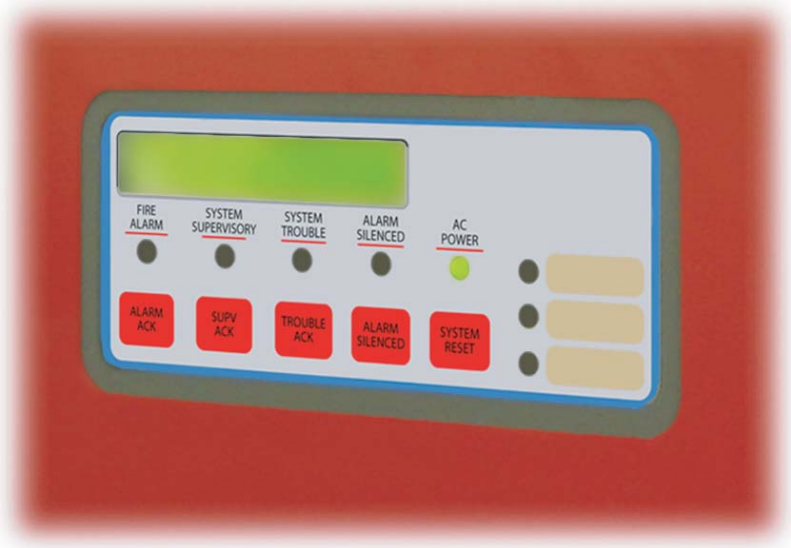
FIRE

4008-9101/4008-9121
Fire Alarm Control Panel



PC Programmer Installation and Programming Instructions

579-717
Rev. B

Copyright and Trademarks

FCC Information

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the door of this equipment is a label that contains, among other information, the following product identifier: US:5QWAL01B4008. If requested, the number must be provided to the telephone company.

In the event of equipment malfunction, all repairs should be performed by an authorized agent. It is the responsibility of users requiring service to report the need for service to our company or to one of our authorized agents. Service can be arranged through our office at:

Tyco Safety Products
91 Technology Drive
Westminster, MA 01473
978-731-2500

The Ringer Equivalence Number (REN), which is 01 for the DACT installed in this panel, is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total number of RENs, contact the local telephone company. For products approved after July 23, 2001, the REN is part of the product identifier, which uses the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g. 01 is a REN of 0.1).

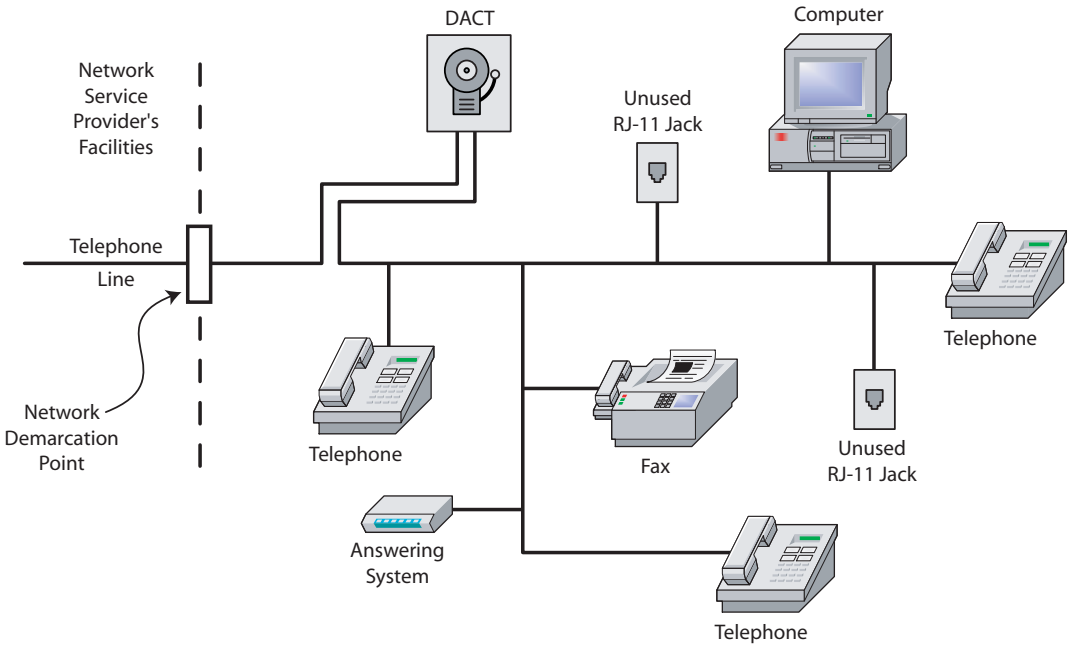
If the DACT causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify you as soon as possible. If your service is discontinued, you will be advised of your right to file a complaint with the FCC.

The telephone company may make changes to its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make the necessary modifications to maintain uninterrupted service.

If trouble is experienced with the DACT, please contact Tyco Safety Products at the location identified above. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Alarm Dialing Equipment

This equipment must be able to seize the telephone line and place a call in an emergency situation. It must be able to do this even if other equipment (telephone, answering system, computer modem, etc.) already has the telephone line in use. To do so, the DACT must be electrically in series with and ahead of all other equipment attached to the same telephone line. Proper installation is depicted in the figure below. If you have any questions concerning these instructions you should consult your telephone company or a qualified installer about connecting the alarm dialing equipment for you.



Connectors for the DACT are terminal blocks on the DACT module. Refer to DACT Wiring in Chapter 2 of this manual for specific DACT wiring instructions.

Cautions and Warnings

READ AND SAVE THESE INSTRUCTIONS. Follow the instructions in this installation manual. These instructions must be followed to avoid damage to this product and associated equipment. Product operation and reliability depends upon proper installation.

DO NOT INSTALL ANY SIMPLEX PRODUCT THAT APPEARS DAMAGED. Upon unpacking your Simplex product, inspect the contents of the carton for shipping damage. If damage is apparent, immediately file a claim with the carrier and notify Simplex.

ELECTRICAL HAZARD - Disconnect electrical field power when making any internal adjustments or repairs. Servicing should be performed by qualified technical representatives.

STATIC HAZARD - Static electricity can damage components. Therefore, handle as follows:

- Ground yourself before opening or installing components.
- Prior to installation, keep components wrapped in anti-static material at all times.

RADIO FREQUENCY ENERGY - This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

SYSTEM REACCEPTANCE TEST AFTER SOFTWARE CHANGES - To ensure proper system operation, this product must be tested in accordance with NFPA72-2002 after any programming operation or change in site-specific software. Reacceptance testing is required after any change, addition or deletion of system components, or after any modification, repair or adjustment to system hardware or wiring.

All components, circuits, system operations, or software functions known to be affected by a change must be 100% tested. In addition, to ensure that other operations are not inadvertently affected, at least 10% of initiating devices that are not directly affected by the change, up to a maximum of 50 devices, must also be tested and proper system operation verified.

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Chapter 1. Overview and Installation

This chapter provides an overview of the process required to program a job and introduces you to the general features of the PC Programmer application, which is the Windows-based application used to program the fire alarm control panel (FACP).

Throughout this manual, keep the the following terms in mind.

- *Job* refers to the file created by the PC programmer that contains all of the panel's programming information. It is also sometimes called a CFIG file because the file extension for a job file is .CFG.
- *Master* (also called the panel EXEC file) refers to the binary file containing the panel's "operating system." It runs on the panel's CPU, and it manages interactions between system components. Occasionally changes to the functionality of the panel may require that a new Master EXEC file be downloaded.

The PC Programmer application, shown in Figure 1, contains the following components.

- A set of **Tabs** corresponding to the major programmable components of the panel. Clicking on a tab gains access to a window that allows you to program a specific set of system attributes. Figure 1-1 shows the location of the tabs. Refer to "Tabs" later in this section for specific information.
- **Toolbar Icons** that allow you to quickly perform routine tasks such as printing, saving a job, etc. Refer to Figure 1-3 for an illustration of the Toolbar.
- **Menus** containing groups of similar choices. Most menu choices have a counterpart on the Toolbar.

In This Chapter

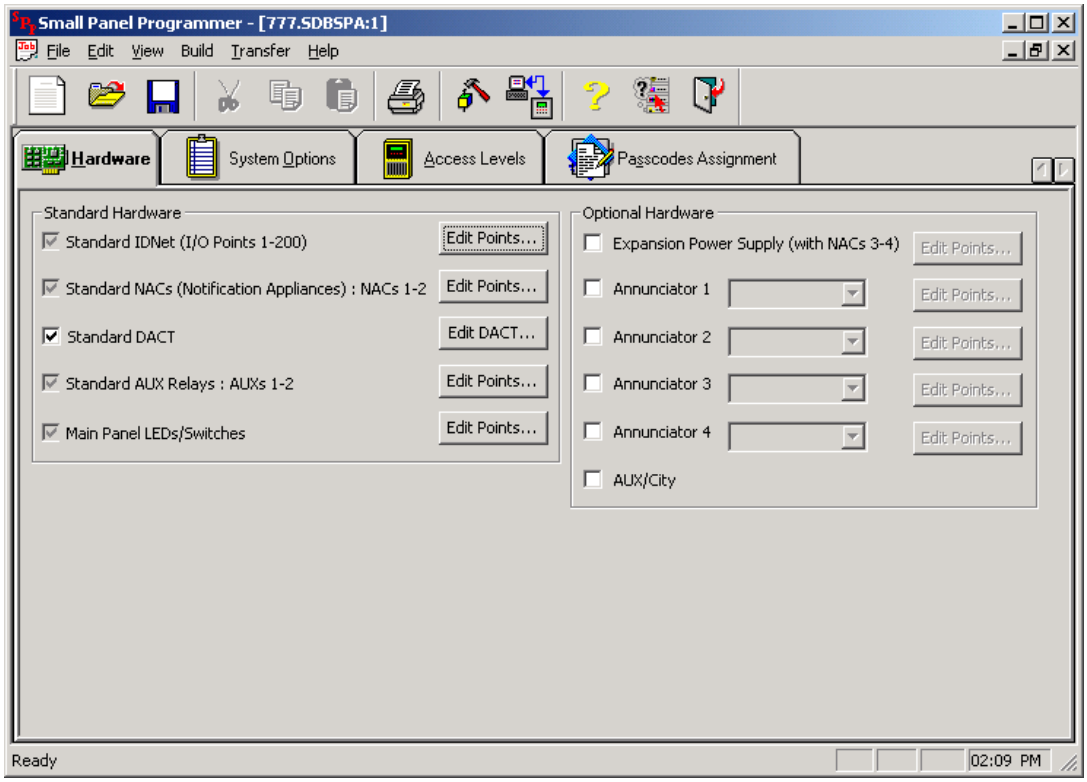

Figure 1-1 Initial Programmer Screen

Tabs

Each tab contains a group of related programming functions, as follows:

The **Hardware Tab** allows you to do the following:

- Define the attributes of each standard system point. Attributes include the point's Function Type (for example, whether a NAC is On until Reset or On until Silence).
- Edit a 20 character Custom Label. During editing, a customizable word library suggests common words to use.
- Define DACT (if used) attributes.
- Define Alarm Group information for each point. Alarm groups allow selective signaling. By assigning initiating devices and NACs to the same alarm group, you program the panel to activate the NACs only if the initiating devices in the same alarm group activate. Alarm Groups can also be used as reference points for annunciator LEDs, meaning the LED illuminates only if a point in the Alarm Group activates.
- Define the optional equipment installed on the panel.
- Define the operation of annunciator LEDs.

Refer to the following chapters for additional information.

- Chapter 5 for information on programming initiating devices, NACs, and Relays.
- Chapter 6 for information on programming Annunciators.
- Chapter 7 for information on programming the DACT.

The **System Options Tab** allows you to set pre-defined modes of operation that have a range of settings from which to choose. Typically, they define global operations such as the time and date format, door drop timers, etc. Refer to Chapter 4 for information on programming System Options.

The **Access Levels and Passcodes Assignment Tabs** work together. Access levels allow you to assign a numerical designation from one to four to each system operation. Passcodes allow you to assign a passcode to each numerical designation. Operators can only accomplish tasks corresponding to the passcode they enter. Refer to Chapter 3 for information on programming Access Codes and Passcodes.

Menus

Figure 1-2 shows the programmer's menu structure.

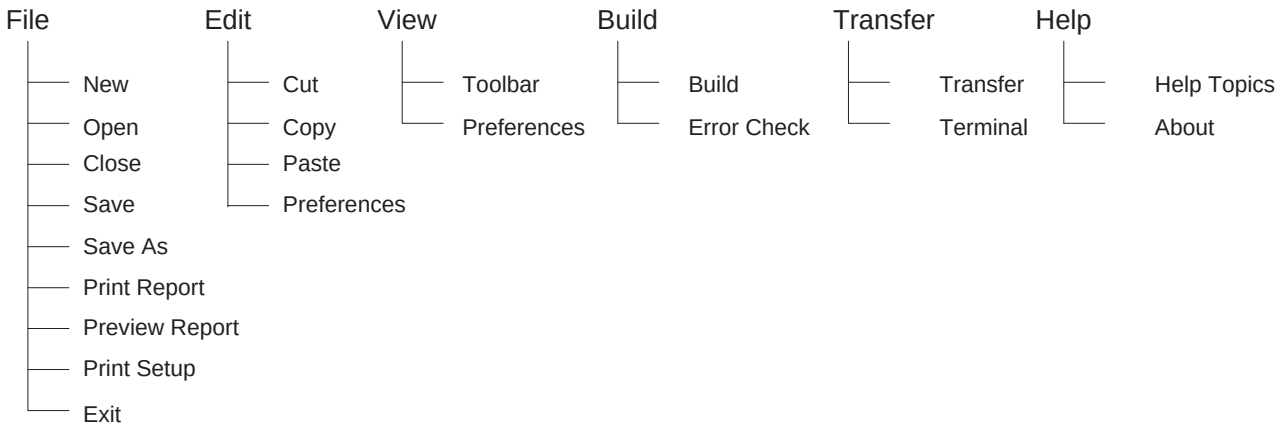

Figure 1-2 Menu Structure

Toolbar

The toolbar contains a set of icons that allow you to quickly perform basic tasks, such as creating a new job or building a job. shows the location of the icon bar and identifies the function of each icon.

Figure 1-3 Icons

Installing the Programmer

1. Insert the CD containing the installation program. Use Windows Explorer to locate SETUP.EXE. Double click on SETUP.EXE to launch the instalation program.
2. A screen appears, indicating that the programmer will be installed on your system. Press Next to continue. The screen shown in Figure 1-4 appears, allowing you to specify the destination location for the files.

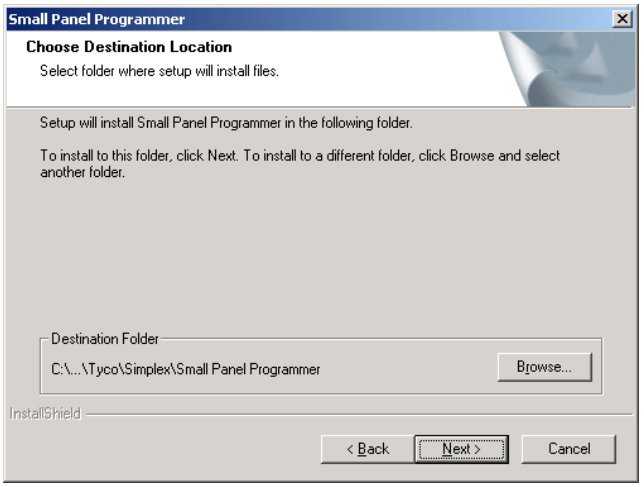

Figure 1-4 Destination Location

3. Use the Browse button to specify an alternate location if necessary, or use the default location shown in the figure. Press Next to continue.

   The prompt shown in Figure 1-5 appears, allowing you to specify the name of the Programs folder. (When you click the Start button and select Programs, this is the menu choice that accesses the programmer.)

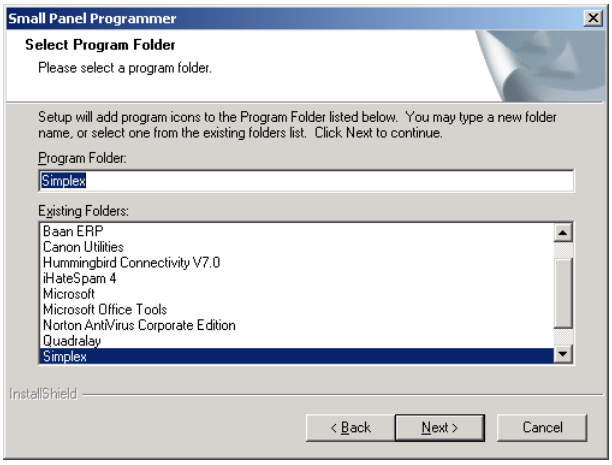

Figure 1-5 Folder Name

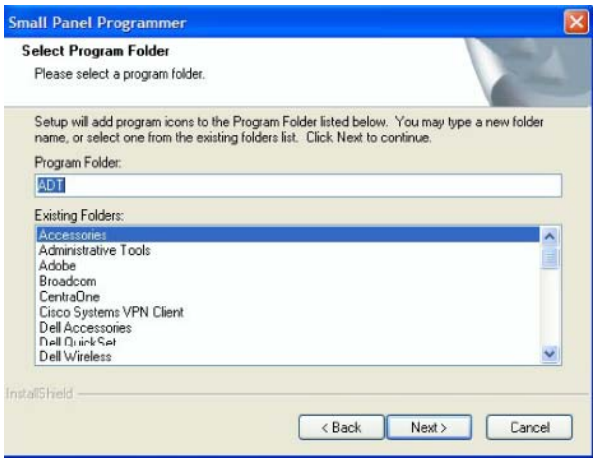

Figure 1-6 Folder Name

4. Enter the name of the folder and press Next. A prompt instructs you to click on Install to start the install.

   Click on this button to install the files. A progress thermometer appears, followed by a screen that directs you to press Finish to complete the installation.

Chapter 2. Basic Operations

Creating a New Job

1. Do either of the following to create a new job.
   - Click on the File menu and select **New**.
   - Click on the paper icon in the top left corner of the programmer.

   A dialog appears, prompting you to choose the panel type.

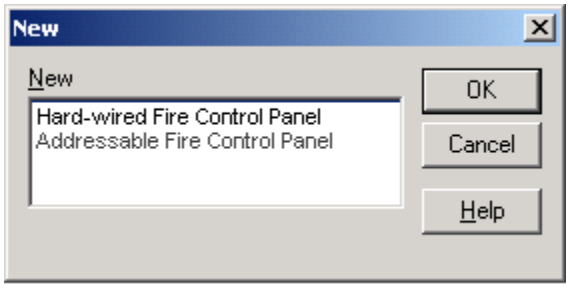

Figure 2-1 New Job Prompt

2. Choose “Addressable Fire Control Panel” and click on the OK button. The prompt shown in Figure 2-2 appears, allowing you to specify the Job Name and the directory path to which the job files are stored.
3. Enter a numerical designation for the job, i.e., 42998. If you need to change the directory to which the files are stored, click on the button with three dots and specify the new path.

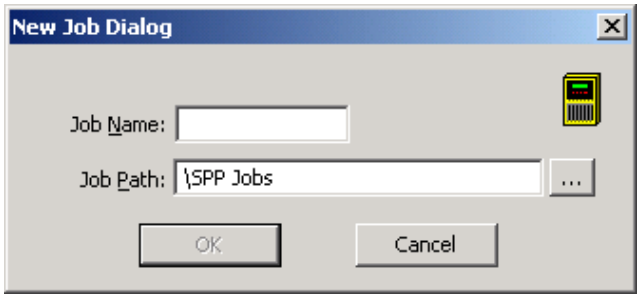

Figure 2-2 Specify Job Name and Path

In This Chapter

Saving a Job

You can save changes you make to a job in either of the following ways:

- Click on the File menu and choose **Save**.
- Click on the Floppy Disk icon on the Toolbar.
-

You can also save an existing job as the basis for a new job using the **Save As** option.

Opening an Existing Job

Job files are stored in the directory *x*:\SPP JOBS*JOBDIR*, where *x* is the hard drive on which the programmer was installed and *JOBDIR* is the directory corresponding to the name of the job.

Click on File and choose Open. A dialog appears, allowing you to sort through the PC's directories. Locate the \SPP-JOBS directory and the directory of the job you want to open.

Building a Job

The build process involves converting the text version of the job to a binary file. The text version of the job is automatically stored on the PC when you save the job. Follow these steps to build the file and convert it to a binary image.

Note: You must build a file before attempting to download the file to the panel.

To build a file, click on the Build menu and select the Build option. When the build is complete, the programmer displays a dialog indicating it is finished building the job.

Uploading/Downloading a Job

The terms Upload and Download refer to transferring files from a panel to the PC (uploading), or from the PC to the panel (downloading).

1. Connect the serial download cable between the serial port located on the right side of the panel display and a free serial port on the service PC.
2. Click on the Transfer menu in the PC Programmer and select the Transfer option. A screen similar to the following appears.

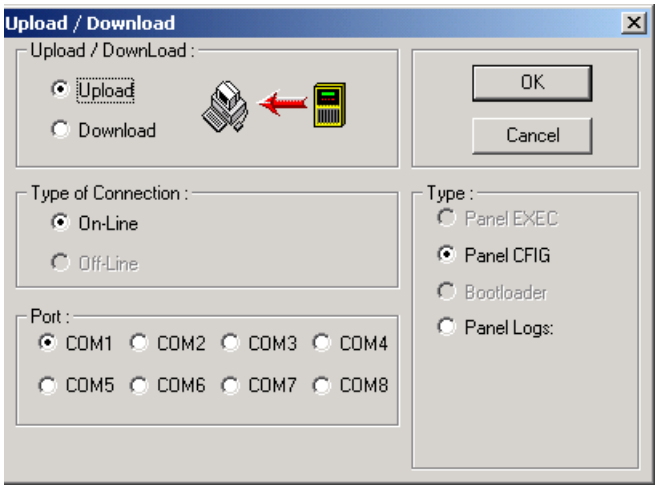

Figure 2-3 Upload Dialog

Uploading Job

Uploading a job transfers the job file from the panel to the PC. The built (binary) job file is transferred from the panel to the PC, unbuilt, and stored in a subdirectory of \SPP JOBS that corresponds to the name of the job.

If you have a job open in the programmer, click on the File menu and choose Close before attempting to upload a job.

Set the options in the Transfer Dialog as follows:

1. In the Upload/Download section of Figure 2-3, make sure to select the Upload radio button. The type of connection is always "On Line," meaning the panel continues to function as a fire alarm panel while the job file is uploading.
2. In the Port section, select the serial COM port on the PC to which the serial cable is attached.
3. In the Type section, select either Panel CFIG (which is the job file) or Panel Logs.
4. Click on OK. A prompt similar to the following appears.

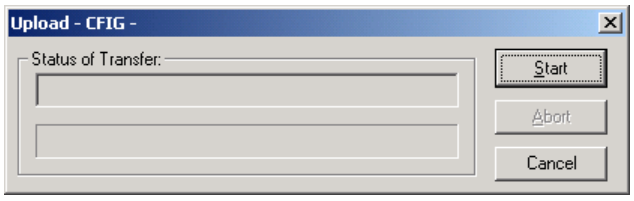

Figure 2-4 Start Upload Dialog

5. At the front panel of the FACP, do the following:
   a. Log in at Access Level 4.
   b. Click on the MENU button.
   c. Press NEXT until the Upld/Dwnld prompt is shown

      <ENTER>=Accept
      Menu:[Upld/Dwnld]

   d. Press ENTER. A prompt similar to the following appears.

      <ENTER>=Accept
      XFER:[Start XFER]

   e. Press ENTER.
6. Click on the Start button shown in Figure 2-4 to start the Upload.

Downloading Files to the Panel

Three types of files can be downloaded to the panel.

- Panel CFIG File. This is the built job file, consisting of all programming definitions in a binary format that the panel's CPU can execute.
- Panel Exec (Master). The Panel Exec file is the "operating system" that runs on the panel's CPU module. It manages interactions between system components. Occasionally changes to the functionality of the panel may require that a new Panel Exec file be downloaded.
- Bootloader Files. The CPU Bootloader files allow a blank panel (neither file is loaded) or a corrupt system (bad CFIG) to be restored to normal operation.

  Note: Downloading the Bootloader files should only be done at the direction of Technical Support.

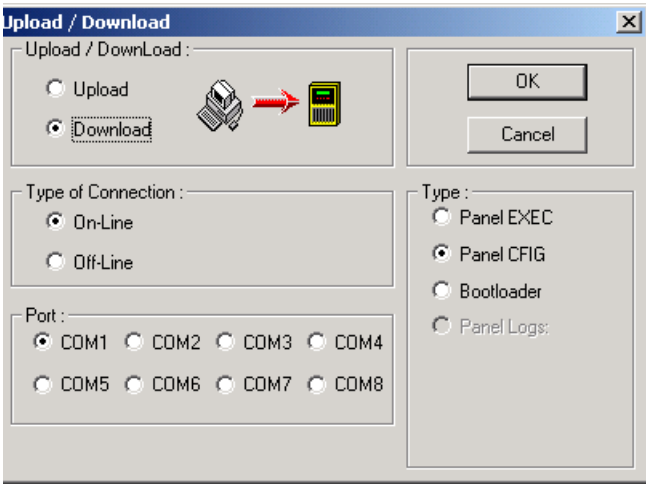

Figure 2-5 Upload/Download Dialog

1. In the Upload/Download section of Figure 2-3, make sure to select the Download radio button.
2. In the Port section, select the serial COM port on the PC to which the serial cable is attached.
3. In the Type section, select either Panel EXEC or Panel CFIG.
4. In the Type of Connection section, you can select either On Line or Off Line for a Panel CFIG, but you can only select Off Line for a Panel EXEC. On Line means the panel continues to function as a fire alarm panel during the download; Off Line means the panel is not operating as a fire alarm panel during the download.
5. Click on OK. A dialog appears, prompting you to specify the location of the file to be downloaded. Click on the name of the file and click on the Open button.

Figure 2-6 Start Download Dialog

6. At the front panel of the FACP, do the following:
   a. Log in at Access Level 4.
   b. Click on the MENU button.
   c. Press NEXT until the Restart CPU prompt is shown

      <ENTER>=Accept
      Menu:[Restart CPU]

   d. Press ENTER. A prompt similar to the following appears.

      <ENTER>=Accept
      Restart:[Warm]

   e. Press ENTER. The panel prompts you again to confirm that you want to restart the panel.

      <ENTER>=Warm Start

   f. Press ENTER. The last prompt before the restart appears.

      <ENTER>=Restart

   g. Press ENTER.

7. Click on the Start button shown in Figure 2-6 to start the Upload.

Editing Custom Label Library

Each point has a Custom Label field that allows you to assign a 20-character custom label to the point.

As you type letters in the Custom Label field, the programmer suggests possible words for the label. For example, typing “GAR” causes the panel to suggest the word “GARAGE.” The CTRL-F key combination allows you to accept the suggestion.

Suggested words are stored in an editable file named **word.lib.** Follow these steps to edit this file and add additional words to the file.

1. Use Notepad to open the word.lib file. Note that this file is installed in the directory indicated at installation time.
2. Add words to the file in alpahbetical order, one word per line. Figure 2-7 shows a sample word.lib screen.

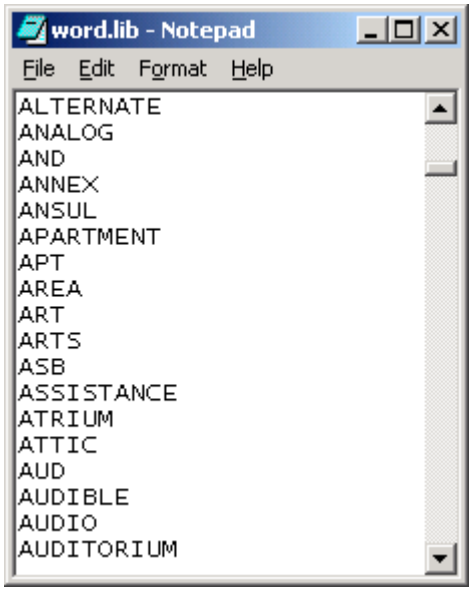

Figure 2-7 Editing Word.Lib

Chapter 3. Access Levels/Passcodes

Access levels and passcodes are used to restrict operator access to specific groups of functions. Setting access levels and passcodes is a two-step process as follows:

1. Associate each operator function with an access level, which is a numerical designation from one to four, with one being the lowest access level and four being the highest.

   Basic functions, such as System Reset and Change Time and Date, are usually assigned to Access Level 1. More sensitive functions, such as Edit Entire Job, are typically assigned to Access Level 3 or 4.
2. Associate each access level with a four-digit passcode.

When an operator logs in with their passcode, they are only allowed to execute the functions associated with their passcode.

It is important to look at the list of functions/access levels, consider what groups of users will be using the panel, and then try to match those user groups to specific functions. Typical groups requiring some level of interaction with the panel include:

- Security Guards
- Maintenance Personnel
- Technicians who maintain and program the system
- Firefighters

You may also want to consult the local Authority Having Jurisdiction (AHJ) before programming access levels. The AHJ may require that only specific groups of people have access to functions such as system reset and alarm silence.

In This Chapter

Setting Access Levels

1. Click on the tab labeled Access Levels. A screen similar to the one shown in Figure 3-1 appear. This figure lists all of the panel functions and shows the default access level assigned to each function.

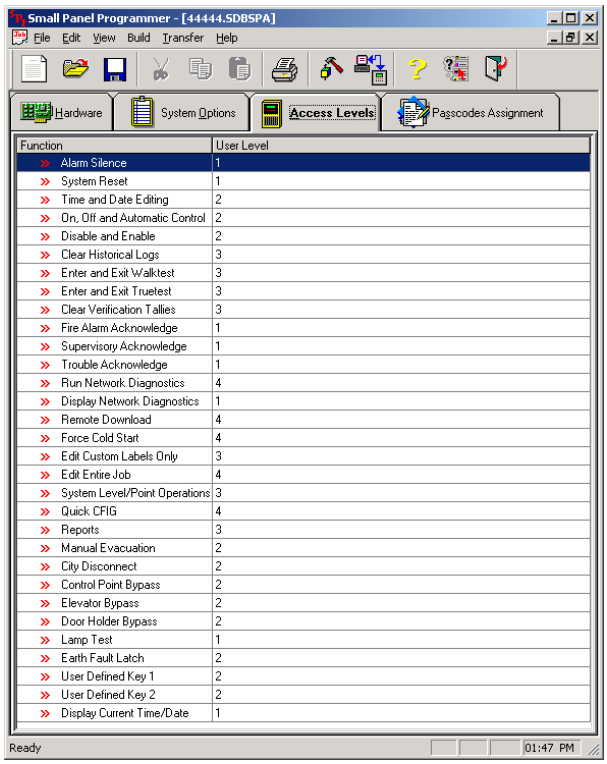

Figure 3-1 Panel Functions and Default Access Levels

2. Click on one of the functions on the left side of the screen. The dialog shown in Figure 3-2 appears, allowing you to assign a numerical access level to the function.
3. Click on the control labeled User Level in the dialog box. Increment or decrement the value until it is appropriate for the selected function.

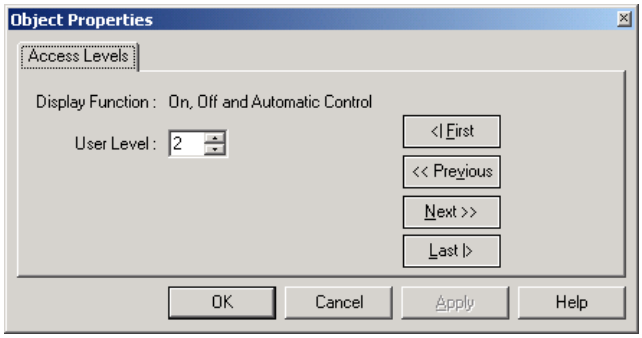

Figure 3-2 Setting User Level

Setting Passcodes

Follow these steps to edit the passcode for Access Level 2, 3, or 4. The passcode for Access Level 1 is non-editable.

1. Click on the tab labeled Passcode Assignment. A screen similar to the one shown in Figure 3-3 appears.
2. Click on one of the User Levels on the left side of the screen. The dialog shown in Figure 3-4 appears, allowing you to assign a numerical passcode to the User Level. Enter a four-digit value in the Passcode text box

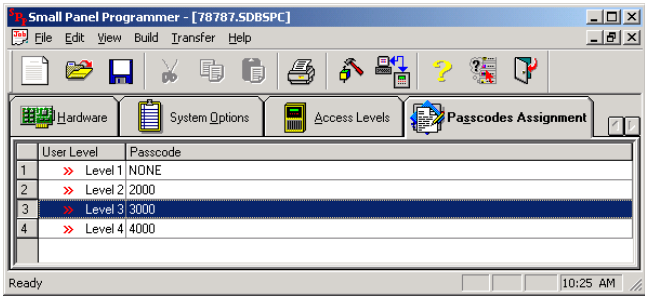

Figure 3-3 Passcode Tab

and click on OK to save the changes. .

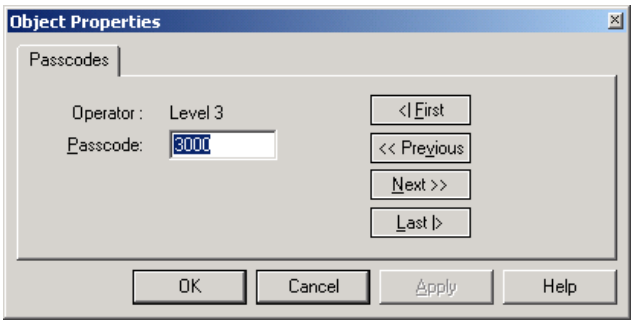

Figure 3-4 Setting Passcode

Chapter 4. Programming System Options

This chapter describes using the System Options tab to set the panel's system options.

System options are pre-defined modes of operation with a range of settings from which to choose. Typically, they define global operations such as the time and date format, door drop timers, etc.

In This Chapter

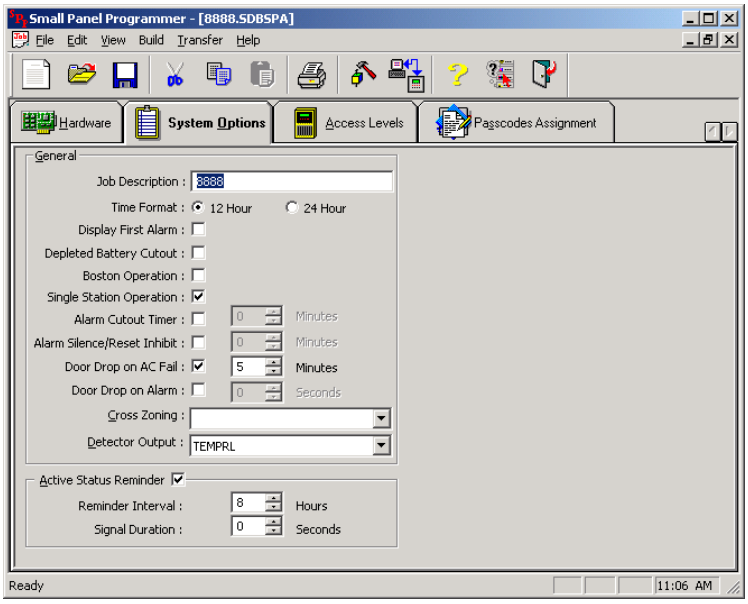

Figure 4-1 System Options Tab

Summary of System Options

Table 4-1 System Options

Option	Setting
Job Description	Text field in which descriptive text can be inserted.
Time Format	Choose 12 (am/pm) or 24-hour (military) format.
Display 1st Alarm	When this option is selected, the panel will automatically display the first (oldest) alarm instead of the Alarm Tally abnormal screen. This allows the first responder to determine the location of the first alarm in the system without having to open the door and press the acknowledge key. If an unacknowledged alarm exists, the system displays that alarm. When that alarm is acknowledged, the system displays the oldest alarm. If no fire alarms exist in the system, the first supervisory event is shown on the display. If no supervisories exist, the first trouble is shown on the display. If there are no fire alarms, supervisories, or troubles, the SYSTEM NORMAL screen is displayed.

Table 4-1 System Options

Option	Setting
Depleted Battery Cutout	This option selects the operation of the panel if an alarm occurs during an AC power loss while a depleted battery trouble exists.If this option is selected, the system does the following: • WILL NOT initiate an alarm if the first alarm occurs after the depleted battery state has been detected. If the hardware jumper for depleted battery cutout has been clipped, the system will shut down 60 seconds after the depleted battery condition is detected • WILL continue sounding the alarm if the depleted battery state is reached after the system is already in the alarm state.
Alarm Cutout Timer	The Alarm Signal Cutout timer allows you to set a duration for how long notification appliances sound after an alarm. In other words, when an alarm condition exists, the signals sound until silenced. With this option set at two minutes, building signals sound on alarm for two minutes and then stop sounding. However, the alarm condition remains active. Choose a timer range from 0-60 minutes (default=0 - no cutout)
Inhibit	While timer is counting down, the Alarm Silence/Reset Inhibit Timer prevents a system operator from using either the Alarm Silence or System Reset functions. When the inhibit timer expires, the panel may be reset/silenced. Choose a timer range from 0-60 minutes (default=0 - no inhibit)

Table 4-1 System Options

Option	Setting
AC Doors	The Door Holder Drop on AC Failure allows the panel to hold doors open for a set duration during an AC power loss condition. After that timer has expired, the panel turns off the door holder relays (all DHOLDER point types). The range for the timer is 0-60 minutes with a default setting of 5 minutes. To have the door holders drop the doors immediately upon AC power loss, set the timer to 0. This option applies to all DHOLDER relay function types regardless of their Alarm Group setting.
Alarm Doors	Allows the panel to hold doors open for a set duration during an alarm condition. After that duration has expired, the panel shuts off the door holder relays (all DHOLDER point types). Choose a timer range from 0-60 minutes (default=0 - immediate door drop). This option applies to all DHOLDER relay function types, regardless of their Alarm Group setting.
Cross Zoning	Allows you to enable cross zoning per alarm group. For example, if you enable cross zoning for Alarm Group 1, it takes two activated alarms in Alarm group one before outputs associated with that alarm group will activate.

Table 4-1 System Options

Option	Setting
Reminder	The Active Status Reminder option allows you to set an interval and duration during which the panel reminds operators that a FIRE, SUPV, or TBL condition still exists. This is accomplished by sounding the front panel tone-alert. • Choose: ON or OFF (default = ON). • Set reminder interval (1-12 hours) • Signal duration. This option sets the duration of the acknowledge signal. (0-60 seconds; 0=on until ack). The default for this option is 0, meaning an acknowledge is required to silence the reminder.
Boston Operation	If ON, sets the sensitivity of the Photoelectric detectors to 3.7% / ft obscuration Set to OFF to set the detector sensitivity to 2.5% / ft
Detector Output	Selects the coding operation of the sounder bases if single-station is not selected. Limited to 40 bases coded by panel. For greater than 40 bases, turn on Steady and code through relay contacts Choices are: Steady Temporal 20 bpm 120 bpm

Table 4-1 System Options

Option	Setting
Single Station	Single Station is a mode of operation that applies to IDNet devices that use a sounder base. Photo and heat sensors mounted on sounder bases can be installed and programmed to act as single station smoke detectors. The sounder activates when the smoke or heat sensor crosses its alarm threshold and turns off when the smoke level goes below its threshold. (A general alarm fire condition also occurs when the detector goes into alarm.) Single Station programming allows you to set whether all the other sounder bases turn on and turn off along with the activated device.
AHJ Reset	If this option is not selected, a point that has alarmed the panel must be disabled or restored to the normal state before the panel can be reset. When this option is selected, the device only needs to be no longer in the alarm state for the system to be reset (e.g. point can be in trouble).
NFPA NAC Operation	When this option is selected, the strobes on the QALERT NACs will turn off when alarm silence is activated. If the option is not selected, the strobes turn off upon completion of system reset.
Report AC Fail Delay	This option is the time delay that the system uses before reporting an AC Failure condition to the central station via the DACT, or before the city trouble is tripped if the only trouble is AC Failure.
Test Report Time	Selects the time when the daily System Test Report is sent to the central station. The default is 2 A.M.

Chapter 5. Programming IDNet Points, NACs, and AUX Relays

This chapter describes using the Hardware Tab to set the characteristics of each IDNet device, notification appliance, and AUX relay to the specific values required for the job.

In This Chapter

Hardware Tab Overview

The Hardware Tab, shown in Figure 5-1, allows you to do the following for IDNet devices, NACs, and AUX relays:

- Identify whether an Expansion Relay Module or an Expansion Power Supply (contains NACs 3 and 4) is installed on the panel.
- Select a category of points to edit. For example, clicking on the Edit Points button to the right of the field labeled “Standard IDNet Points (I/O Points 1-200)” invokes the properties sheet that allows you to specify the characteristics of each IDNet point. Likewise, clicking on “Standard NACs (Notification Appliances : NACs 1-2” allows you to edit the characteristics of the two NACs located on the main system board.

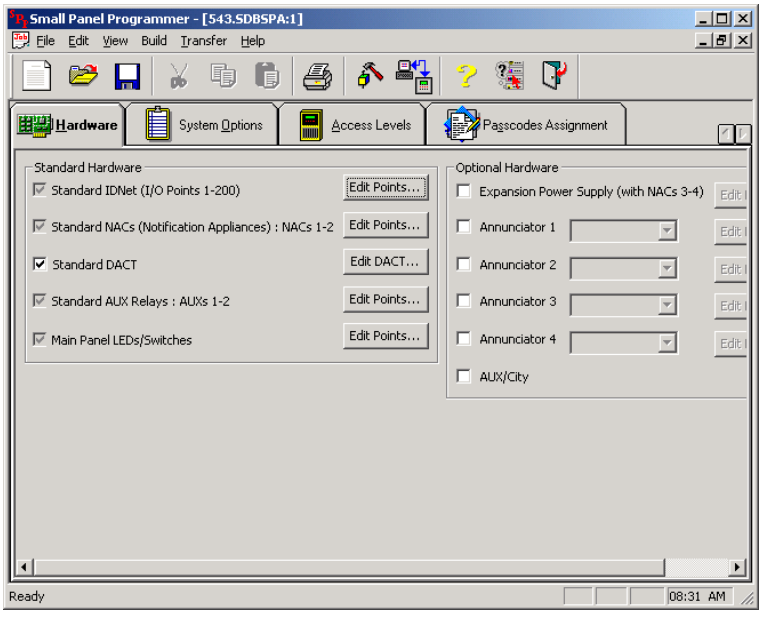

Figure 5-1 Hardware Tab

Identifying Expansion Relays and NACs

If the panel is using an Expansion Relay Module, check the “Aux/City” check box to identify that the relay module is installed in the panel. If the panel is using an Expansion Power Supply, click on the “Expansion

Power Supply (with NACs 3-4)" check box to indicate that the module is installed.

Programming IDNet Points

To edit the characteristics of each IDNet point, click on the Edit Points button to the right of "Standard IDNet Points (I/O Points 1-200)." Refer to Figure 5-1 for the location of this field.

A screen similar to the one shown in Figure 5-2 appears.

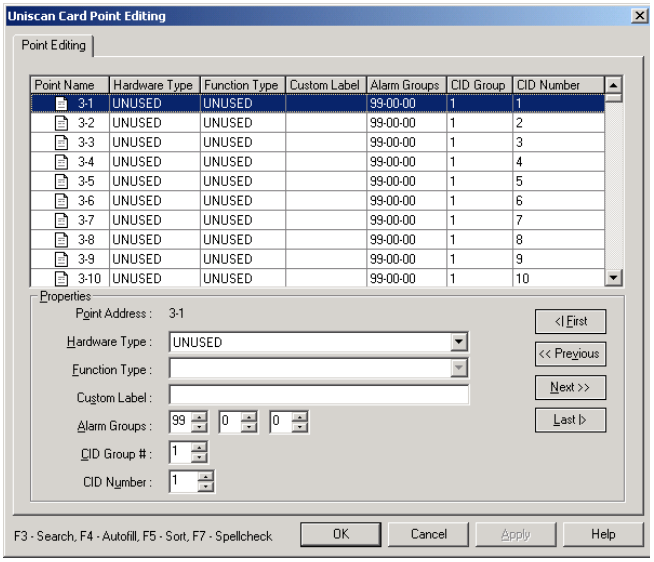

Figure 5-2 IDNet Point Editing

Selecting Point to Edit

Click on the line corresponding to the point you want to edit. Use the drop down list boxes and text fields to specify the characteristics of the point. For each point, the second digit of the Point Name field corresponds to the address (set via dipswitches) of the device.

Setting IDNet Hardware Type

The Hardware Type field, shown at the top of Figure 5-1, identifies the specific device assigned to the IDNet address. Refer to Table 5-1 and Table 5-2 for information on possible settings for this field.

Table 5-1 Hardware Types

Sensor Models	Base Models	Use this Hardware Type
4098-97144098-9714C Photo-Electric Smoke Detector Sensor	4098-97554098-9755C Two-wire duct base w/o relay	PHOTO
	4098-97924098-9792C Detector base w/o remote LED	
	4098-97894098-9789C Detector base with remote LED	
	4098-97564098-9756C Four-wire duct base with relay	RPHOTO
	4098-97914098-9791C Detector base with relay	RPHOTO
	4098-97934098-9793C Isolator base	IPHOTO
	4098-97944098-9794C Sounder base **See Note1 below**	SPHOTO
4098-97334098-9733C Heat Detector Sensor	4098-97924098-9792C Detector base w/o remote LED	HEAT OHEAT
	4098-97894098-9789C Detector base with remote LED	
	4098-97914098-9791C Detector base with relay	RHEAT ROHEAT
	4098-97934098-9793C Isolator base	IHEAT IOHEAT
	4098-97944098-9794C Sounder base See Note 1 below.	SHEAT SOHEAT
4098-97544098-9754C Combination Photo Electric Smoke Detector and Heat Detector	4098-97954098-9795C Multi-detector sounder base See Note 1 and Note 2 below.	SPHOTO & SHEAT
	4098-97964098-9796C Multi-detector base with LED See Note 2 below.	PHOTO & HEAT

Note 1. The operation of sounder bases is controlled by the Single Station system option. See Chapter 4 of this manual for additional information.

Note 2. A multi-detector base, coupled with a combination photo/heat sensor, **uses two addresses**. Make sure to set the address on the base to an

even number, and do not set any other device to the address that you set plus one. The even number represents the Photo portion of the combination sensor. The address plus one represents the heat portion of the sensor.

Note 3. The HEAT, RHEAT, IHEAT, and SHEAT function types set the heat detector to a fixed sensitivity of 135°F. An alarm is initiated when the temperature rises beyond this temperature.

The OHEAT, ROHEAT, IOHEAT, and SOHEAT function types set the heat detector for rate-of-rise operation. With this hardware type, if the temperature rises beyond 135°F or if the temperature rises at a rate of 15°F per minute, an alarm is initiated.

Table 5-2 Hardware Types, IDNet Modules

Module	Use this Hardware Type
4090-9007 Zone Individual Addressable Module (IAM) for Class A or B Signal Circuits	SIGNAL
4090-9001 Supervised Individual Addressable Module (IAM)	IAM
4090-9002 Indiv. Addressable Module with Relay	RIAM
4090-9116 Addressable Isolator	ISOL
4090-9101 Class B Zone Addressable Module for monitor devices	MBZAM
4090-9106 Class A Zone Addressable Module (ZAM) for monitor devices	MAZAM
4099-9010 Single action pull station 4099-9012 Dual Action (Push/Pull) Addressable Pull Stations	ADRPUL

Setting IDNet Function Type

The Function Type determines the way in which the point operates (whether it is a fire point, trouble point, waterflow/sprinkler zone, etc.).

1. Click on the Function Type drop down list box. The list of options shown in Table 5-3 appears.
2. Scroll through the list and select the appropriate Function Type.

Table 5-3 Function Types

Function Type	Device State = Status	Description
FIRE	Normal = NORMAL Current Limited = FIRE Short = FIRE Open = TROUBLE	Fire Monitor Zone
WATER	Normal = NORMAL Current Limited = FIRE Short = FIRE Open = TROUBLE	Waterflow Monitor Zone
HEAT	Normal = NORMAL Current Limited = FIRE Short = FIRE Open = TROUBLE	Heat Detector Zone
DUCT	Normal = NORMAL Current Limited = FIRE Short = FIRE Open = TROUBLE	DUCT Detector Zone
PULL	Normal = NORMAL Current Limited = FIRE Short = FIRE Open = TROUBLE	Pull Station Zone
SMOKE	Normal = NORMAL Current Limited = FIRE Short = FIRE Open = TROUBLE	Smoke Detector Zone
SO	Normal = NORMAL Current Limited = Abnormal Short = Abnormal Open = TROUBLE	Sprinkler Supervisory Zone
WSO	Normal = NORMAL Current Limited = Abnormal Short = Alarm Open = TROUBLE	Combination Waterflow & Water Supervisory Zone
SUPV	Normal = NORMAL Current Ltd = SUPERVISORY Short = SUPERVISORY Open = TROUBLE	Supervisory Monitor
UTIL	Normal = OFF Current Limited = ON Short = ON Open = TROUBLE	Supervised Utility Monitor
TROUBLE	Normal = NORMAL Current Limited = TROUBLE Short = TROUBLE Open = TROUBLE	Trouble Monitor

Table 5-3 Function Types

Function Type	Device State = Status	Description
VSMOKE See note below.	Normal = NORMAL Current Limited = VERIFY Short = FIRE Open = TROUBLE	Verified fire alarm - the current-limited state causes the alarm verification cycle to start. A short is an immediate alarm.
STYLEC	Normal = NORMAL Current Limited = FIRE Short = TROUBLE Open = TROUBLE	Style C Fire Monitor
LATSUPV	Normal = NORMAL Current Ltd = SUPERVISORY Short = SUPERVISORY Open = TROUBLE	Latching Supervisory Monitor (Supervisory latches until system reset).

Note: The alarm verification cycle works on a per-zone basis as follows. If a device with the function type VSMOKE enters a current-limited state, the alarm verification cycle begins. The panel starts a delay timer of 30 seconds. When the timer expires, the zone containing the activated detector is reset. Following the reset, another 15 second timer starts. When the 15 second timer expires, the system checks the zone for an alarm. If a current-limited condition exists on the zone, the panel initiates a fire alarm. If no current-limited condition exists, the panel starts a 2 minute timer. While the timer is counting down, any current-limited condition on any zone will trigger a fire alarm.

A short from a pull-station always triggers an alarm condition, regardless of the alarm verification cycle.

At any stage of the alarm verification cycle, the presence of two devices in alarm triggers an alarm condition.

Custom Label

The Custom Label field (see Figure 5-1) allows you to assign a 20-character custom label to each IDNet point.

1. Type the text for the label in the Custom Label field.
2. As you type letters in the field, the programmer suggests possible words for the label. To accept the programmer's suggestion, press CTRL-F.

   For example, typing "GAR" causes the panel to suggest the word "GARAGE." Press CTRL-F to accept the suggestion.

Alarm Groups

Alarm groups allow you to program selective signaling. Each device can be in up to three groups. Assign the device an alarm group number from 1 to 99. Assign the same alarm group number to the notification device(s) that you want to control.

1. Enter a value for any one of the three alarm groups using either of these methods.
   - Use the pointer to select the existing entry and type the new entry in the field.
   - Use the field's controls to increment or decrement the value.

CID Group and Number

If the panel's DACT is using the Contact ID (CID) reporting format, follow these instructions to set the CID group and ID for each IDNet point. (If the panel either is not using a DACT, or the DACT reporting format is not Contact ID, skip this section.)

1. Enter a value for the CID Group and ID using either of these methods.
   - Use the pointer to select the existing entry and type the new entry in the field.
   - Use the field's controls to increment or decrement the value.

Programming NACs

Use the following procedure to edit the programming of the two Notification Appliance Circuits (NACs) on the base panel, or the two optional NACs on the Expansion Power Supply.

1. If an Expansion Power Supply Module is installed in the system, make sure to check the blank box to the left of the entry for "Expansion Power Supply (with NACs)." Refer to Figure 5-1 for the location of this checkbox.
2. To edit the standard and expansion NACs, click on the Edit Points button to the right of "Standard NACs (Notification Appliances)".

   A dialog similar to the one shown in Figure 5-3 appears. Note that if you checked the box for Expansion Power Supply with NACs, entries for the EPS NACs appear in this dialog as well.
3. Click on the line corresponding to the point you want to edit.

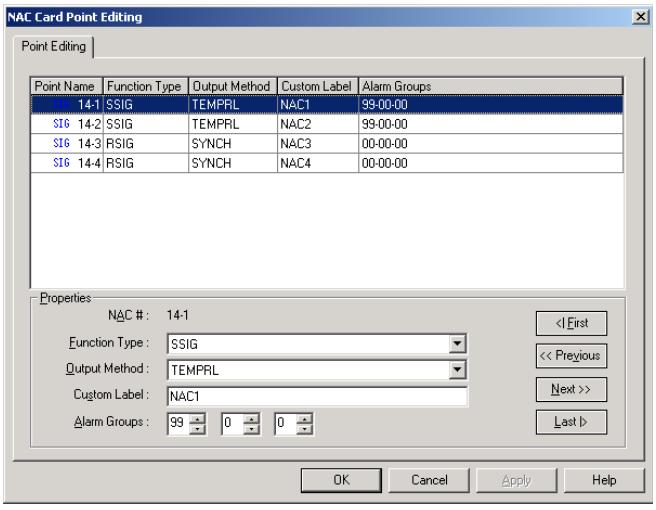

Figure 5-3 NAC Properties Screen

NAC Function Type

The Function Type determines the way in which the NAC operates (whether it is an audible, visual, etc.) and its output method (steady, etc.)

1. Click on the Function Type drop down list box. The list of options shown in Table 5-4 appears.
2. Scroll through the list and select the appropriate Function Type.

Table 5-4 NAC Function Types

Function Type	Description
QALERT	General Alarm Horn/Strobe (horn on-til-silence; strobe on-til-reset). Use for NAC circuits containing *both* horns and strobes. Compatible visual-only devices include: • 4906-9101, wall-mount, visual-only, red • 4906-9102, ceiling-mount, visual-only, red • 4906-9103, wall-mount, visual-only, white • 4906-9104, ceiling-mount, visual-only, white Compatible A/V devices include: • 4906-9127, wall-mount, red • 4906-9128, ceiling-mount, red • 4906-9129, wall-mount, white • 4906-9130, ceiling-mount, white Compatible audible-only devices include: • 4901-9820, wall-mount, red, horn only. Horn must be selected for two-wire horn strobe control. See Horn Instruction manual.
Wheelock	General Alarm Horn/Strobe. Use for NAC circuits containing both horns and strobes. Horn appliances connected to NACs programmed as the Wheelock Function Type will sound the Wheelock "Code 3" coding pattern, which is similar to (but not in sync with) the Simplex Temporal coding pattern, regardless of the NAC coding pattern selected. Horn Appliances on NACs programmed as the Wheelock Function Type will code in sync with each other. Compatible devices include the following Wheelock series: Horn and Strobe Sync AS, ASWP, ASA, ASB, AH, NS, HS4, NH, MIZ, RSS, RSSP, RSSPA, RSSA, RSSB, RSSG, RSSR, RSSWP, RSSWPA, RSSWPB, RSSWPG, RSSWPR, ZNS, ZNH, ZRS Strobe Sync Only (Speaker Strobes etc.) CH70, CH90, E50, E50A, E50B, E50G, E50R, E60, E60A, E70, E70A, E70B, E90, E90A, E90B, ET70, ET80, ET90, ET70WP, ET70WPA, ET70WPB, ET70WPG, ET70WPR, AMT, MT, MTA, MTB, MTG, MTR, MTWP, MTWPA, MTWPB, MTWPG, MTWPR, S8, SA-S70. SA-S90
SSIG	General Alarm (on til-silence). Use for NAC circuits containing only audible devices. Compatible audible-only devices include: • 4901-9820, wall-mount, red, horn only.

Table 5-4 NAC Function Types

Function Type	Description
RSIG	General Alarm (on steady-til-reset). Use for NAC circuits containing visual-only devices. Set NAC Output Method (see Table 5-5) to SYNC. Compatible devices include: • 4906-9101, wall-mount, visual-only, red • 4906-9102, ceiling-mount, visual-only, red • 4906-9103, wall-mount, visual-only, white • 4906-9104, ceiling-mount, visual-only, white
SUPV	NAC activates when there is a supervisory condition active in the system. NAC is on until supervisory condition is cleared.
TRBL	NAC activates when there is a trouble condition active in the system. NAC is on until trouble condition is acknowledged.
UTILITY	NAC activates when an IDNet device with the following attributes activates: • Device must be in same alarm group as utility NAC. • Device must be assigned a Utility function type. Typically used for process monitoring function. For example, a relay on a machine is tied to the IDNet Device. When the relay activates, the utility device activates and triggers the utility NAC.

NAC Output Method

The Output Method determines the pattern sent to the appliances by the NAC. Refer to Table 5-5 for a list of available choices.

1. Click on the Output Method drop down list box. The list of options shown in Table 5-5 appears.
2. Scroll through the list and select the appropriate Output Method.

Table 5-5 Output Methods

Operation	Description
Temporal	Standard Temporal coded pattern. A three pulse coding pattern consisting of three ½ second pulses, each separated by ½ second silence. Each group of three pulses is separated by 1.5 seconds of silence.

Table 5-5 Output Methods

Operation	Description
Synch	Generates synchronization pulse for visual-only NAC circuits that use the following visual-only devices. • 4906-9101, wall-mount, visual-only, red • 4906-9102, ceiling-mount, visual-only, red • 4906-9103, wall-mount, visual-only, white • 4906-9104, ceiling-mount, visual-only, white
Steady	Steady On
20 BPM	Slow March Time - 20 beats per minute
120 BPM	Fast March Time - 120 beats per minute

NAC Custom Label

The Custom Label field (see Figure 5-3) allows you to assign a 20-character custom label to each NAC point.

1. Type the text for the label in the Custom Label field.
2. As you type letters in the field, the programmer suggests possible words for the label. To accept the programmer's suggestion, press CTRL-F.

   For example, typing "GAR" causes the panel to suggest the word "GARAGE." Press CTRL-F to accept the suggestion.

NAC Alarm Groups

Alarm groups allow you to program selective signaling. Each NAC can be in up to three groups. Assign the NAC an alarm group number from 1 to 99. Assign the same alarm group number to the initiating device(s) that you want to control the NAC.

1. Enter a value for one of the three alarm groups using either of these methods.
   - Use the pointer to select the existing entry and type the new entry in the field.
   - Use the field's controls to increment or decrement the value.

Programming Relays

AUX Relay programming allows you to define the following for the first auxiliary relay located on the main sytem board (MSB), and all of the expansion relays (if installed).

Note: Relay 2, which is the second "standard" relay on the panel's MSB, is always a trouble relay.

- Function, which defines when the Relay activates and deactivates.
- Output Method, which defines how the Relay activates (coded, steady, etc.)
- Custom Label. Allows you to set a 20 character label for the relay point.
- Alarm Group. Allows you to associate the relay with up to 3 groups of initiating devices, providing the ability to perform selective activation of the relay.

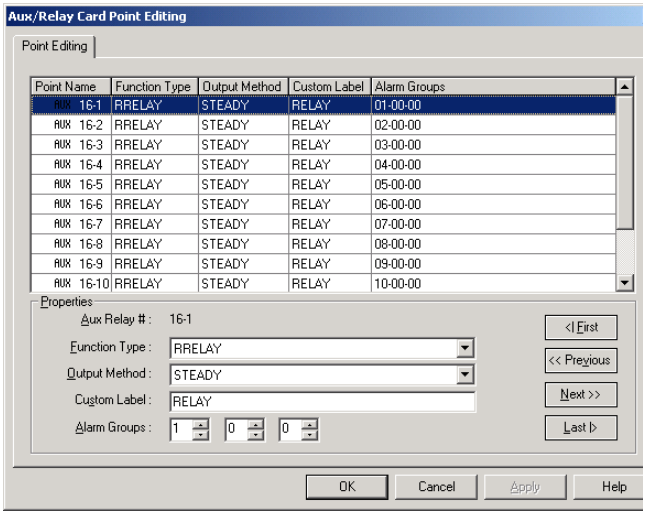

Figure 5-4 AUX Relay Properties Screen

Use the following procedure to edit the programming of Relay 1 on the panel's MSB, or any of the relays on the Expansion Relay Module.

1. If an Expansion Relay Module is installed in the system, make sure to check the blank box to the left of the entry for "Expansion AUX Relays." Refer to Figure 5-1 for the location of this checkbox.
2. Click on the Edit Points button to the right of Standard AUX Relays. Refer to Figure 5-1 for the location of this field.

   A dialog similar to the one shown in Figure 5-3 appears. If you checked the box for Expansion AUX Relays, entries for the optional relays appear in this dialog as well.

AUX Relay Function Type

1. Click on the Function Type drop down list box, which is shown in Figure 5-4.
2. Select a Function Type. Refer to Table 5-6 for a list of the available function Types..

Table 5-6 Relay Function Types

Function Type	Description
SRELAY	Relay activates on general alarm; remains on-til-silence.
RRELAY	Relay activates on general alarm; remains on-til-reset.
SUPV	Relay activates when a Supervisory condition occurs; remains on-til-cleared.
TRBL	Relay activates when a Trouble condition occurs; remains on-til-acknowledge.
Utility	Relay activates when a utility IDNet device in the same alarm group activates.
PRIMARY See Note Below	Relay activates on general alarm. Relay is tied to Primary Elevator Recall contacts.
ALTERN See Note Below	Relay activates on general alarm. Relay is tied to Alternate Elevator Recall contacts.
DRESET	Relay provides 24V power to four-wire detectors. Relay turns off for 5 secs on system reset)
DHOLDER	Relay typically provides 24V power to larger door holder relay with separate power source. Relay activates on general alarm and signals door holder relay to cut power to door holder magnets.

Aux Relay Output Methods

1. Click on the Output Method drop down list box, which is shown in Figure 5-4.
2. Select a Function Type. Refer to Table 5-7 for a list of the available function Types.

Table 5-7 Relay Output Methods

Operation	Description
Steady	Steady On
SYNCH	N/A - Do not use
20 Bpm	Slow March Time - 20 beats per minute.

Table 5-7 Relay Output Methods (Continued)

Operation	Description
Temporal	Standard Temporal coded pattern. A three pulse coding pattern consisting of three ½ second pulses, each separated by ½ second silence. Each group of three pulses is separated by 1.5 seconds of silence.
120 Bpm	Fast March Time - 120 beats per minute.

Note: Elevator recall requires the following:

- The relay must have a function type of Primary or Alternate and must be wired to the appropriate elevator control contact.
- The initiating devices used to trigger elevator recall **must** be associated with the following alarm groups.
  - Alarm Group 98. Associate all zones used to recall the elevator to the primary floor in this alarm group.
  - Alarm Group 97. Associate all zones used to recall the elevator to the alternate floor in this alarm group.

AUX Relay Custom Label

The Custom Label field (see Figure 5-4) allows you to assign a 20-character custom label to each relay point.

1. Type the text for the label in the Custom Label field.
2. As you type letters in the field, the programmer suggests possible words for the label. To accept the programmer's suggestion, press CTRL-F.

   For example, typing "GAR" causes the panel to suggest the word "GARAGE." Press CTRL-F to accept the suggestion.

AUX Relay Alarm Groups

Alarm groups allow you to program selective signaling. Each relay can be in up to three groups. Assign the relay an alarm group number from 1 to 99. Assign the same alarm group number to the initiating device(s) that you want to control the relay.

1. Enter a value for one of the three alarm groups using either of these methods.
   - Use the point to select the existing entry and type the new entry in the field.
   - Use the field's controls to increment or decrement the value.

Chapter 6. Programming Annunciator and Panel LEDs

This chapter describes

- Programming LEDs on the **Local Zone LED annunciator**, which is a door-mounted annunciator containing 10 Red and 14 Yellow LEDs, which provides a red alarm and yellow trouble LED for each of 10 initiating device circuits. This module also provides 4 Yellow LEDs, one for each of 4 NACs. The LEDs are programmable, and can be used for other functions as appropriate per application.
- Programming LEDs on the **Remote LED/Switch Annunciator**.
  - 10 programmable red LEDs
  - 6 programmable yellow LEDs (no default operation)
  - Green “power on” LED (not programmable)
  - Yellow “Alarm Silenced” LED (not programmable)
  - Yellow “Trouble” (not programmable)
  - Yellow “Comm Loss” LED (not programmable)
  - Tone-Alert (not programmable).
  - Switches for ACK, Alarm Silence, System Reset, and Lamp Test. **Note:** These switches are not programmable.
  - Key switch to enable switch functions.

  For Canadian applications, one red LED and one yellow LED must be programmed for each Alarm Group and each NAC. Yellow LEDs must be programmed for indicating Earth Detect, City/DACT disconnect, and Signal Silence Inhibit enabled. If the total number of Alarm Groups plus NACs exceeds 10, an additional remote annunciator shall be mounted adjacent to the panel.
- Programming the three **panel LEDs**. Typical applications for these LEDs include waterflow indicator and Earth fault indicator.
- Programming the **LCD Annunciator**. Programming consists of identifying which groups of events are sent to the LCD annunciator, and determining whether the keyswitch must be turned on before using the system reset, alarm silence, and acknowledge keys.

  For Canadian applications, the LCD annunciator is only suitable for supplementary applications.

In This Chapter

Identifying Installed Annunciators

1. Click on the Hardware Tab. Figure 6-1 shows the section of the Hardware Tab used to define Annunciator attributes.

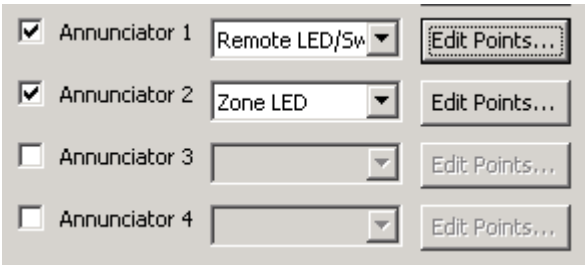

Figure 6-1 Annunciator Section, Hardware Tab

2. Check the appropriate check boxes to the left of the Annunciator 1, Annunciator 2, etc. fields. Refer to Table 6-1 for the way in which the annunciator fields correspond to the annunciator dipswitch settings.:

Table 6-1 Annunciator Dipswitch Settings

Hardware Tab Field Annuciator Number	Physical Address of Annunciator (Set via Dipswitch)
Annunciator 1	4
Annunciator 2	5
Annunciator 3	6
Annunciator 4	7

3. Click on the drop down list box to the right of the Annunciator 1, etc. fields and select the type of annunciator (Remote LED/Switch, Zone LED).

Mapping LEDs to Software Points

Figure 6-2 identifies the way in which the software points map to the LEDs on the Local Zone LED and Remote LED/Switch annunciators. For example, to control the LED in the upper left corner of the Local Zone LED Annunciator, you need to program Point 17.

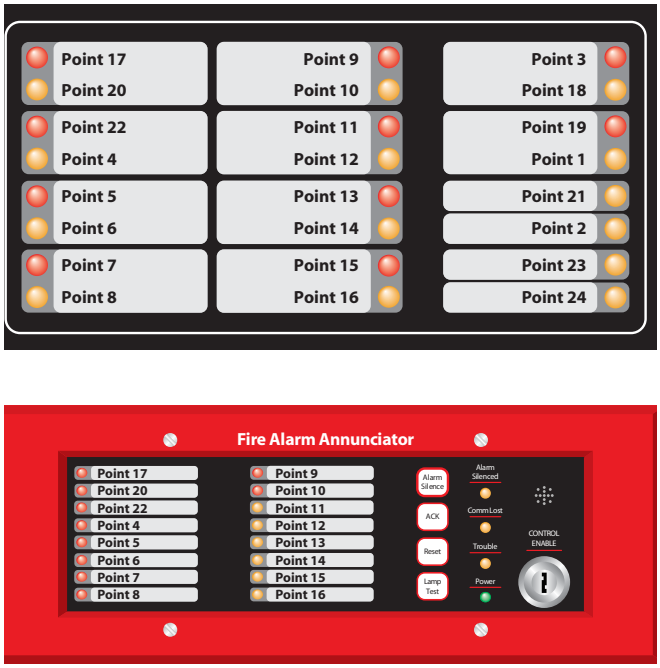

Figure 6-2 Mapping LEDs to Point Names

Default Programming

The LEDs on the Local Zone LED and Remote LED/Switch annunciators have the pre-defined operations listed in Table 6-2 and Table 6-3.

In both tables, a default function of FIRE means the LED illuminates if a current-limited condition occurs on the corresponding reference point. A default function of TROUBLE means the LED illuminates if a short occurs on the corresponding reference point.

Table 6-2 Default LED Assignments, Local Zone LED Module

LED Point	Default Function	Default Reference Point
1	TROUBLE	GRP 9
2	TROUBLE	NAC2
3	FIRE	GRP 8
4	TROUBLE	GRP 1
5	FIRE	GRP 2
6	TROUBLE	GRP 2
7	FIRE	GRP 3
8	TROUBLE	GRP 3

Table 6-2 Default LED Assignments, Local Zone LED Module

LED Point	Default Function	Default Reference Point
9	FIRE	GRP 4
10	TROUBLE	GRP 4
11	FIRE	GRP 5
12	TROUBLE	GRP 5
13	FIRE	GRP 6
14	TROUBLE	GRP 6
15	FIRE	GRP 7
16	TROUBLE	GRP 7
17	FIRE	GRP 99
18	TROUBLE	GRP 8
19	FIRE	GRP 9
20	TROUBLE	GRP 99
21	TROUBLE	NAC 1
22	FIRE	GRP 1
23	TRBL	NAC 3
24	TRBL	NAC4

Table 6-3 Default LED Assignments, Remote LED/ Switch Module

Point	Type	Default Function	Default Reference Point
1	Tone-Alert	PIEZO (tracks state of main piezo)	none
2	Yellow LED	General Trouble (illuminates on any trouble).	none
4	Red LED	FIRE	GRP 3
5	Red LED	FIRE	GRP 4
6	Red LED	FIRE	GRP 5
7	Red LED	FIRE	GRP 6
8	Red LED	FIRE	GRP 7Group 8
9	Red LED	FIRE	GRP 8
10	Red LED	FIRE	GRP 9
11	Yellow LED	TROUBLE.	GRP 99
12	Yellow LED	TROUBLE	GRP 1
13	Yellow LED	TROUBLE	GRP 2
14	Yellow LED	TROUBLE	GRP 3

Table 6-3 Default LED Assignments, Remote LED/ Switch Module

Point	Type	Default Function	Default Reference Point
15	Yellow LED -	TROUBLE	GRP 4
16	Yellow LED -	TROUBLE	GRP 5
17	Red LED -	FIRE	GRP 99
18	Yellow LED -	none	none
20	Red LED -	FIRE	GRP 1
22	Red LED -	FIRE	GRP 2

Note: Do not program Point 2 (Common Trouble LED or Point 18 (Comm Loss) on the LED/Switch Annunciator.

Programming the LED's Mode and Reference Point

This section describes programming LEDs on either a Local Zone LED annunciator module or a Remote LED/Switch annunciator module.

Programming an LED consists of the following tasks

- Identify which point is being monitored by the LED (called the reference point).
- Identify which point state (fire alarm, trouble, etc.) on the monitored point triggers the LED to turn on. This is called the mode.

1. Click on Edit Points, located on the right side of the annunciator field. See Figure 6-1 for the location of this field. A dialog similar to the one shown in Figure 6-3 appears.

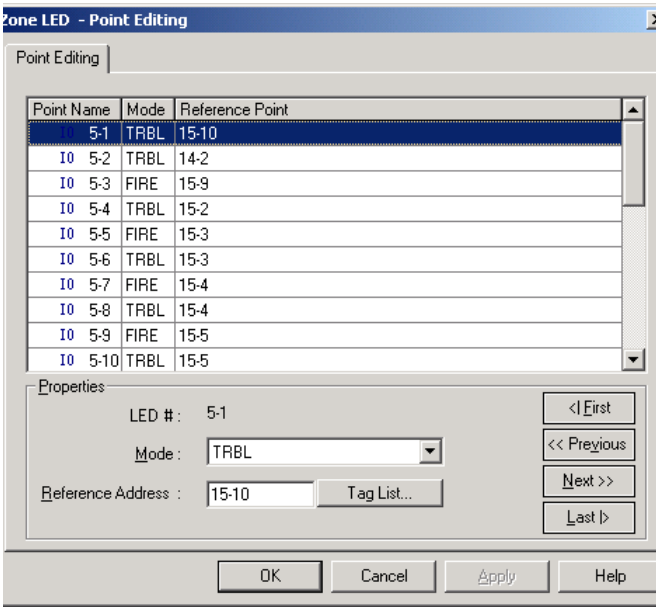

Figure 6-3 Point Editing Screen

2. Select the LED to be programmed by clicking on the LED's entry in the Point Editing Screen.
3. Click on the Mode drop down list box. Choose one of the modes listed in Table 6-4.

Table 6-4 LED Modes

Mode	Description
FIRE	Output activates when referenced point is in an Alarm condition.
SUPV	Output activates when referenced point is in a Supervisory condition.
TRBL	Output activates when referenced point is in a Trouble condition.
DISA	Output activates when the referenced point is Disabled.
ON	Output activates when the state of the reference point is ON.
OFF	Output activates when the state of the reference point is OFF.
LF	Output activates when any point is in an alarm condition.
LS	Output activates when any point is in a supervisory condition.
LT	Output activates when any point is in a trouble condition.

4. Click on the Tag List button to the right of the Reference Address field. A Taglist dialog appears. Scroll through the list of Reference Addresses. When the one you want to choose is shown, click on the address to highlight it and press the space bar. A << symbol appears to the left of the address to indicate it is selected.

   Table 6-5 lists some of the common reference addresses. The specific list that displays depends on the mode selected.

Table 6-5 Common LED Reference Points

Reference Point	Description
IDNet 1-200	Separate reference point for each IDNet initiating device. State monitored determined by selected LED mode.
Aux Relays 1 and 2	Separate reference point for each relay. State monitored determined by selected LED mode.
City/DACT Disconnect	Separate reference point (18-14) for disconnect and trouble. Typical use is to monitor the ON state of either point.
City Trouble	
Control Bypass	Separate reference point for each type of bypass.Typical use is to monitor the ON state of any of the points.
Elevator Bypass	
Door Bypass	
List - General Alarm Points	List contains all zones with FIRE, VERIF, or STYLEC function type. Monitoring the Fire or Trouble state of this list allows you to illuminate an LED when any zone in the list enters an alarm or trouble state. Select either FIRE or TRBL as the mode.
List - Waterflow Zones	List contains all zones with WATER or WSO function type. Monitoring the Fire or Trouble state of this list allows you to illuminate an LED when any zone in the list enters an alarm or trouble state. Use output mode to select which state (Fire, Trouble) is monitored.
List - Sprinkler Zones	List contains all zones with SO or WSO function type. Monitoring the Fire, Trouble, or Supervisory state of this list allows you to illuminate an LED when any zone in the list enters an alarm, trouble, or supervisory state. Select either FIRE, TRBL, or SUPV as the mode.

Table 6-5 Common LED Reference Points

Reference Point	Description
Alarm Group 1 -99	Separate list for each alarm group. Monitoring the Fire, Supervisory, Trouble, or ON state of an alarm group list allows you to illuminate an LED if any point in the group enters the fire, trouble, supervisory, or ON state. Use output mode to select state monitored.
NACs 1 - 4	Separate list for each NAC. Monitoring the ON or trouble state of a NAC allows you to illuminate an LED if the NAC enters trouble state or turns on. Use output mode to select state (on or trouble) monitored.

Programming Panel LEDs

This section describes how to program the operation of the three LEDs built-in to the front panel display. Programming involves setting the mode (the point and point state that triggers the LED to illuminate) and the color of the LED.

The three panel LEDs are stacked one on top of the other on the right side of the panel. When programming Panel LEDs, be aware that LED1 is the top panel LED, LED2 is the LED in the middle, and LED3 is the LED on the bottom.

1. Make sure the Hardware Tab is selected. Examine the choices in the box labeled Standard Hardware.

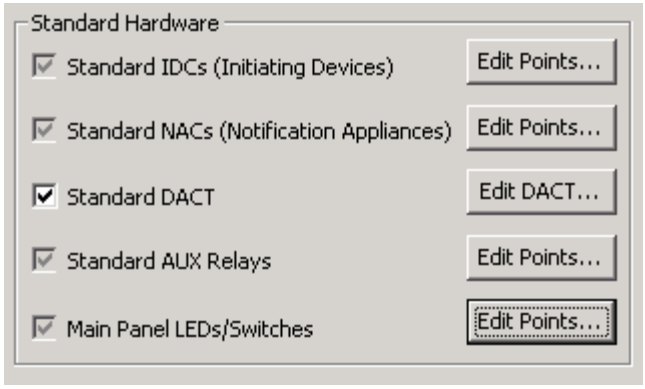

Figure 6-4 Location of Edit Points Button for Panel LEDs

2. Click on the Edit Points button to the right of "Main Panel LEDs/Switches." See Figure 6-4 for the location of this button. A dialog similar to the following appears.

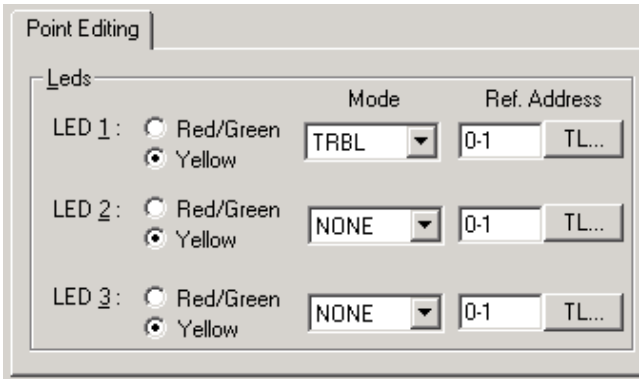

Figure 6-5 Panel LED Point Editing

3. Choose the LED color as follows:
   - Yellow - Programs LED as a yellow LED.
   - RG - Programs LED as either a Red or Green LED, depending on which LED is being programmed.

     If you assign this type to LED1, its color will be red. If you assign this type to LED2 (middle) or LED3 (bottom), its color will be green.
4. Click on the Mode drop down list box for the LED.

Setting LED Mode and Reference Point

The Reference Point and Mode allow you to specify which point is being monitored by the LED (called the reference point) and what point state triggers the LED to turn on (called the mode).

1. Click on the Mode drop down list box.
2. Choose one of the modes from the list. Refer to Table 6-4 for a list of LED modes.
3. Click on the button labeled T-L. A Taglist dialog appears. Scroll through the list of Reference Addresses. When the one you want to choose is shown, click on the address to highlight it and press the space bar. A << symbol appears to the left of the address to indicate it is selected.

   Table 6-5 lists some of the common reference addresses. The specific list of reference addresses that displays depends on the mode selected.

Common Panel LED Applications

Two common applications for programmable LEDs are:

- Earth Fault Detect LED. This LED tracks whether the panel's Earth fault system point is active or not. If the point enters a trouble state (i.e., there is an Earth fault), the yellow LED illuminates. Program the LED as follows:
  - Make sure the color is yellow
  - Select the "TRBL" mode
  - Select 17-06 as the reference point
- Waterflow LED, which illuminates if a device with the function type WATER or WSO activates. Program the LED as follows:
  - Make sure the LED color is red
  - Select the "FIRE" mode
  - Select 22-101 as the reference point

Programming Front Panel Function Keys

The function keys are programmable "Software Switches." The function key on the front panel allows an operator to select either Function 1 or Function 2. Pressing Enter after selecting one of these choices executes the function you program in this section.

1. Click on the Hardware Tab. Figure 6-6 shows the section of the Hardware Tab used to define the switches.

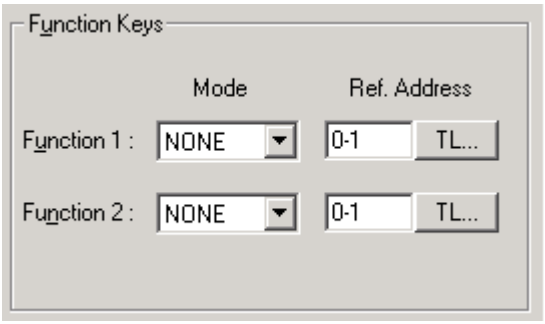

Figure 6-6 Hardware Tab, Function Key Section

2. Click on the Mode drop down list box and choose one of the modes listed in the table below.

Table 6-6 Function Key Modes

Mode	Description
PBT	Programs the reference address to track the state of the switch. Point turns on when function key is active, and turns off when it is not active.
TDE	Programs the function key to toggle (reverse) the disable/enable state of the referenced point.
TOF	Programs the function key to toggle (reverse) the ON/OFF state of the referenced point.

3. Click on the button labeled T-L. A Taglist dialog appears. Scroll through the list of Reference Addresses. When the one you want to choose is shown, click on the address to highlight it and press the space bar. A << symbol appears to the left of the address to indicate it is selected.

   Table 6-5 lists some of the common reference addresses. The specific list of reference addresses that displays depends on the mode selected.

Programming LCD Annunciator

Programming the LCD Annunciator involves:

- Programming the three LEDs on the Annunciator.
- Selecting whether a key is required to perform various annunciator functions.
- Selecting which types of events are annunciated.

Programming LED Color, Mode, and Reference Address

Examine the LED Point Name, shown in Figure 6-7. The first part of the name identifies the address of the annunciator (address 4 in Figure 6-7); the second part of the point name is the number of the LED. LED 1 is the top LED; LED 2 is the middle; and LED 3 is the bottom LED.

1. Click on the Function Type drop down list box to set the LED's color, as follows:
   - Y - Programs LED as a yellow LED.
   - RG - Programs LED as a Red / Green LED. If you assign this type to LED1 (top LED), its color will be red. If you assign this type to the LED2 (middle) or LED3 (bottom), its color will be green.
2. Click on the Mode drop down list box and choose a mode. Refer to Table 6-4 for a list of modes.

3. Click on the button labeled T-L. A Taglist dialog appears. Scroll through the list of Reference Addresses. When the one you want to choose is shown, click on the address to highlight it and press the space bar. A << symbol appears to the left of the address to indicate it is selected.

   Table 6-5 lists some of the common reference addresses. The specific list of reference addresses that displays depends on the mode selected.

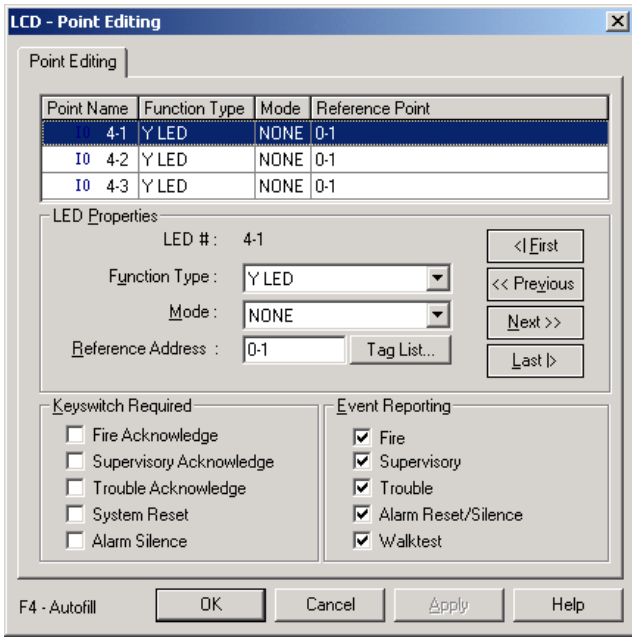

Figure 6-7 LCD Annunciator Point Editing

Selecting Which Events Require Keyswitch

The Keyswitch Required column on the left includes five checkboxes for the panel functions that can be controlled by a keyswitch. Check the box to the left of the entry to force the operator to first turn the keyswitch ON before the function can be performed.

Selecting Which Events to Annunciate

The Event Reporting column on the right includes five checkboxes for the event types that can be displayed at the LCD annunciator. Check the box to the left of an entry to display that type of event at the annunciator.

Chapter 7. Programming DACT

The panel's DACT (Digital Alarm Communicator Transmitter) allows the panel to use one or two telephone lines to call a central station and report a local alarm, trouble, or supervisory condition.

This chapter describes programming the DACT options to specify the characteristics of the DACT's phone connection, communication format, and the format of the event or CID codes used by the central station.

In This Chapter

Adding DACT

1. Click on the Hardware Tab. Figure 7-1 shows the section of the Hardware Tab used to define Annunciator attributes.
2. Check the box to the left of Standard DACT to indicate the DACT is installed.

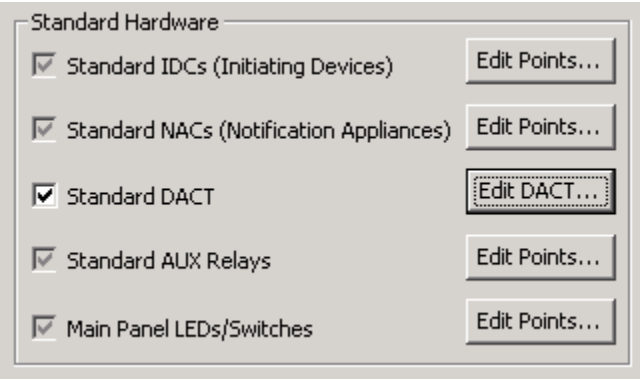

Figure 7-1

Setting Basic DACT Options

1. Click on the Edit DACT button to the right of the Standard DACT checkbox. Refer to Figure 7-1 for the location of this button.

   A screen similar to the one shown in Figure 7-2 is displayed.

2. Click on the Basics Tab in the upper left corner.

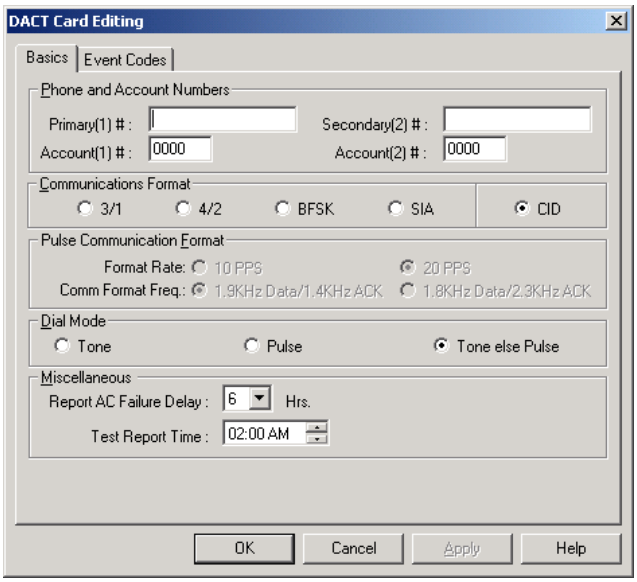

Figure 7-2 DACT, Basics Tab

Setting Phone and Account Numbers

Enter primary and secondary account and phone numbers using the following guidelines.

- **Primary and Secondary Phone Numbers.** Both of these numbers are supplied by the central station.

  When an event occurs, the DACT attempts to send event information to the primary phone number. If the event information is not sent, the DACT attempts to send the information to the secondary phone number. The DACT will make up to 10 attempts to send the information, alternating between the primary and secondary phone numbers.

  Note: The following special characters are available for use when setting the primary and secondary phone numbers.

  - B -- Use if it is necessary to input an DTMF (touch-tone) asterisk (*) into the phone number.
  - C -- Use if it is necessary to input a DTMF pound sign (#) into the phone number.
  - D -- Inserting this character into the phone number causes a 3 second delay at the point at which the D appears.
  - E -- This character causes the DACT to wait two seconds for a secondary (outside line) dial tone. It may be necessary to use this character if you must dial a specific number (9, for example) to get an outside line on the phone system. For example, 9E would cause the DACT to request an outside line and then wait 2 seconds for the secondary dial tone before proceeding with the rest of the phone number. If you use the "E" special character, **make sure to set the Dial Mode to Tone; do not use Tone else Pulse.**

- Primary and Secondary Account. These are unique four-digit identifiers assigned by the central station.

Communication Format

Make sure to determine, from an authorized person at the Central Station, the required communication format. The DACT can report in any of the following communication formats.

- **3/1 pulse** = Three-digit account code followed by one-digit reporting code, double round at 20 pulses per second (PPS). Allows programmable reporting codes. Refer to "Programming Event Codes" later in this chapter.
- **4/2 pulse** = Four-digit account code followed by two-digit reporting code, double round at 20 PPS. Allows programmable reporting codes. Refer to "Programming Event Codes" later in this chapter.
- **BFSK** = Three-digit account code followed by two-digit reporting code, single transmission of constant tones. Features built-in error checking and fixed reporting codes.
- **SIA** = Level 1 compatibility. Four-digit account code features tonal acknowledge, basic reports, and fixed reporting codes.
- **Contact ID (Default).** Uses a four digit account code, followed by a two- digit group number and three digit contact number.

Pulse Communication Format

Set these options as follows:

- **Pulse Rate** option specifies the pulse rate used with either the 3/1 or 4/2 pulse format. This option does not apply to other formats. Choices are 20 pulses per second (PPS), which is the default, and 10 PPS.
- **Pulse Frequency** specifies the frequency (in KHz) of the pulses used by the DACT. Choices are 1.9 Khz Data/1.4 Khz ACK, or 1.8 Khz Data/2.3 Khz ACK.

Setting Dialing Mode

The dialing mode specifies the type of phone line being used by the DACT. Choices are:

- Tone.
- Tone else Pulse.
- Pulse.

AC Fail Delay

The AC Fail Delay allows you to specify the interval between power loss at the panel and when the DACT notifies the central station of the power loss.

Choices are: 0, 6 - 24 hours

Test Report Time

This option specifies the time at which the Test Report Event is sent to the central station. Time is set in 24 hour, military, format.

Programming Contact ID (CID) Points

Follow the procedure below only if the DACT is using the Contact ID (CID) reporting format. CID reporting format requires you to specify the group and Contact ID for each point, but there is no need to specify the type of event with the CID format. This information is automatically derived from the point's function type.

Note: Default CID point values are provided in the panel. Before changing these values, please contact an authorized representative at the central station.

Table 7-1 Default CID Codes

Function Type	Default CID Event Code
SMOKE	111
VSMOKE	111
PULL	115
FIRE	110
STYLEC	110
SUPV	200
LATSUPV	200
WSO	113
WATER	113
TROUBLE	330
System Trouble	330
Phone Line 1 Trouble	351
Phone Line 2 Trouble	352
Auto Test Report	602

Table 7-1 Default CID Codes

Function Type	Default CID Event Code
Manual Test Report	601
Off Normal At Test	608
AC Failure	301
Power Supply Earth	310
Low Battery	302

1. Make sure the Communication Format setting is CID.
2. Click on the Event Tabs.
3. Click the Enable Edit check box.
4. Edit the fields as directed by the Central Station.

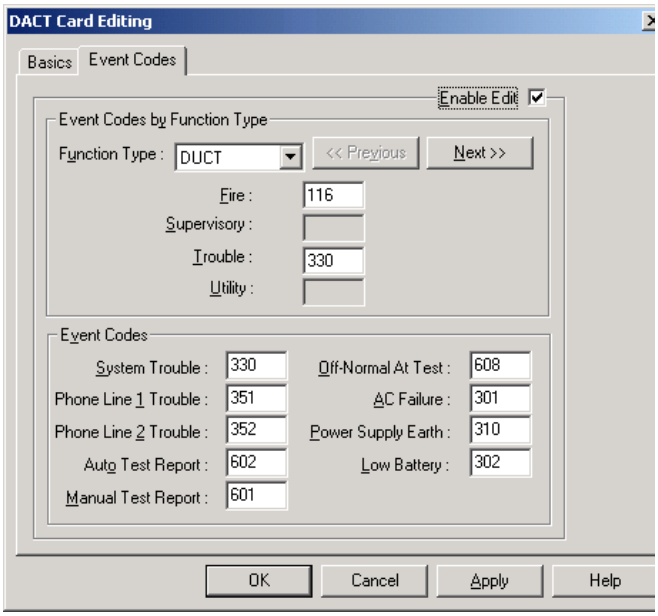

Figure 7-3 Changing CID Codes

Programming Event Codes

Follow the procedure below only if the DACT is using the 3/1 or 4/2 reporting format. Do not edit the BFSK or SIA formats.

1. Make sure the Communication Format setting is 3/1 or 4/2. (Select BFSK or SIA to view, but not edit the codes.)
2. Click on the Event Tabs.
3. Click the Enable Edit check box.
4. Edit the fields as directed by the Central Station.

Table 7-2 Event Categories and Codes

Event	3/1	BFSK	4/2	SIA
Fire Alarm	1	11	A1	FA1
Supervisory	3	33	A3	SS3
Trouble	4	F4	A4	FT4
Fire Restoral	E	E1	71	FR1
Supervisory Restoral	E	E3	73	SJ3
Trouble Restoral	E	E4	74	FJ4
Phone Line 1 Trouble	F	FB	31	LT1
Phone Line 1 Restoral	E	EB	35	LR1
Phone Line 2 Trouble	F	FC	32	LT2
Phone Line 2 Restoral	E	EC	36	LR2
AC Failure	F	FA	6A	AT0
AC Restoral	E	EA	7A	AR0
Auto Test Report	E	EE	3A	RP0
Manual Test Report	E	EE	3A	RX0
Off-normal at test	F	F8	33	YX0

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