to attach to this WorkSPACE. Clicking on the Down arrow gives you these choices: Alarm, Alert, Return to Normal, Any. Click on the desired level, or click on Any to select all levels.
the Precedence drop-down list	assign a priority level to this WorkSPACE. You could potentially have more than one WorkSPACE that meets the criteria for attachment to an alarm. Note: ComfortVIEW will look at the precedence level and assign the WorkSPACE with the higher precedence level to the alarm. In general, you should give a high precedence to WorkSPACES that have very specific incoming alarm criteria. Give lower precedence to WorkSPACES that have more general criteria.
Save	save the new or modified WorkSPACE and its attachment criteria in the WorkSPACE list. The save will not apply until you click on <i>OK</i> .
Cancel	close the dialog box and restore previous settings.
OK	close the dialog box and save the settings.

Table 5-15
Wildcards

Wildcard Symbol	Meaning
_ (underscore)	takes the place of any single character. Example: Specifying <i>TEMP_</i> for the point name means that any incoming alarm's point name that has five characters, where the first four are the letters <i>TEMP</i>, will be acceptable as a match for the point name. Acceptable matches for this example: TEMP1 or TEMPS.
%	takes the place of one or more characters. Example: Specifying <i>TEMP%</i> for the point name means that any incoming alarm message's point name that has <i>TEMP</i> as its first four letters will be acceptable as a match for the point name. Acceptable matches for this example: TEMP1, TEMP99, or TEMP534.



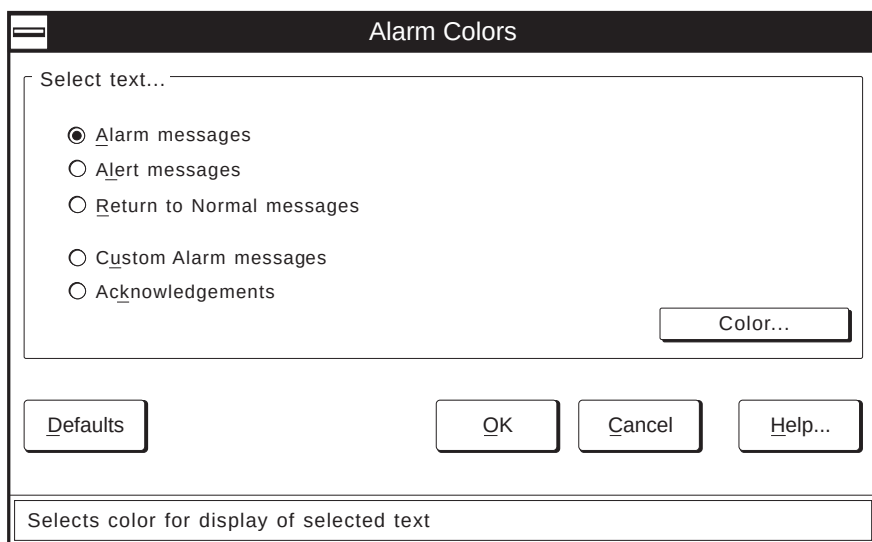
Selecting Alarm List Display Colors

Follow the steps below to select the color of alarm, alert, return to normal, custom alarm, and acknowledgement messages:

1. Display the Alarm List. If necessary, refer to the instructions listed under Viewing the Alarm List.
2. Click on *Options* and then click on *Colors*.

ComfortVIEW displays the Alarm Colors dialog box. Refer to Figure 5-16 and Table 5-16 for instructions on using this box.

Figure 5-16
Alarm Colors
Dialog Box



3. Click on the button preceding the type of message whose color you wish to change (Alarm Messages, Alert Messages, Return to Normal Messages, Custom Alarm Messages, or Acknowledgements).

4. Do one of the following depending on whether you want to use default colors or select another color scheme:
 - Click on *Colors* if you wish to use another color scheme. ComfortVIEW displays the Color dialog box. Refer to Table 5-17 that follows for further instructions on using this dialog box.
 - Click on *Defaults* to use the default colors: royal blue for alarm/alert/return to normal text, black for custom message text, and red for acknowledgement text.
5. After you have chosen the desired colors for your alarm message display, click on *OK*. This closes the Color dialog box and selects the specified colors.

Table 5-16
Alarm Colors
Dialog Box

Click on	To
Colors	display the Color dialog box and select the color for the selected text. You can select one of the standard colors or you may create a custom color. Refer to Table 5-17 for instructions on using this box.
Default	select the default colors — royal blue for alarm/alert/return to normal text, black for custom message text, and red for acknowledgement text.
Help	display help information.
OK	close the dialog box and select the specified colors.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.

Table 5-17
Color Dialog Box

Click on	To
Basic Color	select a standard color for the selected text.
Custom Color	select one of the previously-defined custom colors.
Define Custom Colors	refine the selected basic or custom color. The Color dialog box expands to include a color refiner box. Click on the basic or custom color that you wish to refine. Use the cursor that is inside the color refiner box and the vertical luminosity bar to change the color. You may also type values in the boxes. The right side of the Color/Solid box displays the new text color. Note that the Solid colors are the only ones that apply. For more information on defining custom colors, refer to your Windows user's guide. Click on <i>Add to Custom Colors</i> to add the new color to the custom colors palette.
OK	close the dialog box and select the specified colors.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.

Alarm Menu Commands

This section describes each of the commands that appear in the alarm menus.

File Menu

The following table describes each of the commands in the Alarm Manager's File menu.

Table 5-18
File Menu

Command	Use this command to
Export	copy selected alarms to a file. You can copy this file to another directory, sub-directory, or drive. One use for this function would be to export ComfortVIEW alarm data for use with another software product, such as a word processor or spreadsheet program. Note: You must specify which alarm message components (alarm message, acknowledgement message, custom message, operator note) to export. Use the File menu's Page Setup command to select these components. Dialog Box Options: <i>File Name:</i> Type a name for the export file. <i>Save File As Type:</i> Click on the down arrow and select the file type from the drop down list. <i>Directories:</i> Click on the directory path where you want the file saved.

(continued)

Table 5-18
File Menu
(continued)

Command	Use this command to
Dialog Box Options: (continued)	
	<i>Drives:</i> Click on the down arrow and select the drive where you want the file saved from the drop down list.
	<i>Network:</i> Click on this button to save the file to another computer on the local area network. ComfortVIEW displays the Connect Network Drive dialog box.
	<i>OK:</i> Closes the dialog box and saves changes made.
	<i>Cancel:</i> Exits the dialog box and restores the previous settings.
Print	print selected alarm messages.
Print All	print all alarm messages.
Page Setup	select which alarm message components to print, copy, or export (alarm message, acknowledgement message, custom message, operator note).
Exit	exit the Alarm Manager application.

Edit Menu

The following table describes each of the commands in the Alarm Manager's Edit menu.

Table 5-19
Edit Menu

Command	Use this command to
Cut	delete selected alarms or text and store it on the Windows clipboard. Use this function to rapidly copy alarm text to another software application (such as a word processing program). When editing text in a text box or field, you can only perform this command using the Ctrl X key combination. Note: You must specify which alarm message components (alarm message, acknowledgement message, custom message, operator note) to cut using the File menu's Page Setup command.
Copy	copy selected alarms or text and store them on the Windows clipboard. Use this function to rapidly copy alarm text to another software application (such as a word processing program). When editing text in a text box or field, you can only perform this command using the Ctrl C key combination. Note: You must specify which alarm message components (alarm message, acknowledgement message, custom message, operator note) to copy using the File menu's Page Setup command.
Delete	delete selected alarms or text. When editing text in a text box or field, you can only perform this command using the Delete (or Backspace) key.
Export to clipboard	copy selected alarms to the Windows clipboard. Alarms copied using this command will differ from alarms

(continued)

Table 5-19
Edit Menu
(continued)

Command	Use this command to
	copied using the Copy command, in that these alarms, when pasted into another application, will be preceded by the CCN number, and will display in a tab-separated internal alarm record format.

Configure Menu

The following table describes each of the commands in the Alarm Manager's Configure menu.

Table 5-20
Configure Menu

Command	Use this command to
Custom Messages	add or modify a custom alarm message and identify the criteria for attachment to alarms.
WorkSPACEs	attach a WorkSPACE to an incoming alarm or modify an existing WorkSPACE-incoming alarm assignment.

Functions Menu

The following table describes each of the commands in the Alarm Manager's Functions menu.

Table 5-21
Functions Menu

Command	Use this command to
Acknowledge	acknowledge receipt of selected alarms. Once you've acknowledged an alarm message, ComfortVIEW adds your user name and a time and date stamp to the selected alarm message.
Refresh	include new alarms that may have occurred while you were viewing the alarm list.

(continued)

Table 5-21
Functions Menu
(continued)

Command	Use this command to
Select All	select all alarm messages in the alarm list. You must select alarms that you wish to acknowledge, delete, or print. The background of the selected messages will be highlighted. Performing this command again will de-select all messages and remove the highlighting.
Attach WorkSPACE	assign a WorkSPACE to selected alarms. The alarm-specific toolbar that is displayed below each alarm in the Alarm List contains a WorkSPACE icon. If an alarm's WorkSPACE icon does not appear to be activated (is not a blue color), a WorkSPACE has not been assigned to this alarm. Click on the non-blue WorkSPACE icon or use the Options Menu's Attach WorkSPACE command to display the Attach WorkSPACE Dialog Box, which allows you to assign a WorkSPACE to this alarm. Note that you are assigning a WorkSPACE to the selected existing alarm(s). This WorkSPACE-alarm assignment is not valid for any subsequent occurrences of this alarm.
View Suppressed	update the alarm list and include suppressed alarms. The suppressed alarms do not contain a Suppression icon in their alarm-specific toolbar.

(continued)

Table 5-21
Functions Menu
(continued)

Command	Use this command to
Note	display or add an operator note to the selected alarm(s). If you are attaching a note to a group of alarms, the note will be appended to existing notes. Alarms that currently have an operator's note attached to them appear with a toolbar icon resembling a "scribbled" note. Alarms that do not have an operator's note, appear with a plain yellow note icon.

Options Menu

The following table describes each of the commands in the Alarm Manager's Options menu.

Table 5-22
Options Menu

Command	Use this command to
Font	change the font that ComfortVIEW uses to display alarm list text. When you change the font, all alarm list text is affected.
Colors	select the display colors for the alarm/alert/return-to-normal, custom message, and acknowledgement message text.
Toolbar	hide or display the alarm list toolbar that appears in the second line of the alarm window.

(continued)

Table 5-22
Options Menu
(continued)

Command	Use this command to
Status bar	hide or display the status bar that appears in the third line of the alarm window. The status bar displays the following information: the total number of alarms that have been received, the number of alarms that the currently-logged on operator is seeing, the alarm filters that are currently in effect, an indication of how the alarm list is currently sorted.
Sort	sort the presentation of the alarm list. You can sort the presentation of the alarm list alphabetically by area, zone, element, or point name, by alarm level from zero to seven, or chronologically by time/date. You can use combination sorts. The last sort chosen will have precedence. For example, if you select Area, Alarm level, and then Time/Date, ComfortVIEW will sort the file first according to time/date, then by alarm level, and then alphabetically by area name. Selecting <i>Default</i> removes all sorts currently in effect and sorts alarms by time and date of reception beginning with those alarms received earliest.
Save settings on exit	save any changes you make using commands on the Options menu. For example, if you change the font and then exit the Alarm Manager, the text appears in the new font the next time you start the Alarm Manager. This command also saves the size and position of all Alarm Manager windows.

Window Menu

The following table describes each of the commands in the Alarm Manager's Window menu.

Table 5-23
Window Menu

Command	Use this command to
Contents	display the help table of contents.
Search	search for a help topic by typing a keyword.
About	display program information, version information on all ComfortVIEW components, and copyright.

Setup

Setup

This chapter provides information on ComfortVIEW Setup application.

For information on...	Turn to page
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adding, modifying, and deleting internal gateways	386
adding, modifying, deleting ComfortVIEW operators:	
• adding a new or modifying an existing operator	389
• deleting an operator	390
• defining system access levels	392
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The following terms are used throughout this chapter.

Client — A computer on a local area network running ComfortVIEW communication and user interface software, or ComfortVIEW user interface software only.

Server — A computer on a local area network running ComfortVIEW communication, user interface, service, and database software.

You use ComfortVIEW Setup application to add or define the following:

- ComfortVIEW operators
- ComfortVIEW local area network workstation names
- Alarm printer names and port locations
- Global parameters:
 - Metric or customary US units (fixed setting chosen at installation)
 - Time of day at which to retrieve accumulated report data from your CCN options
 - Period of time to retain accumulated report data in your ComfortVIEW database
 - Number of times to re-try report data retrieval should a failure occur.
 - Enable/disable of system activity event logging.
 - Enable/disable automatic ComfortVIEW login in conjunction with Windows NT login.
 - Enable/disable of automatic alarm deletion, including purge filename and threshold.

You can also use the Setup application to export or import an entire CCN's database.



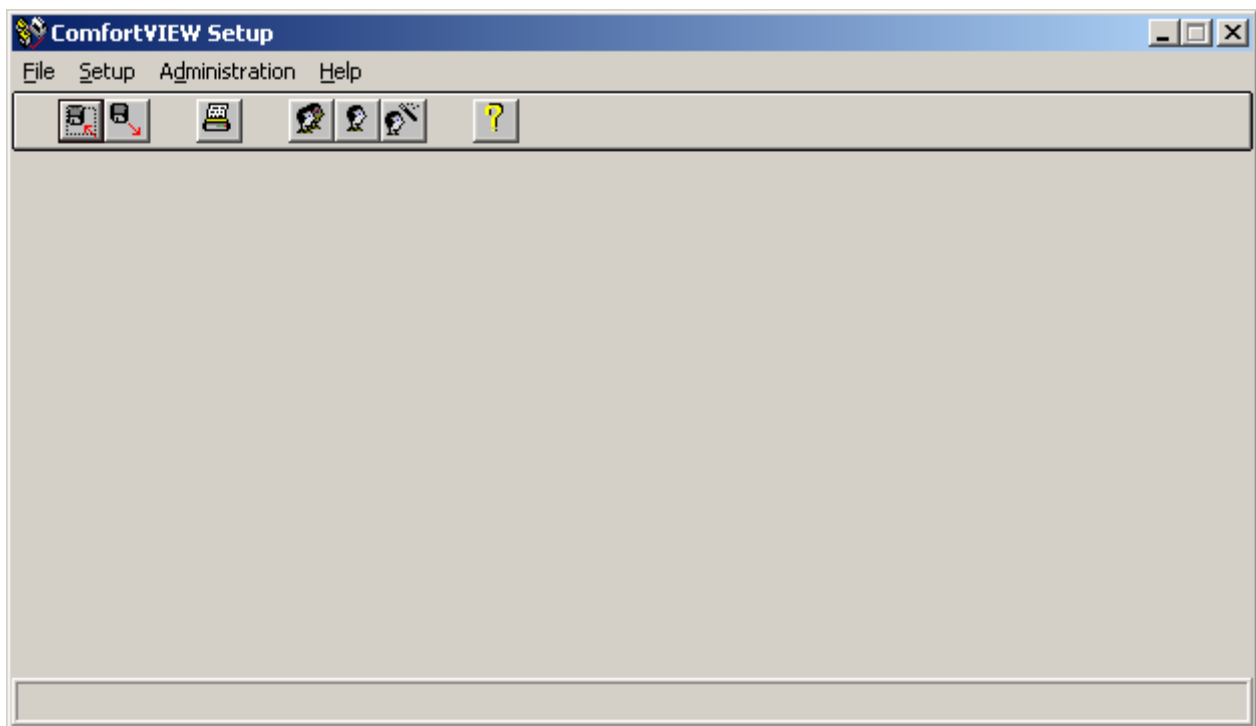
Launching the Setup Application

To launch the Setup application:

Double click on the Setup icon.

ComfortVIEW displays the Setup window shown in Figure 6-1. The top line of the window contains the setup menu. Refer to Setup Menu Command Summary at the end of this chapter for a description of each menu item and command.

Figure 6-1
Setup Window



Adding, Modifying, Deleting Internal Gateways

In addition to using a CCN Autodial Gateway, you can also connect to a remote CCN using an internal gateway, which is a modem that is internal or external to your ComfortVIEW workstation.

Note that ComfortVIEW only supports one internal modem. Multiple modems can be supported, however, if they are connected to external communication ports.

Prior to initially using an internal gateway, you must specify the modem's communication port and telephone number.

Follow the instructions below to add a new, or to modify or delete an existing internal gateway.

1. Click on the *Setup* menu item and then click on *Gateway ports*.

ComfortVIEW displays the Gateway Ports dialog box. Refer to Table and Figure 6-1a. The names of any communication ports that have been previously designated for use by an internal gateway are displayed.

2. In the Gateway Ports dialog box, click on one of the following, depending on whether you wish to configure a new port, modify an existing port's telephone number, or delete an existing port:

- To delete a port's modem designation, click on a port in the Select Gateway port list, and then on *Delete*

At the confirmation message, click on *Yes* to complete the deletion or on *No* to cancel.

- To modify a currently-configured port's telephone number, click on a port in the Select gateway list, and then on *Modify*.

The New Gateway Port dialog box will be displayed. Refer to Figure and Table 6-1b.

In the New Gateway Port dialog box, modify the telephone number, as desired.

- To configure a new port for use with a modem, click on *New*.

The New Gateway Port dialog box will be displayed. Refer to Figure and Table 6-1b.

In the New Gateway Port dialog box, click on the Gateway port drop down list to select the port to configure, and under Phone Number, enter the internal modem's telephone number.

Note: The internal modem telephone number is used in alarm processing. If you wish to receive alarms from a remote CCN when you are connected to it, you must enter this number.

- 3. Click on *OK* to exit the Gateway Ports dialog box and save the settings or on *Cancel* to exit the dialog box and restore previous settings.

Figure 6-1a
Gateway Ports
Dialog Box

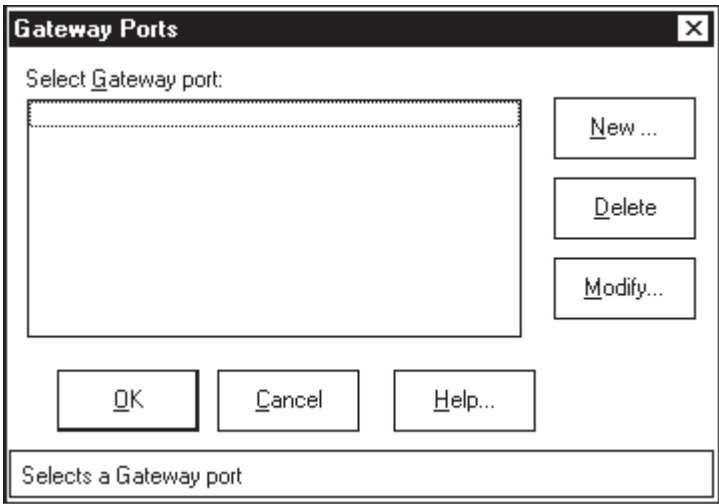


Table 6-1a
Gateway Ports
Dialog Box

Click on	To
New	configure a new port for use with a modem. The New Gateway Port dialog box will be displayed. Refer to Figure and Table 6-3.
A port in the Select Gateway port list	select an existing communication port for modification or deletion.
Delete	delete the selected port's modem designation.

(continued)

Table 6-1a
Gateway Ports
Dialog Box
(continued)

Click on	To
Modify	modify the telephone number of the selected port.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 6-1b
New Gateway Port
Dialog Box

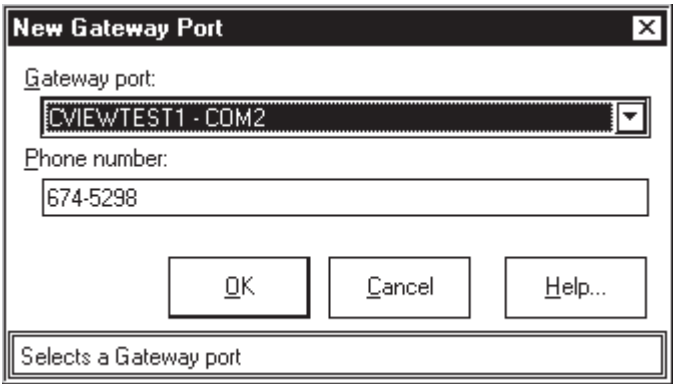


Table 6-1b
New Gateway Port
Dialog Box

Click on	To
the Gateway port drop down list	select the communication port to configure.
Phone number	enter or modify the internal modem's telephone number. Note: The internal modem telephone number is used in alarm processing. If you wish to receive alarms from a remote CCN when you are connected to it, you must enter this number.

(continued)

Table 6-1b
New Gateway Port
Dialog Box
(continued)

Click on	To
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

**Adding,
Modifying,
Deleting
Operators**

To Add a New Operator



To quickly and easily add a new ComfortVIEW operator, click on the Operator Profile toolbar wizard shown at left. The wizard guides you through the following setup functions:

- Setting up the operator profile (operator and login name, password, and alarm indication preference)
- Defining system access levels and assigning access levels to the operator
- Specifying alarm indication preferences.

To Modify an Existing Operator

To modify an existing ComfortVIEW operator, follow the instructions below.

Click on the *Administration* menu item and then click on *Operators*.

Note: You may also perform this command by clicking on the Modify Operator Profiles icon in the toolbar.

ComfortVIEW displays the Operator Configuration dialog box. The names of all existing ComfortVIEW operators display under *Select an Operator*.

Refer to Figure 6-2 and Table 6-2 for further instructions on using the Operator Configuration box.

1. In the Operator Configuration dialog box, use the mouse or the up or down arrow to select the operator to modify in the Select an Operator box.
2. Click on *Profile* to modify the operator's login name, operator name, password, start-up application, or alarm indication preferences. For step by step instructions, refer to Setting Up Operator Profiles, which appears later in this Setup chapter.
3. Click on *Access Level* to modify the set of operator's privileges for each of the areas in your CCN. For step by step instructions, refer to Assigning Access Levels to Operators, which appears later in this Setup chapter.
4. Click on *OK*.

To Delete an Existing Operator

1. In the Operator Configuration dialog box, use the mouse or the up or down arrow to select the operator to delete.
2. Click on the *Delete* button.
3. Follow Steps 1 and 2 for each operator that you wish to delete.
4. Click on *OK*.

Figure 6-2
Operator Configuration
Dialog Box

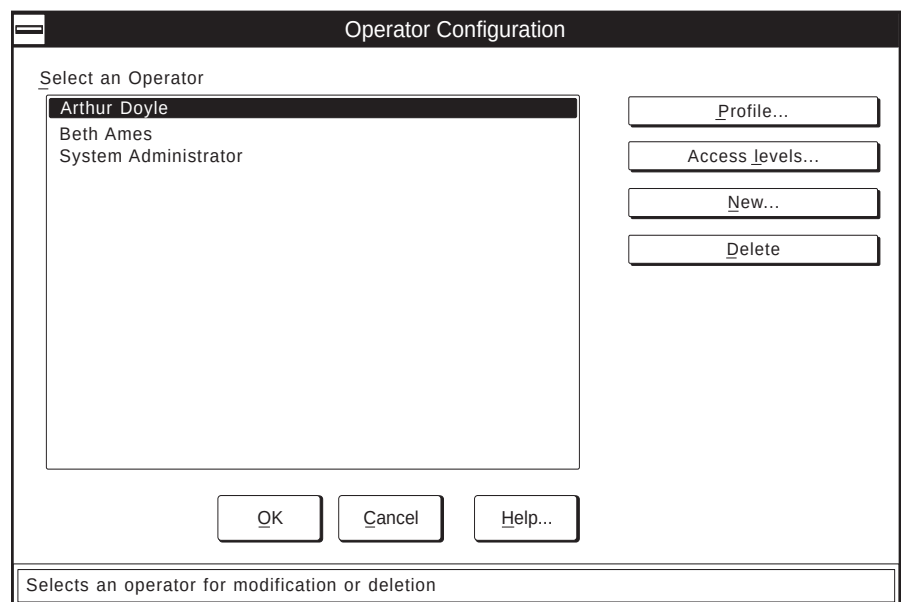


Table 6-2
Operator Configuration
Dialog Box

Click on	To
Select an Operator: list	select an operator to modify or delete.
Profile	display the Operator Profile dialog box. This box gives you the capability to modify the selected operator's login name, operator name, password, start-up application, or alarm indication preferences.
Access levels	display the Operator Access dialog box. This box gives you the capability to modify the selected operator's assigned privilege (access) levels.
New	display the Operator Profile dialog box. This box gives you the capability to add an operator to the system.
Delete	remove the selected operator from the system. ComfortVIEW displays a dialog box asking for confirmation before deleting the selected operator. Click on Yes to delete the operator, or click on No to prevent the deletion from taking place.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Defining System Access Levels

ComfortVIEW provides you with the capability to define and create customized access levels. You can create an access level and specify the ComfortVIEW operations allowed for that level. You then assign access levels to ComfortVIEW operators on an area by area basis.

For example, you can create an access level that has viewing privileges only. An operator that is assigned this access level will be able to view controller data but not change controller configuration in the specified areas.

For information on assigning levels to operators, refer to *Assigning Access Levels to Operators*.

Perform the following to create, modify, or delete an existing access level:

Click on the *Administration* menu item and then click on *Access Levels*.

ComfortVIEW displays the Customized Access Control dialog box. The names of all currently-configured access levels display under *Select an Access Level:*. As you select an access level, the names of the operations that this access level allows display in the lower left box. The lower right box displays the operations that this access level does not allow. You move functions between the left and right boxes to define or modify an access level.

Figure 6-3
Customized Access
Control Dialog Box

Customized Access Control

Select an Access Level:

All Operations

Setpoint Changes

Control Override Ability

Viewing Only

New...

Modify...

Delete

OK

Cancel

Help...

Access Level name:

Alarm Viewing

Allowed functions:

Alarm Indication

Alarm Viewing

<<Add

Remove>>

Available functions:

Alarm Acknowledgement

Alarm Management

Control Element Administration

Control Element Configuration

Custom Programming

Force/Auto Points

Setpoint Configuration

Time Schedule Configuration

View Data Displays

View/Print Reports

Save

Cancel

Selects an Access Level for modification or deletion

Table 6-3
Access Level Functions

Click on	To
Select an Access Level: list	select an access level to modify or delete.
New	create a new access level. Type the name of the new access level in the Access Level name box, select the function(s) from the Available functions list, and click on <<Add.
Modify	modify the selected access level. Select the function(s) you wish to add from the Available functions list, and click on <<Add. To remove a selected function from the Allowed functions list, click on Remove>>.
Delete	delete the currently-highlighted access level.
Save	save the new or modified access level. Note that the save will not apply until you click on OK.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.
Add	add selected Available functions: to the Allowed functions: list.
Remove	move selected Allowed functions: to the Available functions: list.

To Create a New Access Level

1. Click on *New* to create a new access level.
2. Type the name of the new access level in the Access Level Name box.
3. Select the functions to which this access level will be allowed from the Available functions list, and click on <<*Add*.

Note: Refer to Table 6-4 for a list of functions and their corresponding ComfortVIEW operations.

The selected functions will display in the Allowed functions list.

4. If you wish to remove a function from the Allowed functions list, select the function and click on *Remove*>>.
5. When the Allowed functions list contains the desired functions for this access level, click on *Save*.
6. Click on *OK* to close the dialog box and save the new access level.

To Modify or Delete an Existing Access Level

1. Select the access level from the list displayed under *Select an Access Level*:
2. Do one of the following, depending on whether you want to modify or delete an access level:
 - To modify an access level's associated functions, click on *Modify* and then follow Steps 3 to 6 under To Create a New Access Level.
 - To delete an access level, click on *Delete*.

ComfortVIEW displays a dialog box asking for confirmation before deleting the selected access level. Click on *Yes* to delete the access level or click on *No* to prevent the deletion from taking place.

Table 6-4
Access Level Functions

Function	Allows You
Alarm Acknowledgment	Based on area assignments and alarm filters, to: • acknowledge an alarm. • attach an operator note to an alarm.
Alarm Management	Based on area assignments and alarm filters, to: • delete selected alarms. • suppress nuisance alarms.
Alarm Viewing	Based on area assignments and alarm filters, to: • view and hear the alarm indicator. • view the pop-up dialog box containing a description of the most severe unacknowledged alarm. • view the alarm list. • update the alarm list to include the latest alarms. • sort the alarm list. • view operator notes. • print selected alarms. • attach a WorkSPACE to an alarm. • export selected alarms. Note: In order to receive alarms, you must also set up your individual alarm indication preferences and filters. For instructions, refer to Setting Up Operator Profiles and Specifying Operator Alarm Indication Preferences, which appear later in this Carrier Network Manager chapter.
Control Element Administration	Based on area assignments, to perform the following administration and setup procedures: • add, upload/download, configure, or delete a controller to/from ComfortVIEW database. • import and export controllers.

(continued)

Table 6-4
Access Level Functions
(continued)

Function	Allows You
Control Element Administration (continued)	• perform off-line configuration. • upload/download controller configuration. • initiate a CCN directory poll. • initiate CCN diagnostics.
Custom Programming	Based on area assignments, to: • use the custom programming environment.
Force/Auto Points*	Based on area assignments, to: • override (force) a controller's automatic control on any available point. • remove overrides (forces) on any available point and return the point to the controller's automatic control.
Setpoint Configuration*	Based on area assignments, to: • modify all setpoints for assigned buildings.
Time Schedule Configuration*	Based on area assignments, to: • modify all time schedules for assigned buildings.
View Data Displays	Based on area assignments, to: • view tabular displays of system element data. • view a set of predetermined system views. • create a WorkSPACE of system views — add, modify, delete WorkSPACE(s). • connect and disconnect to permitted remote CCNs.

* The View Data function will automatically be included when you select this function.

Setting Up Operator Profiles

You must specify a login name, operator name, password, start-up application, access level, and alarm indication preferences for every ComfortVIEW operator.

Follow the steps below to create or modify any operator's profile:

1. Display the Operator Configuration dialog box by clicking on the *Administration* menu item followed by clicking on *Operators*.

2. Click on *New* to add a new operator to the system, or

Click on *Profile* to modify the selected operator's profile information.

ComfortVIEW displays the Operator Profile dialog box.

3. Refer to Figure 6-5 and Table 6-5 for instructions on using the Operator Profile dialog box.

After entering all information, click on *OK*.

If you are adding a new operator, the Operator Access dialog box now displays. Refer to *Assigning Access Levels to Operators* for instructions on using this box.

If you are modifying an existing operator's profile, the Operator Configuration dialog box re-displays.

Setting Up Your Own Operator Profile

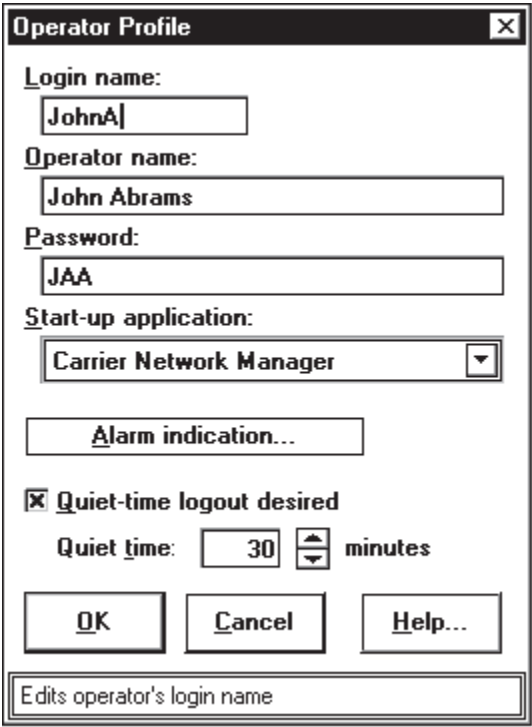
To create or modify your own operator profile:

1. Click on the *Administration* menu item.
2. Click on *Your profile*.



Note: You may also perform this command by clicking on the Modify Your Operator Profile icon in the toolbar.

Figure 6-5
Operator Profile Dialog
Box



The image shows a Windows-style dialog box titled "Operator Profile" with a close button (X) in the top right corner. The dialog contains several input fields and controls:

- Login name:** A text box containing "JohnA".
- Operator name:** A text box containing "John Abrams".
- Password:** A text box containing "JAA".
- Start-up application:** A dropdown menu showing "Carrier Network Manager".
- Alarm indication...** A button.
- Quiet-time logout desired:** A checked checkbox.
- Quiet time:** A numeric spinner box set to "30" followed by the text "minutes".
- Buttons:** "OK", "Cancel", and "Help..." buttons at the bottom.
- Status bar:** A small box at the very bottom containing the text "Edits operator's login name".

Table 6-5
Operator Profile Dialog
Box

Click on	To
the Login name text box	type your operator login name (up to eight characters).
the Operator name text box	type your full operator name (up to 48 characters).
the Password text box	type your login password (up to 16 characters). Note that this text is case sensitive. For example, if you type the characters here in all upper case letters, you must always login with all upper case letters.
Start-up application	select the ComfortVIEW application that automatically launches on login.

(continued)

Table 6-5
Operator Profile Dialog
Box
(continued)

Click on	To
Alarm indication	set up your visual and audible alarm indication preferences. ComfortVIEW displays the Alarm Indication Preferences dialog box. For instructions on using this box, refer to Specifying Operator Alarm Indication Preferences, which appears later in this Setup chapter.
Quiet-time logout desired	enable or disable this feature, which monitors the PC for an operator-specified period of inactivity and then automatically logs out the current ComfortVIEW operator.
Quiet time	enter the number of minutes of inactivity that must pass prior to automatic ComfortVIEW logout. One minute prior to the execution of auto logout, a dialog box, which is accompanied by a "beep," will be displayed warning of the pending logout. A countdown timer is included. Any unsaved data will be lost and outstanding remote CCN and RAS connections will be dropped prior to the logout.
OK	close the dialog box and save changes made. If you are adding a new operator, ComfortVIEW then displays the Operator Access dialog box. Select the access levels for this operator. For instructions on using this box, refer to Assigning Access Levels to Operators, which appears later in this Setup chapter.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Assigning Access Levels to Operators

You must assign access or privilege levels to every ComfortVIEW operator. You can assign access levels to operators on an area by area basis. For example, if you have two access levels named Control Element Configuration and Passive Monitor (each with different access privileges), you could give an operator Control Element Configuration access for one area in your CCN, and Passive Monitor access for another area.

For information on creating access levels, refer to Defining System Access Levels (which appears earlier in this chapter).

Follow the steps below to assign an operator's access levels.

Note: If you are adding a new operator to the system, the Operator Access dialog box automatically displays after you click on the Operator Profile dialog box's *OK* button. Skip to Step 3 below.

1. Display the Operator Configuration dialog box by clicking on the *Administration* menu item followed by clicking on *Operators*.
2. Click on *Access levels* to modify the selected operator's access levels.

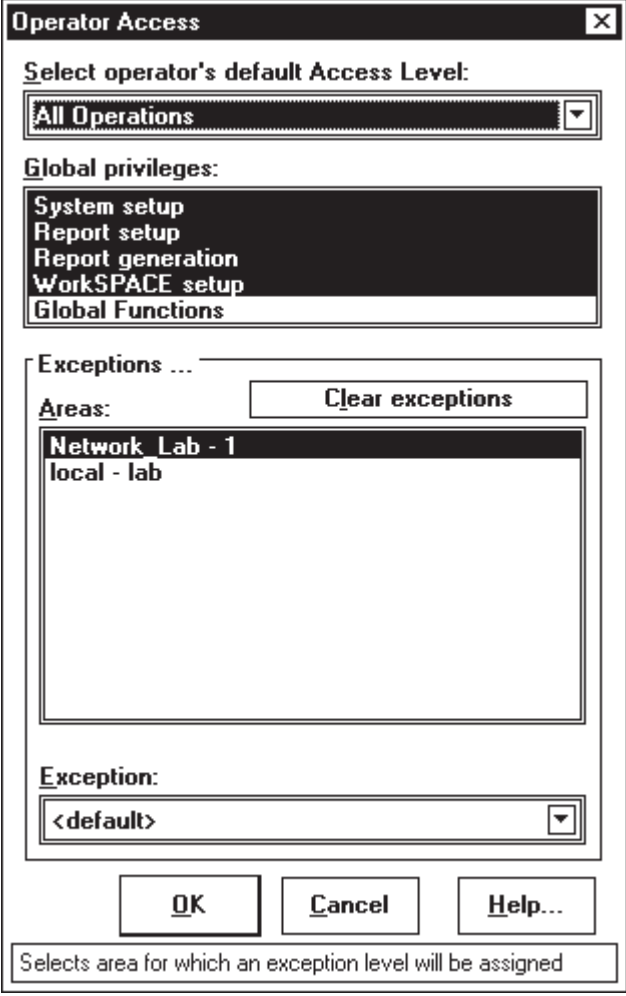
ComfortVIEW displays the Operator Access dialog box.

3. Refer to Figure 6-6 and Table 6-6 for instructions on using this dialog box.
4. Click to enable or disable the following privileges: *System setup*, *Report setup*, *Report Generation*, and *Workspace setup*. Refer to Table 6-6 for a description of specific operations associated with these privileges.
5. Select the operator's default access level from the drop down list box. The operator will by default be assigned this access level for all areas with the exception of those areas listed in the Exceptions list.
6. In the Exceptions Areas list, select the areas for which you wish to assign an access level that is different from the default access level.

As you select an area, the area's currently assigned access level displays in the Exception: list at the bottom of the dialog box. If you wish to change an area's access level, select the new access level from the Exception: drop down list.

7. Once you have made your access level assignments, click on **OK**. This closes the dialog box and saves your settings.

Figure 6-6
Operator Access Dialog
Box



The dialog box is titled "Operator Access" and contains the following sections:

- Select operator's default Access Level:** A dropdown menu currently showing "All Operations".
- Global privileges:** A list box containing "System setup", "Report setup", "Report generation", "WorkSPACE setup", and "Global Functions".
- Exceptions ...**: A section containing:
 - Areas:** A list box with "Network Lab - 1" and "local - lab". A "Clear exceptions" button is located to the right of this list.
 - Exception:** A dropdown menu currently showing "<default>".

At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help...". A status bar at the very bottom reads: "Selects area for which an exception level will be assigned".

Table 6-6
Operator Access Dialog
Box

Click on	To
Select operator's default Access Level:	select the privilege level that the operator will have for all areas in your CCN with the exception of those areas listed in this dialog box under Exceptions. Clicking on the down arrow displays all existing access levels. Select an access level from this list.
Global Privileges:	
System setup	enable/disable system setup privileges. These privileges include access to the following operations: • operator configuration and preferences. For example, adding, modifying, and deleting operators —name and password assignments, quiet time for auto logoff, access level creation, modification, and deletion, alarm annunciation and viewing criteria including setting up alarm filters. • alarm administration. For example, creating custom alarm messages, specifying alarm printing criteria, WorkSPACE/alarm condition relationships. • ComfortVIEW Setup application. For example, alarm printer-location and options, LAN computer names, global report data retrieval settings. • CCN administration. For example, adding, modifying, and deleting CCNs, areas, including setting PC address and baud rate, alarm acknowledgment capability.

(continued)

Table 6-6
Operator Access Dialog
Box
(continued)

Click on	To
Report setup	enable/disable report setup privileges. These privileges include access to the following operations: • creating report definitions. • install optional and custom reports. • configure reports that have custom groupings of data — consumable, runtime, history.
Report generation	perform the following operations: • generate, view, and print any report —standard, optional, or custom.
WorkSPACE setup	enable/disable WorkSPACE setup privileges. These privileges allow you to create and modify WorkSPACES ViewSPACES, and trends.
Global functions	enable/disable access to the following Global Function Manager operations: • configure timed forces, central time schedules, point transfers, and holiday tables.
the Exceptions Areas list	select each area that you wish to assign a different access level than the default access level that is specified in the Select operator's default Access Level box. As you select an area, the area's currently-assigned access level displays in the Exception: list at the bottom of the dialog box. Initially, all areas are assigned to the default access level. If you wish to change the access level, select the new access level for this area from the Exception: drop down list.

(continued)

Table 6-6
Operator Access Dialog
Box
(continued)

Click on	To
Clear Exceptions	re-set all Exception Areas to the default access level.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Specifying Operator Alarm Indication Preferences

You can configure the method by which ComfortVIEW notifies an operator of the existence of unacknowledged alarms, alerts, return to normals, or user-specified critical alarm conditions. ComfortVIEW can notify an operator in one of the following manners:

- A "beep" sounds or a user-specified sound file plays with no visual indication
- A flashing icon displays on top of any window that you are currently viewing
- A pop-up window displays on top of any window that you are currently viewing.

ComfortVIEW also gives you the capability to:

- set up alarm filters that specify families of alarms to be presented to each ComfortVIEW operator.
- specify which alarms are to be treated as critical alarms.
- enable or disable full-screen critical alarm indication.
- customize your audible alarm indication "beep" tones.
- specify a sound file (.wav format) to play on receipt of an alarm, alert, return to normal, or critical alarm.

Note: The sound file must not have a file name in excess of 8 characters.

Follow the steps below to set up or modify operator alarm indication preferences:

1. Display the Operator Configuration dialog box by clicking on the *Administration* menu item followed by clicking on *Operators*.
2. Select the operator whose preferences you wish to access.
3. Click on *Profile*.
4. Click on *Alarm indication*.

ComfortVIEW displays the Alarm Indication Preferences dialog box.

5. Specify visual and audible alarm indication preferences, or click on *Defaults* to select the pre-programmed default options.

Refer to Figure 6-7 and Table 6-7 for instructions on using this dialog box.

6. Once you have specified alarm indication preferences, click on *OK*. This closes the dialog box and saves the settings.

Note: ComfortVIEW includes a new feature that gives you the ability to override this audible indication and play a specified .wav file on the occurrence of specific alarms from specific system elements and points. For more information on this feature, refer to Assigning Custom Messages to Incoming Alarms in the Alarm Manager chapter of this manual.

Specifying Your Own Alarm Indication Preferences

To create or modify your own current alarm indication preferences:

1. Click on the *Administration* menu item.
2. Click on *Your profile*.



Note: You may also perform this command by clicking on the Modify Your Operator Profile icon in the toolbar. You cannot, however, modify alarm filters when you are modifying from Your Profile.

Specifying Alarm Indication Preferences for Logged Out ComfortVIEW Workstations

If you have system setup privilege, you can use the Administration menu's Logout state command to specify alarm indication preferences for all logged out ComfortVIEW workstations. Whenever any ComfortVIEW operator logs out, the logged out ComfortVIEW workstation will indicate (annunciate) alarms as specified here. When an operator logs back in, alarm indication will be guided by the operator's personal alarm preferences that are specified using the Administration menu's Operators command.

1. Display the Alarm Indication Preferences dialog box by clicking on the *Administration* menu item followed by clicking on *Logout state*.
2. Refer to Figure 6-7 and Table 6-7 for instructions on using this dialog box.

Figure 6-7
Alarm Indication
Preferences Dialog Box

Alarm Indication Preferences [X]

Critical alarm threshold: [I] [v] [Filters...] [Defaults]

Visual indication ...

☐ None
☒ Flashing icon
☐ Popup window
☐ Enable visual critical alarm indication

Audible indication ...

☒ Enable audible indication
 Audible alarm...
 Audible alert...
 Audible return to normal...
☐ Enable audible critical alarm indication
 Audible critical alarm...

[OK] [Cancel] [Help...]

Table 6-7
Alarm Indication
Preferences Dialog Box

Click on	To
Critical alarm threshold	specify the level of critical alarms. Alarm levels range from 0 to 6 with Level 0 alarms being more severe than Level 6 alarms. If ComfortVIEW recieves an alarm with a level that is less than or equal to the value entered here, ComfortVIEW displays a full-screen pop-up window on top of any window that you are currently viewing. In addition to specifying this alarm level, you must also click on <i>Enable visual critical alarm indication</i> .
Filters	specify the alarms to be presented to this operator. The Alarm Filters dialog box is displayed. Use this box to specify the families (area, element, and level) of alarms that this operator will receive. For more information on this dialog box, refer to the Alarm Filters Dialog Box figure and table below.
None, Flashing icon, or Pop-up window	indicate your preference for visual alarm indication. If you click on: • <i>None</i> — ComfortVIEW produces no visual indication of the existence of alarms/alerts. • <i>Flashing icon</i> — ComfortVIEW displays a flashing alarm icon on top of any window.

(continued)

Table 6-7
Alarm Indication
Preferences Dialog Box
(continued)

Click on	To
None, Flashing icon, or Pop-up window (<i>cont.</i>)	• <i>Pop-up window</i> — a small pop-up window displays on top of any window that you are currently viewing. For more information on alarm indication, refer to Viewing New and Unacknowledged Alarms in the Alarms chapter of this manual.
Enable visual critical alarm indication	activate/de-activate full-screen pop-up window visual indication of critical alarms. You must also specify critical alarm levels by selecting a value from the Critical alarm threshold pull-down list. Note: Visual critical alarm pop-up windows will not display if there is currently an unacknowledged pop-up alarm window.
Enable audible indication	activate/de-activate audible alarm/alert indication. Then click on <i>Audible alarm</i>, <i>Audible alert</i>, or <i>Audible return to normal</i> to specify each alarm type's "beep" tone or sound file. The Audio Configuration dialog box will be displayed. Refer to Figure 6-10 and Table 6-10 for instructions on using this box.
Enable audible critical alarm indication	activate/de-activate the specific audible indication for critical alarms. Then click on <i>Audible critical alarm</i> to specify the "beep" tone or sound file for critical alarms. If you de-activate this feature, ComfortVIEW will generate the tone specified for

(continued)

Table 6-7
Alarm Indication
Preferences Dialog Box
(continued)

Click on	To
	alarms on receipt of a critical alarm. The Audio Configuration dialog box will be displayed. Refer to Figure 6-10 and Table 6-10 for instructions on using this box.
Defaults	select the following default alarm indication preferences: • critical alarm threshold — 0 • visual indication — flashing icon • visual critical alarm indication — disabled • audible alarm indication — enabled • customized audible indication for — alarms • audible critical alarm indication — disabled
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 6-8
Alarm Filters Dialog Box

Alarm Filters

Filter:

Alarm filter 0

Alarm filter 1

Alarm filter 2

Alarm filter 3

Alarm filter 4

Alarm filter 5

Alarm filter 6

Area:

%

Element:

%

Level:

Any

☒ Enable this filter

Reset

OK

Cancel

Help...

Table 6-8
Alarm Filters Dialog Box

Click on	To
Filter	select an alarm filter number from the drop down list. There are 25 unique filters that you can set up and assign to a single operator. These filters are for this operator only. Use the down arrow key to scroll through the list of filters. If a filter is already configured, its associated area, element, and level display in the respective text boxes.

(continued)

Table 6-8
Alarm Filters Dialog Box
(continued)

Click on	To
	ComfortVIEW compares incoming alarms to your specified criteria and establishes which alarms are routed to which operators using the following rules: ComfortVIEW begins by identifying criteria that might qualify the alarm for routing. One possibility that will qualify is an exact match between your user-defined criteria and the incoming alarm. Other possibilities involve any wildcards that you use to specify criteria. An incoming alarm must satisfy each of the three user-defined criteria before the incoming alarm will be routed to any operator. Refer to Table 6-9 for a list and explanation of allowed wildcards.
Area text box	enter an up to 48 character name of the area whose alarms you wish this operator to receive. Note: This name must match the area name exactly as it appears in the System Overview window (including case). Enter the % wildcard to receive alarms from all areas.
	display the Speedy Data Entry dialog box where you can quickly and easily select the area, element, category, table, and point whose alarms you wish to present to this operator. This dialog box is described in the Speedy Data Entry section of this manual's Carrier Network Manager chapter.
Element text box	enter an up to eight character element name of the CCN system element whose alarms you wish this operator to receive.

(continued)

Table 6-8
Alarm Filters Dialog Box
(continued)

Click on	To
	Note: This name must match the system element name exactly as it appears in the Controller List window (including case). Enter the % wildcard to receive alarms from all system elements.
Level	enter the level of alarms you wish this operator to receive. Clicking on the Down arrow gives you these choices: <i>Alarm</i>, <i>Alert</i>, <i>Return to Normal</i>, <i>Any</i>. Click on the desired level, or on <i>Any</i> to select all levels. If multiple levels are required (but not <i>Any</i>), create duplicate filters each with its own level. Note: You can specify the Area or Element criteria using wildcards within the text of the area or element name. Refer to Table 6-9 for a list and explanation of allowed wildcards.
Enable this filter	activate the selected alarm filter number. The operator will now receive alarms matching the filter's associated area, element, and level.
Reset	clear all alarm filters.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Table 6-9
Wildcards

Wildcard Symbol	Meaning
_ (underscore)	takes the place of any single character. Example: Specifying <i>United Mutual Insurance - Building #_</i> for the area name means that any incoming alarms from controllers in an area where the first 36 characters are <i>United Mutual Insurance - Building #</i>, will be acceptable as a match for the area name. Acceptable matches for this example might be: • United Mutual Insurance - Building #1 • United Mutual Insurance - Building #2 • United Mutual Insurance - Building #A • United Mutual Insurance - Building #B
%	takes the place of one or more characters. Example: Specifying <i>United Mutual Insurance%</i> for the area name means that any incoming alarms from controllers in an area that has <i>United Mutual Insurance</i> as the first 23 characters will be acceptable as a match for the area name. Acceptable matches for this example might be: • United Mutual Insurance - Building #1 • United Mutual Insurance - Chillers • United Mutual Insurance - Physical Plant • United Mutual Insurance - Air Handlers Note: Entering % without any accompanying characters in the Area or Element text box allows you to receive alarms from all areas or system elements.

Figure 6-10
Audio Configuration
Dialog Box

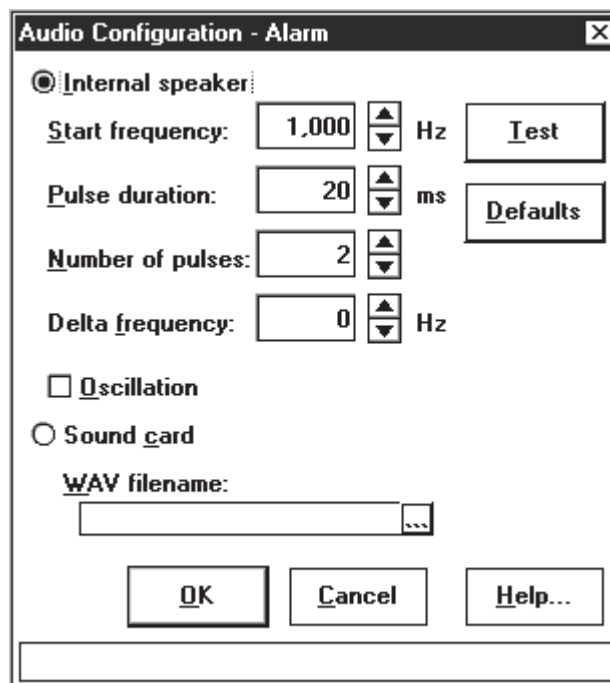


Table 6-10
Audio Configuration
Dialog Box

Click on	To
Internal speaker	use the PC's internal speaker to produce an audible indication of the specified alarm type. To configure an exact tone, use the Start frequency, Pulse duration, Number of pulses, Delta frequency, Oscillation, and Test edit boxes. Note: For ComfortWORS for Windows 9x clients, audible indication is determined differently. If the 9x computer contains a sound card, you must specify a sound Name for the Default Beep in the Control Panel's Sounds Properties dialog box in order to receive any audible alarm indication. If there is no sound card, the alarm tone will default to the standard system beep tone.

(continued)

Table 6-10
Audio Configuration
Dialog Box
(continued)

Click on	To
Start frequency	set the audible alarm "beep" tone's starting frequency (37 to 32000 Hz)
Pulse duration	set the length of each pulse (0 to 1000 ms)
Number of pulses	set the audible alarm tone's total number of pulses (0 to 10)
Delta frequency	set the increment to be applied to each pulse (-2000 to 2000)
Oscillation	enable/disable an oscillation effect
Test	produce a sample tone based on current parameters
Defaults	select the internal speaker tone default parameters specified below: Start frequency: 1000 Hz Pulse duration: 20 ms Number of pulses: 2 Delta frequency: 0 Hz Oscillation: disabled
Sound card	use the PC's sound card to play the specified .wav file as an audible indication of the selected alarm type.
WAV filename	enter the filename of the .wav sound file to be played on the occurrence of the selected alarm type. This file must be located in the \MEDIA\WAVES directory in the \CVIEW, \CWORKS, or other directory in which you installed ComfortVIEW on your server machine. You can also click on the  button and select a filename. Note: The sound file must not have a file name in excess of 8 characters.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Specifying Alarm Printers

ComfortVIEW gives you the capability to define families of alarms that will be automatically printed to specific ComfortVIEW printers. You define alarm families by setting up alarm filters that specify the Area, Element, and Level for incoming alarms. You then assign alarm filters to specific printers. The alarms will print on occurrence to the specified printer(s).

ComfortVIEW compares incoming alarms to your specified criteria and establishes which alarms get routed to which printers using the following rules: ComfortVIEW begins by identifying criteria that might qualify the alarm for routing. One possibility that will qualify is an exact match between your user-defined criteria and the incoming alarm. Other possibilities involve any wildcards that you use to specify criteria. An incoming alarm must satisfy each of the three user-defined criteria before the incoming alarm will be routed to any printer. Refer to Table 6-9 for a list and explanation of allowed wildcards.

Follow the steps below to set up alarm filters and assign filters to printers:

1. Click on the *Administration* menu item and then click on *Alarm printers*.

ComfortVIEW displays the Alarm Printers dialog box. The names of all ComfortVIEW printers, the computer name, and printer port that controls the printer display under *Select a printer*. You add printers to this list using ComfortVIEW Setup application.

2. Select a printer from the Select a Printer: box, and then click on *Filters*.

ComfortVIEW displays the Alarms Filters dialog box.

3. You must now select an alarm filter number from the Filter drop down list. There are 25 unique filters that you can set up and assign to a single printer. Select this field and then use the down arrow key to scroll through the list of existing filters.

If a filter is already configured, its associated area, element, and level criteria display in the respective text boxes.

4. To modify an existing or enter a new Area click on the ... button that is located to right of the Area box.

ComfortVIEW displays the Speedy Data Entry dialog box.

5. In the Speedy Data Entry dialog box, select the Area and system element whose alarms you wish this printer to receive.

If desired, you can filter alarms from specific categories, tables, and points by selecting from the corresponding drop down lists.

6. Select the level of alarms you wish this printer to receive from the Level drop down list. Clicking on the Down arrow gives you these choices: Alarm, Alert, Return to Normal, *. Click on the desired level, or on * to select all levels.

Note: You can specify the Area, Element, or Level criteria using wildcards. Refer to Table 6-9 for a list and explanation of allowed wildcards.

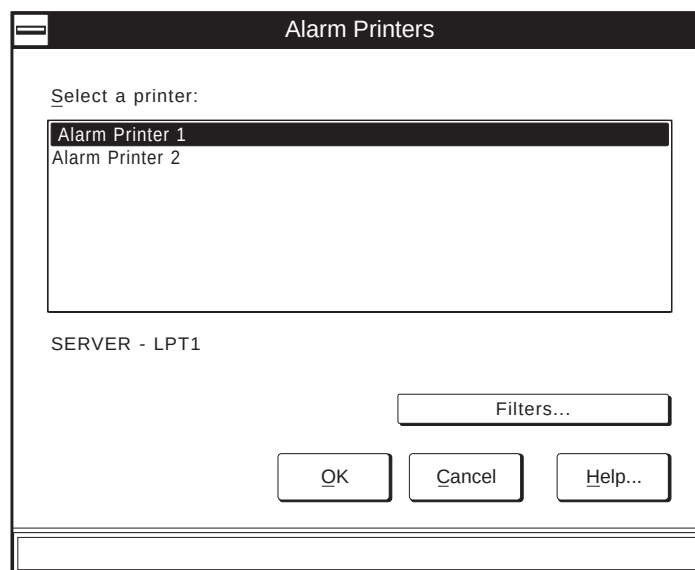
7. Click on *Enable this filter* to assign the selected filter's alarms to the selected printer.

8. Click on *OK* to close the dialog box and save changes made or

Click on *Cancel* to exit the dialog box and restore the previous settings.

Note: Clicking on *Reset* clears all alarm filters. You must specify new alarm filters for this printer to receive alarms.

Figure 6-11
Alarm Printers Dialog Box



Defining ComfortVIEW Local Area Network Workstations

When you connect ComfortVIEW workstations via a local area network (LAN), you must enter all server and client computer names in the Setup Workstations dialog box. ComfortVIEW uses these computer names to link clients and servers and to send data between ComfortVIEW workstations on the LAN.

Note: To allow a remote ComfortVIEW workstation to dial into a ComfortVIEW server, you must enter the remote ComfortVIEW computer name in the server's Setup Workstations dialog box.

Follow the steps below to add or delete LAN workstations:

1. Display the Setup window. If necessary, refer to *Launching the Setup Application*.
2. Click on the *Setup* menu item and then click on *Workstations*. ComfortVIEW displays the Setup Workstations dialog box shown in Figure 6-12. This dialog box displays the names of all ComfortVIEW workstations.

To Add a New Workstation

1. Click on *New*.
The New Workstation dialog box will be presented. Refer to Figure 6-13.
2. Enter the computer name of the ComfortVIEW workstation, and then click on *OK*.

Note: This is the computer name that was specified during Windows installation. This name is displayed in the title of the Program Manager window between the text *Program Manager -* and the \. The computer name must not contain blanks.

The Setup Workstations dialog box re-displays. The new computer name appears in the Workstations list in alphabetical order.

3. Repeat Steps 1 and 2 until you have entered the names of all ComfortVIEW LAN workstations in the Setup Workstations dialog box.

Note: If you change any computer name using Windows, you must add the new name in this dialog box before you delete the old name in Windows.

To Delete an Existing Workstation

- 1. In the Workstations list, click on a computer name.
- 2. Click on *Delete*.

ComfortVIEW deletes the selected workstation and re-displays the Setup Workstations dialog box.

Figure 6-12
Setup Workstations
Dialog Box

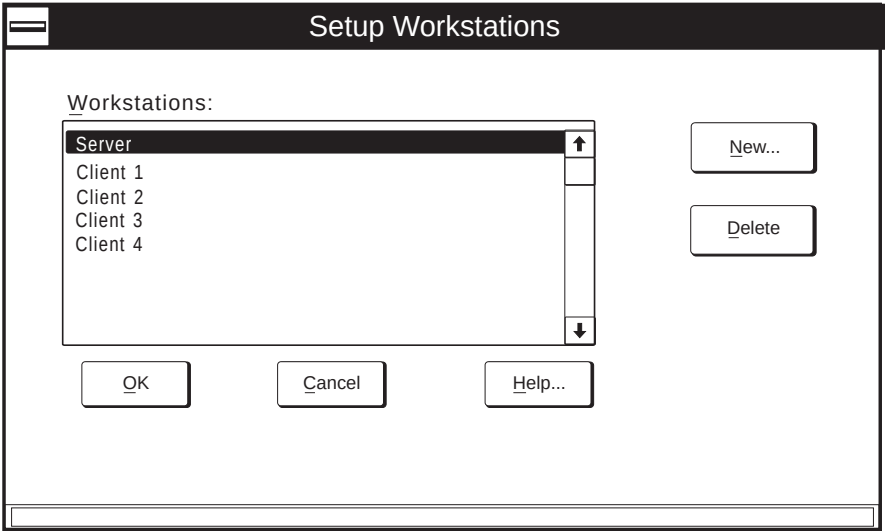


Table 6-12
Setup Workstations
Dialog Box

Click on	To
a computer name in the Workstations list	select a workstation to delete.
New	to add a new workstation to the Workstations list. ComfortVIEW displays the New Workstation dialog box. For instructions on completing this dialog box, refer to Figure 6-13 and Table 6-13.
	Note: The Setup Workstations dialog box is typically used when ComfortVIEW workstations are operating on a local area network or as a dial-in connection.
Delete	delete the selected workstation from the Workstations list.

(continued)

Table 6-12
Setup Workstations
Dialog Box
(continued)

Click on	To
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 6-13
New Workstation
Dialog Box

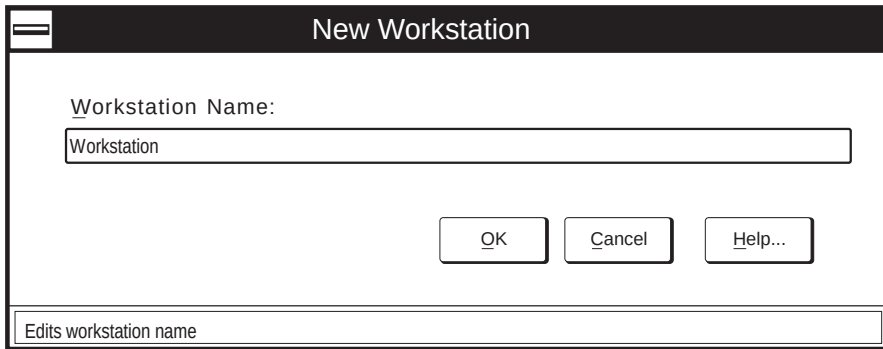


Table 6-13
New Workstation
Dialog Box

Click on	To
Workstation name: text box	enter the new computer name. Note: This is the computer name that was specified during Windows installation. This name appears as the Computer Name in the Control Panel's Network dialog box under the Identification tab. (For Win 2000, select <i>Network and Dial-up Connections</i> , <i>Advanced menu items</i> , <i>Network Identification</i> , followed by the <i>Network Identification</i> tab.) The computer name must not contain blanks.
K	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Defining ComfortVIEW Alarm Printer Names and Port Locations

ComfortVIEW gives you the capability to define families of alarms that will be routed to specific printers. You define the families using the Carrier Network Manager application.

Follow the steps below to specify ComfortVIEW alarm printers. These are the printer names that will appear in the Alarm Printers dialog box that displays when you click on the Carrier Network Manager's *Administration* menu item and the *Alarm Printers* command.

1. Display the Setup window. If necessary, refer to Launching the Setup Application.
2. Click on the *Setup* menu item and then click on *Alarm Printers*.

ComfortVIEW displays the Setup Alarm Printers dialog box shown in Figure 6-14. This dialog box displays the names of all alarm printers.

To Add a New Printer

1. Click on *New*.

The New Printer dialog box will be presented. Refer to Figure 6-15.

2. Enter a name for the alarm printer.
3. Click on the *Port:* drop down list and select the computer and port to which the printer is connected. If your ComfortVIEW workstations are connected via a local area network (LAN), the Port list will include all active ports on your Windows NT network. If you are not on a LAN, the list will include all active ports on your computer.
4. Click on *OK* to save the data, or on *Cancel* to exit without saving changes.

The Setup Printers dialog box re-displays. The new printer name appears in the Printers list in alphabetical order.

5. Repeat Steps 1 to 4 until the Setup Printers dialog box includes the names of all ComfortVIEW alarm printers.

You now must use the Alarm Printers command in the Setup application's Administration Menu to assign alarms to specific ComfortVIEW printers.

To Delete an Existing Printer

- 1. In the Printers list, click on a printer name.
- 2. Click on *Delete*.

ComfortVIEW deletes the selected printer and re-displays the Setup Printers dialog box.

Figure 6-14
Setup Printers
Dialog Box

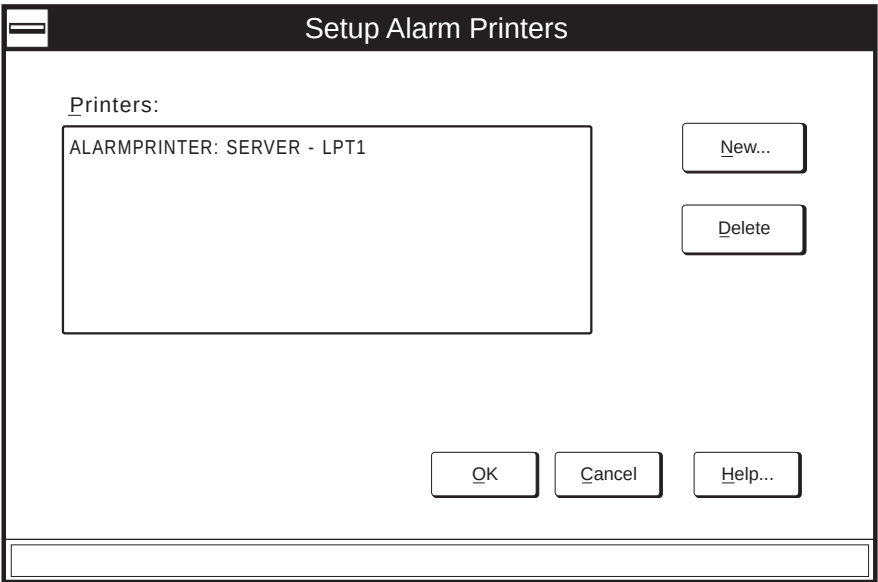


Table 6-14
Setup Printers
Dialog Box

Click on	To
New	to add a new printer to the Printers list. ComfortVIEW displays the New Printers dialog box. For instructions on completing this dialog box, refer to Figure 6-15 and Table 6-15.
Delete	delete the selected printer from the Printers list.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 6-15
New Printer Dialog Box

Table 6-15
New Printer Dialog Box

Click on	To
Printer name text box	enter the new printer name.
Port drop down list	select the computer and port to which the printer is connected.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Defining Custom Engineering Units

Follow the steps below to define custom analog and discrete engineering units. These units will display along with points in FIDs and Comfort Controllers.

1. Display the Setup window. If necessary, refer to Launching the Setup Application.
2. Click on the *Setup* menu item and then click on *Custom units*.

ComfortVIEW displays the Custom Units/Discrete States dialog box. Refer to Table 6-16 and Figure 6-16.

3. Follow the Defining Discrete States and the Defining Analog States instructions below. Then click on *OK* to exit the dialog box and save your changes.

To assign the custom engineering units to FID points, enter the number that corresponds to the desired engineering unit in the Display Units decision that appears in the FID's service configuration table. For an explanation of this decision, refer to the *UT203 FID Overview and Configuration Manual*.

To assign custom engineering units to Comfort Controller points, select the desired engineering unit from the sensor type/units/state drop down list that appears in the Carrier Network Manager's Object Definition dialog box. Note that when using the Building Supervisor, the Network Service Tool, or another interface device to view Comfort Controller points that have been assigned custom units, the units will appear blank.

Defining Discrete States

In the left discrete states column, enter the state that signifies an open contact. In the right discrete states column, enter the state that signifies a closed contact.

Note: For DI devices, it is assumed that the FID's Sensed Discrete Logic Type decision is set to Standard Logic. For DO devices, this assumes that the Output Signal decision is set to Straight Logic.

Defining Analog Units

In the Analog units text box, enter the name for the analog unit.

Table 6-16
Custom Units/Discrete
States Dialog Box

Click on	To
the Analog units text box	enter the name for the analog unit.
the Discrete states left column	enter the state that signifies an open contact.
the Discrete states right column	enter the state that signifies a closed contact.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 6-17
Custom Units/Discrete
States Dialog Box

Custom Units/Discrete States

Analog units:		Discrete states (0,1):	
176		26	
177		27	
178		28	
179		29	
180		30	
181		31	
182		32	
183		33	
184		34	
185		35	
186		36	
187		37	
188		38	
189		39	
190		40	
191		41	

OK

Cancel

Help...

Edits custom analog units

Specifying Global System Parameters

Follow the steps below to specify the following global system parameters:

- Metric or customary US units (fixed setting chosen at installation)
- Time of day at which to automatically retrieve accumulated report data from your CCN options
- Period of time to retain accumulated report data in your ComfortVIEW database
- Number of times to re-try report data retrieval should a failure occur.
- Disable/enable of automatic alarm deletion, including purge filename and threshold.
- Disable/enable of system activity event logging, length of time to retain system activity events in your ComfortVIEW database, and automatic ComfortVIEW log in option.

Note: Changes to the automatic data retrieval time, report data retention period, and number of retries parameters will take effect at the top of the hour.

1. Display the Setup window. If necessary, refer to Launching the Setup Application.
2. Click on the *Setup* menu item and then click on *Globals*.
ComfortVIEW displays the Setup Globals dialog box shown in Figure 6-18.
3. Under the Data retrieval tab, in the Time at which to retrieve data: box, enter the hour of day for automatic data retrieval of report data.

ComfortVIEW Report Panel application will automatically retrieve report data from your CCN options at ten minutes past the hour specified. You may also click on the up or down arrow to increment or decrement the displayed hour. For additional information on automatic data retrieval, refer to the Report Panel chapter of this manual.

4. In the Number of data retrieval retries box, enter the number of times to re-try automatic report data retrieval. Should a failure occur that interferes with timed data retrieval, ComfortVIEW will re-try data retrieval every minute for the

number of times specified. You may also click on the up or down arrow to increment or decrement the displayed value.

5. In the Data Retention Period text box, enter the number of days that ComfortVIEW will retain retrieved report data in its database. You can generate reports using the retained data until the end of this retention period. At the end of the retention period, the data will be automatically deleted. Only retrieved report data (for example, consumable, runtime, and history data) is subject to this purging. Tab-separated report files that are saved to the database as a result of a report generation process are not affected.

Note: Valid entries range from 0 to 99 days. Entering 0 causes the report data to be retained as long as ComfortVIEW has disk space to store it. You are cautioned against doing this, as it could eventually fill up the ComfortVIEW database.

6. Click on the *System activity* tab to access the system activity logging and automatic ComfortVIEW login options. Refer to Table 6-18 for additional information on these options.
7. Click on the *Alarm purge* tab to access the automatic alarm archiving options. Refer to Table 6-18 for additional information on these options

Figure 6-18
Setup Globals Dialog Box

The screenshot shows the 'Setup Globals' dialog box with the 'Data retrieval' tab selected. The dialog has a title bar with a close button. Below the title bar is a checkbox labeled 'Metric ComfortWORKS'. The main area contains three tabs: 'Data retrieval' (selected), 'System activity', and 'Alarm purge'. Under the 'Data retrieval' tab, there are three settings, each with a text box and up/down arrow controls: 'Time at which to retrieve data:' with the value '2:10:00AM', 'Number of data retrieval retries:' with the value '0', and 'Data Retention Period:' with the value '14' followed by the text 'days'. At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help...'. There is also an empty text box at the very bottom of the dialog.

Table 6-18
Setup Globals Dialog Box

Click on	To
Data Retrieval Tab: the Time at which to retrieve data box	enter the hour of day for automatic retrieval of report data and, optionally, automatic alarm purging. ComfortVIEW Report Panel applica- tion will automatically retrieve report data from your CCN options at ten minutes past the hour specified. You may also click on the up or down arrow to increment or decrement the displayed time. For additional infor- mation on automatic data retrieval, refer to the Report Panel chapter of this manual.
the Number of data retrieval retries data box	enter the number of times to re-try automatic report data retrieval should a failure occur. You may also click on the up or down arrow to increment or decrement the displayed value. Valid entries range from 0 to 5.
the data retention period data box	enter the number of days that you wish to retain accumulated report data in your ComfortVIEW database. At the end of the retention period, the data will be automatically deleted. You can generate reports using the retained data until the end of this retention period. Only retrieved report data (for example, consumable, runtime, and history) is subject to this purging. Tab- separated report files that are saved to the database as a result of a report generation process are not affected.

(continued)

Table 6-18
Setup Globals Dialog Box
(continued)

Click on	To
System Activity tab: Log system activity events	specify whether system activity events will be tracked for use in the System Activity Report. System activity events include things such as logins and logouts, alarm deletions, and alarm acknowledgements. Refer to Appendix A of this manual for a complete list of all system activity events.
Event retention period	specify the number of days that system activity report data will be retained in your ComfortVIEW database. At the end of the retention period, the data will be automatically deleted. You can generate System Activity reports using the retained data files until the end of this retention period.
Automatic login	specify whether you want automatic ComfortVIEW login as part of Windows login, thus eliminating the need for two logins. Enabling this option and setting your Operator Profile dialog box's Login name to match (including case sensitivity) your Windows local username (that you can access in the Windows User Manager) will allow you to be automatically logged into ComfortVIEW whenever you log into Windows on the current workstation. Note that the ComfortVIEW password is not used when this option is selected.

(continued)

Table 6-18
Setup Globals Dialog Box
(continued)

Click on	To
Alarm Purge tab:	
Enable alarm purge	enable or disable the automatic alarm archiving and deletion option.
Alarm purge filename	specify the filename to which the purged alarms will be appended.
Threshold at which purge occurs	enter the alarm purge limit. At the designated data retrieval time, if the number of alarms is greater than or equal to this value, ComfortVIEW purges the oldest <i>n</i> alarms from the database, where <i>n</i> is calculated based on the current number of alarms minus the value entered in the Number of alarms to leave in database decision. The alarms are converted into standard ASCII format and appended to the specified filename.
Number of alarms to be left in database	indicate the number of alarms to remain in the database after purge completion.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Exporting CCNs

ComfortVIEW gives you the capability to back up an entire CCN's database to another directory, sub-directory, or drive. You should make it a practice to periodically back up your CCN database in the event that a malfunction should occur with your hard disk. Because it allows you to copy a CCN database from one PC to another, this function could also be helpful to Carrier service personnel for in-office preparation of a ComfortVIEW field database.

CCN export copies the selected CCN's entire database to the specified drive. This drive can be the ComfortVIEW floppy diskette drive, another ComfortVIEW hard drive partition, or another computer on the local area network. The information that will be copied includes:

- the CCN name and number
- the area name(s)
- all controllers and all associated configuration
- WorkSPACES that contain points from the specified CCN (and the associated ViewSPACES and trends — including graphic backgrounds and databoxes from the specified CCN)

Note: WorkSPACES that contain links to these WorkSPACES, as well as WorkSPACES that are linked to by these WorkSPACES, will also be included.

- Report definitions that contain points from the specified CCN
- All System Activity report definitions.

This CCN database information can be copied back, or imported to ComfortVIEW at any time, using the File menu's Import command. For additional information, refer to Importing CCNs, which appears later in this Setup chapter.

Follow the instructions below to export a CCN from the ComfortVIEW hard disk:

1. Display the Setup window. If necessary, refer to Launching the Setup Application.
2. Click on the *File* menu item and then click on *Export CCN*. The Export CCN Selection dialog box will be displayed. Refer to Figure 6-19.



Note: You may also perform this command by clicking on the Export CCN icon in the toolbar.

3. Click on the CCN that you wish to export, and then click on *OK*.

The Export Target Selection dialog box will be displayed.

4. In the Export Target Selection dialog box, select the directory and drive where you want the file saved. Refer to Table 6-20 for more information on using the Export Target Selection dialog box.
5. Click on *OK* to export the CCN to the specified file name and location.

ComfortVIEW displays a dialog box asking for confirmation before copying the selected CCN. Click on *Yes* to complete the export, or click on *No* to prevent the export from taking place.

ComfortVIEW will save the exported files to the specified directory using the following file naming convention: 00000xxx, where xxx is the CCN number.

A function status box is displayed during the copy process. If you are exporting to diskette, ComfortVIEW will prompt you to insert another diskette, if necessary. The message *Function completed successfully* displays on completion.

Note: The ComfortVIEW export procedure will terminate if any single file to be exported is larger in size than the diskette to which you are exporting. For example, if you are exporting to a 720 kb diskette, and a graphic file is 1 Mb in size, the export procedure will terminate.

Figure 6-19
Export CCN Selection
Dialog Box

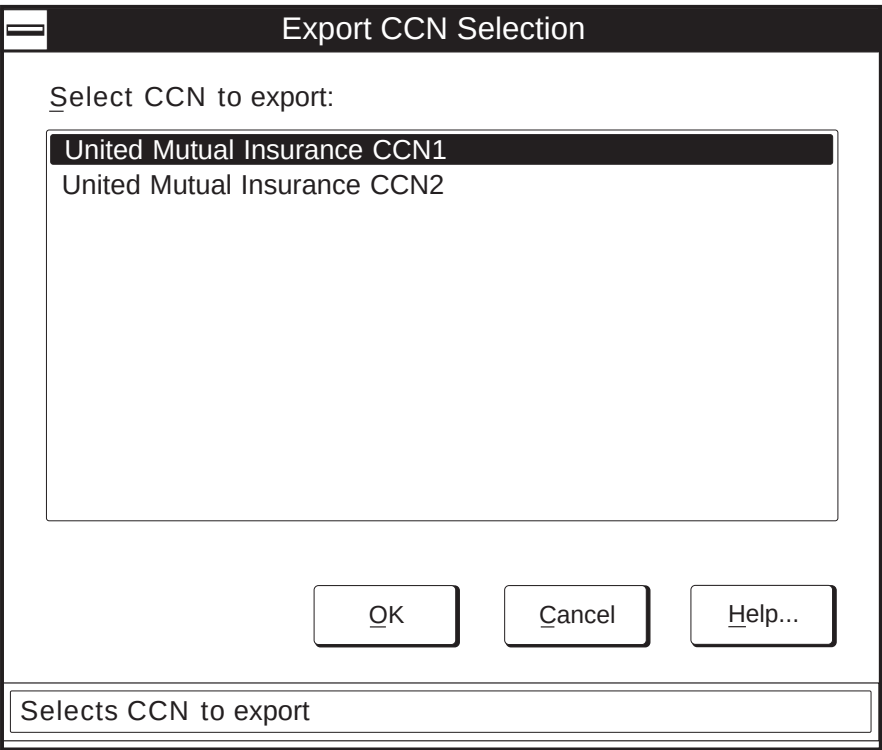


Table 6-19
Export CCN Selection
Dialog Box

Click on	To
a CCN	select a CCN to export.
OK	close the dialog box and save the selection. The Export Target Selection dialog box will be displayed. For more information on using this dialog box, refer to the Export Target Selection Dialog Box figure and table below.
Cancel	exit the dialog box without saving the selection.
Help	display help information.

Figure 6-20
Export Target Selection
Dialog Box

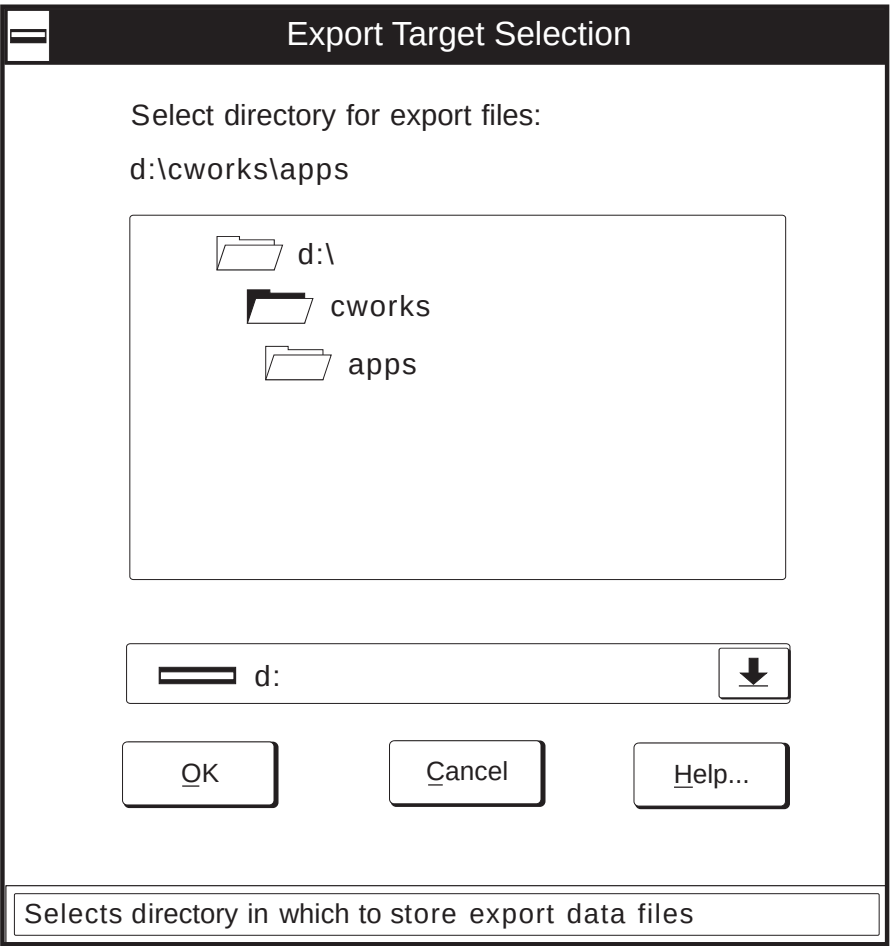


Table 6-20
Export Target Selection
Dialog Box

Click on	To
the drive drop down list	select the drive where you want the files saved.
a directory	to select a directory where you want the files saved.
OK	close the dialog box and save the selection.
Cancel	exit the dialog box without saving the selection.
Help	display help information.

Importing CCNs

You can use the File menu's Import CCN command to copy previously-exported CCN database files to ComfortVIEW. This function would typically be used by a Carrier representative during off-line preparation of a ComfortVIEW database.

CCN database files that were previously exported using the File menu's Export CCN command, will be copied to the ComfortVIEW database.

Follow the instructions below to import previously exported CCN database files to a ComfortVIEW hard disk:

1. Display the Setup window. If necessary, refer to Launching the Setup Application.
2. Click on the *File* menu item and then click on *Import CCN*.



Note: You may also perform this command by clicking on the Import CCN icon in the toolbar.

The Import Source Selection dialog box will be displayed. Refer to Figure 6-21.

3. In the Import Source Selection dialog box, select the drive and directory that contains the CCN that you wish to import, and then click on *OK*.

ComfortVIEW displays the Imported CCN Definition dialog box. This dialog box functions the same as the New CCN Definition dialog box that displays when you are adding a new CCN.

4. Enter the name and number of the CCN being imported. CCN names may consist of up to 48 characters. If necessary, refer to Figure 6-22 and Table 6-22 for instructions on using the CCN Definition dialog box.

Note: You must enter a unique CCN name and number. If the new CCN name or number is already used in the target ComfortVIEW database, a notification message will be displayed and the CCN Definition dialog box will be re-displayed.

5. Make any other modifications, and then click on *OK* to close the Imported CCN Definition dialog box and start the import.

A confirmation dialog box will be displayed asking if you wish to import the specified CCN.

6. Click on *Yes* to start the import or on *No* to close the dialog box without importing.

A function status box will display during the import process. ComfortVIEW will copy all previously-exported CCN database files from the specified drive and directory to the new CCN name and number. In the new CCN, ComfortVIEW will precede the imported area names with the new CCN name.

Note: If, during the import, ComfortVIEW finds that the name of a database item being imported already exists in the target ComfortVIEW database, the New Name dialog box will be displayed. You can either enter a new name for the imported item, overwrite the original item with the one being imported, or skip the importing of this item. If necessary, refer to Figure 6-23 and Table 6-23 for instructions on using the New Name dialog box.

The message *Function completed successfully* displays on completion.

7. You should now launch the Carrier Network Manager application and set up the access parameters for the new CCN. See Modifying CCNs in the Adding/Modifying CCNs section of this manual's Carrier Network Manager chapter. The imported CCN and address will default to Database Only and System Element 239. You can modify these values as required.

Figure 6-21
Import Source Selection
Dialog Box

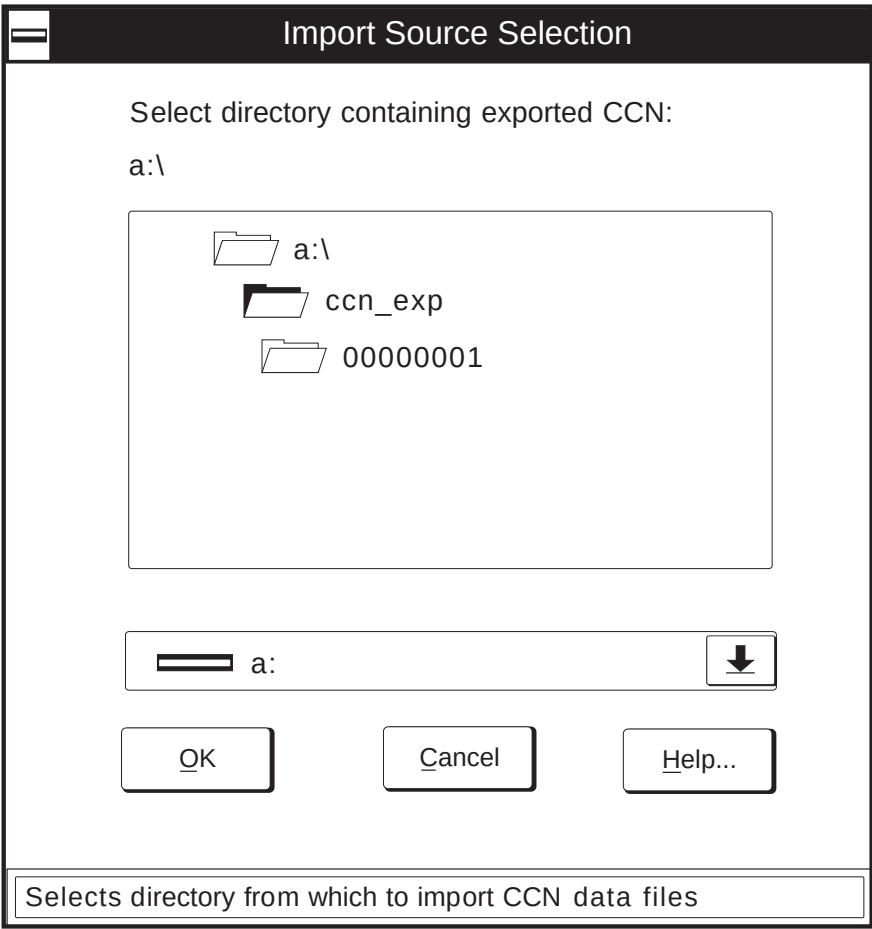


Table 6-21
Import Source Selection
Dialog Box

Click on	To
the drive drop down list	select the drive where the exported files are currently stored.
a directory	select the CCN files to import.
OK	close the dialog box and save the selection. The Imported CCN Definition dialog box is displayed. Refer to Table 6-22 and Figure 6-22 for instructions on using this dialog box.
Cancel	exit the dialog box without saving the selection.
Help	display help information.

Figure 6-22
Imported CCN Definition
Dialog Box

Imported CCN Definition

CCN _name:

CCN number:

1

Access ...

Used CCN numbers:

100

↓

OK

Cancel

Help...

Table 6-22
Imported CCN Definition
Dialog Box

Click on	To
CCN name edit box	enter the new CCN name. Up to 48 characters are allowed. You must assign the new CCN a name that is different from those that are currently used in the target ComfortVIEW database.
CCN number edit box	modify the displayed CCN number. You must assign the new CCN a number that is different from those that are currently used in the target ComfortVIEW database. This number is used internally by various ComfortVIEW applications to identify CCNs. Used CCN numbers can be viewed by clicking on the down arrow in the Used CCN numbers drop down list.

(continued)

Table 6-22
Imported CCN Definition
Dialog Box
(continued)

Click on	To
	Note: If you are importing a remote CCN that will be accessed by Autodial Gateway, this number must match the Customer Number configured at the remote Autodial Gateway.
Used CCN numbers	view the highest number already in use in the target database. Click on the down arrow to view a complete list of all used CCN numbers.
OK	close the dialog box and save the selection.
Cancel	exit the dialog box without saving the selection.
Help	display help information.

Figure 6-23
New Name Dialog Box

New Name

A ViewSPACE of the given name already exists;
Enter a new name, or press Overwrite to replace.

Original name:

ViewSPACE Controller Comfort

New name:

ViewSPACE Controller Comfort

Overwrite

Overwrite all

Skip

OK

Cancel

Help...

Table 6-23
New Name Dialog Box

Click on	To
New name edit box	modify the name of the database item that is being imported. Note: If desired, you can leave this name as is and overwrite the original like-named target database item by clicking on <i>Overwrite</i> or <i>Overwrite all</i>.
Overwrite	replace the original like-named target database item with the one being imported.
Overwrite all	replace all original like-named target database items with the ones being imported. For example, clicking on <i>Overwrite all</i> during the importing of ViewSPACES, will replace all original like-named ViewSPACES with those being imported.
Skip	continue the CCN import without importing this database item.
OK	close the dialog box and save the selection. ComfortVIEW will then verify that the new name is unique.
Abort	abort the entire import process.
Help	display help information.

Setup Menu
Command
Summary

This section describes each of the commands that appear in the Setup window menus.

File Menu

The following table describes each of the commands that appear in the File menu.

Table 6-24
File Menu

Command	Use this command to
Export CCN	export an entire CCN's database.
Import CCN	import an entire CCN's database.
Print	print a report of ComfortVIEW Setup options.
Print Setup	select a printer and printing options. The Print dialog box displays. To change the printer from the one displayed, click on the drop down list. Click on <i>Properties</i> to access Page Setup, orientation, and size options.
Exit	exit the Setup application.

Setup Menu

Table 6-25
Setup Menu

The following table describes each of the commands that appear in the Setup menu.

Command	Use this command to
Globals	specify the following global system parameters: • Metric or customary US display units • Time of day at which to retrieve accumulated report data from your CCN options • Period of time to retain accumulated report data in your ComfortVIEW database • Number of times to re-try report data retrieval should a failure occur • Enable/disable system activity event logging. • Enable/disable automatic ComfortVIEW login in conjunction with Windows NT login. • Enable/disable automatic alarm deletion, including purge filename and threshold. The Setup Globals dialog box displays.
Workstations	add or delete LAN workstations. The Setup Workstations dialog box displays. If your ComfortVIEW setup contains workstations communicating on a LAN, you must specify the computer name of every LAN workstation. Clicking on <i>New</i> displays the New Workstation dialog box and allows you to add a new workstation to the Workstations list. Enter the workstation name as it appears in the Computer Name in the Network dialog

(continued)

Table 6-25
Setup Menu
(continued)

Command	Use this command to
	box's Identification tab. This dialog box is located in the Windows NT Control Panel. Clicking on an existing workstation and then clicking on <i>Delete</i> deletes a workstation from the Workstations list. Note: This command is not available on stand-alone ComfortVIEW systems.
Alarm printers	specify the name and port assignment of all ComfortVIEW alarm printers. The Setup Printers dialog box displays. Clicking on <i>New</i> displays the New Printers dialog box and allows you to add a new printer to the Printers list. Clicking on an existing printer and then clicking on <i>Delete</i> deletes a printer from the Printers list. You now must use the Alarm Printers command in the Carrier Network Manager Administration menu to assign alarms to specific ComfortVIEW printers.
Gateway ports	add a new or modify or delete an existing internal Gateway. The Gateway Ports dialog box displays. The names of any communication ports that have been previously designated for use by an internal Gateway are displayed. In the Gateway Ports dialog box, you can click on <i>New</i> to configure a new port for use with a modem, <i>Modify</i> to change the selected currently-configured port's telephone number, or on <i>Delete</i> to delete the selected port's modem designation.
Custom units	set up custom analog and discrete units that will be displayed with points in FIDs and Comfort Controllers.

Table 6-25
Setup Menu
(continued)

Command	Use this command to
Add equipment help	upgrade your Carrier equipment help files to the latest versions.
Remote status	display or hide the remote connection status window. This window displays the names of all remote CCNs to which a connection is currently established (including RAS connections). You can set the windows to always appear on top of all other windows by right clicking on the title bar and selecting <i>Always on top</i> .

Administration Menu

The following table describes each of the commands in the Administration menu.

Table 6-26
Administration Menu

Command	Use this command to
Access levels	create customized access levels. You can create an access level and specify the ComfortVIEW operations allowed for that level. ComfortVIEW displays the Customized Access Control dialog box. You then assign access levels to operators on an area by area basis.
Operators	add, modify, or delete a ComfortVIEW operator. ComfortVIEW displays the Operator Configuration dialog box. The names of all existing ComfortVIEW operators display under <i>Select an Operator</i> . When adding a new or modifying an existing operator you must enter the operator's profile information, assign the operator's access privileges, and specify the operator's alarm indication preferences and alarm filters.
Alarm printers	route alarms to specified ComfortVIEW printers.

(continued)

Table 6-26
Administration Menu
(continued)

Command	Use this command to
	ComfortVIEW displays the Alarm Printers dialog box. The names of all ComfortVIEW printers display under <i>Select a printer:</i> . The computer name and printer port that controls that printer are also displayed. Printers are assigned using ComfortVIEW Setup application.
Logout state	set up the alarm indication preferences for all logged out ComfortVIEW workstations. Whenever any ComfortVIEW operator logs out, the logged out ComfortVIEW workstation will indicate (annunciate) alarms as specified here. When an operator logs back in, alarm indication will be guided by the operator's personal alarm preferences that are specified using the Administration menu's Operators command.
Your profile	modify your login name, password, start-up application, automatic log-off, or alarm indication preferences.

Help Menu

The following table describes each of the commands that appear in the Help menu.

Table 6-27
Help Menu

Command	Use this command to
Contents	display the help table of contents.
Search	search for a help topic by typing a keyword.
About	display program information, version information on all ComfortVIEW applications, and copyright.

Report Panel

Report Panel

This chapter provides instructions on ComfortVIEW's Report Panel application.

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Terminology

The following terms are used throughout this Report Panel chapter.

Consumable Report — A ComfortVIEW report that lists usage information, taken at fifteen-minute intervals (for example, kilowatt hours of electricity or gallons of fuel). The Data Collection Option Module collects the consumable data, which is typically measured by devices such as wattmeters and flow sensors. ComfortVIEW gives you the capability to create daily, monthly, and yearly consumable reports.

Runtime Report — A ComfortVIEW report that lists the number of minutes each hour that a discrete system element point is in the on state. The Data Collection Option Module collects runtime data. ComfortVIEW gives you the capability to create daily, monthly, and yearly runtime reports.

History Report — A ComfortVIEW report that lists value or status information taken at user-specified time intervals. The Data Collection Option Module collects history data.

Report Definition — The specifications for a report. The first step in creating a ComfortVIEW report is to create a report definition. In the report definition, you specify parameters such as the report name and description, report type, the points on which to report, and the range of dates from which to compile data. ComfortVIEW maintains a list of all report definitions in its database.

Area — A logical grouping of system elements within a CCN. For example, an area could be a building, a floor, a wing, or a chiller plant.

Data Retrieval — The act of uploading data from the Data Collection Option module to the ComfortVIEW database.

Report Generation — The act of compiling the report data that data retrieval has uploaded from the Data Collection Option module to the ComfortVIEW database.

Accessing the Report Panel

ComfortVIEW Report Panel function gives you the capability to generate reports from data that the Data Collection Option Module collects from the network.

The types of reports currently available to you include consumable, runtime, and history. Samples of these report types appear at the end of this chapter. Refer to Table 7-1 below for a description of each report type. Additional report types may become available. As new report types are installed, their icons automatically display in the report panel window. Refer to Appendix A — Additional ComfortVIEW Reports for more information.

Table 7-1
Reports

Report Type	Contents
 Consumable	Usage information for devices measuring consumables (for example, flow sensors and wattmeters) from one or all Data Collection Options on one or more networks (including remote CCNs). You can create daily, monthly, or yearly consumable reports.
 Runtime	Equipment runtime (on-time) information for discrete system element points from one or all Data Collection Options on one or more networks. You can create daily, monthly, or yearly runtime reports.
 History	Timed or event-triggered history (point value) information collected periodically over time from one or all Data Collection Options on one or more networks.

A consumable, runtime, or history report can contain information on up to 48 points.



To launch the Report Panel application:

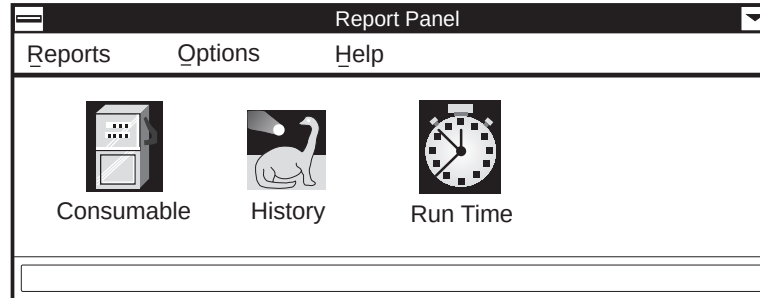
Double click on the Report Panel icon.

ComfortVIEW displays the Report Panel window shown in Figure 7-2.

This window contains icons for each report type. Clicking on an icon displays the report definition list. The top line of the window contains the report panel menu bar. Refer to Report Panel Menu Command Summary at the end of this Report Panel chapter for a description of each menu item and command.

If desired, you can add an icon to this window. The icon could initiate the execution of a custom report that you have created using a third party spreadsheet program. For instructions, refer to the Using the Report Panel To Initiate a Third Party Report Application section of this chapter.

Figure 7-2
Report Panel Window



Other Required Documentation

This chapter provides ComfortVIEW operating instructions for creating report definitions and generating reports. For information on how to configure the Data Collection Module for use with the ComfortVIEW Report Panel application, refer to the *Data Collection Option Overview and Configuration Manual*. For information on configuring other modules for use with ComfortVIEW optional reports, refer to the respective module's overview and configuration manual.

Producing a Report — An Overview

The report creation process is summarized below. For more detailed report creation instructions, refer to the Creating, Copying, or Modifying a Report Definition and Generating a Report sections of this chapter.

To produce a ComfortVIEW report you must perform the following tasks:

1. Define the specifications for the report. You do this by creating a report definition where you enter specifications such as the report name and description, report type (daily, monthly, yearly), automatic data retrieval and report generation preferences, and the points on which to report.

ComfortVIEW maintains a list of all report definitions in its database. You can view, modify, or delete a report definition, or re-generate a report from an existing definition at any time. You can also copy a report definition for use as a starting point in creating another report definition.

2. Manually generate the report, or, if you select automatic report generation, the report automatically generates at a time that you specify using the ComfortVIEW Setup application. When ComfortVIEW generates a report, it retrieves data from the network (or uses data that was already retrieved) and creates a temporary tab-separated report file. If desired, you can save the tab-delineated report file permanently on disk for use with third party spreadsheet applications. You can also opt to print the report file.

Report definitions define the specifications for your reports. Report specifications include information such as the report name and description, report type (daily, monthly, yearly), automatic data retrieval and report generation preferences, and the points on which to report.

Displaying the Report Definition List

Follow the steps below to display a list of all existing report definitions.

1. Display the report panel. If necessary, refer to the instructions listed under Accessing the Report Panel.
2. Click on the *Reports* menu item and then click on the report type (*Consumable*, *History*, *Runtime*, or *System Activity*).

Note: You may also perform this command by double clicking on the Report Panel's Consumable, History, Runtime, or System Activity icon.

ComfortVIEW displays a Report Definition List window similar to the one displayed in Figure 7-3. This window lists the up to 8 character report name and up to 48 character description of all existing report definitions for the type of report selected (consumable, runtime, history, and system activity). Some of the report definitions may be preceded by a red icon. These are reports that have been specified to be automatically generated. Refer to the explanation of the Report Definition Dialog Box that appears later in this chapter for additional information on this option.

The top line of the window contains the menu bar. Refer to Report Definition List Menu Command Summary at the end of this chapter for a description of each menu item and command.

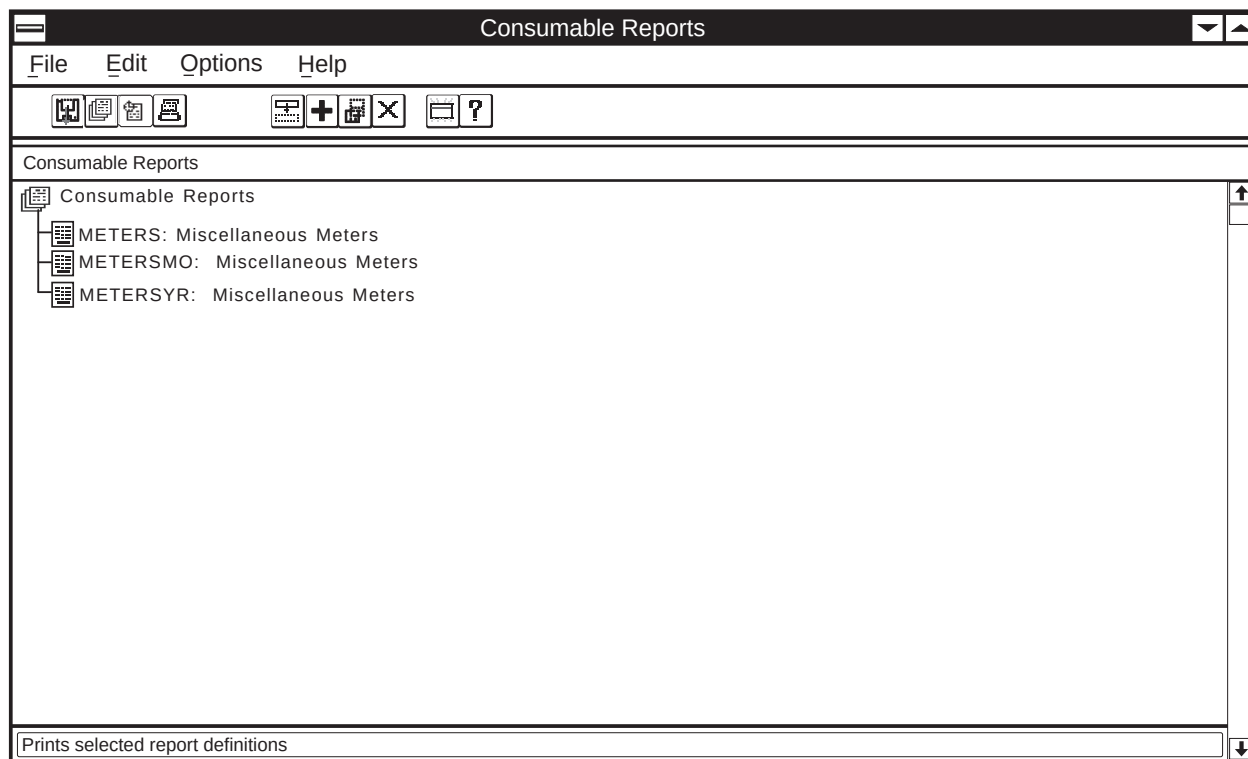
The second line of the window contains the toolbar. Refer to Report Panel Definition List Window Toolbar below for information on using each toolbar button.

The third line of the window contains the status bar. This line displays the name and description of the currently highlighted report definition.

Note: If desired, you can remove the status bar from the Report Definition List window by clicking on the *Options* menu item followed by clicking on *Status bar*. To return the status bar to the window, perform these two commands again.

You may also change the window's font and point size by clicking on the *Options* menu item followed by clicking on *Font*. For further instructions, refer to the Changing the Font section of this chapter.

Figure 7-3
Sample Report Definition
List Window



Report Definition List Window Toolbar

The second line of the Report Definition List window contains the toolbar. If you use a mouse, the toolbar gives you instant access to the most frequently used Report Panel commands. By simply clicking the mouse button, you can perform operations such as generating reports, copying and deleting report definitions, and printing report definitions.

Note: If desired, you can remove the toolbar from the Report Definition List window by clicking on the *Options* menu item followed by clicking on *Toolbar*. To return the toolbar to the window, perform these two commands again.

Table 7-3
Report Definition List
Window Toolbar

The following table describes the buttons that appear on the Report Definition List window toolbar.

Click on	To
	import report data.
	generate a report using the selected report definition.
	re-generate a report using the selected report definition with a new range of dates.
	print the selected report definition.
	create a new report definition.
	copy a selected definition.
	modify a selected report definition.
	delete a selected definition.
	update the screen with the latest report definitions.
	display help information.

Creating, Copying, or Modifying a Report Definition



To Create a New Report Definition

1. Display the report definition list. If necessary, refer to Displaying the Report Definition List.
2. Click on the *File* menu item and then click on *New*.

ComfortVIEW displays a Report Definition dialog box similar to the ones shown in Figure 7-4 and Appendix A. You use this dialog box to enter the specifications for a report.

Note: You may also perform this command by clicking on the *Add New* report icon in the tool bar.

3. To produce a consumable, runtime, or history report, you must enter the specifications shown below. For a list of specifications for other optional ComfortVIEW reports, refer to Appendix A.
 - Report Name and Description
 - Report Type (None, Daily, Monthly, Yearly)
 - Manual Generation or Automatic Retrieval Options
 - Report Dates
 - Data Points on Which To Report
 - Format

Refer to Figure 7-4 and Table 7-4 and to Appendix A for instructions on using the Report Definition dialog box.

4. Click on *OK* to exit the dialog box and save changes, or click on *Cancel* to exit the dialog box without saving changes.

ComfortVIEW re-displays the report definition list.

Figures 7-8 to 7-10 display different Report Definition dialog box configurations with explanations of the reports that will be produced by each.

To Copy an Existing Report Definition

Follow the instructions below to create a new report definition by copying a selected definition.

1. Display the report definition list. If necessary, refer to Displaying the Report Definition List.
2. Click on the report definition you wish to copy.
3. Click on the *Edit* menu item and then click on *Copy*.
ComfortVIEW copies the selected report definition and displays the copied Report Definition dialog box.
4. Enter the new Report Name, and, if desired, make any other modifications.

Refer to Table 7-4 and Appendix A for instructions on using the Report Definition dialog box. Figures 7-8 to 7-10 display different Report Definition dialog box configurations with explanations of the reports that will be produced by each.

5. Click on *OK* to exit the dialog box and save changes, or click on *Cancel* to exit the dialog box without saving changes.

ComfortVIEW re-displays the report definition list.

To Modify an Existing Report Definition

1. Display the report definition list. If necessary, refer to Displaying the Report Definition List.
2. Double click on the report definition to modify.
Note: You may also perform this command by clicking on a report in the report definition list followed by clicking on the *Edit* menu item and then clicking on *Modify*.

ComfortVIEW displays a Report Definition dialog box similar to the one shown in Figure 7-4 and Appendix A.

3. Modify the specifications as desired.
4. Click on *OK* to exit the dialog box and save changes, or click on *Cancel* to exit the dialog box without saving changes.

ComfortVIEW re-displays the report definition list.

Figure 7-4
Report Definition Dialog
Box

Report Definition

Report Name:

ZONE TEMP

Report Description:

Zone Temp Tracking

Report

☐ None
☒ History

Automatic Retrieval Options

☒ Enable automatic data retrieval
☒ Enable automatic report generation
☐ Save tab-separated data file

Print to

HP LaserJet III

Data retrieval period...

Manual Generation Options

☒ Retrieve History data
☐ Send report directly to CWREPORT

Report Dates

☒ Range of times/dates

Data from:

00:00 10/23/96

Data through:

23:59 10/24/96

☒ Save dates as relative

Defaults

Data Points...

Format...

OK

Cancel

Help...

Closes this dialog box and saves settings

Table 7-4
Report Definition Dialog
Box — Consumable,
Runtime, and History
Reports

Click on	To
the Report Name text box	enter an up to 8 character name for the report. This name identifies the report in the report definition list.
the Report Description text box	enter an up to 48 character description for the report. This name appears along with the 8 character report name in the report definition list. It is also the report title that prints on the top line of the report.

(continued)

Table 7-4
Report Definition Dialog
Box — Consumable,
Runtime, and History
Reports (continued)

Click on	To
Report	
None	specify that you do not wish to generate reports every time you automatically retrieve module data.
Daily	create a daily report. You can create daily reports for yesterday, today, or for a specified range of dates.
Monthly	create a monthly report for the dates specified under Range of data.
Yearly	create a yearly report for the dates specified under Range of data.
History	create a history report.
Report Dates:	
Yesterday	create a daily report using yesterday's data.
Today	create a daily report using today's data. The report will contain today's data starting from midnight to the current time.
Range of times/dates:	
Data from:	
Data through:	create a report using data from a range of times and dates. Click on the button to the right of the <i>Data from:</i> and <i>Data through:</i> dates to display the Data Range dialog box. Enter the data start and end times and dates. Refer to Figure 7-5 and Table 7-5 for instructions on using the Data Range dialog box.
	When defining a report based on a single day's data, enter the corresponding date in both the Data from: and Data to: text boxes. Note: If, in a runtime report definition, you enter a whole hour Data through time (for example, 3:00), ComfortVIEW will subtract 1 minute and display the resulting time (in this case, 02:59). This also occurs in consumable report definitions, except that it will occur for both whole hour and 15 minute Data through times (for example, 02:15).

Table 7-4
Report Definition Dialog
Box — Consumable,
Runtime, and History
Reports (continued)

Click on	To
Save dates as relative	automatically adjust the Data from and Data through dates relative to the current date. For example, you create a report definition on 8/10/94. You specify the <i>Data from:</i> and <i>Data through:</i> dates to be 8/3/94 and 8/10/94. On 8/18/94, you generate another report from this existing definition. ComfortVIEW will automatically adjust these dates relative to 8/18/94 date. <i>Data from:</i> will automatically update to 8/11/94 and <i>Data through:</i> will update to 8/18/94.
Automatic Retrieval Options:	
Enable automatic data retrieval	automatically, at ten minutes past the hour you specify using the ComfortVIEW Setup application, retrieve the specified report data from the Data Collection Option module and store it in the ComfortVIEW database. The data will be retained in the database for the period you specify using the Setup application. Note: The Data Collection Option Module only stores up to two days-worth of runtime and consumable data. Failure to retrieve module data will cause the data to be lost. Thus, even if you do not wish to generate a report at this time, and have specified this by clicking on <i>None</i>, you still must retrieve module data.

(continued)

Table 7-4
Report Definition Dialog
Box — Consumable,
Runtime, and History
Reports (continued)

Click on	To
Enable automatic report generation	automatically, after data retrieval, generate the specified report using the data that has been automatically retrieved from the modules and stored in the ComfortVIEW database. This option is typically used in conjunction with the Enable automatic data retrieval option.
Save tab-separated data file	save the actual report that is created as part of the report generation process. ComfortVIEW will save the report to the CWORKS\REPORTS^{report type} directory path (where <i>report type</i> is replaced by the type of report being generated: CONSUME, HISTORY, RUNTIME, etc.). ComfortVIEW uses the following report file naming convention: <i>Rptname.xxx</i> (where <i>Rptname</i> is replaced by the eight character name you enter in the Report Name text box, and <i>xxx</i> is the report number ranging from 001 to 999. Note that this number is incremented each time you re-generate this report.) You would only select this option if, at some later time, you intend to read the report into a third party spreadsheet application.

(continued)

Table 7-4

Report Definition Dialog
Box — Consumable,
Runtime, and History
Reports (continued)

Click on	To
the Print to: drop down list	select a printer on which to automati- cally print the report. When several printers exist in your system, this option gives you the capability to specify a different printer for each report.
Data Retrieval Period (in History Report Definition only)	display the Data Retrieval Period dialog box. Here you specify a time interval, in hours, weeks, or months to automatically retrieve history data from the Data Collection Option Module. Refer to Figure and Table 7-5a for instructions on using this dialog box. Data retrieval will commence at 10 minutes past the hour you specify in the Setup applica- tion and will occur at this interval. The Data Collection Option Module only stores up to 192 pieces of data for history reports. Thus, depending on the sampling period that is configured in the module, the data could be lost if ComfortVIEW does not retrieve it often enough. The following table gives you some guidelines for sampling periods (inter- vals) and the maximum collection period after which data could be lost:

(continued)

Table 7-4
Report Definition Dialog
Box — Consumable,
Runtime, and History
Reports (continued)

Click on	To	
Data Retention Period (<i>continued</i>)	Option Module	Do not set ComfortVIEW Collection Period to more than
	Sampling Period	
	1 minute	
	2 minutes	
	4 minutes	
	6 minutes	
	8 minutes and up	24 hours

Manual Generation Options:

Retrieve yesterday's data	retrieve yesterday's data from the Data Collection Option Module and manually create a daily, monthly, or yearly report based on this data. This option will only be available if you select a report date of yesterday or a range of data that includes yesterday.
Retrieve today's data	retrieve today's data from the Data Collection Option Module and manually create a daily, monthly, or yearly report based on this data. This option will only be illuminated if you select a report date of Today or a Range of data that includes today. ComfortVIEW will retrieve data from the module ranging in time from midnight to the current time.
Retrieve history data (in History Report Definition only)	retrieve history data from the Data Collection Option. Module and manually create a history report based on this data. ComfortVIEW will retrieve data from the module ranging from the time of last collection to the current time.

(continued)

Table 7-4
Report Definition Dialog
Box — Consumable,
Runtime, and History
Reports (continued)

Click on	To
Send report directly to CWREPORT printer	bypass the report viewer and print the report without first displaying it. If you do not enable this option, ComfortVIEW will display the report on-screen allowing you to view it before printing it. The report will print on the CWREPORT printer that you create in the Windows NT Print Manager.
Defaults	select the defaults listed below: <u>History Defaults:</u> Report: History Automatic Retrieval Options: Enable automatic data retrieval, Enable automatic report generation, Save tab-separated data file, Collection Period: 0 (Data will be retrieved at hour specified in the ComfortVIEW Setup application.) Manual Generation Options: Retrieve history data Report Dates: Data from yesterday's to today's date Save Dates as Relative: Enabled

(continued)

Table 7-4
Report Definition Dialog
Box — Consumable,
Runtime, and History
Reports (continued)

Click on	To
Defaults (<i>continued</i>)	<u>Consumable and Runtime Defaults:</u> Report: Daily Automatic Retrieval Options: Enable automatic data retrieval, Enable automatic report generation, Save tab-separated data file Manual Generation Options: Retrieve today's data Report Dates: Range of Data: Yesterday through today Save Dates as Relative: Enabled
Data Tables	select the tables to include in the report. ComfortVIEW displays the Report Data Tables dialog box. This box allows you to select a CCN and display the names of all Data Collection Option tables in the CCN. You can then select the tables containing the points you wish to include in the report. You can include points from more than one CCN whether they are local or remote. Refer to Figure 7-6 and Table 7-6 for instructions on using this dialog box.
Format	select the report format. ComfortVIEW displays the Report Format dialog box. Refer to Figure 7-7 and Table 7-7 for instructions on using this dialog box.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 7-5
Data Range Dialog Box

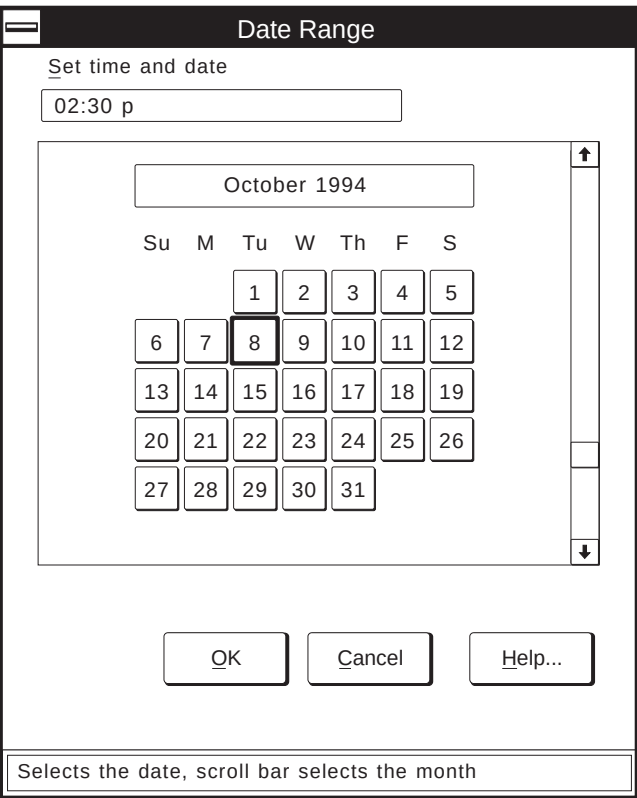


Table 7-5
Data Range Dialog Box

Click on	To
a day in the calendar	modify the displayed day of month.
the scroll bar's down or up arrow	modify the month and year.
OK	close the dialog box and save the settings.
Cancel	close the dialog box and restore the previous settings.
Help	display help information.

Figure 7-5a
Data Retrieval Period
Dialog Box

Data Retrieval Period

Retrieval period

☐ Daily

☒ Weekly

☐ Monthly

Retrieval day of week

Monday

↓

OK

Cancel

Help...

Closes this dialog box and saves settings

Table 7-5a
Data Retrieval Period
Dialog Box

Click on	To
Daily	retrieve history data from the Data Collection Option module every day at the hourly interval you specify under Data retrieval interval. Retrieval will begin at the hour you specify using the Setup application.
Weekly	retrieve history data from the Data Collection Option module once a week on the day you specify under Retrieval day of week.
Monthly	retrieve history data from the Data Collection Option module once a month on the day you specify under Retrieval day of month.

(continued)

Table 7-5a
Data Retrieval Period
Dialog Box
(continued)

Click on	To
OK	close the dialog box and save the settings.
Cancel	close the dialog box and restore the previous settings.
Help	display help information.

Figure 7-6
Report Data Tables
Dialog Box

Report Data Tables

Data Tables Selected:

- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM01S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM02S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM03S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM04S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM05S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM06S: Data Collect Consumable

<< Add Remove >>

Data Tables Available:

- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM07S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM08S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM09S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM10S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM11S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM12S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM13S: Data Collect Consumable
- United Mutual Insurance::DATA CXFR: Data Collect/Transfer - 0,82::CONSM14S: Data Collect Consumable

CCN Selection:

United Mutual Insurance

OK Cancel Help...

Table 7-6
Report Data Tables
Dialog Box

Click on	To
the CCN Selection: drop down list	select the CCN containing the tables to include in the report.
the Data Tables Available: list	display the names of all available Data Collection tables in the selected CCN. Click on a table name and then click on <i>Add</i> to include up to 48 of the table's associated points in the report.
the Data Tables Selected: list	display the tables currently selected to be included in the report. Click on a table name and then click on <i>Remove</i> to delete the table's associated points from the report.
<<Add	add the tables selected in the Data Tables Available: list to the report. The selected table name will be transferred from the Data Tables Available list to the Data Tables Selected list.
Remove>>	remove the tables selected in the Data Tables Selected: list from the report. The selected table name will be transferred from the Data Tables Selected list to the Data Tables Available list.
OK	close the dialog box and save the settings.
Cancel	close the dialog box and restore the previous settings.
Help	display help information.

Figure 7-7
Report Format Dialog
Box

Report Format

Include:

- ☒ Area in page header
- ☒ Point description
- ☒ Show units
- ☒ Header every page
- ☒ Foooter every page
- ☒ Legend
- ☒ Page Numbers

Points per Legend: 4

OK Cancel Help...

Includes the area in the page header

Table 7-7
Report Format Dialog
Box

Click on	To
Area in Page Header	include the area name in the report header. You would typically only elect to do this if all report points are in the same area. If points are from different areas, click on <i>Legend</i> to include each point's area name at the bottom of all pages.
Point description	include each point's 24 character point description in the column headers. The description will appear below the point name.
Show units	include each point's units in the column headers.

(continued)

Table 7-7
Report Format Dialog
Box
(continued)

Click on	To
Legend	include each point's area name, in legend format, at the bottom of all pages.
Points per legend	for future use.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Note that Header every page, Footer every page, and Page numbers fields are enabled, but appear dimmed. ComfortVIEW will automatically include these items on all pages of the report.

Sample History Report Explanation

The report definition shown in Figure 7-8 will generate a history report named ZONETEMP, which is used for zone temperature tracking. In this example, it is assumed that today is October 24, 1996 and ComfortVIEW is configured to automatically and periodically retrieve data from the network's Data Collection Option Module. This report definition will automatically generate the ZONETEMP history report once a day. This definition will also create a report, on manual command, using the most up-to-the-minute zone temperature data that it can retrieve from the network.

Automatic Retrieval Options: The zone temperature history data will be automatically retrieved from the Data Collection Option Module every two hours as was specified in the Data Retrieval Period dialog box, which was accessed by clicking on the Data retrieval period button. An actual report, based on the retrieved data, will be automatically generated, once a day, and will be printed to a printer named HP LaserJet III. The time of day that the report will generate is 2:00 am. This information has been specified using the ComfortVIEW Setup application.

Manual Generation Options: When the report is generated on command by a user, the latest up-to-the-minute data will be retrieved from the Data Collection Option Module. This manually-generated report will be presented on the screen for user viewing. Since the Range of Data has been configured to include all of yesterday's as well as today's data, the report will include data from the previous day's automatic retrieval activity.

Figure 7-8
Sample History Report
Definition Dialog Box

Report Definition

Report Name: ZONE TEMP

Report Description: Zone Temp Tracking

Report

☐ None

☒ History

Automatic Retrieval Options

☒ Enable automatic data retrieval

☒ Enable automatic report generation

☐ Save tab-separated data file

Print to

HP LaserJet III

Data retrieval period...

Manual Generation Options

☒ Retrieve History data

☐ Send report directly to CWREPOR

Report Dates

☒ Range of times/dates

Data from: 00:00 10/23/96

Data through: 23:59 10/24/96

☒ Save dates as relative

Defaults

Data Tables...

Format...

OK Cancel Help...

Closes this dialog box and saves settings

Sample Consumable Report Explanation

The report definition shown in Figure 7-9 will generate a consumable report named METER1A, which is used for tracking building energy usage. In this example, it is assumed that today is October 24, 1996 and ComfortVIEW is configured to automatically retrieve daily consumable data from the network's Data Collection Option Module. This report definition will automatically generate the METER1A consumable report once a day. This definition will also create a report, on manual command, using the most up-to-date consumable data that it can retrieve from the network.

Automatic Retrieval Options: The consumable data will be automatically retrieved from the Data Collection Option Module. An actual report, based on the retrieved data, will be automatically generated, once a day, and will be printed to a printer named HP LaserJet III. The time of day that the report will generate is 2:00 am. This information has been specified using the ComfortVIEW Setup application.

Manual Generation Options: When the report is generated on command by a user, the most up-to-date consumable data will be retrieved from the Data Collection Option Module. This manually-generated report will be sent directly to the CWREPORT printer. Since the Range of Data has been configured to include all of yesterday's as well as today's data, the report will include data from yesterday's automatic retrieval activity.

Figure 7-9
Sample Consumable
Report Definition Dialog
Box

Report Definitor

Report Name:

METER1A

Report Description:

Building Meter Summary

Report

☐ None
☒ Daily
☐ Monthly
☐ Yearly

Automatic Retrieval Options

☒ Enable automatic data retrieval
☒ Enable automatic report generation
☐ Save tab-separated data file

Print to

LaserJet III

Manual Generation Options

☐ Retrieve Yesterday's data
☒ Retrieve Today's data
☒ Send report directly to CWREPORT printer

Report Dates

☐ Yesterday
☐ Today
☒ Range of data

Data from:

00:00 10/22/96

Data through:

23:59 10/23/96

☒ Save dates as relative

Defaults

Data Tables...

Format...

OK

Cancel

Help...

Closes this dialog box and saves settings

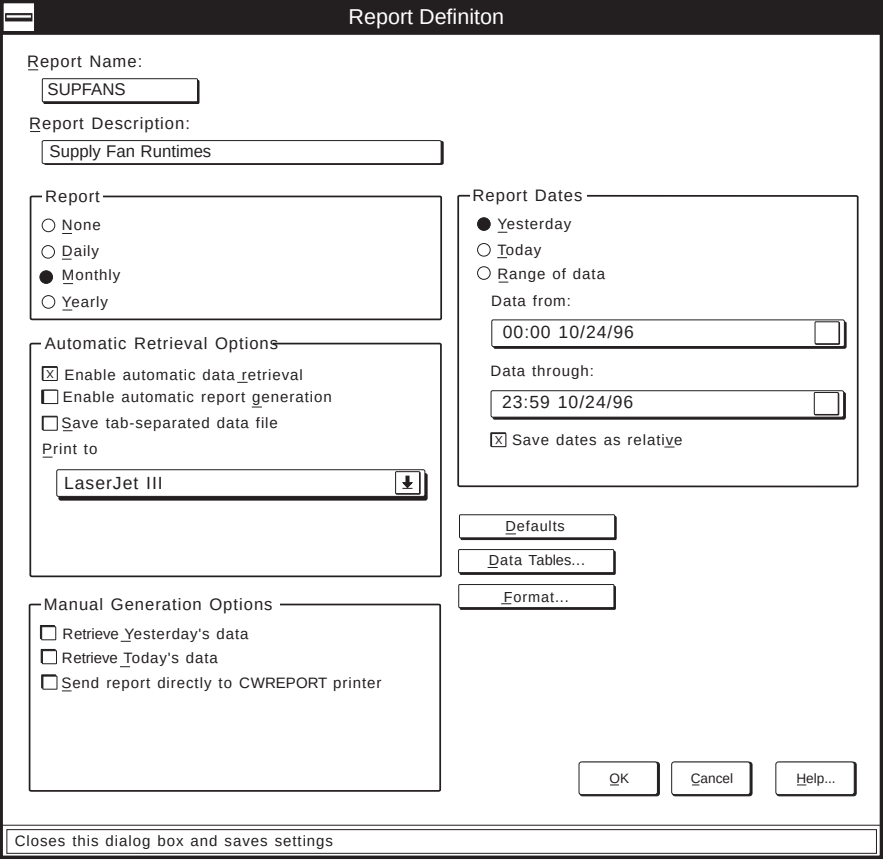
Sample Runtime Report Explanation

The report definition shown in Figure 7-10 will generate a runtime report named SUPFANS, which is used for accumulating the run time of a building's air handler supply fans. In this example it is assumed that today is October 25, 1996 and ComfortVIEW is configured to automatically retrieve daily data from the network's Data Collection Option Module in anticipation of creating a monthly report. This report definition will not automatically generate a report every day. It will automatically retrieve the data, however. The report definition permits the manual generation of a monthly report based on the month's accumulated data.

Automatic Retrieval Options: The runtime data will be automatically retrieved from the Data Collection Option Module. The retrieval time of day has been specified using the ComfortVIEW Setup application.

Manual Generation Options: When the report is generated on command by a user, the included runtime data will include data for the current month through yesterday. No data retrieval will take place on the generation of the monthly report. This report will be presented to the user by means of the report viewer. It will not be sent directly to the CWREPORT printer.

Figure 7-10
Sample Runtime Report
Definition Dialog Box



The dialog box is titled "Report Definition". It contains several sections for configuring a report:

- Report Name:** A text field containing "SUPFANS".
- Report Description:** A text field containing "Supply Fan Runtimes".
- Report:** A group box containing four radio buttons: "None", "Daily", "Monthly" (selected), and "Yearly".
- Automatic Retrieval Options:** A group box containing three checkboxes: "Enable automatic data retrieval" (checked), "Enable automatic report generation" (unchecked), and "Save tab-separated data file" (unchecked). Below these is a "Print to" label and a dropdown menu showing "LaserJet III" with a download icon.
- Report Dates:** A group box containing three radio buttons: "Yesterday" (selected), "Today", and "Range of data". Below these are two date/time pickers: "Data from:" (00:00 10/24/96) and "Data through:" (23:59 10/24/96). At the bottom of this group is a checked checkbox "Save dates as relative".
- Manual Generation Options:** A group box containing three checkboxes: "Retrieve Yesterday's data" (unchecked), "Retrieve Today's data" (unchecked), and "Send report directly to CWREPORT printer" (unchecked).
- Buttons:** Three buttons are located in the middle right: "Defaults", "Data Tables...", and "Format...". At the bottom right are "OK", "Cancel", and "Help..." buttons.
- Status Bar:** A message at the bottom reads "Closes this dialog box and saves settings".



Deleting an Existing Report Definition

Follow the instructions below to delete a report definition from the report definition list.

Deleting a report definition deletes the definition only. The report definition deletion process does not delete any related report files that you may have saved.

1. Display the report definition list. If necessary, refer to Displaying the Report Definition List.
2. Click on the report definition you wish to delete.

Note: ComfortVIEW allows you to delete multiple report definitions. Use the Windows-standard mouse or keyboard techniques to select multiple definitions.

3. Click on the *Edit* menu item and then click on *Delete*.

Note: You may also perform this command by clicking on Delete icon in the toolbar.

ComfortVIEW displays the following prompt: *Reconfigure the data collection tables?*

4. Click on *Yes* to free up any data collection tables that have been assigned to this report, or on *No* to prevent table deallocation from taking place.

You would typically select *No* if you wish to keep the tables in a Data Collection Option for later use, or if the tables are in a GPM or HPM and cannot be deallocated.

Note: ComfortVIEW will not deallocate any data collection tables that are being used by other report definitions.

You will then be presented with a deletion confirmation dialog box.

5. Click on *Yes* to complete the deletion or click on *No* to prevent the deletion from taking place. If you have selected multiple definitions and wish to delete all, click on *Yes to All*.

ComfortVIEW displays a function status box during the deletion, and the report definition list re-displays when the deletion is complete.



Printing a Report Definition

Follow the steps below to print a selected report definition.

1. Display the report definition list. If necessary, refer to Displaying the Report Definition List.
2. Click on the report definition you wish to print.
3. Click on the *File* menu item and then click on *Print*.

Note: You may also perform this command by clicking on the Print icon.

ComfortVIEW opens the Windows Notepad application and displays the report definition information.

To print the Report Definition:

Click on Notepad's *File* menu item and then click on *Print*.

To close the report:

Click on Notepad's *File* menu item and then click on *Exit*.

Changing the Font

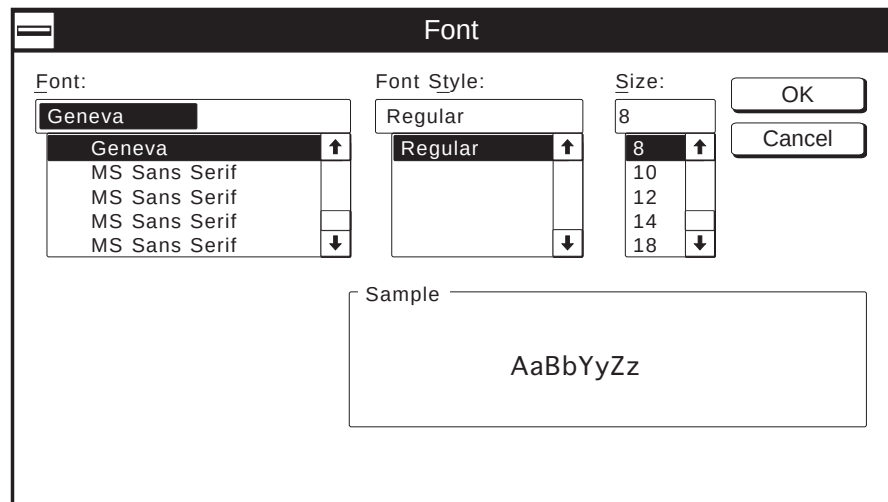
You can change the report definition list font. When you change the font, all report definition list text is affected.

To change the font:

1. Display the report definition list. If necessary, refer to Displaying the Report Definition List.
2. Click on the *Options* menu item followed by clicking on *Font*.
ComfortVIEW displays the Font dialog box. Refer to Figure 7-11.
3. In the Font box, select the font you want to use.
The text in the Sample box changes to reflect the font you select.
4. In the Font Style box, select any style options you want to use (for example, bold or italic).
5. In the Size box, select the point size you want to use: the larger the point size, the larger the characters appears on your screen.
6. Click on *OK*.

Note: To Make the New Report Definition List Font and Point Size Permanent: Click on the *Options* menu item and then click on *Save settings on exit*. A checkmark (✓) appears before the command to indicate that it is enabled. The text will appear in this new font and point size the next time you start the Report Panel. This command also saves the size and position of the report window.

Figure 7-11
Font Dialog Box



Generating a Report

Required Conditions for Manual and Automatic Report Generation

This section explains the report generation process. It first discusses the required conditions and then presents step by step automatic and manual report generation instructions.

Before you can generate a report, the following conditions must exist:

- A report definition, which contains the specifications for the report, must exist in the report definition list. To verify, display the report definition list. If necessary, refer to *Displaying the Report Definition List* for instructions. If you must add a new or modify an existing report definition, refer to the *Creating, Copying, or Modifying a Report Definition* section of this chapter.

- To generate a consumable, runtime, or history report, a Data Collection Module must exist on the Carrier Comfort Network. The module also must have been added to the ComfortVIEW database. For instructions on adding system elements to the database, refer to the Adding/Modifying Controllers section of this manual's Carrier Network Manager chapter.
- For consumable, runtime, and history reports, a report table must exist and must be configured in the Data Collection Option. (For example, if the Data Collection Option is collecting runtime data, you must configure the Data Collection Option's RUNTM_{xxx}S Table.) For instructions on configuring Data Collection Option tables, refer to Displaying and Configuring CCN Options in the Carrier Network Manager chapter of this manual.
- For consumable and runtime points in PICs or Comfort Controllers, an equipment part report table must also exist and be configured in the PIC or Comfort Controller. (For example, if the Data Collection Option is collecting runtime data from the 39N Air Handler PIC, you must also configure the 39N's Runtime Configuration Table.) If necessary, refer to the Modifying Configuration Table Values or Configuring Comfort Controllers section of the Carrier Network Manager chapter of this manual.
- When generating reports for remote CCNs, ComfortVIEW will automatically connect to the remote CCN to retrieve data. Your Autodial Gateway must be capable of connecting to the remote CCN when commanded by ComfortVIEW.

Note: This will only happen if your report definition calls for the retrieval of data to create the report. If you plan to use data that has already been retrieved and stored in the ComfortVIEW database, remote CCN connection is not necessary.

- If you wish to print the report, you must create a printer called CWREPORT in the Windows NT Print Manager. Manually-generated reports will print to this printer. Automatically-generated reports will print to the printer you select in the Report Definition dialog box.

To Manually Generate a Report

Follow the steps below to produce a report on request.

1. Verify that the Required Conditions for Manual and Automatic Report Generation exist.
2. Display the report definition list. If necessary, refer to Displaying the Report Definition List.
3. Click on the report definition from which you wish to create a report.

Note: If desired, you can review the report specifications by double clicking on the report definition. The Report Definition dialog box will display. Modify specifications as desired. Click on *OK* to save the modifications, or click on *Cancel* to exit without saving changes.

Be aware that changes made to the Report Dates options will affect any automatic generation. Remember to return the Report Dates to their original settings.

4. Click on the *File* menu item and then click on *Generate*.

ComfortVIEW displays a confirmation dialog box asking if you wish to generate the report.

5. Click on *Yes* to generate the report or click on *No* to prevent report generation. If you have selected multiple reports and wish to generate all, click on *Yes to All*.

A function status box is displayed during the report generation.

If, in the Report Definition dialog box, you enabled the Send report directly to CWREPORT printer option, the report prints on the CWREPORT printer created in the Windows NT Print Manager, and the report definition list re-displays on completion. Refer to the end of this chapter for sample ComfortVIEW reports.

If you did not enable the Send report directly to CWREPORT printer option, ComfortVIEW initiates the report viewer and displays the report on-screen. For instructions on the Report Panel's report viewer function, refer to the Using the Report Viewer section of this chapter.



Manual Report Regeneration

You can also use the File menu's Regenerate command (or click on the Regenerate icon in the toolbar) to manually reproduce a selected report based on a range of dates that is different than those specified in the report definition.

To Automatically Generate a Report

Follow the steps below to automatically produce a report at a user-specified time.

1. Verify that the Required Conditions for Manual and Automatic Report Generation exist.
2. Display the report definition list. If necessary, refer to Displaying the Report Definition List.
3. Configure your report definition to automatically retrieve data and automatically generate a report. For instructions, refer to Modifying an Existing Report Definition in the Creating, Copying, or Modifying a Report Definition section of this chapter.
4. The report will automatically generate and print at the time specified in the ComfortVIEW Setup application. If you wish to view or modify this time, refer to this manual's Setup chapter for instructions. The report will print on the printer specified in the Report Definition dialog box's *Print to* drop down list. This list appears under Automatic Retrieval Options.

Report Data Status

If bad data is encountered when a daily time-based report (i.e., History, Runtime, or Consumable) is being generated, ComfortVIEW will indicate the reason for the bad data on the report in the status column to the right of the data. Bad data may be encountered for the following reasons:

- no data was available from the controller
- there was a communication failure within the CCN
- there was a hardware failure at the controller

- the data collection option was configured improperly
- there was a mismatch of information between the ComfortVIEW database and the Data Collection Option.

When bad data is encountered in a daily time-based report, it is discarded and ComfortVIEW provides an interpolated value for that time instead. The interpolated value is calculated using the average of the good data readings preceding and succeeding the bad data. Interpolated values are inserted if up to two consecutive data readings are bad. If bad data exists for more than two data readings, no interpolation is performed, and the data is included in the report.

Using the Report Viewer

The report viewer function gives you the capability to:

- view, print, and save a report on disk.
- display another previously-generated report file.

The report viewer is automatically invoked as part of manual report generation. You can also, however, manually initiate the report viewer by clicking on the report definition list's *File* menu item and then clicking on *Report Viewer*.

Note: In Windows 9x client, it is recommended that you do not open more than one instance of the Report Viewer application. This is in order to conserve system resources.

When it is invoked by manual report generation, the report viewer function consists of a Report Viewer window with a Print Preview mode. The Print Preview mode is activated automatically when you manually generate a report and disable the Report Definition dialog box's Send report directly to CWREPORT printer option. When you exit the Print Preview mode, the Report Viewer window is displayed.

Print Preview Mode

When you manually generate a report, the report viewer displays the report in front of you in a Print Preview mode. This gives you the opportunity to view the report before you print it. A sample Print Preview window is displayed in Figure 7-12.

Figure 7-12
Sample Print Preview
Window

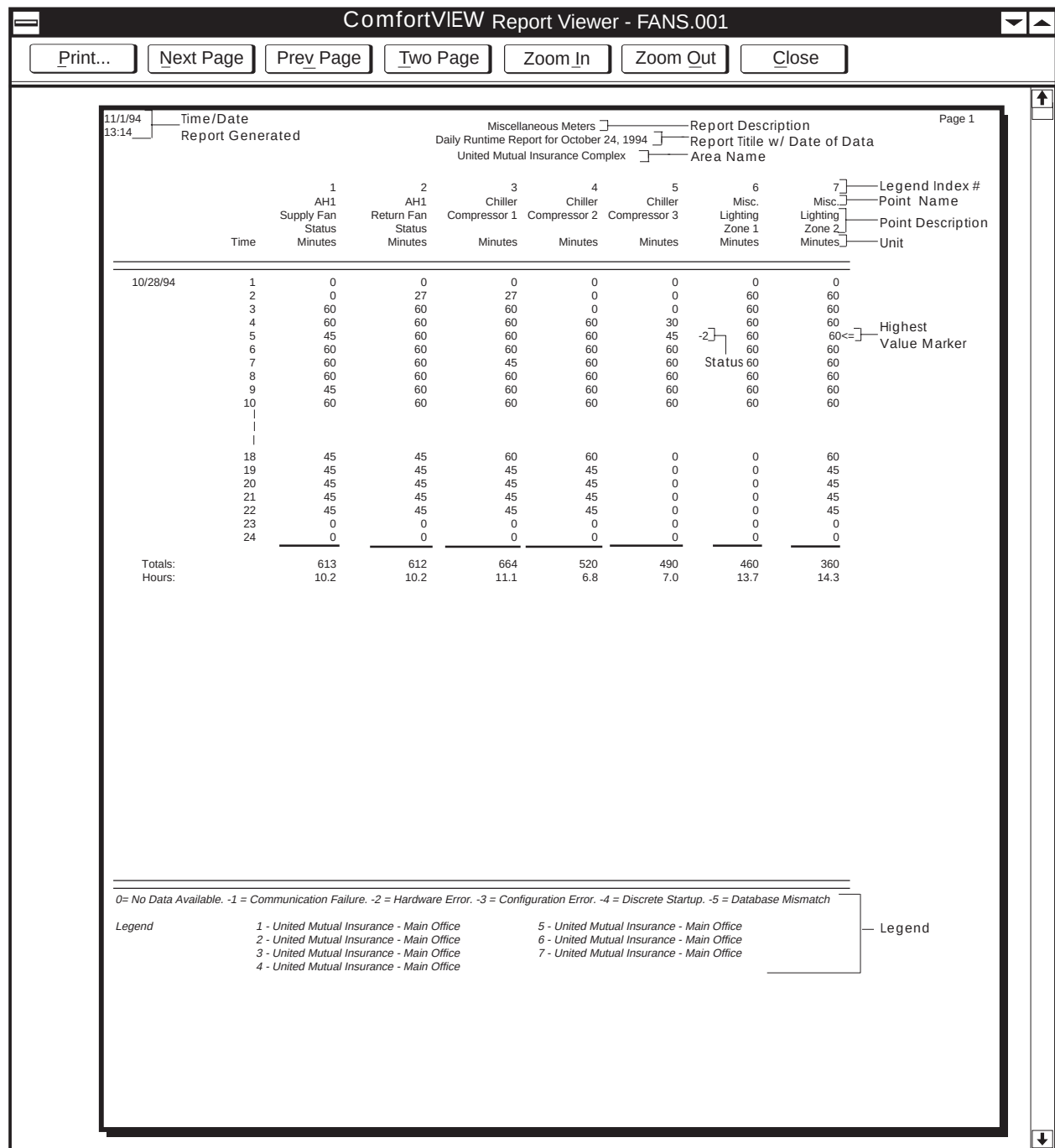


Table 7-12
Print Preview Window
Buttons

Click on	To
Print	print the report. The Print dialog box displays. To print selected report pages, click on <i>Pages</i> and enter the page numbers. To change the displayed print quality, make your selection from the drop down list. Enter the desired number of copies in Copies:. Then, click on <i>OK</i>. Note: To change the report's orientation (the default is landscape), click on the Print dialog box's <i>Properties</i> button, and, in the Print Properties dialog box, select <i>Portrait</i>. By default, the report will print on the CWREPORT printer that you have created in the Windows Print Manager. To print on another printer, click on the <i>Name</i> drop down list and select the desired printer. After printing the report, ComfortVIEW displays the Report Viewer window. Refer to Report Viewer Window following this table for an explanation of this window.
Next Page	if you have a multi-page report, view the next page.
Prev Page	if you have a multi-page report, view the previous page.
Two Page	display pages side by side.

(continued)

Table 7-12
Print Preview Window
Buttons
(continued)

Click on	To
Zoom In	magnify and view the report at a closer range.
Zoom Out	return the report to its original size.
Close	exit the report without printing. ComfortVIEW now displays the Report Viewer window.

Note: Unlike other windows, you cannot close this window by clicking on its control menu box.

Report Viewer Window

A sample Report Viewer window is displayed in Figure 7-13. The top line of the Report Viewer window displays *ComfortVIEW Report Viewer* followed by the report file name. The second line of the window contains the menu bar. Report Viewer menu commands are summarized in Table 7-13.

From the Report Viewer window, you can:

- display another report file that had been previously generated and saved on disk.

Note: Automatically-generated report files are saved if you select the *Save tab-separated data file* option in the Report Definition dialog box. Manually-generated report files are saved using the Report Viewer window's File Save as command.

- save the currently-displayed report file on disk. You would typically save a report file if you intend to view it at a later time or if you wish to read the file into a third party spreadsheet application.
- re-display the Print Preview Window and view the report.
- print the currently-displayed report.

Figure 7-13
Sample Report Viewer
Window

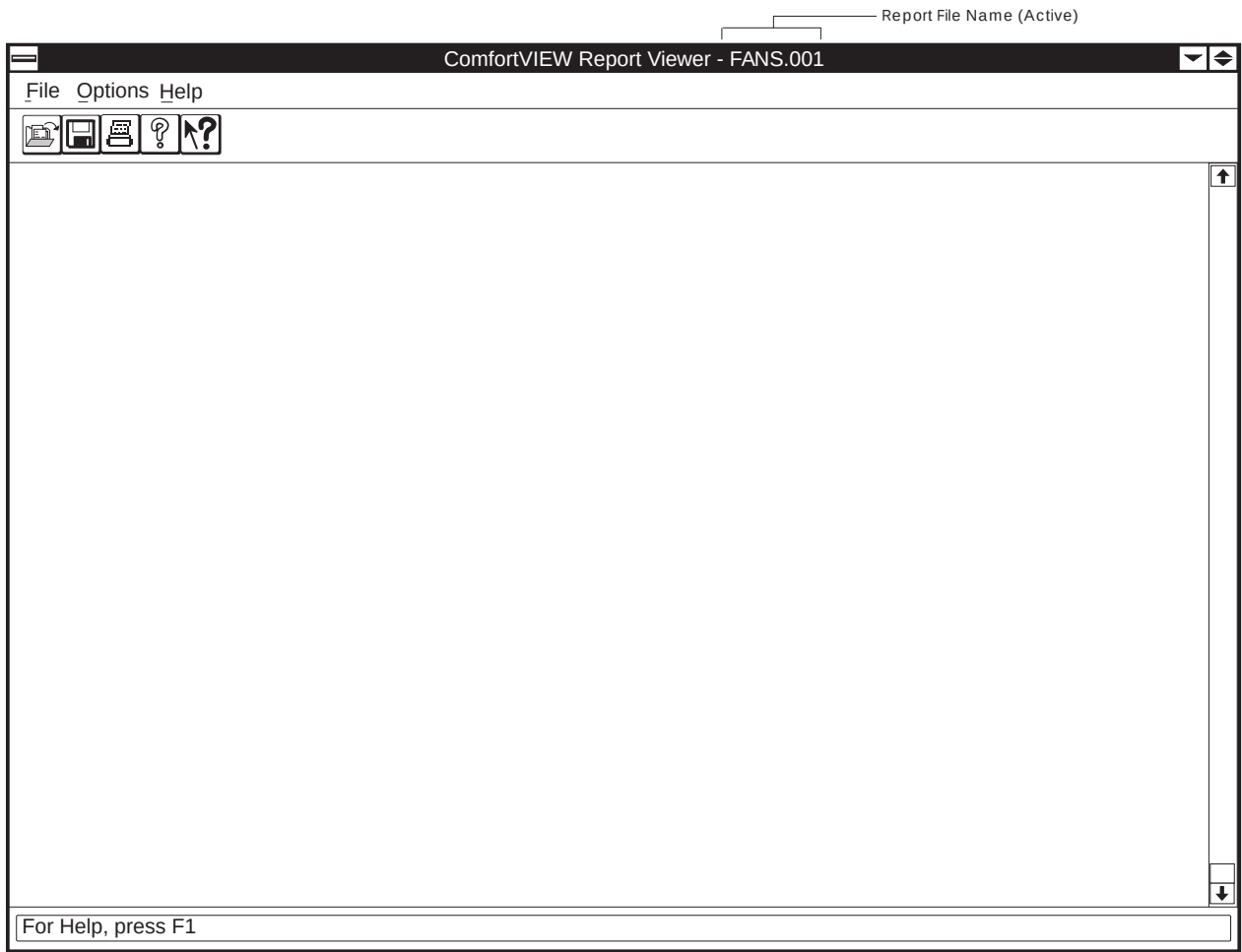


Table 7-13
Report Viewer Menu
Commands

File Menu Commands	Use this command to
Open	display another report file. Note: This report file must have been previously generated and saved to disk. The File Open dialog box displays. Select the file you wish to display or type the file name in the File Name box. You can also select a different drive by making your selection from the <i>Drives</i> drop down list. You can select a report file that is resident on another network computer by clicking on the <i>Network</i> button. ComfortVIEW saves automatically-generated reports to the \REPORTS\<i>report type</i> directory path (where <i>report type</i> is replaced by the type of report being generated: CONSUME, HISTORY, RUNTIME, etc.). This directory path will be located in \CWORKS, \CVIEW, or other directory in which you installed ComfortVIEW. ComfortVIEW uses the following report file naming convention: <i>Rptname.xxx</i> (where <i>Rptname</i> is replaced by the 8 character name you enter in the Report Name text box, and xxx is the report number ranging from 001 to 999. Note that this number is incremented each time you re-generate this report.)

(continued)

Table 7-13
Report Viewer Menu
Commands
(continued)

File Menu Commands	Use this command to
Save As	save the currently-displayed report file. The name of the currently-displayed report appears in the top line of the window following <i>ComfortVIEW Report Viewer -</i>. The File Save As dialog box displays. To save the file with a name different from the one displayed in the File Name box, type the name for the file. You may also select a different drive and a different directory or folder. For your convenience, a \REPORTS directory is supplied on your disk. This directory will be located in the \CWORKS, \CVIEW, or other directory in which you installed ComfortVIEW. To save the file on another network computer, click on the <i>Network</i> button.
Print	print the currently displayed report file. The name of the currently-displayed report appears in the top line of the window following <i>ComfortVIEW Report Viewer -</i>. The Print dialog box displays. To print selected report pages, click on <i>Pages</i> and enter the page numbers. To change the displayed print quality, make your selection from the drop down list. Enter the desired number of copies in <i>Copies:</i>, and, if desired, click on <i>Collate Copies</i>. Click on <i>OK</i>.

(continued)

Table 7-13
Report Viewer Menu
Commands
(continued)

File Menu Commands	Use this command to
Print (continued)	Note: If you wish to change the report's orientation (the default is landscape), click on the Print dialog box's <i>Properties</i> button, and, in the Print Properties dialog box, select <i>Portrait</i>. By default, the report will print on the CWREPORT printer created in the Windows NT Print Manager. If you wish to print on another printer, click on the <i>Name</i> drop down list and select a printer.
Print Preview	return to the Print Preview Window and view the report.
Print Setup	override the CWREPORT printer assignment. By default, manually-generated reports print on this printer, which is created in the Windows NT Print Manager. Selecting this command allows you to override the CWREPORT printer assignment. The Print Setup dialog box displays. If you wish to change the printer from the one displayed, select from the drop down lists. Click on <i>Portrait</i> or <i>Landscape</i> to select the report's orientation. If you wish to select another network printer, click on the <i>Network</i> button, and, in the Connect to Printer dialog box, select a printer.

(continued)

Table 7-13
Report Viewer Menu
Commands
(continued)

File Menu Commands	Use this command to
Exit	exit the Report Viewer Window. The Report Definition list re-displays.
Options Menu Commands	Use this command to
Toolbar	hide or display the toolbar that appears in the second line of report panel windows.
Status bar	hide or display the status bar that appears along the bottom of the Report Viewer Window.
Help Menu Commands	Use this command to
Contents	display the help table of contents.
Search	search for a help topic by typing a keyword.
About	display program information, version information, and copyright.

Editing Report Data

ComfortVIEW gives you the ability to modify the consumable and runtime and tenant billing data that it retrieves from the Data Collection and Tenant Billing Options and stores in its database.

Specifically, if there are missing or erroneous daily values in your monthly data, you can insert the missing or modify the existing daily values by following the instructions below. ComfortVIEW then automatically updates your monthly and yearly totals accordingly.

To edit your report data:

- Use the Windows Notepad application to create a text file containing the new or modified daily values. For instructions, refer below to To Create the Text File.
- Display the report definition list and use the File menu's Import data command to import the Notepad text file into the ComfortVIEW database. If you are modifying existing daily totals, the text file data will overwrite the existing values. If you are inserting missing daily totals, the text file data will be inserted into the monthly data. The monthly and yearly data will automatically update accordingly. For instructions on importing the Notepad text file, refer below to To Import the Data into the Consumable, Runtime, or Tenant Billing Data File.

To Create the Text File

1. Use the Windows Notepad application to create a file with the new or modified data.

Note: You must type each line of data in the format shown below. Separate each piece of data with a Tab.

For Consumable and Runtime Data:

Year [Tab] Month [Tab] Day [Tab] Numeric Value [Tab] Index #

where:

Year = the 4 digit year (Ex: 1999); Month = 1-12; Day = 1-31;

Numeric Value = the daily value

Index # = 0 (Consumable) 1-8 (Runtime Index #)

For Tenant Billing Data:

Year [Tab] Month [Tab] Day [Tab] Hour [Tab] Minute [Tab] Zone#
[Tab] Name [Tab] Duration

where:

Year = the 4 digit year (Ex: 1999); Month = 1-12; Day = 1-31;

Hour = 1-24; Minute = 1-60; Zone# = the tenant billing zone;

Name = the zone name; Duration = time in minutes

2. Save the Notepad text file in the directory
\CVIEW\REPORTS using the .RPT file extension.
Example Notepad text file containing consumable data:
EXAMPLE.RPT

1994	9	1	21113.2567	0
------	---	---	------------	---

Explanation:

When this text file is imported, the existing daily consumable total usage value for 9/1/94 will be overwritten with the value 21113.2567. If there currently is no usage value for this date, this value will be inserted into the monthly data. It will then be added to the 9/94 monthly total. The 94 yearly total also will be adjusted accordingly.

To Import the Data into the Consumable, Runtime, or Tenant Billing Data File

1. Display the report definition list. If necessary, refer to Displaying the Report Definition List.
2. Click on the *File* menu item and then click on *Import data*.
ComfortVIEW displays the Data Table Selection dialog box. This dialog box lists all consumable and runtime tables in each CCN. Refer to Figure 7-14 and Table 7-14 for instructions on using this dialog box.
3. Select a CCN from the Select CCN drop down list.
4. In the Select data table list, select the option table containing the point whose monthly data you intend to modify and click on *OK*.

The Open File dialog box displays.

5. Select the Notepad text file you wish to import or type the text file name in the File Name box. You can also select a different drive by making your selection from the Drives drop down list. You can select a text file that may be resident on another network computer by clicking on the *Network* button.
6. Click on *OK*.

The dialog box closes, the data imports into the selected consumable or runtime file, and the report definition list re-displays.

Figure 7-14
Data Table Selection
Dialog Box

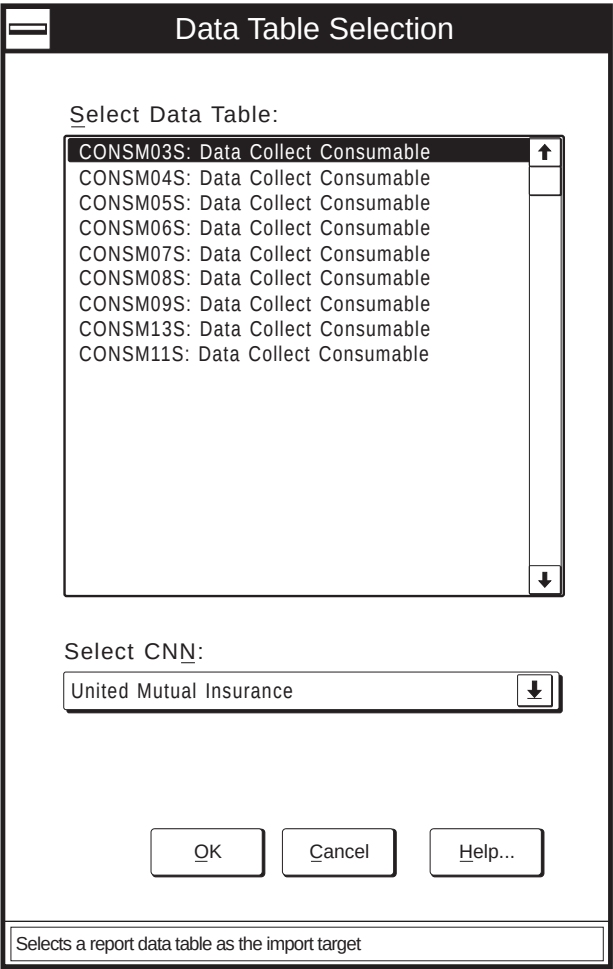


Table 7-14
Data Table Selection
Dialog Box

Click on	To
A CCN in the Select CCN drop down list	select the CCN containing the table to modify.
A table in the Select Data Table list	select the table containing the point whose monthly data you intend to modify.

(continued)

Table 7-14
Data Table Selection
Dialog Box
(continued)

Click on	To
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Managing Your Report Files

This section describes the files that are used and created by the ComfortVIEW Report Panel application. It also includes information on steps to take to manage the report files in your ComfortVIEW database.

The Report Panel application uses or creates the following files:

- The actual report files

These are the files that ComfortVIEW produces as a result of generating a report. Depending on how you set up the report definition, you can save automatically generated reports in your ComfortVIEW database. ComfortVIEW will save the report to the CVIEW\REPORTS\report type directory path (where *report type* is replaced by the type of report being generated: CONSUME, HISTORY, RUNTIME, etc.).

You can also save manually generated reports. Manually generated reports can be saved to a directory of your choice. But, for your convenience, the following reports directory has been set up for you: CVIEW\REPORTS.

ComfortVIEW uses the following report file naming convention: *Rptname.xxx* (where *Rptname* is replaced by the 8 character name you enter in the Report Name text box, and *xxx* is the report number ranging from 001 to 999. Note that this number is incremented each time you re-generate this report.)

To Manage These Report Files:

It is your responsibility to periodically delete or copy report files to a diskette. This is particularly important if you have configured your ComfortVIEW system to automatically generate reports and save them in your database. This action will lead to a steady decrease in available ComfortVIEW disk space.

- The report data that ComfortVIEW retrieves from the CCN option modules, stores in the ComfortVIEW database, and uses to formulate reports.

To Manage This Data:

It is your responsibility to specify the number of days that ComfortVIEW will retain retrieved report data in its database. At the end of this retention period, which you specify using ComfortVIEW Setup application, ComfortVIEW automatically deletes the data.

Only retrieved consumable, runtime, and history report data is subject to this purging. You can generate reports using the retained data until the end of this retention period.

Retention period valid entries range from 0 to 99 days. Entering 0 causes the data to be retained as long as ComfortVIEW has disk space to store it. You are cautioned against doing this, as it could eventually consume all disk space.

- The Notepad text files that you create and import to the ComfortVIEW database in the event that you have missing or incorrect daily report values.

These text files modify the report data that ComfortVIEW retrieves from the CCN option modules. (These data files are described in the bulleted item above.)

You must type data into the Notepad text file using the format shown in the Editing Report Data section of this chapter, and save the text file in the directory \CVIEW\REPORTS using the .RPT file extension.

To Manage These Data Files:

You can delete these files once the Import is complete.

Using the Report Panel To Initiate a Third Party Report Application

You can include your own custom report in the Report Panel. You do this by adding an icon to the Report Panel window. The icon could be used, for example, to launch a third party spreadsheet application that you could use to manipulate your report data.

Follow the steps below to add a report to ComfortVIEW Report Panel:

1. Display the report panel. If necessary, refer to the instructions listed under Accessing the Report Panel.

2. Click on the *Options* menu item and then click on *New*.

ComfortVIEW displays the New Report Profile dialog box.

3. In the Report name box, enter a descriptive report or application name. This name will display beneath the icon in the Report Panel window.
4. In the Menu entry box, enter a descriptive report or application name. This name will display in the command list when you click on the Report Panel window's *Report* menu item.

Note: To allow a user to invoke this command using a shortcut key, place an & character before the letter that you wish to be the shortcut key.

5. In the Icon file box, enter the directory path and file name of the icon that you wish to represent this report in the Report Panel window, or

click on the box to the right of the text box to search your directories for the proper icon file.

6. Enter any help text that you want presented in the Report Panel when the user selects your report application.

7. In the Executable box, enter the name of the executable file ComfortVIEW will invoke to start your report application, or

click on the box to the right of the text box to search your directories for the proper executable file.

If necessary, refer to Figure 7-15 and Table 7-15 for a summary of all New Report Profile dialog box options.

Figure 7-15
New Report Profile Dialog
Box

New Report Profile

Report name:

Menu entry:

Icon File:

Help Text:

Executable

OK

Cancel

Help...

Table 7-15
New Report Profile Dialog
Box

Click on	To
the Report Name text box	enter a name for the report or application. This name will display beneath the icon in the Report Panel window.
the Menu entry text box	enter a command name for the report. This name will display in the command list when you click on the Report Panel window's <i>Report</i> menu item.
	Note: To allow a user to invoke this command using a shortcut key, place an & character before the letter that will be the shortcut key.

(continued)

Table 7-15
New Report Profile Dialog
Box
(continued)

Click on	To
the Icon text box	enter the directory path and file name of the report icon that you wish to add to the Report Panel window. You may also click on the box to the right of the text box to search your directories for the proper icon file.
the Help text box	enter any help text that you want presented in the Report Panel when the user selects your report application.
the Executable box	enter the name of the executable file ComfortVIEW will invoke to start your report application. You may also click on the box to the right of the text box to search your directories for the proper executable file.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

**Report Panel
Menu Command
Summary**

Reports Menu

This section describes each of the commands that appear in the Report Panel window menus. Refer to Figure 7-2 in the Accessing the Report Panel section of this chapter to view a copy of the Report Panel Window.

The table below describes each of the commands that appear in the Report Panel’s Reports menu. Consumable, history, and runtime commands will always display in this Report menu. Additional report names will appear in the menu as you install other optional ComfortVIEW report types.

Table 7-16
Reports Menu

Click on	To
Consumable	display the consumable report definition list.
History	display the history report definition list.
Runtime	display the runtime report definition list.
Exit	exit the report panel application.

Options Menu

The table below describes each of the commands that appear in the Report Panel’s Options menu.

Table 7-17
Options Menu

Click on	To
New	add a custom report to the report panel. If desired, you can create your own custom report and icon and add it to the report panel. This icon could be used, for example, to launch a third party spreadsheet application that you could use to manipulate your report data. The New Report Profile dialog box displays. This command will also be used to add new ComfortVIEW report types as they become available.
Modify	modify the selected report profile. You must click on the report type icon prior to using this command. The profile dialog box displays. Make any desired changes. Click on <i>OK</i> to close the dialog box and save changes made, or on <i>Cancel</i> to exit the box and restore previous settings.

(continued)

Table 7-17
Options Menu
(continued)

Click on	To
Delete	delete the selected report profile. You must click on the report type icon prior to using this command. ComfortVIEW deletes the selected report icon and profile, and its accompanying report definition list.

Help Menu

The table below describes each of the commands that appear in the Report Panel's Help menu.

Table 7-18
Help Menu

Click on	To
Contents	display the help table of contents.
Search	search for a help topic by typing a keyword.
About	display program information, version information, and copyright.

Report Definition List Menu Command Summary

This section describes each of the commands that appear in the report definition list menu. Refer to Figure 7-3 in the Displaying the Report Definition List section of this chapter to view a sample report definition list.

File Menu

The table below describes each of the commands that appear in the report definition list's File menu.

Table 7-19
File Menu

Click on	To
New	create a new report definition and define the specifications for your report. This is the first step in the

(continued)

Table 7-19
File Menu
(continued)

Click on	To
	report creation process. Report specifications include information such as the report name and description, report type (daily, monthly, yearly), automatic data retrieval and report generation preferences, and the points on which to report. The Report Definition dialog box displays. Refer to Report Definition Dialog Box in the Creating, Copying, or Modifying a Report Definition section of this chapter for instructions on using this dialog box. Click on <i>OK</i> to close the dialog box and save information entered, or click on <i>Cancel</i> to exit the dialog box without saving.
Import data	modify retrieved consumable or runtime monthly data by importing a Notepad text file containing the new data.
Generate	produce (generate) the selected report. A confirmation dialog box displays. Click on <i>Yes</i> to generate the report or on <i>No</i> to prevent report generation. A function status box displays during the report generation. If you enabled the Report Definition dialog box's Send report directly to CWREPORT printer option, the report will print. If you did not enable this option, ComfortVIEW initiates the report viewer and allows you to view the report before printing. Refer to the Generating a Report and Using the Report Viewer sections of this chapter for additional report viewer and generation information.
Regenerate	manually generate a selected report based on a new range of data dates. ComfortVIEW will display the Regenerate Start Date and Regenerate End Date dialog boxes where

(continued)

Table 7-19
File Menu
(continued)

Click on	To
	you must enter report data start and end dates and times. If necessary, refer to Data Range Dialog Box, which appears in the Creating, Copying, or Modifying a Report Definition section of this chapter, for instructions on using these dialog boxes. ComfortVIEW will generate the report using the new report data.
Print	print the selected report definition. ComfortVIEW opens the Notepad application and displays the report definition. Click on the <i>File</i> menu item and then click on <i>Print</i> . Click on <i>File</i> and <i>Exit</i> to close the report.
Print setup	configure report print specifications such as print resolution and orientation. If desired, you can also use this command to override the ComfortVIEW printer assignment. Manually-generated reports for which you enable the Send report directly to CWREPORT printer option will print on the CWREPORT printer that you create in the Windows NT Print Manager. Use this command to override the printer assignment.
Report viewer	manually initiate the report viewer function. ComfortVIEW displays the File Open dialog box. Refer to the explanation of the Open command in Table 7-13 for instructions on using this dialog box. Note: In Windows 9x client, it is recommended that you do not open more than one instance of the Report Viewer application. This is to conserve system resources.
Exit	exit the report definition list.

Edit Menu

The table below describes each of the commands that appear in the report definition list’s Edit menu.

Table 7-20
Edit Menu

Click on	To
Copy	create a copy of a selected report definition. ComfortVIEW copies the selected report definition and displays the copied Report Definition dialog box. Type the new Report Name, and, if desired, make any other modifications. Click on <i>OK</i> to close the dialog box and save changes made, or click on <i>Cancel</i> to exit the dialog box without saving changes.
Delete	delete a selected report definition. At the <i>Reconfigure the data collection tables?</i> prompt, click on <i>Yes</i> to deallocate (or free up) any data collection tables or on <i>No</i> to prevent table deallocation from taking place. You would typically select <i>No</i> if you wish to keep the tables in a Data Collection Option for later use, or if the tables are in a GPM or HPM and cannot be deallocated. You will then be presented with a deletion confirmation dialog box. Clicking on <i>Yes</i> completes the report definition deletion, or on <i>No</i> cancels the report deletion. Note that if you have specified table deallocation, but the tables are being used by other report definitions, they will not be deallocated.
Modify	modify the selected report definition. The Report Definition dialog box displays. Make any desired modifications. Click on <i>OK</i> to close the dialog box and save changes made, or click on <i>Cancel</i> to exit the dialog box without saving changes.

Options Menu

The table below describes each of the commands that appear in the report definition list's Options menu.

Table 7-21
Options Menu

Click on	To
Font	change the font that ComfortVIEW uses to display report definition list text. Dialog Box Options: <i>Font:</i> Select the font to use. <i>Font Style:</i> Select any style options (for example, bold or italic) <i>Size:</i> Select the point size. The larger the point size, the larger the characters appear on your screen. <i>Sample:</i> The text in this box changes to reflect the font, font style, and size you select. <i>OK:</i> Closes the dialog box and save changes made. <i>Cancel:</i> Exits the dialog box and restores the previous settings.

(continued)

Table 7-21
Options Menu
(continued)

Click on	To
Toolbar	hide or display the toolbar that appears in the second line of report panel windows.
Status bar	hide or display the status bar that appears in the third line of report panel windows. This status bar displays the name and description of the currently highlighted report definition.
Refresh	update the report definition list with the most recent report definitions that have been created and saved in the ComfortVIEW database.
Save settings on exit	save any changes you make by using commands on the Options menu. For example, if you change the font and then exit the report definition list, the text appears in the new font the next time you enter the report list. This command also saves the size and position of report windows.

Help Menu

The table below describes each of the commands that appear in the report definition list’s Help menu.

Table 7-22
Help Menu

Click on	To
Contents	display the help table of contents.
Search	search for a help topic by typing a keyword.
About	display program information, version information on all ComfortVIEW components, and copyright.

Sample Reports

This section contains sample ComfortVIEW reports.

The following reports are included:

- Consumable Daily Report
- Consumable Monthly Report
- Consumable Yearly Report
- Runtime Daily Report
- Runtime Monthly Report
- Runtime Yearly Report
- History Report

Sample reports for additional ComfortVIEW reports can be found in Appendix A.

Figure 7-23 Sample Consumable Daily Report

Figure 7-23 Sample Consumable Daily Report

11/1/94
13:14

Miscellaneous Meters
"Monthly Consumable Report For October, 1994"
United Mutual Insurance Complex

Date	CHILLER		CHILLER		BOILER		BOILER		BOILER		BOILER		ELECTRIC		ELECTRIC	
	Office Chilled Water Flow	GALS	Annex Chilled Water Flow	GALS	Office Steam Flow	LBS	Annex Steam Flow	LBS	Office Gas Flow	MBTU	Annex Gas Flow	MBTU	Office Wattmeter	KWH	Annex Wattmeter	KWH
Oct-94																
1	96615		57969		40512		24307		39600.8		23760.5		5079		3047	
2	111150		66690		46606		27964		45558.5		27335.1		5843		3506	
3	442890<=		263169		185350		111425		181445.5		108835.7		232701		3961	
4	438615		265734<=		183916		110349		179780.8		107868.5		23561		3834	
5	410400		246240		172085		103251		168216.0		100929.6		215731		2944	
6	408690		245214		171368		102821		167515.1		100509.1		124831		2890	
Monthly	27	406125	243675		170292		102175		166463.7		99878.2		21348		12809	
Total	28	431775	259065		181048		1086291		80481.7		106186.3		22697		13618	
29	94050		56430		39436		23662		38549.5		3129.7		4944		2966	
30	85500		51300		35851		21511		35045.0		21027.0		4494		2697	
31	427500		256500		179255		107553		175225.0		105135.0		22472		13483	
Totals:]		9846608	5907965		4129175		477967		4040250.3		422121.15		176993		10564	

<= indicates peak usage.

Figure 7-24 Sample Consumable Monthly Report

11/1/94
13:14

Miscellaneous Meters
"Yearly Consumable Report For 1994"
United Mutual Insurance Complex

Month	CHILLER		CHILLER		BOILER		BOILER		BOILER		BOILER		ELECTRIC		ELECTRIC	
	Office Chilled Water Flow	GALS	Annex Chilled Water Flow	GALS	Office Steam Flow	LBS	Annex Steam Flow	LBS	Office Gas Flow	MBTU	Annex Gas Flow	MBTU	Office Wattmeter	KWH	Annex Wattmeter	KWH
1994	Jan	0	0	0	5367927<=		3220756<=		5252325.4<=		3151395.2<=		465929		279557	
	Feb	0	0	0	5161468		3096881		5050312.9		3030187.7		467283		285770	
	Mar	0	0	0	4335634		2601380		4242262.8		2545357.7		491814		295088	
	April	430973	2658584		3509799		2105879		3434212.8		2060527.7		502168		301301	
	May	7384956	4430973		2064587		1238752		2020125.1		1212075.1		544101		326461	
	Jun	10831268	6498761		1032294		619376		1010062.6		606037.5		544619		326771	
	Jul	12012861<=	7207717<=		0				202012.5		121207.5		545654<=		327393<=	
	Aug	11815929	7089557		0				202456.9		121474.2		545396		327237	
	Sep	10831268	6498761		2683964		16103782		626162.7		1575697.6		494402		296641	
	Oct	9846608	5907965		4129175		2477967		4040250.3		2422121.1		517699		310564	
		67153863	40292318		28284847		16971371		28080184.0		16846081.3		51280643		076783	
Totals:																

<= indicates peak usage.

Figure 7-25 Sample Consumable Yearly Report

11/1/94
13:14

Miscellaneous Meters
"Daily Runtime Report For October 28, 1994"
United Mutual Insurance Complex

Legend
Index
Number

1		2		3		4		5		6		7		8		9		10		11		12	
AH1		AH2		Chiller		Chiller		Chiller		Chiller		Chiller		Chiller		Misc		Misc		Misc		Misc	
Supply Fan		Return Fan		Chilled Water		Chilled Water		Chilled Water		Compressor 1		Compressor 2		Compressor 3		Compressor 4		Lighting		Lighting		Lighting	
Status	Status	Status	Status	Pump #1	Pump #2	Pump #1	Pump #2	Pump #1	Pump #2	Compressor 1	Compressor 2	Compressor 3	Compressor 4	Lighting	Lighting	Lighting	Lighting	Lighting	Lighting	Lighting	Lighting	Lighting	
Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	Minutes	
10/28/94	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	
	4	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
	21	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	26	22	20	30	0	
	22	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
	23	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals:	613	612	612	664	406	661	538	421	133	824	885	885	797	856	856	797	856	856	797	856	856	856	
Hours:	10.2	10.2	10.2	11.1	6.8	11.0	9.0	7.0	2.2	13.7	14.8	14.8	13.3	14.3	14.3	13.3	14.3	14.3	13.3	14.3	14.3	14.3	

0 = No Data Available. -1 = Communication Failure. -2 = Hardware Error. -3 = Configuration Error. -4 = Discrete Startup. -5 = Database Mismatch.

Legend
1 - United Mutual Insurance - Main Office
2 - United Mutual Insurance - Main Office
3 - United Mutual Insurance - Machinery
4 - United Mutual Insurance - Machinery
5 - United Mutual Insurance - Machinery
6 - United Mutual Insurance - Machinery

7 - United Mutual Insurance - Machinery
8 - United Mutual Insurance - Machinery
9 - United Mutual Insurance - Annex
10 - United Mutual Insurance - Annex
11 - United Mutual Insurance - Annex
12 - United Mutual Insurance - Annex

Legend

Figure 7-26 Sample Runtime Daily Report

Figure 7-27 Sample Runtime Monthly Report

Figure 7-27 Sample Runtime Monthly Report

11/1/94
13:14

Miscellaneous Meters
"Monthly Runtime Report For October 28, 1994"
United Mutual Insurance Complex

Month	1		2		3		4		5		6		7		8		9		10		11		12	
	AH1		AH2		Chiller		Chiller		Chiller		Chiller		Chiller		Chiller		Misc		Misc		Misc		Misc	
	Status	Hours	Status	Hours	Pump #1	Hours	Pump #2	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Lighting	Hours	Lighting	Hours	Lighting	Hours	Lighting	Hours
1994	Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	412.9	442.3	442.3	398.9	427.3	427.3	427.3	427.3
	Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	412.9	442.3	442.3	398.9	427.3	427.3	427.3	427.3
	Mar	49.2	48.9	53.2	53.2	53.2	32.5	32.5	33.8	33.8	10.6	10.6	53.0	53.0	43.0	43.0	379.9	406.9	406.9	367.0	393.1	393.1	393.1	393.1
	Apr	86.0	85.6	93.2	93.2	93.2	56.8	56.8	18.6	18.6	92.8	92.8	75.3	75.3	59.1	59.1	363.4	389.2	389.2	351.0	376.0	376.0	376.0	376.0
	May	135.2	134.6	146.4	146.4	146.4	89.3	89.3	145.8	145.8	118.3	118.3	92.8	92.8	29.2	29.2	346.9	371.5	371.5	335.1	358.9	358.9	358.9	358.9
	Jun	196.6	195.8	213.0	213.0	213.0	129.9	129.9	212.0	212.0	172.1	172.1	135.0	135.0	42.5	42.5	313.8	336.2	336.2	303.2	324.7	324.7	324.7	324.7
	Jul	270.3	269.2	292.8	292.8	292.8	178.6	178.6	58.5	58.5	291.5	291.5	236.6	236.6	185.7	185.7	317.1	339.7	339.7	306.4	328.2	328.2	328.2	328.2
	Aug	277.7	276.5	300.8	300.8	300.8	183.4	183.4	190.7	190.7	60.1	60.1	299.5	299.5	243.1	243.1	313.8	336.2	336.2	303.2	324.7	324.7	324.7	324.7
	Sep	258.1	256.9	279.5	279.5	279.5	170.4	170.4	225.9	225.9	177.2	177.2	55.8	55.8	278.3	278.3	323.7	346.8	346.8	312.7	335.0	335.0	335.0	335.0
	Oct	245.8	244.7	266.2	266.2	266.2	162.3	162.3	265.0	265.0	215.1	215.1	168.8	168.8	53.2	53.2	330.4	353.9	353.9	319.1	341.8	341.8	341.8	341.8
Totals:		1518.8	1512.2	1645.2	1645.2	1645.2	1003.2	1003.2	1150.2	1150.2	1137.7	1137.7	1116.9	1116.9	934.1	934.1	3515.0	3765.0	3765.0	3395.6	3637.1	3637.1	3637.1	3637.1

Legend	1 - United Mutual Insurance - Main Office	7 - United Mutual Insurance - Machinery
	2 - United Mutual Insurance - Main Office	8 - United Mutual Insurance - Machinery
	3 - United Mutual Insurance - Machinery	9 - United Mutual Insurance - Annex
	4 - United Mutual Insurance - Machinery	10 - United Mutual Insurance - Annex
	5 - United Mutual Insurance - Machinery	11 - United Mutual Insurance - Annex
	6 - United Mutual Insurance - Machinery	12 - United Mutual Insurance - Annex

Figure 7-28 Sample Runtime Yearly Report

Miscellaneous Meters													
"Daily History Report For October 28, 1994"													
United Mutual Insurance Complex													
Time	1	2	3	4	5	6	7	8	9	10	11	12	
	AH1 Supply Fan Status	AH1 Heat Interlock Relay	AH1 Supply Air Temperature	AH1 Returned Air Temperature	AH1 Space Temperature	AH1 Static Pressure	AH1 Outside Air Temperature	AH1 Relative Humidit	Chiller delta T	Chiller delta T	Boiler delta T	Boiler delta T	
			dF	dF	dF	In H2O	dF	%	^F	^F	^F	^F	^F
10/27/94 0:00	Stop	Off	65.2	65.1	67.7	0.00	51.2	35	0.2	0.2	15.3	20.1	
0:05									0.1	0.1	15.7	19.3	
0:10			65.3	65.2	67.8				0.3	0.4	15.9	19.1	
0:15						0.00	51.3	35	0.1	0.1	16.4	18.4	
23:45						0.00	57.2	37	0.1	0.1	19.4	16.3	
23:50			62.5	65.1	67.7				0.2	0.2	19.2	15.8	
23:55									0.4	0.5	20.1	15.4	

0 = No Data Available. -1 = Communication Failure. -2 = Hardware Error. -3 = Configuration Error. -4 = Discrete Startup. -5 = Database Mismatch.

- Legend
- 1 - United Mutual Insurance - Main Office
 - 2 - United Mutual Insurance - Main Office
 - 3 - United Mutual Insurance - Machinery
 - 4 - United Mutual Insurance - Machinery
 - 5 - United Mutual Insurance - Machinery
 - 6 - United Mutual Insurance - Machinery

- 7 - United Mutual Insurance - Machinery
- 8 - United Mutual Insurance - Machinery
- 9 - United Mutual Insurance - Annex
- 10 - United Mutual Insurance - Annex
- 11 - United Mutual Insurance - Annex
- 12 - United Mutual Insurance - Annex

Figure 7-29 Sample History Report

Global Function Manager

Global Function Manager

This chapter provides information on ComfortVIEW's Global Function Manager application.

For instructions on...	Turn to page
launching the Global Function Manager application	517
configuring a ComfortVIEW server to automatically force and auto user-specified groups of points	517
transmitting data from point to point or broadcasting point data onto the CCN Bus	522
creating global occupancy schedules	527
configuring global holidays	527
a summary of all Global Function Manager commands	534

Launching the Global Function Manager Application

To launch the Global Function Manager application:

Double click on the Global Function Manager icon.

ComfortVIEW displays the Global Function Manager window. The top line of the window contains the Global Function Manager menu. Refer to Global Function Manager Menu Command Summary at the end of this chapter for a description of each menu item and command.

Timed Force

You can configure a ComfortVIEW server to automatically force and auto one or more user-specified points, based on user-specified time parameters.

Follow the steps below to set up, modify, or delete a timed force:

1. Click on the *Functions* menu item and then click on *Timed Force*.

The Timed Force Groups dialog box is displayed. Refer to Figure and Table 8-1. This dialog box contains the names of all currently-configured force groups. As you select a force group, the group's force and auto time, force precedence, enable/disable status, and the names of all points that are currently assigned to the group display under *Force group*

information and in the *Force points*: list in the lower section of the dialog box.

2. In the Timed Force Groups dialog box, you can do the following:
 - Click on *New* to define a new force group (up to 300 force groups can exist), or click on an existing force group and then click on *Modify* to modify it. The Timed Force Points dialog box will be displayed. Use this dialog box to add and delete points from the group (up to 60 points per group), and to specify force precedence, and force and auto time. Double click on the Value cell to specify a new or modify the existing force value. Refer to Figure and Table 8-2 for instructions on using this dialog box.
 - Click on an existing force group, and then click on *Delete* to delete it. In the confirmation dialog box, click on *Yes* to delete the group or on *No* to close the dialog box without group deletion.
3. Click on *OK* to close the Timed Force Groups dialog box and save your settings or on *Cancel* to close the dialog box without saving settings.

At the specified time, ComfortVIEW will force the points identified for each group. Successes and failures will be logged in the System Activity log using an operator name of *ComfortVIEW* and an event of either *Timed force* or *Timed force with auto*, depending on whether an auto time was configured for the point, and whether the point being forced supports the force with auto feature. Alarms will be generated for failures. Those points for which an auto time is configured that do not support the force with auto feature, will receive a standard force and ComfortVIEW will issue the auto command at the appropriate time. If the ComfortVIEW server is turned off before the scheduled auto time, the auto will not be performed. ComfortVIEW will not perform forces or autos on points whose force or auto time occurred while ComfortVIEW was not running.

Figure 8-1
Timed Force Groups
Dialog Box

Timed Force Groups

Force groups:

1	Force Group1
---	--------------

New...

Modify...

Delete

OK

Cancel

Help...

Force group information

Force time: 10/21/1997 02:48 PM

Auto time: 10/22/1997 02:48 PM

Enabled

Force using local precedence

Force points:

1	Nationwide Mutual Insurance AHU: - 0.2 SPT: Air Space Temperature	70.0 (dF)
2	Nationwide Mutual Insurance AHU: - 0.2 SAT: Supply Air Temperature	66.2 (dF)
3	Nationwide Mutual Insurance AHU: - 0.2 OAT: Outside Air Temperature	66.2 (dF)
4		

Displays a list of force groups

Table 8-1
Timed Force Groups
Dialog Box

Click on	To
the name of a group in the <i>Force groups:</i> list	select a group to modify or delete.
New	create a new force group. The Timed Force Points dialog box is displayed. Refer to Table and Figure 8-2 for instructions on using this dialog box.
Modify	modify the selected force group. The Timed Force Points dialog box is displayed. Refer to Table and Figure 8-2.
	Note: Double clicking on an existing group in the <i>Force Groups:</i> list also will display this dialog box.

(continued)

Table 8-1
Timed Force Groups
Dialog Box
(continued)

Click on	To
Delete	delete the selected force group. At the confirmation dialog box, click on <i>Yes</i> to delete the group or on <i>No</i> to close the dialog box without completing the deletion.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 8-2
Timed Force Points
Dialog Box

Timed Force Points

Group name: Force_Group1

☒ Enabled

Force using:
☒ Local precedence
☐ Remote precedence

Force time: 10/21/1997 02:40 PM ... X

Auto time: 10/22/1997 02:40 PM ... X

Point	Value		
1 Nationwide Mutual Insurance AHU: - 0.2 SPT: Air Space Temperature	70.0 (dF)	New...	Delete
2 Nationwide Mutual Insurance AHU: - 0.2 SAT: Supply Air Temperature	66.2 (dF)	New...	Delete
3 Nationwide Mutual Insurance AHU: - 0.2 OAT: Outside Air Temperature	66.2 (dF)	New...	Delete
4		New...	Delete

OK Cancel Help...

Table 8-2
Timed Force Points
Dialog Box

Click on	To
the Group name: text box	enter a name for this group of timed force points.
Enabled	enable or disable the functionality of this timed force group.
Force time: and Auto time:	
	enter the force start or end date and time. These times will apply to all points in this force group. The Force Time and Date dialog box will be displayed. Enter the force start or end time and date. If necessary, you can refer to Figure and Table 7-5 in this manual's Report Panel chapter for instructions on using the Force Time and Date dialog box.
	delete the currently-displayed force or auto time and date.
Force using: Local precedence Remote precedence	set the force level to either a local or remote ComfortVIEW force. Remote forces have a higher precedence than local. The word <i>Supervisor</i> (for local ComfortVIEW forces) or <i>Remote Monitor</i> (for remote ComfortVIEW forces) appears in the points status column to indicate the type of ComfortVIEW force that is in effect.
New	add a point to this timed force group. The Point Selection dialog box will be displayed. Select the point from the area, element, category, table, and point drop down lists. If necessary,

(continued)

Table 8-2
Timed Force Points
Dialog Box
(continued)

Click on	To
	Refer to Table and Figure 4-13 in this manual's WorkSPACE Manager chapter for instructions on using the Point Selection dialog box.
Delete	delete the selected point from this timed force group.
the Value cell (double click)	to specify the force value for the selected point. The Force dialog box will be displayed. Enter the desired override value. If necessary, refer to Table and Figure 2-23 in this manual's Carrier Network Manager chapter for instructions on using the Force dialog box.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Point Transfer/ Broadcast

You can configure ComfortVIEW to transmit point data from one CCN system element to another, or to broadcast data from one CCN system element onto the CCN Bus. You can create up to 99 different point transfer instances.

Follow the steps below to set up, modify, or delete a point transfer or broadcast:

1. Click on the *Functions* menu item and then click on *Point Transfer*.

The Point Transfer dialog box is displayed. This dialog box displays a list of up to 99 point transfer/broadcast instances. A *Modify* button will be displayed next to those point transfers that are currently

configured. A *New* button will be displayed next to the unconfigured transfer instances. As you scroll through the list, each transfer's associated point transfer information, including error reporting for unprocessed transfers/broadcasts, will be displayed in the lower section of the dialog box.

2. In the Point Transfer dialog box, you can do the following:
 - Click on *New* to define a new or on *Modify* to modify an existing point transfer/broadcast. The Modify Point Transfer dialog box will be displayed. Use this dialog box to specify or modify your point transfer/broadcast information. Refer to Figure and Table 8-4.
 - Click on *Delete* to delete an existing point transfer/broadcast.
3. Click on *OK* to close the Point Transfer dialog box and save your settings or on *Cancel* to close the dialog box without saving settings.

At start-up, ComfortVIEW will issue all enabled transfers/broadcasts, then schedule subsequent transfers/broadcasts based on the configured frequency. Any new or modified point transfers/broadcasts will execute immediately, then scheduled according to the indicated frequency. Errors will be reported in the Point Transfer dialog box.

Figure 8-3
Point Transfer
Dialog Box

Point transfer 01	Modify...	Delete	▲
Point transfer 02	New...	Delete	
Point transfer 03	New...	Delete	
Point transfer 04	New...	Delete	
Point transfer 05	New...	Delete	
Point transfer 06	New...	Delete	
Point transfer 07	New...	Delete	
Point transfer 08	New...	Delete	▼

Point transfer information

Enabled Frequency (minutes): 1

Read from:
 Nationwide Mutual Insurance
 AHU: - 0, 2
 SPT: Air Space Temperature

Write to:
 Nationwide Mutual Insurance
 AHU: - 0, 32
 SPT: Space Temperature

Status of last attempt: Force level:
 Not processed. Supervisor force

Table 8-3
Point Transfer
Dialog Box

Click on	To
New	configure a new point transfer or broadcast instance. The Modify Point Transfer dialog box is displayed. Refer to Table and Figure 8-4 for instructions on using this dialog box.
Modify	modify a point transfer or broadcast. The Modify Point Transfer dialog box is displayed. Refer to Table and Figure 8-4.
OK	close the dialog box and save the changes made.

Note: Double clicking on any point transfer instance also will display this dialog box.

(continued)

Table 8-3
Point Transfer
Dialog Box
(continued)

Click on	To
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 8-4
Modify Point Transfer
Dialog Box

Table 8-4
Modify Point Transfer
Dialog Box

Click on	To
Enabled	enable or disable the functionality of this transfer or broadcast.
Read from	select the point to transfer or broadcast. The Point Selection dialog box will be displayed. Select the point from the area, element, category,

(continued)

Table 8-4
Modify Point Transfer
Dialog Box
(continued)

Click on	To
	table, and point drop down lists. If necessary, refer to Table and Figure 4-13 in this manual's WorkSPACE Manager chapter for instructions on using the Point Selection dialog box.
Transfer	specify this instance to be a point transfer.
Write to	select the point to which you wish to transfer. The Point Select dialog box will be displayed.
Force level drop down list	select the force level for point transfers. You must select a force with a higher level (which will appear above this one in the drop down list.) Broadcasts will automatically use a Control force level.
Broadcast Name	specify this instance to be a broadcast. specify the point name that will receive the broadcasted data. ComfortVIEW will broadcast the specified Read from point value to all local CCN system elements containing this point name.
Frequency	specify the time interval at which the broadcasts/transfers of data will execute. Point transfer allowable entries: 1-240. Broadcast allowable entries: 15-240.
OK	close the dialog box and save the changes made. Note: Changes will not take effect until you exit the previous (Point Transfer) dialog box.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Holiday Broadcast

A ComfortVIEW server that has been configured to be a time broadcaster (using the Enable Time Broadcast decision in the Carrier Network Manager's Standard CCN Settings dialog box) will send holiday status, along with the time, date, and day-of-week, when broadcasting to all locally-connected CCNs. The holidays which will be sent are read from the group of holidays that you specify here by selecting the *Functions* menu's *Holiday tables* command.

Selecting this command displays the Holidays dialog box. Use this dialog box to select each holiday by clicking on a day in the calendar. Select the month and year using the scroll bar.

For a list of all currently-configured holidays, select the *File* menu's *Print* command.

Central Time Schedules

The Global Function Manager gives you the ability to create master occupancy (time) schedules and to link these schedules to up to 100 existing occupancy schedules in specified CCN system elements on any locally-connected CCN. If desired, you can also create an override schedule that will supersede the master schedule on a specified day. Once a day (or when you manually select *Download*), ComfortVIEW will download the master and any associated override time schedules to the specified system elements, override the existing controller time schedules, and then update the local ComfortVIEW database to match the newly-changed controller databases. This function would be helpful in those situations, for example, where there are a large number of CCN controllers in a facility to allow you to quickly change all occupancy schedules at once.

Follow the steps below to create a global occupancy schedule.

1. Click on the *Functions* menu item and then click on *Central Time Schedule*.

The Central Time Schedules dialog box is displayed. Refer to Figure and Table 8-5. This directory-tree structured dialog box displays the names of all currently-existent master occupancy schedules. Double-clicking on the name of a master schedule displays the categories *Links* and *Overrides*.

Double-click on either one of these categories to display the names of the associated link and override schedules.

2. In the Central Time Schedules dialog box, you can do the following:
 - Define a new master time schedule by clicking on the header *Central time schedules* and then clicking on *New*. The Master Time Schedule dialog box will be displayed. Refer to Figure and Table 8-6. Click to enable/disable days of the week, and enter the Occupied From and To times in the corresponding edit boxes. The bar graph will update to display the occupied times.
 - Create a new controller time schedule link or a new override schedule by clicking on the name of an existing master schedule and then clicking on *New*. The Link/Override dialog box will be displayed. Refer to Figure and Table 8-7. Select either *Link* or *Override*.

You could also create a new link or override by expanding the directory tree, clicking on *Links* or *Overrides*, and then clicking on *New*.
 - Modify an existing master, link, or override schedule by clicking on the name of the master, link, or override schedule and then clicking on *Modify*. If you are modifying a link, the Select Table dialog box will be displayed. If you are modifying a master or override schedule, the Master Time Schedule or Override Schedule dialog box will be displayed. Refer to Figure and Table 8-6.
 - Download a master schedule to all associated links and override schedules, if appropriate, by clicking on the name of the central schedule and then clicking on *Download*.
 - Delete an existing master, override, or linked schedule by clicking on the schedule, override, or link name and then clicking on *Delete*. In the confirmation dialog box, click on *Yes* to delete the schedule, or on *No* to close the dialog box without completing the deletion.
3. Click on *OK* to close the Central Time Schedules dialog box and save your settings, or on *Cancel* to close the dialog box without saving settings.

Daily, at 3:00 am, ComfortVIEW will download each master schedule to its set of linked schedules on the bus. It will also update the corresponding linked schedules in the ComfortVIEW database. On a given day, if an override schedule exists, the override schedule will be used instead of the master.

Figure 8-5
Central Time Schedules
Dialog Box

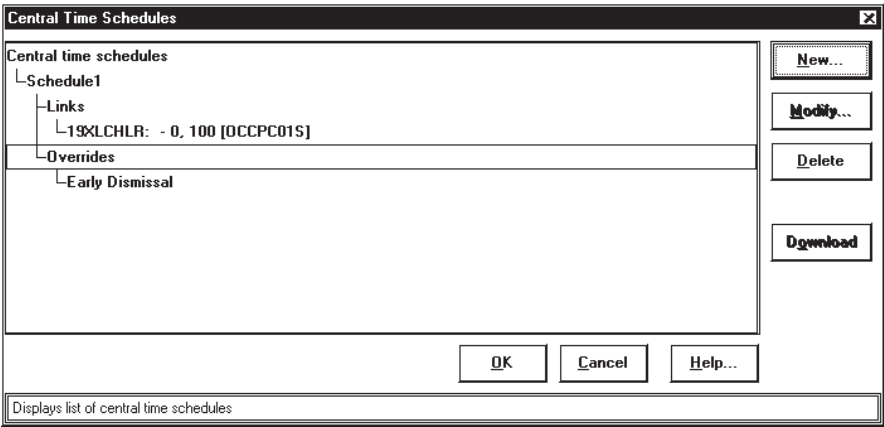


Table 8-5
Central Time Schedules
Dialog Box

Click on	To
the header <i>Central time schedules</i> and then click on New	add a new master time schedule. The Master Time Schedule dialog box will be displayed. Refer to Figure and Table 8-6 for instructions on using this dialog box.
an existing master schedule name and then click on New	create a link to an existing controller time schedule or a new override schedule. The Link/Override dialog box will be displayed. Refer to Figure and Table 8-7 for instructions on using this dialog box.
	Note: You can also create a new link or override by expanding the directory tree, clicking on <i>Links</i> or <i>Overrides</i> and then clicking on <i>New</i> .

(continued)

Table 8-5
Central Time Schedules
Dialog Box
(continued)

Click on	To
an existing central, link, or override schedule name and then click on Modify	modify an existing master, link, or override schedule. Either the Select Table, Master Time Schedule, or Override Schedule dialog box will be displayed. Refer to Figure and Table 8-6 for instructions on using the Master Time or Override Schedule dialog box. For instructions on using the Select Table dialog box, refer to Figure and Table 4-13 in this manual's WorkSPACE Manager chapter.
an existing master schedule name and then click on Download	send the master schedule or an override to the specified (linked) controllers. The download will overwrite the specified controller time schedules, and then update the local ComfortVIEW database to match the newly-changed controller databases.
an existing master schedule, override schedule, or link and then click on Delete	delete the selected link or schedule.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Figure 8-6
Master or Override Time
Schedule Dialog Box

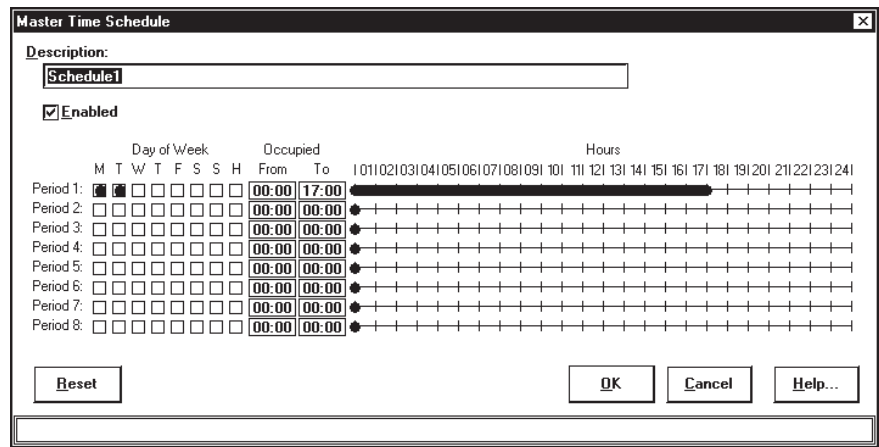


Table 8-6
Master or Override Time
Schedule Dialog Box

Click on	To
the Description text box	specify a name for this master schedule. This name will be displayed in the Central Time Schedules dialog box.
Enabled	enable or disable the functionality of this master schedule.
a Day of Week	enable or disable a day of week for this occupancy period.
Occupied From	specify the hour and minute, in military format, at which this occupied period begins. Note: You can also select this time by left clicking on the desired time in the Hours time bar.
To	specify the hour and minute, in military format, at which this occupied period ends. The bar graph will update to display the occupied times. Note: You can also select this time by right clicking on the desired time in the Hours time bar.

(continued)

Table 8-6
Master Time Schedule
Dialog Box
(continued)

Click on	To
Override date (in Override Schedule only)	select the month and date that the override schedule will take precedence over the master schedule. The Override Date dialog box will be displayed. Select the month and year using the scroll bar. Select the date by clicking on a day in the calendar.
Reset	erase all current occupancy selections.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.

Figure 8-7
Link/Override Dialog Box

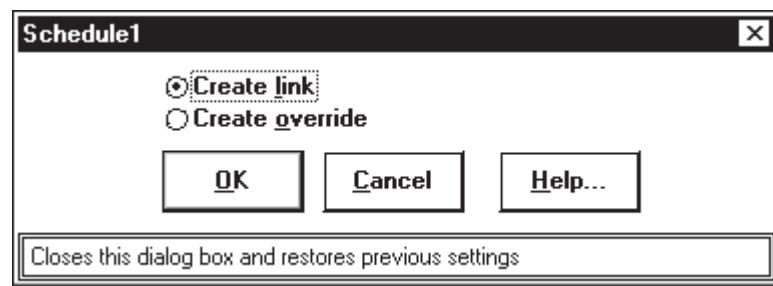


Table 8-7
Link/Override Dialog Box

Click on	To
Create link	specify the controller occupancy schedule that will be overridden by this central schedule. The Select Table dialog box will be displayed. If necessary, you can refer to Figure and Table 4-13 in this manual's WorkSPACE Manager chapter for instructions on using this dialog box. Note: Up to a maximum of 100 different occupancy tables can be linked to one central schedule.

(continued)

Table 8-7
Link/Override Dialog Box
(continued)

Click on	To
Create override	create a time schedule that will override this central schedule on a specified day. The Override Schedule dialog box will be displayed. This dialog box is the same as the Master Time Schedule dialog box (shown in Figure and Table x-x), with the only difference being that the Override Schedule dialog box contains an Override date button. Clicking on this button will display the Override Date dialog box, where you enter the date on which this schedule will override the central schedule. Note that the range of valid dates extends from today's date to one year in the future. This date will automatically apply for consequent years. Note: Up to a maximum of 366 overrides can be created for one central schedule.
OK	close the dialog box and save the changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

**Global Function
Manager Menu
Command
Summary**

The following table describes each of the commands that appear in the Global Function Manager menus.

File Menu

The following table describes each of the commands that appear in the File menu.

Table 8-8
File Menu

Command	Use this command to
Print	print a report of timed force groups, central time schedules, point transfers, or holidays. The Print dialog box displays. Select the type of report to print.
Print Setup	select a printer and printing options. The Print dialog box displays. To change the printer from the one displayed, click on the drop down list. Click on <i>Properties</i> to access Page Setup, orientation, and size options.
Exit	exit the Global Function Manager application.

Functions Menu

The following table describes each of the commands that are in the Functions menu

Table 8-9
Functions Menu

Command	Use this command to
Timed Force	automatically force and auto groups of-specified points, based on user-specified time parameters. The Timed Force Groups dialog box displays.

(continued)

Table 8-9
Functions Menu
(continued)

Command	Use this command to
Central Time Schedule	create global occupancy schedules. The Central Time Schedules dialog box displays. From this dialog box, you can display, modify, or delete existing, or create new master, linked, and override occupancy schedules.
Point Transfer	transmit point data from one CCN system element to another, or to broadcast data from system element onto the CCN Bus. The Point Transfer dialog box displays. This dialog box displays a list of up to 99 point transfer/broadcast instances. From this dialog box you can modify or delete an existing or create a new point transfer/broadcast.
Holiday Tables	specify the global holidays. If your ComfortVIEW server is configured to be a time broadcaster, it determines the holiday status that will be broadcast to all locally-connected CCNs along with time, date, and day-of-week according to the holidays that are specified here. The Holidays dialog box is displayed.

Help Menu

The following table describes each of the commands in the Help menu.

Table 8-10
Help Menu

Command	Use this command to
Contents	display the help table of contents.
Search	search for a help topic by typing a keyword.
About	display program information, version information on all ComfortVIEW components, and copyright.

BEST++

ComfortVIEW BEST++

The ComfortVIEW BEST++ application gives you access to Carrier's Building Environmental Systems Translator (BEST++) custom programming language. This easy-to-use programming language gives you the ability to write programs to supplement or enhance the standard control algorithms that are resident in Carrier's Comfort Controllers.

Instructions on operating the ComfortVIEW BEST++ application are included in Appendix D of the *BEST++ Programmer's Reference Manual* (808-893). This manual can be ordered from Carrier Literature Distribution.

Appendixes

Appendix A

— Additional ComfortVIEW Reports

Consumable, runtime, and history reports are described in this manual's Report Panel chapter. Other report types that are available to you are described in Table A-1 below.

Table A-1
Additional Reports

Report Type	Contents
System Activity	ComfortVIEW "system-type" events; refer to Table A-4 for a list of the events that can be reported.
Alarm Summary	Selected alarm information
Time Schedule	Controller-by-controller occupancy schedules and associated points
Tenant Billing	Timed overrides and resulting charges

To produce any of these reports, you need to first create a report definition, and then generate the report. The remainder of this appendix describes how to create report definitions for each of the above report types; see the Report Panel chapter for instructions on generating reports.

Defining a System Activity Report



Follow these steps to create a report definition for a System Activity report:

1. Launch the Report Panel application by double-clicking on the *Report Panel* icon (shown at left).
2. Double-click on the *System Activity* icon (shown at left). You will see a list of the existing System Activity report definitions.
3. Click on the *File* menu item, then click on *New*. You can also click on the *Add New Report* tool bar icon (shown at left).

ComfortVIEW displays a Report Definition dialog box, shown in Figure A-2.

3. Use the Report Definition dialog box to enter the following:
 - Report Name and Description
 - Manual Generation or Automatic Retrieval Options
 - Report Dates

Refer to Figure A-2 and Table A-2 for instructions on using the Report Definition dialog box.

4. Click on the *Events* button to choose which types of system events to include in the report. Refer to Selecting Events for the Report, which appears later in this chapter, for information on how to do this.
5. Click on the *Format* button to see a dialog box with various report formatting options. These are described under Formatting a Report, which appears later in this chapter.
6. Click on *OK* to exit the Report Definition dialog box and save changes, or click on *Cancel* to exit the dialog box without saving changes.

ComfortVIEW re-displays the System Activity Report Definition list.

Report Definition Dialog Box

The Report Definition dialog box works much the same way for System Activity, Alarm Summary, Time Schedule, and Tenant Billing reports. Table A-2 can be used as a reference for each; any differences are noted in the table. The Tenant Billing Report Definition, though, does include some additional settings that are described in Defining A Tenant Billing Report later in this chapter.

Figure A-2
Report Definition Dialog Box for System Activity Reports

Report Definition

Report Name: SYSTACT

Report Description: System Activity Report

Automatic Generation Options

- ☒ Enable automatic report generation
- ☒ Save tab-separated data file

Print to: HP LaserJet III

Manual Generation Options

- ☐ Send report directly to CWREPORT

Report Dates

- ☐ Yesterday
- ☐ Today
- ☒ Range of times/dates

Events from: 00:00 Nov 02, 1997

Events through: 23:59 Nov 09, 1997

☒ Save dates as relative

Defaults Events... Format...

OK Cancel Help...

Closes this dialog box and saves settings

Table A-2
Report Definition
Dialog Box

Click on	To
the Report Name text box	enter an up to 8 character name for the report. This name identifies the report in the report definition list.
the Report Description text box	enter an up to 48 character description for the report. This name appears with the report name in the report definition list. It is also the report title that prints on the top line of the report.
Report Dates: Yesterday	use yesterday's event data in the report.
Today	create a report using today's event data. The report will contain today's data starting from midnight to the current time.
Range of data Events from: Events through:	create a report using data from a range of dates. Enter the date or click on the button to the right of the Events from: and Events through: dates to display the Data Range dialog box. Refer to Figure 7-5 and Table 7-5 in the Report Panel chapter for instructions on using the Data Range dialog box. When defining a report based on a single day's data, enter the corresponding date in both the Events from: and Events through: text boxes. For Alarm Summary reports, the field names are Alarms from and Alarms through, but the functions are exactly the same.

(continued)

Table A-2
Report Definition
Dialog Box (continued)

Click on	To
Save dates as relative	automatically adjust the Events from: and Events through: dates relative to the current date. For example, you create a report definition on 8/10/97. You specify the Events from: and Events through: dates to be 8/3/97 and 8/10/97. On 8/18/97, you generate another report from this existing definition. ComfortVIEW will automatically adjust these dates relative to 8/18/97.

Automatic Generation Options:

Enable automatic report generation	automatically, after data retrieval, generate the specified report using the data that is stored in the ComfortVIEW database.
Save tab-separated data file	save the actual report that is created as part of the report generation process. ComfortVIEW will save the report to the CWORKS\REPORTS\report type directory path (where <i>report type</i> is replaced by the type of report being generated: CONSUME, HISTORY, RUNTIME, SYSTACT, etc.). ComfortVIEW uses the following report file naming convention: <i>Rptname.xxx</i> (where <i>Rptname</i> is replaced by the eight character name you enter in the Report Name text box, and xxx is the report number ranging from 001 to 999. Note that

(continued)

Table A-2
Report Definition
Dialog Box (continued)

Click on	To
	this number is incremented each time you re-generate this report.) You would only select this option if, at some later time, you intend to use the report in a word processing or spreadsheet application.
the Print to: drop down list	select a printer on which to automatically print the report. When several printers exist in your system, this option gives you the capability to specify a different printer for each report.
Manual Generation Options:	
Send report directly to CWREPORT printer	bypass the report viewer and print the report without first displaying it. If you do not enable this option, ComfortVIEW will display the report on-screen allowing you to view it before printing it. The report will print on the CWREPORT printer that you create in the Windows NT Print Manager.
Defaults	select the following defaults: • Enable automatic report generation • Save tab-separated data file • Save Dates as Relative • Report Dates: Data from 00:00 yesterday to 23:59 today

(continued)

Table A-2
Report Definition
Dialog Box (continued)

Click on	To
Events (System Activity only)	select the system activity events on which to report. ComfortVIEW displays the Report Event Groups dialog box, which lists the events that will be included in the report, and allows you to add and remove events. See Figure A-3 and Table A-3 for instructions on using this dialog box.
Filters (Alarm Summary only)	select the CCN elements whose alarms will be included in the report. When you click this button, you will see the Alarm Filters dialog box, which lists the elements that will be included in the report, and lets you add and remove up to 48 elements. Double clicking on an item moves it from one list to the other.
CCN elements (Time Schedule only)	select the CCN elements whose schedules will be included in the report. When you click this button, you will see the CCN Elements dialog box. This dialog box lists the elements that will be included in the report, and lets you add and remove up to 48 elements. Double clicking on an item moves it from one list to the other.
Data tables (Tenant Billing only)	select the tenants who will be included in the report. When you click this button, you will see the Data Tables dialog box, which lets you add and remove up to 48 tenants from the report.

(continued)

Table A-2
Report Definition
Dialog Box (continued)

Click on	To
Format	select the report format and sort order in which report data will be presented. ComfortVIEW displays the Report Format dialog box. See Figure A-5 and Table A-5 for instructions on using this dialog box. The Report Format feature does not apply to Time Schedule and Tenant Billing reports.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

**Selecting Events
for the Report**

ComfortVIEW lets you select which types of system events to include in the report. When you click on the Events button in the Report Definition dialog box, you will see the Report Event Groups dialog box shown in Figure A-3. The box on the right side list all the different event groups which are not included in the report; the box on the left lists all the event groups that are included. Table A-3 describes how to use the different controls in the dialog box to build a list of event groups to include.

Alarm Summary, Time Schedule, and Tenant Billing reports all use similar dialog boxes to select elements for their reports. The main difference is that the labels within the box are different, reflecting the different types of data each report includes. The Alarm Summary report uses the Alarm Filters dialog box; the Time Schedule report uses the CCN Elements dialog box; and the Tenant Billing report uses the Data Tables dialog box. Despite the different names, they all function in basically the same way.

Following this section, see Table A-4 for a reference of the specific events which are a part of each System Activity event group, and the target outcomes for each group that will be included in the report.

Figure A-3
Report Event Groups
Dialog Box

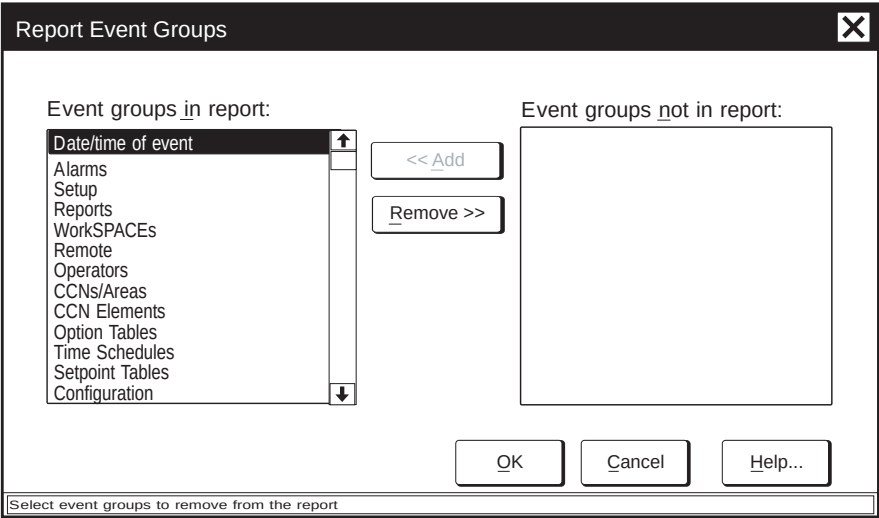


Table A-3
Report Event Groups
Dialog Box

Click on	To
an item in the Event groups in report: list	select an event group to remove from the report. Table A-4 lists the specific events associated with each event group.
Remove	remove a selected event group from the report. Note: You can also remove an item by double clicking on it.
an item in the Event groups not in report: list	select an event group to add back to the Event groups in report: list.
Add	add a selected event group to the report. Note: You can also add an item by double clicking on it.
Select Area (Time Schedule and Alarm Summary only)	select the CCN area of the desired element.
Select CCN (Tenant Billing only)	select the CCN of the desired tenants.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

The table below lists the different event groups and the specific events associated with each group. The target column lists the outcome of the event. The target information is that which appears in the system activity report. For example, the target of an access level addition (in event group operators) would be the new access level name.

Table A-4
Event Groups and
Associated Events

Group	Associated Events	Target
Logins	Logins and logouts, Quiet time logouts	n/a
Alarms	Alarm acknowledgements, deletions, and suppressions	# acknowledged, deleted, or suppressed
Setup	Modify global setup parameters	n/a
	Add and delete workstation	workstation name
	Add and delete alarm printers	printer name
	Modify custom units	n/a
Reports	Report definition additions, modifications, and deletions	rpt name and description
	Manual and automatic report generations	rpt name and description
	Report data imports	CCN name, table name and description
WorkSPACES	WorkSPACE/ViewSPACE/Trend additions, modifications, and deletions	name
Remote	Manual and automatic connects to and disconnects from remote CCNs	CCN name

(continued)

Table A-4
Event Groups and
Associated Events
(continued)

Group	Associated Events	Target
Operators	Access level additions, modifications, and deletions name	access level
	Operator profile additions, modifications, and deletions name	operator profile
CCNs/Areas	CCN additions, modifications, and deletions	CCN name
	Area additions, modifications, and deletions	area name
	NDS update polls and cold calls	CCN name
	Time/date broadcasts	CCN name
CCN Elements	CCN system element additions, modifications, and deletions; CCN system element moves; CCN system element uploads and downloads; CCN system element verifications; CCN element set time/date	area name, element name, description, address
Option Tables	Consumable, runtime, history table additions, modifications, and deletions	area name, element name, description, address, table name and description
Time Schedules	Time schedule uploads, downloads, and modifications	See option tables

(continued)

Table A-4
Event Groups and
Associated Events
(continued)

Group	Associated Events	Target
Setpoint Tables	Setpoint table uploads, downloads, and modifications	See option tables
Configuration	Configuration table uploads, downloads, and modifications	See option tables
FIDs	FID point additions, modifications, and deletions	area name, element name, description, address, point name and description
Comfort Controllers	Comfort Controller object additions, modifications, and deletions	area name, element name, description, address, table name and description,
Forces	Point forces and autos; Submaster point forces	See FIDs (plus value)

Formatting a Report

ComfortVIEW gives you several options for customizing the appearance of your report. You can:

- sort the report in different ways
- include only system events which are coded as successes or failures.

Use the Report Format dialog box (Figure A-5) to set these different options. You can reach the Report Format dialog box by clicking on the *Format* button in the Report Definition dialog box, as described in Table A-2.

The Report Format dialog box is used by both the System Activity and Alarm Summary reports; the only difference is that the Alarm Summary report gives you a different list of options to include.

Table A-5 describes the options available in the Report Format dialog box.

Figure A-5
Report Format
Dialog Box

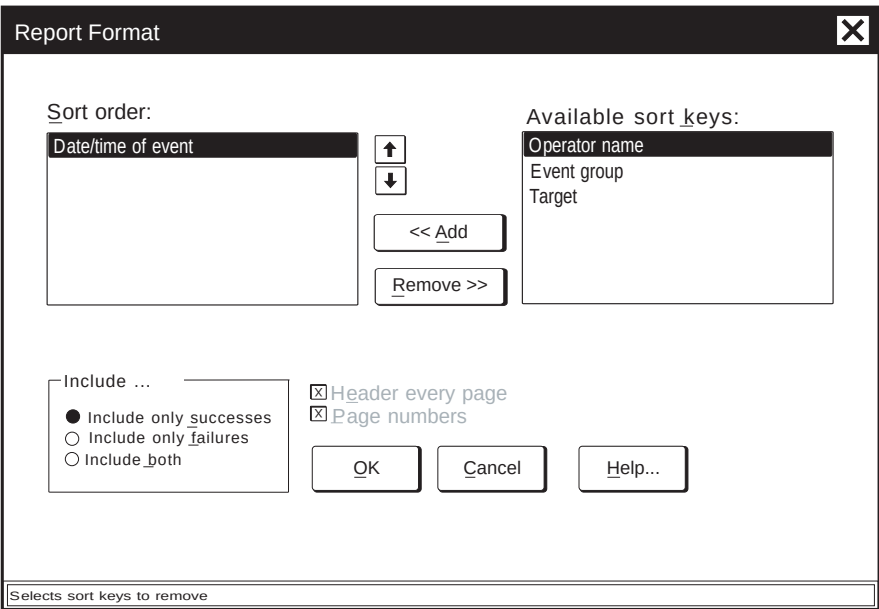


Table A-5
Report Format
Dialog Box

Click on	To
the Sort order: list	select a sort key. The report's data will be sorted in the order that you specify here. The precedence of each sort is determined by its position in the list. Once a key is selected, use the up or down arrow to reposition it.
the Available sort keys: list	select a sort key to apply to the report data. Click on <i>Add</i> to move the sort to the Sort order list. Figure A-5 shows the sort keys for a System Activity report.
Add	move the selected sort key from the Available list to the Sort order list. ComfortVIEW will now apply this sort to the report data.
Remove	remove the selected sort. The sort key will move from the Sort order list back to the Available list.
the up arrow	increase the precedence of a selected sort. The sort key will move up in the Sort order list.
the down arrow	decrease the precedence of a selected sort. The sort key will move down in the Sort order list.
Include (System Activity only)	
Include only successes	include only successfully-completely events in the report.
Include only failures	include only failed events in the report.
Include both	include both successes and failures in the report.

(continued)

Table A-5
Report Format
Dialog Box
(continued)

Click on	To
Select components to include (Alarm Summary only)	
Alarm message	Include the message component of the alarm.
Custom message	Include the custom message component (if any) of the alarm.
Acknowledgement	For each alarm in the report, include the acknowledgement message.
Operator note	For each alarm in the report, include the operator note, if any.
Select levels to include (Alarm Summary only)	
Alarm	Include alarms in the report.
Alert	Include alerts in the report.
Return to normal	Include return-to-normal messages in the report.
OK	close the dialog box and save changes made.
Cancel	exit the dialog box and restore the previous settings. Any changes made are not saved.
Help	display help information.

Note that the Header every page and Page numbers fields are enabled, but appear dimmed. ComfortVIEW will automatically include this information on all pages of the system activity report.

Sample Report

On the following page is a sample System Activity Report.

09/18/96
14:13

Today's System Activity System Activity Report For September 18, 1996

Page 1

Date	Time	Event	Note	Target	Force Value	Auto Date	Auto Time
	08:59	System Administrator Login					
	09:22	System Administrator Acknowledge alarm		651			
	09:22	System Administrator Delete alarm		669			
	09:28	System Administrator Modify global setup parameters					
	09:29	System Administrator Add workstation					
	09:29	System Administrator Delete workstation		Client1			
	09:44	System Administrator Add alarm printer		Client1			
	09:45	System Administrator Modify custom units		LaserJet4Si/4SiMXPS			
	10:04	System Administrator Add ViewSPACE					
	10:05	System Administrator Add WorkSPACE		ViewSPACE:23XL Chiller Monitor View			
	10:06	System Administrator Modify WorkSPACE		WorkSPACE:23XL Chiller Monitor			
	10:21	System Administrator Add CCN		WorkSPACE:23XL Chiller Monitor			
	10:24	System Administrator Add area		United Mutual			
	10:26	System Administrator Add CCN element		United Mutual Insurance - Building 1			
	10:28	System Administrator Add CCN element		United Mutual Insurance - Building 1 30GT: - 0,96			
	10:29	System Administrator Upload existing CCN element		United Mutual Insurance - Building 1 30GT: - 0,97			
	10:31	System Administrator Modify generic configuration table		United Mutual Insurance - Building 1 30GT: - 0,97			
				United Mutual Insurance - Building 1 AHU: - 0,2 CONFIG: Configuration			

Defining an Alarm Summary Report



To create a report definition for an Alarm Summary report, follow these steps:

1. Launch the Report Panel application by double-clicking on the *Report Panel* icon (shown at left).
2. Double-click on the *Alarm Summary* icon (shown at left). You will see a list of all the existing Alarm Summary report definitions.
3. Click on the *File* menu item, then click on *New*. You can also click on the *Add New Report* icon on the tool bar (shown at left).

ComfortVIEW displays a Report Definition dialog box similar to the one shown in Figure A-6.

4. Use the Report Definition dialog box to enter the following:
 - Report Name and Description
 - Manual Generation or Automatic Retrieval Options
 - Report Dates

Figure A-6
Report Definition
Dialog Box for
Alarm Summary
Reports

Report Definition

Report Name:
DALARM

Report Description:
Daily alarm report

Automatic Generation Options

☒ Enable automatic report generation
☒ Save tab-separated data file

Print to:
\\CIE\HP870CXI

Manual Generation Options

☐ Send report directly to CWREPORT

Report Dates

☐ Yesterday
☒ Today
☐ Range of times/dates:

Alarms from:
00:00 10/6/97

Alarms through:
23:59 10/6/97

☒ Save dates as relative

Defaults
 Filters..
 Format...

OK Cancel Help...

Edits the report description (up to 48 characters)

Refer to Table A-2 for instructions on using the Report Definition dialog box.

5. Click on the *Filters* button to display the Alarm Filters dialog box where you can select the CCN elements whose alarms will be included in the report. Double clicking on an item moves it from one list to the other.
6. Click on the *Format* button to set the following report format options:
 - Sort the report in different ways
 - Select which types of alarms to include in the report
 - Include all of the alarm message or just certain components.

Table A-5 in the Formatting a Report section earlier in this chapter describes the Report Format dialog box in detail.

7. Click on *OK* to exit the dialog box and save changes, or click on *Cancel* to exit the dialog box without saving changes.

ComfortVIEW re-displays the Alarm Summary Report Definition list.

Sample Report

The facing page shows a sample Alarm Summary report.

11/05/97
08:43

Alarm Summary Report
Alarm Summary Report For November 4, 1997

Page1

=====

ProgCentral - area RCSI 0,52 Alarm - 6 at 0:00 4-Nov-1997: Comm Failure on Element 8

ProgCentral - area RCSI 0,52 Alarm - 6 at 0:00 4-Nov-1997: Comm Failure on Element 24

ProgCentral - area RCSI 0,52 Alarm - 6 at 8:00 4-Nov-1997: Comm Failure on Element 8

ProgCentral - area RCSI 0,52 Alarm - 6 at 8:00 4-Nov-1997: Comm Failure on Element 24

ProgCentral - area RCSI 0,52 Alarm - 6 at 8:00 4-Nov-1997: Comm Failure on Element 24

ProgCentral - area RCSI 0,52 Alarm - 6 at 8:00 4-Nov-1997: Comm Failure on Element 112

ProgCentral - area RCSI 0,52 Alarm - 6 at 9:00 4-Nov-1997: Comm Failure on Element 24

ProgCentral - area RCSI 0,52 Alarm - 6 at 9:00 4-Nov-1997: Comm Failure on Element 112

ProgCentral - area RCSI 0,52 Alarm - 6 at 10:00 4-Nov-1997: Comm Failure on Element 24

ProgCentral - area RCSI 0,52 Alarm - 6 at 10:00 4-Nov-1997: Comm Failure on Element 112

ProgCentral - area AHU 0,90 Alarm - 2 at 10:20 4-Nov-1997: Space Temperature -10.0 dF outside limit of 45.0 dF.

ProgCentral - area AHU 0,90 Return to normal at 10:21 4-Nov-1997: Space Temperature.

Defining a Time Schedule Report



Time Schedule reports let you see occupancy schedules and associated points on a controller-by-controller basis. To create a report definition for a Time Schedule report, follow these steps:

1. Launch the Report Panel application by double-clicking on the *Report Panel* icon (shown at left).
2. Double-click on the *Time Schedule* icon (shown at left). You will see a list of all the existing Time Schedule report definitions.
3. Click on the *File* menu item, then click on *New*. You can also click on the *Add New Report* icon on the tool bar (shown at left).

ComfortVIEW displays a Report Definition dialog box similar to the one shown in Figure A-7.

4. Use the Report Definition dialog box to enter the following:
 - Report Name and Description
 - Manual Generation or Automatic Retrieval Options

Refer to Table A-2 for instructions on using the Report Definition dialog box.

Figure A-7
Report Definition
Dialog Box for
Time Schedule
Reports

5. Click on the *CCN Elements* button to display the CCN Elements dialog box where you can select the CCN elements whose schedules will be included in the report. Double clicking on an item moves it from one list to the other.
6. Click on *OK* to exit the dialog box and save changes, or click on *Cancel* to exit the dialog box without saving changes.

ComfortVIEW re-displays the Time Schedule Report Definition list.

Sample Report

The following page shows a sample Time Schedule report.

11/05/97
09:01

Time Schedule Report
Time Schedule Report

Controller Name: 19XLCHLR
CCN Name: ProgCentral
Area Name: ProgCentral - area
=====

Address: 0,100

Period	M	T	W	T	F	S	S	H	Occupied Time	Unoccupied Time
1	X	X							0:00	24:00
2									0:00	0:00
3									0:00	0:00
4									0:00	0:00
5									0:00	0:00
6									0:00	0:00
7									0:00	0:00
8									0:00	0:00

Time Schedule:

OCCPC01S

Occupancy Supervisory

Associated Points:

Period	M	T	W	T	F	S	S	H	Occupied Time	Unoccupied Time
1					X				0:00	15:00
2					X				8:30	0:00
3					X				0:00	12:30
4									15:00	0:00
5					X				3:15	0:00
6					X				0:00	10:30
7					X				10:00	0:00
8									0:00	10:00

Time Schedule:

OCCPC02S

Occupancy Supervisory

Associated Points:

Period	M	T	W	T	F	S	S	H	Occupied Time	Unoccupied Time
1					X				0:00	15:00
2					X				8:30	0:00
3					X				0:00	12:30
4									15:00	0:00
5					X				3:15	0:00
6					X				0:00	10:30
7					X				10:00	0:00
8									0:00	10:00

Time Schedule:

OCCPC03S

Occupancy Supervisory

Associated Points:

Controller Name: AHU
CCN Name: ProgCentral
Area Name: ProgCentral - area
=====

Address: 0,90

Period	M	T	W	T	F	S	S	H	Occupied Time	Unoccupied Time
1									0:00	23:45
2									3:15	21:00
3	X	X	X	X	X			X	0:00	0:00
4									0:00	0:00

Time Schedule:

OCCPC01S

Defining a Tenant Billing Report

The Tenant Billing report lets you create reports showing the timed override and resulting charges for each tenant you have defined as part of your CCN. The timed override is the amount of time a tenant has exceeded their scheduled occupancy hours. In order to create Tenant Billing Reports, your CCN must include a Tenant Billing Module. This is an optional piece of hardware which resides on the CCN and collects the data needed for the report.

To create a Tenant Billing report definition, follow these steps:



1. Launch the Report Panel application by double-clicking on the *Report Panel* icon (shown at left).



2. Double-click on the *Tenant Billing* icon (shown at left). You will see a list of all the existing Tenant Billing report definitions.



3. Click on the *File* menu item, then click on *New*. You can also click on the *Add New Report* icon on the tool bar (shown at left).

Figure A-8
Report Definition Dialog
Box for Tenant Billing
Reports

Report Definition

Report Name:
BLDG3

Report Description:
Billing report for Building 3

Report
☐ None
☐ Summary
☒ Activity

Automatic Retrieval Options
☒ Enable automatic data retrieval
☒ Enable automatic report generation
☐ Save tab-separated data file

Print to:
 \\CIE\HP870CXI

Report Dates
☐ Last month's data
☐ This month's data
☒ Range of times/dates:
 Data from: 00:00 9/1/97
 Data through: 23:59 9/30/97
☒ Save dates as relative

Manual Generation Options
☐ Retrieve last month's data
☐ Retrieve this month's data
☐ Send report directly to CWREPORT

Defaults
Data tables...

OK Cancel Help...

Edits the short name of the report (up to 8 characters)

ComfortVIEW displays a Report Definition dialog box similar to the one shown in Figure A-8.

4. Use the Report Definition dialog box to enter the following:
 - Report Name and Description
 - Report Type
 - Manual Generation or Automatic Retrieval Options
 - Report Dates

Refer to Table A-2 for instructions on using the Report Definition dialog box. Table A-9 describes additional report definition features not described in Table A-2.

5. Click on the *Data Tables* button to display the Report Data Tables dialog box where you can select the data tables that will be included in the report. Generally, each customer's data is stored in its own data table, so the *Data Tables* button lets you select which customers to include in the report. Double clicking on an item moves it from one list to the other.
6. Click on *OK* to exit the dialog box and save changes, or click on *Cancel* to exit the dialog box without saving changes.

ComfortVIEW re-displays the Alarm Summary Report Definition list.

To learn more about defining tenants and tenant billing, see the *Tenant Billing Option Overview and Configuration Manual* (808-730).

Table A-9
Additional Report
Definition Items for
Tenant Billing Reports

Click on	To
Report	
None	deactivate the report definition.
Summary	create a summary report, which shows for each tenant the total override time and total charges for each day.
Activity	include for each tenant the summary described above, plus an activity log which shows each override instance with zone name, override start time, and requested time.

Automatic Generation Options:

Enable automatic data retrieval	automatically retrieves the tenant billing data that is stored in the Tenant Billing CIO Module. Otherwise, the report will use the data that is stored in the ComfortVIEW database.
---------------------------------	--

Manual Generation Options:

Retrieve last month's data	include the previous month's billing data in the report.
Retrieve this month's data	include the current month's billing data in the report.

Sample Reports

On the following pages are sample Tenant Billing Reports—a Summary report, and an Activity report.

01/29/99
11:58

Tenant Billing Report for January 1, 1999 to January 31, 1999

Page 1

General Insurance Incorporated
New York, New York

Summary Report

	Day	Timed Override Duration (hh:mm)	Rate (\$/hour)	Cost (\$0.00)
	=====	=====	=====	=====
January-1999	1	2:40	1.00	2.67
	2	1:49	1.00	1.82
	7	0:35	1.00	0.58
	8	1:05	1.00	1.08
	10	0:55	1.00	0.92
	11	2:00	1.00	2.00
	14	1:05	1.00	1.08
	15	1:00	1.00	1.00
	19	0:30	1.00	0.50
	21	0:40	1.00	0.67
		12:19		12.32

N = No data; I = Oncomplete data; M = Database mismatch; C = Communication failure

Activity Report

Timed Override

	Day	Zone	Start Time (hh:mm)	Requested Duration (hh:mm)	Total Duration (hh:mm)
	=====	=====	=====	=====	=====
January-1998	5	ZONE1	9:00	1:10	1:10
January-1998	9	ZONE1	22:00	0:40	0:40
January-1998	21	ZONE3	12:00	0:13	0:13
January-1998	22	ZONE3	12:00	0:14	0:14
January-1998	23	ZONE1	12:00	0:36	0:36
January-1998	24	ZONE1	12:00	0:20	0:20

Appendix B— CWACCESS.DLL

Overview

ComfortVIEW includes a dynamic-link library (DLL) which allows third-party programs to access CCN system elements, central time schedules, and occupancy and setpoint schedules. It also lets those programs use Carrier's Autodial Gateway and Telink products to connect to remote CCNs. This new DLL, CWACCESS.DLL, is installed in the \CVIEW\Apps directory at the same time ComfortVIEW is installed. The DLL is designed so that applications which use it can work independently of ComfortVIEW. You do not need to be logged in to ComfortVIEW to use the DLL, nor does ComfortVIEW need to be installed on the machine from which you are accessing the DLL's functions. ComfortVIEW must however, be installed and running on a ComfortVIEW server computer that is located on the same network as the computer from which you are accessing this DLL.

The DLL provides the following functions:

- CW_InitLib
- CW_GetErrorBuffer
- CW_CloseLib
- CW_OpenOccupancyTable
- CW_CloseOccupancyTable
- CW_ReadPeriod
- CW_WritePeriod
- CW_OpenSetPointTable
- CW_CloseSetPointTable
- CW_ReadSetPoint
- CW_WriteSetPoint
- CW_ConnectToRemoteCCN
- CW_DisconnectFromRemoteCCN

The following sections describe each of these functions, including return values and parameters, C++ prototypes from the DLL, and sample Visual Basic declarations and function calls.

Note that for those functions which return string values to their parameters, the parameter variable must be initialized with some value (not just declared or dimensioned) before the function is called. You must use the CW_InitLib function to establish the connection to the ComfortVIEW server before using any of the other functions. For all functions (except for CW_CloseLib and CW_GetErrorBuffer), the result should be checked for an error; use the CW_GetErrorBuffer function to display the actual error.

CW_InitLib()

```
int CW_InitLib(char *Server)
```

This function initializes the connection to the ComfortVIEW server. This connection must be established before any tables or setpoints can be read or written to.

Parameters–

Server The name of the ComfortVIEW Server

Return Value–

The function returns 0 if there is no error; any other value indicates an error. (See the description of CW_GetErrorBuffer() for more information on CWACCESS errors.)

Sample Declaration–

```
Public Declare Function CW_InitLib Lib  
"CWACCESS.DLL" (ByVal Server As String) As Integer
```

Example–

```
Server = "\\ProgCentral2"  
Result = CW_InitLib(Server)
```

CW_GetErrorBuffer()

```
int CW_GetErrorBuffer(char *ErrBuf)
```

This function retrieves any error messages that are produced by any CWACCESS function. It will retrieve up to 255 characters from the Error Queue, and will also retrieve multiple error messages.

Parameters–

ErrBuf A string of up to 255 characters which stores an error message

Return Value–

The value 0 indicates that there are still error messages in the error buffer; a positive value indicates there are no more error messages.

Sample Declaration–

```
Public Declare Function CW_GetErrorBuffer Lib  
"CWACCESS.DLL" (ByVal ErrBuf As String) As Integer
```

Example–

```
ErrBuf = String(255, 0)  
ErrResult = CW_GetErrorBuffer(ErrBuf)  
While ErrResult = 0  
    MsgBox "Error Detected = " & ErrBuf  
    ErrResult = CW_GetErrorBuffer(ErrBuf)  
Wend
```

In the above example, CW_GetErrorBuffer is called in a While loop to ensure that all error messages will be displayed.

CW_CloseLib()

```
void CW_CloseLib()
```

This function terminates the connection to the ComfortVIEW server.

Parameters–

None

Return Value–

None

Sample Declaration–

```
Public Declare Sub CW_CloseLib Lib "CWACCESS.DLL" ()
```

Example–

```
Call CW_CloseLib
```

CW_OpenOccupancyTable()

```
int CW_OpenOccupancyTable(unsigned long CCNNumber, unsigned short Bus, unsigned short Controller, unsigned short OccupancyTableNumber, char * OccupancyTableName, unsigned short *TableID)
```

This function opens the time schedule for the controller which is specified by the function's arguments. The table to be opened can be specified by either its name or number. If the value of *OccupancyTableNumber* = 0, the function will use the string stored in *OccupancyTableName* to identify the desired table. If *OccupancyTableNumber* contains a valid table number, it will open the table and return its name in *OccupancyTableName*. When a table has been successfully opened, a system-generated integer is returned to *TableId*. This number is then used by the *CW_CloseOccupancyTable*, *CW_WritePeriod* and *CW_ReadPeriod* functions to identify the appropriate table.

This function can also be used to open the Central Time Schedule. To open the Central Time Schedule, use the following arguments: *CCNNumber*, *Bus*, and *Controller* must be 0, and the *OccupancyTableName* must be a name of the Central Time Schedule.

Parameters—

<i>CCNNumber</i>	The CCN number of the controller whose occupancy table you want to open
<i>Bus</i>	The number of the CCN bus the controller is on
<i>Controller</i>	The ID number of the controller
<i>OccupancyTableNumber</i>	The controller's occupancy table number
<i>OccupancyTableName</i>	The controller's occupancy table name
<i>TableId</i>	Returns the table id of the opened table

Return Value—

The function returns 0 if there is no error; any other value indicates an error. (See the description of *CW_GetErrorBuffer()* for more information on CWACCESS errors.)

Sample Declaration–

```
Public Declare Function CW_OpenOccupancyTable Lib
"CWACCESS.DLL" (ByVal CCNNumber As Long,
ByVal Bus As Integer, ByVal Controller As Integer, ByVal
OccupancyTableNumber As Integer, ByVal
OccupancyTableName As String, TableId As Integer) As
Integer
```

Example–

```
CCNNumber = 1
Bus = 0
Controller = 10
OccupancyTableNumber = 1
OccupancyTableName = String(255, 0)
TableId = 0
Result = CW_OpenOccupancyTable(CCNNumber, Bus,
Controller, OccupancyTableNumber,
OccupancyTableName, TableId)
```

CW_CloseOccupancyTable()

int CW_CloseOccupancyTable (unsigned short *TableId*, int *Saveflag*)

This function closes the occupancy table specified by *TableId*. You can also set *SaveFlag* to save any changes made to the table with the *CW_WritePeriod* function. The results of the function *CW_WritePeriod* will not be stored in the database until the *CW_CloseOccupancyTable* function is called with a non-zero value for *Saveflag*.

If the *CW_CloseOccupancyTable* function fails, it may fail at different stages of completion. The function *GetErrorBuffer* will display the extent of the error. If the error indicates that a table is successfully downloaded into the ComfortVIEW database but not downloaded into the controller, the table will not be downloaded into the controller at a later time automatically by ComfortVIEW.

Parameters–

TableId This is the TableId obtained from the CW_OpenOccupancyTable Function.

Saveflag If this flag is set to a non-zero value the table will be saved to the database and downloaded to the controller. If it is set to zero any changes will not be saved

Return Value–

The function returns 0 if there is no error; any other value indicates an error. (See the description of CW_GetError-Buffer() for more information on CWACCESS errors.)

Sample Declaration–

```
Public Declare Function CW_CloseOccupancyTable Lib
"CWACCESS.DLL" (ByVal TableId As Integer, ByVal
Saveflag As Integer) As Integer
```

Eaxmple–

```
Saveflag = 1
Result = CW_CloseOccupancyTable(TableId, Saveflag)
```

CW_ReadPeriod()

```
int CW_ReadPeriod (unsigned short TableId, unsigned short
PeriodNumber, unsigned short *DOWFlags, unsigned short
*OccupiedStartHour, unsigned short *OccupiedStartMinute, un-
signed short *OccupiedEndHour, unsigned short
*OccupiedEndMinute)
```

This function reads an Occupancy Period based upon the TableId and the PeriodNumber. The period is specified as the days of the week, and a start and end time. The table to be read must have been opened with the CW_OpenOccupancyTable function prior to calling this function. When the table is opened, the CW_OpenOccupancy-Table function returns the TableId value which is used by the CW_ReadPeriod function to identify the proper table.

Parameters–

<i>TableId</i>	This value is supplied by the CW_OpenOccupancyTable function
<i>PeriodNumber</i>	The period number to read
<i>DOWFlags</i>	Returns a packed byte representing the days of the week and holidays in the following manner: MTWTFSSH
<i>OccupiedStartHour</i>	Returns the start hour of period 0–24
<i>OccupiedStartMinute</i>	Returns the start Minute of period 0–59
<i>OccupiedEndHour</i>	Returns the end hour of period 0–24
<i>OccupiedEndMinute</i>	Returns the end Minute of period 0–59

Return Value–

The function returns 0 if there is no error; any other value indicates an error. (See the description of CW_GetError-Buffer() for more information on CWACCESS errors.)

Sample Declaration–

```
Public Declare Function CW_ReadPeriod Lib
"CWACCESS.DLL" (ByVal TableId As Integer, ByVal
PeriodNumber As Integer, DOWFlags As Integer,
OccupiedStartHour As Integer, OccupiedStartMinute As
Integer, OccupiedEndHour As Integer, OccupiedEndMinute
As Integer) As Integer
```

Example–

```
PeriodNumber = 1
DOWFlags = 0
OccupiedStartHour = 0
OccupiedStartMinute = 0
OccupiedEndHour = 0
OccupiedEndMinute = 0
Result = CW_ReadPeriod(TableId, PeriodNumber,
DOWFlags, OccupiedStartHour, OccupiedStartMinute,
OccupiedEndHour, OccupiedEndMinute)
```

The DOWFlags are stored as a packed byte. The sample code below shows a way to translate the data to a more usable form. CheckDay0–CheckDay8 are eight variables which correspond to the MTWTFSSH of the DOWFlags; 1 indicates that the day is in the period, 0 indicates that it is not.

```

DOWMask(8) As Integer
    DOWMask(0) = 128
    DOWMask(1) = 64
    DOWMask(2) = 32
    DOWMask(3) = 16
    DOWMask(4) = 8
    DOWMask(5) = 4
    DOWMask(6) = 2
    DOWMask(7) = 1

For key = 0 To 7
    DayLoop = "CheckDay" & key
    If (DOWFlags And DOWMask(key)) Then
        Me(DayLoop) = 1
    Else
        Me(DayLoop) = 0
    End If
Next key

```

The Me(DayLoop) expression is used to access the variable name, which is stored as a string in DayLoop and is a member of the current Microsoft Access Form. This could also be accomplished in Visual Basic by storing the values in an array.

CW_WritePeriod()

```

int CW_WritePeriod(unsigned short TableId, unsigned short
PeriodNumber, unsigned short DOWFlags, unsigned short
OccupiedStartHour, unsigned short OccupiedStartMinute, unsigned
short OccupiedEndHour, unsigned short OccupiedEndMinute)

```

This function writes a period specification to the table specified in TableId. The table to be written to must have been opened with the CW_OpenOccupancyTable function prior to calling this function. When the table is opened with this function, it returns the TableId

value which is used by the CW_WritePeriod function to identify the proper table.

Note that the new period is not saved to the database until the table is closed with the CW_CloseOccupancyTable function and a non-zero SaveFlag. However, if you read this table before it is closed, you will receive the new data.

Parameters–

<i>TableId</i>	This value is supplied by the CW_OpenOccupancyTable function
<i>PeriodNumber</i>	The period number to read
<i>DOWFlags</i>	Returns a packed byte representing the days of the week and holidays in the following manner: MTWTFSSH
<i>OccupiedStartHour</i>	Returns the start hour of period 0–24
<i>OccupiedStartMinute</i>	Returns the start Minute of period 0–59
<i>OccupiedEndHour</i>	Returns the end hour of period 0–24
<i>OccupiedEndMinute</i>	Returns the end Minute of period 0–59

Return Value–

The function returns 0 if there is no error; any other value indicates an error. (See the description of CW_GetError-Buffer() for more information on CWACCESS errors.)

Sample Declaration–

```
Public Declare Function CW_WritePeriod Lib
"CWACCESS.DLL" (ByVal TableId As Integer, ByVal
PeriodNumber As Integer, ByVal DOWFlags As Integer,
ByVal OccupiedStartHour As Integer, ByVal
OccupiedStartMinute As Integer, ByVal OccupiedEndHour
As Integer, ByVal OccupiedEndMinute As Integer) As
Integer
```

Example–

```
TableId = TableId
PeriodNumber = 1
OccupiedStartHour = 5
OccupiedStartMinute = 30
OccupiedEndHour = 18
OccupiedEndMinute = 15
Result = CW_WritePeriod(TableId, PeriodNumber,
DOWFlags, OccupiedStartHour,
OccupiedStartMinute, OccupiedEndHour,
OccupiedEndMinute)
```

The DOWFlags are stored as a packed byte. The sample code below shows a way to translate the data to a more usable form.

CheckDay0–CheckDay8 are eight variables which correspond to the MTWTFSSH of the DOWFlags; 1 indicates that the day is in the period, 0 indicates that it is not.

DOWMask(8) As Integer

```
DOWMask(0) = 128
DOWMask(1) = 64
DOWMask(2) = 32
DOWMask(3) = 16
DOWMask(4) = 8
DOWMask(5) = 4
DOWMask(6) = 2
DOWMask(7) = 1
```

DOWFlags = 0

For key = 0 To 7

DayLoop = "CheckDay" & key

If (Me(DayLoop) <> 0) Then

DOWFlags = DOWFlags Or DOWMask(key)

End If

Next key

CW_OpenSetPointTable() int CW_OpenSetPointTable (unsigned long *CCNNumber*, unsigned short *Bus*, unsigned short *Controller*, char * *SetPointTableName*, unsigned short **SetPointTableId*, unsigned short **SetPointCount*)

This function opens the setpoint table which is identified by the function's arguments: CCN number, bus number, controller element number, and table name. When a setpoint table has been successfully opened, a system-generated integer is returned to SetPointTableId. This number is then used by the CW_CloseSetPointTable, CW_WriteSetPoint and CW_ReadSetPoint functions to identify the appropriate table.

Parameters—

<i>CCNNumber</i>	The CCN number of the controller whose setpoint table you want to open
<i>Bus</i>	The number of the CCN bus the controller is on
<i>Controller</i>	The ID number of the controller
<i>SetPointTableName</i>	The controller's setpoint table name
<i>SetPointTableId</i>	Returns the table id of the opened table
<i>SetpointCount</i>	Returns the number of points in the setpoint table

Return Value—

The function returns 0 if there is no error; any other value indicates an error. (See the description of CW_GetErrorBuffer() for more information on CWACCESS errors.)

Sample Declaration—

```
Public Declare Function CW_OpenSetPointTable Lib
"CWACCESS.DLL" (ByVal CCNNumber As Long, ByVal
Bus As Integer, ByVal Controller As Integer, ByVal
SetPointTableName As String, SetPointTableId As Integer,
SetPointCount As Integer) As Integer
```

Example–

```
CCNNumber = 1
Bus = 0
Controller = 10
SetPointTableName = String(255, 0)
SetPointTableName = "SS01"
SetPointTableId = 0
SetPointCount = 0
Result = CW_OpenSetPointTable(CCNNumber, Bus,
Controller, SetPointTableName, SetPointTableId,
SetPointCount)
```

CW_CloseSetPointTable()

int CW_CloseSetPointTable (unsigned short *SetPointTableId*, int *Saveflag*)

This function closes the setpoint table specified by SetPointTableId. You can also set SaveFlag to save any changes made to the table with the CW_WriteSetPoint function. The results of the function CW_WriteSetPoint will not be stored in the database until the CW_CloseSetPointTable function is called with a non-zero value for Saveflag.

If the CW_CloseSetPointTable function fails, it may fail at different stages of completion. The function GetErrorBuffer will display the extent of the error. If the error indicates that a table is successfully downloaded into the ComfortVIEW database but not downloaded into the controller, the table will not be downloaded into the controller at a later time automatically by ComfortVIEW.

Parameters–

<i>SetPointTableId</i>	This is the SetPointTableId obtained from the CW_OpenSetPointTable Function.
<i>Saveflag</i>	If this flag is set to a non-zero value the table will be saved to the database and downloaded to the controller. If it is set to zero any changes will not be saved

Return Value–

The function returns 0 if there is no error; any other value indicates an error. (See the description of CW_GetError-Buffer() for more information on CWACCESS errors.)

Sample Declaration–

Public Declare Function CW_CloseSetPointTable Lib
"CWACCESS.DLL" (ByVal SetPointTableId As Integer,
ByVal Saveflag As Integer) As Integer

Example–

Saveflag = 1
Result = CW_CloseSetPointTable(SetPointTableId,
Saveflag)

CW_ReadSetPoint()

int CW_ReadSetPoint(unsigned short *SetPointTableId*, unsigned
short *PointNumber*, char **Description*, char **Name*, double **Value*,
char **Units*, double **HighLimit*, double **LowLimit*, char **Notes*)

This function reads the setpoint information for the setpoint specified by the function's arguments.

Parameters –

<i>SetPointTableId</i>	This is the SetPointTableId returned by CW_OpenSetPointTable.
<i>Point Number</i>	The number of the point to read.
<i>Description</i>	This string returns the description.
<i>Name</i>	This string returns the point's name.
<i>Value</i>	Returns the value of the point.
<i>Units</i>	This string returns the units of the point's value and limits.
<i>HighLimit</i>	Returns the maximum value the point can hold.
<i>LowLimit</i>	Returns the minimum value the point can hold.
<i>Notes</i>	This string returns the point's notes.

Return Value–

The function returns 0 if there is no error; any other value indicates an error. (See the description of CW_GetError-Buffer() for more information on CWACCESS errors.)

Sample Declaration–

```
Public Declare Function CW_ReadSetPoint Lib
"CWACCESS.DLL" (ByVal SetPointTableId As Integer,
ByVal PointNumber As Integer, ByVal Description As
String, ByVal Name As String, Value As Double, ByVal
Units As String, HighLimit As Double, LowLimit As
Double, ByVal Notes As String) As Integer
```

Example–

```
PointNumber = 1
Name = String(15, 0)
Units = String(10,0)
Value = 0
HighLimit = 0
LowLimit = 0
Description = String(255,0)
Notes = String(255,0)
Result = CW_ReadSetPoint(SetPointTableId, PointNumber,
Description, Name, Value, Units, HighLimit, LowLimit,
Notes)
```

CW_WriteSetPoint()

```
int CW_WriteSetPoint(unsigned short SetPointTableId, unsigned
short PointNumber, char *Description, double Value)
```

This function writes a value to the table and setpoint specified by the function's arguments. This information is not saved to the database until the table is closed by CW_CloseSetPointTable function with a non-zero SaveFlag; however, if you read this table before it is closed, you will receive the new data. Value is the only field that can be changed in a setpoint table. If the value of PointNumber = 0, the function will use the string stored in Description to identify the desired point.

Parameters–

<i>SetPointTableId</i>	This is the SetPointTableId returned by the CW_OpenSetPointTable function
<i>PointNumber</i>	The number of the point to write to.
<i>Description</i>	The description of the point to write to. If PointNumber < > 0, this parameter can be left blank.
<i>Value</i>	The value to set the point to.

Return Value–

The function returns 0 if there is no error; any other value indicates an error. (See the description of CW_GetErrorBuffer() for more information on CWACCESS errors.)

Sample Declaration–

```
Public Declare Function CW_WriteSetPoint Lib
"CWACCESS.DLL" (ByVal SetPointTableId As Integer,
ByVal PointNumber As Integer, ByVal Description As
String, ByVal Value As Double) As Integer
```

Example–

```
PointNumber = 1
Value = 100.4
Description = String(255,0)
Result = CW_WriteSetPoint(SetPointTableId, PointNumber,
Description, Value)
```

CW_ConnectToRemoteCCN()

```
int CW_ConnectToRemoteCCN(char *RemoteCCNName)
```

This function establishes a connection to a remote CCN.

Parameters–

<i>RemoteCCNName</i>	The name of the remote CCN to connect to
----------------------	--

Return Value–

The function returns 0 if the connection was established successfully; any other value indicates an error. (See the description of CW_GetErrorBuffer() for more information on CWACCESS errors.)

Sample Declaration–

```
Public Declare Function CW_ConnectToRemoteCCN Lib  
"CWACCESS.DLL" (ByVal CCNName As String) As  
Integer
```

Example–

```
Rname = "RemoteSite"  
Result = CW_ConnectToRemoteCCN(Rname)
```

CW_DisconnectFromRemoteCCN()

```
int CW_DisconnectFromRemoteCCN(char *RemoteCCNName)
```

This function terminates the connection to a remote CCN.

Parameters–

<i>RemoteCCNName</i>	The name of the remote CCN to disconnect from.
----------------------	--

Return Value–

The function returns 0 if the connection was terminated successfully; any other value indicates an error. (See the description of CW_GetErrorBuffer() for more information on CWACCESS errors.)

Sample Declaration–

```
Public Declare Function CW_DisconnectFromRemoteCCN  
Lib "CWACCESS.DLL" (ByVal CCNName As String) As  
Integer
```

Example–

```
Rname = "RemoteSite"  
Result = CW_DisconnectFromRemoteCCN(Rname)
```

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