Alert EL

for SiteScan® SS2000W

Alarm
Management
System

USER'S MANUAL

Liebert®

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1 Introduction to Alert EL

How To Use This Manual

This manual consists of four major sections, organized in the order in which they should be addressed:

Table 1-1. Alert EL User's Guide

Section	Chapter
Part I. Introduction	Introduction to Alert EL
Part II. Configuration	Configuring the Database
	Configuring Reporting Actions
	Configuring the Station
	Formatting with Field Codes
Part III. Operation	Handling Alarms
Part IV. Reference	Alert EL Menu Commands
	Maintenance Issues
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For first time users, it is strongly suggested that you read the **Introduction** first. This section provides a general overview of Alert EL. Next, read the **Configuration** section, which details how to configure the database, station, and reporting actions in preparation for operation. When the station is ready to begin receiving alarms, the **Operation** section discusses all of the commands necessary to handle incoming alarms.

The **Reference** section can be used for consultation at any time. It briefly describes all of the Alert EL menu commands and various maintenance issues.

This manual assumes that you are familiar with all of Liebert Corporation software products (such as SiteScan 2000 for Windows and Eikon) and the Liebert Corporation network topology. It also assumes that you are familiar with working in the Windows environment.

What Is Alert EL?

Alert EL is a comprehensive alarm management software package which runs in the Windows environment. It is designed to provide maximum alarm handling flexibility. For instance, alarms can be assigned "security levels" and can be categorized into Groups. Alert EL can also perform automated Reporting Actions when an alarm is received, such as calling a pager or printing alarm information.

Multiple Views

Alert EL can display alarms in one of seven different "views", each showing a different type of alarm or message. Another Alert EL feature allows the Main Operator to customize operator access to the system by assigning individual operators passwords and numeric "security levels" which are required to use certain commands and to act on alarms.

Unlimited Alarms

When an FB uses the Alert microblock to generate alarms and messages, the number of alarms that may exist per FB is virtually unlimited.

Multi-User Capability

Alert EL has multi-user capability, where multiple stations may exist on a Local or Wide Area Network and share a single database. A high-performance database engine allows greater speed, multi-user access control, and future extendibility during record access. Because the database is shared, each alarm can have actions performed on it from

any station. For example, when an alarm is "acknowledged" from one station, the alarm's change of state is displayed on every multi-user station. Refer to the "Alert EL Multi-User" section on page 8-1 for more information about Alert EL's Multi-User capability.

Minimum Requirements

Minimum Software Requirements

Alert EL Single-User

- MS-DOS 5.0 or later.
- Microsoft Windows 3.1 or higher.
- SiteScan 2000 for Windows V2.6 or later.
- DCLAN 2.5 or later.
- GC2 V4.0 module driver or later (if using SiteGate-232 modules).
- Module driver V4.0 or later (if downloading GFBs containing Alert microblocks to modules).

Alert EL Multi-User

- MS-DOS 5.0 or later.
- Microsoft Windows 3.1 or higher.
- SiteScan 2000 for Windows V2.6 or later.
- DCLAN 2.5 or later.
- GC2 V4.0 module driver or later (if using SiteGate-232 modules).
- Module driver V4.0 or later (if downloading GFBs containing Alert microblocks to modules).
- Network Interface card (see NOTE below).
- TCP/IP or NET BIOS protocol stack (see NOTE below).

NOTE Contact Liebert Site Applications for configuring Alert EL Multi-User on a network.

Minimum Hardware Requirements

- 80486 IBM PC-AT compatible. (Pentium PCI, 75 MHz recommended)
- 8 megabytes RAM. (16 mb recommended)
- 540 Mb hard drive.
- Microsoft mouse.
- 101-key keyboard.
- VGA card with resolution of 640x480 pixels with 256 simultaneous colors under Windows 3.1. Must also have a Windows 3.1 driver. (VESA local bus recommended)
- VGA monitor capable of displaying a resolution of 640x480 pixels with 256 simultaneous colors (0.28 maximum dot pitch).
- One parallel port, one serial port.

NOTE Non-receiving stations on Alert EL Multi-User do not require a serial port.

Windows Considerations

In order to install Alert EL, you must have previously installed Windows 3.1, Windows 95, or Windows 98. If Windows 3.1 is being used on a 386 computer, Windows must be running in enhanced mode. Alert EL will run most efficiently with a screen resolution of at least 640 x 480. Higher screen resolutions are also supported.

Due to restrictions placed on memory access by Windows, an excessive number of alarms in the Main View (greater than 6000) may cause other Windows applications that are running to fail, and may lead to corruptions in the Alert database. The exact number of alarms that can cause this situation varies depending on other applications that may be running in addition to Alert EL. This problem is a result of memory access restrictions, and may occur regardless of the amount of memory added to the workstation. Note that these restrictions apply only to the number of alarms in the Main View, not the number of alarms in the Alert database. To avoid this possibility, be sure to regularly backup and delete closed alarms.

Installing Alert EL

Install Alert EL on the station(s) by following the instructions below. If you want to abort the installation process before it is complete, you can pick the Exit icon on the lower right of the install screen. However, you must complete the installation process before you can run Alert EL.

Unless otherwise specified, Liebert Corporation software should always be installed in chronological order. For example, if Alert EL has a date of 12/15/96 and SiteScan 2000 for Windows has a date of 12/01/96, SiteScan 2000 for Windows should be installed before Alert EL. Liebert Corporation software that has the same dates can be installed in any order. If you are installing Alert EL Multi-User on a network, you should first install Alert EL on the network server, then perform the necessary client installations.

To Install Alert EL

1. Ensure that the computer displays the correct time and date. Insert the Alert EL Install Disk 1 into a floppy drive of your computer.
2. Make a backup copy of each installation disk.
3. Run Windows.
4. Pick **Run** from the Program Manager's File menu. If you are running Windows 95, pick the **Start** button and then pick **Run**. A pop-up dialog box will appear.
5. At the Command Line, enter **a:\setup.exe** (or whichever drive the disk is in). Select **OK**, or press **Enter**.
6. At this point, the installation program begins. At the Welcome pop-up, select one of the following:
   - **Install** to install the Alert EL program files.
   - **Quit** to exit the installation.
7. If this is a multi-user installation, the Client Install pop-up appears.

   Select **No** to perform a complete Alert EL installation on this computer. Select **Yes** to perform a Client installation on this computer. If a Client installation is chosen, Alert EL will be set up to run on this computer from a network drive.

NOTE A full Alert EL installation must be performed on the network server before any Client installations can be successfully completed.

8. At the Specify Location for Alert pop-up, enter the directory to install Alert EL in and pick **OK** (or, if this is a Client installation only, entert the complete path for the network drive and directory where Alert is already installed). To install Alert EL in the default directory (**c:\ss2000**), select **OK**.

NOTE In order to use Alert EL's SiteScan 2000 commands to display a SiteScan 2000 for Windows graphic, you must install Alert EL in the same directory as the SiteScan 2000 for Windows program files. For more information about Alert EL's SiteScan 2000 command, see the "SiteScan 2000" section on page 6-16.

9. At this point, the installation program will begin to copy the program files. When you are directed to do so, remove and insert the appropriate diskettes and select **OK**.
10. After the files have been copied, the Which Program Group? pop-up appears asking you to specify the Windows Program Group in which the Alert EL programs will appear.

    Enter the name of the Program Group you would like Alert EL to appear in. If this Program Group already contains a Logger icon, the Logger icon will be deleted. Press Enter or pick **OK** to accept the default.

    If a previous version of Alert EL already exists on the computer, the name of the Program Group containing that version is listed in the **Old Program Group Name** box. To delete the old program group, click on the **Delete Old Program Group Name** checkbox.

CAUTION The new program group will contain only programs installed with Alert EL. Any other program items or icons that are currently in the old program group will not appear in **any** group if the old program group is deleted.

11. When the Program Group has been selected, a pop-up appears indicating the system files that may need to be updated. To have the setup program make these changes for

you, select **Update**. If you don't want any changes to be made to the files listed, choose **Skip**.

12. If a previous version of Alert EL is detected on the computer, the Specify the Database Path for Alert dialog box appears. Use this dialog box to identify the drive and directory in which you want to store Alert EL's database.

    The path for the existing database appears in the **DBPath** box by default. Press Enter or click **OK** to accept the default directory, or enter a different drive and directory that the Alert database will be stored in. When determining your database path, please consider the following items:

    - It is strongly recommended that you store the database information in a subdirectory of the main Alert EL directory (for example, **c:\ss2000\alrtdata**). If the database files are stored in the main Alert EL directory, database archiving and restoration is extremely difficult because all of the database files are intermingled with the Alert EL program files.
    - Furthermore, it is strongly recommended that the database directory only stores Alert database files (i.e., two programs should not share the Alert database directory). If the Alert database files become mixed with another program's files (for example, Trend Historian's database files), it's possible that files could be overwritten or deleted during backups or restorations.

13. When the installation is complete, the Installation Complete pop-up will be displayed. Click on the **Installation Complete** button to exit the installation program.
14. Insert the disk labeled **Alert 1.3a Y2K Upgrade** in your computer's floppy drive.
15. In Windows Explorer or File Manager, double-click the file **ssael13a.exe** on the floppy disk. Install this upgrade to the same directory you chose in step 9.
16. Quit and *restart Windows* before using Alert EL.

The Alarm Process

The alarm process explained in this section is a general process. It assumes that all the information necessary to receive an alarm has been configured.

The figure below illustrates the general flow of an alarm from a module to an Alert EL station.

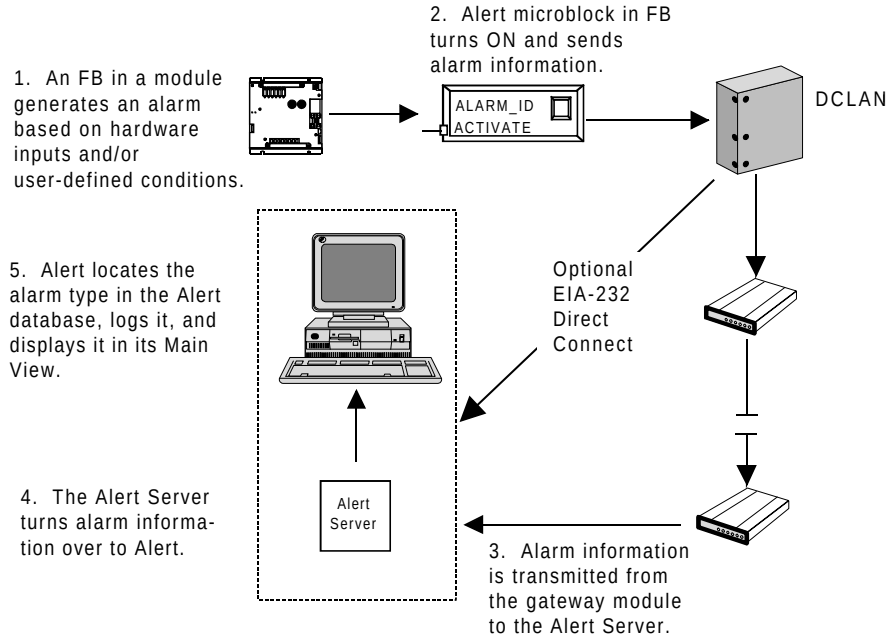

Figure 1-1: Alarm Flow

The FB Generates An Alarm

When an FB generates an alarm (based on hardware inputs and/or user-defined conditions), the Alert microblock is turned ON.

The FB Transmits the Alarm to the Gateway Module

The CMnet uses a "peer-to-peer" token passing scheme, which means that a module on the CMnet can transmit only when it has the token. As a result, each module can communicate with equal authority while all other modules listen. When its module has the token, the FB transmits

the alarm to the gateway module through the module driver and it sends the following alarm information:

- **Time/Date**

  This is the time and date the FB generated the alarm. This information can be overwritten with latched data by the Alert microblock.

- **System ID**

  This is the three-character name that is assigned in SiteScan 2000 for Windows and Alert EL to an entire local area network of control modules.

- **Four Digit Address**

  This is the address of the FB containing the alarm point. Addresses consist of four numbers: the line number, gateway module number, module number, and function block number. An example of a four digit address is 3,5,10,6.

- **Alarm ID**

  This is a unique code assigned to the alarm. The Alarm ID is defined in the Alert microblock and in the Alert database. Alarm ID is discussed further in the "Alarms" section on page 2-31.

- **Return To Normal**

  The Return To Normal (RTN) information that is sent to Alert EL from the module conveys two pieces of information:

  1. Whether the alarm being sent requires an RTN before it can be closed in Alert EL. This is defined in the Alert microblock by Liebert Site Applications.
  2. Whether an RTN *has* occurred for the alarm.

  When the Alert microblock is configured in Eikon by Liebert Site Applications, it can be configured to require a Return To Normal message in order to change from the Active state to the Inactive state in Alert EL. When an alarm condition no longer exists, the Alert microblock turns OFF and passes the RTN message to Alert EL.

- **Five Latched Values**

  The Alert microblock allows up to five analog or digital latched values. Latched values are generic data values that may be sent when the Alert microblock is enabled.

The Gateway Module Delivers the Alarm to the Alert Server on the Alert Receiving Station

This step of the process requires that many settings be carefully configured. These settings and the places where they are discussed in more detail, are as follows:

- **Alarm Check**, **Check When Connected**, and **GCM Poll** settings (discussed in the section INI Configuration Manager in the *SiteScan 2000 for Windows User's Guide* and the "The alc.ini File" section on page 8-16).
- Connections configuration (discussed in the "Connections" section on page 4-2).

The receiving station is the Alert EL station identified in a gateway module as the location to contact for the delivery of alarms. With Alert EL Single-User, only one receiving station exists. However, Alert EL Multi-User allows multiple receiving stations.

With Alert EL Multi-User, the only difference between a receiving station and a non-receiving station is that receiving stations can launch and control reporting actions. Otherwise, receiving stations and non-receiving stations operate in the exact same manner for database and alarm handling. A station does not have to be designated as a receiving station in order to view and handle alarms. See the "Receiving Stations" section on page 8-3 for more information.

An alarm may be configured in the Alert microblock by Liebert Site Applications as "critical" or "non-critical". When the gateway module receives an alarm defined as "critical", it immediately delivers any critical alarms to the Alert EL receiving station, along with any non-critical alarms it may be holding. When the gateway module receives an alarm defined as "non-critical," it holds the alarm until it is contacted by a SiteScan 2000 for Windows Workstation acting as an Alert receiving station or until a critical alarm is received. This contact may occur when an operator contacts the site using SiteScan 2000 for Windows or when the Alert Server polls for alarms on a network connection. RTN messages are delivered to Alert EL in the same manner (i.e., critical or non-critical) as the original alarm.

Alert Server Delivers the Alarm to Alert EL

Alert Server is Alert EL's alarm receipt program which resides on a receiving station. When it is running, Alert Server is visible as a minimized and unpickable icon on the Windows desktop. When Alert Server receives an alarm, it determines if the alarm belongs to a System which Alert Server is configured to monitor. If the alarm belongs to a System being monitored by Alert Server, Alert Server turns the alarm over to Alert EL. Once Alert EL receives the alarm, it begins to notify the operator that an alarm has been received by beeping the PC's speaker. If the alarm *does not* belong to a System being monitored by Alert Server, the alarm is not retrieved and it is left in the gateway module.

Alert EL Stores the Alarm Information in the Alert Database

When Alert EL receives the alarm information from Alert Server, it checks the Alert database for the alarm type, based on the Alarm ID. Once Alert EL locates the appropriate alarm type in the database, further alarm information (previously configured by an operator) will be extracted.

There are two parts to the Alert database: the *instance database* and the *records database*. The instance database logs all alarms it has ever received (except for deleted alarms). The records database stores all of the information necessary to handle alarms.

If Alert EL can locate the Alarm ID in its database, it displays the information configured for that alarm in the Main View (see Figure 1-7) and begins to execute any Reporting Actions configured for that alarm. The alarm is also logged in Alert EL's instance database as an instance record.

If Alert EL cannot locate the alarm in its records database, it still displays the alarm in the Main View using the default configuration and logs the alarm in Alert EL's instance database as an instance record. See the "Unconfigured Alarms" section on page 6-3 for more information on how Alert EL handles unconfigured alarms.

When an Alert microblock generates an RTN message, the same alarm process is followed as discussed in the steps above. The same information (System name, address, Alarm ID, etc.) is sent to Alert EL with an additional field specifying the RTN condition. RTN messages are delivered to Alert EL in the same manner as the original alarm (i.e. critical or non-critical). ***For the purposes of discussion, all future references to "alarms" also apply to Return To Normal messages.***

Alert EL displays the alarm according to the current view

Because an operator can display different "views" that list different types of alarms, alarms may be logged by Alert EL but not displayed in the Main View.

The alarm may go through various states before being closed in Alert EL

Depending on the requirements configured in the Alert microblock, an alarm may go through various states before being closed by Alert EL:

- **Active-Unacknowledged**

  An alarm that has not received a Return To Normal message (whether it is required or not) and has not been acknowledged.

- **Active-Acknowledged**

  An alarm that has not received a Return To Normal message (whether it is required or not) but has been acknowledged.

- **Inactive-Unacknowledged**

  An alarm that has received a Return To Normal message but has not been acknowledged.

- **Inactive-Acknowledged**

  An alarm that has received a Return To Normal message and has been acknowledged.

- **Closed**

  An alarm that has all its requirements fulfilled. These requirements depend on how the alarm was originally configured.

The alarm is "closed" by Alert EL after all requirements are fulfilled

All alarms must be acknowledged before they can be closed. In addition, if the alarm was configured in the Alert microblock by Liebert Site Applications to require an RTN, the alarm will not close until it receives the RTN.

Closed alarms can be displayed in a view, but as the list of alarms in the Main View grows, the database also grows and Alert EL's performance can be slowed. Closed alarms can be deleted from the database, but it is important to back up the database before doing this. See the "Delete" section on page 6-13 for information on deleting alarms and the "Database Concerns" section on page 8-10 for information on backing up the database.

Preparing to Receive Alarms

This section provides a general overview of how to prepare Alert EL to receive alarms for a new installation. For complete information about specific topics, consult the referenced sections.

SiteScan 2000 for Windows and Alert EL

Alert EL can only run when SiteScan 2000 for Windows is installed on the same station. Alert EL requires that the necessary System files for the Systems to be monitored by Alert EL be installed on the receiving station.

SiteScan 2000 for Windows alc.ini Settings

There are several **alc.ini** settings that must be adjusted in the [Logger] section and [SVW] section in order for Alert EL to receive alarms properly. Most of these settings can be changed using the INI Configuration Manager utility. See the section INI Configuration Manager in the *SiteScan 2000 for Windows User's Guide* and the "The alc.ini File" section on page 8-16 for complete information on these settings.

- **Alarm Check**
- **GCM Poll Start**
- **GCM Poll End**
- **GCMPOLLRTC**
- **List**
- **File**
- **Check When Connected**
- **Interval**

Make sure that all the Systems that will be monitored by Alert Server are listed in the [Logger] section of the **alc.ini** file (**List** and **File** settings in the INI Configuration Manager). This step is *extremely* important because if Alert Server receives an alarm that does not belong to a System being monitored by Alert Server, the alarm is not retrieved and it is left in the gateway module.

Connection Configuration

In order for Alert EL to receive alarms, gateway modules must be configured with connection information so that they are able to contact receiving station(s) with alarms. If the necessary gateway module configuration has not already been performed, consult the following Liebert Corporation literature for instructions:

- *DCLAN User Manual*
- *SiteGate-ETH User Manual*
- *SiteGate-232 User Manual*
- *SiteScan 2000 for Windows User's Guide*

Make certain that the correct hardware and software requirements are met (see the "Minimum Requirements" section on page 1-3).

With Alert EL Multi-User, *multiple gateway modules do not have to report alarms to one receiving station*. Since the Alert database is shared, one gateway module can call one receiving station with alarms, while another gateway module can call a different receiving station with alarms. The delivered alarm information is made available to all of the other Alert EL stations. *However, one gateway module should not be set up to call two different receiving stations.* If this occurs, the alarm

information is duplicated in the Alert database (see Figure 8-4 in the **Maintenance Issues** chapter).

In addition to configuring the gateway modules, Alert EL must be configured to monitor the ports that will be receiving alarms and the receiving station(s) must have the **Receive Station** setting enabled (see the "Receive Station Setting" section on page 4-7). If the port information has not already been configured in SiteScan 2000 for Windows on the Connection Configuration pop-up, see the "Connections" section on page 4-2 for information about configuring connections.

Alert EL uses the same Connection Configuration software provided with SiteScan 2000 for Windows to store hardware port access information. This means that you should be careful about making changes to the Connection Configuration pop-up in Alert EL. After the ports are configured, connections should not be added or deleted unless a hardware device is removed or installed on that station. Changing certain parameters on this screen could prevent SiteScan 2000 for Windows from finding a device, causing SiteScan 2000 for Windows to display an error when attempting to connect to an installation.

Configuring the Database

Configuring the Alert database is the most important part of preparing Alert EL to receive alarms. It is recommended that the database is configured from a receiving station. See the **Configuring the Database** chapter for more information on database configuration.

The information configured in the database is stored in the "records" portion of the Alert database (see the "Alert EL Stores the Alarm Information in the Alert Database" section on page 1-11). Configuring the database involves configuring six different "tables" of information:

- **Operators**

  The Operator table must be configured with the names, passwords, and security levels of the people who will be using Alert EL. The security levels configured in the Operator table determine the alarms and the commands that the operator may affect or use. Alert EL's Operator table is initially created with one operator name, the Main Operator, with a password of "Alert".

- **Systems**

  A System is an entire grouping of control modules that are identified by a three-character ID. These Systems are the same Systems in use by SiteScan 2000 for Windows. In order to receive alarms from Alert Server, the Systems must be configured in the Alert database because Alert EL's database is completely isolated from SiteScan 2000 for Windows' database for performance reasons.

- **Sites**

  Sites are single points of contact gateway modules have to the Workstation. Sites exist within Systems and are identified by different line numbers in the SiteScan 2000 for Windows configuration text.

- **Reporting Actions**

  Reporting Actions perform certain reporting procedures in Alert EL. Reporting Actions can be configured at any station, but they can only be executed at a receiving station. It is not necessary to configure Reporting Actions for alarms, but using Reporting Actions can cut down on the amount of manual work an operator must do when handling alarms (paging personnel, printing alarm information, etc.). Reporting Actions are discussed in the **Configuring Reporting Actions** chapter.

- **Groups**

  Groups are logical collections of Reporting Actions. An Alert Reporting Action Group should not be confused with a SiteScan 2000 for Windows Scheduling Group.

- **Alarms**

  The Alarms table is a collection of Alarm records that are stored in the *records database*. The Alarms table should not be confused with Alert EL's *instance database*, where incoming alarms are logged. When Alert EL receives an alarm, it uses the Alarms table to "look up" additional alarm information by the Alarm ID. Alert EL is capable of receiving alarms that are not configured in the database, but it is recommended that as many alarms as possible be configured in order to best utilize Alert EL's special features.

Configuring the Station

Three special features should be configured which are specific to each Alert EL station. A brief description of each feature is provided below.

A more complete discussion is available in the **Configuring the Station** chapter.

- **Notification**

  When Alert EL receives an alarm, it notifies operators in close proximity to the station by beeping the PC speaker and/or forcing the Alert EL window to the desktop foreground. This feature can be enabled or disabled for each Alert EL station by the operator.

- **Time Zone**

  Configuring the time zone informs an Alert EL station where it physically resides in the world. Alert EL stores all dates and times relative to Greenwich Mean Time (GMT). In order to do this properly, Alert EL needs to know in which time zone each station is located.

- **Receive Station**

  Enabling the **Receive Station** setting launches Alert Server, which appears minimized in the Windows work area. When it is enabled, a check mark appears to the left of **Receive Station** and the information is saved in the **alc.ini** file. Enable this option if the station is a receiving station. After Alert Server is launched, *Alert EL begins to receive alarms*, so do not enable **Receive Station** unless the database, station, and connections have been configured and Alert EL is ready to receive alarms.

Configuring GFBs With Alert Microblocks

In order to take advantage of Alert EL's alarm handling features, GFBs should be created by Liebert Site Applications that use the Alert microblocks, instead of the old Alarm and Message microblocks. GFBs containing Alert microblocks cannot be downloaded into a module unless the module driver being used is Version 4.0 (or later).

NOTE Consult **Liebert Site Applications** for more information concerning GFB issues.

Running Alert EL

In order to run properly, Alert Server requires that the DOS program **share.exe** be loaded in memory during execution of the **autoexec.bat** file. If **share.exe** is not detected during installation, it is added to the **autoexec.bat** file.

NOTE Alert Server must be running in order to receive alarms. If you want Alert Server to load automatically when Windows is started, copy Alert EL into the Windows Startup Group as described below. Be sure that the **Receive Station** setting in Alert EL is enabled; otherwise, Alert EL will not be able to receive alarms. Refer to the "Receive Station Setting" section on page 4-7 for more information.

- For Windows 3.1, hold down the **Ctrl** key and drag the Alert EL icon into the Startup Group with the mouse. The Startup Group is created when Windows 3.1 is installed. Be sure to enable **Save Settings on Exit** from the Windows Program Manager **Options** menu before exiting Windows.
- For Windows 95, follow this procedure:
  1. Click the **Start** button, and then point to **Settings**.
  2. Click **Taskbar**, and then click the **Start Menu Programs** tab.
  3. Click **Add**, and then click **Browse**.
  4. Locate the **alert.exe** program and then double-click it.
  5. Click **Next**, and then double-click the StartUp folder.
  6. Type "Alert EL" and then click **Finish**.

To Start Alert EL From Within Windows

1. Run the Program Manager (it is normally active when Windows is started.)
2. If the program group is minimized, activate it by double-clicking on the group icon.
3. Double-click on the Alert EL icon to launch Alert EL. Alert EL's Main View appears (see the "The Main View" section on page 1-25).

To Start Alert EL From DOS

CAUTION: Do not use this method from a Windows DOS window, because Windows is already running. Doing so may lock up your computer.

1. From the **c:** prompt, type:

   win *pathname*\alert.exe (where *pathname* is the entire pathname where the Alert EL program files are stored)

   then press Enter.

   OR

   From the directory where the Alert EL program files are stored, type:

   win alert.exe

   then press Enter.

   Alert EL's Main View appears (see the "The Main View" section on page 1-25).

Launching Alert EL for the First Time

When Alert EL is launched for the first time it displays a series of pop-ups that ask for station and database information. This information is saved in the [Alert] section of the **alc.ini** file, where it can be changed at a later date, if necessary.

Station Name

Alert EL first displays a pop-up that prompts for a Station Name.

Figure 1-2: Alert EL Station Name pop-up

The Station Name is always displayed in the Title Bar of the Main View. Enter a Station Name and select **OK** to continue or **Exit** to cancel the station naming process and exit Alert EL. Station Names are used by Alert EL Multi-User to help track operator log status and Reporting Actions. They must be unique to each station on the Alert EL Multi-User network.

In addition to storing the Station Name information in the **alc.ini** file, it is also stored in the shared database. When Alert EL Multi-User is launched, Alert EL tries to determine if another station using the same database has already been registered with the same name. If a duplicate name is currently in use, Alert EL notifies the operator and asks for a different name. This process continues until a unique name is found (or until the operator aborts the process).

If Alert EL Single-User is being used, the Station Name is still required, but it is less significant.

Database Location

After the Station Name pop-up is displayed, Alert EL displays the Alert Database Path pop-up.

Figure 1-3: Alert Database Path pop-up

When Alert EL is used for the first time, no database or database location exists.

- It is strongly recommended that you store the database information in a subdirectory of the main Alert EL directory (for example, **c:\ss2000\alrtdata**). If the database files are stored in the main Alert EL directory, database archiving and restoration is extremely difficult because all of the database files are intermingled with the Alert EL program files.
- Furthermore, *it is strongly recommended that the database directory only stores Alert database files* (i.e., two programs should not share the Alert database directory). If the Alert database files become mixed with another program's files (for example, Trend Historian's database files), it's possible that files could be overwritten or deleted during backups or restorations.

If no prior database path existed, a default database path is initially displayed in the Alert Database Path pop-up. This name consists of an "ALRTDATA" subdirectory from the drive and directory where Alert EL is running from.

Enter a database location and select **OK** to continue or **Exit** to cancel the database location process and exit Alert EL.

Database Creation

After Alert EL receives the database location, it checks to see if a database already exists in that location. If a database already exists, Alert EL loads it and proceeds. If the specified path does not exist, Alert EL notifies the operator and asks if the path should be created (see below). If the operator selects **Yes** and Alert EL is able to create the path, a new database is created and installed on the specified directory. If the operator selected **No**, Alert EL returns to the Alert Database Path pop-up and allows the operator to specify a different directory.

Figure 1-4: Create Database Path confirmation

When a new database is created, the System Alarm Text Import pop-up may appear. This feature allows you to create alarm records for alarm text that already exists in the **sysalarm.txt** and **xxxalarm.txt** files. For more information about this feature, refer to the "System Alarm Text Import" section on page 2-35.

Logging In

Alert EL restricts access to several features by requiring preconfigured operators to use Operator IDs to log into Alert EL. Unless an operator is logged into Alert EL, the majority of commands are disabled. Once the operator logs into Alert EL using the **Log In** command, the commands are accessible (as long as the operator has the proper security level to use them).

When the **Log In** command is executed, the previously logged in operator (if any) is automatically logged out of Alert EL and the new operator is logged in. It is not possible for one station to have more than one operator logged into Alert EL. However, with Alert EL Multi-User, it is possible for an operator to be logged into more than one station at a time.

The **Use as default** setting on the Operator Login pop-up allows the same Operator ID to appear in the **Operator ID** field every time the pop-up is displayed. This feature is useful if the same operator logs into the Alert EL station repeatedly. To define a default operator, display the Operator ID in the **Operator ID** field and enable the **Use as default** box. The default setting takes effect upon successful login. The **Use as default** setting is unique to a station.

To Log Into Alert EL

1. Select **Log In** from the **Actions** menu (or press the **F2** key). This displays the Operator Login pop-up (see below). If an Operator ID has been defined as the default operator (with the **Use as default** button), this ID will already be displayed in the Operator ID field.

Figure 1-5: Operator Login pop-up

2. Display the Operator pull-down by selecting the down arrow in the Operator ID field. A list of configured Operator records will be displayed in the menu. Use the up and down scroll arrows to display Operator IDs not immediately visible in the pull down. If the database is new, only one Operator ID (Main Operator) is available for log in.

   The Main Operator has the highest security level. The name and password of the Main Operator can be changed by an operator with the proper security level, but the Main Operator can never be deleted and the security level cannot be changed (see the "Operators" section on page 2-9 for more information).

3. Select an Operator ID from the pull down menu. You may type in the Operator ID (*last name*, *first name*) but it is faster to select the ID using the mouse. The Operator ID will appear in the Operator ID field.

4. If you wish the selected Operator ID to automatically display in the **Operator ID** field when the Operator Login pop-up is displayed, select the **Use as default** box.

5. Enter the password in the **Password** field and select **OK** to log in or **Cancel** to exit the log in process. The password for the Main Operator is initially designated as "Alert", but this can (and should) be changed by the operator after logging in.

If an invalid password is entered, the following message appears and Alert EL returns to the Operator Login pop-up.

Figure 1-6: Incorrect password message

After the correct password has been entered, the Operator Login pop-up will close and more commands are accessible. Some commands may be inaccessible if your security level is too low or if the commands are not appropriate for the alarm currently selected in the Main View. If the database is new, no alarms will appear in the Main View, and therefore the commands that are associated with alarms will be disabled.

The Main View

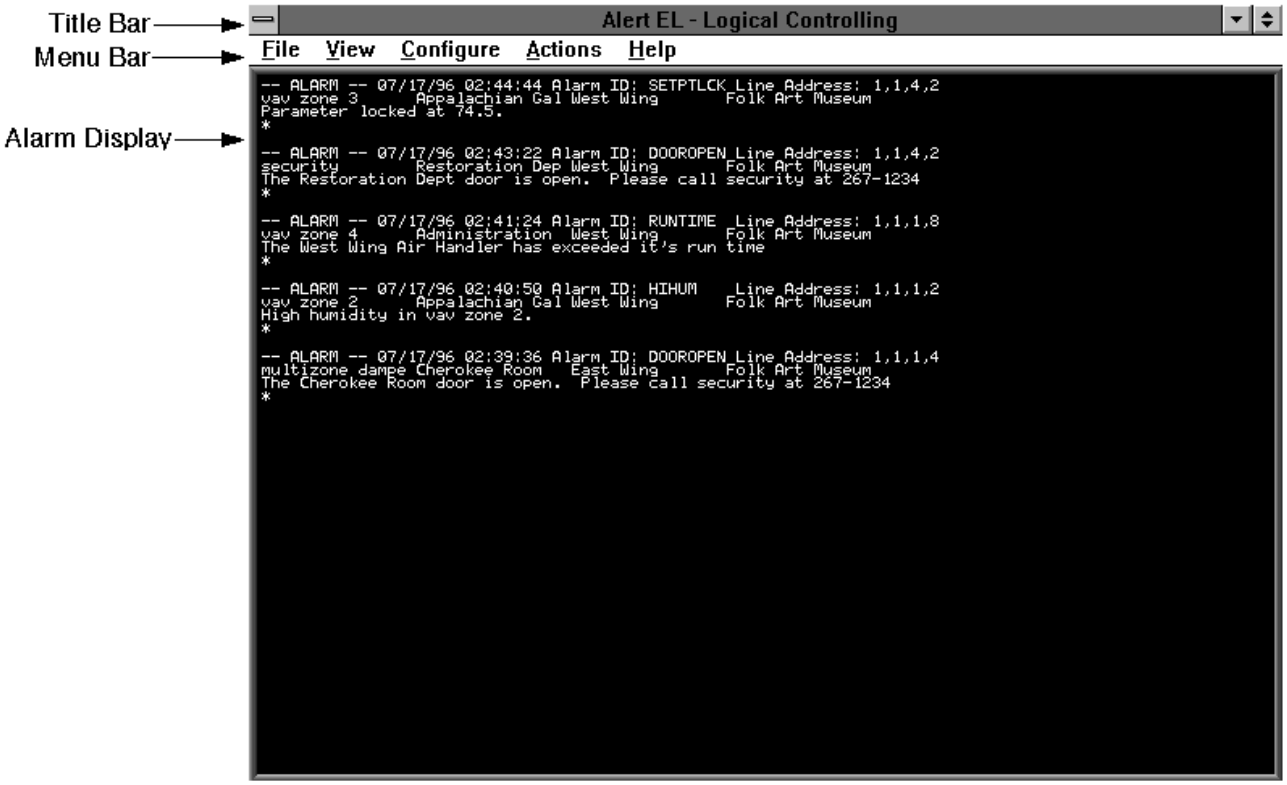

Figure 1-7: The Main View

Title Bar

The **Title Bar**, located at the top of the Main View, contains the name of the Alert EL station being used.

Menu Bar

The **Menu Bar** is comprised of five menu selections:

- **File**
- **View**
- **Configure**
- **Actions**

- **Help**

Each menu item is a pull-down selection of commands related by subject matter. For example, **Configure** should be selected if the user needs to add, delete, or change any information in the Alert database. See the **Alert EL Menu Commands** chapter for more information.

Alarm Display

The **Alarm Display** lists alarms in a format called a "view". Seven different views are available:

- Alarms - Urgent
- Alarms
- Messages
- Status Reports
- Trend Reports
- Closed
- Unacknowledged

For more information about these views, see the "Viewing Alarms" section on page 6-1.

* * *

2 Configuring the Database

Introduction

Configuring the Alert EL records database is probably the most important part of preparing Alert EL to receive alarms. All the information necessary to receive and handle alarms is created when the Alert database is configured.

Throughout this manual, references are made to "instance records" and "Alarm records". There is a difference between the two. This manual defines an "instance record" as an actual alarm occurrence which is logged in the instance database, while an "Alarm record" is alarm information that the operator configures in Alert EL. When an actual alarm occurs, Alert EL uses the Alarm record to provide further information about the alarm. Each Alarm record may be configured individually, or Alert EL can automatically create Alarm records from existing **sysalarm.txt** and **xxxalarm.txt** files.

This entire chapter is devoted to an explanation of the various database "tables" that must be configured (Operators, Systems, etc.) and how to configure them. Because the information for configuring and testing Reporting Actions is extensive, it is documented separately in the **Configuring Reporting Actions** chapter.

If Alert EL Multi-User is being used, keep in mind that any additions, changes, or deletions to the database records affect other stations.

Configuration Pop-Up

The Configuration pop-up is the central location from where all database configuration occurs. When **Database** is selected from the **Configure** menu, the Configuration pop-up is displayed (see below). The Configuration pop-up is divided into three areas: List of Database Tables, List of Database Records, and List of Configuration Commands.

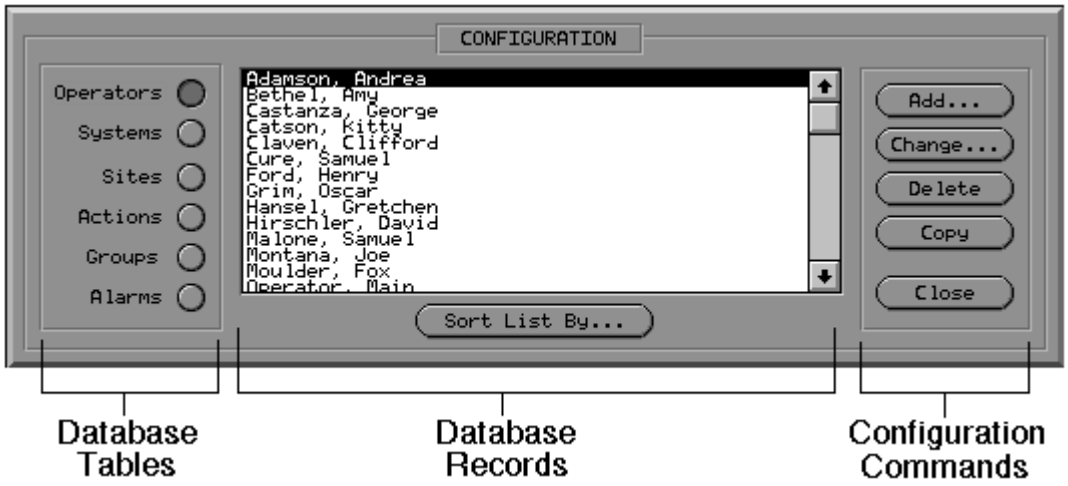

Figure 2-1: Configuration pop-up

List of Database Tables

There are six database "tables" that contain records configurable by the operator. These tables are: Operators, Systems, Sites, Actions, Groups, and Alarms. Each database table is explained in its respective section in this chapter.

To view the database records that belong to a table, select a table's corresponding radio button. The tables are organized on the pop-up in the most likely order of configuration.

List of Database Records

The center window displays the contents of a table (i.e., records). The records that are displayed depend on which database table is currently selected.

These records are accessible by double-clicking on a record *or* selecting the record and the **Change** command. The Add / Change pop-up for that record will be displayed with the appropriate record information, and any changes to the record can be made from this pop-up. Records not immediately visible in the Configuration pop-up can be viewed by using the right vertical scroll bar.

The **Sort List By** command on the Configuration pop-up displays a pull-down list with various sort options that the operator may select to sort and display the database records in the Configuration pop-up. *This only affects the records displayed in the Configuration pop-up, not the Main View.* The available sort options vary depending on what database table is currently displayed (Operators, Alarms, etc.) and are explained in their related sections.

List of Configuration Commands

The right side of the pop-up contains all of the commands that act on the database records. See the following **Configuration Commands** section for a description of each of the configuration commands.

Configuration Commands

Add

The **Add** command allows you to create a new database record (for a new operator, a new alarm, etc.).

To Add a New Record

1. Select **Database** from the **Configure** menu to display the Configuration pop-up.
2. Display the database table you wish to create a new record for by selecting the corresponding radio button from the left side of the pop-up. This will display the table's records in the center of the Configuration pop-up.

3. Select **Add** from the right side of the pop-up. The appropriate Add / Change pop-up will be displayed. Some fields may be filled with default information. The field information contained in the pop-up varies depending on what type of record is being added.
4. Enter the record information in the appropriate fields.
5. When you are finished adding record information, select **OK** to save the record, or select **Cancel** to exit without saving.
6. Select **Close** to exit the Configuration window.

Change

The **Change** command modifies an existing database record. This is a feature that should be used with caution because any changes take effect *immediately* after the Add / Change pop-up is closed.

If a record is changed that affects an alarm, it also affects alarms that already exist in the "instance" database as instance records. This situation is best explained with an example:

Example:

There are several alarms in the Main View with the Alarm ID of "ALM34". An operator changes the security level of ALM34 from "75" to "50" in the Add / Change Alarm pop-up. After the Add / Change Alarm pop-up is closed, but *before* the Configuration pop-up is closed, Alert EL receives a new ALM34. The new ALM34 is displayed with the security level of "50", but at this point the other ALM34 alarms remain with a security level of "75". When the Configuration pop-up is finally closed, the Main View refreshes and the ALM34 alarms *all* have the security level of "50".

The **Change** command has a serious effect on Reporting Actions. Any changes to a Group record or Reporting Action record take effect *immediately after the Add / Change pop-up is closed*. Therefore, any new alarms that Alert EL receives reflect the change. After the Configuration pop-up is closed, any instance records that have Reporting Actions affected by the change also reflect the change. Note that this does not apply to alarms with closed Reporting Actions, but it *does* apply to alarms with Reporting Actions waiting to execute, and to alarms with Reporting Actions currently being executed.

The reason for having database changes affect Alert EL's operation at two different times (i.e., when the Add / Change pop-up is closed and when the Configuration pop-up is closed), is to minimize the steps Alert EL must perform to handle the changes. Some changes may be very large in scope. For instance, a change could cause many Reporting Actions could be added to and deleted from Groups that have active alarms. It is undesirable to have the Main View re-sort every time a single Alarm record's security level changed, and it would also be undesirable to have outstanding alarms regenerate Reporting Actions before all of the changes were entered. Restricting the effect of database changes to new alarms until the Configuration pop-up is closed allows the changes to take immediate effect while delaying the global impact until all of the desired changes have been made.

This method of database changes is also beneficial to the operation of Alert EL Multi-User. Once the operator closes the Configuration pop-up, other Alert EL stations are internally notified of the change(s) and redraw accordingly. Notifying other Alert EL stations every time a record changed in the database would cause each station to continually redraw the Main View or regenerate Reporting Actions.

To Change A Record

1. Select **Database** from the **Configure** menu to display the Configuration pop-up.
2. Select the radio button that corresponds to the database table containing the record you wish to change. The Configuration pop-up will display the appropriate records.
3. Double-click on the record you wish to change (or select the record and then select **Change** from the right side of the pop-up). The appropriate Add / Change pop-up is displayed with the fields filled with the record information. The field information contained in the pop-up varies depending on what type of record is being edited.
4. Make any changes to the record.
5. When finished, select **OK** to close the pop-up and save the changes to the record, or select **Cancel** to exit the pop-up without saving.
6. Select **Close** to exit the Configuration window. Depending on what was changed, you may see the Main View refresh to reflect your changes.

Delete

The **Delete** command deletes an existing database record. The **Delete** command is similar to the **Change** command in that it will *immediately* affect a record. This could impact instance records. Therefore, this command should also be used with caution.

When Alert EL receives alarms, it creates links between instance records and database records. Additionally, when the database is configured by the operator, links are created between database records. Because of these links, records cannot be deleted without first removing the links:

- Operator record - *linked to an instance record when the operator acknowledges the alarm.*
- System record - *linked to a Site record when the Site record is configured.*
- Site record - *linked to an instance record when Alert EL receives the alarm.*
- Reporting Action record - *linked to a Group record when the Reporting Action is configured.*
- Group record - *linked to an Alarm record when the Alarm record is configured.*
- Alarm record - *linked to an instance record when Alert EL receives the alarm.*

To remove a link to an instance record, the associated instance record must first be deleted from the instance database. Links between database records can be removed from within Alert EL from the appropriate Add / Change pop-up. See the applicable sections for more information.

To Delete a Record

1. Select **Database** from the **Configure** menu to display the Configuration pop-up.
2. Select the radio button that corresponds to the database table containing the record you wish to delete. The contents of the Configuration pop-up will change to display the appropriate records.
3. Select the record you wish to delete from the Configuration pop-up.

4. Select **Delete** from the right side of the pop-up. A verification pop-up will be displayed (see below).

Figure 2-2: Delete confirmation pop-up

NOTE Alert EL may display an error message instead of a verification message if you are attempting to delete a record with database linkages.

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5. To continue with the deletion, select **Yes**. To cancel the deletion, select **No**. When a record is deleted, it is immediately removed from the Configuration pop-up. Any incoming alarms that are affected by the deletion will reflect the change.
6. Select **Close** to exit the Configuration window. If the deleted record affects existing alarms in the instance database, you may see the Main View refresh to reflect the deletion.

Copy

The **Copy** command copies an existing database record and creates a new record which contains the same field information as the original record. This feature is particularly helpful when creating database records with similar information.

When a record is copied, a new record is created that is based on the original record. A copy is initially distinguished from the original record with the text "Copy:*n*" placed next to the record name (where *n* is incremented by 1 for each copy made of the original). Note that if the combined Copy:*n* and record name exceed the maximum character length, the record name will be truncated (Example: The first copy of "Jackson County Schools" would be named "Copy:0 Jackson County Sch"). Character lengths vary by record types (for example, Action names can be 30 characters, while Operator first and last names can be 45 characters).

NOTE When an Alarm record is copied, the new record that is created is assigned the Alarm ID of "Copy:*n*" (where *n* is incremented by 1 for each copy made of the original) instead of "Copy:*n*" being appended to the Alarm ID text.

To Copy a Record

1. Select **Database** from the **Configure** menu to display the Configuration pop-up.
2. Select the radio button that corresponds to the database table containing the record you wish to copy. The contents of the Configuration pop-up will change to display the appropriate records. System or Site records cannot be copied.
3. Select the record you wish to copy from the Configuration pop-up.
4. Select **Copy**. Immediately, a copy of the record will be added to the Configuration pop-up in the "Copy:*n*" format described above.
5. At this point, you may use the **Change** command to make any changes to the copied record.
6. When finished copying records, select **Close** to exit the Configuration pop-up.

Close

The **Close** command closes the Configuration pop-up. This command impacts the Main View display if any changes or deletions have been made to records that affect existing instance records. See the explanations of the **Change** and **Delete** commands for more information.

The **Close** command in the Configuration pop-up is not the same as a **Cancel** command (found in other pop-ups throughout Alert EL). A **Cancel** command will "undo" any changes made in a pop-up. Since any changes made to database records take effect *immediately* after the Add / Change pop-up is closed, the Configuration **Close** command cannot "undo" those changes.

Operators

Configuring the Operator Table

The Operator table contains information about operators who will be using Alert EL. When an operator acknowledges an alarm, Operator information is linked to that instance record. This creates a link between the Operator record and the instance record. Because of this, an Operator record cannot be deleted until the instance records that the operator acknowledged are deleted from the instance database.

Alert EL's Operator table is initially created with one Operator record. This operator is "Main Operator" and the initial password is "Alert". Although an operator with the appropriate security level may change the first and last name of the Main Operator and the password, it is not possible to delete the Main Operator record, nor is it possible to change the security level. It is strongly suggested that the Main Operator password be changed after the first log in.

Operator information is added and changed from the Add / Change Operators pop-up (see below). When Alert EL is used for the first time, the **Add** command will be used most often to build the Operator table (see **To Add A New Operator** for instructions). With Alert EL Multi-User, any operator information that is added, changed, or deleted in the Operator table can be viewed by other multi-user stations after the changes are saved.

Figure 2-3: Add/Change Operator pop-up

The **First** field contains the first name of the operator. Alert EL allows up to 20 characters for a first name.

The **Last** field contains the last name of the operator. Alert EL allows up to 25 characters for a last name.

The **Password** field is used to enter the password of the operator. This password is used to log into Alert EL. Alert EL allows up to 8 characters for a password. Passwords are not case sensitive. An operator may change his/her own password. However, only an operator with a security level of 100 can view and change passwords. If an operator is not authorized to view passwords, they are displayed with asterisk symbols (*).

When a password is added or changed in the Add / Change Operators pop-up, it must be entered twice – once in the Add / Change Operators pop-up and once in a Verification pop-up.

The **Level** field refers to the "security level" of the operator. A security level is a number that defines a level of access in Alert EL. Security levels are assigned to operators, commands, and alarms. An operator must have a security level equal to or greater than a command's security level in order to perform that command. Additionally, an operator must have a security level equal to or greater than an alarm's security level in order to acknowledge that alarm or change the status of that alarm's Reporting Actions. If an operator attempts to use a command or acknowledge an alarm that is above his/her security level, Alert EL displays an error message.

The highest security level is 100 and the lowest is 1. The Main Operator ID has a security level of 100, which cannot be changed. Table 4-1 on the following page lists the security levels for commands. Security levels for alarms are operator-definable (see the "Alarms" section on page 2-31 for more information).

Table 2-1. Command Security Levels Table

Activity	Security Level	Activity	Security Level
Add Operator	100	Add System	75
Change Operator	100	Change System	75
Delete Operator	100	Delete System	75
Copy Operator	100	Add Site	75
Change Passwords	100	Change Site	75
View Passwords	100	Delete Site	75
Change Security Level	100	Configure as Receive Station	75
Delete Instance Record	95	Configure Connections	50
Delete All Instance Records in Main View	95	Configure Time Zone	25
Force RTN	95	Configuration Pop-up	1
Change Actions	75	Silence	1
Change Group	75	View Reporting Action Status	1
Add Alarm	75	Acknowledge Alarm	‡
Change Alarm	75	Acknowledge All	‡
Delete Alarm	75	Change Reporting Action Status	‡
Copy Alarm	75		

‡ Operator must have the same security level (or higher) as the corresponding alarm.

To Add A New Operator

1. Pick **Database** from the **Configure** menu. The Operator records are displayed by default when the Configuration pop-up is opened.
2. Pick **Add**. The Add / Change Operator pop-up will be displayed.
3. Enter the first name of the user in the **First** field.
4. Enter the last name of the user in the **Last** field.

NOTE Alert EL will display an error message if you attempt to create an Operator record with the same first and last name as an existing Operator record.

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5. Enter the password in the **Password** field.
6. Enter the security level in the **Level** field.
7. Select **OK** to save your changes and exit the pop-up or pick **Cancel** to exit without saving.
8. If you selected **OK**, Alert EL displays the Password Verification pop-up. Reenter the password. The password characters are displayed with the asterisk symbol ("*").

Figure 2-4: Password Verification pop-up

9. Select **OK** to save the Operator record and exit the pop-up, or select **Cancel** to return to the Add / Change Operator pop-up.

To Change An Existing Operator

1. Pick **Database** from the **Configure** menu. The Operator records are displayed by default when the Configuration pop-up is opened.
2. Double-click on the Operator record you wish to change (or select the Operator record and select **Change**). This displays the Add / Change Operator pop-up with the appropriate record information.

3. Make whatever changes are necessary to the record. You cannot assign an operator the same first and last name as an existing Operator record.
4. Pick **OK** to save your changes and exit the pop-up or pick **Cancel** to exit without saving.
5. If you selected **OK**, Alert EL will display the Password Verification pop-up. Reenter the password and select **OK** to save the Operator record and exit the pop-up or **Cancel** to exit the pop-up without verifying the password.

To Delete An Operator

NOTE Because Alert EL creates a link in the instance database between instance records and the operators who acknowledged them, an Operator record may not be deleted without first deleting all of the instance records that the operator acknowledged. It is not possible to delete the Main Operator.

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1. Pick **Database** from the **Configure** menu. The Operator records are displayed by default when the Configuration pop-up is opened.
2. Select the Operator record that you wish to delete.
3. Pick **Delete**. Alert EL will display a message asking if you are certain you want to delete the selected record.
4. Pick **Yes** to delete the Operator record or **No** to cancel the deletion process. The record will immediately be removed from the Configuration pop-up.

To Copy An Operator

1. Pick **Database** from the **Configure** menu. The Operator records are displayed by default when the Configuration pop-up is opened.
2. Select the Operator record that you wish to copy.
3. Pick **Copy**. A new record will be created based on the original record and displayed in the Configuration pop-up. The copy is distinguished from the original with the text "Copy: *n*" placed after the last name (where *n* is incremented by 1 for each copy made of the original).

4. Select the copy and pick **Change**. The Add / Change Operator pop-up will be displayed.
5. Change the name of the operator and make any other changes to the record at this time.
6. Pick **OK** to save the changes and exit the pop-up or pick **Cancel** to exit without saving.

Sort List By - For Operator Records

The **Sort List By** for the Operator table allows an operator to sort and display the Operator records with several sorting formats. *This command only affects how records are sorted and displayed in the Configuration pop-up, not the Main View.* The default sort setting sorts the Operator records alphabetically by last name.

To sort the Operator records, first display them in the Configuration pop-up by selecting the Operators radio button from the left side of the Configuration pop-up. Select **Sort List By** to display the following options.

Figure 2-5: Sort List By for Operators

Select a sort option. The Operator records will redraw to display the appropriate order in the Configuration pop-up.

- **By Last Name** sorts the Operator records alphabetically by the operator's last name. This is the default sort setting.
- **By First Name** sorts the Operator records alphabetically by the operator's first name.
- **By Security Level** sorts the Operator records numerically by the security level. Operator records are secondarily sorted by last name.
- **By Record Order** sorts the Operator records as they are organized in the Alert EL records database. For the most part, this means that Operator records appear in the order that they were created. This order may vary if Operator records are deleted from the Operator table.

Systems

Configuring the System Table

The System table contains information on Systems. A System consists of an entire grouping of control modules that Alert EL identifies with a three-character ID. These Systems are the same Systems in use by SiteScan 2000 for Windows.

Because every Site must be linked to a System, it is not possible to delete a System that has Sites associated with it. Additionally, because a System record only consists of the **ID** and **Name** field, the **Copy** command is disabled.

Additions and changes to System records are made from the Add / Change System pop-up (see below).

Figure 2-6: Add/Change System pop-up

The **ID** field in the Add / Change System pop-up is reserved for the three-character System ID. When an alarm is generated in the module, one of the key pieces of information sent to Alert EL is the three-character System identification.

It is recommended that the System ID not be changed or deleted once it is created. If Alert EL receives an alarm having a System ID it does not recognize, the alarm is logged in the **alert.err** file as a bad alarm. Alert EL informs the operator of bad alarms by displaying the alarm in Alert EL using the Alarm ID of "ALERTERR".

The **Name** field in the Add / Change System pop-up is the System Name. System Names can be up to 30 characters and can be changed at any time.

To Add A New System

1. Select **Database** from the **Configure** menu.
2. Select the **Systems** radio button from the left side of the Configuration pop-up. The System records will be displayed in the Configuration pop-up.
3. Pick **Add**. The Add / Change System pop-up will be displayed.
4. Enter the three-character System identification in the **ID** field.
5. Enter the System Name in the **Name** field.
6. Select **OK** to save your changes and exit the pop-up or pick **Cancel** to exit without saving.

To Change A System

1. Pick **Database** from the **Configure** menu.
2. Select the Systems radio button from the left side of the Configuration pop-up. The System records will be displayed in the Configuration pop-up.
3. Double-click on the System record that you wish to change (or select it and pick **Change**). The Add / Change System pop-up will be displayed with the appropriate record information and the System ID highlighted.
4. Make any desired changes to the System ID or System Name.
5. Pick **OK** to save the changes and exit the pop-up or pick **Cancel** to exit without saving.

NOTE If the System Name is changed, the change is reflected in the System field of the Add / Change Site pop-up for the affected Site records.

To Delete A System

NOTE You cannot delete a System that has Sites associated with it. If you attempt to delete a system that has sites associated with it, you will receive the message, *"The 'System Name' is currently associated to defined sites and cannot be deleted."* In order to delete a System with Sites, you must first remove the links from the Add / Change Site pop-up (see the "Sites" section on page 2-19).

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1. Pick **Database** from the **Configure** menu.
2. Select the Systems radio button from the left side of the Configuration pop-up. The System records will be displayed in the Configuration pop-up.
3. Select the System record that you wish to delete.
4. Pick **Delete**. If the System record has no Sites that are associated with it, Alert EL will ask if you are sure you want to delete the System record.
5. Pick **Yes** to delete or **No** to cancel the deletion process.

Sort List By - For System Records

The **Sort List By** for the System table allows an operator to sort and display the System records with several sorting formats. *This command only affects how records are sorted and displayed in the Configuration pop-up, not the Main View.* The default sort setting sorts the system records alphabetically by System Name.

To sort the System records, first display them in the Configuration pop-up by selecting the System radio button from the left side of the Configuration pop-up. Select **Sort List By** to display the following options. Select a sort option. The System list will redraw to display the appropriate order in the Configuration pop-up.

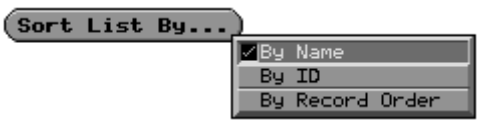


Figure 2-7: Sort List By for Systems

- **By Name** sorts the System records alphabetically by System Name. This is the default sort setting.
- **By ID** sorts the System records alphabetically by System ID.
- **By Record Order** sorts the System records as they are organized in the Alert EL records database. For the most part, this means that System records will appear in the order that they were created. This order may vary if System records are deleted from the System table.

Sites

Configuring the Site Table

The Site table contains information regarding Sites. Sites exist within Systems and are identified by different line numbers in the SiteScan 2000 for Windows configuration text.

When the operator adds Site record information to the Alert EL records database, a link is created (in the Add / Change Site pop-up) between a previously configured System record and the newly configured Site. Because every Site must be linked to a System, you must configure your System table before the Site table.

Because each Site is linked to a System, the **Copy** command is disabled to avoid creating accidental links.

Additions and changes to the Site table are made from the Add / Change Site pop-up (see below).

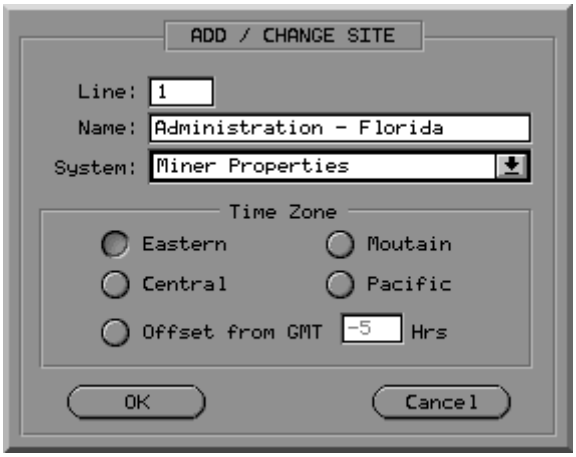


Figure 2-8: Add/Change Site pop-up

The **Line** field is used to enter the Line Number of the Site. The Line Number is used by SiteScan 2000 for Windows and Alert EL for addressing purposes. Each Site must have its own Line Number within a System. Since SiteScan 2000 for Windows is limited to 150 Sites per System, the Line Number should not be over 150.

The **Name** field is reserved for the Site Name. When SiteScan 2000 for Windows was configured with Sites, this information was also created. Site names may be up to 25 characters. The same Site Name can be assigned to multiple sites, as long as the Line Numbers are different.

The **System** field is where a link to a System is made. Each Site must be linked to the System it is associated with, or Alert EL will not allow the Site record to be saved. A System can be selected from the pull down menu.

NOTE A System may also be selected by tabbing down to the **System** field (or selecting the pull down arrow) and typing the first letter of the System. Each time the first letter is typed, Alert EL displays the next System in the list that begins with that letter.

The **Time Zone** section of the Add / Change Site pop-up is used to define the time zone where the site is located. This information is important because Alert EL needs to know what time an alarm occurred in relation to the receiving station time. For the continental United States, the four standard time zones are provided: **Eastern**, **Central**, **Mountain**, and **Pacific**.

For other locations, enter the offset from Greenwich Mean Time (GMT). The **Offset from GMT** field can only accept whole numbers. If a GMT offset is entered that is not a whole number, Alert EL rounds the GMT offset *down*. For example, "4.9" would be rounded down to "4". See Table 4-1 on page 4-11 for GMT information.

To Add A New Site

1. Pick **Database** from the **Configure** menu.
2. Pick the **Sites** radio button from the Configuration pop-up. The Site records will be displayed in the Configuration pop-up.
3. Pick **Add**. The Add / Change Site pop-up will be displayed.
4. Enter a line number in the **Line** field. Line numbers must be unique within a System.
5. Enter a site name in the **Name** field.
6. From the **System** field, select the System that the Site is associated with.

7. Select a time zone in the **Time Zone** field.
8. Select **OK** to save your changes and exit the pop-up or pick **Cancel** to exit without saving.

To Change A Site

NOTE You cannot change the Line Number or associated System of a Site record if instance records exist that are linked to the Site record. This applies even if the instance record is in the Closed state.

---

1. Pick **Database** from the **Configure** menu.
2. Pick the Sites radio button from the Configuration pop-up. The Site records will be displayed.
3. Double-click on the Site record that you wish to change (or select it and pick **Change**). The Add / Change Site pop-up will be displayed with the appropriate record information.
4. Make any desired changes to the record.
5. Pick **OK** to save your changes and exit the pop-up or pick **Cancel** to exit without saving.

To Delete A Site

NOTE You cannot delete a Site record if instance records exist that use that Site record. To delete a Site record, you must first delete all of the associated instance records. This applies even if the instance record is in the Closed state.

---

1. Pick **Database** from the **Configure** menu.
2. Pick the Sites radio button from the Configuration pop-up. The Site records will be displayed in the Configuration pop-up.
3. Select the Site record that you wish to delete.
4. Pick **Delete**. Alert EL will ask if you are sure you want to delete the Site record.
5. Pick **Yes** to delete or **No** to cancel the deletion process.

Sort List By - For Site Records

The **Sort List By** command located on the Configuration pop-up allows an operator to sort Site records using various sort formats. *This command only affects how records are sorted and displayed in the Configuration pop-up, not the Main View.* The default sort setting sorts the Site records alphabetically by Site Name.

To sort the Site records, first display them in the Configuration pop-up by selecting the Sites radio button from the left side of the Configuration pop-up. Select **Sort List By** to display the following options.

Figure 2-9: Sort List By for Sites

Select a sort option. The Site records will redraw to display the appropriate order.

- **By Site Name** sorts the Site records alphabetically by Site Name. This is the default sort setting.
- **By Line Number** sorts the Site records numerically by the Site's Line Number.
- **By System / Line Number** sorts the Sites alphabetically by the associated System ID. **Sort List By System / Line Number** also displays the Sites' Line Numbers.
- **By Record Order** sorts the Site records as they are organized in the Alert EL records database. For the most part, this means that Site records appear in the order that they were created. This order may vary if Site records are deleted from the Site table.

Actions

Overview

This section explains Reporting Actions and how to change and test them in a general manner. For information concerning specific Reporting Actions, see the following chapter, **Configuring Reporting Actions**.

A Reporting Action is an automatic procedure that is launched after an alarm is received by an Alert EL station. This feature is extremely useful in reducing manual procedures that are performed when an alarm is received (for example, paging personnel, sending alarm information to a printer, etc.).

Only the station which receives an alarm (designated as a "receiving station" on Alert EL Multi-User) can launch Reporting Actions. See the "Alert EL Multi-User" section on page 8-1 for more information on receiving stations.

Reporting Actions are associated with alarms through Groups (see Figure 2-10 on page 2-24). If Alert EL receives an alarm that has Reporting Actions, operators have the capability to view the Reporting Actions' status as they are launched and executed. The operator logged in at the receiving station that received the alarm has the ability to Abort or Execute the Reporting Action if he/she has the proper security level. See the "View Reporting Status" section on page 6-14 for more information on viewing Reporting Action status.

The following types of Reporting Actions are available:

ASCII File Write

Numeric Pager

Parallel Printer

Serial Output

Alphanumeric Pager

Once Reporting Actions are defined, they are organized into Groups. When an alarm is received, the Reporting Action is launched. The figure below illustrates the relationship between Reporting Actions, Groups, and Alarms:

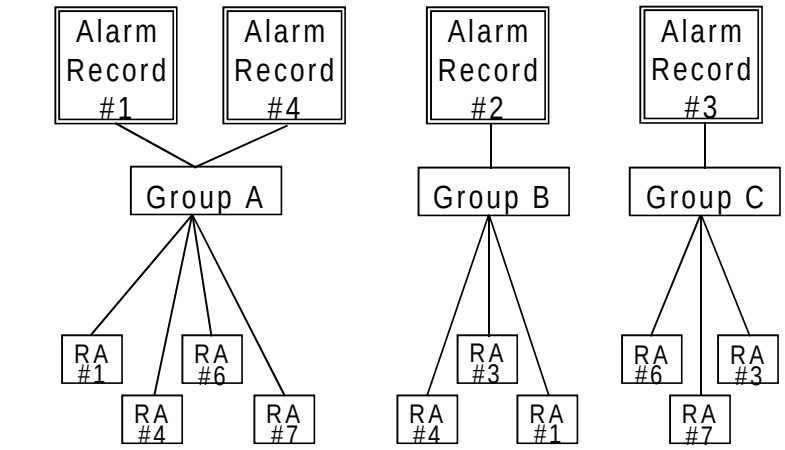


Figure 2-10: Relationship Between Reporting Actions, Groups, and Alarms

A Reporting Action can be assigned to any or all Groups. If a Reporting Action is changed, the change is effective for all Groups the Reporting Action is assigned to.

After an individual Reporting Action is configured, the operator has the ability to test it. This feature allows the operator to trouble-shoot any possible Reporting Action problems before actual alarms are received. It is strongly recommended that Reporting Actions are tested before they are used.

When A Reporting Action Is Changed

It is possible to change a Reporting Action that is associated with a Group (or many Groups). If this is done, the change is reflected in *all* of the Groups with that Reporting Action. For example, if an operator changed the description of a Numeric Pager Reporting Action from "Page Maintenance Director" to "Page Director of Maintenance", any

Group that was associated with the "Page Maintenance Director" Reporting Action would display the new description in its respective Add / Change Group.

A change to a Reporting Action will also affect any alarms that exist in the instance database that are using that Reporting Action. This only applies, however, if the Reporting Actions associated with the alarm are not finished. If they are finished, any changes to a Reporting Action will have no effect on them.

To Change A Reporting Action

NOTE Changing a Reporting Action may affect alarms with Reporting Actions waiting to execute. See the "When A Reporting Action Is Changed" section on page 2-24 for more information.

---

1. Select **Database** from the **Configure** menu. The Configuration pop-up will be displayed.
2. Select the Actions radio button from the left side of the pop-up to display the records.
3. Double-click on the record you wish to change (or select the record and pick **Change** from the right side of the pop-up). The appropriate editing pop-up for that record will be displayed.
4. Make any changes to the Reporting Action record. Information on the individual fields within a Reporting Action editing pop-up is provided in the **Configuring Reporting Actions** chapter.
5. Select **Test** from the editing pop-up to verify that the changed Reporting Action will work properly (see the "To Test A Reporting Action" section on page 2-26).
6. When the Reporting Action is working properly with no errors, select **OK** from the editing pop-up to exit the pop-up and save the Reporting Action, or select **Cancel** to exit the pop-up without saving.

To Test A Reporting Action

NOTE It is *imperative* that each Reporting Action be tested before it is used in an alarm situation. Some Reporting Actions may take longer to test and trouble-shoot than others. For example, the Numeric Pager Reporting Action will take more time to configure than the ASCII File Write Reporting Action because of the timing issues involved in sending a numeric page.

1. After configuring a new Reporting Action or changing an existing one, select **Test** from the Reporting Action's editing pop-up. The Testing Reporting Action pop-up will be displayed (see example below) and Alert EL will attempt to perform the Reporting Action.

Figure 2-11: Testing Reporting Action pop-up

2. If Alert EL is able to perform the Reporting Action, the Testing Reporting Action pop-up will display a message indicating the test was successful. Select **OK** to close the Testing Reporting Action pop-up.

   If Alert EL is unable to perform the Reporting Action, an error message will be displayed in the Testing Reporting Action pop-up. See the "Reporting Action Error Messages" section on page 10-14 for a list of the error messages and possible causes.

3. From the Reporting Action editing pop-up, select **OK** to save any changes and exit the pop-up, or select **Cancel** to exit the pop-up without saving any changes.

Sort List By - For Reporting Actions

The **Sort List By** command for the Reporting Action table allows an operator to sort and display the Reporting Action records with several sorting formats. *This command only affects how records are sorted and displayed in the Configuration pop-up, not the Main View.* The default sort setting sorts the Reporting Action records alphabetically by their descriptions.

To sort the Reporting Action records, first display them by selecting the Actions radio button from the left side of the Configuration pop-up. Select **Sort List By** to display the following options.

Figure 2-12: Sort List By for Actions

Select a sort option. The Reporting Action records will redraw to display the appropriate order in the Configuration pop-up.

- **By Action Name** sorts the Reporting Actions alphabetically by their descriptions. This sort format is the default setting.
- **By Record Order** sorts the Reporting Action records as they are organized in the Alert EL records database.

Groups

Configuring the Group Table

Groups exist as organizers for Reporting Actions. An Alert EL Reporting Action Group should not be confused with a SiteScan 2000 for Windows Scheduling Group. Five different Groups are available:

- Alarms - Urgent
- Alarms
- Messages
- Status Reports
- Trend Reports

After a Group is configured with Reporting Actions, it can be associated with Alarm record(s) when the alarm is configured (see Figure 2-10 on page 2-24). When Alert EL receives an alarm, the associated Reporting Actions are launched. Because Alarm records are linked to Group records, it is not possible to delete a Group record that has Alarm records referencing it.

Changing a Group may affect active Reporting Actions. See the "When A Reporting Action Is Changed" section on page 2-24 for more information. Changes to the Group table are made from the Add / Change Group pop-up

Figure 2-13: Add/Change Group pop-up

The **Group Name** field displays the name of the group. This name cannot be changed.

The **Scheduled Actions** section of the Add / Change Group pop-up is used to display the individual Reporting Actions that are associated with that Group. Reporting Actions can be added to a Group with the **Add** command and can be removed from a Group with the **Delete** command (see the "To Assign a Reporting Action to a Group" section on page 2-29 and the "To Delete a Reporting Action from a Group" section on page 2-29).

To Change A Group

1. Pick **Database** from the **Configure** menu.
2. Pick the Groups radio button from the Configuration pop-up. The Group records will be displayed in the Configuration pop-up.
3. Double-click on the Group record to be changed (or select it and pick **Change**). The Add / Change Group pop-up will be displayed with the record information.
4. Make any changes to the record.
5. Select **OK** to save your changes and exit the Add/Change Group pop-up, or select **Cancel** to exit without saving.

To Assign a Reporting Action to a Group

1. From the Add / Change Group pop-up, select **Add**. This will display the Add Action pop-up.
2. Double-click on the Reporting Action that you wish to assign to the Group (or select the Reporting Action and **OK**).
3. The Reporting Action will now be visible in the **Scheduled Actions** section of the Add / Change Group pop-up.

To Delete a Reporting Action from a Group

1. From the **Scheduled Actions** section of the Add / Change Group pop-up, select the Reporting Action you want to delete.
2. Select **Delete**. Alert EL will *immediately* delete the Reporting Action from the **Scheduled Actions** section without prompting for verification.
3. Select **OK** to save the deletion and close the Add / Change Group pop-up.

4. If you change your mind about deleting the Reporting Action, select **Cancel** to exit the Add / Change Group pop-up without deleting. The Reporting Action will be restored to the **Scheduled Actions** section for that Group.

Sort List By - For Groups

The **Sort List By** command for the Group table allows an operator to sort and display the Group records with several sorting formats. *This command only affects how records are sorted and displayed in the Configuration pop-up, not the Main View*. The default sort setting sorts the Group records alphabetically by Group Name.

To sort the Group records, first display the Group records by selecting the Groups radio button from the left side of the Configuration pop-up. Select **Sort List By** to display the following options.

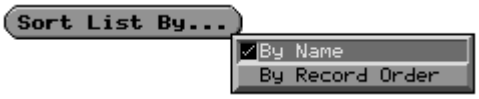


Figure 2-14: Sort List By for Groups

Select a sort option. The Group records will redraw to display the appropriate order in the Configuration pop-up.

- **By Name** sorts the Group records alphabetically by Group Name.
- **By Record Order** sorts the Group records as they are organized in the Alert EL records database.

Alarms

Alarm Record vs. Instance Record

There are two different kinds of alarm records that exist in the Alert database:

- Alarm Record

  An Alarm record is alarm information configured by the operator that corresponds to an alarm Alert EL expects to receive. Once Alert EL receives the alarm, the configured information is used by Alert EL to display and handle the alarm.

- Instance Record

  An Instance record is a log record that is created when an alarm is received. Alert EL logs these alarms in the "instance" database.

When an alarm is received by Alert EL, Alert EL matches it with the alarm information configured in the Alarm records database and displays the alarm in the Main View. The alarm is also logged to the "instance" database and becomes an instance record. Unless the instance record is deleted by the operator, the alarm remains in the instance database permanently (see Figure 2-15 below).

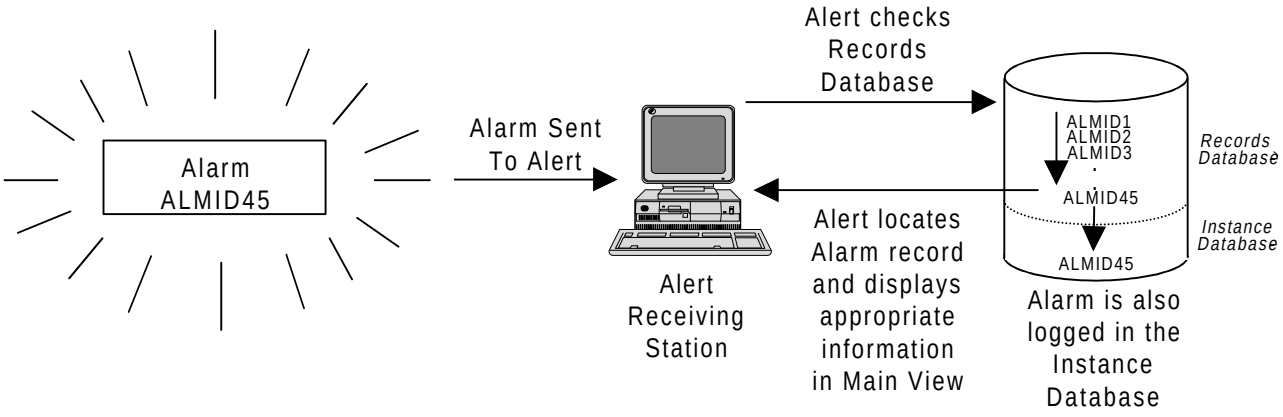


Figure 2-15: Alarm Record vs. Instance Record

The Alarm records database is initially created with several alarm templates. If Alert EL receives an alarm that is not configured in the records database, it displays the alarm using the format of one of these templates. See the "Unconfigured Alarms" section on page 6-3 for more information.

Configuring the Alarm Table

Alarms can be configured individually in the Alarm table, or they can be imported from an existing **sysalarm.txt** or **xxxalarm.txt** file using the System Alarm Text Import feature (see the "System Alarm Text Import" section on page 2-35). In either case, when an alarm is configured it is associated with a Group. A Group is a collection of Reporting Actions. When a Group is assigned to an alarm and that alarm is received by Alert EL, the Reporting Actions associated with that Group are performed (see the "Groups" section on page 2-28 for more information).

An Alarm record cannot be saved to the database unless it is associated with a Group. If it is necessary to configure an alarm with *no* Reporting Actions, link the alarm to a Group that has no Reporting Actions associated with it.

Use the Add / Change Alarm pop-up (see below) to configure a new Alarm record or to change an existing Alarm record.

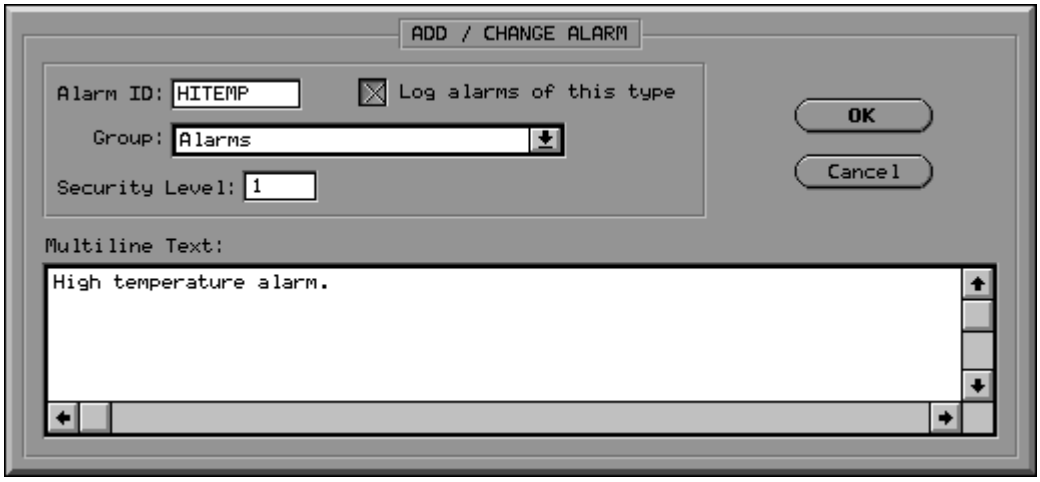


Figure 2-16: Add/Change Alarm pop-up

The **Alarm ID** field is used to enter the global name for the alarm. Alarm IDs must be unique to the database. Alert EL uses the Alarm ID to match a received alarm to its Alarm record. *The Alarm ID must exactly match the Alarm ID entered on the Alert microblock in Eikon by Liebert Site Applications.* Otherwise, it is displayed using one of the unconfigured alarm templates. The Alarm ID can be composed of up to eight uppercase letters, numbers, and symbols. It is not recommended that spaces be used in Alarm IDs. When choosing Alarm IDs, avoid using IDs that have a special meaning in Alert EL (see the table below). Refer to the "Templates" section on page 9-6 for more information about these reserved Alarm IDs.

Table 2-2. Reserved Alarm IDs

Alarm ID	Used for
A	Unconfigured old-style alarm template
A1	Lock alarm
ALERTERR	Bad alarm template
DEFAULT	Unconfigured Alert alarm template
M	Unconfigured old-style message template
STATUS	Status report template
TREND	Trend report template

NOTE Alarms with an ID of STATUS or TREND will be treated by Alert as old-style alarms. For more information about old-style alarms, refer to **Appendix A**.

If the **Log alarms of this type** box is checked, Alert EL handles alarms as it normally does (i.e., alarms are displayed in Main View and logged in the instance database). By default, the **Log alarms of this type** box is checked. However, if the **Log alarms of this type** box is *not* checked, Alert EL does not display the alarm or log it to the instance database. This feature should be used with extreme caution. *If the* **Log alarms of this type** *box is not checked, there will be no record that the alarm was ever received.* In addition, if an RTN is received that is related to the alarm not being logged, the RTN will also not be logged.

The **Log alarms of this type** feature may be disabled in situations where the station is receiving Daily Status Reports or Trends that do not need to be viewed or logged by Alert EL. If you do not want to log or display certain DSRs or Trends, *it is not a good idea to leave them unconfigured* because Alert EL will log and display them as unconfigured alarms. Instead, configuring DSRs and Trends and then disabling the **Log alarms of this type** box will cause Alert EL to ignore the DSR or Trend.

The **Group** field is used to associate an Alarm record with a Group. The Group may be selected from the pull-down menu with the mouse. Once an alarm is associated with a Group, any Reporting Actions that belong to that Group are launched after Alert EL receives the alarm.

NOTE A Group may also be selected by tabbing down to the **Group** field (or selecting the pull down arrow) and typing the first letter of the Group. Each time the first letter is typed, Alert EL displays the next Group in the list that begins with that letter.

If the alarm being configured does not require any Reporting Actions, associate the alarm with any Group that has no associated Reporting Actions. An Alarm record cannot be saved unless it is associated with a Group.

NOTE Alarms are sorted into different views depending on the group the alarm is associated with. For example, alarms associated with the Alarms group appear in the Alarms view; alarms associated with the Messages group appear in the Messages view, etc.

The **Security Level** field assigns a numeric level of access to the alarm. An operator must have the same security level as an alarm or higher in order to acknowledge it and to change the status of any of the alarm's Reporting Actions. If an operator attempts either of these actions without the proper security level, Alert EL will display an error message. Security levels can range from 1-100, with "1" being the lowest and "100" being the highest.

NOTE Security levels are also assigned to operators to control access to commands. See the "Operators" section on page 2-9 for more information.

The **Multiline Text** field is reserved for additional alarm information. Multiline text is displayed with an alarm in the Main View (and/or sent as a serial output to a device such as a printer or terminal using Reporting Actions). This field allows the operator to enter text that can exceed one line or the operator can use "field codes", which are numeric representations of referenceable fields (see the **Formatting With Field Codes** chapter for information on field codes).

System Alarm Text Import

The System Alarm Text Import option allows you to automatically create Alarm records based on alarm text located in the **sysalarm.txt** and **xxxalarm.txt** files (where **xxx** is the three-character System name). The **sysalarm.txt** file contains default alarm text and is installed with SiteScan 2000 for Windows. The **xxxalarm.txt** file contains alarm text that has been customized for a particular System. The **sysalarm.txt** file is usually located in the **c:\ss2000\emsys\xxx\m68** directory, while the **xxxalarm.txt** file is usually located in the **c:\ss2000\emsys\xxx** directory. Refer to the *SiteScan 2000 for Windows User's Guide* for more information about directory structure.

Alarm IDs are created in Alert EL by combining a default ID ("A" for alarms and "M" for messages) with the alarm text numbers in the **sysalarm.txt** and **xxxalarm.txt** files. The alarm text from these files is used in the Multiline text field in the Alert EL Alarm record. The alarms are assigned to Groups according to the alarm IDs. Alarm IDs beginning with A are assigned to the Alarms Group, and alarm IDs beginning with M are assigned to the Messages Group.

NOTE The default alarm IDs created by the System Alarm Text Import feature may vary depending on settings determined in the **alc.ini** file. For more information about these settings, refer to the "The alc.ini File" section on page 8-16.

All imported alarms are initially assigned a security level of 1. Once the alarms are imported, the security level and other information can be changed by using the Add / Change Alarm pop-up.

If the alarm text in the **sysalarm.txt** or **xxxalarm.txt** files uses any special codes to reference information from the FB (for example, "POAW ~~~~~~~"), these codes will **not** be translated by Alert EL and will appear in the view as literal text. To show additional information from the FB in the alarm's Multiline text, use Alert EL's field codes in the Multiline text to reference latched data from the Alert microblock. Refer to the **Formatting with Field Codes** chapter for more information.

Using System Alarm Text Import

The System Alarm Text Import pop-up is accessed by selecting **System Alarm Text Import** from the **File** menu. This option cannot be selected when the Configuration pop-up is open. The System Alarm Text Import pop-up may also appear when a new database is created.

Figure 2-17: System Alarm Text Import pop-up

The **Systems** window displays a list of all the Systems defined in the **alc.ini** file.

The **Import** button begins the process of creating alarm records for each entry in the **sysalarm.txt** and **xxxalarm.txt** files for the system selected in the Systems window. The **Import All** button imports alarms from all the Systems appearing in the Systems window. Alert EL first loads the **.txt** files into memory, then creates the new Alarm records. A message may appear if either the **sysalarm.txt** or **xxxalarm.txt** files could not be found. If the System(s) selected in the Systems window have not already been configured in the Alert database, Alert EL will also create System records with the description "Unconfigured."

The **Automatically overwrite duplicate alarms?** option, when enabled, will automatically overwrite the text of an existing configured alarm with the alarm text from the **sysalarm.txt** or **xxxalarm.txt** files if the alarm IDs are the same. For example, if the alarm ID M15 has already been configured in the Alert database and the **sysalarm.txt** file for the System being imported contains an entry for M15, then Alert EL will automatically overwrite the existing Multiline text for alarm M15 with the text from the **sysalarm.txt** file.

If the **Automatically overwrite duplicate alarms?** option is disabled, Alert EL will pause when an alarm text number matches an existing alarm ID and allow the operator to determine whether or not to overwrite the text.

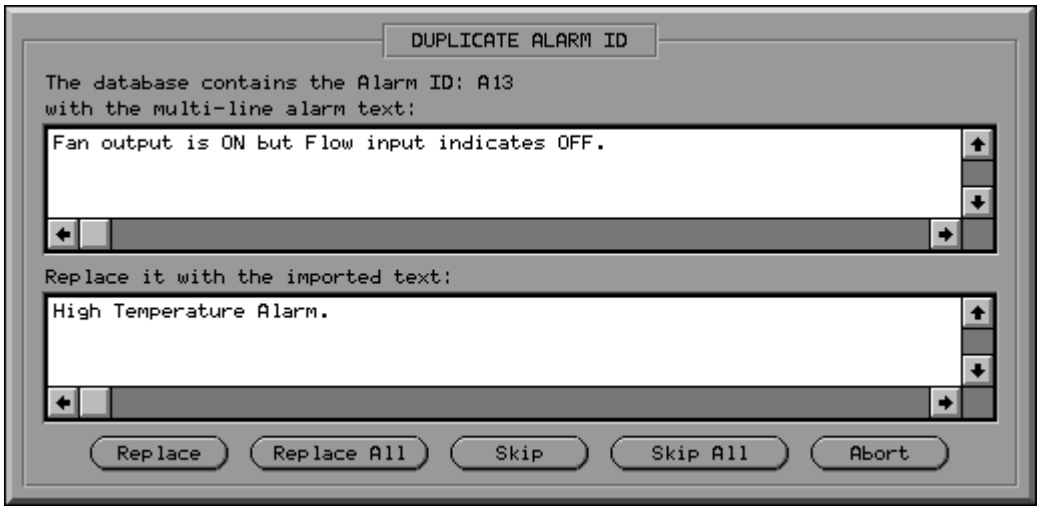


Figure 2-18: Duplicate Alarm ID Found pop-up

Choose **Replace** or **Replace All** to replace the existing Multiline text with the imported text, **Skip** or **Skip All** to keep the existing Multiline text and ignore the imported text, or **Abort** to cancel the import process. If **Replace All** or **Skip All** is chosen, this dialog box will not reappear if additional duplicate alarms are found, and subsequent duplicate

alarms will be replaced or skipped. Note that if **Abort** is chosen at any time during the import process, alarm records that have already been created by this process will not be deleted.

To Add An Alarm

1. Pick **Database** from the **Configure** menu. The Configuration pop-up will be displayed.
2. Select the Alarms radio button from the left side of the Configuration pop-up. The Alarm records will be displayed.
3. Select **Add**. The Add / Change Alarm pop-up will be displayed.
4. Enter an eight-character Alarm ID in the **Alarm ID** field.
5. Leave the **Log alarms of this type** box checked if you wish Alert EL to log and display the alarms as they are received. *Be aware that when you leave the* **Log alarms of this type** *box empty, Alert EL will not display the alarm or keep any record of it!*
6. Associate the alarm with a Group in the **Group** field. Note that you cannot save the alarm unless you designate a Group Name.
7. Select the alarm's security level in the **Security Level** field.
8. Enter Multiline text for the alarm in the **Multiline Text** field.
9. Pick **OK** to save your changes and exit the Add / Change Alarm pop-up or pick **Cancel** to exit without saving.

To Import Alarms from an Existing System

1. Pick **System Alarm Text Import** from the **File** menu. The System Alarm Text Import pop-up will be displayed.
2. Select the System in the Systems window you want to import alarms from.
3. Enable or disable the **Automatically overwrite duplicate alarms?** option as desired.
4. Pick **Import** to import alarms from the selected System, or pick **Import All** to import alarms from all the Systems shown. The alarm records will be created from the **sysalarm.txt** and **xxxalarm.txt** files (where **xxx** is the three-character System name).
5. Select **OK** to close the System Alarm Text Import pop-up.

6. Follow the steps in the "To Change An Alarm" section below to change security levels or other information for the new alarm records as necessary.

To Change An Alarm

NOTE You cannot change the Alarm ID of an Alarm record with existing instance records without first deleting all of the instance records that use that Alarm ID. This applies even if the instance record is in the Closed state.

---

1. Pick **Database** from the **Configure** menu. The Configuration pop-up will be displayed.
2. Select the Alarms radio button from the left side of the Configuration pop-up. The Alarm records will be displayed.
3. Select the Alarm record to change and pick **Change** or double-click on the Alarm record. The Add/Change Alarm pop-up will appear with the appropriate record information.
4. Make any desired changes to the fields.
5. Pick **OK** to save your changes and exit the pop-up or pick **Cancel** to exit without saving.

To Delete An Alarm

NOTE You cannot delete an Alarm record with existing instance records without first deleting all of the associated instance records. This applies even if the instance record is in the Closed state.

---

1. Pick **Database** from the **Configure** menu. The Configuration pop-up will be displayed.
2. Select the Alarms radio button from the left side of the Configuration pop-up. The Alarm records will be displayed.
3. Select the Alarm record that you wish to delete and pick **Delete**. If the Alarm record has no associated instance records, Alert EL will display a message asking you if you are sure you wish to delete the alarm.

   If the Alarm record does have associated instance records, Alert EL will display an error message.

4. Select **Yes** to delete the Alarm record or select **No** to cancel the deletion process.

To Copy An Alarm

1. Pick **Database** from the **Configure** menu. The Configuration pop-up will be displayed.
2. Select the Alarms radio button from the left side of the Configuration pop-up. The Alarm records will be displayed.
3. Select the Alarm record that you wish to copy and pick **Copy**. A new record of the original Alarm record will be created and added to the Alarm table. The copy will be distinguished from the original with the text "Copy: *n*" as its Alarm ID (where *n* is incremented by 1 for each copy made of the original).
4. Select the copy and pick **Change** (or double-click on the copy). The Add / Change Alarm pop-up for that alarm will be displayed with the record information.
5. Change the Alarm ID and make any other changes to the Alarm record.
6. Pick **OK** to save your changes and exit the pop-up or pick **Cancel** to exit without saving.

Sort List By - For Alarms

The **Sort List By** feature allows the operator to sort Alarm records in different ways. *This command only affects how Alarm records are sorted and displayed in the Configuration pop-up, not the Main View.* The default setting sorts the Alarm records alphabetically by Alarm ID.

To sort the Alarm records, first display them by selecting the Alarms radio button from the left side of the Configuration pop-up. Select **Sort List By** to display the following options:

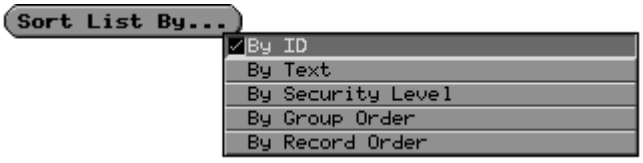


Figure 2-19: Sort List By for Alarms

Select a sort option. The Alarm records will redraw to display the appropriate order in the Configuration pop-up.

- **Sort List By ID** sorts the Alarm records alphabetically by Alarm ID. This is the default sort setting.
- **Sort List By Text** sorts the Alarm records alphabetically by the Multiline Text.
- **Sort List By Security Level** sorts the Alarm records numerically by the assigned security levels.
- **Sort List By Group Order** sorts the Alarm records alphabetically by their associated Groups.
- **Sort List By Record Order** sorts the Alarm records as they are organized in the Alert EL records database. For the most part, this means that Alarm records appear in the order that they were created. This order may vary if Alarm records are deleted from the Alarm table.

* * *

3 Configuring Reporting Actions

Introduction

This chapter explains each Reporting Action in the order that they are listed in the Add Action pop-up (see below). For information on adding, changing, deleting, copying, and testing Reporting Actions, see the "Actions" section on page 2-23.

 **ASCII File Write**

 **Numeric Pager**

 **Parallel Printer**

 **Serial Output**

 **Alphanumeric Pager**

ASCII File Write

The ASCII File Write Reporting Action appends alarm information to a text file. If the operator defines a file that does not exist, Alert EL creates the file and adds the alarm information. If the file already exists, Alert EL appends the alarm information to the end of the file. Five ASCII File Write Reporting Actions are available, one for each type of alarm (Alarms - Urgent, Alarms, Messages, Status Reports and Trend Reports).

The ASCII File Write Reporting Action records the following information about each alarm:

- Alarm Group
- Alarm Generation Date
- Alarm Generation Time
- Alarm ID
- System ID/System name
- Site
- Line Address
- Tab Labels
- Multiline Alarm Text

NOTE Refer to the "Actions" section on page 2-23 for general instructions on adding, changing, copying, deleting, and testing Reporting Actions.

Changes to an ASCII File Write Reporting Action are made from the ASCII File Write pop-up (see below).

Figure 3-1: ASCII File Write pop-up

The **Description** field on the ASCII File Write pop-up is reserved for a description of the ASCII File Write Reporting Action. This description is displayed in the Add / Change Group pop-up when assigning configured Reporting Actions to a Group. The description can be up to 30 characters.

The **File name** field is used to enter the entire path and file name (for example, **c:\alarms\heatalms.txt**). A default file name is automatically entered for each ASCII File Write Reporting Action. This file is written to the directory in which the Alert EL programs are stored. If the operator defines a file that does not exist, Alert EL creates the file and adds the alarm information. If the file already exists, Alert EL appends the alarm information to the end of the file. Up to 80 characters can be entered for a path name. Use the **Browse** button to select a file from the disk.

Numeric Pager

The Numeric Pager Reporting Action pages personnel by sending numeric messages to personal pagers through the use of a third-party service (definable and subscribed to by the operator). Communication with the third party pager service is through the use of Hayes compatible modems. *This Reporting Action only supports Hayes compatible modems.* The numeric message may consist of numeric text entered by the operator and/or the Alarm ID. Two different Numeric Pager Reporting Actions may be defined.

From the Numeric Pager pop-up, the operator can define how many times to attempt to connect to the pager service. The operator can also define a secondary number to call in case the connection to the first number is unsuccessful. The entire cycle of calling can be repeated for as many times as the operator defines, or until a successful page is completed.

NOTE Refer to the "Actions" section on page 2-23 for general instructions on adding, changing, copying, deleting, and testing Reporting Actions.

Changes to a Numeric Pager Reporting Action are made from the Numeric Pager pop-up (see below).

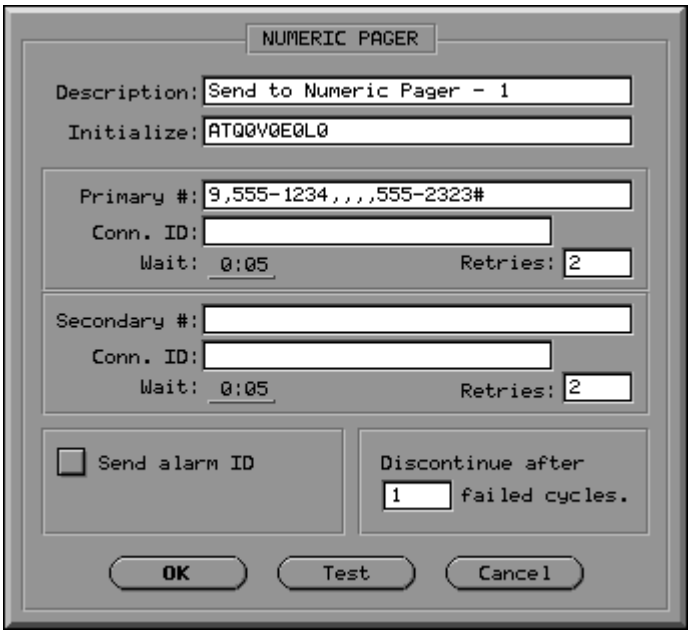


Figure 3-2: Numeric Pager pop-up

The **Description** field on the Numeric Pager pop-up is reserved for a descriptive name of the Numeric Pager Reporting Action. This description is used in the Add / Change Group pop-up when assigning Reporting Actions to a Group. The description of the Numeric Pager Reporting Action can be up to 30 characters.

The **Initialize** field is used to enter a string that is sent to the modem to configure it for the station sending the page. The initialization string is sent to the modem *each* time the numeric pager action occurs. When a new Numeric Pager pop-up is displayed, this field defaults to **ATQ0V0E0L0**. If these codes (or other codes that represent the same information; see NOTE below) are not present in the **Initialize** field, the Reporting Action may not function properly. The prefix **AT** should be used before the initialization string. The following additional code will be sent to the modem whether or not it appears in the **Initialize** field: **S7=*xx*** (where ***xx*** = the number of seconds entered in the **Wait** field).

NOTE Some older Hayes-compatible modems need the command **X4** in the initialization string. If this command is necessary, be sure to enter it in the **Initialize** field following the AT prefix.

Modem AT commands described here are as follows:

Q0 = result codes enabled

E0 = command echo disabled

L0 = low modem speaker volume

S7 = number of seconds the originating modem waits for a dial tone (the number of seconds entered in the **Wait** field)

V0 = short form result codes enabled

X4 = use extended result codes

The **Primary #** field is reserved for the phone number of the pager service that the receiving station should call. The full string should be entered in this field, including any prefixes (i.e., dialing "9" for an outside line), wait periods, *and* the phone number that should be displayed in the pager window (if desired). Note that some pager services require the "#" character following the number that should be displayed by the pager. Check with your pager service to see if this character is required.

Example: 9, 1-614-555-3423,,,,,614-555-1212

The example above would dial "9" for an outside line, then the long-distance phone number. Each of the commas represents a 2-second wait (for most Hayes compatible modems). It is important to insert enough commas so that the modem pauses while the paging service is speaking and it sends information when the paging service pauses (the **Test** command is available for this function). The "614-555-1212" number is the phone number that is displayed in the receiving pager window.

The **Conn. ID** field allows the operator the opportunity to choose exactly which serial port to dial out from. Alert EL attempts to match the Conn. ID defined in the Numeric Pager pop-up with a Conn. ID defined in the Connections Configuration pop-up (see the "Connections" section on page 4-2). If a match is found, Alert EL uses that port to dial out. If no match is found, Alert EL reports an error on the Reporting Action Status pop-up and the page is not sent. If no Conn. ID is defined in the Numeric Pager pop-up, Alert EL uses the first available modem that is compatible with the configured baud rate.

The **Wait** field for the Primary # is used to specify the modem timeout for the connection. The Wait time does not begin counting down until the last character in the **Primary #** field is sent. Since much of the

information communicated by the Numeric Pager Reporting Action is included in the Primary # field, a Wait time of between 5 and 10 seconds may be all that is necessary. Additional time may be required if a third-party communications port redirection utility is being used. The default is "0:05" (5 seconds). The Wait time may need to be adjusted during the testing phase of the configuration.

NOTE The **Wait** field uses a "number scrolling" method to define the time. To change a time, select a number by clicking on it with the left mouse button. A horizontal bar will appear beneath the number. Hold the left mouse button down to scroll forward through numbers and hold the right mouse button down to scroll backwards through the numbers. Release the mouse button when the desired number is displayed.

The **Retries** field for the Primary # is used to define how many times Alert EL attempts to retry the Primary # if the first attempt fails. For example, if the **Retries** field is set to "2", Alert EL tries to connect to the Primary # a total of three times before it proceeds to attempt to connect to the Secondary #. This number is set to "2" by default.

The **Secondary #** field is used to enter the phone number of the pager service to call if the Primary # connection has failed. It is not required that a Secondary # is used. If a Secondary # is not defined, Alert EL does not attempt to use it if the Primary # has failed. The configuration for the Secondary # (i.e., **Conn. ID**, **Wait** field, **Retries** field) is the same as for the Primary #.

If the **Send alarm ID** box is checked, Alert EL sends the Alarm ID of the alarm that the Numeric Pager Reporting Action is associated with. Because a numeric pager is used to transmit the Alarm ID, an Alarm ID that uses alphanumeric characters is displayed using the corresponding numbers from a phone pad: The letters "A", "B", and "C" are represented by the number "2"; the letters "D", "E", and "F" are represented by the number "3", etc. If a phone number is sent to the pager, the Alarm ID is displayed after the phone number (see example below).

Example:

"614-555-1212326633"

("326633" represents the Alarm ID "FANOFF")

The **Discontinue after _____ failed cycles** field is used to define how many times Alert EL should try the *entire calling cycle* (i.e. beginning with the Primary # and ending with the Secondary #).

Example:

If the Numeric Pager Reporting Action is configured to . . .

- Retry the Primary # twice.
- Retry the Secondary # four times.
- Try the *entire* cycle three times.

. . . the end result would be that Alert EL would attempt to . . .

- Call the Primary # a total of three times.
- Call the Secondary # a total of five times.
- Try the *entire* cycle three times.

If after all cycles were executed and no connection was made, Alert EL would display an error message in the Reporting Action Status pop-up and the Reporting Action would fail.

Parallel Printer

The Parallel Printer Reporting Action prints alarm information to a parallel printer. Two different Parallel Printer Reporting Actions may be defined. The following alarm information is printed by this Reporting Action:

- Alarm Group
- Alarm Generation Date
- Alarm Generation Time
- Alarm ID
- System ID/System name
- Site
- Line Address
- Tab Labels
- Multiline Text

The "Send to Printer -1" Reporting Action is the default Reporting Action in every Group. However, this Reporting Action can be removed from a Group if necessary. See the "Groups" section on page 2-28 for more information.

NOTE Refer to the "Actions" section on page 2-23 for general instructions on adding, changing, copying, deleting, and testing Reporting Actions.

Changes to the Parallel Printer Reporting Action are made from the Parallel Printer pop-up (see below).

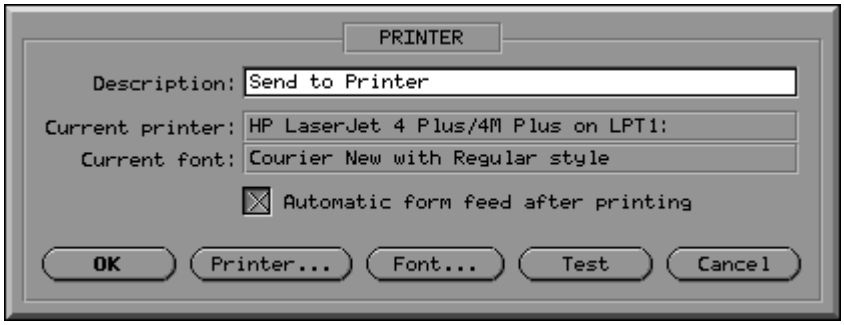


Figure 3-3: Printer pop-up

The **Description** field is reserved for the name of the Parallel Printer Reporting Action. This description is used in the Add / Change Group pop-up when assigning Reporting Actions to a Group. The description of the Parallel Printer Reporting Action can be up to 30 characters.

The **Current Printer** field indicates what printer the Reporting Action prints to. By default, this field contains the Microsoft Windows default printer. To change the designated printer in this field, select the **Printer** button. This displays the standard Microsoft Windows Print Setup window (see below).

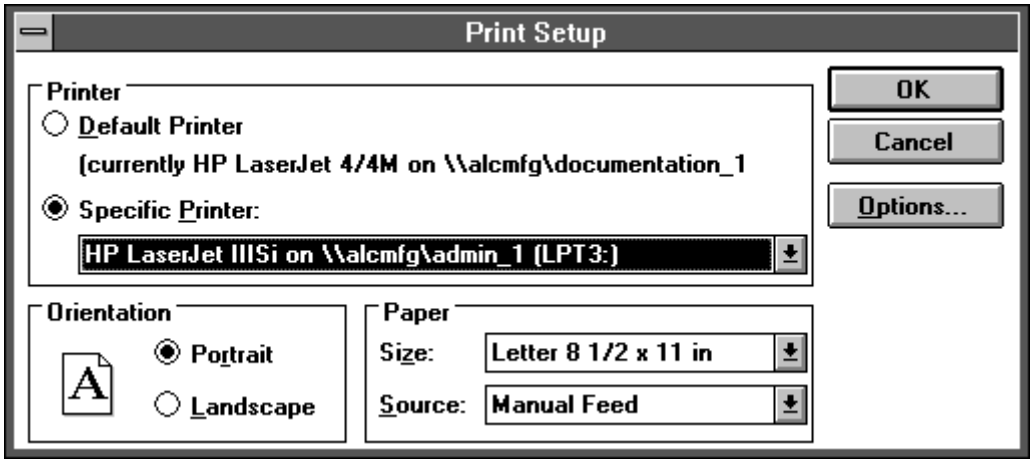


Figure 3-4: Microsoft Windows 3.x Print Setup window

The **Current font** field on the Parallel Printer pop-up allows the operator to select the font to use when printing the alarm information. The font can only be changed if the **Automatic form feed after printing** option is selected. To change the font from the default font setting, select the **Font** button. This displays the standard Microsoft Windows Font window (see below).

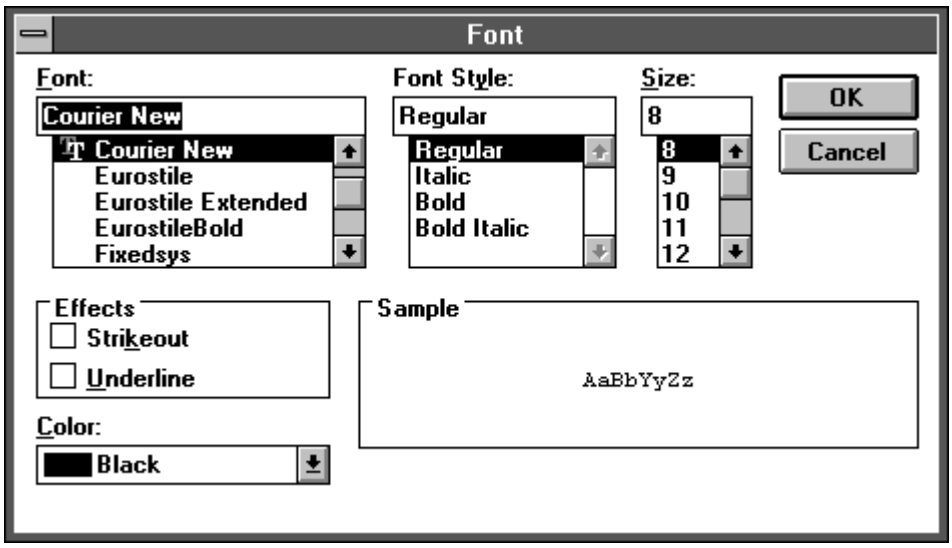


Figure 3-5: Microsoft Windows 3.x Font window

If the **Automatic form feed after printing** box is selected, Alert EL formats the text using the font selected and sends the alarm information to the printer. After all of the information is sent, the Reporting Action sends a form feed command to the printer, and the last page printed is ejected. The next alarm information (or user file) starts on a new page.

If the **Automatic form feed after printing** box is disabled, Alert EL sends the alarm information to the printer, but does not issue a form feed command after all the information has been sent. The next alarm information (or user file) is printed immediately after the previous one on the same page. If the alarm information is being sent to a Laserjet printer, this setting would require the operator to physically press the "Form Feed" button on the printer in order to eject the last page from the printer. Deselecting the **Automatic form feed after printing** box also disables the **Font** command, which causes this Reporting Action to print alarm information in the designated printer's default font.

If **Automatic form feed after printing** is disabled, information is sent directly from the receiving station to the printer, bypassing the Windows print spooler. Therefore, some less advanced dot matrix printers (such as the Okidata Microline 182) may not be able to handle

the volume of printing output sent by Alert. When this occurs, the results of the Reporting Actions may be unpredictable. To avoid this problem, use a more advanced printer (such as the Okdiata Microline 321).

NOTE If Windows 95 or Windows NT is being used and the Parallel Printer Reporting Action is configured to print to a shared network printer with **Automatic form feed after printing** disabled, the printer must be captured to a port before printing. To do this under Windows 95, edit the **Properties** of the desired printer and pick the **Capture Printer Port** option to select a port. To do this under Windows NT, type the following command at a DOS prompt: **net use *port printername* /P:Y** (where ***port*** is the name of the desired port and ***printername*** is the name of the desired network printer). Then, edit the **Properties** of the printer in Windows NT and assign it to the corresponding port. To release the captured port in Windows NT, enter the following command at a DOS prompt: **net use *port* /D** (where ***port*** is the name of the desired port).

Serial Output

The Serial Output Reporting Action sends alarm information to a Video Display Terminal (VDT). The terminal can be directly connected to the receiving station, or it can be accessed by a modem-to-modem connection. The alarm information is sent to the VDT and displayed on the screen. If previous alarm information has been sent, the new information is displayed starting at the next available line on the screen. The alarm information can also be sent by a modem-to-modem connection to a remote serial printer. *This Reporting Action only supports Hayes compatible modems.*

Three Serial Output Reporting Actions are available:

- Send to Serial Output
- Relay Port On - This Reporting Action is assigned by default to the Alarms and Alarms - Urgent Groups, and is executed when an alarm is received.
- Relay Port Off - This Reporting Action is assigned by default to the Alarms and Alarms - Urgent Groups, and is executed when an alarm is acknowledged.

The following information is sent by this Reporting Action:

- Alarm Group
- Alarm Generation Date
- Alarm Generation Time
- Alarm ID
- System ID/System name
- Site
- Line Address
- Tab Labels
- Multiline Text

See Figure 3-6 below for an illustration of how a serial output Reporting Action might be set up.

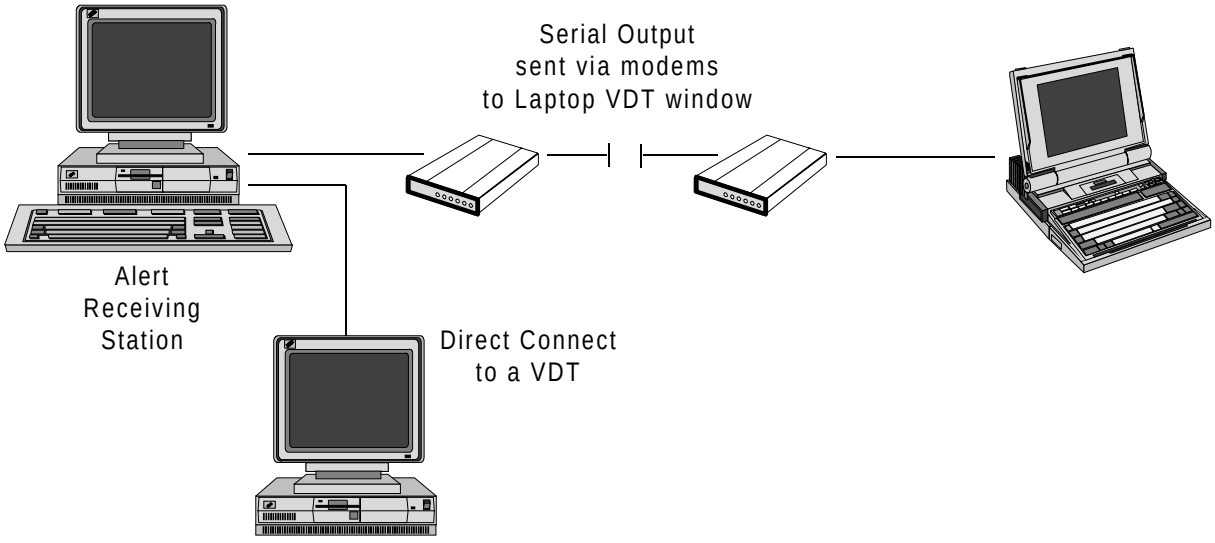


Figure 3-6: Possible Serial Output Configuration

NOTE Refer to the "Actions" section on page 2-23 for general instructions on adding, changing, copying, deleting, and testing Reporting Actions.

Serial Output Pop-up

Changes to the Serial Output Reporting Action are made from the Serial Output pop-up (see below).

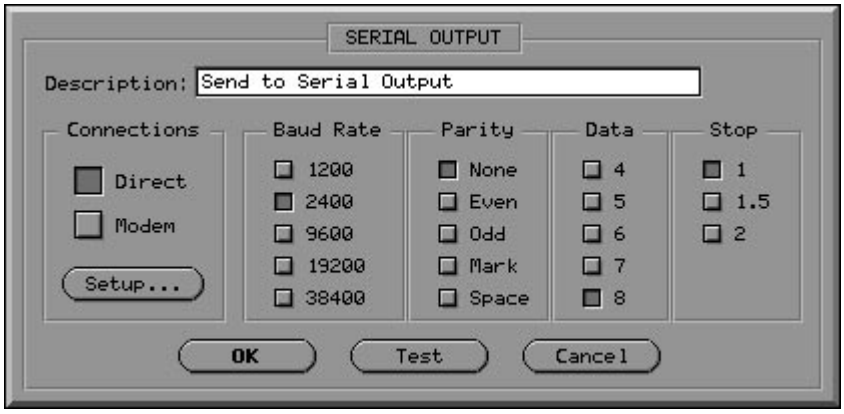


Figure 3-7: Serial Output pop-up

The **Description** field of the Serial Output pop-up is reserved for the name of the Serial Output Reporting Action. This description is displayed in the Add / Change Group pop-up when assigning Reporting Actions to a Group. This field can be up to 30 characters.

The **Connections** section of the pop-up is used to configure what type of connection the receiving station uses to send the alarm information. The operator needs to indicate if the VDT is directly connected to the receiving station or if a modem-to-modem connection is used.

Direct Connection Setup

If **Direct** (for direct connection) is selected, picking the **Setup** button displays the Direct Connection Setup pop-up (see below).

Figure 3-8: Direct Connection Setup pop-up

From the Direct Connection Setup pop-up, enter a Connection ID in the **Connection ID** field if the receiving station should search for a port with that Connection ID. (Connection IDs are configured in the Connection Configuration pop-up. See the "Connections" section on page 4-2.) If nothing is entered in the **Connection ID** field, the receiving station uses the first available direct connect port in order to send the alarm information.

If **Enable RTS/CTS handshaking** is selected, the receiving station uses Request to Send / Clear to Send flow control for data transfer. It may help to enable this option if there are problems sending information to the terminal.

Modem Connection Setup

If **Modem** is selected from the Serial Output pop-up, picking the **Setup** button displays the Modem Connection Setup pop-up (see below).

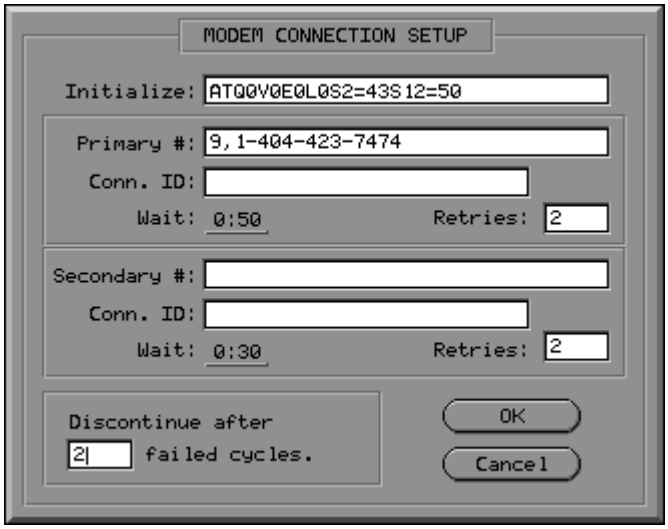


Figure 3-9: Modem Connection Setup

The **Initialize** field is used to enter a string that is sent to the modem to configure it for the station sending the output. The initialization string is sent to the modem *each* time the Serial Output Reporting Action occurs. When a new Serial Output pop-up is displayed, this field defaults to **ATQ0V0E0L0S2=43S12=50**. If these codes (or other codes that represent the same information; see NOTE below) are not present in the **Initialize** field, the Reporting Action may not function properly. The prefix **AT** should be used before the initialization string. The following additional code will be sent to the modem whether or not

it appears in the **Initialize** field: **S7=*xx*** (where ***xx*** = the number of seconds entered in the **Wait** field).

NOTE Some older Hayes-compatible modems need the command **X4** in the initialization string. If this command is necessary, be sure to enter it in the **Initialize** field following the AT prefix.

Modem AT commands described here are as follows:

Q0 = result codes enabled

E0 = command echo disabled

L0 = low modem speaker volume

S2 = escape code character (43 is the "+" character – modem default)

S7 = number of seconds the originating modem waits for a dial tone (the number of seconds entered in the **Wait** field)

S12 = escape code guard time (50 x 20 milliseconds = 1 second –modem default)

V0 = short form result codes enabled

X4 = use extended result codes

The **Primary #** field is used to enter the complete dial string that is necessary to connect to the modem (see the example in Modem Connection pop-up above).

The **Conn. ID** field allows the operator to choose exactly which port to dial out from. Alert EL attempts to match the Conn. ID defined in the Modem Connection Setup pop-up with a Conn. ID defined in the Connections Configuration pop-up. If a match is found, Alert EL uses that port to dial out. If no match is found, Alert EL reports an error on the Reporting Action Status pop-up and the information is not sent. If no Conn. ID is defined in the Serial Output pop-up, Alert EL uses the first available modem that is compatible with the configured baud rate.

The **Wait** field for the Primary # is used to specify the modem timeout for the connection. The Wait time does not begin counting down until the last character in the **Primary #** field is sent. A Wait time of between 30 and 60 seconds may be necessary to connect to the remote system. Additional time may be required if a third-party communications port

redirection utility is being used. The Wait time defaults to "0:30" (30 seconds), but can be adjusted by the operator.

NOTE The **Wait** field uses a "number scrolling" method to define the time. To change a time, select a number by clicking on it with the left mouse button. A horizontal bar will appear beneath the number. Hold the left mouse button down to scroll forward through numbers and hold the right mouse button down to scroll backwards through the numbers. Release the mouse button when the number you wish to use is displayed.

The **Retries** field for the Primary # is used to define how many times Alert EL attempts to retry the Primary # if the first attempt fails. For example, if the **Retries** field is set to "2", Alert EL tries to connect to the Primary # a total of three times before it attempts to connect to the Secondary #. This number is set to "2" by default.

The **Secondary #** field is used to enter the phone number Alert EL should dial if the Primary # connection has failed. It is not required to enter a Secondary #. If no Secondary # is entered, Alert EL does not attempt to call it if the Primary # has failed. The configuration for the **Secondary #** (i.e., **Conn. ID**, **Wait** field, **Retries** field) is the same as for the Primary #.

The **Discontinue after _____ failed cycles** field is used to define how many times Alert EL should try the *entire calling cycle* (i.e. beginning with the Primary # and ending with the Secondary #).

Example:

If the Serial Output Reporting Action is configured to . . .

- Retry the Primary # twice.
- Retry the Secondary # four times.
- Try the *entire* cycle three times.

. . . the end result would be that Alert EL would attempt to . . .

- Call the Primary # a total of three times.
- Call the Secondary # a total of five times.
- Try the *entire* cycle three times.

If after all cycles were executed and no connection was made, then Alert EL displays an error message in the Reporting Action Status pop-up and the Reporting Action would fail.

Baud Rate, Parity, Data, and Stop

The **Baud Rate**, **Parity**, **Data** (bits), and **Stop** (bits) sections of the Serial Output pop-up (see below) are used to define the data transfer, whether using direct connection or a modem-to-modem connection.

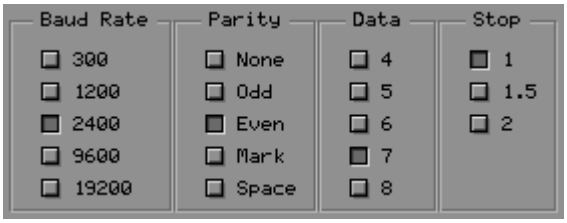


Figure 3-10: Baud Rate, Parity, Data and Stop section

Alphanumeric Pager

The Alphanumeric Pager Reporting Action pages personnel from the receiving station using an alphanumeric paging system or a third party alphanumeric pager service (definable and subscribed to by the operator). The paging system can be directly connected to the receiving station, or it can be accessed by a modem-to-modem connection. The alphanumeric page that is sent is completely configurable by the operator. Up to 30 pagers can be contacted with a single connection to the paging unit. The Alphanumeric Pager Reporting Action only supports paging systems that use the PET protocol (also called TAP protocol).

The figure below illustrates how the hardware might be set up for the Alphanumeric Pager Reporting Action.

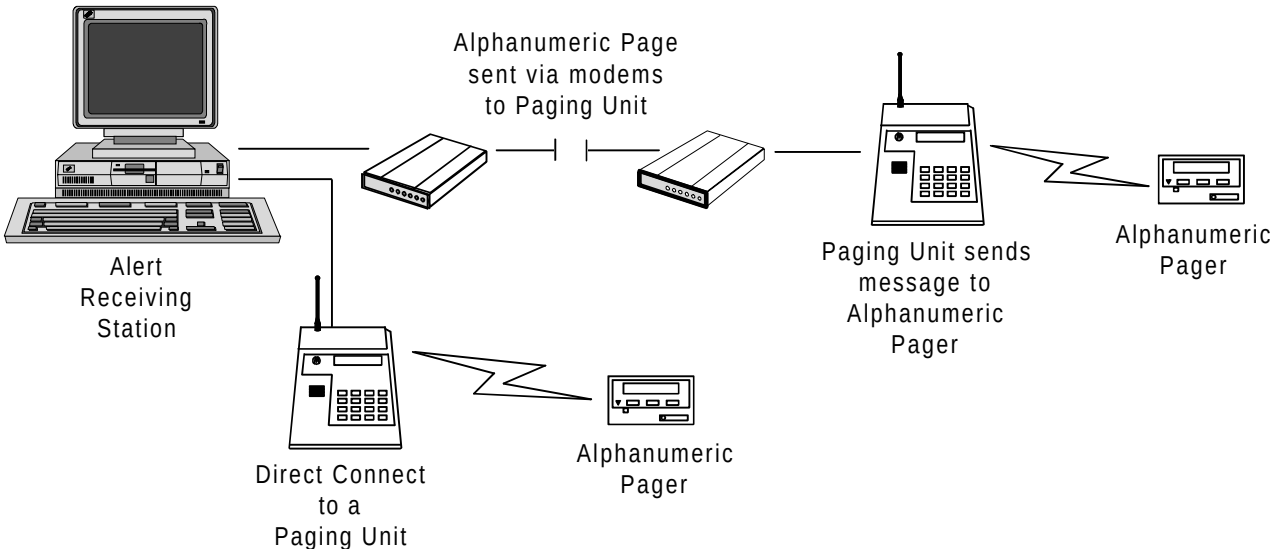


Figure 3-11: Possible Alphanumeric Page Configuration

NOTE Refer to the "Actions" section on page 2-23 for general instructions on adding, changing, copying, deleting, and testing Reporting Actions.

Additions and changes to the Alphanumeric Pager Reporting Action are made from the Alphanumeric Pager pop-up (see below).

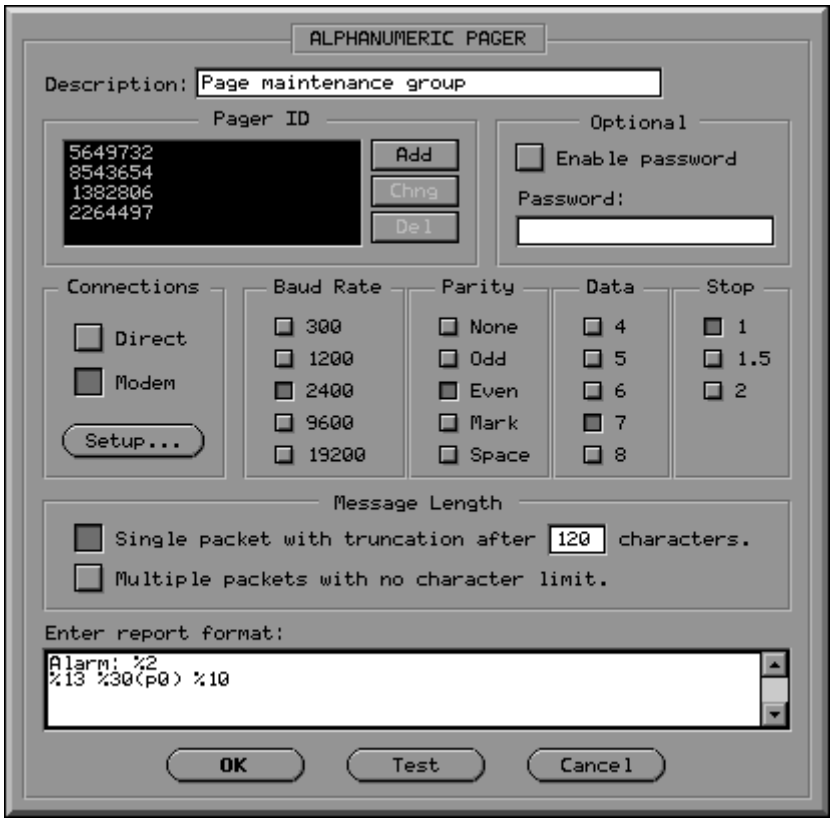


Figure 3-12: Alphanumeric Pager pop-up

The **Description** field of the Alphanumeric Pager pop-up is reserved for the name of the Alphanumeric Pager Reporting Action. This description is displayed in the Add / Change Group pop-up when assigning Reporting Actions to a Group. This field can be up to 30 characters.

The **Pager ID** section should be used to enter the identification number of each pager to be contacted during this connection. Enter up to 30 pager IDs in this window. The order in which the pager IDs are listed in this box corresponds to the order in which the pagers are contacted. This Reporting Action does not function unless at least one pager ID is defined. Use the **Add**, **Chng**, and **Del** buttons, to add, change or delete pager IDs from this window.

The **Password** field is used for paging systems that require a password to be entered. Some paging systems refer to the Password as a "Caller ID" or "System Entry Key". If a password is required, it must be entered

in this field and the **Enable Password** box selected. If this box is not selected, Alert EL ignores the password.

The **Connections** section of the pop-up is used to indicate what type of connection the receiving station uses to send the page. If **Direct** (for direct connection) is selected, picking the **Setup** button displays the Direct Connection Setup pop-up (see below). The operator needs to indicate whether the paging unit is directly connected to the receiving station or a modem-to-modem connection is used.

Direct Connection Setup

Figure 3-13: Direct Connection Setup pop-up

From the Direct Connection Setup pop-up, enter a Connection ID in the **Connection ID** field if the receiving station should search for a "People Finder" port with that Connection ID (Connection IDs are configured in the Connection Configuration pop-up. See the "Connections" section on page 4-2 for more information.). If nothing is entered in the **Connection ID** field, the receiving station uses the first available "People Finder" port in order to send the alarm information.

NOTE As indicated on the Direct Connection Setup pop-up, a paging unit must be designated as a "People Finder" instead of "Direct Connect" in the **Device** parameter of the Configure Connections pop-up.

If **Enable RTS/CTS handshaking** is selected, the receiving station uses Request to Send / Clear to Send flow control for data transfer. It may help to enable this option if there are problems sending information to the paging unit.

Modem Connection Setup

If **Modem** is selected, picking the **Setup** button displays the Modem Connection pop-up for a modem connection (see below).

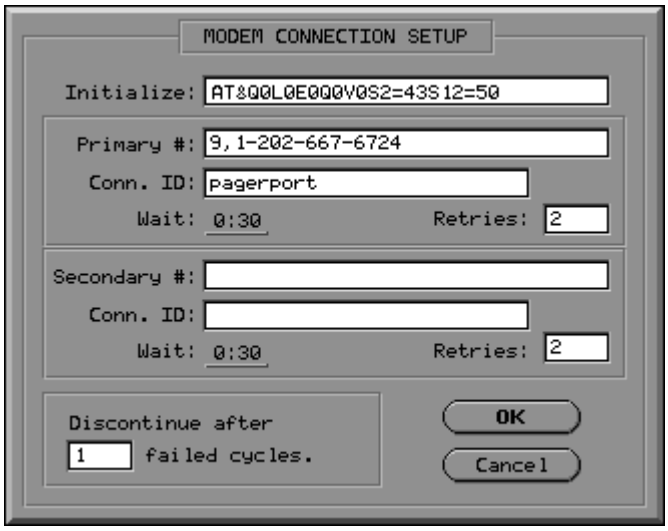


Figure 3-14: Modem Connection Setup pop-up

The **Initialize** field is used to enter a string that is sent to the modem to configure it for the station sending the output. The initialization string is sent to the modem *each* time the Alphanumeric Pager Reporting Action occurs. When a new Alphanumeric Pager pop-up is displayed, this field defaults to **AT&Q0L0E0Q0V0S2=43S12=50**. If these codes (or other codes that represent the same information; see NOTE below) are not present in the **Initialize** field, the Reporting Action may not function properly. The prefix **AT** should be used before the initialization string. The following additional code will be sent to the modem whether or not it appears in the **Initialize** field: **S7=*xx*** (where ***xx*** = the number of seconds entered in the **Wait** field).

NOTE The **&Q0** command turns data compression off and is required for some systems. It will not be sent to the modem unless it appears in the **Initialize** field. In addition, some older Hayes-compatible modems need the command **X4** in the initialization string. If this command is necessary, be sure to enter it in the **Initialize** field following the AT prefix.

Modem AT commands described here are as follows:

&Q0 = data compression off (many paging units require no data compression)

Q0 = result codes enabled

E0 = command echo disabled

L0 = low modem speaker volume

S2 = escape code character (43 is the "+" character – modem default)

S7 = number of seconds the originating modem waits for a dial tone (the number of seconds entered in the **Wait** field)

S12 = escape code guard time (50 x 20 milliseconds = 1 second –modem default)

V0 = short form result codes enabled

X4 = use extended result codes

The **Primary #** field is used to enter the complete dial string that is necessary to connect to the modem (see the example in Modem Connection pop-up above).

The **Conn. ID** field allows the operator the opportunity to choose exactly which modem port to dial out from. Alert EL attempts to match the Conn. ID defined in the Alphanumeric Pager pop-up with a Conn. ID defined in the Connections Configuration pop-up (see the "Connections" section on page 4-2). If a match is found, Alert EL uses that port to dial out. If no match is found, Alert EL reports an error on the Reporting Action Status pop-up and the page is not sent. If no Conn. ID is defined in the Alphanumeric Pager pop-up, Alert EL uses the first available modem that is compatible with the configured baud rate.

The **Wait** field for the Primary # is used to specify the modem timeout for the connection. The Wait time does not begin counting down until the last character in the **Primary #** field is sent. A Wait time of between 30 and 60 seconds may be necessary to connect to the remote system. Additional time may be required if a third-party communications port redirection utility is being used. The Wait time defaults to "0:30" (30 seconds), but can be adjusted by the operator.

NOTE The **Wait** field uses a "number scrolling" method to define the time. To change a time, select a number by clicking on it with the left mouse button. A horizontal bar will appear beneath the number. Hold the left mouse button down to scroll forward through numbers and hold the right mouse button down to scroll backwards through the numbers. Release the mouse button when the desired number is displayed.

The **Retries** field for the Primary # is used to define how many times Alert EL attempts to retry the Primary # if the first attempt fails. For example, if the **Retries** field is set to "2", Alert EL tries to connect to the Primary # a total of three times before it attempts to connect to the Secondary # (if any). This number is set to "2" by default.

The **Secondary #** field is used to enter the phone number Alert EL should dial if the Primary # connection has failed. It is not required to enter a Secondary #. If no Secondary # is entered, Alert EL does not attempt to dial one after the Primary # has failed. The configuration for the **Secondary #** (**Conn. ID**, **Wait** field, **Retries** field) is the same as for the Primary #.

The **Discontinue after _____ failed cycles** field is used to define how many times Alert EL should try the *entire calling cycle* (i.e. beginning with the Primary # and ending with the Secondary #).

Example:

If the Alphanumeric Pager Reporting Action is configured to . . .

- Retry the Primary # twice.
- Retry the Secondary # four times.
- Try the *entire* cycle three times.

. . . the end result would be that Alert EL would attempt to . . .

- Call the Primary # a total of three times.
- Call the Secondary # a total of five times.
- Try the *entire* cycle three times.

If after all cycles were executed and no connection was made, then Alert EL displays an error message in the Reporting Action Status pop-up and the Reporting Action would fail.

The **Baud Rate**, **Parity**, **Data** (bits), and **Stop** (bits) sections of the Alphanumeric Pager pop-up (see below) are used to define the data transfer, whether using direct connection or a modem-to-modem connection.

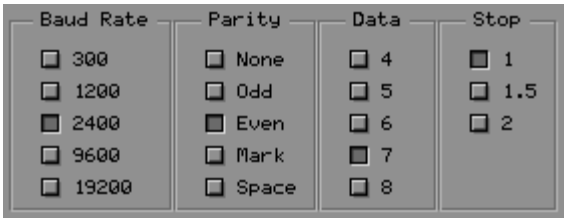


Figure 3-15: Baud Rate, Parity, Data and Stop section

Many paging systems have internal modems that operate at 300 bps. Therefore, if connecting by modem to the internal paging system, a 300 baud rate configuration may be needed.

The **Message Length** section of the Alphanumeric Pager pop-up (see below) allows the operator to specify whether the data transmission to the paging system contains a single packet with a fixed number of characters or multiple packets with no character limit. Many paging systems only allow a single packet per pager message and take either 120 or 240 characters per message. The single packet option defaults to 120 characters and truncates all remaining characters in the formatted pager message. The operator may change this number to correspond with the paging system being used. The maximum number of characters a single packet can take is 245, which may be invalid for many paging systems. The multiple packet option continues to send packets until all of the message has been sent.

Figure 3-16: Message Length section

Enter report format

The **Enter report format** window of the Alphanumeric Pager pop-up (see below) is used to define the content of alarm information sent to the alphanumeric pager. The operator can enter text or use "field codes" to represent referenceable fields (for more information on field codes, see the **Formatting With Field Codes** chapter). The default alarm information sent by the Alphanumeric Pager Reporting Action includes the following:

- Alarm Generation Time
- System ID
- Tab label (the lowest tab label where the alarm was generated)
- Alarm ID

This window is limited to approximately 1100 characters that can be typed in at the configuration time. The actual message that is sent (after the field codes have been converted to the appropriate alarm information) is limited only by available memory. Be aware that some pagers have internal character limits and the message length configuration truncates the actual alarm information sent if that character limit is exceeded.

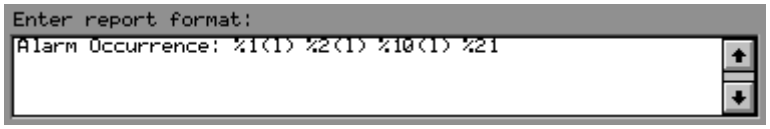


Figure 3-17: Enter report format section

* * *

4 Configuring the Station

Introduction

Each Alert EL station can be configured differently. Configuring the station allows you to configure ports so that receiving stations can receive alarms, to enable or disable station notification, and to set the station's time zone.

For stations using Alert EL Multi-User, customization of the station does not affect other Alert EL stations.

Connections

Introduction

Configuring connections allows the operator to set up port information for stations that will be receiving alarms (see the "Receiving Stations" section on page 8-3 for more information on receiving stations).

In order for Alert EL to receive alarms, gateway modules must be configured with connection information so that they are able to contact the receiving station. If the necessary gateway module configuration has not already been performed, see the following literature for information on configuring DCLANs, SiteGate-ETHs, SiteGate-232s, and SiteScan 2000 for Windows to receive alarms:

- *DCLAN User Manual*
- *SiteGate-ETH User Manual*
- *SiteGate-232 User Manual*
- *SiteScan 2000 for Windows User's Guide*

With Alert EL Multi-User, multiple gateway modules do not have to report alarms to the same receiving station (i.e., Workstation). Since the database is shared, one gateway module may call one receiving station with alarms, while another gateway module may call a different receiving station. *However, one gateway module should not be set up to call two different receiving stations.* If this occurs, the alarm information will be duplicated in the Alert database.

Configuring Connections

Alert EL must be configured to monitor the ports that will be receiving alarms. If Logger was previously used to handle alarms, the port information is most likely already configured in SiteScan 2000 for Windows on the **Connections Configuration** pop-up. After a port is configured to receive alarms (using the information below), the **Receive Station** setting must be enabled in order to launch Alert Server. See the "Receive Station Setting" section on page 4-7 for more information.

Any changes that are saved on the **Connections Configuration** pop-up (see below) affects all Liebert Corporation Windows products because it stores hardware port access information. Once configured, it controls access to the limited number of serial port or network connections. It also provides for device independence by allowing a program to select the next available matching connection when sending outgoing data. Because access to the port is coordinated, serial port efficiency is increased and Reporting Action configuration is simplified.

In addition, if the Connections Configuration pop-up is displayed and a port is being used by another application, this information is displayed on the Connections Configuration pop-up until the port is no longer being used.

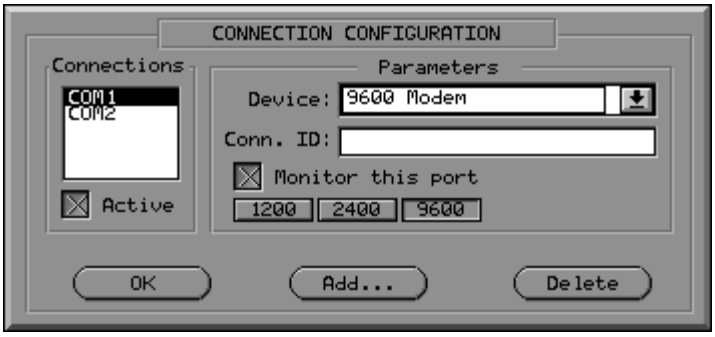


Figure 4-1: Connection Configuration pop-up

Connections

This portion of the Connection Configuration pop-up identifies which port connections exist on the computer. Because these connections usually correspond to hardware devices on the computer, connections should not be added or deleted unless a hardware device is removed or installed.

NOTE If you are using the Facsimile Reporting Action, the fax modem used by this Reporting Action must be dedicated and must **not** be configured in the Connection Configuration pop-up.

The **Active** button can be enabled or disabled for each connection. It specifies whether the connection is available for Liebert Corporation software. This feature is useful when other Windows applications may need to use a particular connection temporarily without interference

from Liebert Corporation software. The items in the Parameters section can be changed only when the **Active** button is enabled.

Parameters

This section of the Connection Configuration pop-up identifies the device parameters which are associated with the connection currently selected in the **Connections** window. The items in this section only affect the connection currently selected and can be changed only when the **Active** button is enabled for that connection.

The **Device** parameter specifies the type of device associated with the connection currently selected. Because this parameter corresponds to hardware devices connected to the computer port, it should not be changed unless a wire is physically moved. If the **Device** parameter does not match the corresponding setting in the Edit Connection pop-up in SiteScan 2000 for Windows, an error will occur in SiteScan 2000 for Windows when attempting to connect to a System.

The **Device** parameter allows the operator the ability to add a device if it is not available on the pull down list (this allows for greater flexibility with any future Alert EL releases).

NOTE If the Alphanumeric Pager Reporting Action is using a direct connection to a paging unit, the **Device** parameter must be designated as "People Finder" instead of "Direct Connect". See the "Alphanumeric Pager" section on page 3-18 for more information.

Connection ID

The **Conn. ID** parameter is an optional parameter that allows the operator to assign a name to the connection currently selected. This parameter is useful because Alert EL can be configured to search for a specific Connection ID among like devices when sending outgoing data. If multiple connections have the same Connection ID, Alert EL uses the first available one. Note that when searching for a connection to use, Alert EL first searches for connections which do not have the **Monitor this port** button enabled.

Monitor this port

The **Monitor this port** parameter specifies that the connection currently selected will be monitored by Alert Server for incoming communications. This parameter works in conjunction with the **Receive Station** setting (in the **Configure** menu), which launches Alert Server. If this setting is enabled, then the **Receive Station** setting must also be enabled (see the "Receive Station Setting" section on page 4-7).

If a connection has the **Monitor this port** parameter disabled, then Alert Server ignores it. When this parameter is enabled for a serial port connection, several buttons appear for various baud rates. Alert Server monitors a connection only at the selected baud rate.

The **Monitor this port** button is disabled for Direct Network connections because they cannot be used to receive alarms.

When searching for a connection to use for outgoing data, Alert EL first searches for connections which do not have the **Monitor this port** button enabled.

To Configure Connections

1. Select **Configure-Connections**. The Connection Configuration pop-up is displayed.
2. From the Connection Configuration pop-up, make the desired changes for **Connections**, **Device**, and **Connection ID**.
3. Select the **OK** button or move to a different connection to save the changes for that connection.

To Add a Connection

1. Select **Configure-Connections** to display the Connection Configuration pop-up.
2. Select **Add**. The Add Connection pop-up will be displayed (see below).

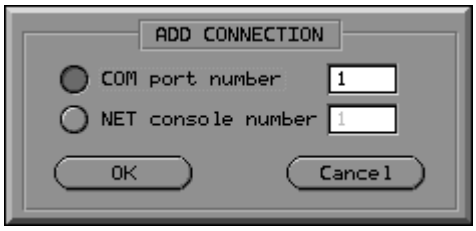


Figure 4-2: Add Connection pop-up

3. Select **COM Port** if the connection is through a computer's serial port, or **Net Console** if it is a network connection.
4. Type the Serial Port number or the DCLAN Console number in the appropriate field. Port numbers and console numbers default to the next available number. Numbers are limited to 1-16. For Serial Ports it is unlikely that a number greater than 4 is valid except where special serial hardware drivers are installed.

NOTE DCLANs store alarms generated from Alert microblocks on consoles 1-4 only.

---

5. Select **OK** to save the changes or **Cancel** to abort.

To Delete a Connection

1. Select **Configure-Connections** to display the **Connection Configuration** pop-up.
2. Select the connection (from the **Connections** window) to be deleted.
3. Pick the **Delete** button. If the device being deleted is currently in use by an application, Alert EL will display an error message. If the port is not being used, Alert EL will ask if you are sure you want to delete the device.
4. Pick **Yes** to continue or **No** to abort.

Receive Station Setting

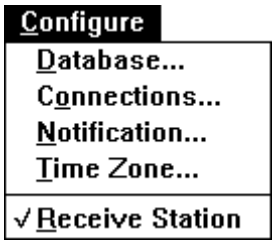


Figure 4-3: Configure Menu

If a station has been configured in the Connection Configuration pop-up to monitor a port for alarms, then the **Receive Station** setting in the **Configure** menu *must be enabled* so that Alert Server is launched when Alert EL is launched. When Alert EL is launched after it has been installed, the **Receive Station** setting is disabled.

The **Receive Station** setting is enabled when a check mark is placed next to **Receive Station** in the **Configure** menu. To disable the setting, select **Receive Station** again to remove the check mark. If Alert EL cannot launch Alert Server for some reason, an error message is displayed and the **Receive Station** setting in the **Configure** menu is not checked.

Because of the serious effect this setting has on a station, only operators with security levels of 75 or higher may enable and disable the **Receive Station** setting.

Notification

Configuring Notification allows the operator to enable or disable the audible Notification for the station. When an alarm is received, Alert EL notifies operators in close proximity to the station by beeping the PC speaker. If Notification is disabled, no sound will occur to inform the operator when an alarm is received.

Notification is silenced with the **Actions-Silence** command. The **Actions-Silence** command has a different effect from disabling Notification. The **Actions-Silence** command silences the Notification for a period of two minutes, or until another alarm is received, at which time Notification begins again. If Notification has been disabled, the **Actions-Silence** command is disabled, and the operator is not notified when alarms are received.

Acknowledging an alarm automatically silences the Notification. However, if there are multiple alarms that require silencing and one alarm is acknowledged, Notification still continues until Notification is silenced (or all of the alarms are acknowledged).

Notification can be enabled or disabled using the Alarm Notification pop-up (see below). Select **Notification** from the **Configure** menu to display the pop-up.

Figure 4-4: Alarm Notification pop-up

Beep PC speaker

If **Beep PC speaker** is selected, Alert EL plays the familiar Microsoft Windows warning beep (**ding.wav**) when an alarm is received. This beep is repeated approximately every two seconds.

NOTE This Notification option requires that the **Enable System Sounds** setting in the Microsoft Windows Control Panel be selected. *If it is not enabled, Alert EL is not able to sound the warning beep!*

Force Alert EL to foreground

If this option is selected, Alert EL notifies the station when an alarm arrives into the current view by forcing Alert EL to the desktop foreground if Alert EL is hidden behind other Windows applications *OR* is minimized. If Alert EL is already in the foreground and this option is selected, then this Notification option has no effect.

To Configure Notification

1. Select **Notification** from the **Configure** menu. The Alarm Notification pop-up will be displayed.
2. Select the desired Notification by picking the corresponding boxes. If no actions are selected, then no Notification will occur.
3. Select **OK** to save your changes and exit the Alarm Notification pop-up, or select **Cancel** to exit without saving.

Time Zone

This command sets the time zone of the station. Alert EL stores all dates and times relative to Greenwich Mean Time (GMT). In order to do this properly, Alert EL needs to know in which time zone each station is located. If the Time Zone is not configured, the station time zone is set to Eastern Standard Time by default.

The station time zone is set using the Station Time Zone pop-up (see below). Any change made to the station time zone is immediately recognized when the **OK** command is selected. The Main View redraws to display the alarms with the alarm generation times altered accordingly.

NOTE The larger the number of alarms in the Main View, the longer it takes for Alert EL to redraw.

Once a time zone is selected, pick **OK** to save the changes and exit the pop-up, or pick **Cancel** to exit the pop-up without saving.

Figure 4-5: Station Time Zone pop-up

The **Eastern**, **Central**, **Mountain**, and **Pacific** settings set the station time to an Eastern, Central, Mountain, or Pacific time zone, respectively. When one of the continental United States time zones is selected and the change is saved, the **Offset from GMT** field displays the corresponding offset from Greenwich Mean Time. The **Offset from GMT** field can be used instead of the above settings.

Offset from GMT allows the operator to set the time zone of the station using an offset from GMT if none of the above options is appropriate. This field can only accept whole numbers. If a GMT offset is entered that is not a whole number, Alert EL rounds the GMT offset *down*. For example, "4.9" would be rounded down to "4".

Use the following table to determine the GMT offset for your area. If you are unsure what time zone to use, or if you think your time zone is not represented in this table, consult a current encyclopedia or atlas for a map displaying world time zones.

Table 4-1. Greenwich Mean Time Table

Time Zone	GMT Offset
ZE12C (12 3/4 hours east of GMT)	+12.75
ZE12 (12 hours east of GMT)	+12
ZE11B (11 1/2 hours east of GMT)	+11.5
ZE11 (11 hours east of GMT)	+11
ZE10B (10 1/2 hours east of GMT)	+10.5
ZE10 (10 hours east of GMT)	+10
ZE9B (9 1/2 hours east of GMT)	+9.5
ZE8 (8 hours east of GMT)	+8
ZE7 (7 hours east of GMT)	+7
ZE6B (6 1/2 hours east of GMT)	+6.5
ZE6 (6 hours east of GMT)	+6
ZE5C (5 3/4 hours east of GMT)	+5.75
ZE5B (5 1/2 hours east of GMT)	+5.5
ZE5 (5 hours east of GMT)	+5
ZE4B (4 1/2 hours east of GMT)	+4.5
ZE4 (4 hours east of GMT)	+4
ZE3B (3 1/2 hours east of GMT)	+3.5
ZE3 (3 hours east of GMT)	+3
ZE2 (2 hours east of GMT)	+2
CET (Central European Time)	+1
GMT (Greenwich Mean Time)	0
ZW1 (One hour west of GMT)	-1
ZW2 (Two hours west of GMT)	-2
ZW3 (Three hours west of GMT)	-3
NST (Newfoundland)	-3.5
AST (Atlantic Standard Time)	-4
EST (Eastern Standard Time)	-5
CST (Central Standard Time)	-6
MST (Mountain Standard Time)	-7
PST (Pacific Standard Time)	-8
YST (Yukon Standard Time)	-9
ZW9B (9 1/2 hours west of GMT)	-9.5
HST (Alaska-Hawaii Standard Time)	-10
BST (Bering Standard Time)	-11
ZW12 (12 hours west of GMT)	-12

* * *

5 Formatting With Field Codes

How Alert EL Uses Field Codes

What is a Field Code?

Alert EL uses field codes to represent a referenceable piece of alarm information (Alarm ID, Generation Time, etc.) An example of a field code is:

```
%10
```

The "%" character tells Alert EL that a field number will immediately follow. The field number "10" represents the Alarm ID (see Table 5-2 on page 5-10 for field numbers).

Field codes can be used with "justifiers" and other parameters to create a formatting string. Justifiers and parameters specify how a field code is to be formatted within an output stream. An example of a formatting string is:

```
%10(l)
```

The "(l)" is a justifier that tells Alert EL to left justify the Alarm ID (%10) within its default field width. A left parentheses "(" immediately following the field code indicates to Alert EL that field specific formatting parameters are to follow. The left parentheses must be typed immediately after the field code with no space or Alert EL will interpret everything after the space literally.

A more complete example of a formatting string and its result is shown below:

```
Alarm ID:  %10(c)
System:  %13(c)
```

. . . would output as . . .

```
Alarm ID:  -HITEMP-
System:  --ABC---
```

(where "-" represents spaces)

The example above mingles constant text with field codes to create a unique output stream.

Where Are Field Codes Used?

Alert EL uses field codes to format alarm information that is output to various devices (printer, screen, file dumps, etc.). Listed below are the exact locations where the operator can use field codes:

Table 5-1.

Command	Pop-Up	Used for . . .
Configure-Database-Alarms		Multiline text
Configure-Database-Actions	Alphanumeric Pager	Report Format sent to an alphanumeric pager.

In some of the locations listed in the table, Alert EL initially creates default alarm information to be sent to a device. However, the operator is free to change this information in order to customize how and what alarm information is sent. The "How To Use Field Codes" section below explains how to do this. When using field codes, the best rule of thumb is to experiment. Only by experimenting with field codes and their parameters will you become familiar with using them.

How To Use Field Codes

A "formatting string" is made up of a combination of field codes, parameters, and literal text. This formatting string is used by Alert EL to produce text input that contains alarm information.

A field code of:

```
%10 %1 %2
```

. . . is merged with alarm information during the formulation or output to produce the following . . .

```
HITEMP 11/01/96 12:15:45
```

The % symbol must appear before a field number, with no space in between. Field numbers range from 1 to 30 (see Table 5-2 on page 5-10). Text can be mingled with field codes to make the alarm information easier to read. For example:

```
%10 occurred on %1 at %2.
```

. . . would output as . . .

```
HITEMP occurred on 11/04/96 at 10:01:16.
```

NOTE If the "%" character is immediately preceded by a "/" character, both characters will be treated as a literal expression by Alert EL, and the field code will not be translated. For example, the expression **`%10/%12`** would output as **`HITEMP/%12`**. If you want to separate field codes with the "/" character, be sure to use a space between the "/" character and the following "%" character.

Justification

Alarm information can be formatted in a limited way by using "justifiers." Justifiers are codes placed in parenthesis after a field code to tell it how to position itself. Justifiers are not available for multiline text fields.

Justifiers can be placed in any order, but must appear within parentheses immediately following the field code (i.e., no spaces). If the "(" character does not immediately follow the field code, Alert EL will interpret the "(" character and all the text following literally. For example:

```
Alarm ID %10  (c) has occurred!
```

. . . would display as . . .

```
Alarm ID HITEMP  (c) has occurred!
```

Field codes use justifiers as follows:

```
%n(j)
```

The character "n" represents the field code number and "j" represents the type of justification desired. Justification can be left ("l" or "L"), center ("c" or "C"), or right ("r" or "R").

When Alert EL justifies alarm information, it justifies within a default field width unless the operator specifies a different field width. Each field code has a default field width and a maximum field width (see Table 5-2 on page 5-10 for default and maximum field width information). This means that if alarm information doesn't fill the default field width, Alert EL "pads" the remaining field width with spaces. For example:

```
%13(c)
```

. . . would output as . . .

```
--ABC---
```
(where "-" represents spaces and the default width is 8)

If a field code is used with a specified field width, the format would be as follows:

```
%n(jw)
```

The character "n" represents the field code number, "j" represents the type of justification, and "w" represents the field width amount. For example:

```
%10(c15)
```

. . . would output as . . .

```
-----HITEMP----
```
(where "-" represents spaces)

The role justifiers play in formatting output can be further explained by the following examples:

```
[%13]
[%13(l)]
[%13(l12)]
[%13(c)]
[%13(r12)]
[%13(l2)]
```

. . . would output with a System ID of "ABC" as follows . . .

```
[ABC]
[ABC-----]
[ABC---------]
[--ABC---]
[---------ABC]
[AB]
```

If no justifiers are used (for example, just "%10"), the field width is only as wide as the output.

NOTE If the alarm information exceeds the maximum field width, Alert EL truncates the alarm information.

Field Specific Parameters

There are some fields that use other parameters in addition to the justifiers. These fields are:

- **Latched Data Values**
- **Tab Labels**
- **Time**
- **Date**

Parameters can be placed in any order, but must appear within parentheses immediately following the field code (i.e., no spaces). If the "(" character does not immediately follow the field code, Alert EL will interpret the "(" character and all the text following literally. For example:

```
%10 occurred on %1 (d)!
```

. . . would display as . . .

```
HITEMP occurred on 11/17/96 (d)!
```

The **Latched Data Values** field can use two parameters, "pi" and "az":

```
%18(piaz)
```

The "pi" parameter is the position index for any Latched Data Value (originally defined in the Alert microblock by Liebert Site Applications). The "p" parameter is a literal character and tells Alert EL to look for a numeric entry immediately following. The character "i" represents which latched value should be displayed from the Alert microblock. Valid values for "i" are 0-4 (zero based). For example, for Latched Data Value #3, the "pi" parameter could be expressed as:

```
Fan On/Off Status:  %18(p2)
```

. . . and would output as . . .

```
Fan On/Off Status:  On
```

If the "pi" parameter is not used, Alert EL displays whatever is in the first position ("0") by default.

If the "a" parameter is specified following the "pi" parameter, the data is interpreted as analog and the data value prints as a floating point value instead of "On" or "Off". If the "a" parameter is not used, Alert EL assumes that the data values are digital, in which case they will print out as "On" (for non-zero values) or "Off" (for zero values). An example of the "pia" parameter is:

Equipment Temperature: %18(p3a)°F

. . . would output as . . .

Equipment Temperature: 75°F

The "z" parameter is optional following the "a" parameter, and allows the operator to specify a number of characters within the field that will be filled. If the output has fewer characters than the specified fill amount, the remaining character spaces are filled with zeros. For example:

Equipment Temperature: %18(p3a4)°F

. . . would output as . . .

Equipment Temperature: 0075°F

This parameter may used in combination with justification parameters; however, note that if a field width is specified that is shorter than the "z" parameter, the output value may be truncated. If the "z" parameter is specified as 0, the output will be zero-filled to the field width.

The "pi" parameter can also be used to indicate the tab label in SiteScan 2000 for Windows where the alarm is generated from. The Tab Labels field number (%30) will display the bottom four tab labels. The "pi" parameter for the Tab Labels field works in the same manner as the "pi" parameter for Latched Data Values, except the valid values for "i" are 0-3 (zero based). The values 0-3 correspond to the bottom four SiteScan 2000 for Windowstab labels. The "0" position is the bottom label, the "1" position is the second tab from the bottom, etc.

For example:

```
%10 occurred on %1 at %2 from the %30(p0)
in the %30(p1) in the %30(p2) of %30(p3),
System %13.
```

. . . would output as . . .

```
HITEMP occurred on 11/17/96 at 12:01:05
from the Chiller Plant Mgr. in the
Mechanical Room in the Basement of Mercy
Hospital, System ABC.
```

The **Date** fields (which include Generation Date, RTN Date, Acknowledge Date and Receive Date) can use the "d" parameter. This parameter tells Alert EL to use the Windows long date format instead of the Windows short date format specified in the International application in the Windows Control Panel when outputting data:

```
%1(d)
```

. . . would output as . . .

```
Thursday, November 17, 1996
```

(instead of the short date format of 11/17/96)

The **Time** and **Date** fields can also use the "fi" parameter. If the "d" parameter (Windows long date) is used with the "fi" parameter, Alert EL will ignore the "fi" parameters and display the long date format. The "fi" parameter specifies the output format of the time/date. The "f" is literal character and tells Alert EL to look for a number immediately following. The character "i" is zero based and represents the following time and date formats:

Time

0 Use Windows time formatting. This is the default and does not require the specification of "f0".

1 HH:MM:SS in military time.

Date

0 Uses Windows date formatting. This is the default and does not require the specification of "f0".

1 MM/DD/YY

2 MM/DD/YYYY

3 DD/MM/YY

4 DD/MM/YYYY

5 YY/MM/DD

6 YYYY/MM/DD

Table 5-2. Field Codes

Field Description	Code	Type	Default Width/ Max. Width	Parameters†
Alarm Generation Date	1	Date	8/30	jw, d, fi
Alarm Generation Time	2	Time	8/30	jw, fi
RTN Generation Date	3	Date	8/30	jw, d, fi
RTN Generation Time	4	Time	8/30	jw, fi
Acknowledge Date	5	Date	8/30	jw, d, fi
Acknowledge Time	6	Time	8/30	jw, fi
Receive Date	7	Date	8/30	jw, d, fi
Receive Time	8	Time	8/30	jw, fi
Alarm Status	9	Text (act. stat.-act. stat.)	50/50	jw
Alarm ID	10	Text	8/20	jw
Multiline Alarm Text ‡	12	Text with CR/LFs	NA/NA	NA
System ID	13	Text	8/20	jw
System Name	14	Text	30/50	jw
Site Number	15	Integer	4/6	jw
Site Name	16	Text	25/50	jw
CMnet Address *	17	N,N,N,N	10/20	jw
Latched Data Values	18	"On", "Off", or float	5/13	jw, pi, az
Acknowledging Operator - First Name	19	Text	20/70	jw
Acknowledging Operator - Last Name	20	Text	25/70	jw
Group Name	23	Text	25/50	jw
Station Name Receiving Alarm	24	Text	25/50	jw
Originating Site Time Zone	25	Text	4/20	jw
Acknowledging Operator - Full Name	27	Text	45/70	jw
Trend/Status Report Data **	28	Text with CR/LFs	NA/NA	NA
Trend/Status Report Data - First Line	29	Text	80/120	jw
Tab Labels	30	Text	20/40	jw, pi

† Parameters are abbreviated as follows:

j= justification (justification can be left (l), right (r), or center (c))

w= field width

d= long date format

fi= date/time format

pi= latched data or tab label position (positions can be 0-4 for Latched Data Values or 0-3 for Tab Labels)

a= when used with "pi" for Latched Data Values indicates analog data

z= when used with "pia" for Latched Data Values indicates the number of characters the output is zero-filled to.

Refer to the "How To Use Field Codes" section on page 5-3 for examples of these parameters.

‡ The Multiline Alarm Text does not have a default and maximum size, nor is it justifiable. It is a variable length text field which may or may not have embedded CR/LF pairs (carriage return / line feed).

* The CMnet address is the Line #, DCLAN #, Module #, and FB #. Commas separate each value (no spaces).

** The Trend/Status Report Data field is a variable length field that represents the trend or status data that is collected by the alarm. This field is handled exactly like Field # 12, Multiline alarm text.

* * *

6 Handling Alarms

Viewing Alarms

Views

Alert EL provides seven different "views" in which the different types of alarms are displayed. These views, listed on the **View** menu, are as follows:

- Alarms - Urgent
- Alarms
- Messages
- Status Reports
- Trend Reports
- Closed
- Unacknowledged

Alarms are sorted into the Alarms - Urgent, Alarms, Messages, Status Reports and Trend Reports views depending on their associated Group. Alarms associated with the Alarms Group appear in the Alarms view; alarms associated with the Messages Group appear in the Messages view, etc.

NOTE Alarms with an ID of M#### (where # represents a number) appear in the Messages view. Alarms with an ID of STATUS or TREND appear in the Status Reports or Trend Reports view, respectively. See the "Alarms" section on page 2-31 for more information about configuring alarm IDs.

The Closed view displays all alarms that are in the closed state, regardless of the alarm's ID. Once an alarm is moved to the Closed view, the alarm will remain in this view until the alarm is deleted. The Unacknowledged view displays all alarms that have not yet been acknowledged. Unacknowledged alarms will also appear in their respective view according to their Group. Once an alarm is acknowledged, the alarm will be removed from theUnacknowledged view, but will not be removed from its Group's view until it is closed. Refer to the "Viewing Alarm States" section on page 6-7 for more information about the closed state. Note that the larger the number of alarms in the Main View, the longer it takes for Alert EL to redraw.

NOTE Due to restrictions placed on memory access by Windows, an excessive number of alarms in the Main View (greater than 6000) may cause other Windows applications that are running to fail, and may lead to corruptions in the Alert database. The exact number of alarms that could cause this situation varies depending on other applications that are running in addition to Alert EL. This problem is a result of memory access restrictions, and may occur regardless of the amount of memory added to the workstation. Note that these restrictions apply only to the number of alarms in the Main View, not the number of alarms in the Alert database. To avoid this possibility, be sure to regularly back up the Alert database and delete closed alarms.

The following information is displayed for each alarm:

- **Alarm status**: the alarm's status (active-unacknowledged, active-acknowledged, inactive-unacknowledged, inactive-acknowledged, or closed)
- **Alarm type**: the alarm's type (alarm - urgent, alarm, message, status report or trend report) according to the alarm's associated Group.
- **Date**: the date the alarm was generated by the FB.
- **Time**: the time the alarm was generated by the FB.
- **Alarm ID**: the alarm's ID.

- **System ID**: the ID of the System in which the alarm was generated.
- **System name**: the name of the Sysetm in which the alarm was generated.
- **Site**: the Site in which the alarm was generated.
- **CMnet address**: the address of the FB in which the alarm was generated. The address consists of the line number, gateway module number, control module number, and FB number.
- **Tab labels**: the bottom three SiteScan 2000 for Windows tab labels for the FB where the alarm was generated.
- **Text**: the Multiline Text of the alarm as it is configured on the Add/Change Alarm pop-up.
- **Acknowledging Operator**: the full name of the operator who acknowledged the alarm, plus the date and time the alarm was acknowledged. If the alarm has not yet been acknowledged, this space is left blank. This information does not appear for alarms in the Unacknowledged view.
- **Return-to-Normal**: the date and time Alert EL received a return to normal message for the alarm.

For Trend Reports and Status Reports, Alert EL also displays the complete trend or status information for the alarm.

Unconfigured Alarms

If Alert EL receives an Alert microblock alarm with an Alarm ID it does not recognize in the database, it is still capable of displaying the alarm properly in Alert EL by using a "template" to display the unconfigured alarm. The original template exists in the Alarms table with the Alarm ID of "DEFAULT". The original template that Alert EL uses remains the same, but a copy of the template is made in the Alarms table for every alarm that arrives unconfigured. These copies are assigned the same Alarm ID that appears in the Alert microblock's **Alarm ID** field, and are assigned to the Alarms Group by default.

NOTE Unconfigured alarms with an alarm ID of M#### (where # represents a number) are automatically assigned to the Messages Group and appear in the Messages view.

Once Alert EL receives an unconfigured Alert EL alarm and saves it as an Alarm record, the operator may further configure the record with more descriptive Multiline text, security levels, etc. However, once the Alarm ID is automatically created, it cannot be changed by the operator unless the corresponding instance records are deleted from the database (see the "Alarms" section on page 2-31 for information on configuring Alarm records).

Bad Alarms

There may be cases when Alert EL receives an unconfigured alarm that it is not capable of displaying properly. In order to prevent receiving bad alarms, make certain that the Alert database is configured completely, especially the System and Site information.

These "bad alarms" are logged in an ASCII file called **alert.err**, which is dynamically updated as bad alarms are received. The **alert.err** file is located in the same directory as the Alert EL executable (in most cases, **c:\ss2000**). Alert EL informs the operator of these bad alarms by displaying them in the Main View with the default Alarm ID of "ALERTERR". By double-clicking on the bad alarm in the Main View to display the Alarm Information pop-up, the operator can obtain more information about the bad alarm.

There are five possible messages that Alert EL displays with bad alarms for trouble-shooting purposes:

- BADALARM - This message is displayed if an unconfigured alarm was received and Alert EL could not locate the appropriate template to display the unconfigured alarm. Make certain that the templates used to handle unconfigured alarms ("DEFAULT", "A", "M", etc.) have not been deleted.
- BADSITE - Alert EL displays this message if the alarm's Site number cannot be located in the Alert database for the System that the alarm belongs to. Make certain that the Site table is configured properly.

NOTE If an alarm’s site number does not exist for any System in the database, Alert EL creates a new Site record with the description "Unconfigured."

- BADSYSTEM - Alert EL displays this message if the alarm's System does not exist in the Alert database. Make certain that the System table is configured properly.

NOTE If neither an alarm's System or Site is configured in the Alert database, Alert EL will create a System and a Site record, using the description "Unconfigured."

- CANTLOG - Alert EL displays this message if it is having problems logging the alarm. This is not an operator error – it usually indicates that there is a problem with the database. Contact Liebert Site Applications for assistance.
- NORTNMATCH - Alert EL displays this message if a Return-To-Normal message is received, but the alarm that it belongs to cannot be located (possibly because it was deleted). This is logged in the **alert.err** file, but Alert EL does not display it in Alert EL.

Like the DEFAULT template that Alert EL uses to display alarms with unconfigured Alarm IDs, ALERTERR is a template that is initially created in the Alert database with the other templates when Alert EL is installed. Unlike the DEFAULT template, however, *new alarm records are not created in the Alarm table for each occurrence*. Bad alarms always use the Alarm ID of ALERTERR unless the default name is changed in the **alc.ini** file.

NOTE If the ALERTERR template is inadvertently deleted from the Alert database, Alert EL will log the bad alarms using the DEFAULT template.

The **alert.err** file grows as bad alarms are received and logged. It's a good idea to delete bad alarms from the **alert.err** if they are no longer being referenced.

Printing Alarms

The **Print View** command available in the **File** menu allows the operator to print all the alarms displayed in the Main View. Alarms are printed the way that they appear in the Main View. The **Print View** command is disabled if there are no alarms in the current view.

Alarms can be printed individually using the Parallel Printer Reporting Action after Alert EL receives them (see the "Parallel Printer" section on page 3-8).

The **Print Setup** command (also available from the **File** menu) displays the standard Microsoft Windows Print window (see below), which allows the operator to define what printer to use. If no printer is defined, Alert EL prints the alarms to the Microsoft Windows default printer. If no default printer is set, or if the default printer is not configured in Windows, the **Print View** command is disabled.

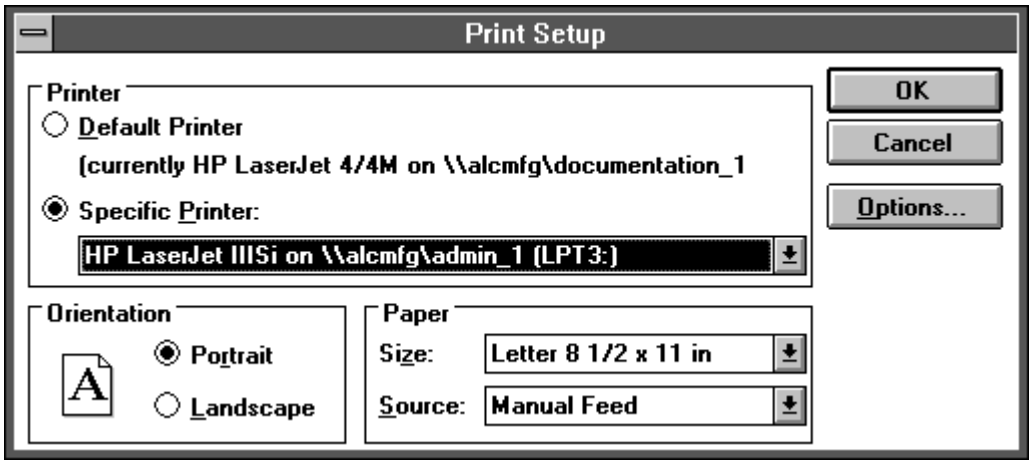


Figure 6-1: Microsoft Windows Print Setup window

Viewing Alarm States

Introduction

Depending on the requirements configured in the Alert microblock (by Liebert Site Applications), an alarm may go through various states before being closed by Alert EL:

- **Active-Unacknowledged**

  An alarm that has not received a Return To Normal message (whether it is required or not) and has not been acknowledged.

- **Active-Acknowledged**

  An alarm that has not received a Return To Normal message (whether it is required or not) but has been acknowledged.

- **Inactive-Unacknowledged**

  An alarm that has received a Return To Normal message but has not been acknowledged.

- **Inactive-Acknowledged**

  An alarm that has received a Return To Normal message and has been acknowledged.

- **Closed**

  An alarm that has all its requirements fulfilled. These requirements depend on how the alarm was originally configured.

An alarm can be configured with multiple conditions that must be fulfilled before it can reach the Closed state:

- An alarm can be configured in the Alert microblock to require a Return To Normal message before it can be closed.
- All alarms must be acknowledged before they can be closed.
- An alarm is associated with a Group, which can be configured to launch Reporting Actions. Reporting Actions must be completed before an alarm can be closed.

Status Colors

Alarms appear in the Main View in different colors, depending on the status of the alarm. The following colors correspond to the five different alarm states:

Table 6-1. Status Colors

Alarm State	Initial Color
Active, Unacknowledged	Red
Active, Acknowledged	Dark Yellow
Inactive, Unacknowledged	Dark Green
Inactive, Acknowledged	Dark Cyan
Closed	Gray

Alarm Information Pop-Up

Specific information for an alarm can be viewed by double-clicking on the alarm from the Main View. This displays the Alarm Information pop-up (see below) for that alarm. To close the pop-up, select **OK**.

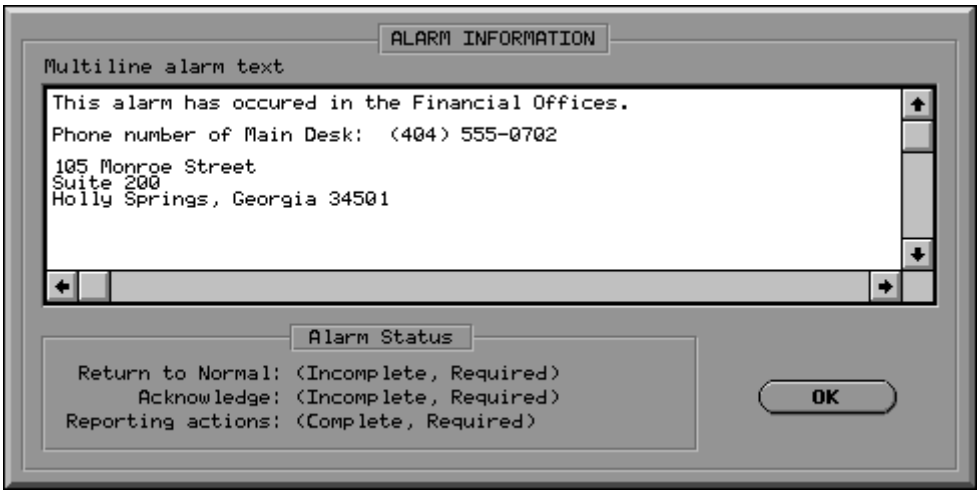


Figure 6-2: Alarm Information pop-up

The **Multiline alarm text** window displays the multiple line alarm information that was configured for the alarm. The text in this window cannot be cut or altered in any way, although it may be copied to the clipboard. Any alarm information not immediately visible in the window can be viewed with the vertical and horizontal scroll bars.

The **Alarm Status** section of the pop-up displays the conditions required for the alarm and what conditions still must be fulfilled before the alarm can close.

Actions Menu Commands

Introduction

There are several commands available for the operator to use to perform some kind of action. Most of these commands are used to act on alarms in some fashion. These commands are accessible from the **Actions** menu in Alert EL. All of these commands except for **Acknowledge All in View** and **Delete All in View** are available as hot keys (see below).

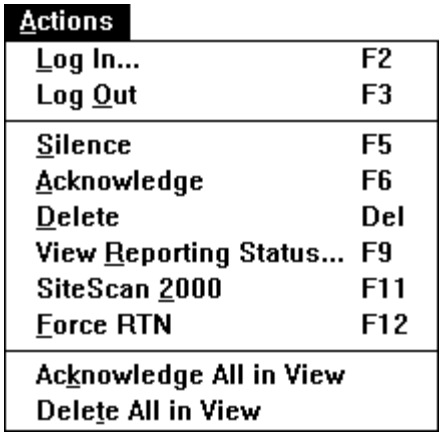


Figure 6-3: Actions Menu

To perform an action on an alarm, select the alarm from the Main View, then select the command from the **Actions** menu (or use the hot key). The exceptions to this procedure are **Log In**, **Log Out**, **Acknowledge All in View**, and **Delete All In View**. Since these four commands indirectly act on alarms, it is not necessary to select an alarm before using one of these commands.

Commands are displayed as gray and are disabled if they are not appropriate for the alarm currently selected in the Main View. For example, if an alarm has already been acknowledged, the **Acknowledge** command is disabled when that alarm is selected.

Alarms and Alert EL Multi-User

With Alert EL Single-User, one station has complete control of the database and the alarms. Every action performed by the operator creates a tangible reaction in the databases or the Main View. However, with Alert EL Multi-User, the operator must adjust to seeing reactions when there was no visible action performed on his station.

Because all Alert EL Multi-User stations share the same database and have the same capability to act on alarms (except for Reporting Actions, which can only be acted on by the station that received the corresponding alarm), operators may see alarms appear and disappear from the current view without any action performed on their part. This is not a flaw or bug in the Alert EL software. Any alarm that changes because of a command executed from the **Actions** menu will show a change on every station which shares that database.

For more information on Alert EL Multi-User and a list of the commands that are affected by Alert EL Multi-User, see the "Alert EL Multi-User" section on page 8-1.

Log In

Unless an operator is logged into Alert EL, the majority of commands are disabled and an operator is unable to handle alarms, though they are able to view them in the Main View. Once the operator logs into Alert EL using the **Log In** command, the commands are accessible (as long as the operator has the proper security level to use them).

The Log In command can be executed by selecting **Log In** from the **Actions** menu. The hot key for the Log In command is **F2**. For more information about the Log In command, refer to the "Logging In" section on page 1-22.

Log Out

The **Log Out** command logs the current operator out of Alert EL. When no one is logged into Alert EL, a majority of the commands are disabled, although the Alert EL station continues to receive alarms. This command is inaccessible if there is no operator currently logged into Alert EL.

An operator is also automatically logged out if:

- Another operator logs in without the first operator logging out.
- He/she exits Alert EL (with the **Exit** command).
- He/she closes the Alert EL window.

To Log Out of Alert EL

1. Select **Log Out** from the **Actions** menu (or use the **F3** hot key).
2. Alert EL will immediately log you out of Alert EL without asking for verification.

Silence

When an alarm is received, Alert EL notifies the operator of the new alarm by causing the computer's speaker to beep. Notification will occur whether or not the newly-arrived alarm appears in the current view. The operator can halt Notification with the **Silence** command.

There are several important things to note concerning Notification:

- With Alert EL Multi-User, each multi-user station must halt their station's Notification individually. If Notification is halted at one station, it still must be halted at all of the other multi-user stations.
- An alarm does not have an individual Notification. Once Notification is silenced, it is silenced for *all* newly received alarms. For example, if several alarms are received in succession by Alert EL and Notification is silenced, it is silenced for *all* of the newly received alarms.

Notification is silenced with the **Actions-Silence** command. When this command is selected, Notification is halted for the station for two minutes, or until another alarm is received. At the end of the two-minute silence, Notification will begin again if one or more alarms have not been acknowledged.

Acknowledging an alarm automatically silences the Notification. However, if there are multiple alarms that require silencing and one alarm is acknowledged, Notification still continues until Notification is silenced (or all of the alarms are acknowledged).

To Silence Notification

1. When an alarm arrives into the current view, Alert EL will perform the station's Notification. Select **Silence** from the **Actions** menu (or use the **F5** hot key).
2. At this point, Notification is silenced for a period of two minutes, or until another alarm is received. If any alarms remain unacknowledged at the end of the two-minute interval, Notification will begin again.

Acknowledge

The **Acknowledge** command is performed by the operator currently logged in. Unlike the **Silence** command, the **Acknowledge** command is specific to an alarm. This command allows the operator to formally recognize individual alarms. This means that each alarm must be selected and acknowledged individually.

To acknowledge an alarm, an operator must have the same (or greater) security level of the alarm being acknowledged. If the operator does not have a high enough security level, Alert EL displays an error message.

When an alarm is acknowledged, it changes from the Unacknowledged to the Acknowledged state. All alarms must be acknowledged before they can be closed. If no other conditions are required for an alarm to close, then acknowledging the alarm causes it to close and disappear from the Main View.

An alarm that is newly arrived into the current view can be acknowledged without silencing it first. If only one alarm is newly arrived into the view and it is acknowledged, Alert EL also silences the

Notification permanently. However, if more than one alarm is newly arrived into the view and an alarm is acknowledged, Alert EL continues the Notification to prevent the other alarms from being overlooked.

With Alert EL Multi-User, alarms can be acknowledged by any station which shares the same database on the network. If one station acknowledges an alarm, it is shown as acknowledged on all stations which share the same database.

The **Acknowledge** command can be executed by selecting **Acknowledge** from the **Actions** menu. The hot key for the **Acknowledge** command is **F6**.

To Acknowledge An Alarm

1. Select the alarm to be acknowledged from the Main View.
2. Select **Acknowledge** from the **Actions** menu (or use the **F6** hot key). The acknowledged alarm will immediately change from the Unacknowledged state to the Acknowledged state.

Delete

The **Delete** command allows an operator to delete an instance record from the instance database. When an alarm is deleted, it is removed from the Main View and the database *permanently*. Since Alert EL Multi-User stations share the same database, all Alert EL Multi-User stations are affected when the operator deletes an alarm.

Alert EL does not ask for verification before deleting an alarm. Furthermore, an alarm can be deleted without any of the conditions for closure being fulfilled. This means that an alarm can be deleted even if it has not been acknowledged, received a Return To Normal, etc. If an alarm's Group contains Reporting Actions that are waiting to execute and the alarm is deleted, Alert EL aborts the Reporting Actions. It is a good idea to perform periodic backups of the database to prevent alarm information from being lost.

Because of the serious ramifications of deleting alarms from the database, this command requires a security level of at least 95. If an operator with a security level below 95 attempts to delete an alarm, Alert EL displays an error message.

The **Delete** command can be executed by selecting **Delete** from the **Actions** menu. The hot key for the **Delete** command is the **Del** key.

To Delete An Alarm

1. Select the alarm from the Main View that you wish to delete.
2. Select **Delete** from the **Actions** menu (or use the **Del** key). *This will immediately delete the alarm from the database with no verification.*

View Reporting Status

Although the Alarm Information pop-up displays the completion status of an alarm's Reporting Actions (see the "Alarm Information Pop-Up" section on page 6-8), it does not convey detailed information concerning the Reporting Actions. The **View Reporting Status** command allows an operator to view detailed information about an alarm's individual Reporting Actions which includes completion status as well as launch information. With this feature, an operator logged in at the receiving station also has the ability (given the appropriate security level) to abort and execute Reporting Actions. The **View Reporting Status** command is available as the **F9** hot key.

With Alert EL Multi-User, every station on the network can view the status of Reporting Actions. However, only the station that received an alarm can launch that alarm's Reporting Actions. In addition, only that receiving station can abort or prematurely execute the Reporting Actions. The **Abort** and **Execute** commands are disabled for other stations on the network.

When an alarm is selected from the Main View and the **View Reporting Status** command is executed, the Reporting Action Status

pop-up for that alarm is displayed (see example below). If an alarm has no Reporting Actions, the Reporting Action Status pop-up is empty.

Figure 6-4: Reporting Action Status pop-up

The **Reporting Action** column of the pop-up lists the descriptions of the Reporting Actions for the alarm. If more Reporting Actions exist than can be immediately displayed in the pop-up, a vertical scroll bar appears to view those Reporting Actions.

The **Start** column of the pop-up displays the date and time the Reporting Action began.

The **End** column displays the date and time the Reporting Action finished. Some Reporting Actions start and end almost immediately, but some Reporting Actions may take longer to execute (for example, Reporting Actions that require calling out on a port).

The **Result** column displays the status of the Reporting Action in more detail. The information displayed here rapidly reports information concerning the progress of Reporting Actions during execution. This field is useful for diagnostic reasons for Reporting Action failures or for watching the execution progress to verify the action was performed correctly. The information displayed here is the same information that is displayed when a Reporting Action is being tested from its editing pop-up.

The lower left section of the pop-up displays a small legend describing the four states that Reporting Actions can achieve: Waiting, Executing, Completed, and Aborted. The **Result** information displays in a color that indicates the Reporting Action state. For example, if a Reporting

Action has been aborted, its corresponding **Result** information is displayed in the Abort color.

The **Abort** command allows the operator to permanently halt the selected Reporting Action in the pop-up. When a Reporting Action is selected from the pop-up and this command is used, Alert EL displays the date and time the Reporting Action was aborted and the Result information, *"Execution prevented: Aborted by user."* Once aborted, the Reporting Action is considered complete and does not attempt to reexecute at a later time. An operator must have the same security level (or higher) of the alarm that the Reporting Action is associated with in order to perform the **Abort** command.

The **Execute** command allows the operator to prematurely execute a Reporting Action. When the Reporting Action is selected and this command is used, Alert EL attempts to perform the Reporting Action and displays the results in the **Result** column. An operator must have the same security level (or higher) of the alarm that the Reporting Action is associated with in order to perform the **Execute** command.

To View An Alarm's Reporting Action Status

1. Select an alarm from the Main View.
2. Select **View Reporting Status** from the **Actions** menu (or use the **F9** hot key). The Reporting Action Status pop-up for that alarm will be displayed. If no Reporting Actions exist for the alarm, the pop-up will be blank.
3. Select **OK** to exit the Reporting Action Status pop-up.

SiteScan 2000

The SiteScan 2000 command displays the SiteScan 2000 for Windows graphic that was responsible for generating a particular alarm. When this option is selected, SiteScan 2000 for Windows jumps to the desktop foreground and attempts to display the graphic. If no graphic is available, the Status Page for the alarm's generating FB is displayed. SiteScan 2000 for Windows must be connected to the same System that the alarm originated from. Otherwise, SiteScan 2000 for Windows displays an error message. This command is disabled when SiteScan 2000 for Windows is not running.

The **SiteScan 2000** command can be executed by selecting **SiteScan 2000** from the **Actions** menu. The hot key for the **SiteScan 2000** command is **F11**.

NOTE In order for SiteScan 2000 for Windows to be accessible from Alert EL, the Alert EL and SiteScan 2000 for Windows program files must reside in the same directory. If the Alert EL program files are stored in a different directory, this command will not be effective.

To Display A SiteScan 2000 for Windows Graphic

1. Select the alarm from the Alert EL Main View.

NOTE Make certain that SiteScan 2000 for Windows is connected to the same System as the selected alarm.

2. Select the **SiteScan 2000** command from the **Actions** menu (or use the **F11** hot key). The SiteScan 2000 for Windows graphic for that alarm will be displayed. If there is no graphic for the alarm, the Status Page will be displayed. To move back and forth between SiteScan 2000 for Windows and Alert EL, use the **Alt-Tab** keys.

Force RTN

The **Force RTN** command allows the operator to have an alarm return to normal even though the alarm has not received an RTN message from the module. This command does not affect the status of the alarm in the module, only the status of the alarm in Alert EL. If a Return to Normal message is later received by Alert Server from the module, the message is unable to find the alarm and the message is logged in the **alert.err** file. See the "Bad Alarms" section on page 6-4 for more information.

When the **Force RTN** command is executed, the alarm immediately becomes inactive. In order to use the **Force RTN** command, an operator must have a security level of 95 or greater. The **Force RTN** command can be executed from the **Actions** menu, or by pressing the F12 function key.

To Force an Alarm to Return to Normal Status

1. Select the alarm to return to normal from the Main View.
2. Select **Force RTN** from the **Actions** menu or press F12. The alarm will immediately change to the Inactive state.

Acknowledge All in View

The **Acknowledge All in View** command works in the same manner as the **Acknowledge** command except that it acknowledges all alarms displayed in the current view. Alarms not displayed in the current view are not acknowledged.

If alarms exist in the current view that have been configured with a security level that is higher than the operator performing the **Acknowledge All in View** command, Alert EL displays an error message and does not acknowledge those particular alarms.

To Acknowledge All Alarms In the Current View

1. Select **Acknowledge All in Vlew** from the **Actions** menu. Alert EL will immediately begin to acknowledge alarms in the current view. The Acknowledge All pop-up will be displayed to show the status of the alarms as Alert EL is acknowledging them(see below).

Figure 6-5: Acknowledge All pop-up

2. If you wish to cancel the **Acknowledge All in View** command in progress, select the **Cancel** button from the pop-up. The **Cancel** command only affects alarms that Alert EL has not yet acknowledged.

Delete All in View

The **Delete All in View** command works in the same manner as the **Delete** command except that this command deletes *all* alarms displayed in the current view. Alarms not displayed in the current view are not deleted. All of the ramifications that apply to the **Delete** command also apply to the **Delete All in View** command:

- When an alarm is deleted, it is removed from the Main View and database permanently.

- An alarm can be deleted without any of the conditions for the alarm being fulfilled (Return To Normal, Acknowledgement, etc.).
- With Alert EL Multi-User, all of the stations see an alarm deleted.

However, unlike the **Delete** command, Alert EL asks for verification before beginning the deletion process.

The **Delete All in View** command is disabled if the operator has a security level below 95.

To Delete All the Alarms in the Current View

1. Select **Delete All in View** from the **Actions** menu. A verification pop-up will appear.
2. Pick **Yes** to begin deleting all alarms in the current view. Alert EL will immediately begin to delete alarms. The Delete All pop-up will be displayed to show the status of the deletion process (see below).

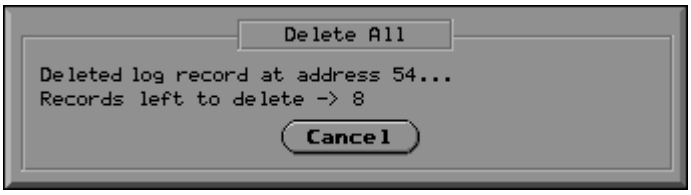


Figure 6-6: Delete All pop-up

3. If you wish to cancel the **Delete All in View** command while it is in progress, select the **Cancel** button from the Delete All pop-up. The **Cancel** command will only affect alarms that Alert EL has not yet deleted.

   If alarms have been deleted that contained Reporting Actions waiting to execute, Alert EL displays a message to inform you that the Reporting Actions have been aborted.

* * *

7 Alert EL Menu Commands

How To Use This Chapter

This chapter is intended to be used as a general reference guide for the Alert EL menu commands. Each menu command is explained *briefly* in the order that they appear in their menus. For more in-depth information, consult the referenced sections and chapters.

File Menu Commands

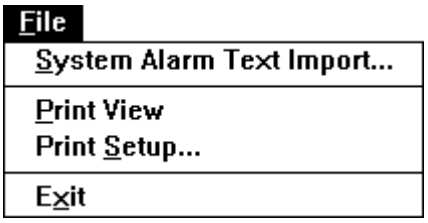


Figure 7-1: File Menu

System Alarm Text Import

The System Alarm Text Import command allows you to import the **sysalarm.txt** and **xxxalarm.txt** file from an existing System to the Alert database. This process will automatically create Alarm records in the Alert database for each existing alarm or message text entry.

For More Information, See . . .

- **System Alarm Text Import** on page 2-35

Print View

The **Print View** command prints the alarms as they are displayed in the Main View. Alarms are printed to the selected printer (see **Print Setup**). This command is disabled if there are no alarms in the current view.

For More Information, See . . .

- **Printing Alarms** on page 6-5
- **Parallel Printer** on page 3-8

Print Setup

The **Print Setup** command displays the standard Microsoft Windows Print window, which allows the operator to define which printer to use. If no printer is specified, Alert EL prints the alarms to the Microsoft Windows default printer. If no default printer is set, or if the default printer is not configured in Windows, the **Print View** command is disabled.

For More Information, See . . .

- **Printing Alarms** on page 6-5

Exit

The **Exit** command closes Alert EL. This command is *not* the same as the **Log Out** command. It is important to note that receiving stations that have been exited do not continue to receive alarms. The alarms are not lost, but are stored in the gateway module until Alert EL is again able to retrieve them.

In addition to the **Exit** command, Alert EL may be closed by double-clicking the Microsoft Windows File Drawer (in the upper left corner of the Alert EL window). If the station is a receiving station, a pop-up will appear requiring a password to be entered before Alert can be exited. You must enter the password of any operator whose security level is 75 or higher. If the station is not a receive station, or Alert Server is not running, a verification pop-up is displayed and no password is required to exit.

Alert EL cannot be exited with Reporting Actions currently executing. If an operator attempts to exit Alert EL with Reporting Actions executing, Alert EL displays an error message that gives the operator the opportunity to either cancel the exiting process or to abort the Reporting Actions that are executing (see below). If this pop-up remains open,

Alert EL counts down the number of Reporting Actions still executing until they are finished, and then exits Alert EL.

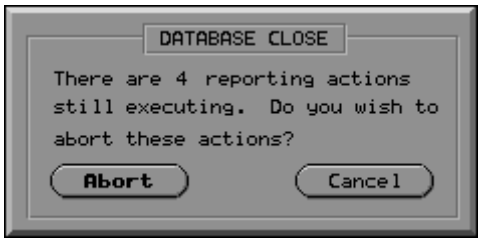


Figure 7-2: Database Close pop-up

View Menu Commands

Figure 7-3: View Menu

The **View** menu lists the seven different views that can be displayed in Alert EL. Each view displays a different type of alarm, depending on the Group the alarm is associated with. Alarms associated with the Alarms Group appear in the Alarms view, alarm associated with the Messages Group appear in the Messages view, etc. The Closed view displays alarms of any type that are in the closed state.

- **Unacknowledged**
- **Alarms**
- **Alarms - Urgent**
- **Closed**
- **Messages**
- **Status Reports**
- **Trend Reports**

For More Information, See . . .

- **Viewing Alarms** on page 6-1

Configure Menu Commands

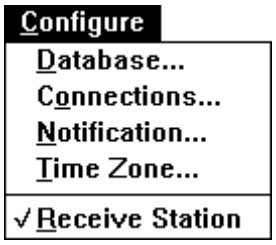


Figure 7-4: Configure Menu

Database

The **Database** command displays the Configuration pop-up, where the operator can add, change, and delete database records for the following :

- Operators
- Systems
- Sites
- Actions
- Groups
- Alarms

To make additions, changes, and deletions to the database, an operator must have the same security level (or higher) as the command.

For More Information, See . . .

- **Configuring the Database** chapter
- **Command Security Levels Table** on page 2-11

Connections

The **Connections** command displays the Connection Configuration pop-up. This pop-up allows the operator to set up port information used in receiving alarms and executing various Reporting Actions. An operator must have a security level of 50 (or higher) in order to use this command. Any changes to this pop-up affect all Liebert Corporation Windows products.

For More Information, See . . .

- **Connections** on page 4-2
- **Receiving Stations** on page 8-3
- **The alc.ini File** on page 8-16

Notification

The **Notification** option allows you to enable or disable the station's Notification. When Alert EL receives an alarm, it notifies operators in close proximity to the station by beeping the PC speaker and/or forcing the Alert EL window to the desktop foreground.

For More Information, See . . .

- **Notification** on page 4-8
- **Silence** on page 6-11

Time Zone

This command displays the Station Time Zone pop-up, where the operator can set the time zone of the station. In order for Alert EL to normalize the times properly, it must know where each station is located. An operator must have a security level of 25 (or higher) to use this command.

For More Information, See . . .

- **Time Zone** on page 4-9

Receive Station

This command launches the Alert Server. Once this setting is enabled, the Alert Server launches when Alert EL is launched. To enable **Receive Station**, select it from the **Configure** menu. If Alert Server is launched, a check will appear to the left of **Receive Station** and Alert Server will be visible as a minimized icon in the Windows work area. If Alert EL cannot launch Alert Server for some reason, an error message is displayed and the **Receive Station** setting in the **Configure** menu is not checked.

This setting is specific to a station. An operator must have a security level of 75 (or higher) to use this command.

For More Information, See . . .

- **Connections** on page 4-2

Actions Menu Commands

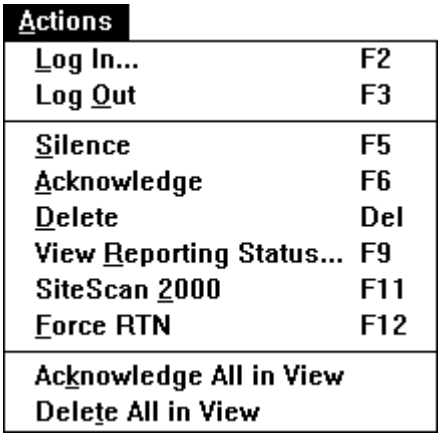


Figure 7-5: Actions Menu

The **Actions** menu contains commands that act on alarms, (except for the **Log In** and **Log Out** commands). All of the **Actions** menu commands, with the exception of **Force RTN**, **Acknowledge All in View** and **Delete All in View**, have hot keys.

Log In

The **Log In** command allows the operator to log into an Alert EL station. An operator must be logged into Alert EL in order to perform most commands. The hot key is **F2**.

For More Information, See . . .

- **Logging In** on page 1-22

Log Out

The **Log Out** command allows the operator to log out of the Alert EL station. The hot key is **F3**.

For More Information, See . . .

- **Log Out** on page 6-11

Silence

The **Silence** command allows the operator to silence the Notification process. If the Notification process is not active, the **Silence** command is disabled. The hot key is **F5**.

For More Information, See . . .

- **Silence** on page 6-11

Acknowledge

The **Acknowledge** command is performed by the operator currently logged in. This command allows the operator to formally recognize individual alarms. Each alarm must be selected and Acknowledged individually. An operator can only acknowledge an alarm if he/she has the same security level of an alarm or higher. Once an alarm is acknowledged, it changes state from Unacknowledged to Acknowledged. The hot key is **F6**.

For More Information, See . . .

- **Acknowledge** on page 6-12
- **Acknowledge All in View** on page 6-18

Delete

The **Delete** command allows an operator to delete instance alarms from the instance database one alarm at a time. *When an alarm is deleted, it is removed from the Main View and the database **permanently***. Once an alarm is deleted, it cannot be retrieved or restored. An operator must have a security level of 95 or higher in order to use this command. The hot key is the **Del** key.

For More Information, See . . .

- **Delete** on page 6-13
- **Delete All in View** on page 6-18

View Reporting Status

The **View Reporting Status** command displays the Reporting Action Status pop-up, which allows an operator to view the status of an alarm's Reporting Actions. The station that received the alarm can abort or prematurely execute the alarm's Reporting Actions from the pop-up if the logged-in operator has the same security level (or higher) as the corresponding alarm. The hot key is **F9**.

For More Information, See . . .

- **View Reporting Status** on page 6-14

SiteScan 2000

The SiteScan 2000 command allows an operator to go directly to the SiteScan 2000 for Windows graphic that was responsible for generating a particular alarm. When this option is selected, SiteScan 2000 for Windows jumps to the desktop foreground and attempts to display the graphic. If no graphic is available, the Status Page for the alarm's generating FB is displayed. SiteScan 2000 for Windows must be connected to the same System that the alarm originated from. Otherwise, SiteScan 2000 for Windows displays an error message. This command is disabled when SiteScan 2000 for Windows is not running. The hot key is **F11**.

For More Information, See . . .

- **SuperVision** on page 6-16

Force RTN

The **Force RTN** command allows the operator to assign an inactive status to an alarm even though the alarm has not received an RTN message from the module. This command does not affect the status of the alarm in the module, only the status of the alarm in Alert EL. In order to use the **Force RTN** command, an operator must have a security level of 95 or greater. The hot key is **F12**.

For More Information, See . . .

- **Force RTN** on page 6-17

Acknowledge All in View

The **Acknowledge All in View** command works in the same manner as the **Acknowledge** command except that it acknowledges *all* alarms displayed in the current view. An operator can only acknowledge an alarm if he/she has the same security level of an alarm or higher. Alarms not displayed in the current view are not acknowledged.

For More Information, See . . .

- **Acknowledge** on page 6-12
- **Acknowledge All in View** on page 6-18

Delete All in View

The **Delete All in View** command works in the same manner as the **Delete** command except that this command deletes *all* alarms displayed in the current view. Alarms not displayed in the current view are not deleted. An operator must have a security level of 95 (or higher) in order to use this command.

For More Information, See . . .

- **Delete** on page 6-13
- **Delete All in View** on page 6-18

Help Menu Commands

Overview

The **Help** menu contains the commands for accessing Alert EL's On-Line Help facility and for displaying the About Alert EL pop-up.

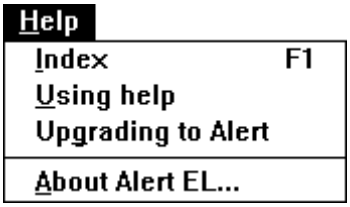


Figure 7-6: Help Menu

On-Line Help is a feature provided by Windows which allows the operator to view a comprehensive hypertext file. The On-Line Help is a Windows Application, so all the standard Windows techniques for moving, resizing, and closing the Help window apply. For a complete description of all the features included in the On-Line Help, press **F1** twice. To return to the On-Line Help after reading the Windows Help instructions, pick the **Index** button in the Help Window.

Alert EL's Help is a comprehensive hypertext file which is available within Alert EL. It describes the various functions and features of Alert EL and how to use them. If the screen is large enough, the operator can refer to Help and use Alert EL at the same time by resizing both windows so that they don't overlap. To work with overlapping windows, press **Alt + Tab** to switch back and forth between the windows.

Index

The **Index** command launches Alert EL's On-Line Help facility. When Alert EL's Help is launched, the Table of Contents is displayed. You may locate the subject matter that interests you from the Table of Contents, or you may use the **Search** command to locate a subject. The hot key for this command is **F1**.

Words with a solid underline are "jumps" that display the Help topic they name. To jump to another topic, do one of the following:

- Pick the underlined topic, OR
- Press the **Tab** key until the underlined topic is highlighted and then press **Enter**.

Using the Help Commands and Buttons

At the top of the Help window are menus of commands and buttons. Below is a summary of the commands and buttons used most often:

Table 7-1. Help Commands

Help Command or Button	What it does
Open command (File menu)	Lets you open any Windows Help file in the Help window.
Print Topic command (File menu)	Prints the displayed Help topic for easy reference.
Copy command (Edit menu)	Copies the displayed Help topic to the Clipboard (so you can paste it into another Windows application).
Annotate command (Edit menu)	Lets you add your own notes to the displayed Help topic.
Define command (Bookmark menu)	Adds the title of the topic (or a name you type) to the Bookmark menu so you can display that topic by choosing its name from the menu.
Index button	Displays the Help Index.
Back button	Displays the previous topic you looked at so you can backtrack through the Help screens.
Search button	Displays a dialog box where you can type keywords or select keywords to search for related Help topics. If you type a keyword and Help finds no match, the program displays the topics that are closest in alphabetical order.

Using Help

The **Using Help** command provides information about using On-Line Help (see below).

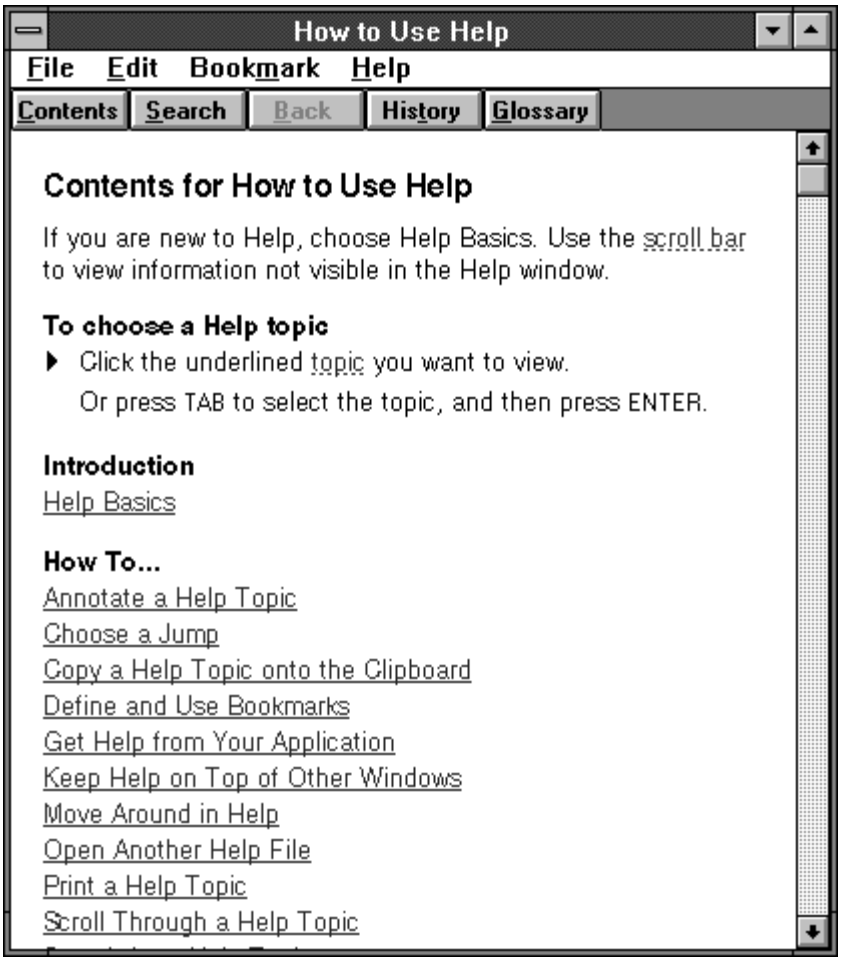


Figure 7-7: On-Line Help window

Upgrading to Alert

Liebert Corporation can offer expanded alarming and reporting capabilities by upgrading your Alert EL software to Alert. Additional or expanded features include:

- **Views** - can be customized to meet individual operator needs. Sort alarms by System, Group, acknowledging operator, date and time and alarm status.

- **Priority levels** - can be assigned to individual alarms. View alarms by priority level in the Main View.
- **Reporting Actions** - are schedulable and unlimited. Additional Reporting Actions include Alarm Escalation, Microsoft Windows Command, Fax and Sound Play.
- **Groups** - are unlimited and customizable. Schedule each Group's Reporting Actions to meet your needs.
- **Notification Options** - are customizable by the operator. Notification methods include pulsating alarms, forcing Alert to the Windows foreground, flashing the Alert icon, playing a custom sound file, and activating an external siren. Customize the Silence duration as well.
- **Auto-Delete** - simplifies alarm database maintenance. Automatically delete alarms from the database that have been closed for a specified number of days.
- **Alarm Filtering** - eliminates "resultant" alarms allowing operators to focus on "causal" alarms. Configure a filtering structure that automatically acknowledges certain alarms when other alarms are active.
- **Facility Condition Notification** - constantly notifies staff of critical facility conditions. Use an external light panel or Alert's built-in graphic panel to show at a glance the state of your facility.

The upgrade process is smooth and trouble-free, making use of your existing Alert EL database. For more information about upgrading your Alert EL software, contact your local Liebert Corporation Dealer.

About Alert EL

The **About Alert EL** command displays the Alert EL logo pop-up, which shows the software version, copyright information, and serial number. Select **OK** to close the pop-up.

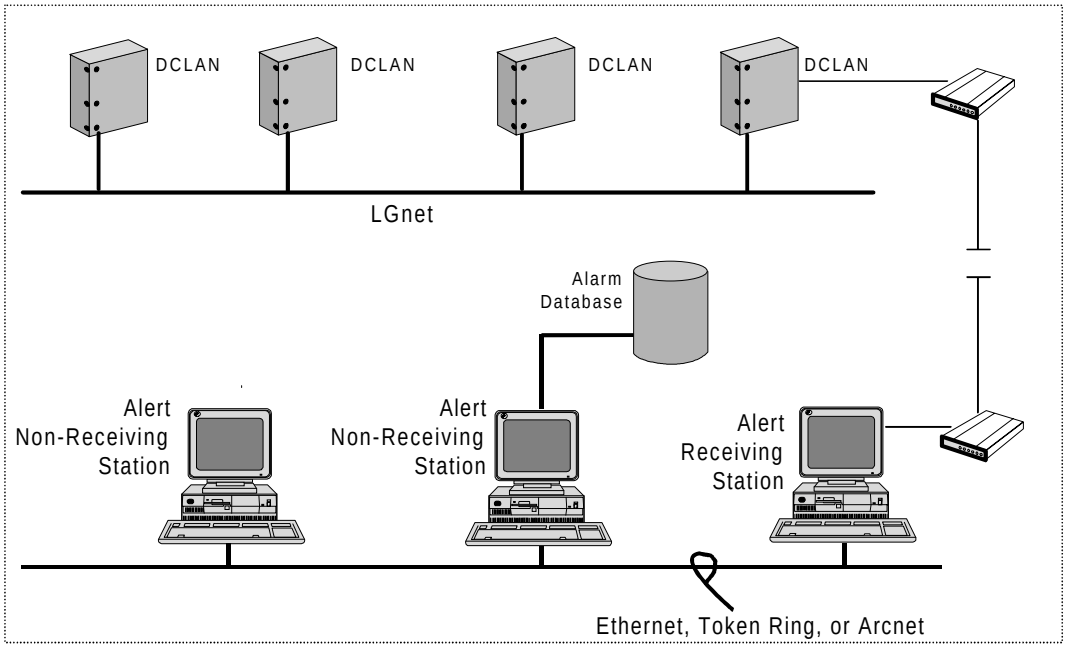
If Alert EL Multi-User has been installed, a **Copy #** appears next to the serial number indicating which copy is installed on the computer. The Copy # does not appear on the first copy installed. For example, on a five-user system, the first copy installed would display only the serial number, and the remaining copies installed would display the serial number and Copy # 2, 3, 4, or 5.

* * *

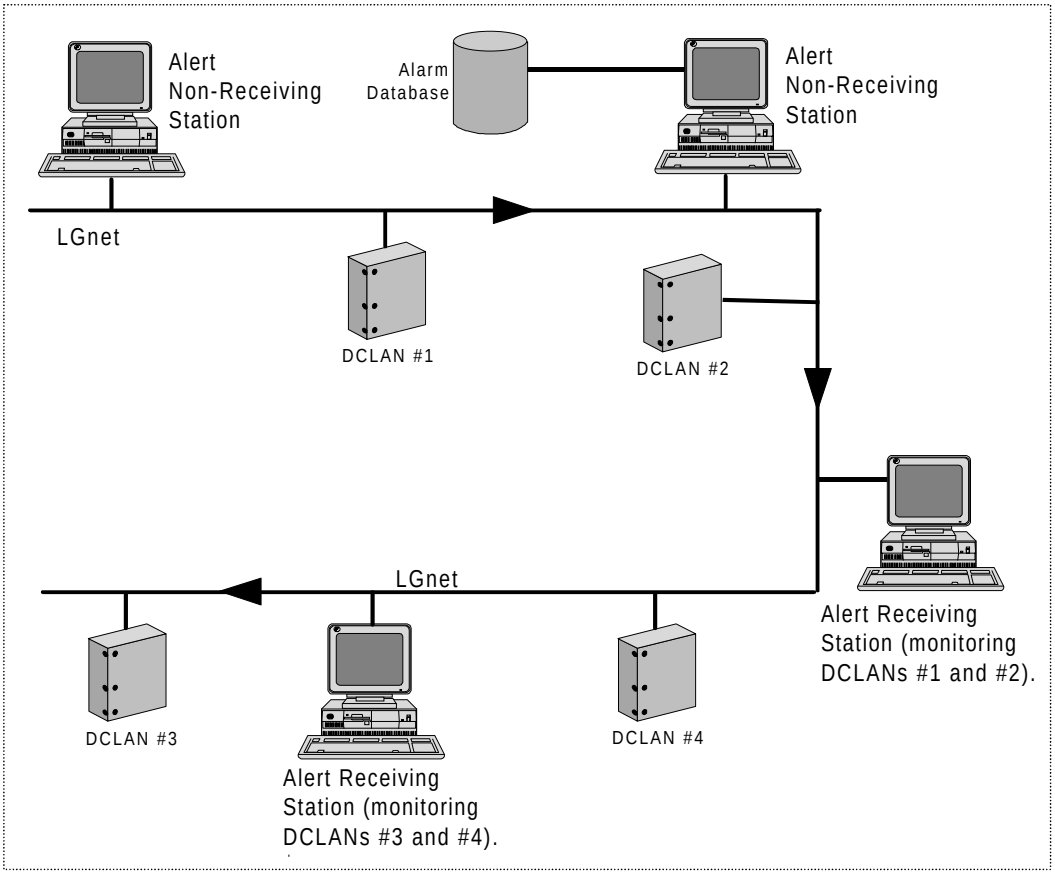
8 Maintenance Issues

Alert EL Multi-User

Alert EL Multi-User differs from Alert EL Single-User in that the multi-user version allows multiple stations to share a database across a network. Multiple Alert EL stations may coexist on the same network. The Alert EL stations may exist on the same physical cable as an LGnet, or it may communicate to it via modem (see Figure 8-1 on the following page). Alert EL stations may not reside on an EIA-485 LGnet.



Alert stations isolated from LGnet



Alert stations on same cable as LGnet

Figure 8-1: Alert EL Station Configurations

Receiving Stations

A receiving station is an Alert EL station that has been set up to monitor ports for alarms. The difference between a receiving station and a non-receiving station is that only a receiving station can "own" and launch Reporting Actions. This means that a non-receiving station cannot execute or abort Reporting Actions. All Reporting Actions tied to a particular alarm will be the sole responsibility of the station that received the alarm. An operator can view the status of the Reporting Actions from another station, but cannot alter (abort or prematurely execute) them. Receiving and non-receiving stations do not differ in the capability to handle alarms (i.e., acknowledge, delete, etc.)

Because Alert EL Single-User has only one station, there is only one receiving station.

The figures on the following two pages illustrate how an Alert EL Single-User station and Alert EL Multi-User stations might be configured.

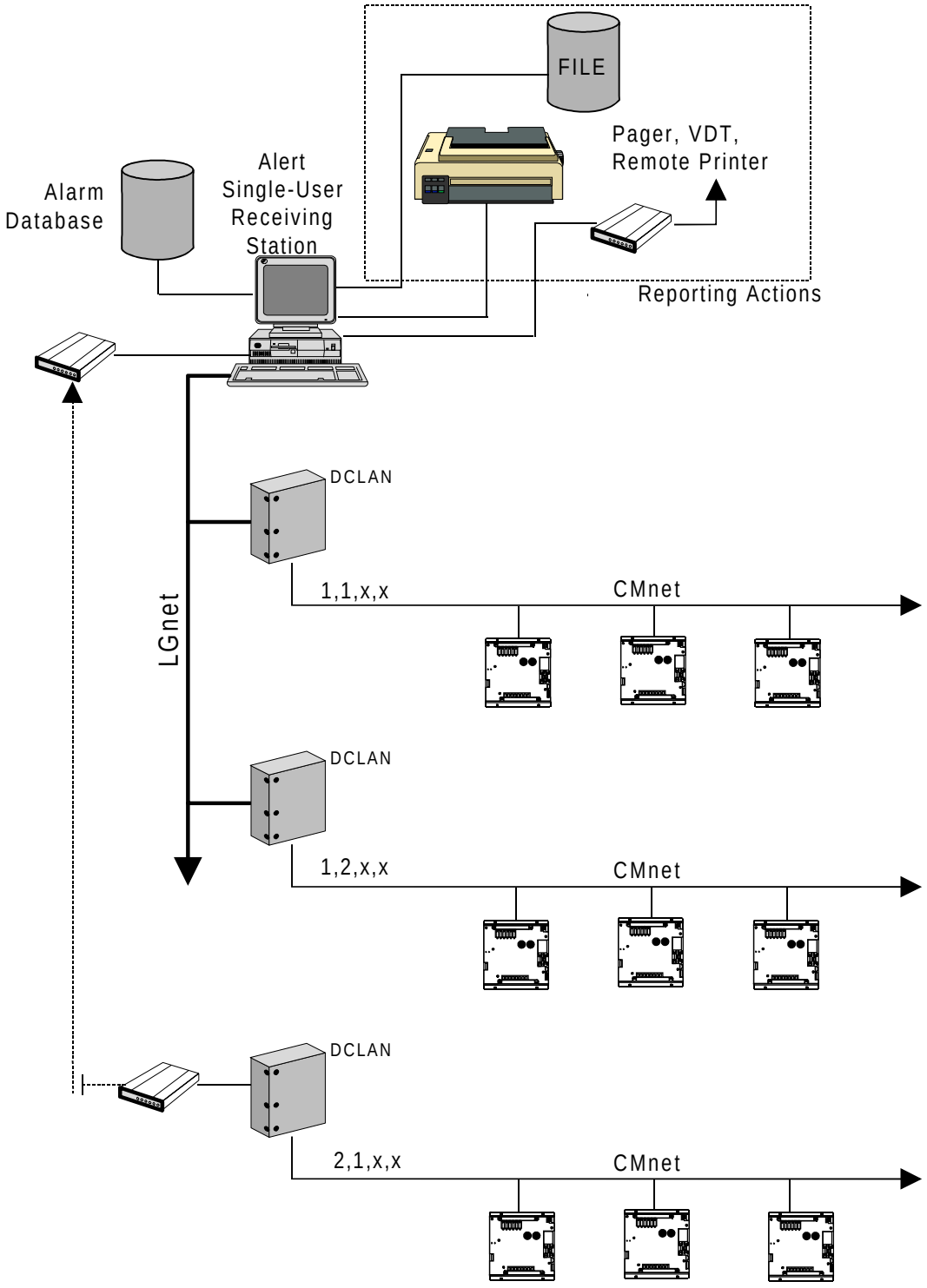


Figure 8-2: Alert EL Single-User with Multiple DCLANs

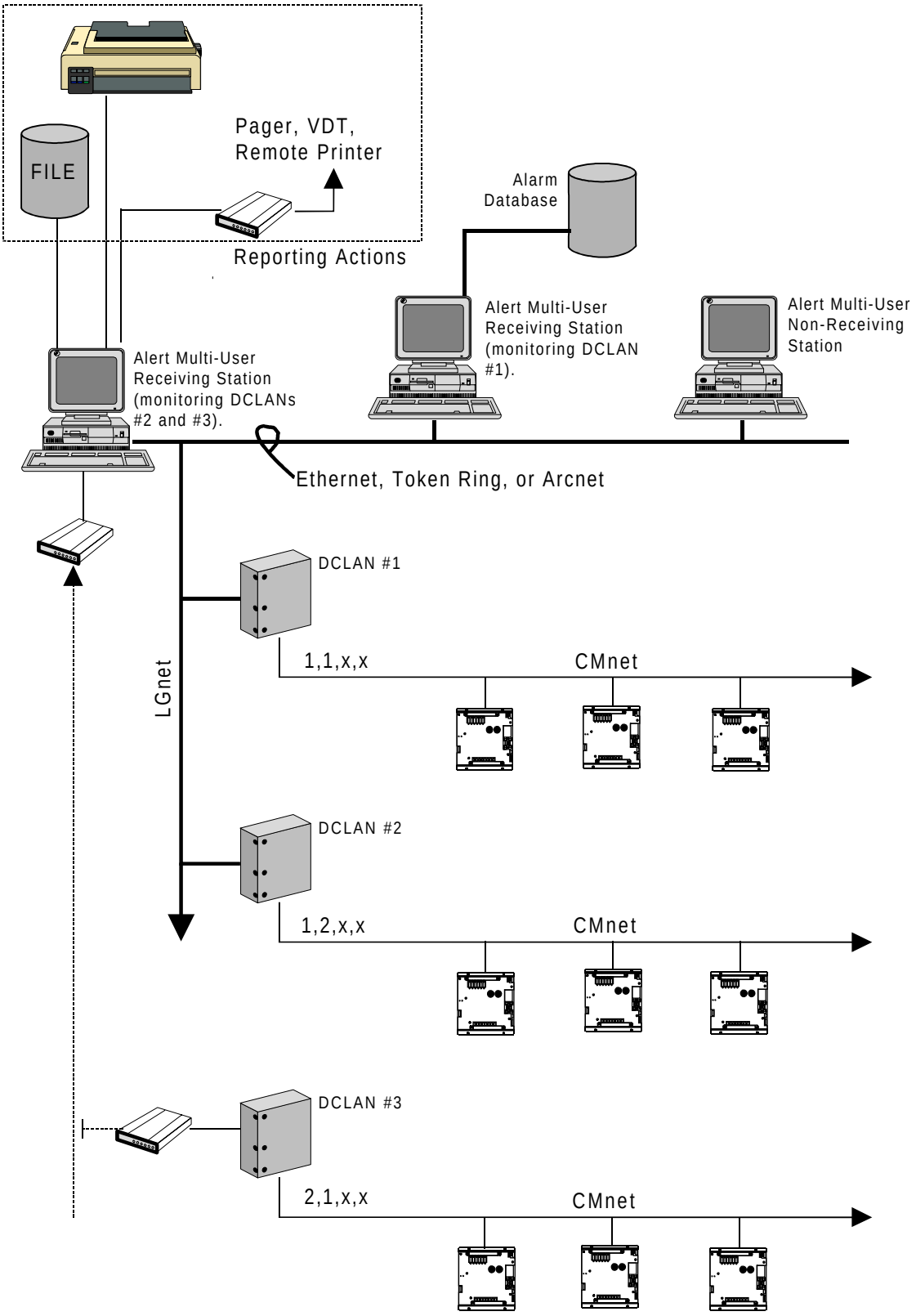


Figure 8-3: Alert EL Multi-User Configuration

It is also possible to use Alert EL Single-User and Alert EL Multi-User on the same network. See figure 8-5 on page 8-10 for an example of this type of configuration. *Note that if stations monitor the same console, they must share the same database*. Otherwise, one station could receive an alarm and the other would have no record of it ever occurring. In the example shown in figure 8-5, the databases and connection configurations could be set up to monitor different Systems. However, they could also be set up to monitor the same Systems.

Connection Configuration

With Alert EL Multi-User, multiple gateway modules do not have to report alarms to the same receiving station (i.e., Workstation). Since the database is shared, one gateway module can call one receiving station with alarms, while another gateway module can call a different receiving station with alarms. *However, one gateway module should not be set up to call two different receiving stations.* If this occurs, the alarm information will be duplicated in the Alert database. See Figure 8-4.

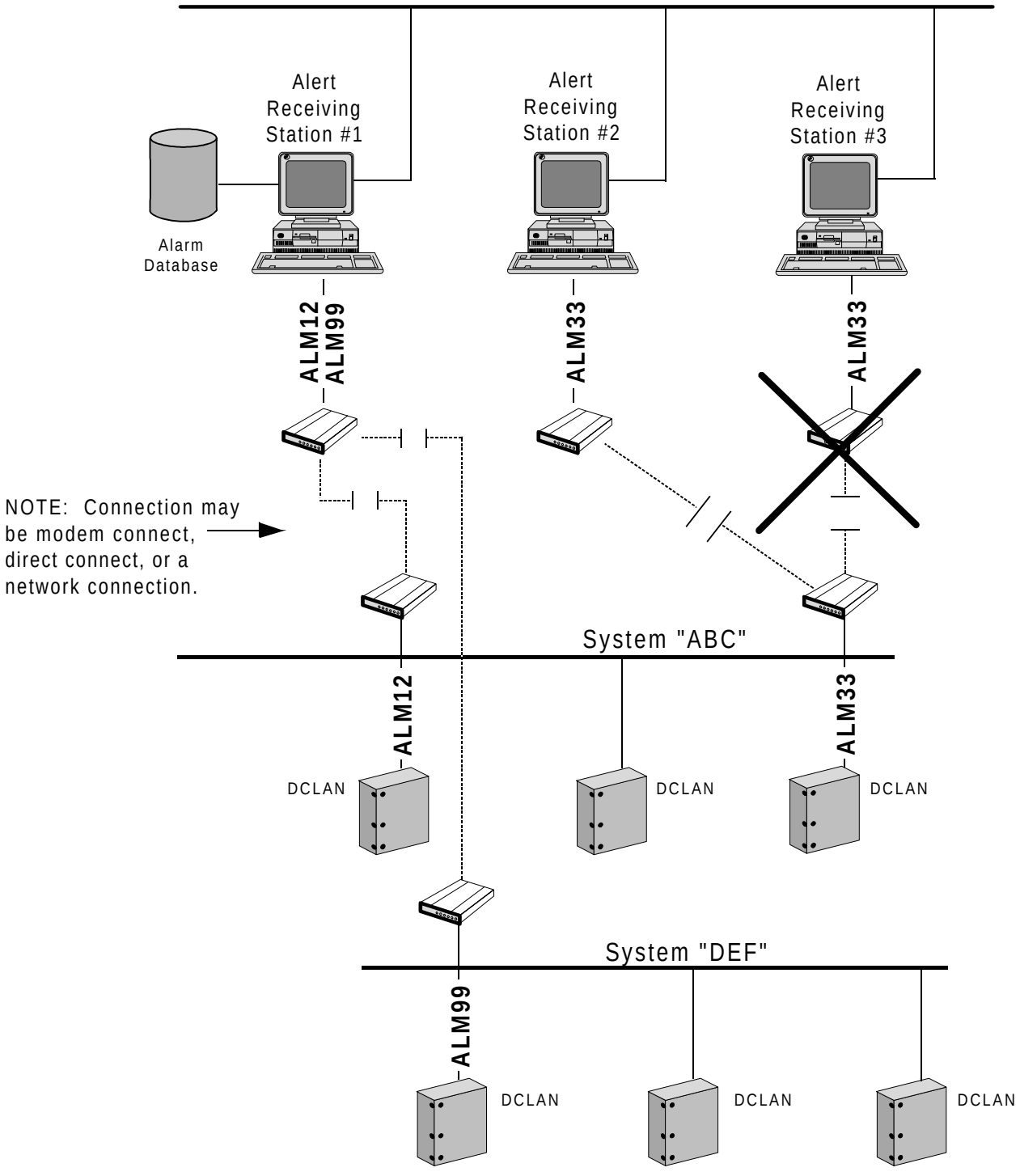


Figure 8-4: Gateway Modules Set Up to Send Alarms to Stations

Network Router Configuration

When Alert EL Multi-User stations communicate through a network router, a unique NetBIOS name must be given to each station. This name is used by the network router's host file, which matches the station's name to its IP address. The Alert EL station's NetBIOS name must be entered in the **alc.ini** file as the **NetBIOSName** setting, and in the router's host file across from the station's IP address. Refer to "The alc.ini File" section on page 8-16 for more information.

NOTE If Scope is being used, then the three-character Scope ID should be appended to the station's NetBIOS name in the router's host file. The Scope ID should **not** be added to the name entered in the **NetBIOSName** setting in the **alc.ini** file.

Ramifications of Using Alert EL Multi-User

Because multiple stations can coexist on a network and share a single database, any changes to the state of an alarm or changes to the database immediately affect all other Alert EL stations on the network.

A shared database has several advantages:

- Operators can immediately view up-to-date information regarding database changes and alarms' change of state.
- Gateway modules do not have to report alarms to the same receiving station (i.e., Workstation), which means that Reporting Actions can be distributed between receiving stations to reduce serial usage and network slow-down.
- Multiple stations that have access to the database mean that multiple operators can handle alarms simultaneously.

Because multiple users may be accessing the database and handling alarms at the same time, there are some issues that operators should be aware of:

- Alert EL Multi-User restricts record access to one operator at a time. If an operator attempts to open the editing pop-up for a record while another operator already has it open, Alert EL will display an error message. Only when an operator has closed the editing pop-up for the record can others access

that record. This does *not* mean that operators cannot perform edits to other records in the database – only records that are currently being edited by other operators.

- Any action performed on an alarm from a multi-user station will impact the other multi-user stations. This means that an operator could see alarms acknowledged, deleted, or closed without any action on their part. This also impacts alarms that require an action to change to the closed state. When one operator performs the required action, the alarm will be shown as closed across the network.
- Because the database may be located on a separate machine from the stations and is accessed across a network, database access is slower than Alert EL Single-User.

Commands That Affect Other Stations

Below is a list of commands that have an impact on other stations when using Alert EL Multi-User. Some commands will affect other stations in less obvious ways than other commands.

- **Configure-Database**
- **Actions-Acknowledge**
- **Actions-Delete**
- **Actions-View Reporting Status**
- **Actions-Acknowledge All in View**
- **Actions-Delete All in View**

Database Concerns

Introduction

Alert EL does not remove Closed alarms from the database until they are deleted (**Actions-Delete** command). Over time, the database may become quite large if alarms are not manually deleted. It is recommended that a backup copy of the database be made periodically, especially before deleting alarms.

Multiple Databases

Multiple stations can exist on a network that use different databases as long as the stations that are monitoring the same console are sharing the same database. Otherwise, one station could receive an alarm and the other would have no record of it ever occurring.

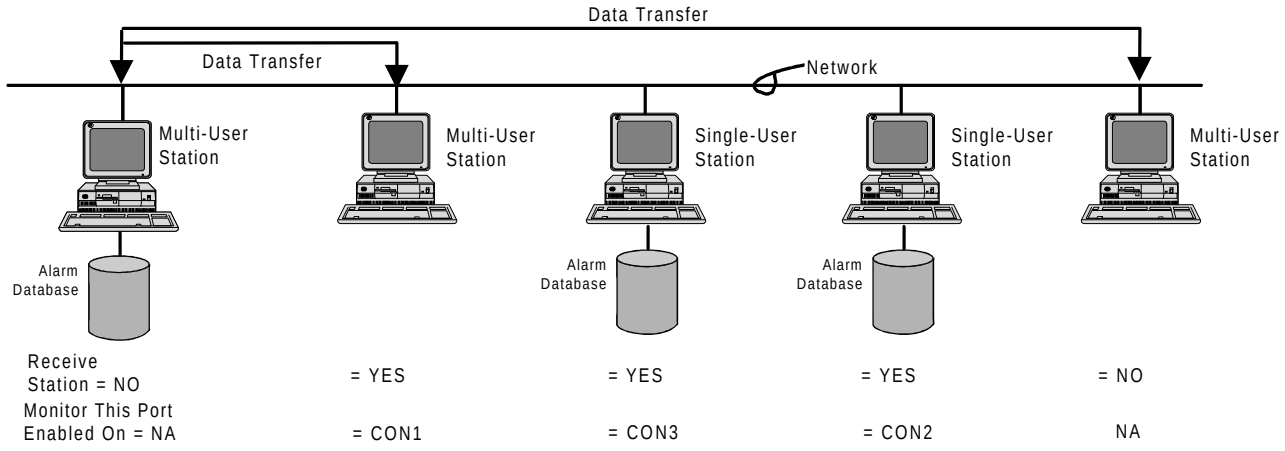


Figure 8-5: Alert EL Single-User and Alert EL Multi-User On Same Network

The figure above shows multiple stations on the same physical cable with two of the stations using Alert EL Multi-User and the other two using Alert EL Single-User. The two Alert EL Multi-User stations are reading and writing data to the database files, which are located on a third multi-user station. The two Alert EL Single-User stations each have their own database.

In the example above, the databases and connection configurations could be set up to monitor different Systems. However, they could also be set up to monitor the same Systems.

Database Location

When Alert EL was launched after the initial installation, it prompted for a database directory name.

- It is strongly recommended that you store the database information in a subdirectory off the directory that Alert EL is installed to (for example, **c:\ss2000\alrtdata**). If the database files are stored in the main Alert EL directory, database archiving and restoration is extremely difficult because all of the database files will be intermingled with the Alert EL program files.
- Furthermore, *it is strongly recommended that the database directory only stores Alert database files* (i.e., two programs should not share the Alert database directory). If the Alert database files become mixed with another program's files (for example, Trend Historian's database files), it's possible that files could be overwritten or deleted during backups or restorations.

The database path name and directory information is saved in the [Alert] section of the **alc.ini** file (DBPath setting), where it can be changed at a later date, if necessary.

Backing Up the Database

The **Backup & Restore Utility** program backs up the Alert database files (using the industry standard PKZIP software). It also backs up the Trend Historian database files and the SiteScan 2000 for Windows System files for the current System.

The Backup & Restore Utility program is fully automatic and will span multiple floppy disks for large databases. Use this utility also to restore back-up files.

After the database is copied to the floppy drive, you may delete database information within Alert EL that is no longer needed. **Any deletions must be performed from Alert EL, *not the database directory*. *Never***

delete an amsdbd.xxx file from DOS or File Manager. For more information about the Backup & Restore Utility, refer to the *SiteScan 2000 for Windows User's Guide*.

Restoring the Database

The **Backup & Restore Utility** program can be used to restore Alert database files that were backed up using this utility. It also restores Trend Historian database files and SiteScan 2000 for Windows System files. For more information abou the Backup & Restore Utility, refer to the *SiteScan 2000 for Windows User's Guide.*

Alert Database Utility

The Alert Database Utility checks for and corrects most problems that may exist in the Alert database. This utility may also compress the database, reducing its size so that it will run more efficiently. Use this utility if you suspect your database may be corrupt, or could run more efficiently. This program is installed when Alert EL is installed on the computer. Double-click the Alert Database Utility icon to display the pop-up.

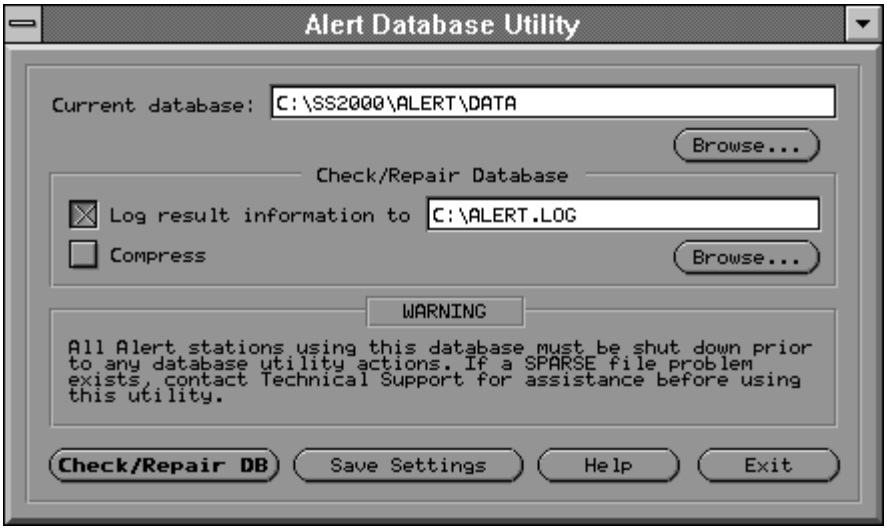


Figure 8-6: Alert Database Utility pop-up

NOTE All Alert EL stations using the specified database **must be shut down** prior to any database utility actions. Failure to do so may result in database corruptions. In addition, if any sparse files exist on the computer please contact Liebert Site Applications before attempting to use this utility. **Sparse files**, which will only be found on network drives, are file chains that contain unallocated blocks of memory. An indication that sparse files might exist on your computer would be a file whose size appears to take up most of the available space on the network drive. For example, a sparse file that is actually 20kb in size might appear to take up to 2GB of space on the disk.

The **Current Database** field always defaults to the **DBPath** setting in the **alc.ini** file. If you wish to repair a database in a different location, enter the location here, or use the **Browse** button to select a file.

The **Log result information to** field allows the operator to specify a filename that will contain a list of any errors reported and corrected by this utility. Use the **Browse** button to select a file from the disk. The utility writes information in ASCII text format, and any text editor (such as Windows Write) can be used to view the file. If the **Log result** checkbox is not enabled, there will be no record of activity performed by this utility.

The **Compress** option, when enabled, will condense the records in the Alert database to make the database run more efficiently. To compress the database, select the **Check/Repair DB** button. The compress is performed automatically after the repair is completed.

The **Check/Repair DB** button begins the database repair and displays the Check/Repair Database pop-up.

Figure 8-7: Check/Repair Database pop-up.

This pop-up provides an updated view of the program's activity, displaying the number of records that were found to be corrupted, and the number of records that were repaired. The **Cancel** button is available on this pop-up while the utility is processing records. If **Cancel** is selected before the program is finished, the program will halt and the database will be restored to the state it was in prior to performing the repair.

CAUTION Once the **Cancel** button is pressed, it may take from a few seconds up to several minutes for the cancel request to be processed. DO NOT attempt to re-boot the computer at any point during the repair. Doing so could cause further damage to the database.

When the repair and compression are complete, the Check/Repair Database pop-up shows the status of the repair. If the **Log result** option has been enabled, the **View Log Report** button becomes active. Select this button to view the errors logged by the utility. Select **OK** to exit and return to the Alert Database Utility pop-up.

The **Save Settings** button allows the operator to save any changes made to the Alert Database Utility pop-up. Note, however, that the **Current Database** field will always show the location in the **DBPath** setting in the **alc.ini** file, regardless of whether **Save Settings** is selected or not. The **Save Settings** button is only active if changes are made to the pop-up.

The **Help** button displays the Alert Database Utility's on-line help file. Select **Exit** to close the pop-up. If changes to the settings have been made but not saved prior to exiting, the operator will be prompted to save those changes before exiting the program.

To Repair or Compress the Alert Database

1. Ensure that all stations using the database are **not** running Alert EL and do not have sparse files. Failure to do so could cause database corruptions.
2. Launch the Alert Database Utility.
3. Select the desired settings on the Alert Database Utility pop-up.
4. Select **Check/Repair DB** to begin the repair and/or compression process.
5. When the repair is complete, select **OK** to return to the Alert Database Utility pop-up or **View Log Reports** to view the error log. If for any reason the utility could not repair the database, contact Liebert Site Applications.
6. Select **Exit** to close the Alert Database Utility. At this point, normal operation of Alert EL may be resumed.

The alc.ini File

Introduction

The **alc.ini** file consists of different sections used by Liebert Corporation Windows applications. Only those **alc.ini** settings which are associated with running Alert EL, which do not appear in the INI Configuration Manager and which cannot be changed from within Alert EL are included in this section. For information about settings in the INI Configuration Manager, refer to the *SiteScan 2000 for Windows User's Guide*.

NOTE The contents of the **alc.ini** file are not case sensitive.

[Alert] Section

Station=name This setting assigns a name to the station being used. With Alert EL Multi-User, this setting is particularly important because no two stations on a network can have the same station name. When Alert EL is launched for the first time after installation, it prompts the operator for the station name. After Alert EL is run for the first time, the station name can only be changed from the **alc.ini** when Alert EL is not running.

DBPath=path This setting locates the database directory, where all the database files are stored. When Alert EL is launched for the first time, it prompts the operator for the database location path name. After Alert EL is run for the first time, the database path name can only be changed from the **alc.ini** when Alert EL is not running. This setting should be the same for all stations on an Alert EL Multi-User network which share the same database.

DefaultStandardAlarmID=name This setting allows the operator to change the default template name for unconfigured old-style alarms. This setting is not required to be set from the **alc.ini** unless a default override is required. The default name is originally set to "A". If this setting is changed, this name must also be changed in the **Alarm ID** field of the default template ***OR***, if instance records already exist that use the

default template name, a new Alarm record must be created with this name as an Alarm ID. The default template name should be no more than four characters, or Alert EL will truncate it when the old-style alarm text number and System name are appended.

DefaultStandardMsgID=name This setting allows the operator to change the default template name for unconfigured old-style messages. This setting is not required to be set from the **alc.ini** unless a default override is required. The default name is originally set to "M". If this setting is changed, this name must also be changed in the **Alarm ID** field of the default template ***OR***, if instance records already exist that use the default template name, a new Alarm record must be created with this name as an Alarm ID. The default template name should be no more than four characters, or Alert EL will truncate it when the old-style message text number and System name are appended.

DefaultStandardTrendID=name This setting allows the operator to change the default template name for unconfigured trends. This setting is not required to be set from the **alc.ini** unless a default override is required. The default name is originally set to "TREND". If this setting is changed, this name must also be changed in the **Alarm ID** field of the default template ***OR***, if instance records already exist that use the default template name, a new Alarm record must be created with this name as an Alarm ID. If the default template name is more than four characters, Alert EL will truncate it with the System ID if the System ID is being appended (see DefaultStandardSysAppend below).

DefaultStandardDSRID=name This setting allows the operator to change the default template name for unconfigured daily status reports (DSRs). This setting is not required to be set from the **alc.ini** unless a default override is required. The default name is originally set to "STATUS". If this setting is changed, this name must also be changed in the **Alarm ID** field of the default template ***OR***, if instance records already exist that use the default template name, a new Alarm record must be created with this name as an Alarm ID. If the default template name is more than four characters, Alert EL will truncate it with the System ID if the System ID is being appended (see DefaultStandard-SysAppend below). This setting affects all stations on an Alert EL Multi-User network.

DefaultStandardSysAppend=Y or **N** This setting appends the three-character System ID to default template names for old-style alarms, messages, trends, and DSRs. The System ID truncates the default template name when it is appended. For example, "A" will be

"ASSS####" (where *SSS* is the System ID and *####* is the text number). This setting is not required to be set from the **alc.ini** unless a default override is required.

ErrorAlarm=name This setting allows the operator to change the default name for bad alarms. Bad alarms occur when Alert EL receives alarms that it cannot handle or display properly. This could be caused by Systems or Sites not configured in the database. These alarms are logged in an **alert.err** file (located in the same directory as the Alert EL executable). Alert EL informs the operator of bad alarms by displaying the alarm in Alert EL with an Alarm ID of "ALERTERR". This setting is not required to be set from the **alc.ini** unless a default override is required. If this setting is changed, this name must also be changed in the Alarm ID field of the template ***OR***, if instance records already exist that use the default template name, a new Alarm record must be created with this name as an Alarm ID. If the default name identified here is more than eight characters, it will be truncated in Alert EL.

NetBIOSName=name This setting allows the operator to specify the NetBIOS name of the Alert EL station. This setting is not required unless Alert EL Multi-User stations are communicating through a network router. In these cases, a specific name is required in order for the station to be identified in the router's host file. The NetBIOS name can be up to thirteen characters in length. If a name is entered that is longer than thirteen characters, the name will be truncated. For more information, see the "Network Router Configuration" section on page 8-8.

[Logger] Section

GCMPOLLRTC=# This setting defines the maximum number of DCLANs which Alert Server polls for alarms. When this setting is set to greater than one, Alert Server polls each DCLAN in round-robin fashion. The default is 1 and the maximum is 15. This setting is used only for systems with multiple DCLANs. If none of the GCM POLL settings are defined, the Alert Server only checks the DCLAN defined as "GCMmaster" for alarms.

* * *

9 Appendix A

Old-Style Alarms

Alert EL can receive and display alarms generated from old-style Alarm and Message microblocks, in addition to alarms generated by Alert microblocks. The following restrictions apply to using old-style Alarm and Message microblocks:

- Alarm and message microblocks are limited to less than eight different alarms and less than eight different messages per FB.
- Old-style alarms and messages are time-stamped with the time that the alarm is received by Alert EL, not the time the alarm was generated.
- Old-style alarms and messages cannot return to normal. Therefore, an old-style alarm will remain in the Active state in Alert EL until all its requirements are fulfilled and it is closed.
- Old-style alarms and messages cannot transmit latched data or time input overrides from the FB.
- Old-style alarms and messages cannot be designated as "non-critical" and are treated as "critical" by default.
- Alarm and Message microblocks are not supported by modules containing Exec 5.x or later firmware.

Old-style alarms can be preconfigured in Alert EL's database with special Alarm IDs (see the "Preconfiguring Old-Style Alarms" section on page 9-6). These IDs reflect whether the alarm is an Alarm or Message as well as the corresponding text number.

If old-style alarms are not preconfigured in the Alert database, Alert EL still logs them as instance records. In order to do this, Alert EL must associate each incoming alarm with an Alarm ID. Since the four old-style alarms (Alarms, Messages, Trends, and Daily Status Reports) only have a System and a text number associated with them, Alert EL creates a unique Alarm ID to successfully log the alarm. This ID is created from a combination of the associated old-style alarm/message text number, the System ID (if desired), and an existing Alarm ID "template". Note that if Alert EL receives an unconfigured alarm and does not have a corresponding template, the unconfigured alarm is logged in the **alert.err** ASCII file as a bad alarm. Alert EL informs the operator of bad alarms by displaying them with the Alarm ID of "ALERTERR".

Templates

When the Alert database is initially created, several template alarm records are added to the Alarms table. These alarm records are identified as templates by their Alarm ID. Each template serves a specific purpose.

Table 9-1. Template Names for Unconfigured Alarms

Type of Alarm	Template ID
Old-Style Alarm	A
Old-Style Message	M
Daily Status Report	STATUS
Trend Report	TREND
Unconfigured Alert Alarm	DEFAULT
Bad Alarm	ALERTERR

When an unconfigured alarm is received, Alert EL creates a unique ID for the alarm using the appropriate template. The new Alarm record that is created is used to log the alarm and all future alarms of this ID. The operator may further configure the Alarm record with more descriptive Multiline text, Security levels, etc. (see the "Alarms" section on page 2-31 for information on configuring Alarm records). However, once the Alarm ID is automatically created, it cannot be changed by the operator unless the corresponding instance records are deleted from the database.

These templates are all initially assigned to their corresponding Group. Be aware that these templates can be deleted.

A and M Templates

When Alert EL receives an unconfigured old-style alarm it attempts to log the alarm under an Alarm ID made up from the "A" template and the alarm text number that was originally assigned to the alarm. For example, an old-style alarm using alarm text #65 would be logged as "A65". This works in the same manner for old-style messages, except messages use the "M" template. An old-style message using the message text #133 would be logged as "M133". The original "A" or "M" template that Alert EL used to create the new alarm records remains the same.

NOTE Lock reports use the "A" template and the first bit position in the Alarm microblock on order to create the Alarm ID of "A1". Lock reports are generated whenever a parameter is locked on the Parameter Page.

STATUS and TREND Templates

When Alert EL receives a Daily Status Report (DSR) or Trend, it attempts to log the Status or Trend under the Alarm ID made from the associated templates. Therefore, the alarms that are logged are simply "STATUS" and "TREND". New Trend Reports are *also* forwarded to Trend Historian if it is enabled (see the *SiteScan 2000 for Windows User's Guide*). Alert EL can be set to ignore certain types of reports with the **Log alarms of this type** button on the Add / Change Alarm pop-up.

DEFAULT and ALERTERR Templates

The DEFAULT template is used when Alert EL receives an unconfigured alarm generated by an Alert microblock. See the "Unconfigured Alarms" section on page 6-3 for information on how Alert EL handles unconfigured Alert microblock alarms.

The ALERTERR template is used when Alert EL receives an unconfigured alarm that it cannot display properly. See the "Bad Alarms" section on page 6-4 for information on how Alert EL handles bad alarms.

DefaultStandardSysAppend

The situation may occur where old-style alarms from different Systems are using the same alarm text number. If the A#### method described above was used to handle these situations, only one Alarm record is created in the Alarms table, although two instance records are still logged. For example, if an alarm used alarm text #88 from System ABC and another alarm used alarm text #88 from System XYZ, Alert EL creates only one Alarm record with the Alarm ID of A88, even though the two alarms would both be displayed separately in the Main View. Because only one Alarm record was created, Alert EL would use the same security levels and other configurations for both alarms.

In some cases, the single Alarm record configuration is adequate to handle both alarms. However, to avoid this situation, use the **DefaultStandardSysAppend alc.ini** setting. When an unconfigured old-style alarm is received, this causes Alert EL to append the three-character System ID to the Alarm ID A#### format before appending the alarm text number. Alert EL creates an Alarm and instance record using the Alarm ID format ASSS#### (where "SSS" is the three-character System ID).

The **DefaultStandardSysAppend** setting must be set to **YES** in order for the three-character System ID to be appended to the Alarm ID. This allows Alert EL to create two different Alarm records for unconfigured alarms using the same text number from different Systems. For example, the alarm from System ABC using alarm text #88 would have the Alarm ID "AABC88", and the alarm from System XYZ would have the Alarm ID "AXYZ88". If **DefaultStandardSysAppend** is set to **NO**, Alert EL will not append the System ID and only one Alarm record will be created in the Alarm table.

This **alc.ini** setting also applies to Status and Trend Reports. Status and Trend Reports from different Systems can only be differentiated from each other by using the **DefaultStandardSysAppend** setting. For example, a Status from System ABC would have the Alarm ID of "STATUABC" and the Status from System XYZ would have the Alarm ID of "STATUXYZ".

Changing Template Names

Template names can be changed using the following settings in the **alc.ini** file. These settings are not required to be set from the **alc.ini** unless a default override is required. If the template name is changed in the **alc.ini** file, this name must also be changed in the **Alarm ID** field of the template ***OR***, if instance records already exist that use the template name, a new Alarm record must be created with this name as an Alarm ID. These settings affect all stations on an Alert EL Multi-User network.

NOTE If the default template name is more than four characters, Alert EL will truncate it with the System ID if the System ID is being appended (see the "DefaultStandardSysAppend" section on page 9-4).

- **DefaultStandardAlarmID=name** This setting allows the operator to change the default template name for unconfigured old-style alarms. The default name is originally set to "A".
- **DefaultStandardMsgID=name** This setting allows the operator to change the default template name for unconfigured old-style messages. The default name is originally set to "M".
- **DefaultStandardTrendID=name** This setting allows the operator to change the default template name for unconfigured trends. The default name is originally set to "TREND".
- **DefaultStandardDSRID=name** This setting allows the operator to change the default template name for unconfigured daily status reports (DSRs). The default name is originally set to "STATUS".

Preconfiguring Old-Style Alarms

Because Alert EL uses a standard method of assigning Alarm IDs to unconfigured old-style alarms (as discussed in the "Templates" section on page 9-2), it is possible to preconfigure old-style alarms in the Alarms table so that when the alarms are received by Alert EL, they are not treated as unconfigured. Preconfiguring these alarms allows the operator to take full advantage of Alert EL's alarm handling features (for example, assigning Reporting Actions, Multiline text, etc.).

Old-style alarms and messages may be easily preconfigured by using the System Alarm Text Import feature. This feature automatically creates alarm records from existing **sysalarm.txt** and **xxxalarm.txt** files. For information about this feature, refer to the "System Alarm Text Import" section on page 2-35. Note that if the DefaultStandardSysAppend setting is set to Yes, the imported alarms will have the System name as part of the alarm ID.

To individually preconfigure old-style alarms (message, trends, etc.), first use the **Copy** command to copy the appropriate template for the alarm you are preconfiguring (for example, if preconfiguring an old-style message, copy the "M" template once). After copying the template to create a new alarm record, use the same method as described in the "Alarms" section on page 2-31 in order to configure the new alarm record.

- For old-style alarms and messages, assign Alarm IDs using the "A" (or "M") template and the text number.

  Example: An old-style alarm that used text number "12" would have an Alarm ID of "A12".

  If DefaultStandardSysAppend has been set to "YES" in the **alc.ini**, then assign Alarm IDs using the "A" (or "M") template, the three-character System ID, and the text number.

  Example: An old-style message that used text number "64" and was from System ABC would have an Alarm ID of "AABC12".

- For Trend reports and Status reports, it is not necessary to preconfigure them unless you wish to differentiate between reports from different Systems. If you want to differentiate, set DefaultStandardSysAppend setting in the **alc.ini** file to "YES". Then assign Alarm IDs using the "TREND" or "STATUS" template and the three-character System ID.

Example: A Trend report from System ABC would have an Alarm ID of "TRENDABC". A Trend report from System XYZ would have an Alarm ID of "TRENDXYZ".

NOTE When preconfiguring old-style alarms, keep in mind that Trend and Status Reports should have the field code of %28 in the **Multiline text** field. This is because %28 represents the trend or status information for the Trend or Status Report. If it is not included, Alert EL will not be able to display the trend or status information. The operator may add to the **Multiline text** field and perform any other configuration of the alarm in order to utilize Alert EL's features. For more information about field codes, refer to the **Formatting with Field Codes** chapter.

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10 Appendix B

Alert EL Error Messages

Error messages that the operator might encounter while working with Alert EL are listed below in alphabetical order. For error messages that the operator might encounter while testing Reporting Actions, see the "Reporting Action Error Messages" section on page 10-14.

"A copy of this record cannot be made."

This message appears in the Configuration pop-up when Alert EL is unable to make a copy of the selected record type. Possible causes are duplicate records given by names or IDs with "Copy:*n*" in them or the number of copied records exceeds 100.

"A database file could not be accessed. The file size may exceed the Windows buffer size for 32-bit file access. You may need to disable the 32-bit file access in Windows. See the Alert EL User's Guide for more information."

This message occurs when an alarm is received if a database file has grown too large for the 32-bit file access buffer or cannot be found. After the operator acknowledges this message, it may re-appear several times in rapid succession. Continue to acknowledge the message by picking **OK** until the message does not reappear. Then, exit Alert EL immediately and disable Windows 32-bit file access to try to correct the problem. To do this, select the 386 Enhanced icon in the Windows Control Panel. Select the **Virtual Memory** button, then select **Change**. Make sure that the **Use 32-Bit File Access** option is *not* selected. Select **OK**, then exit the Control Panel and restart Windows.

"A local AMSDB.DBD schema file was found in the database directory. Do you want to use it instead?"

This message may occur when working with the Alert Database Utility. Normally, the user should always answer **No**. This message occurs when the directory indicated in the utility's **Current database** field contains the **amsdb.dbd** schema file. This file is used in conjunction with the database. The main schema file will always be found in the Alert EL program directory, not the database directory. When executing, Alert EL will always use the main schema file in the Alert EL program directory. Likewise, the Alert Database Utility should also use the main schema file to repair the database. To use the file in the database directory, pick **Yes**. To use the schema file in the Alert EL program directory, pick **No**. Pick **Cancel** to cancel the repair process on this database.

"A record in the database could not be initialized. Database access not allowed."

When a database is created or opened, certain records require write access. If Alert EL was unable to gain write access to these records the above error message will default. For Alert EL Multi-User situations, make sure that the 'Alert_User' user name has complete read/write capabilities in the installed AMSDB database through the **admin.exe** utility.

"An unexpected database error (####) occurred."

Alert EL encountered database access problems it was not expecting. Note the error number given by "####" and attempt the operation again. If the problem persists the database may be corrupt and a previously backed up copy of the database may need to be restored.

"An unexpected error occurred during a record write operation."

This is a generic error that notifies the operator of an unanticipated error while performing a database write operation during record configuration. Attempt the operation again. If a second attempt does not clear the problem, close and restart Alert EL. If the problem still exists after restarting Alert EL, the database may be corrupt. Contact Liebert Site Applications for assistance.

"Database access is currently restricted due to other stations attempting to open the database. Please try again."

This message may occur if several multi-user stations are attempting to access the database at the same time. The Alert Database Path pop-up will appear when this message is acknowledged. Select another database to access, or select OK to attempt to access the same database. Try the operation again.

"Database Open Failed. The database cannot be created or opened."

Alert EL's database was unable to open successfully. The database may be corrupted or the disk may be full. Attempt to relocate the database by moving the files and altering the "DBPath" **alc.ini** setting. Restart Alert EL. If the problem has not cleared, the database may have to be returned to Liebert Corporation for attempted restoration.

"Low memory. The database cannot be opened."

This error is displayed while attempting to create a different Alert database. A large amount of memory is required to perform the create operation and Alert EL was unable to obtain the necessary resources to do so. Stop Alert EL and quit any unnecessary Windows applications before proceeding.

"NetBIOS Error! Alert EL network communications will be unavailable until this computer is rebooted."

This message will appear in Alert EL Multi-User environments when Alert EL has previously crashed on the station in error. If Alert EL Multi-User is unable to perform a controlled shutdown, the Alert EL-to-Alert EL communications on an Alert EL Multi-User network will not be activated. To correct the problem, exit Alert EL and exit Windows. Reboot the computer and attempt a reload of Windows and Alert EL.

"No default printer was found. Use the Control Panel to install and select a default printer."

This error occurred because the operator tried to select a printer using the **File-Print Setup** command, or tried to configure a new Parallel Printer Reporting Action, and no default printer was configured in

Microsoft Windows Control Panel. Configure a default printer using Windows Control Panel and attempt the operation again.

"One or more alarm records with outstanding reporting actions have been deleted. The associated reporting actions have been aborted."

This message occurs as a result of a Delete All operation that deleted alarms still having uncompleted Reporting Actions. The Reporting Actions were aborted.

"One or more alarms could not be acknowledged because of security reasons. Please acknowledge these alarms individually."

This message occurs as a result of an Acknowledge All operation when one or more of the alarms that was examined had a security level higher than that of the acknowledging operator. This message informs the user that those alarms have not been automatically acknowledged.

"Only 'XXXX' records can be processed at one time."

This message occurs when the operator has selected the **Acknowledge All** or **Delete All** command from the **Actions** menu, and the number of alarms that are to be acknowledged or deleted is at or near the number indicated. This is an informational message only. After selecting OK, Alert EL will continue processing the maximum amount of records possible. It may be necessary to perform the **Acknowledge All** or **Delete All** action again to acknowledge or delete any records that were not processed the first time.

"OPERATOR NAME' is the owner of one or more log entries. Please archive the commented log entry before proceeding."

An operator attempted to delete an Operator record that was currently attached to alarm instance records. Operator records are attached to instance records when they acknowledge alarms. To delete the operator record, all of the instance records that have been acknowledged by that operator must be located and deleted.

"Out of heap space! Shut system down.. NOW!"

This message may appear if Alert EL runs extremely low on memory while handling alarms and launching reporting actions. If this message

appears, shut Alert EL down immediately and remove any unnecessary applications from memory. It is a good idea to quit and restart Windows to free any fragmented memory left by other applications.

"Simulated alarms cannot be passed to SiteScan 2000 for Windows for examination."

This message will appear if the operator attempts to view the SiteScan 2000 for Windows graphic and/or Status Page for an alarm that was simulated using the Eikon Simulator. It is not possible to view the SiteScan 2000 for Windows graphic or Status Page for a simulated alarm.

"SiteScan 2000 for Windows cannot be launched."

Alert EL attempted to launch SiteScan 2000 for Windows and failed due to unknown reasons. If the condition occurs, stop and restart Windows with as little applications as possible. Re-launch Alert EL and attempt to re-launch SiteScan 2000 for Windows.

"SiteScan 2000 for Windows cannot be located."

This error occurs when an operator attempted to launch and switch to SiteScan 2000 for Windows from Alert EL. Windows was unable to locate and launch the **ems.exe** executable. Make sure that the DOS PATH variable includes the **ems.exe** directory.

"System memory is too low to start SiteScan 2000 for Windows."

Due to low system resources, Windows was unable to launch SiteScan 2000 for Windows when the operator selected the SiteScan 2000 command. Close unnecessary applications from Windows and attempt to re-launch SiteScan 2000 for Windows.

"System memory is too low to start the Alert Server program. Alert EL is running as a non-receiving station."

Alert EL attempted to launch the Alert Server program and failed due to low system memory. Close all unnecessary Windows applications and attempt to re-launch the Alert Server program by selecting the **Receive Station** option in the **Configure** menu. If the problem persists, shut down Windows, reboot the computer, restart Windows and Alert EL.

"The alarm ID 'ALARMID' already exists in the database."

The operator attempted to add a non-unique alarm record to the database. Select a unique alarm ID to solve the problem.

"The 'ALARM ID' alarm is being referenced by existing log records and cannot be deleted."

The operator is unable to delete alarms that are currently being referenced by log alarm instance records. This message results when an operator attempts to delete an alarm without first deleting all of the instance records that reference it.

"The Alert Server program cannot be launched. Alert EL is running as a non-receiving station."

Alert EL attempted to launch the Alert Server program and failed due to unknown reasons. If condition occurs, stop and restart Windows with as little applications as possible. Re-launch Alert EL as a receiving station.

"The Alert Server program 'LOGGER.EXE' cannot be located. Alert EL is running as a non-receiving station."

Alert EL cannot start the Alert Server program. The directory where it resides must be in the DOS PATH variable for Windows to locate and launch the program. If this is not the case, add the **c:\ss2000** directory (or the directory where **logger.exe** is located) to the DOS PATH environment variable and restart the computer.

"The AMSDB.DBD database schema file cannot be found in 'PROG DIRECTORY'. The database cannot be created or opened."

In order for Alert EL to create a valid database, the **amsdb.dbd** file must be located in the same directory as the Alert EL executable (**alert.exe**). Make sure that the file is in its proper place and attempt to recreate the database by restarting Alert EL.

"The 'C:\DIRECTORY' database path does not exist. Do you wish to create it?"

Alert EL Single-User attempts to open a valid database when it starts up. It searches for the database via the "DBPath" **alc.ini** setting. If this setting points to a path that does not exists, Alert EL will ask the operator if it should create the directory. If yes, is chosen, Alert EL will attempt to create the directory and create the corresponding database.

"The database could not be accessed because of a write protect error."

Make sure the disk is not full or write-protected. Close and restart Windows and attempt the operation again.

"The database could not be accessed because of an adapter hardware error."

This error may indicate a hardware problem with your computer. Close Windows, reboot the computer and attempt the operation again.

"The database could not be accessed because of not enough memory."

There was not enough memory available for Alert EL to complete the operation. Close any unnecessary Windows applications and attempt the operation again, or increase the computer's memory and try the operation again.

"The database could not be accessed because of the disk is not ready."

This message may occur if Alert EL is unable to read the disk. Attempt the operation again. If necessary, close Windows and restart the computer.

"The database could not be accessed because the drive is invalid."

Check the **DBPath** setting in the **alc.ini** file and make sure Alert EL is attempting to access the correct drive.

"The database could not be accessed because the file was not found."

Make sure the computer's path is correct and try the operation again. If the path is incorrect, close and restart Windows, then attempt the operation again.

"The database could not be accessed because the lock files could not be opened. Database locking error: ####"

Make sure the disk is not full or write-protected. Close and restart Windows and attempt the operation again. If the problem persists, contact Liebert Site Applications.

"The database could not be accessed because the network is busy."

Ensure that your network connections are correct. Network traffic needs to be reduced. Down-sizing the network may reduce the traffic. If necessary, close Windows and restart your computer.

"The database could not be accessed because the path was not found."

Make sure your computer is using the correct path and that the Alert database files have not been moved. Attempt the operation again.

"The database could not be accessed because too many files are open."

Alert EL was unable to complete the operation because too many files are open at one time. Increase the number of files and buffers in the **config.sys** file and attempt the operation again.

"The database could not be accessed because of too many network sessions."

Make sure that your network is operating properly and attempt the operation again. You may need to increase the number of sessions in the **protocol.ini** file. Close Windows and restart your computer.

"The database in the 'C:\DIRECTORY' directory does not exist. Do you wish to create it?"

The database path pointed to by the "DBPath" **alc.ini** setting exists but does not have a valid database installed. Alert EL will detect this condition on startup and ask the operator if he/she wishes to create a database in that directory.

"The database is currently in use by an Alert EL Single-User station on the network. Access by this Multi-User station is prohibited."

An Alert EL Multi-User station attempted to access a database that is currently in use by an Alert EL Single-User station. A multi-user station cannot access a single-user database.

"The database is currently in use by another Alert EL station on the network. Access by this Single-User station is prohibited."

An Alert EL Single-User station attempted to access a database on the network that is currently in use by another station. Only one single-user station can access a database at a time.

"The 'DB DIRECTORY' database directory is invalid and cannot be created."

Alert EL cannot create the database directory specified in the "DBPath" **alc.ini** setting. Make sure that this setting is correct and that the path name is a valid DOS directory name.

"The driver name 'DRIVER NAME' exceeds 31 characters and cannot be used with this version of Alert."

The name of the driver chosen for the Parallel Printer Reporting Action is longer than the maximum of 31 characters. Choose a driver whose name is 31 characters or less to use this Reporting Action.

"The Main Operator cannot be deleted."

This error is displayed when an operator attempts to delete the Main Operator.

"The operator name already exists in the database."

A duplicate operator name was attempted to be saved while configuring operators. Operators must have unique names. This message will also display when a user attempts to change an existing operators name to a previously defined name.

"The operator 'OPERATOR NAME' cannot be located."

This message appears when an operator attempts to login but the selected operator name does not exist in the database. The only possible cause to this problem is when an operator on another Alert EL station deletes an operator name after the operator from this station displayed the login pop-up but before OK was selected.

"The operator 'OPERATOR NAME' is already logged in at this station."

The operator attempting to login is already logged in on the same station.

"The port name 'PORT NAME' exceeds 31 characters and cannot be used with this version of Alert."

The name of the port chosen for the Parallel Printer Reporting Action is longer than the maximum of 31 characters. Choose a port whose name is 31 characters or less to use this Reporting Action.

"The printer is currently busy. The information could not be printed."

The operator attempted to print the Main View while a Reporting Action was printing to the same printer. Wait until the Reporting Action is finished printing before attempting to print the Main View.

"The printer name 'PRINTER NAME' exceeds 31 characters and cannot be used with this version of Alert. Use the Control Panel to rename the printer or select a different printer from the list."

The name of the printer chosen for the Parallel Printer Reporting Action is longer than the maximum of 31 characters. Choose a printer whose name is 31 characters or less, or rename the printer using Windows' Control Panel to use this Reporting Action.

"The record is currently locked by the station 'STATION NAME'."

The requested record could not be accessed during database configuration because it is currently in use at the specified station. A configuration record cannot be changed while it is in use at another station. Attempt the operation after the other operator has finished working with the record.

"The security level must be between 1 and 100."

This error occurs when an operator attempts to add or change an alarm configuration record that has an invalid security setting. Adjust the security setting to fit within the acceptable range and re-save the record.

"The selected printer was not found. Choose another printer from the Print Setup configuration box or use the Control Panel to reinstall the selected printer."

This error occurs when an operator attempts to print the Main View or use a Parallel Printer Reporting Action on a printer that is not configured in Windows. Reinstall the printer using Windows Control Panel, or select another printer.

"The selected printer was not found and no default printer has been setup. Use the Control Panel to reinstall the selected printer or to install and select a default printer."

This error occurs when an operator attempts to print the Main View or use a Parallel Printer Reporting Action on a printer that is no longer configured in Windows, and no default printer has been configured. Install and configure the selected printer and/or a default printer using Windows Control Panel and attempt the operation again.

"The selected reporting action requires reconfiguration."

The configuration data for a reporting action has been corrupted. Edit the reporting action that caused the error and select OK.

"The station name 'STATION NAME' is currently being used by another station on this netowrk or was left connected following a reboot. Do you still want to connect to the same database?"

This message may appear when Alert EL Multi-User is launched. It indicates either that another station on the network has been started with the same station name, or that this station did not exit Alert EL properly prior to re-starting.

"The 'STATION NAME' station name is currently being used by another station on this network with the specified database."

This message may appear when Alert EL Multi-User is launched. It indicates that another station on the network has been started with the same station name. Since no two stations on a network can have the same name, Alert EL will ask the operator to enter a different station name prior to continuing with the startup procedure. Alert EL makes every attempt to determine if the secondary station is actually up and running.

"The supplied password is incorrect."

This error message appears if an operator enters an invalid password while attempting to login or when a password re-verification is required.

"The time zone offset must be between -12 and +12 hours."

An invalid time zone offset has been entered in one of the areas that require a time zone.

"This action name already exists in the database."

This error occurs when an operator attempts to add a non-unique Reporting Action to the database. Select a unique name for the Reporting Action and attempt to re-save the record.

"This alarm is from system ID 'SYSTEM ID' and SiteScan 2000 for Windows is currently on system 'SYSTEM ID'. Please switch SiteScan 2000 for Windows' system to continue."

This error appears when an operator selects the SiteScan 2000 command for an alarm. SiteScan 2000 for Windows is currently monitoring a different System than the alarm's originating System. Adjust SiteScan 2000 for Windows to use the System associated with the desired alarm and re-select the SiteScan 2000 command.

"This operator is currently logged in at station 'STATION NAME' and cannot be deleted."

An attempt has been made to delete an Operator record that is currently logged in at the specified station. The operator must first log out before the record can be deleted.

"This station was unable to lock the database for reading."

This error may occur if Alert EL repeatedly attempts to access the database to read one or more records, and Alert EL was unable to read the information because another station was accessing the database. Alert EL does not attempt this particular read operation again after generating this message.

"This station was unable to lock the database for writing."

This error may occur if Alert EL repeatedly attempts to access the database to write to one or more records, and Alert EL was unable to write the information because another station was accessing the database. Alert EL does not attempt this particular write operation again after generating this message.

"This station was unable to lock the needed record. Either another station has failed during a locking process or the network is down."

An attempt was made to change a database record that cannot currently be accessed by Alert EL for one of two reasons: another workstation may have failed or shut down while attempting to access the record, or the current station is not communicating with the network.

"Virtual array could not be accessed."

This message will only appear in situations where Alert EL's virtual file capabilities are activated. For this to occur, an extremely large number of alarms must be present (> 8000) and Alert EL is unable to create a virtual disk array. The situation is critical in that Alert EL may lose some alarms from its view and not handle them properly. Attempt to shut Alert EL down and determine why the file 'ALVM.$$$' cannot be created in the current directory (i.e. disk space, bad disk, network drive invalid). Once the problem is corrected, restart Alert EL.

"WARNING: The reporting action previously configured for the 'REP ACTION NAME' action cannot be currently located."

A Reporting Action that was previously configured to use one of the Reporting Action modules cannot be edited because the configured module (.DRA file) was not found and loaded on Alert EL startup. These files have the .DRA extension and should be located in the same directory as the alert executable (**alert.exe**). Once the proper module has been restored, restart Alert EL.

"You do not have the necessary security clearance to do this. You need a security level of at least ## to proceed further."

An operator is not logged in or the operator attempted to perform an action that he/she does not have security clearance for.

Reporting Action Error Messages

Error messages that the operator may encounter while testing Reporting Actions are listed below. They are organized by Reporting Action type, and then in alphabetical order. For more information about Reporting Actions, see the **Configuring Reporting Actions** chapter.

Alphanumeric Pager Error Messages

"Completed successfully but at least one paging action failed."

This message occurs if the Reporting Action is configured to send a message to more than one pager ID, but is unable to contact one or more of the pagers listed.

"Execution failed."

A general error occurred during the execution. Make sure the modem or terminal is functioning properly, the connections between the modem/terminal, the computer and the phone line are not loose, and the computer memory is not low. Device interference or line noise may also be interfering with the modem signals.

"Execution failed: Bad data packet - message length may be invalid."

After repeated attempts, the paging unit was unable to accept the last data packet sent. The message length may have been invalid for the paging unit. Check the message length in the Reporting Action's configuration pop-up. Many paging units only accept 120 or 240 character message lengths. The data packet length will be several characters greater than the message length. Check the paging unit's reference manuals for correct data packet lengths.

"Execution failed: Cannot open device or device does not exist."

The device is configured in the Connection Configuration pop-up, but it is not physically connected to the computer. Make sure that the communication device is connected securely to the PC.

"Execution failed: Communication device not responsive."

The modem did not respond after a data stream was sent to it by the Reporting Action. Make sure that the modem is functioning properly. The modem may need to be turned off and back on again and then reset.

"Execution failed: Communication device unknown."

The device needed should be configured to a port in the Connection Configuration pop-up and physically connected to the computer.

"Execution failed: Communication error."

An error occurred during the communication that may have resulted from an incorrect data transmission checksum from line noise or interference. Make sure that the modem and phone lines are functioning properly.

"Execution failed: Communication error due to bad datagram send."

The datagram message was garbled while either sending or receiving and the Reporting Action could not recover from this problem. This error may have resulted from line noise or interference. Make sure that the phone lines are functioning properly.

"Execution failed: Communication error due to Carrier Detect timeout."

A timeout occurred while Alert EL was waiting for a carrier detect notification from the modem. Make sure that the connection is good and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to CTS timeout."

Time expired before the CTS (Clear-To-Send) signal was received back from the receiving modem or direct-connect device. Make sure that the connection is good and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to detected break condition."

A break was detected in the communication connection between Alert EL and the receiving modem or device. Make sure that the connection is good, the phone line is operational, and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to DSR timeout."

Time expired before the DSR (Data-Set-Ready) signal was received back from the receiving modem or direct-connect device. Make sure that the connection is good and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to full transmit buffer."

The data transmit buffer became full and the Reporting Action could not recover from this problem. This error may have resulted from a disconnected modem or phone line. Make sure that the modem and phone lines are functioning properly.

"Execution failed: Communication error due to NetBIOS hardware failure."

Alert EL encountered a serious network problem and could not execute the Reporting Action successfully. The problem may have resulted from the network being down, or the Reporting Action may have been executed on a PC that has a bad or missing network card.

"Execution failed: Could not open communication device."

The requested device was found, but the port was in use by another process during the entire configured cycle time. The number of cycles may need to be increased in the Reporting Action's configuration pop-up.

"Execution failed: Invalid parameters for the given device."

The communication device does not support the parameters selected in the Reporting Action's configuration pop-up. Make sure the baud rate, parity, data bits, and stop bits are correct for that device.

"Execution failed: Modem error due to invalid modem initialization text."

The modem returned an error message from the initialization text. Make sure that the initialization text in this Reporting Action's configuration pop-up is correct. Also make sure that the phone number being dialed

is correct, the phone line is operational, and that the modem is functioning properly.

"Execution failed: No answer from dialed number."

The receiving modem associated with the dialed phone number did not answer in the time allowed and the sending modem was unable to connect. Make sure that the phone line is operational and that the receiving modem is functioning properly.

"Execution failed: No carrier detected."

The modem was forced to hang up due to the carrier signal not being detected or lost, or due to an inactivity for a period of time defined in the modem's automatic timeout register.

"Execution failed: No dial tone detected."

No dial tone was detected by the modem and the communication could not proceed. Make sure that the phone number being dialed is correct, the phone line is operational, and that the modem is functioning properly.

"Execution failed: Out of system resources."

There were not enough Windows system resources to complete the Reporting Action. Close any unnecessary applications and attempt the Reporting Action again.

"Execution failed: Paging action could not be completed."

An error occurred while the Reporting Action was attempting to connect or send information to the paging unit. Make sure that the Reporting Action is configured correctly, the modem and phone lines are functioning properly, and that the paging unit or service is operational.

"Execution failed: Phone line busy."

The dialed phone number was continuously busy during the entire preset cycle time and the sending modem was unable to connect. The number of configured cycles may need to be increased. Make sure that the

phone number being dialed is correct, the phone line is operational, and that the modem is functioning properly.

"Execution failed: Process timed out - possible failed connect."

Time expired before the paging unit responded to the Reporting Action's attempted connection. Make sure that the paging unit is powered up and also supports the PET protocol. Also make sure that the modem is still functioning properly and all connections are secure.

"Execution failed: Process timed out - possible failed login."

Time expired before the paging unit responded to the Reporting Action's attempted login. Make sure that the modem and paging unit are still operational. If the password option was chosen, the password may be incorrect or the paging unit may not support password entries on login. Also, make sure that the paging unit supports the PET protocol.

"Execution failed: Process timed out - possible failed packet send."

Time expired before the paging unit responded to the Reporting Action's last data packet sent. Make sure that the modem and paging unit are still operational. The message length may also have been invalid for the paging unit. Check the message length in the Reporting Action's configuration pop-up. Many paging units only accept 120 or 240 character message lengths. The data packet length will be several characters greater than the message length. Check the paging unit's reference manuals for correct data packet lengths.

"Execution failed: Process timed out - possibly due to no answer from dialed number."

The connection process did not complete in the time defined in the Reporting Action's configuration. Make sure that the modem and phone lines are functioning properly. If the modem is still unresponsive, turn it off and back on again. If everything is working fine, then the configured wait time may need to be increased.

"Execution failed: Requested device is marked as inactive."

The device is configured in the Connection Configuration pop-up, but it is marked as inactive. Make sure that the communication device is configured as active if it is to be used by the Reporting Action.

"Execution failed: Requested device not found on any configured port."

The device needed should be configured to a port in the Connection Configuration pop-up and physically connected to the computer.

"Execution failed: Unable to connect to pager service."

The Reporting Action was unable to get the direct-connect paging unit to respond. The paging unit may not be powered up or may not be connected to the PC with a NULL-Modem cable. Many paging units require a NULL-Modem cable when connected directly to a PC. The paging unit may also not support the PET protocol.

"Execution failed: Unable to login to pager service."

The paging unit did not allow the Reporting Action to login. If the password option was chosen, the password may be incorrect or the paging unit may not support password entries on login. The paging unit may also not support the PET (or TAP) protocol. This Reporting Action only supports paging units that operate under the PET protocol.

"Execution failed: Unable to open device due to invalid handle."

This error message is used for in-house testing and should not occur. In the event that it does, check the amount of memory that is currently available. If the memory is low, close any unnecessary programs that may be running in Windows and execute the Reporting Action again.

"Execution failed: Unable to open device due to non-Alert usage."

The requested device was found, but the port was in use (or the network name was in use) by a non-Alert product during the entire preset cycle time. Check to make sure that other software products that also use the needed port have not failed and that they release control of the port when

not in use. The number of cycles may also need to be increased in the Reporting Action's configuration pop-up.

"Execution failed: Unable to open device due to unavailable NetBIOS hardware."

Alert EL encountered a serious network problem and could not execute the Reporting Action successfully. The problem may have resulted from the network being down, or the Reporting Action may have been executed on a PC that has a bad or missing network card.

"Execution failed: Unsupported device type for this function."

This Reporting Action was incorrectly used with a non-communication device. Make sure that the Reporting Action is configured correctly.

"Execution prevented: Pre-empted by alarm close."

This message will occur if one or more Reporting Actions are scheduled to occur after other actions have completed, and these actions are not required for the alarm to close If the alarm closes before the Reporting Actions are scheduled to occur, this message will appear and the Reporting Actions will not be performed.

ASCII File Write Error Messages

"Execution failed: Could not open the requested file."

The file could not be opened by the Reporting Action during the time allowed for retries. Make sure that the file is not locked by another process or operator and that the path name is correct.

"Execution failed: Information could not be written."

A general error occurred during the execution of the Reporting Action. Make sure that the file is not locked by another process or operator and that the path name is configured correctly. Close all unnecessary programs running in Windows and execute the Reporting Action again.

"Execution failed: Invalid memory allocation."

Windows did not have enough memory available to complete the task. Close all unnecessary programs running in Windows and execute the Reporting Action again.

"Execution failed: Out of system resources."

There were not enough Windows system resources to complete the Reporting Action. Close any unnecessary applications and attempt the Reporting Action again.

"Execution failed: Serious I/O error while writing to the file."

An error occurred while trying to write to the file. Make sure that the file is not locked by another process or operator and that the path name is correct.

"Execution prevented: Pre-empted by alarm close."

This message will occur if one or more Reporting Actions are scheduled to occur after other actions have completed, and these actions are not required for the alarm to close If the alarm closes before the Reporting Actions are scheduled to occur, this message will appear and the Reporting Actions will not be performed.

Numeric Pager Error Messages

"Execution failed."

A general error occurred during the execution. Make sure the modem or terminal is functioning properly, the connections between the modem/terminal, the computer, and the phone line are not loose, and the computer memory is not low. Device interference or line noise may also be interfering with the modem signals.

"Execution failed: Cannot open device or device does not exist."

The device is configured in the Connection Configuration pop-up, but it is not physically connected to the computer. Make sure that the communication device is connected securely to the PC.

"Execution failed: Communication device not responsive."

The modem did not respond after a data stream was sent to it by the Reporting Action. Make sure that the modem is functioning properly. The modem may need to be turned off and back on again and then reset.

"Execution failed: Communication device unknown."

The device needed should be configured to a port in the Connection Configuration pop-up and physically connected to the computer.

"Execution failed: Communication error."

An error occurred during the communication that may have resulted from an incorrect data transmission checksum from line noise or interference. Make sure that the modem and phone lines are functioning properly.

"Execution failed: Communication error due to bad datagram send."

The datagram message was garbled while either sending or receiving and the Reporting Action could not recover from this problem. This error may have resulted from line noise or interference. Make sure that the phone lines are functioning properly.

"Execution failed: Communication error due to Carrier Detect timeout."

A timeout occurred while Alert EL was waiting for a carrier detect notification from the modem. Make sure that the connection is good and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to CTS timeout."

Time expired before the CTS (Clear-To-Send) signal was received back from the receiving modem or direct-connect device. Make sure that the connection is good and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to detected break condition."

A break was detected in the communication connection between Alert EL and the receiving modem or device. Make sure that the connection is good, the phone line is operational, and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to DSR timeout."

Time expired before the DSR (Data-Set-Ready) signal was received back from the receiving modem or direct-connect device. Make sure that the connection is good and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to full transmit buffer."

The data transmit buffer became full and the Reporting Action could not recover from this problem. This error may have resulted from a disconnected modem or phone line. Make sure that the modem and phone lines are functioning properly.

"Execution failed: Communication error due to NetBIOS hardware failure."

Alert EL encountered a serious network problem and could not execute the Reporting Action successfully. The problem may have resulted from the network being down, or the Reporting Action may have been executed on a PC that has a bad or missing network card.

"Execution failed: Could not open communication device."

The requested device was found, but the port was in use by another process during the entire configured cycle time. The number of cycles

may need to be increased in the Reporting Action's configuration pop-up.

"Execution failed: Invalid parameters for the given device."

The communication device does not support the parameters selected in the Reporting Action's configuration pop-up. Make sure the baud rate, parity, data bits, and stop bits are correct for that device.

"Execution failed: Modem error due to invalid modem initialization text."

The modem returned an error message from the initialization text. Make sure that the initialization text in this Reporting Action's configuration pop-up is correct. Also make sure that the phone number being dialed is correct, the phone line is operational, and that the modem is functioning properly.

"Execution failed: No answer from dialed number."

The receiving modem associated with the dialed phone number did not answer in the time allowed and the sending modem was unable to connect. Make sure that the phone line is operational and that the receiving modem is functioning properly.

"Execution failed: No carrier detected."

The modem was forced to hang up due to the carrier signal not being detected or lost, or due to an inactivity for a period of time defined in the modem's automatic timeout register.

"Execution failed: No dial tone detected."

No dial tone was detected by the modem and the communication could not proceed. Make sure that the phone number being dialed is correct, the phone line is operational, and that the modem is functioning properly.

"Execution failed: Out of system resources."

There were not enough Windows system resources to complete the Reporting Action. Close any unnecessary applications and attempt the Reporting Action again.

"Execution failed: Paging action could not be completed."

An error occurred while the Reporting Action was attempting to either connect or send information to the paging service. Make sure that the Reporting Action is configured correctly, and that all phone lines and modems are functioning properly.

"Execution failed: Phone line busy."

The dialed phone number was continuously busy during the entire preset cycle time and the sending modem was unable to connect. The number of configured cycles may need to be increased. Make sure that the phone number being dialed is correct, the phone line is operational, and that the modem is functioning properly.

"Execution failed: Process timed out - possibly due to no answer from dialed number."

The connection process did not complete in the time defined in the Reporting Action's configuration. Make sure that the modem and phone lines are functioning properly. If the modem is still unresponsive, turn it off and back on again. If everything is working fine, then the configured wait time may need to be increased.

"Execution failed: Requested device is marked as inactive."

The device is configured in the Connection Configuration pop-up, but it is marked as inactive. Make sure that the communication device is configured as active if it is to be used by the Reporting Action.

"Execution failed: Requested device not found on any configured port."

The device needed should be configured to a port in the Connection Configuration pop-up and physically connected to the computer.

"Execution failed: Unable to open device due to invalid handle."

This error message is used for in-house testing and should not occur. In the event that it does, check the amount of memory that is currently available. If the memory is low, close any unnecessary programs that may be running in Windows and execute the Reporting Action again.

"Execution failed: Unable to open device due to non-Alert usage."

The requested device was found, but the port was in use (or the network name was in use) by a non-Alert product during the entire preset cycle time. Check to make sure that other software products that also use the needed port have not failed and that they release control of the port when not in use. The number of cycles may also need to be increased in the Reporting Action's configuration pop-up.

"Execution failed: Unsupported device type for this function."

This Reporting Action was incorrectly used with a non-communication device. Make sure that the Reporting Action is configured correctly.

"Execution prevented: Pre-empted by alarm close."

This message will occur if one or more Reporting Actions are scheduled to occur after other actions have completed, and these actions are not required for the alarm to close If the alarm closes before the Reporting Actions are scheduled to occur, this message will appear and the Reporting Actions will not be performed.

Parallel Printer Error Messages

"Execution halted: Aborted by user through the Print Manager window."

The print file generated by the Reporting Action was removed from the print queue and deleted by the operator and the information was not printed.

"Execution failed: Could not access requested printer."

The Reporting Action was attempting to access a printer that was currently unavailable at execution time, or is no longer configured in Windows Control Panel. Check the Windows Print Manager and make sure that the designated printer is still connected and on-line. Make sure that the printer is properly configured in Control Panel.

"Execution failed: Information could not be printed."

An error occurred during the execution of the Reporting Action and the information could not be printed. Make sure that the printer is functioning properly and that all connections are secure. Check the Windows Print Manager and make sure that the designated printer is still connected and on-line, and that no files waiting in the print queue show error messages. Correct any problems that may be found, close any unnecessary programs that may be running in Windows, and execute the Reporting Action again.

"Execution failed: Out of system resources."

There were not enough Windows system resources to complete the Reporting Action. Close any unnecessary applications and attempt the Reporting Action again.

"Execution failed: Print spooler error."

An error occurred with the Print Spooler while the Reporting Action was attempting to send information to the printer. Check the Windows Print Manager and make sure no files have error conditions and that the designated printer is still connected and on-line.

"Execution failed: Print spooler ran out of disk space."

An insufficient amount of disk space on the PC's hard drive was available for use during the execution of the Reporting Action. Free some additional disk space on the hard drive and execute the Reporting Action again.

"Execution failed: Print spooler ran out of memory."

An insufficient amount of memory was available for use during the execution of the Reporting Action. Close any unnecessary programs running in Windows and execute the Reporting Action again.

"Execution failed: Printer is not captured to a port."

This message will occur in Windows 95 or Windows NT if the **Automatic form feed after printing** option is disabled and the shared network printer is not captured to a port. To capture the printer to a port in Windows 95, edit the **Properties** of the desired printer and pick the **Capture Printer Port** option to select a port. Under Windows NT, type the following command at a DOS prompt: **net use *port printername* /P:Y** (where ***port*** is the name of the desired port and ***printername*** is the name of the desired network printer). Then, edit the **Properties** of the printer in Windows NT and assign it to the corresponding port. To release the captured port in Windows NT, enter the following command at a DOS prompt: **net use *port* /D** (where ***port*** is the name of the desired port).

"Execution failed: Serious I/O error while printing to the device."

A data transfer error occurred while the Reporting Action was trying to send information to the designated printer. Make sure that the connection between the printer and the PC is secure and that no device interference is creating line noise.

"Execution prevented: Pre-empted by alarm close."

This message will occur if one or more Reporting Actions are scheduled to occur after other actions have completed, and these actions are not required for the alarm to close If the alarm closes before the Reporting Actions are scheduled to occur, this message will appear and the Reporting Actions will not be performed.

Serial Output Error Messages

"Execution failed."

A general error occurred during the execution. Make sure the modem or terminal is functioning properly, the connections between the modem/terminal and the computer or between the modem and phone line are not loose, and the computer memory is not low. Device interference or line noise may also be interfering with the modem signals.

"Execution failed: Cannot open device or device does not exist."

The device is configured in the Connection Configuration pop-up, but it is not physically connected to the computer. Make sure that the communication device is connected securely to the PC.

"Execution failed: Communication device not responsive."

The modem did not respond after a data stream was sent to it by the Reporting Action. Make sure that the modem is functioning properly. The modem may need to be turned off and back on again and then reset.

"Execution failed: Communication device unknown."

The device needed should be configured to a port in the Connection Configuration pop-up and physically connected to the computer.

"Execution failed: Communication error."

An error occurred during the communication that may have resulted from an incorrect data transmission checksum from line noise or interference. Make sure that the modem and phone lines are functioning properly.

"Execution failed: Communication error due to bad datagram send."

The datagram message was garbled while either sending or receiving and the Reporting Action could not recover from this problem. This error may have resulted from line noise or interference. Make sure that the phone lines are functioning properly.

"Execution failed: Communication error due to Carrier Detect timeout."

A timeout occurred while Alert EL was waiting for a carrier detect notification from the modem. Make sure that the connection is good and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to CTS timeout."

Time expired before the CTS (Clear-To-Send) signal was received back from the receiving modem or direct-connect device. Make sure that the connection is good and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to detected break condition."

A break was detected in the communication connection between Alert EL and the receiving modem or device. Make sure that the connection is good, the phone line is operational, and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to DSR timeout."

Time expired before the DSR (Data-Set-Ready) signal was received back from the receiving modem or direct-connect device. Make sure that the connection is good and that the receiving modem or device is functioning properly.

"Execution failed: Communication error due to full transmit buffer."

The data transmit buffer became full and the Reporting Action could not recover from this problem. This error may have resulted from a disconnected modem or phone line. Make sure that the modem and phone lines are functioning properly.

"Execution failed: Communication error due to NetBIOS hardware failure."

Alert EL encountered a serious network problem and could not execute the Reporting Action successfully. The problem may have resulted

from the network being down, or the Reporting Action may have been executed on a PC that has a bad or missing network card.

"Execution failed: Could not open communication device."

The requested device was found, but the port was in use by another process during the entire configured cycle time. The number of cycles may need to be increased in the Reporting Action's configuration pop-up.

"Execution failed: Invalid parameters for the given device."

The communication device does not support the parameters selected in the Reporting Action's configuration pop-up. Make sure the baud rate, parity, data bits, and stop bits are correct for that device.

"Execution failed: Modem error due to invalid modem initialization text."

The modem returned an error message from the initialization text. Make sure that the initialization text in this Reporting Action's configuration pop-up is correct. Also make sure that the phone number being dialed is correct, the phone line is operational, and that the modem is functioning properly.

"Execution failed: No answer from dialed number."

The receiving modem associated with the dialed phone number did not answer in the time allowed and the sending modem was unable to connect. Make sure that the phone line is operational and that the receiving modem is functioning properly.

"Execution failed: No carrier detected."

The modem was forced to hang up due to the carrier signal not being detected or lost, or due to an inactivity for a period of time defined in the modem's automatic timeout register.

"Execution failed: No dial tone detected."

No dial tone was detected by the modem and the communication could not proceed. Make sure that the phone number being dialed is correct, the phone line is operational, and that the modem is functioning properly.

"Execution failed: Out of system resources."

There were not enough Windows system resources to complete the Reporting Action. Close any unnecessary applications and attempt the Reporting Action again.

"Execution failed: Phone line busy."

The dialed phone number was continuously busy during the entire preset cycle time and the sending modem was unable to connect. The number of configured cycles may need to be increased. Make sure that the phone number being dialed is correct, the phone line is operational, and that the modem is functioning properly.

"Execution failed: Process timed out - possibly due to no answer from dialed number."

The connection process did not complete in the time defined in the Reporting Action's configuration. Make sure that the modem and phone lines are functioning properly. If the modem is still unresponsive, turn it off and back on again. If everything is working fine, then the configured wait time may need to be increased.

"Execution failed: Requested device is marked as inactive."

The device is configured in the Connection Configuration pop-up, but it is marked as inactive. Make sure that the communication device is configured as active if it is to be used by the Reporting Action.

"Execution failed: Requested device not found on any configured port."

The device needed should be configured to a port in the Connection Configuration pop-up and physically connected to the computer.

"Execution failed: Serial action could not be completed."

An error occurred during the execution. Make sure the modem or terminal is functioning properly, the connection between the modem/terminal and the computer (or between the modem and phone line) is not loose, and the computer memory is not low. Device interference or line noise may also be interfering with the modem signals.

"Execution failed: Unable to open device due to invalid handle."

This error message is used for in-house testing and should not occur. In the event that it does, check the amount of memory that is currently available. If the memory is low, close any unnecessary programs that may be running in Windows and execute the Reporting Action again.

"Execution failed: Unable to open device due to non-Alert usage."

The requested device was found, but the port was in use (or the network name was in use) by a non-Alert product during the entire preset cycle time. Check to make sure that other software products that also use the needed port have not failed and that they release control of the port when not in use. The number of cycles may also need to be increased in the Reporting Action's configuration pop-up.

"Execution failed: Unsupported device type for this function."

This Reporting Action was incorrectly used with a non-communication device. Make sure that the Reporting Action is configured correctly.

"Execution failed: Unable to open device due to unavailable NetBIOS hardware."

Alert EL encountered a serious network problem and could not execute the Reporting Action successfully. The problem may have resulted from the network being down, or the Reporting Action may have been executed on a PC that has a bad or missing network card.

"Execution prevented: Pre-empted by alarm close."

This message will occur if one or more Reporting Actions are scheduled to occur after other actions have completed, and these actions are not required for the alarm to close If the alarm closes before the Reporting Actions are scheduled to occur, this message will appear and the Reporting Actions will not be performed.

* * *

11 Glossary of Terms

Alarm Record

Alarm information configured in advance by the operator so that Alert EL knows how to display and handle the corresponding alarms when they are received.

Alarm Status

One of five states that an alarm can be in after being received by Alert EL. Alarms can be Active-Unacknowledged, Active-Acknowledged, Inactive-Unacknowledged, Inactive-Acknowledged, or Closed.

Alert EL

A comprehensive alarm management software package available in single-user or multi-user versions.

Alert Server

Alert EL's alarm receipt program which resides on a receiving station. Enabling the Receive Station setting on the Configure menu launches Alert Server, which appears as a minimized and unpickable icon in the Windows work area.

Database

The portion of Alert EL that stores all information concerning received alarms and records created by the operator.

Eikon

A Windows-based application which provides the ability to graphically program, display, and interact with any sequence of operation. Eikon is used by Liebert Site Applications primarily to create Graphic Function Blocks (GFBs).

Field Codes

A referenceable field of alarm information that Alert EL uses in printing, displaying, and sending alarms. When Alert EL sends field codes to the printer, screen, or serial output, the field codes are replaced with the corresponding alarm information they represent.

Gateway Module

A type of hardware control module whose primary purpose is to act as a communications link between the local area network and the receiving station. Examples are SiteGate-232, and DCLAN.

Group / Reporting Group

A collection of Reporting Actions to which alarms are assigned. Reporting Actions are assigned to Groups in order to customize launching criteria. Alert EL Groups should not be confused with Scheduling Groups in SiteScan 2000 for Windows.

Instance Record

A record of an alarm that Alert EL has received.

Main View

The Alert EL screen which consists of the Title Bar, Menu Bar, and Alarm Display.

Non-Receiving Station

An Alert EL Multi-User station on the network that does not physically monitor and receive alarms, though it can view and handle alarms through a shared database.

Notification

Alert EL's method of informing operators in close proximity to the station when an alarm arrives into a current view.

Receiving Station

An Alert EL station identified in a gateway module as the location to contact for the delivery of alarms. With Alert EL Single-User, only one receiving station exists. Alert EL Multi-User allows multiple receiving stations.

Reporting Action

An automatic procedure launched after an alarm is received by an Alert EL station. The operator has the capability to define when these actions will be launched. This feature is extremely useful in reducing manual procedures that are performed when an alarm is received.

Return To Normal

A message sent from the Alert microblock indicating that the corresponding alarm is no longer in the alarm state. A Return To Normal is also referred to as an "RTN". RTNs are displayed in Alert EL as "Inactive" alarms.

Security Level

A number that defines a level of access in Alert EL. Security levels are assigned to operators, commands, and alarms.

Site

A separate installation of control modules which usually has a single gateway module. Sites exist within Systems and are identified by different line numbers in the SiteScan 2000 for Windows configuration text.

SiteScan 2000 for Windows

A full-featured software package designed as a graphical HVAC system interface that runs on a Workstation. It features high resolution, dynamic color graphics with pickable windows and pop-up menus.

System

An entire grouping of control modules that Alert EL identifies with a three-character ID. Systems are divided into Sites and are the same Systems controlled by SiteScan 2000 for Windows.

View

A selective display of alarms in the Main View.

Workstation

A computer which acts as the main communication interface between operators and the hardware field equipment, usually featuring SiteScan 2000 for Windows software. A Workstation may or may not be an Alert EL Receiving Station.

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