LiNC-NET for Windows XP Professional and Vista Business Edition

Administrator Guide for LiNC-NET ver. 5.14
38-10055-002
REV: D

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First Edition – Version A - January 2003
Revision B – October 2003
Revision C – November 2007
Revision D – October 2008

Published by **PCSC**
3541 Challenger Street
Torrance, CA 90503
(310) 303-3600

Publication Number: 38-00055-002-D

0.2 Table of Contents

1.0 Introduction

Welcome to the redesigned LiNC-NET for Windows XP Professional and Vista Business Edition, the enterprise programming software from PCSC. This user-friendly, PC-based access control manager is fairly simple to operate and provides Help screens along the way to make operation even easier. We've recently redesigned the LiNC-NET manuals

LiNC-NET for Windows XP Professional and Vista Business Edition operates under the Microsoft Windows XP Professional and Vista operating systems. The host PC should be dedicated to the access control system to ensure security integrity and management efficiency. Other Windows XP Professional and/or Vista applications should not be running concurrently with LiNC-NET for XP Professional.

LiNC-NET functions on two separate levels: Administrator and User. This manual has been designed to provide information for the Administrator level of LiNC-NET, which allows an individual to set the parameters of the system and configure LiNC-NET's operation with the different panels it controls. To obtain a complete understanding of LiNC-NET, it should be used in conjunction with the LiNC-NET for Windows XP Professional and Vista Business Edition Install Manual and the LiNC-NET for Windows XP Professional and Vista Business Edition User Manual.

Panel Installation Manuals

MicroLPM	P/N 33-10019-001
Ultimate	P/N 33-10035-001
IQ-200	P/N 33-10036-001
SIM	P/N 33-10037-001
IQ-400	P/N 33-10057-001

Peripheral Installation Manuals

Modem	P/N 39-10052-001
Stallion	P/N 39-10060-001
Lantronix	P/N 39-10056-001

NOTE: The MicroLPM and Ultimate manuals and the peripheral installation manuals have not been evaluated by UL and are not suitable for UL1076 installations.

NOTE: For clarity in describing the use of LiNC-NET, the MicroLPM, IQ, SIM and Ultimate PCBs will be referred to as the PANEL.

NOTE: LiNC-NET for Windows XP Professional and Vista Business Edition ver. 5.14.07 or greater is Windows Vista compatible.

1.3 Installation and Setup

Along with the Help screens, this guide describes how to setup your system quickly and easily. Refer to the **LiNC-NET for Windows XP Professional and Vista Business Edition Installation Guide** (P/N 33-10055-002) for proper installation of the LiNC-NET system. Refer to the **LiNC-NET for Windows XP Professional and Vista Business Edition User Guide** (P/N 37-10055-002) for the day-to-day operation and maintenance of your system. The User Guide provides information on entering data regarding card assignment, time periods, downloading records to the Panel(s), and door operations.

NOTE: Some of the screens shown in the **LiNC-NET 5.14 Admin Manual** make reference to **LiNC-NET 5.14.1**. Except for screens where the software now functions and appears differently in the current version of **LiNC-NET 5.14**, please assume that the functionality shown in these older screens is still correct for this version.

2.0 Using LiNC-NET

Remember-

In a **Multi-User** or **Concentrator** system, PC's must be booted up in the following order:

1. Host PC
2. Concentrator PC(s)
3. Workstation PC(s)

Booting up the system in a different order could cause network communication problems.

Also, in a **Multi-User** or **Concentrator** system, PCs must be shut down in the following order:

1. Workstation PC(s)
2. Concentrator PC(s)
3. Host PC

Shutting down the system in a different order could cause network communication problems.

2.1 Coming and Going

2.1.1 Starting LiNC-NET

1. In Windows, press **Start** at the bottom of the screen. The menu will display a list of programs. Click on **Programs** and then click on **LNv5_14_xx**.

2. Double-click on the **LiNC-NET** icon and the **password menu** will appear.

3. Enter **0** and then the password **PYMTF** to sign on to **LiNC-NET**. The **System menu** will appear.

> **NOTE** If you have installed a client database, enter the name of the client before entering a password.

2.1.2 Exiting LiNC-NET

From the **System or User Commands Menu**, press the **EXIT** button at the bottom of the screen to sign off LiNC-NET.

The **Sign-on** screen will appear. Enter your default Exit name (**1**) and then the password (**EXIT**) to terminate LiNC-NET.

> **NOTE** During system set up, a system password is installed that will allow varying levels of access to LiNC-NET for Windows XP Professional and Vista Business Edition. There will be both an access password and an exiting password.

> **NOTE** To prevent data loss or database corruption while LiNC-NET is running, you MUST use your Exit password. DO NOT use a warm boot (CTRL-ALT-DEL) or a cold boot (Power switch off) to terminate the LiNC-NET application software.

2.2 System Commands and Menus

System Menu

A section of the LiNC-NET program is used by the LiNC-NET System Administrator to establish the basic system parameters of LiNC-NET. The System Menu also gives access to features such the Password Menu, which are restricted from the User Menu.

User Menu

A section of the LiNC-NET program that is used by the normal operators of the LiNC-NET System. The User Menu functions for the day-to-day use of the LiNC-NET system, including activating and reactivating cards and establishing time periods and holidays. For a detailed description of the User Menu, please see the LiNC-NET 5.14 for Windows XP Professional User Guide (P/N 37-10055-002).

2.2.1 System Commands

This section provides an overview of the **System Commands Menu**. The **System Commands Menu** is displayed after LiNC-NET is started from Windows XP Professional and the Administrator logs onto the system. From the System Commands Menu all features and functions are accessible. After selecting a menu item, a set of options will be displayed. You can use either the mouse or keyboard command to initiate the function you wish to access. Some features, such as **Bulk** or **Door** have only one function screen associated with it and will access that screen when the button is clicked. Other features, such as **Site** or **Hardware** have several function screens associated with it, and will give you a list of choices when the button is clicked.

2.2.1.1 The System Commands Menu and Tool Bar

The **System Commands Menu** is comprised of the following main menu items:

2.2.1.2 Bulk

Used for bulk initialization of data, including Card Technology, Access Times, Daylight Savings, Card Database Format, and Entry/Exit enforcement.

2.2.1.3 Site

2.2.1.3.1 Host computer

Allows the administrator to configure the method in which panels will connect to the Host computer. The Host computer screen allows an administrator to establish the method that a panel, or groups of panels, will communicate with the Host computer. The Host computer screen assigns COM ports, establishes the method of communication to each COM port (modem, direct, or LAN), establishes the number of panels that are connected, and lists the physical location of the Host computer.

2.2.1.3.2 Panel

Configures each panel's parameters, such as Daylight Savings, Entry/Exit enforcement, method of communication to the Host Computer, its assigned Time Period, and its location in reference to the Host Computer.

2.2.1.4 Door

Configures door parameters such as card technology, access time, auto-unlock time, and two-person minimum occupancy rule. Access Actions define what (if any) action should automatically turn on or off, and program counter time outputs.

NOTE Familiarity with the panel functions is required to implement this function.

2.2.1.5 Hardware

2.2.1.5.1 Input

Configures sense input number, name to door number, and assigns the type of alarm, door sense, input counter, etc. An administrator also can define the counter actions that will automatically occur when input transitions from state-to-state (Normal/Closed, Alarm/Ajar, Trouble /Forced), i.e., link the inputs to the outputs.

2.2.1.5.2 Output

Names and defines outputs and sets their functions. These parameters determine when to turn outputs on and off, as well as define the actions when entering and exiting time periods.

2.2.1.5.3 Floor Groups

Controls the destination of an elevator cab based on a card's authorization attributes. When a card is swiped at a reader inside a cab, the time period/floor group pairs assigned to the card are evaluated to determine which relays the card can activate at the current time. Of those relays, the ones that are assigned to the reader engage the floor buttons from which the cardholder can make a selection.

2.2.1.6 Card

2.2.1.6.1 Add

The Card menu defines the cardholder data. All the options are here. Each card can be assigned the following information: cardholder name, normal or long access, override capability with event lockout and access costs, escort status, entry/exit exemption, card group specification, affiliation, counter number class, PIN, authorization group, and expiration dates.

2.2.1.6.2 Change

Allows an administrator to add a range of cards with the same information.

2.2.1.6.3 LiNC-ID

Refer to the LiNC-ID manual P/N 33-10042-001.

2.2.1.7 Integrity

2.2.1.7.1 Backup

Only History files will be backed up to the selected drive.

2.2.1.8 Password

2.2.1.8.1 Password

Each password is defined with access privileges that determine which functions are available to an operator. The initial system password is PYMTF. In addition to passwords and ID levels, class levels (None, System, User, Exit, and switch) can be designated based on each operator's program level.

2.2.1.8.2 Program Levels

In addition to passwords, program levels within the main access options (System, User, and Switch [System and User] and Reports) can be designated for each operator.

2.2.1.9 Alarms

LiNC-NET supports 2 types of alarms: 1) Sense Input and 2) Transaction. Sense input alarms are physical inputs driven by alarm devices, such as magnetic contacts, glass break, and passive infrared detectors. Transaction alarms are created by Host and panel transactions, such as an access denied, a disk error, a Logon occurrence, etc.

2.2.1.9.1 Alarm Acknowledgment

An alarm record may be defined at the Host by assigning a panel sense input record to a Host alarm record. When an alarm is detected at the panel, it can cause the corresponding alarm at the Host to be set and an alarm event to be logged in the journal file. An alarm condition at the Host/Workstation causes the alarm icon at the top of the screen to flash red-white and activates a break out box to acknowledge the alarms.

2.2.1.10 Logger

LiNC-NET maintains a logger (history) file comprised of records transferred from various panels. The logger records the following information: the PC host number (unless the system is a stand-alone unit), the panel number, the alarm status, the date and time logged, the date and time of occurrence, the name and location of where the transaction took place, and a code reference.

2.2.1.11 Reports

LiNC-NET is capable of producing reports on the screen or printer. The report setup window contains a tabbed notebook. The Display page allows the user to select the fields to be included in the report and the Search page allows the user to specify the search criteria. The Display page also contains buttons under Change Heading that allow the user to alter the heading and the column widths of the fields. Refer to the User Guide.

2.2.1.12 Help

This screen assists in the data entry process and defines the criteria required for proper operation.

2.2.1.13 User Commands

2.2.1.13.1 User (Switch)

This allows you to switch from the **System Commands** menu to the **User** menu. The sign on password must have the **Switch** class selected.

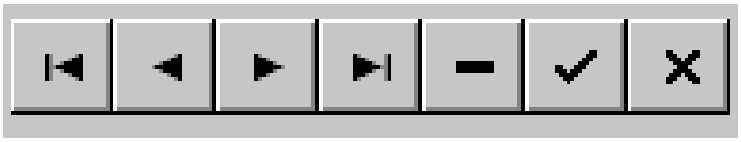
2.2.1.13.2 Exit

Logoff allows you to sign-off from LiNC-NET for Windows XP Professional and Vista Business Edition and return to Password entry.

2.2.1.14 Data Entry and Modification

To display or make modifications to the LiNC-NET for Windows XP Professional and Vista Business Edition database, follow these instructions:

1. Enter a file selection. (Example: **Site**). Key letters are underlined in each file name. Press **Alt-S** to access **Site** files. The sub-menu listing displays **Host** and **Panel**. Tab or arrow key to your selection. Press **Enter**. Or click on the selection or the icon with the mouse button.
2. Click on to the block that you wish to modify using the mouse or use the Tab key from the keyboard.
3. Position the cursor at the data field that you wish to modify or add to, and highlight the field by clicking on the block. A range window, described below, will appear on the screen for those fields that offer multiple options.
4. A data field can be modified in one of the following ways:
    - Some fields require that the operator enter the data. (Example: the name field). Enter the data, then press the mouse button or the Tab key to advance.
    - Other fields will have a **navigator bar** (shown below), which will appear at the top of the file.



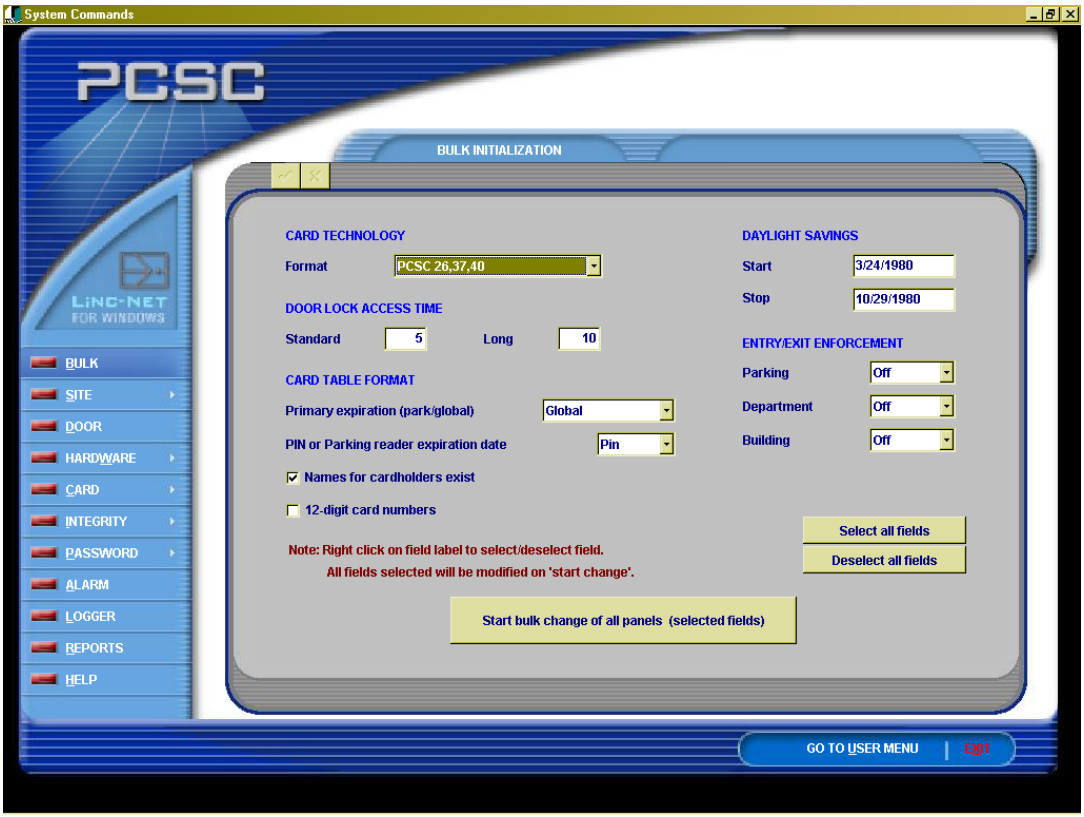
a. **b.** **c.** **d.** **e.** **f.** **g.**

a. Set the current record to the first record.
b. Set the current record to the previous record.
c. Set the current record to the next record.
d. Set the current record to the last record.
e. Delete the current record.
f. Write changes to the current record to the database.
g. Cancel edits to the current record.

All record fields (**System** and **User**) contain the legal keyboard character input.

2.2.2 Bulk Initialization

LiNC-NET enables the user to initialize every panel in the system to user-selected default values. **Bulk Initialization** defines the card technology: Access Times, Daylight Savings start and stop dates, Card Table format, and Entry/Exit options.



If you have just installed LiNC-NET using ConFigLN, you will notice that the **Bulk Initialization** page is almost exactly the same as the **Create Data Base: Default Values** page. You will also notice that the entries made in the **Create Data Base: Default Values** page will appear here in the **Bulk Initialization** page.

2.2.2.1 Making Changes in Bulk Initialization

Select All Fields — This button selects all data fields. All fields will be displayed in bold.

Deselect All Fields — This button clears the selection for all data fields. All fields will be displayed in gray.

Select a Single Entry — Right-click on the field to be changed. The field will be highlighted in bold.

Start Bulk Change of All Panels (Selected Fields) — This button starts the update of the selected fields for each panel.

To initialize all panels:

1. Make all appropriate changes for Bulk Initialization of the panels.
2. Right-click the header to each item to select/deselect.
3. Select the **Start Bulk Change of All Panels (Selected Fields)** button.

2.2.2.2 Bulk Initialization: Card Technology

In this section, you must select the card reader technology that you will implement into your access control system. Select the appropriate type of card reader in the Format window. The available card technology formats are as follows:

ProTech Readers	BR-350, BR-351, BR-352, BR-370, BR-371, All Hughes ID Proximity
MagStripe	BR-450, BR-451, BR-452, BR-470, BR-471
Watermark	Any Watermark card with the 12-digit format
PCSC Wiegand	34-bit PCSC Wiegand format, All Sensor Proximity Readers
Indala	Indala Proximity format
12-Digit	No site code; Magnetic Stripe
Sensor 26	Standard Sensor 26-bit format

NOTE BR-700 readers are setup as Sensor 26 readers.

Sensor 34	Standard Sensor 34-bit format
Special	Special format
PCSC 26, 37, 40	Standard PCSC Proximity format
Corp_1000	Special 35-bit HID Proximity format
Motorola 32	Special 32-bit motorola Proximity format
Smartcard_40	HID 40-bit Smartcard format

A letter or additional reference description that describes the reader type can follow the card technology:

PIN-Pad	PIN Pad with the reader.
(I)	Insert Reader

2.2.2.3 Bulk Initialization: Door Lock Access Time

The **Door Access Time** is the length of time that the door lock is to be energized. The actual length of time is 1/2 second less than the number of seconds specified. For example, access time value of 1 denotes 1/2 second of access and time value of 5 denotes 4 1/2 seconds. Value of 1 is generally used for turnstiles.

You must select time values for both the Standard Access and Long Access:

- **Standard Access** is the normal door lock energize time. Select an access time from 1-253 seconds (2-253 seconds for elevator readers).

- **Long Access** is the door lock energize time for cardholders that require a longer access time (i.e. an individual with a disability). Select an access time from 2-254 seconds (3-254 seconds for elevator readers).

2.2.2.4 Bulk Initialization: Card Table Format

Primary Expiration
If you select **Global**, the system automatically selects the Primary expiration date for all types of readers. You must select Global, if user-select PIN is to be used.

If you select **Park-Only (Secondary Expiration)**, each cardholder has 2 card expiration dates, with the parking expiration date automatically set to Date. One date controls the access privilege for “parking” type readers and the other for all other types of readers. This unique function allows the system administrator to automatically deny access to cardholders at parking readers, yet allow them to pass through facility related readers.

PIN or Expiration Date (Parking Readers)
If you select Park-Only as the primary expiration choice the system automatically selects Date. If you select PIN (only available when primary expiration is set to Global), you will have the capability of user-select 4-digit PIN codes. These PIN codes are used in conjunction with a reader and PIN Pad.

Names for Cardholders Exist
PCSC panel products have the ability to store the cardholder names within the panel itself. However, in the MicroLPM selecting this option will decrease the number of cardholders from 1016 to 600 cardholders (the capacity of the IQ/SIM panels are not effected by downloading). If you require names and more cardholders than 600, you will need to purchase a memory expansion kit for the MicroLPM.

12-Digit Card Number
Various card formats are available within the system. When using the MagStripe or Watermark format where a site code is not available, this option must be selected. The panel series supports 8 - 12 digit ABA Track 2 format data

2.2.2.5 Bulk Initialization: Daylight Savings

The Daylight Savings Cycle may be programmed into the panel.

Start Enter the date of the official start of Daylight Savings (In the U.S. it is usually the first Sunday of April).

Stop Enter the date of the official end of Daylight Savings (In the U.S. it is usually the last Sunday of October).

NOTE If the panel does not roll into Daylight Savings (no Start date programmed), then it won't roll out of Daylight Savings (even if a Stop date was programmed).

For IQ-200 with IQ 7.9.12Q (or newer) firmware or SIM with SI-7.9.15S (or newer) firmware. The panel will automatically roll out of **Daylight Savings Time** even if it didn't roll into **Daylight Savings Time**.

2.2.2.6 Bulk Initialization: Entry/Exit Enforcement

Each panel supports three separate entry/exit enforcement levels: **Strict**, **Lenient**, and **Soft**. Each enforcement level can be individually assigned to **Parking**, **Building**, or **Department** readers, but is enforced (under normal circumstances) when the Entry function and the corresponding Exit function readers are on the same panel. In order to broaden the use of Entry/Exit enforcement, an administrator can use Regional Antipassback. For more information, see the 5.14 Install Manual- Appendix A (P/N: 33-10055-002).

NOTE Entry/Exit enforcement cannot be done (at any of the 3 levels) if the entry readers are on one panel and the corresponding exit readers are on a different panel.

NOTE These panel firmware versions require the door to be opened before changing the card status. Repeated accesses will be granted (regardless of the anti-passback level of enforcement) if the door is not opened:

Standard MicroLPM-	Version 1.9.5 and above
Plus 2 MicroLPM-	Version 3.9.5 and above
Plus 4 MicroLPM-	Version 7.9.13 and above

NOTE All IQ and SIM panels require that the door be opened prior to updating the card status.

2.2.2.6.1 Strict Entry/Exit

The cardholder's entry/exit status must be synchronized with the system, otherwise an entry/exit error will be announced. In other words, the cardholder must have the proper status (building, department, or parking) before he uses an entry/exit reader. The card status must be as follows:

If the cardholder's Building Status is **IN** then Department Status can be **IN** or **OUT**.
If the cardholder's Building Status is **OUT**, the Department Status must be **OUT**.
If the cardholder's Department Status is **IN** then Building Status must be **IN**.

If the cardholder's status does not comply with the reader's entry/exit definition, then the system will deny access. In other words, when a cardholder attempts to enter a building **IN** reader, the cardholder's building and department status must be **OUT**.

2.2.2.6.2 Lenient Entry/Exit

This level is the same as **Strict** except on the first use of the card, in which case the system will automatically reset the building and department status to proper synchronization. The cardholder's second attempt at the reader will then grant him access.

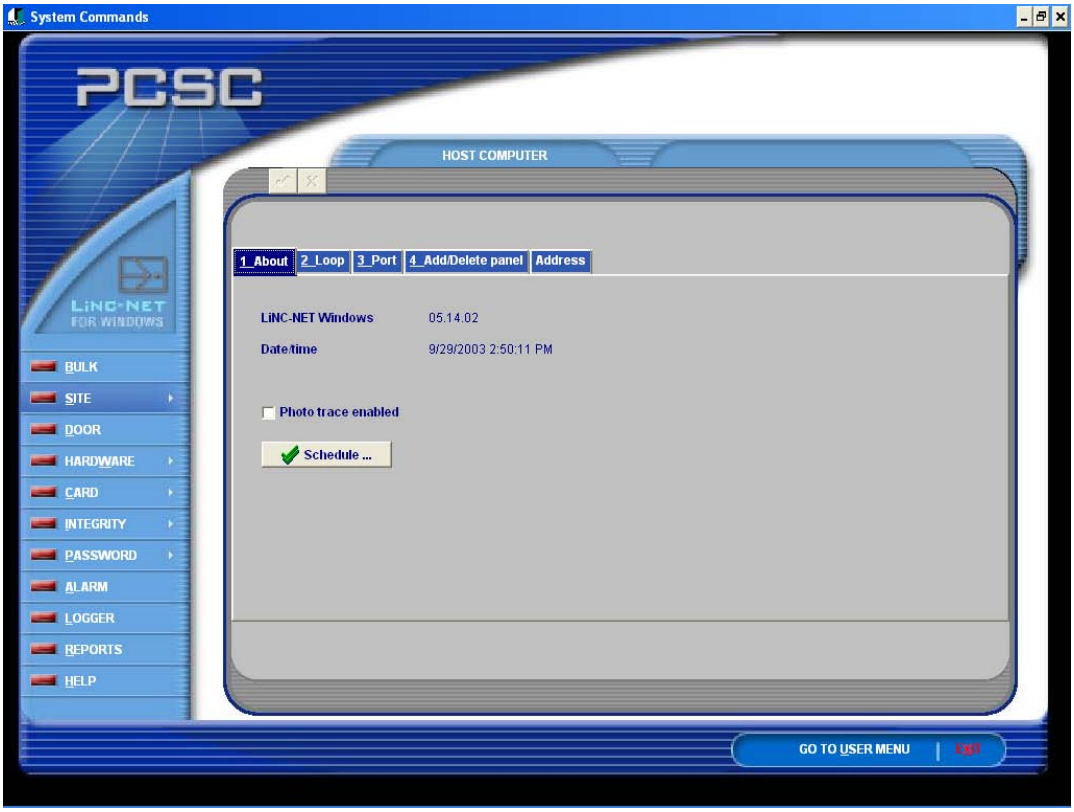
2.2.2.6.3 Soft Entry/Exit

This level follows the same rules as **Strict** except that an error transaction is recorded, all status levels are synchronized, and access is **GRANTED**.

2.2.3 Site

2.2.3.1 Site: Host Computer

2.2.3.1.1 Site: Host Computer: About



LiNC-NET Windows The LiNC-NET Windows version is displayed here (entered during the installation of the LiNC-NET software). You will be asked to state this number when calling with inquiries.

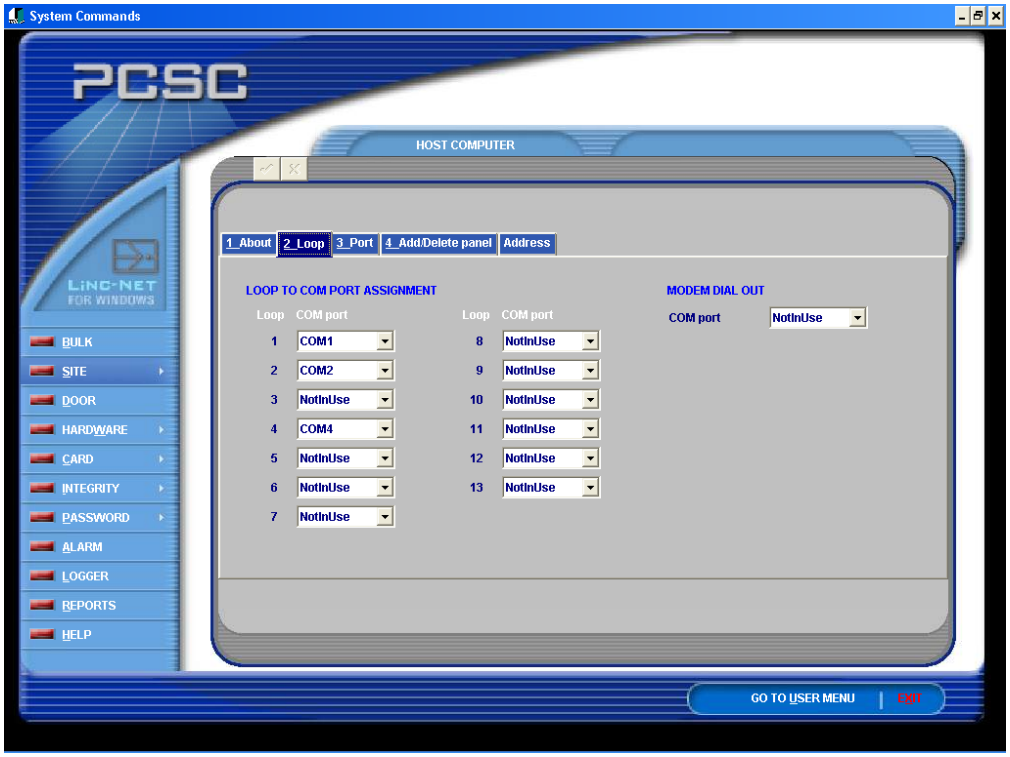
Date/time The current date and time at the Host PC is downloaded to each panel. In addition, the date and time are broadcast to each PC in a network, ensuring that all panels on-line will be synchronized.

> **NOTE** The Host/Workstation/Concentrator PC's time is set in the Windows Control Panel, not in LiNC-NET.

Photo trace enabled Able to have cardholder's photo display to a user based on the card transactions taking place at the panel.

Schedule… Displays all scheduled events.

2.2.3.1.2 Site: Host Computer: Loop



Loop to COM Port Assignment

Select the serial communication port number (COM 1, COM 2, COM 3, or COM 4) for one of 4 possible panel loops when you are NOT using a Stallion® port. If you are using a Stallion® port, then LiNC-NET is capable of 13 communication ports (COM 1 – COM 13). If no loop exists, select **NotInUse**.

Each communication port used for direct connect, LAN, or modem must be assigned to a loop before it can be used.

A COM port MUST be used for any LAN connection.

A Log Off MUST take place to initialize the COM port after any changes take place.

2.2.3.1.2 Site: Host Computer: Loop (cont.)

Modem Dial Out

A single AutoDial modem (e.g., U.S. Robotics Sportster 28.8/33.6/56k Fax-Modem) may be used at the PC for dial out to any of the panels in the LiNC-NET system. Consult factory for other compatible modems.

Select the port where the modem for auto-dial is connected. This COM port number must be different than the direct connect COM port number. If no auto-dial modem is being used, select NotInUse.

The COM port selected for this field must have the type of connection field set to modem.

For further information, refer to Modem Restoration after Power Loss Technical Bulletin 39-10052-001.

2.2.3.1.3 Site: Host Computer: Port

Port Configuration Defines the communication/connection type.

Type of Connection **Direct** (Direct Connect RS232/RS485 type)
Modem (Autodial up connection)
LAN (Local Area Network through an Ethernet (NIC) Network Interface card)
NotInUse (if the com port is not utilized by the LiNC-NET)

Baud Rate 1200, 2400, 4800, 9600, 14k, 19k, 38k, 56k, 57k, 115k, 128k, 256k

Telephone Number Phone # of modem installed at LiNC-NET Host PC

MODEM initialization AT (Attention) commands used to train an external MODEM connected to a COM Port.

NOTE: User may initialize or modify the modem string command to specify a particular modem for each port. Currently, the system is defaulted to US Robotics Sportster Internal Modem. To change to an External US Robotics Sportster Modem @33.6 or higher Baud type in “ATH&F1”.

2.2.3.1.3.1 Changing Baud Rate or Port Type:

1. If you are currently in Direct Connect mode and wish to change the Baud rate ONLY:

a) Insure that all panels are currently On Line.

b) If changes are required, click on **Sites: Host Computer: Port** tab. (See **Host Computer** Setup). Make change(s) in menu.

c) Click on the check **[✓]** button to write changes to the hard disk.

d) Press the **EXIT** button to access the **Sign On** password screen (do NOT exit from LiNC-NET for Windows XP Professional and Vista Business Edition).

e) Enter the **User Login** identification and **password** (NOT exit password) so you will return to the System Menu. The connection will be re-established automatically and the new Baud rate will be set.

NOTE	If Baud rate was altered and the panel was not on-line, either alter it back to original setting or modify the panel's DIP switch configuration (for more information, see your panel's **Installation Manual**).

2. If you are currently in MODEM (auto dial) mode and wish to change the Baud rate ONLY:

Important!	Baud rate changes should be made in a separate session. Do NOT combine this change with other downloading, which may cause the panel to restart.

a) If changes are required, click on **Site: Host Computer: Port** tab. (See **Host Computer** Setup).

b) Make **Baud Rate** change(s) in menu.

c) Click on the check [✔] button to write changes to the hard drive.

d) Repeat the following for all panels in the system:
- Dial the panel and hang up by requesting Offline. (At this time, the user can still dial the panel or the panel can dial the Host and communicate at the original Baud rate).
- Continue this procedure until all the panels are dialed.

e) Press the EXIT button to access the sign-on screen (do NOT exit from LiNC-NET for Windows 2000/XP Professional).

f) Enter the **User Login** identification and **password** (NOT exit password) so that you return to the System Menu.

This will restart (warm boot) all affected panels.

3. If you are currently in Direct Connect mode and wish to change the Port type to AutoDial ONLY:

a) Insure that all panels are currently Off-Line.

b) If changes are required, click on **Site: Host computer: Port** tab. (See **Host computer Setup**).

c) Make **Type of Connection** change(s) in the menu.

d) Click on the check **[✓]** button to write changes to the hard drive.

f) Press the **Exit** button.

g) Enter the **User Login** identification and **password** (NOT exit password) so that you return to the System Menu.

h) For all affected Panels, on the panel PCB, change the RS-232/RS-485 jumper and DIP switch to let location 04 =8.X *(this relates to the MicroLPM and MicroLPM Plus boards)*.

NOTE X depends on Baud Rate: e.g. 8.8 for 9600 baud
8.2 for 2400 baud

For more information, see your MicroLPM Installation Manual- (P/N: 33-10019-001). For IQ and SIM panels, consult your panel's installation manual:
-IQ Installations Manual (P/N: 33-10036-001)
-SIM Installations Manual (P/N: 33-10037-001)

i) Exchange your direct connecting cable to a modem cable.

j) Select panel online to verify communication method.

4. If you are currently in MODEM (auto dial) mode and wish to change the Port type to Direct Connect ONLY:

> **Important!!** Baud rate changes should be made in a separate session. Do NOT combine this change with other downloading, which may cause the panel to restart.

a) Insure that the panel is currently offline.

b) If changes are required, click on **Site: Host Computer: Port** tab. (See **Host Computer Setup**).

c) Make **Type of Connection** change(s) in menu.

d) Press the **Exit** button.

e) Enter the **User Login** identification and **password** (NOT exit password) so that you return to the System Menu.

f) For all affected Panel's, on the panel PCB, change the RS-232/RS-485 jumper and DIP switch to let location 04 =8.X *(this relates to the MicroLPM and MicroLPM Plus boards).*

g) Exchange your direct connecting cable to a MODEM cable.

> **NOTE** X depends on Baud Rate: e.g. 8.8 for 9600 baud
> 8.2 for 2400 baud
>
> For more information, see your MicroLPM Installation Manual- P/N 33-10019-001. For IQ and SIM panels, consult your panel's installation manual:
> -IQ Installations Manual (P/N: 33-10036-001)
> -SIM Installations Manual (P/N: 33-10037-001)

h) Select panel online to verify communication method.

5. If you are currently in LAN mode and wish to change the IP address type ONLY:

a) Insure that the panel is currently offline.

b) If you wish to change the IP address, click on the **Site: Panel: Hardware** tab.

c) Under LAN connection, highlight the current address in the **IP Address** block

d) Enter the new address.

e) Consult with your LAN administrator or MIS personnel to ensure the correct address (when using a LAN connection, make sure that the terminal server is connected to the panel).

f) Click on the check **[✓]** button at the top left side of the menu to save the new address.

g) Press the **Exit** button to log off the System menu.

h) Enter the **User Login** identification and **password** (NOT exit password) so that you return to the System Menu.

2.2.3.1.4 Site: Host Computer: Add/Delete panel

The databases for panels are added to and deleted from the database as necessary.

Current Count

This file indicates how many panels are currently part of your system. To add or delete a module, enter the number of the panel and select the model type. Press **+ Add Panel** or **- Delete Panel**.

Up to 200 panels may be added. When adding a new panel into LiNC-NET all the information from the **Bulk Initialization** page will automatically default to the new panel.

2.2.3.1.5 Site: Host Computer: Address

LiNC-NET 5.14 now has a feature that allows an Administrator to give the physical location of the Host computer and its connected Workstations. By choosing either the **Host** or **Workstation** radio buttons, you can enter the address to different connected PC's. It is only possible to enter one **Host** address, but LiNC-NET allows addressing for 20 Workstations.

2.2.3.2 Site: Panel

2.2.3.2.1 Site: Panel Setup: Features

2.2.3.2.1.1 Password

The default password **PYMTF** is used to logon the panel during the initial set-up. It is recommended that once communication is established with the panel (on-line), the password should be changed. Since **PYMTF** is used for initial set-up, you must use **PYMTF** to logon each time a new panel is added to the system.

> **NOTE** The panel password will return to factory default when the panel is factory reset.

2.2.3.2.1.2 Daylight Savings

The **Daylight Savings** cycle may be programmed into the panel.

Enter Enter the date of the official start of **Daylight Savings**. In the US it the first Sunday in April. Enter the date that daylight savings begins in month, day, year format (e.g., 04/01/2001).

Exit Enter the date of the official end of **Daylight Savings**. In the US it is the last Sunday in October. Enter the ending date in the same format (e.g. 10/04/2001).

> **NOTE** Do to Y2K compliancy, the PC must be configured for a 4-digit year format. Consult the Windows Control Panel/Regional Settings and select the Short Date format of mm/dd/yyyy and the Long Date format of mm/dd/yyyy to accommodate the LiNC-NET for uninterrupted (proper) operation.

2.2.3.2.1.3 Entry/Exit Enforcement

Each panel supports 3 separate levels of Entry/Exit enforcement: **Strict**, **Lenient**, and **Soft**. Each enforcement level can be assigned individually by **Parking**, **Department**, or **Building** type readers, but is enforced only when the Entry function and its corresponding Exit function reader(s) are on the same panel. Entry/Exit Enforcement cannot function (at any of the 3 levels) if the Entry reader(s) are on one panel and the corresponding Exit readers are on another panel unless a user is using Regional Antipassback. For more information, see the 5.14 Install Manual-Appendix A (P/N 33-10055-002).

NOTE Version 1.9.5 and above for Standard MicroLPMs
Version 3.9.5 and above for Plus 2 MicroLPMs
Version 7.9.13 for Plus 4 MicroLPMs

NOTE These firmware versions require that the door be opened before changing the card status. Repeated accesses will be granted (regardless of the anti-passback level of enforcement) if the door is not opened.

NOTE All IQ and SIM Panels require that the door be opened prior to updating the card status.

2.2.3.2.1.3.1 Strict Entry/Exit

The cardholder's entry/exit status must be synchronized with the system, otherwise an entry/exit error will be announced. In other words, the cardholder must have the proper status (building, department, and parking) before he uses an entry/exit reader. The card status must be as follows:

If the cardholder's Building Status is **IN**, then the Department Status can be **OUT** or **IN**.

If the cardholder's Building Status is **OUT**, then the Department Status must be **OUT**.

If the cardholder's Department Status is **IN**, then the Building Status must be **IN**.

If the cardholder's status does not comply with the reader's entry/exit definition, then the system will deny access. In other words, when a cardholder attempts to enter a building **IN** reader, the cardholder building and department status must be **OUT**.

2.2.3.2.1.3.2 Lenient Entry/Exit

This is the same as **Strict** except on the first use of the card; the system will automatically reset the building and department status to proper synchronization. The cardholder's second attempt at the reader will then grant him access.

2.2.3.2.1.3.3 Soft Entry/Exit

Same as strict except that an error transaction is recorded, statuses are synchronized, and access is GRANTED.

2.2.3.2.1.3.4 In Case of LockIn/LockOut

To restore operation to a card whose owner has been locked in or out due to an entry/exit (anti-passback) violation, simply deactivate and then re-activate the card from the Change Card screen with the panel(s) online.

NOTE	Depending on the Panel firmware version, when toggling status for In/Out of doors, either an Authorized card or an Authorized card followed by a door open activation will toggle In/Out status.

NOTE	MicroLPM Firmware versions 1.9.5 and 7.9.13 or higher provide for an Authorized card followed by a Door Open to toggle In/Out status.

NOTE	MicroLPM versions 1.9.5, 3.9.5, 5.9.16, or 7.9.13 or lower provides for an Authorized card ONLY to toggle In/Out status.

NOTE	All IQ and SIM panels require that the door be opened prior to updating the card status.

2.2.3.2.1.4 Card Table Format

Primary Expiration (Park/Global)	Panels support parking, department, and building type readers. The system can automatically expire a card for Parking Only readers if the PARK-ONLY is selected. Click on the options:
Park-Only	Selects a secondary card expiration date to be used at parking-type readers.
Global	Selects a primary card expiration date to be used at all readers.
PIN or Expiration Date (Parking Readers)	Because there is limited cardholder space in RAM in the panel, the Global expiration date automatically selects the PIN option. Conversely, selection of the Park-only option selects the date option.
Names for Cardholders Exist	The cardholder file within the standard panel can be configured with or without names. If the panel is configured with names, it requires more memory space and lowers the card capacity. However, all “Plus” series MicroLPMs default to cards with names. For IQ and SIM panels, downloading names has no bearing on card capacity Select “ ✔ ” if names for cardholders exist in the panel. If this section is changed, System Parameters and Cards files must be downloaded to the panel in order for the changes to take effect.
12-Digit Card Numbers	When using MagStripe or Watermark formats where a site code is NOT available; this option must be selected. The IQ/SIM/Micro-series supports 5 to 12-digit ABA track 2 format data. Select this option if the cards being used are 12-digit cards or do NOT select if cards are binary. If this section is changed, System Parameters and Cards files must be downloaded to the panel in order for the changes to take effect. Various card formats are available within the system.

Renewable Shunt

The Renewable Shunt renews the access time if a second card swipe occurs before the previous completed transaction. It is recommended that the access time be set equal to, or longer, than the shunt time to avoid problems.

Multiple facility codes

A panel can be made aware if LiNC-NET system uses multiple facility codes within one system (ie. one building with multiple tenants).

NOTE: Only the IQ, Ultimate and SIM panels can recognize Multiple facility codes within a system.

Duress Event

A control counter can be activated when a duress code is entered by the cardholder. Once a sense input has been selected, an output must be assigned for an alarm.

The duress code is the Normal PIN code, except that the first and second digits are incremented by one. If the first or second Regular PIN digit is 9, the duress code digit is calculated as a 0.

Select a Control Counter that will enable an output for duress (1-40). Refer to Access Action.

NOTE Duress can only be initiated from a cardreader WITH PIN pad, NOT from a PIN pad only terminal.

Example of Duress PIN code Assignment:

Regular	DURESS
3129	4229
1999	2099

Do NOT assign user-defined PIN codes 0000, 0911 and 9811, as they are reserved by the system.

NOTE User-defined pin codes are programmed in the Card Add or Card Change screens.

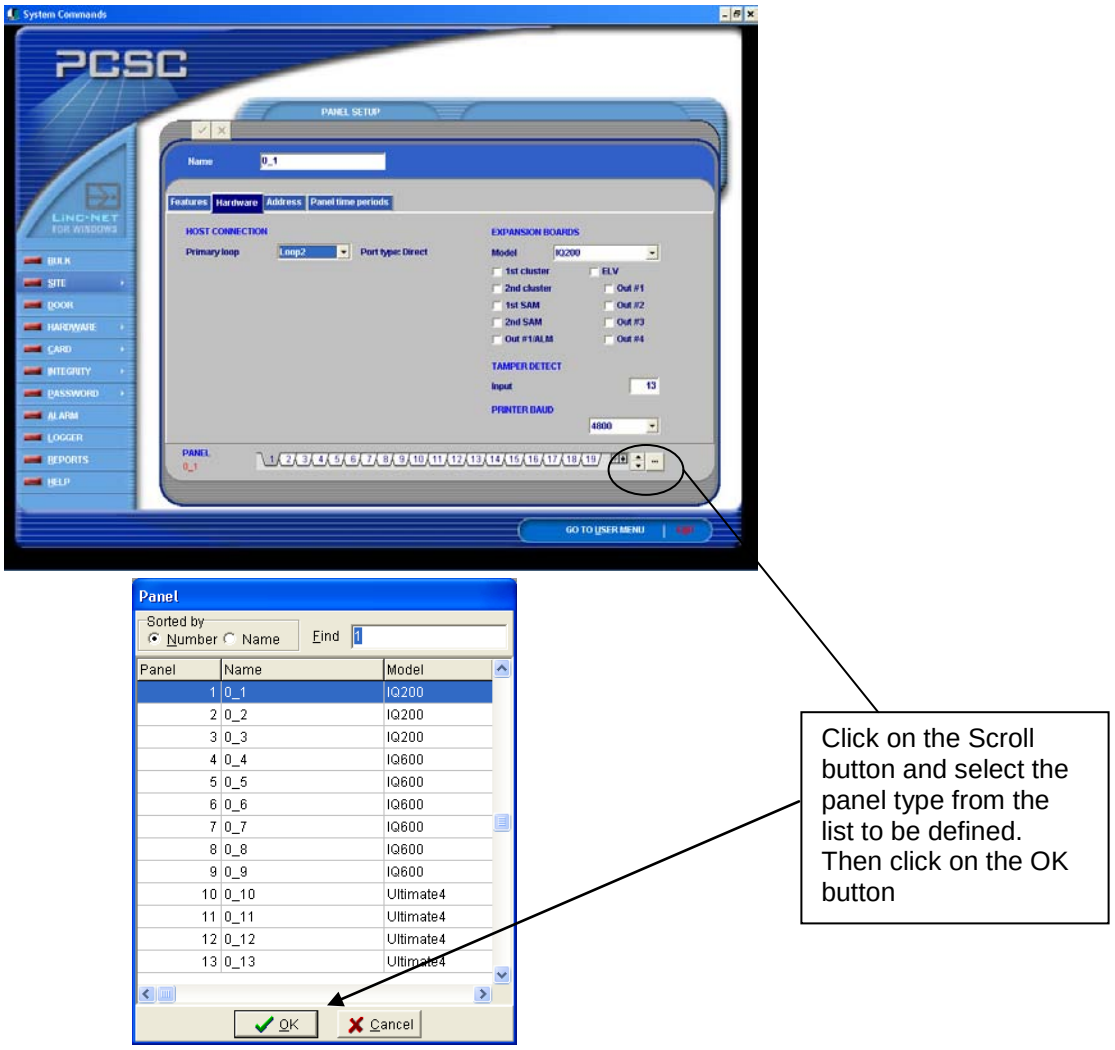
2.2.3.2.2 Site: Panel Setup: Hardware

The **Panel Setup : Hardware** screen will be configured to reflect a panel's communication method (Direct, Modem, LAN, or NotInUse) of its Primary Loop.

2.2.3.2.2.1 DIRECT

2.2.3.2.2.1.1 Host Connection

Primary Loop: Select the loop number to determine which communication port will connect to this panel. Refer to **Host Computer Setup**. The type of connection is displayed to the right of the **Primary Loop** number: **Direct** for direct connection.



2.2.3.2.2.2 MODEM

2.2.3.2.2.2.1 Host Connection:

Primary Loop: Select the loop number to configure to which communication port this panel will connect. Refer to Host Computer Setup. The type of connection is displayed to the right of the **Primary Loop** number: **Modem** for modem connection.

2.2.3.2.2.2.2 MODEM CONTROL (if primary loop is modem)

2.2.3.2.2.2.3 Secondary Loop

Select the loop number for the secondary connection. This is necessary if the panel attempts to notify the HOST PC of an alarm or a backlog of events by dialing in at the same time as another panel. Although only one panel would be able to connect to the dial-out modem (see HOST Computer Setup), it can dial into and receive calls from panels. To alleviate contention, additional modems may be connected to the Host PC for receiving incoming calls (up to 3 as long as a COM port isn't already assigned for Direct or LAN connected panel(s)).

NOTE Only the modem designated dial-out in the HOST computer's set-up screen can initiate a call from the PC to a control panel. The additional modem(s) are for receiving calls only.

Each modem connected to the HOST PC has its own dedicated telephone line, and therefore its own telephone number. When the **secondary loop** is specified to be a loop number assigned to one of the modems that only receives calls, the panel will first attempt contacting the host via the **primary loop**. If the **primary loop** is busy, than the **secondary loop** will attempt a dial-up connection to the HOST.

A maximum of two loops may be assigned to any panel for dialing into the HOST. Also, the PC can accommodate up to a total of four internal modems (only one can dial out from the PC). Therefore, different secondary loop numbers can be assigned to different panels to minimize contention.

History Transfer When a panel is connected to LiNC-NET over a dial-up modem, history transactions are transmitted to LiNC-NET under the following conditions:

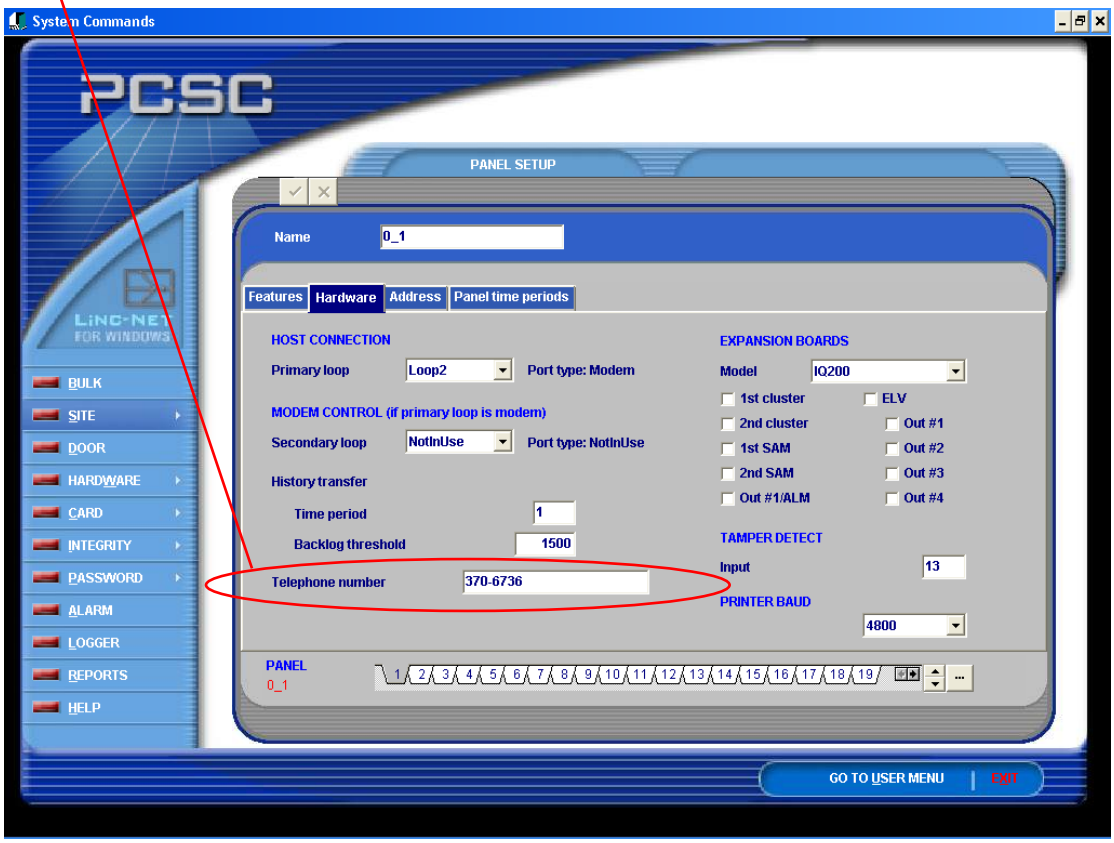
1. Upon an alarm
2. At the start of the Time Period
3. At a pre-defined number of transactions

Time Period Select the Time Period when the panel will call the Host to upload its transaction buffer. The panel will call automatically at the start of each segment within the time period selected.

Backlog Threshold Defined as the number of transactions that will be recorded in the panel before it automatically calls the HOST to transfer the information. For a standard panel setup, we recommend a backlog threshold of 300 to insure that more recent transactions do not overwrite older ones.

NOTE Failing to transfer messages will create gaps in subsequent History reports.

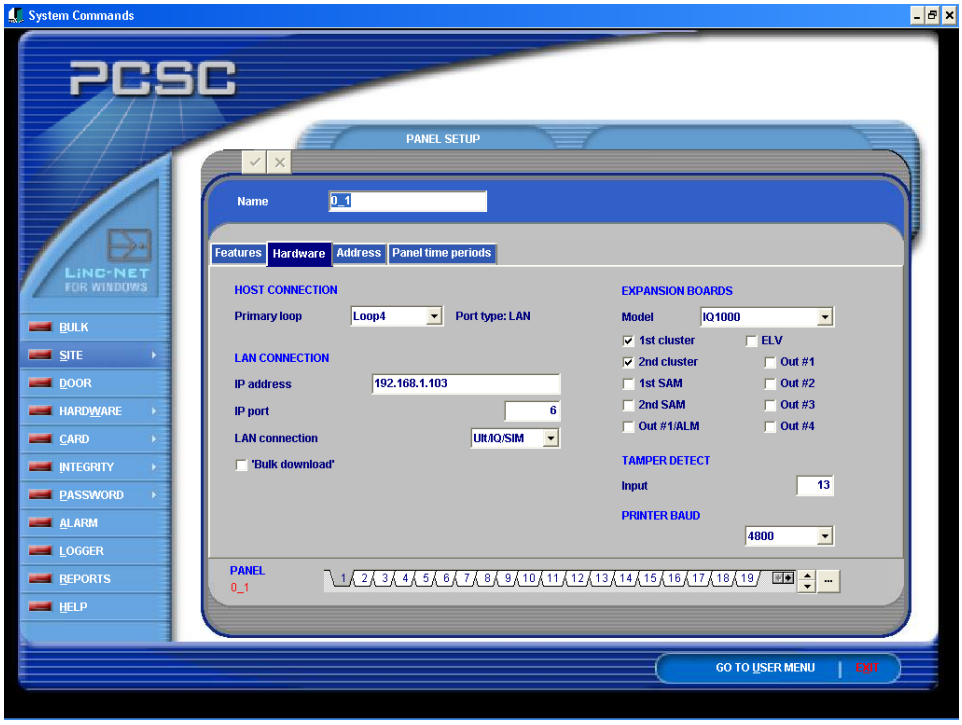
Telephone Number Enter the phone number of the AutoDial modem to which the panel is connected.



2.2.3.2.2.3 LAN

2.2.3.2.2.3.1 Host Connection

Primary Loop Select the loop number to determine which communication port will connect to this panel. Refer to Host Computer Setup. The type of connection is displayed to the right of the loop selection: LAN.



2.2.3.2.2.3.2 LAN Connection

IP Address Enter the IP address for the selected Panel Terminal Server. Consult with your LAN administrator or MIS personnel.

IP Port **Port Address**

For ULT/IQ/SIM, enter 3001
For Black Box Terminal Server, enter 3001.
For LANtronix Terminal Server, enter 3001

LAN Connection

For ULT/IQ/SIM, enter 3001
For Black Box Terminal Server, enter 3001.
For LANtronix Terminal Server, enter 3001

When using a LAN connection, make sure that the Terminal Server is connected to the panel or to a panel through a hub. The Terminal Server end may require a DB25 male end connector or mounting to screw terminals.

For further information regarding the LANtronix Terminal Server, refer to **Technical Bulletin 39-10056-001**.

NOTE: The Ultimate Panel and the LANtronix MSS1-T RS-232 Serial Terminal Server have not been evaluated by UL, and are not suitable for UL installations.

Bulk Download This is a feature for the Ultimate only. It gives a user the ability to download large packets to the Ultimate's memory.

Tamper Detect Enter the sense input number 13 for tamper detect.

Printer Baud Rate Define the speed of the serial printer that is connected to the panel:
-MicroLPM -1200, 2400, 4800, 9600
-IQ/SIM – 9600 only

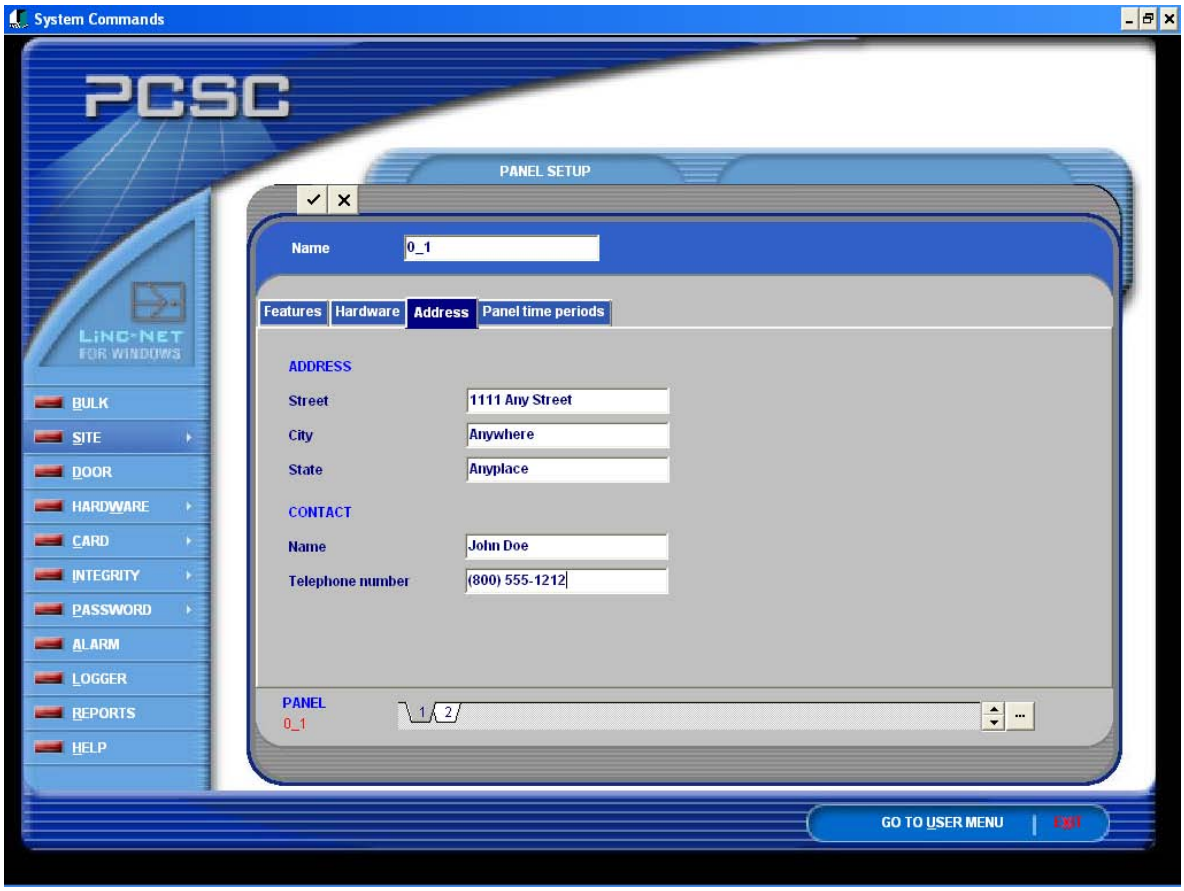
NOTE: For further information regarding individual panels, refer to the following Installation Guides:

MicroLPM	P/N 33-10019-001
Ultimate	P/N 33-10035-001
IQ-200	P/N 33-10036-001
SIM	P/N 33-10037-001
IQ-400	P/N 33-10057-001

2.2.3.2.3 Site: Panel Setup: Address

Address Enter the address of the site where the panel is located.

Contact Enter the Name and number of the Person to contact in regards to the LiNC-NET/Panel system.



2.2.3.2.4 Site: Panel Setup: Panel Time Periods

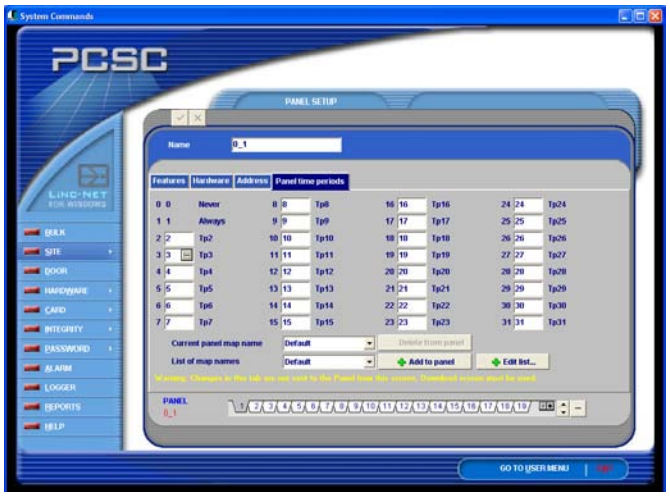
Each panel is given the ability to handle 31 different time periods that are defined through the User menu. If a particular panel uses time periods separate from other panels in the system, they can be created and monitored here. LiNC-NET has the ability to support 99,999 unique Time Periods.

2.2.3.2.4.1 Setting Half Day Holiday Time Periods

This feature for LiNC-NET 5.14 allows an administrator to set a multiple **Holiday Time Periods** that can be used in the **LiNC-NET User** menu. Though this process affects LiNC-NET Users in their holiday time period decision-making skills more than Administrators, setting the holiday time period can only be done by accessing the **LiNC-NET System** menu.

Procedure:

1. In the **LiNC-NET User** menu, proceed to the **Time Period** screen.
2. Create a new **Holiday Time Period** within the **Holiday** tab-screen.
3. Create a name for the time period in the **Name** box.
4. Press the **Switch** button to access the **System** menu.
5. In the **System** menu, proceed to the **Panel** screen.



6. In the **Panel** screen, choose the **Panel Time Periods** tab.
7. Choose a panel that the **Holiday Time Period** will effect.
8. Select a **Time Period**, and press the **[…]** button.
9. Choose the **Panel Time Period** that you wish to create in the **Time Period** pop-up window.
10. Press the **OK** button. This will close the **Time Period** pop-up window.
11. Press the Edit List button. This will bring up the **Panel Time period mapped names** pop-up window.
12. Create a new name for this new **Time Period**.
13. Press the **Add** button to add it to the existing list of mapped names, and the **Delete** button to remove it.
14. Press the OK button to close the window.
15. In the **List of Mapped Names** pull-down menu, choose the name that was just created.
16. Press the **Add to Panel** button. This will make the time period active on the panel the next time the **Host** downloads to the panel.

17. Repeat this process for every panel that will require this **Time Period**.
18. Press the check **[√]** button to save changes.

19. Press the **Switch** button to access the **User** menu and proceed to the **Holiday List** screen.
20. To select the default **Holiday Time Period** for this date, press the date square once. This will make the calendar date square turn blue.
21. To use the alternate **Holiday** time period, select the name from the Master List.
22. Pull the text from the **Master List** Column into the **Mapped name** column. This will now make the alternate **Holiday** time period active for that particular day on all participating panels.

2.2.4 Door

2.2.4.0 Door Overview

For the following door configuration data entry, enter the door number to be configured and assign a name to the door (example: Executive). Don't forget to select the panel that is being used in the door configuration. At the bottom of the screen, position the mouse cursor on the tab for the appropriate panel and click on the index tab.

Also enter the reader selection data. Each panel supports up to 2 readers per door. If the first terminal letter for a door will be changed from the default, enter the letter from the range (a through l). If a second reader terminal for a door will be changed from the default, it will always be different from the one programmed as the first reader. Enter the letter from the range (a through l). If you are not utilizing entry and exit readers, bypass this section. If the doorway has an entry and an exit reader, you must define the reader number for the second reader. This will allow standard lock output and door sense control via software control, NOT hardware control. The selection will take away from the total number of terminals used for doors.

NOTE Before a reader can be assigned as a second reader, it must be dissociated from its current door assignment as a first reader. For example, to assign reader b on door 1, it must first be dissociated from door 2.

2.2.4.1 Door Overview: Time Related

2.2.4.1.1 Time Duration (Seconds)

Access time is the amount of time that a door lock is energized. There are two access timers for each door lock: Standard and Long (for handicapped). The choice of which timer to be used will be determined by the cardholder's Long attribute.

Enter the access time by using the command keys. The standard length of time is 5 seconds for Standard access and 10 seconds for Long access. Enter 1 for the quickest access time or 255 for the longest. Long access time follows the same parameters, and will be used in the event more time is required. Long Access values are always at least 1 second longer than standard values.

Ranges for Time Values (in seconds):

Standard Access:	1-253
Long Access:	2-254
Egress:	1-253
Standard Shunt:	2-254
Long Shunt:	3-255

For Elevator Readers:

Standard Access:	2-253
Long Access:	3-254
Standard Shunt:	3-254
Long Shunt:	4-255

Egress (unlock) time utilizes Standard Shunt time.

NOTE Attempts to program Time duration less than 2 seconds in an elevator-type reader will cause floor relays to NOT be engaged upon card authorization even though the green LED will momentarily light on the reader.

Egress (Request to Exit) time has a range of 1-253 seconds. Enter the time length desired.

Standard Shunt The length of time to disable the door status alarm during normal egress is the standard shunt time. The default time is 8 seconds. Enter a different amount of time if necessary. Shunt time is always at least 1 second longer than the corresponding access time.

Long Shunt The length of time to disable the door status when a cardholder with the Long Access feature presents a card is the long shunt time. The default time is 12 seconds. Enter a different amount of time if necessary.

2.2.4.1.2 Time Period Control

When using a reader and keypad combination, the PIN pad and/or door may be disabled during user-selected times. Assign a time period (2 - 31) to disable the requirement for PIN entry. The user will only be required to use the card reader and bypass entering his PIN code during this time period.

Time Period for PIN_Pad Disable The PIN Pad may be automatically disabled during these periods by defining the Time Period to disable the use of the PIN Pad (0-999). The user will only be required to use the cardreader during this time period. To select the Time Period for PIN Pad disable, enter the Time Period number desired.

Time Period for Auto Unlock Scheduled automatic door unlock can be programmed by defining the time period (0-999) during which the door is to be unlocked. If this option is selected, the door remains unlocked until the designated time period expires. Users will NOT be required to use their cards or PIN codes during this time period. If this option is not selected, the door remains locked until authorized card or egress transaction occurs.

2.2.4.2 Door Overview: Hardware connections

Door assignment criteria consists of sense inputs, control counters, reader type, and transaction specifications. The default assignments are set up as follows:

Default Door Sense Inputs	are ODD numbers from 17 to 39
Reader Detect Sense Inputs	are numerical from 1 to 12
Default Egress Sense Inputs	are EVEN numbers from 16 to 38
Lock Control Counters	are in numerical order from 1 to 12
Door Shunt/ Local Alarm Control Counters	are in numerical order from 13 to 24

The first reader terminals are assigned by the 12 alphabet characters **a, b, c,** etc., through **l** on Panel-12. If a second reader will be assigned to a door, it will be taken from one of the other 11 readers **NOT** assigned to another door.

2.2.4.2.1 Door Lock

Output This connection specifies the output number (1-12) where the electric lock for this door is connected. (Refer to your specific Installation Guide for output location and number.) If a door lock control counter number will be changed from the default, enter the number from the range available (1-12). This output will be connected to the electric lock at the door.

Log Select this option if lock transactions will be logged.

Normally Open When this field is selected ([✔]), the quiescent state of the door relay is de-energized. This will cause continuity to exist between the common and normally closed contacts. When an access operation or an egress (with energize) operation occurs, the door relay will momentarily energize to temporarily complete continuity between the common and normally open contacts.

When this field is NOT selected ([ ]), the quiescent state of the door relay is energized. This will cause continuity to exist between the common and the normally open contacts. When an access operation or an egress (with energize) operation occurs, the door relay will momentarily de-energize to temporarily complete continuity between the common and the normally closed contacts. Whether the door operates as a fail-safe or fail-secure environment depends upon the type of door hardware used (magnetic lock or door strike) and how the door is programmed.

2.2.4.2.1.1 Door Strikes- Fail Safe

For door strikes, power is required to unlock the door. Therefore, in a fail-safe environment, wire the door strike hardware across the common and normally closed relay contacts. Do **NOT** select ([ ]) the **normally open** field. When the door relay is in its quiescent state, the door will be locked. But upon card transaction or egress (with energize) operation, the relay will de-energize and the door will become momentarily unlocked. In the event of a power outage to the panel, this will permit the door relay to de-energize and for continuity to exist between the common and normally closed contact. Power from the battery-backed power supply will now be applied to the strike causing it to unlock, until either the battery discharges or panel power is restored.

2.2.4.2.1.2 Door Strikes- Fail Secure

In a fail secure environment, wire the door strike hardware across common and normally open contacts. Then, select ([✔]) the **normally open** field. When the door relay is in its quiescent state, the door will be locked. But upon card transaction or egress (with energize) operation, the relay will energize and the door will become momentarily unlocked. In the event of a power outage to the panel, this will permit the door relay to de-energize and for continuity to exist between the common and normally closed contacts. Power from the battery-backed supply will now be removed from the strike causing it to lock.

2.2.4.2.1.3 Magnetic Locks- Fail Safe

For magnetic locks, power is removed to unlock the door. Therefore, in a fail-safe environment, wire the magnetic lock across the common and normally open contacts. Do NOT select
([ ]) the normally open field. When the door relay is in its quiescent state, the door will be locked. But upon card transaction or egress (with energize) operation, the relay will de-energize and the door will become momentarily unlocked. In the event of a power outage to the panel, this will permit the door relay to de-energize and for continuity to exist between the common and normally closed contacts. Power from the battery-backed power supply will now be removed from the magnetic lock, causing it to unlock until panel power is restored.

2.2.4.2.1.4 Magnetic Locks- Fail Secure

In a fail-secure environment, wire the magnetic lock across common and normally closed contacts. Then, select ([✔]) the normally open field. When the door relay is in its quiescent state, the door will be locked. But upon card transaction or egress (with energize) operation, the relay will energize and the door will become momentarily unlocked. In the event of a power outage to the panel, this will permit the door relay to de-energize and for continuity to exist between the common and normally closed contacts. Power from the battery-backed supply will now be applied to the magnetic lock causing it to secure until the battery discharges.

Summary of the Four Possible Fail-Safe/Fail-Secure Cases:

When using **door strikes**-

-For **fail-safe** operation, wire to COM and N.C. contacts and do **NOT** select **([ ])**, the **normally open** field.

-For **fail-secure** operation, wire to COM and N.O. contacts and select ([✔]), the normally open field.

When using **magnetic locks**-

-For **fail-safe** operation, wire to COM and N.O. contacts and do **NOT** select (**[ ]**), the normally open field.

-For **fail-secure** operation, wire to COM and N.C. contacts and select ([✔]), the normally open field.

2.2.4.2.2 Door Sense

Input

This connection describes the sense-input number for the door sense (door status/door position) contact. Refer to your specific Panel Installation Guide for sense Input location. If the door sense input contact for the door will be changed from the default, enter the number from the range available (0, 16-55, or 56-71 in an ALM or OUT configuration).

Range Designations

16-23 MicroLPM
24-31 MicroLPM8
32-39 MicroLPM12
40-47 SAM1 (supervised door sense)
48-55 SAM2 (supervised door sense)

16-19 IQ 200
16-23 IQ-400
16-27 IQ 600
16-35 IQ 1000

16-23 SIM 4
16-31 SIM 8

Normally Closed

Click on if the door lock sense input contact is **Normally Closed**. A **Normally Closed** sense input will lock the door when the system detects an open circuit except when using the Maglock option.

Mag Lock

When selected, this option will terminate the door lock control counter activation upon door closure. Otherwise, the system will terminate the door lock control counter activation upon a door opening. This option is related to card reader transactions, as well as egress operations for the specific door. The purpose of this option is to permit the door to be fully opened while preserving the magnetic locks deactivated state. Without this option, at the moment when the door switch contacts changed their state (indicating that the door was “slightly” opened), the power to the magnetic lock would be restored. This condition could cause the lock to immediately pull in and, prematurely, secure the door prior to the person passing through the access point.

Meanwhile, the transaction would be recorded as though the person actually did pass through the door. The shunting of the door switch contacts (shunt time) is terminated differently depending upon whether the magnetic lock option is selected. When the Maglock option is selected, upon a card transaction or an egress operation, the shunt time begins when the access time expires. In other words, when the door is unlocked and then opened, as the door switch contacts are immediately shunted prior to unlocking, the door remains unlocked until either it is closed or until its access (unlock) time expires. Should the door still be open when the access time expires, then the shunt time will begin at this point in time. However, if the door is closed prior to the access (unlock) time expiring, the door shunt time is immediately canceled. Hence, the overall duration of the door being shunted is the access time plus the shunt time. When the Maglock option is NOT selected, then upon a card transaction or

an egress operation, the shunt time begins as soon as the door is unlocked. The shunt time cancels when the specified time has elapsed, or when the door is closed. Regardless of the option selection, should the door be accessed (by card transaction or egress operation), but NOT opened, the shunt time will cancel upon the access time expiring.

NOTE [MicroLPM standard firmware must be version 1.9.5 or higher; or version 3.9.5 or higher, if Plus. The Maglock option is not supported in Plus MicroLPMs (version 2.X) or MicroELV (version 5.8.X) systems.]

All IQ and SIM panels support the Maglock option.

2.2.4.2.3 Egress

Input This connection selects the sense input number that is to control the Request to exit (egress) for this door. If the egress sense input for a door will be changed from the default, enter the available number (0, 16-39)**

Log Select this option if you wish to write egress transactions into the hard disk for later report creation.

Normally Open Select this option if the Egress switch is a normally open (N.O.) contact.

Energize on Egress This option will energize the door strike when Request to exit is encountered. All other functions, such as Door Closed will still be monitored. Activation allows the relay to energize when egress is allowed.

2.2.4.2.4 Reader

Log If transactions at this particular reader are to be stored in memory and transmitted to the host, select this option.

Function The type of reader and its function is defined here. A standard access control reader would be defined as Access. The remainder of the selections pertains to the entry/exit features. Depending on Building, Department, or Parking entry/exit, the reader's function (IN, OUT, or IN/OUT), is defined.

2.2.4.2.4.1 Reader Function Options

AccessIn	Access IN only	**BldgIn**	Building IN only
AccessOut	Access OUT only	**BldgOut**	Building OUT only
Access	Standard Access	**BldgInOut**	Building IN and OUT
ParkIn	Parking IN Only	**DeptIn**	Department IN only
ParkOut	Parking OUT Only	**DeptOut**	Department OUT only
ParkInOut	Parking IN and OUT	**DeptInOut**	Department IN and OUT
		Elevator	Elevator Access

Reader (cont.)

Type Type refers to the card data format that will be accepted by the reader. Only one format per reader is available. Select the card data format that will be accepted by the reader from the following list:

PIN_PAD	BP250 or BP270
ProTech (Hughes ID)	BR350, BR370, VR670 (40-bit), PCSC Protech, All Hughes ID Proximity readers (except 26-bit cards)
ProTech (I)	PCSC ProTech Insert readers: BR371, BR351, and BR352
ProTech/PIN_PAD	ProTech readers with PIN_Pad (swipe readers)
ProTech/PIN_PAD (I)	ProTech Insert readers with PIN_Pad
MagStripe	BR450, BR470
MagStripe (I)	BR451, BR452, BR471
Magstripe/PIN_PAD	BR450/BP250, BR470/BR270
Magstripe/PIN_PAD (I)	BR450/BP250, BR450/BP250
Watermark	Any Watermark card with the 12-digit format
Watermark (I)	Custom Watermark card
Watermark/PIN_PAD	Custom Watermark card
Watermark/PIN_PAD (I)	Custom Watermark card
PCSC Wiegand	34-bit PCSC Wiegand format. All Sensor Proximity readers
Wiegand/PIN_PAD	34-bit PCSC Wiegand format with BP270 PIN_PAD
Indala	All Indala readers (32-bit)
Indala/PIN_PAD	All Indala readers w/PIN Pad
12-Digit	NO Site code; Magnetic stripe, BR450, BR470
12-Digit (I)	BR451, BR452, BR470, BR471
12-Digit/PIN_PAD	BR470/BR270, BR450/BP250
12-Digit/PIN_PAD (I)	BR451/BP270, BR471/BP270, BR452/BP250, BR472,/BP270
Sensor-26	Standard Sensor 26-bit format, VR670 26-bit, HID 26-bit, BR700 BARCODE
Sensor-26/PIN_PAD	BR200/BP270, BR202,/BP270, PRK234, PR235/BP270, PR232/BP270, PR234/BP270
Sensor-34	Standard Sensor 34-bit format, BR200, BR202
Sensor-34/PIN_PAD	BR-200/BP270, BR202/BP270
Special	Proprietary
Special/PIN_PAD	Proprietary
PCSC-26, 37, 40	37-bit format (PCSC), Sensor 26, PCSC 40-bit Protech (HID Prox Reader)
PCSC-26, 37, 40/PIN_PAD	PCSC 37-bit Prox/BP270, Protech 40-bit/BR270 (HID Prox Reader)
Corp-1000	Fortune 500 format, PR732, PR733, PR735, PR736
Corp-1000/PIN_PAD	Fortune 500 format w/PIN Pad, HID Prox Reader/BP270
Motorola-32	Corporate Secure format, Motorola Prox Readers
Motorola-32/PIN_PAD	Corporate Secure format w/PIN Pad, Motorola Prox Readers w/ Bulletin PIN_PAD
Smartcard_40	HID 40-bit Smartcard
Smartcard_40/PIN_PAD	HID 40-bit Smartcard with PIN_PAD

NOTE A letter or additional reference description that describes the reader type can follow the card technology:

PIN-PAD indicates a PIN Pad with reader. (I) indicates Insert Reader

NOTE Not all reader/card interfaces are current. Check card data sheet for compatibility options

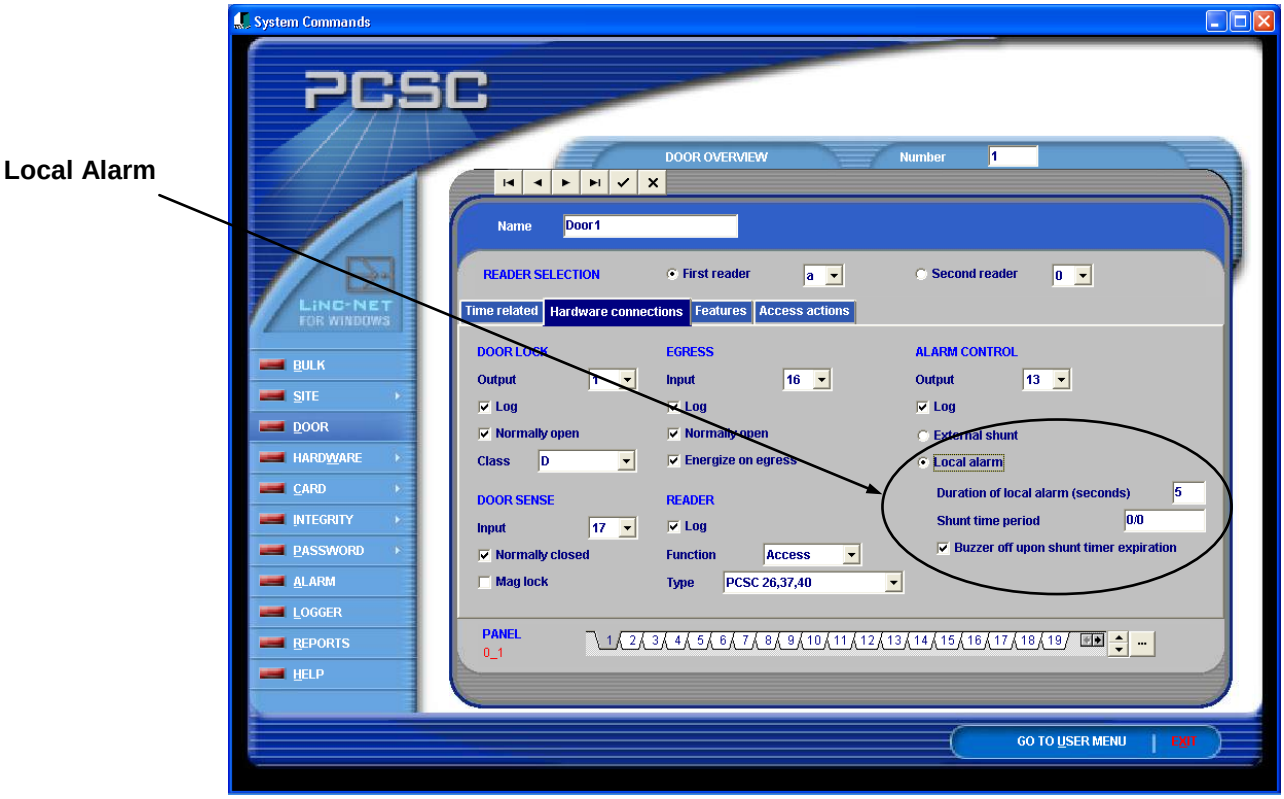
2.2.4.2.5 Alarm Control

Output — This connection controls which output number the feature selected should operate (external shunt or local alarm).

Log — Select this option if output transactions are to be logged in the LiNC-NET journal.

External Shunt — This feature activates the associated open collector output during the door-open state. This option can be used to “shunt” other alarm systems attached to the door.

Local Alarm — Select this option if you wish to have an alarm annunciated at the door, to inform the user that an alarm message will be generated and sent to the host if the door is not closed. The open collector output defined by door output will be activated.



Alarm Control (cont.)

Duration (seconds) of local alarm — Amount of time the alarm will sound once it is activated

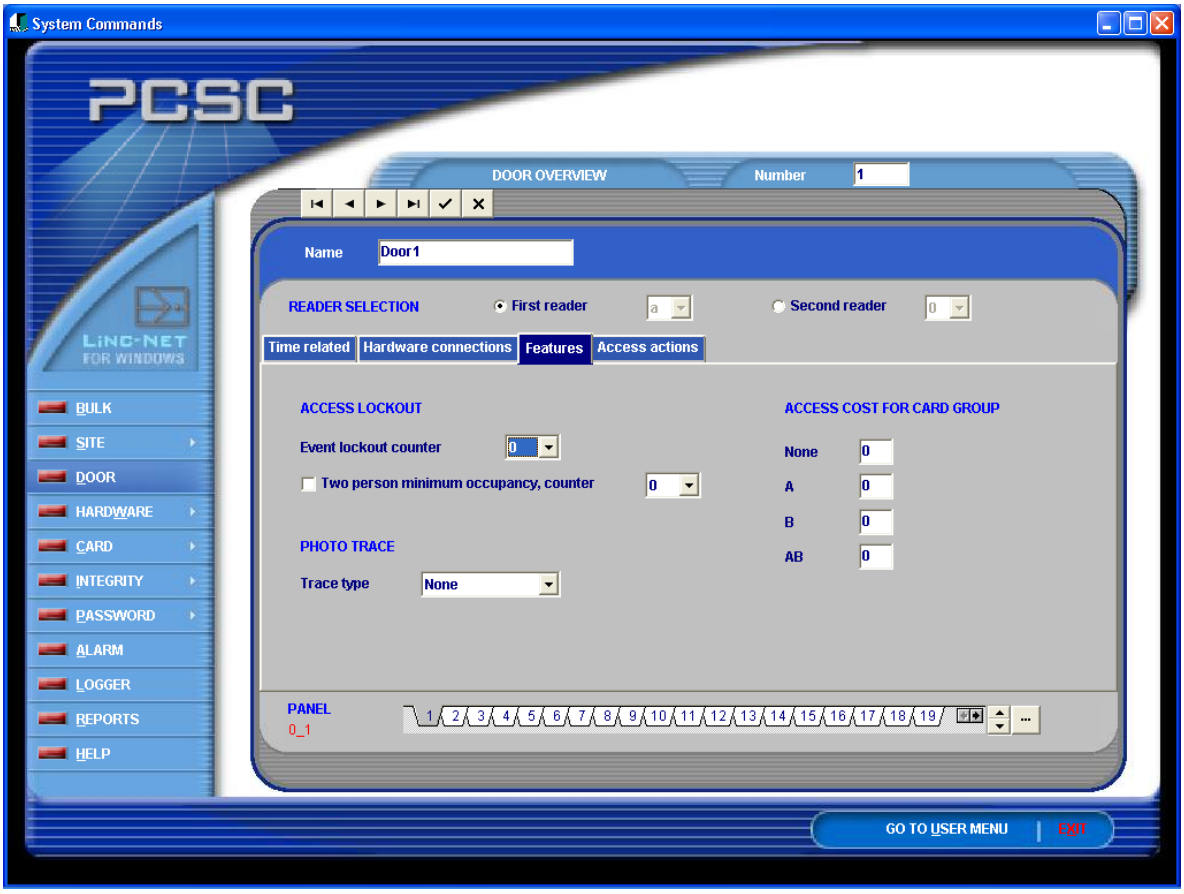
Shunt Time Period — Defines what time period you do not want the local alarm to function.

Buzzer Off Upon ShuntTimer Expiration — Select this option if you wish to shut off the buzzer when the shunt timer expires. Not selecting this field causes the local alarm output to remain active until the door is closed.

NOTE MicroLPM firmware level must be version 1.9.1 or higher. MicroLPM Plus firmware level must be version 2.6L or higher. MicroLPM Plus2 firmware level must be version 3.9.2 or higher). When selected, the **Local Alarm** options appear. Enter the duration of the alarm in seconds and the shunt time period of the alarm. The duration field specifies (in seconds) at what interval before the door shunt expires the local alarm output will be initiated.

All IQ and SIM panels support the local alarm feature.

2.2.4.3 Door Overview: Features



2.2.4.3.1 Access Lockout

Panels support features that automatically deny access upon an event condition or when **Two-Person Minimum Occupancy** is in effect. **Event Lockout** is a feature that automatically denies access upon an event condition.

If **Event Lockout** is in effect, a cardholder that normally would be able to gain access is denied. A reader can be set into Event Lockout automatically through a card access, sense input, or by time of day. These conditions adjust the **Event Lockout** counter value and when the value is equal to or greater than the **High Threshold**, the reader is in **Event Lockout**.

> **NOTE** **Event Lockout** only affects readers. Egress operations are not defeated during an event lockout condition.

2.2.4.3.1.1 Event Lockout Counter

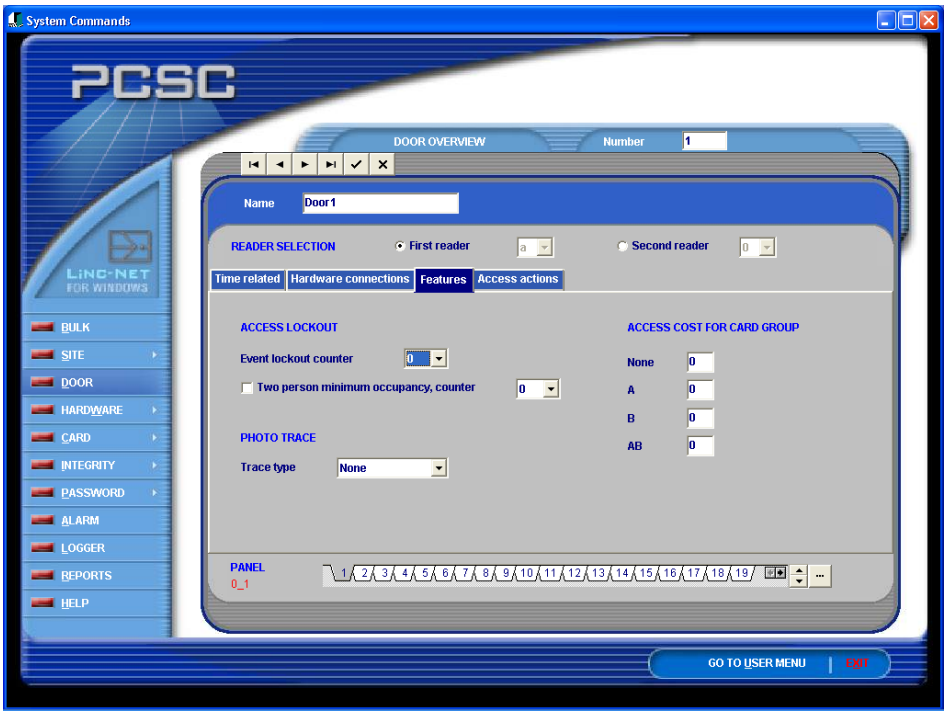
To enable **Event Lockout** counter for a reader:

1. Display the appropriate door in **Door Overview**.

2. Select the reader (1st or 2nd).

3. Enter a counter number in the **Event Lockout** counter field.

4. Define the event action that will modify the counter value. The **Event Lockout** counter number will be the threshold for denied access (Event Lockout). It will deny access to normally authorized cardholders in the event of an alarm within an area or when a parking lot is full. When the counter value reaches the selected value, normally authorized cards will be denied access. Conversely, when the counter value reaches its low value or lower, **Event Lockout** will be turned off, and normal access returns.



2.2.4.3.1.2 Two-Person Minimum Occupancy Rule (TPMOR)

The panel can restrict access to a secured area by monitoring the number of people within that area. If no one is in the monitored area, the two-person minimum occupancy rule (TPMOR) feature requires two valid cardholders in order to gain access to that area. Once the area has the required two people, other valid cardholders will gain access without the need to enter or exit in pairs. The last two people are also required to exit together. This feature requires an IN and an OUT reader. When no one is in the area, and the first card is presented, the card reader LED will flash red/green for up to 6 seconds. During this time, the second card must be presented for TPMOR processing to be lifted.

2.2.4.3.1.3 Two-Person Minimum Occupancy Counter:

To enable TPMOR:

1. Display the appropriate door in **Door Overview**.
2. Select the **Two-Person Minimum Occupancy** box.
3. Enter the control counter number in the counter field. This option is used to count the number of people or cars within a room, area, or parking lot. If TPMOR is selected, the control counter number must be entered. When using the **Room Occupancy** counter, be sure to have at least one reader counting entries and another counting exits. This control counter should NOT be used for any other functions.

Output Outputs used by the TPMOR system must be configured with Low = Ø and High = 2.

Access Cost for Card Group The MicroLPM Plus series offers a feature that debits units from a cardholder's record. Debit can be determined by a reader and by a card group. Enter the number of units (0-999) to debit for each card group at this reader. Depending upon the number of credits issued to a card group; the Access cost for a card group will be subtracted from that balance. The system will subtract the value that was assigned for the card group as access cost for every valid transaction at a specified reader or readers (only designated readers) debits the card (account) status. See the **Change Card/Status** screen to allocate credits to a card account.

2.2.4.3.2 Phototrace

This feature can be used only if the administrator's system came equipped with PCSC's LiNC-ID video-badging software. Activating **Phototrace** allows the **User** to see each cardholder's archived badge-photo. The pull-down menu allows three options:

2.2.4.3.2.1 Trace Types

None	no extra features
TraceOnly	only Phototrace
SolicitOpen	Solicit Open feature

To learn more about **Phototrace** and it's uses, please consult the **Linc-ID Administrator** manual.

NOTE Depending on the panel firmware version, when toggling status for In/Out of doors, either an Authorized card or an Authorized card followed by a door open activation, will toggle In/Out status.

NOTE MicroLPM Firmware versions 1.9.5 and 7.9.5 or higher provide for an Authorized card followed by a Door Open to toggle In/Out status.

NOTE MicroLPM Firmware versions 1.9.5, 3.9.5, 5.9.16, or 7.9.5 or lower provides for an Authorized card ONLY to toggle In/Out status.

NOTE All IQ and SIM panels require the door to be opened prior to updating the card status.

2.2.4.4 Door Overview: Access Actions

Door Overview: Access actions
(MicroLPM Plus, IQ, SIM)

LiNC-NET provides output control via a card access or denial. The file tabs at the bottom of this screen will be different, depending on whether a standard or a MicroLPM-Plus controls your system. The screen above displays the MicroLPM-Plus panel. The number of outputs (control counters) that may be operated by a card transaction is dependent upon the panel type.

The Card Group programming influences the action performed when the card transaction takes place. For each possible card group, control may be determined by whether the card transaction occurs during an active or inactive time period schedule. The output operation is determined by the card being authorized (access granted) or unauthorized (access denied) when presented to a specific reader. When using a Standard MicroLPM, the card group (A, B, or AB) will determine the output that is affected. This provides a unique output operation to be generated at the same reader, dependent on the Group of the card presented.

NOTE Standard Panel cards of Group AB may influence two outputs since the operations under the Group A and the Group B file tabs are implemented for an authorized card of this group. The file tabs at the bottom will display: 'Every Access, Card Group A, Card Group B, and Denied Access. When using a MicroLPM-Plus, the card Group (A, B, AB) or the Escorted (Escort Required) group will determine the output that is affected. This again provides for a unique output operation to be generated at the same reader, dependent on the group of the card presented. When an authorized card transaction occurs at a specific reader, the operations programmed under the first action, second action, third action may enable 3 outputs. Refer to the bottom file tabs in the panel above.

Reader Selection Select the reader (a-l) that you wish to program. Enter a name to be associated with the panel and the reader or simply give it a Door number (example: Door#4).

2.2.4.4.0 Access Action Summary Based On Standard and Plus-type Panels

2.2.4.4.0.1 Standard Panel

Every Access- 1 additional output operation (plus door lock/ external shunt output activation). Regardless of Card Group.

Card Group A*- 1 additional output operation (plus the above defined Every Access operation) for cards who are defined as Card Group A.

Card Group B*- 1 additional output operation (plus the above defined Every Access operation) for cards who are defined as Card Group B.

Denied Access- 1 single output operation (no door lock/ external shunt output activation) regardless of the card's Group assignment.

* For **Card Group AB** cards	The Card Group A, Card Group B, and Every Access operations are activated upon the card being authorized.

NOTE When a card is not a Card Group AB card (Card Group= None, Card Group A, or Card Group B) then up to two additional output operations (plus door lock/ external shunt output activation) may be attained when the card is granted access. When a card is a Card Group AB card, then up to three additional output operations (plus door lock/ external shunt output activation) may be attained when the card is granted access.

2.2.4.4.0.2 MicroLPM Plus/IQ/SIM

Access Granted 1st Access- 1 additional output operation (if Card Group assigned to the card matches the Card Group assigned to this option) plus door lock/ external shunt output activation.

Access Granted 2nd Access- 1 additional output operation (if Card Group assigned to the card matches the Card Group assigned to this option) plus door lock/ external shunt output activation.

Access Granted 3rd Access- 1 additional output operation (if Card Group assigned to the card matches the Card Group assigned to this option) plus door lock/ external shunt output activation.

Access Denied Action- 1 additional output operation (if the Card Group assigned to the card matches the Card Group assignment to this option) but without door lock/ external shunt output activation.

NOTE When an authorized card's Group matches the Card Group assigned to either the 1st, 2nd or 3rd Access granted actions then for each match, a separate output activation will occur. In addition, the door lock/ external shunt output activation will occur. Because the Card Group assigned (to the Access Granted actions) may be either All, A, B, Escorted (defined below)-

2.2.4.4.1 Access Action Commands

Card Group
(Access Granted 1st, 2nd, 3rd, denied) Card Group Options

All	**Card Group A, B, AB**, and **None** as defined in the **Card Add/Change** screens
A	**Card Group A** as defined in the **Card Add/Change** screens.
B	**Card Group B** as defined in the **Card Add/Change** screens.
Escorted	An Escorted Card is card of any class (**A, B, AB**, and **None**) but is defined as **Escort Required** in the **Card Add/Change** screens.

Access Action (at the Reader)

For normal access and Alternate access actions, control counter action is composed of the **When Time Period** (Active or Not Active) priority option, **Preload, T** and **Operation**. Select from the following options:

Every Access or Access Granted First action	Select the first option Card Group access privileges from the options given. Enter All if access will be granted fully at the reader, A for one-way entry, B for one-way exit.
Counter	Enter the control counter number for the first option. Select from 0-40, A, B, C, D, or H (H class control counter is only available in the Plus series).

2.2.4.4.1.1 Time Period Control

Time Period	Enter a time period (2-31) for the access action. Program the action that will take place when the time period is Active and when the time period is Not Active.
Preload	Select the Preload action from the following options:
NoLoad	No preload action (CC value is not changed)
LoadZero	Load CC with zero
LoadLow	Load CC with low threshold value
LoadHigh	Load CC with high threshold value
LoadMax	Load CC with maximum value
AddPreset	Add preset value to CC
FlipOutput	Load CC with zero or high threshold to flip output
T	The system allows the user to override any other CC action and give priority to the time period's control operations. To do so, you must define whether or not time period has priority. If non-zero value is assigned to the auto-unlock output, the T flag will automatically be selected for the segment start.

2.2.4.4.1.2 Time Period Control

Operation — Select the operation to be performed on the control counter from the following list:

None	No Operation
Decrement	Decrement CC
DecrementSec	Start auto-decrement on second
DecrementMin	Start auto-decrement on minute
Clear	Clear auto increment decrement
Increment	Increment CC
IncrementSec	Start auto-increment on second
IncrementMin	Start auto-increment on minute
OverrideTp	Override time period control
TpSuspend	Suspend time period control (until (one ON cycle) restore)
TpResume	Resume time period control

For 2nd action (Card **Group A** access), activate another Control Counter or a class of **Control Counters** with a valid access for a cardholder whose card is defined as **Card Group A** or **Card Group AB** at this reader:

1. Enter the control counter number (1-40) or group (**A, B, C**, or **D**).
2. Follow the previous steps for **Preload**, **Time Period**, and **Operation**.
3. For third action (**Card Group B** access), for cards defined as **Group B** or **AB**, follow the preceding instructions to initiate.

Access Denied (Action) — A control counter action can be executed when a cardholder is denied access. The first group of entries (Time Period, Preload, T, Operation) defines the control counter action during an active Time Period card denial. The second set of entries describes what to do during the Access Denied Not active Time Period. If the Time Period control operations will override the Control Counter action, select “T” Field entry. Enter the control counter number (1-40) or control counter class (A, B, C, D) to initiate. Follow the identical procedure for the access granted counters above.

2.2.5 Hardware

2.2.5.1 Hardware-Input

Be sure to select the panel number tab at the bottom of the screen. Then select the sense-input number to be displayed or modified, (including the name for the sense input). Enter a name (up to 20 characters) to identify the sense input to the panel (example: Door1si4). Click on the check box after the selection and then click the arrow buttons to go forward or backward.

Input Number — Enter the sense input number

Name — Enter a name for the input (Door1, Door2, Door3, etc. are the default names given).

Assigned to Door — The door number is displayed if this input is assigned to a door. By default, an input will be assigned to the Door number that corresponds to it's number (ie. Input 4 will default to Door 4).

Type

Sense Inputs 1-12	reader detect
Sense Input 13	Tamper Detects for the panel
Sense Inputs 14	other purposes (In the IQ series panel, Sense Input 14 is used as an alarm point).
Sense Inputs 16-39	(default) Egress Sense and Door Sense for readers 1-12
Sense Inputs 40-71	may be assigned for one of the following purposes:

Not in Use	Not being used
Alarm	Used to generate alarms
Events	Egress Sense
Input Switch	Used when counting or using the input to trigger outputs without generating an alarm or real time transaction.
Elevator Control	The card will be able to access floors defined by the floor groups during the corresponding Time Periods. Enter the time period (0-999) which will enable the cardholder to access the corresponding floor group. (ELV must be enabled in the ConfigLN program).

NOTE In the elevator series panels, sense inputs 72-119 are setup as Button Sense Inputs.

Inverted Input Polarity Check box if the Sense Input should be inverted.

Output Action Output action is defined by the fields Counter, Preload, T, and Operation. Counter controls the counter number while Preload, T, and Operation define the counter action.

Counter	Controls the counter number.
Preload	Instruction to load a numeric value into the counter.
T	Time Period does not have priority.
Operation	Instruction that acts upon the numeric value already loaded into the counter.

Output action can be defined for each of the three conditions listed below.

2.2.5.1.1 Hardware Input: Upon Condition

...Normal/Closed

If defined as a dry contact alarm point, supervisory alarm point, or event. Control counter action will be performed upon going into normal status after an alarm condition. If defined as a door sense, control counter action will be executed upon detecting a door closure after a door alarm.

...Alarm/Ajar

If defined as an alarm point, event, or egress, the control counter action will be performed upon an alarm. If defined as a door sense, control counter action will be performed when the door is left open longer than shunt time. For UL Installations, the maximum number of alarm signals shall not exceed 1000.

...Trouble/Forced

If defined as a supervisory alarm, the control counter action will be performed upon detecting a short or open circuit trouble. If defined as a door sense, the control counter action will be performed upon an illegal entry through a doorway without first using an exit button or a card reader (Door forced open).

Input Screen with Calibration

NOTE	IQ, SIM, and ULTIMATE panels with 7.9.16 or higher only support the supervised point by point digital calibration. The Ultimate panel has not been evaluated by UL and is not suitable for UL1076 Installations.

NOTE	Each individual sense input MUST be in normal state with 180/300 resistors and proper setup of inverted polarity, before calibration takes place.

NOTE	Notification that calibration took place is at LED of Panel will be OFF with corresponding Sense Input #.

2.2.5.1.2 Proper Point by Point Calibration

To calibrate an individual door-

1. Make sure door/input in normal position.
2. Click on **Supervised** box
3. Save changes on navigation bar
4. Click the **Calibrate** button

Note:	The door/input will not calibrate correctly if changes are not first saved in the navigation bar.

Input Without Calibration

Input Screen - Supervised

Preload

NoLoad	No preload action (CC value is not changed)
LoadZero	Load CC with zero
LoadLow	Load CC with low threshold value
LoadHigh	Load CC with high threshold value
LoadMax	Load CC with maximum value
AddPreset	Add preset value to CC.
FlipOutput	Load CC with low or high threshold to flip output

T

The system allows the user to override any other CC action and give priority to the Time Period's control operations. Define whether or not time period has priority. Enter a [✔] if the Time Period does not have priority. If a non-zero value is assigned to the auto-unlock time period of a door lock output, T flag will automatically be selected for the segment start.

Operation

Select the operation to be performed on the control counter from the following list of instructions which act upon the numeric values already loaded into the counter:

None	No Operation
Decrement	Decrement CC
DecrementSec	Start auto-decrement on second
DecrementMin	Start auto-decrement on minute
Clear	Clear auto increment decrement
Increment	Increment CC
IncrementSec	Start auto-increment on second
IncrementMin	Start auto-increment on minute
OverrideTp	Override time period control (one ON cycle)
TpSuspend	Suspend time period control (until restore)
TpResume	Resume time period control

Shunt by Time Period,

Shunting an alarm condition may be done by time period or bycontrol counter number or class. Under **Time Period**, enter the time period (1-31) which will shunt the alarm. At counter, enter the active control counter which will shunt the alarm (1-40, or counter class A, B, C, or D).

Shunt by Counter

Enter the control counter number, which will activate or deactivate sense inputs upon an alarm condition. For Preloads, **Time Period** priority, and **Operations**, select from the following option instructions which load numeric values into the counter.

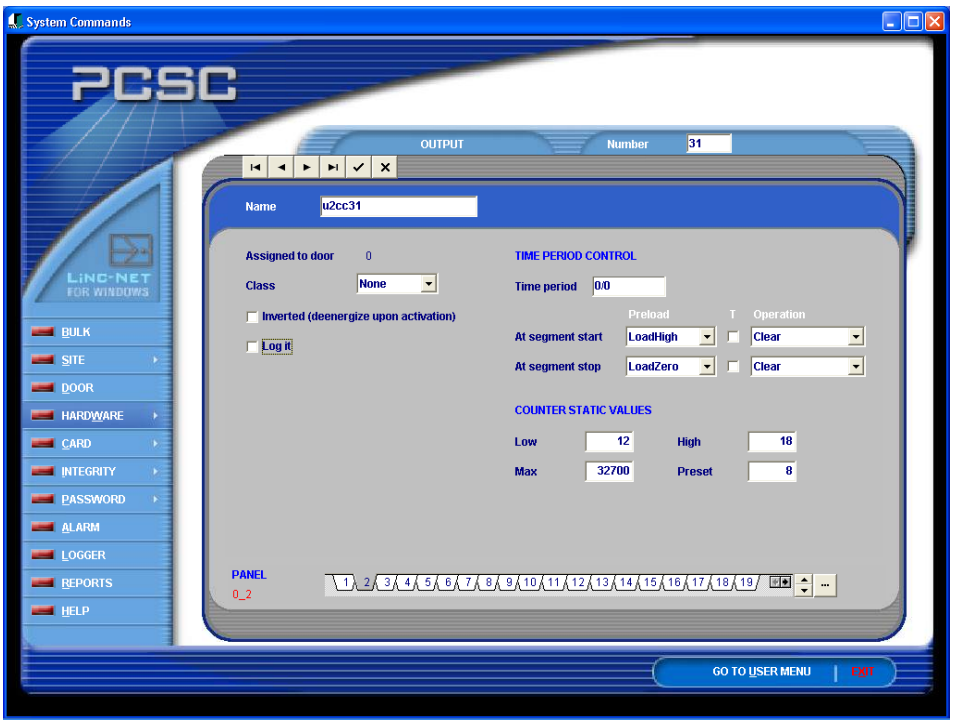
2.2.5.2 Hardware-Output

Be sure to select the panel number at the bottom of the screen. Enter a control counter number from the range of 1 through 40 (41 through 88 on MicroELV).

Assigned to Door — Door number is displayed if this control counter is assigned to a door.

Class — Control counters can be classified A through E. Class D and E are defined for door lock and external shunt, respectively. Counters are programmed as Class D and E from within the Door Overview hardware screen, Door Lock and Alarm Control output fields respectively. CLASSES A through C is user-assigned. They permit a single occurrence (sense-input violation or time period control) to actuate more than one counter at a time. Assign from the following options:

For Non-Door Outputs		For Door Outputs
None		D
A		AD
B		BD
AB	Or	ABD
C		CD
AC		ACD
BC		BCD
ABC		ABCD



Output with Counter Static Values

2.2.5.2.1 Time Period Control

Control counters can be affected by Time Period. Action can occur upon entry into, as well as exit from, the Time Period. Enter the Time Period by which door outputs will be activated or deactivated. The Time Period will cause the following prescribed actions to transpire: one upon entry (when the Time Period goes into effect) and one upon Exit (when the Time Period ends).

Output with Pop-Up Screens

For example,
1.The time period 2 is entered, which may be the time from 8:00 to 17:00.
2. **LoadHi** is entered under **Preload**, which indicates that the control counter is loaded with the high value upon entry (the beginning time).
3. **LoadZero** is entered for exit Preload, indicating a zero value load (the ending time).

Click on the **Search** button to scroll to a different panel number.

The door functions (opening, in this case) are automatically overridden upon **Time Period** end with the entry of **Clear (Clr)** under the **Operations** block. For **Preloads**, **Time Periods**, and **Operation**, select from the following options:

Preload

NoLoad	No preload action (CC value is not changed)
LoadZero	Load CC with zero
LoadLow	Load CC with low threshold value
LoadHigh	Load CC with high threshold value
LoadMax	Load CC with maximum value
AddPreset	Add preset value to CC
FlipOutput	Load CC with low or high threshold to toggle output

T The system allows the user to override any other CC action and give priority to the time periods control operations. Define whether or not time period has priority. Enter a [✔] if the Time Period does not have priority. If a non-zero value is assigned to the auto-unlock time period of a door lock output, a T flag will automatically be selected for the segment start.

Operation Select the operation to be performed on the control counter from the following list:

None	No Operation
Decrement	Decrement CC
DecrementSec	Start auto-decrement on second
DecrementMin	Start auto-decrement on minute
Clear	Clear auto increment decrement
Increment	Increment CC
IncrementSec	Start auto-increment on second
IncrementMin	Start auto-increment on minute
OverrideTp	Override time period control (one ON cycle)
TpSuspend	Suspend time period control (until restore)
TpResume	Resume time period control

Class Control counters can be classified A through E. Class D and E are defined within the Door Overview Hardware screen for door lock and external shunt, respectively. CLASSES A through C are user-assigned. They permit a single occurrence (sense-input violation or card transaction) to activate more than one counter at a time. Assign from the following options:

For Non-Door Outputs		For Door Outputs
None		D
A		AD
AD		BD
AB	Or	ABD
C		CD
AC		ACD
BC		BCD
ABC		ABCD

Inverted
[de-energize upon activation] Place [✔] to de-energize upon activation.

Log It If the transaction will be logged into the LiNC-NET journal, click on the box [✔].

Time Period Control Control counters can be affected by Time Period. Action can occur upon entry into, as well as exit from, the Time Period. Enter the Time Period by which outputs will be activated or deactivated.

The Time Period will cause the following prescribed actions: one upon Entry (when the Time Period goes into effect) and one upon Exit (when the Time Period ends).

Example:

1. Time period 2 is entered, which may be the time from 08:00 to17:00.
2. **LoadHi** is entered under Preload, which would indicate that the control counter is loaded with the high value upon entry (the beginning time).
3. **LoadZero** is entered for exit Preload, indicating a zero value load (the ending time). The door functions (opening, in this case) are automatically overridden upon Time Period end with the entry of **Clear (Clr)** under the **Operations** block.

For **Preloads**, **Time Periods**, and **Operation**, select from the following options:

Preload

NoLoad	No preload action (CC value is not changed)
LoadZero	Load CC with zero
LoadLow	Load CC with low threshold value
LoadHigh	Load CC with high threshold value
LoadMax	Load CC with maximum value
AddPreset	
FlipOutput	Load CC with low or high threshold to toggle output

T — The system allows the user to override any other CC action and give priority to the time periods control operations. Define whether or not time period has priority. Enter an X if the Time Period does not have priority.

Operation — Select the operation to be performed on the control counter from the following list:

None	No Operation
Decrement	Decrement CC
DecrementSec	Start auto-decrement on second
DecrementMin	Start auto-decrement on minute
Clear	Clear auto increment decrement
Increment	Increment CC
IncrementSec	Start auto-increment on second
IncrementMin	Start auto-increment on minute
OverrideTp	Override time period control (one ON cycle)
TpSuspend	Suspend time period control (until restore)
TpResume	Resume time period control

Counter Static Values — After each operation, the counter value is compared to the **Counter Static Values (Low and High)**. The **Low** value is used to turn the defined output **OFF** and the **High** value is used to turn the output **ON**.

When a counter value is being incremented and equals the **High** value, the defined output will be activated.

When the counter value decrements, and the counter value equals the **Low** value, the output will be deactivated.

Low	Low Threshold. Deactivate the output when the counter reaches this value.
High	High Threshold. Activate the output when the counter reaches this value.
Max	Maximum value. Counter will not exceed this value. Max must be greater than or equal to the High value.
Preset	Preset value. A user-defined value that can be loaded into the counter.

NOTE When using Elevator Control, the Low counter value should be 0 and the High counter value should be 2. Do NOT modify these values in an elevator panel.

2.2.5.3 Floor Groups (ELV)

Elevator control is defined as restricting access to specific floors in a building. The typical floor select panel interfaces to the elevator panel through a common ground system. Each push-button has a wire connected to the panel that carries the signal alerting the panel which floor was selected. The purpose of the ELV is to interrupt the signal from the push-button and the panel. When an authorized cardholder uses the system, the ELV allows the signal from the push-button to be received by the panel. The ELV restricts access by limiting a cardholder's choice of floors in the elevator cab. The ELV is placed between the floor selection panel (push-button) in the elevator cab and the elevator panel. The ELV allows the elevator panel to receive only those floor selections from the floor selection panel which the cardholder is authorized to access.

Typical operation of an **ELV** system is as follows:

1. The cardholder swipes/presents a card to the system via a cardreader (and/or PIN Pad).
2. The system determines which floors that the cardholder can access.
3. If the cardholder is authorized, the ELV allows the signals from the push-button to be processed.
4. The cardholder then selects the floor.
5. The elevator panel receives the message, controlling the cab to the desired (and authorized) floor.

NOTE The cardholder is responsible for selecting only one floor. In addition, the panel can only monitor which floors a cardholder may select. It is not able to determine what floor was selected. Single floor latching with destination reporting is under development. This will prohibit multiple floors from being selected by a single card presentation.

An ELV system will activate all associated relays on command from the host computer. A predefined access time may be specified with a command. Relays are automatically deactivated after the access time has elapsed.

The ELV operates in a fail-safe mode. The “secure” state of the relay is energized. If the ELV malfunctions or loses power, the relays de-energize and control is reverted to the push-button panel.

An ELV system requires the following setup:

1. In the **ConfigLN** program, under the **Main** tab, then **Miscellaneous**, select **[✓] MicroLPM ELV** in use. See the section on “Initialization Setup for LiNC-NET for Windows”.

2. Panel Hardware Setup: ELV must be selected in the expansion boards group.

3. Door Overview Hardware Options: Select Elevator as the Reader Function for the readers used in the ELV system.

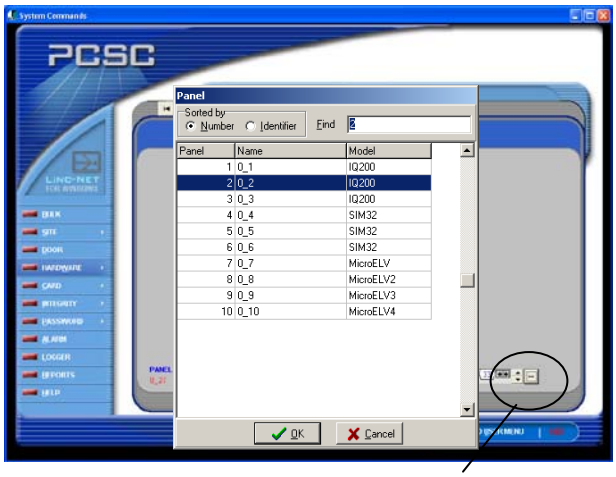
4. Output: Outputs used by the ELV system must be configured with Low = 0 and High = 2.

5. Floor Group: Make relay to reader assignments and define floor groups that will define access for cards.

6. Card Definition: A card can have up to four time period/floor group pairs to define the elevator access. In addition, the card must have access at the elevator reader. This is defined in the Authorization Group menu screen.

Floor groups define the groups of relays that are used to define access for each card for an ELV system. Care must be taken in defining floor groups for a system with multiple ELVs because each ELV has its own set of floor groups. But all ELVs use identical card records containing the same time period/floor group pairs and identical time period records.

Floor Group screen is blank when panel is NOT defined as an elevator-type controller in the MicroLPM Setup/Hardware screen



Click on the SEARCH button to scroll to another panel that is defined as Mico-Elevator type controller.

2.2.5.3.1 Field Definitions

Number	Enter the number of the Floor group to be displayed or modified.
Name	The name for the current floor group is displayed and can be modified.
Relays	Select one of the Output boards. Because one relay is wired to one floor select button of a particular elevator cab, it is not possible to assign more than one reader to control a relay. However, any number (1-64) of relay outputs (25-88) may be controlled by a single reader.
Relay	This column displays the relay numbers. The range of relays shown is dependent on the Output board selected.
Output #1	Relays 25 through 40 - Available in MicroELV4, ELV3, ELV2, and ELV1.
Output #2	Relays 41 through 56 - Available in MicroELV4, ELV3, and ELV2.
Output #3	Relays 57 through 72 - Available in MicroELV4 and ELV3.
Output #4	Relays 73 through 88 - Available in MicroELV4.
Floor	A short text may be entered in this field to identify the relay. This field can be updated from any floor group. Changes made in one floor group will be reflected in every other floor group of that panel.
Floor Accessible	These fields define the floor group. A check in this field indicates that the floor connected to that relay is accessible to the cards that use this floor group. Often, cardholders of different levels of access will activate different relays (floor groups) depending on job type and seniority.
Reader	This field shows to which reader, if any, the relay is assigned. This field can be updated from any floor group. There is one set of relay to reader assignments for each panel, and changes made in one floor group will be reflected in every other floor group of that panel. There is a 4-Reader max on any elevator system.
Panel	Select the panel number. The name of the panel is displayed in the field located in the lower left corner of the screen to the left of the tabs.

2.2.6 Card

2.2.6.1 Card: Add Card

Card information to grant access to a cardholder is user-defined. The user allows the cardholder to enter or exit a facility by defining **Card** parameters. The user can also enter personal information for the cardholders. Refer to **Cardholders Personal Data**.

Adding a Card

Enter the card number in the **Add Card(s) number** block including the ability to add groups of cards with the same information.

At the **Start Add** block, enter the number of the cardholder that you wish to add in the **from** block. If there is more than one addition, enter the ending number in the **to** block below. If only adding a single card, enter the same number in both the **from** and **to** boxes.

If there are common fields in the group of cards you are adding (i.e. Normal Access, Expiration date), you can enter information before you press the **Start Add** button. This will enter the same common information to all cards being added.

NOTE Card numbers can be assigned from 1 to 65,000. The total number of cards assigned depends upon the memory card(s) and firmware version in your panel system. Under Normal access conditions, check the Card active box to activate the card. If a person requires extended access time through a doorway, select the Long access box.

2.2.6.1.1 Normal Access

Card Active — Assigns the cardholder time Standard Access time duration for each particular access point. The Standard Access time duration is determined in Door Setup:

Long Access — Allows the cardholder to use the Long Access time duration of a particular access point. The time gets defined in the **Door Setup: Long Access**.

2.2.6.1.2 Capable of Override

Event Lockout — LiNC-NET provides a feature to disable access upon an event or alarm condition. If the user will be allowed to override this condition, select this option. If the cardholder is to have this override capability, click on the Event lockout box.

Access-Cost — The ability to override the cost/debit criteria. If the cardholder is to have this override capability, click on the Access-cost box.

2.2.6.1.3 Escort

Capable — Ability to grant access to a cardholder that has the escort required attribute.

Required — The holder must be accompanied by a cardholder that has the escort capable attribute. A cardholder may have both capable and required attributes, but always require a second unique cardholder with a capable attribute to gain access. If the cardholder can be assigned as an **Escort**, check **Capable**. If the cardholder must be escorted, select **Required.**

2.2.6.1.4 Exempt from EntryExit (Anti-Passback)

LiNC-NET supports 3 levels of **Entry/Exit** enforcement: **Parking**, **Building**, and **Department**. The cardholder's **Entry/Exit** status and the function type of the access reader determine **Entry/Exit** decisions. A reader is assigned an **Entry/Exit** function. The terminal type (**Parking**, **Building**, or **Department**) determines the function. Each terminal type where anti-passback is to be enforced has an **Entry/Exit** direction associated with it (In or Out). **Building In/Out**, **Department In/Out** and **Parking In/Out** type readers do permit a single reader to be used for anti-passback enforcement, but they are not practical. This is because, in order for the system to keep track of the cardholders true whereabouts, the cardholder must be relied upon to use the card reader whenever entering/exiting.

Because this single reader must be oriented in a location accessible to the entrance and exit, the customary physical restrictions prohibiting the omission of reader use are usually eliminated. Thus, if the cardholder forgets to use the reader each time they pass through the checkpoint, they will compromise the system's integrity. Therefore, it is recommended that two readers be used (one on each side of the door) when using anti-passlock.

When an **Entry/Exit** reader reads a card, the system checks the cardholder's **In/Out** status against the terminal type. The status of the cardholder must be OPPOSITE of the Terminal type (e.g., in order that a cardholder is granted entrance, his status must be OUT and vice-versa.

Also, If the cardholder is Exempt from entry/exit restrictions for Building/department or Parking, check the appropriate box.).

NOTE 5.14 also allows for Regional Anti-Passback. For more information, see the 5.14 Install Manual- Appendix A (P/N: 33-10055-002).

Example If a card is presented to a **Bldg In** (Building In) reader, the cardholder's **Bldg** status must be OUT prior to use. That is to say, he cannot be in the building and attempt to get back in again. This feature stops the "passback" of cards. LiNC-NET can be programmed to ignore or bypass the Entry/Exit logic to specific cardholders by setting the individual entry/exit exemption status. If the cardholder does not follow the Entry/Exit logic, access status will be one of the following:

1. **Strict** Always denied access (when strict anti-passback is selected in the panel setup) and a possible alarm and logger message will be generated.
2. **Lenient** A single violation ONLY is allowed (when lenient anti-passback is selected in the panel setup) and a possible alarm and logger message will be generated.
3. **Soft** Always ALLOWED access (when soft anti-passback is selected in the panel setup) and a possible alarm and logger message will be generated.

Building/Department The cardholder with this attribute can go against the entry/exit criteria for building or department type readers.

Park The cardholder with this attribute does not have to comply with the entry/exit criteria used by parking type readers.

2.2.6.1.5 Authorization Group

Assign the authorization group number (1 – 99,999 that describes the authorization level for the cardholder. An authorization group is a valid list of readers and the time period that the cardholder can gain access. Enter a second, third, or fourth Authorization group number if applicable.

NOTE A **MicroLPM-Plus4** is required to specify the third and fourth authorization groups (Firmware version 7.9.X must be installed in the MicroLPM & PLUS4 enabled in INI file). In the ConfigLN program from the Main tab under Miscellaneous, select **Plus4**.

2.2.6.1.6 Expiration Date(s)

One date controls the access privilege for parking type readers and the other controls the access privilege for all other types of readers. This unique function allows the system administrator to automatically deny access to cardholders at parking readers, yet allow them to pass through facility related readers. The card will be denied access from the end of the expiration date. LiNC-NET can support two expiration dates:

Primary expiration: If you have previously selected **Global** (in panel setup- card table format =Park/Global), the system uses the Primary Expiration Date for all types of readers. You must select Global if user-select PIN is to be used.

Secondary expiration - If you have previously selected **Park-Only** (in panel setup- card table format =Park-Only), the system uses the Secondary Expiration Date for all types of readers.

2.2.6.1.7 Miscellaneous

Card Group — There are 4 classes of cards that a cardholder may be assigned to: **None**, **Group A, Group B,** and **Group A** and **Group B**. Card groups are used to activate different outputs at the same reader or used to provide counting by the different groups. Enter the Card group: **A, B, AB**, or **None**.

Affiliation — An Affiliation Group can be assigned to a Cardholder here.

Class-H Counter Number/Class — This resource permits allocation of a specific output (called Class-H counters [1-40]) to be controlled by a specified card when presented to any number of specified readers. Define the counter number or class for counter Class-H during terminal access.

PIN — The PIN (Personal Identification Number) field allows the operator to assign a 4-digit number to a cardholder. The PIN is "encrypted" (****) in the data files so that other programs are unable to view them. Hence, the passwords and PIN codes are NOT displayed. This PIN must be used when entering through a door that includes a reader and PIN pad. The PIN can be entered before or after presenting the card.

NOTE A Duress Code can be derived from the Normal PIN code by incrementing the first and second digits by "one". If the first and second Regular PIN digit is a 9, the duress code digit is calculated as a 0. Duress can only be initiated from a cardreader with PIN Pad, not from a PIN only terminal.)

Example of a Duress Code assignment:

Regular PIN = 3219
Duress Code would be: 4319

Regular PIN = 1999
Duress Code would be: 2099

Do NOT assign user-defined PIN codes **0000**, **0911** and **9811**, as they are reserved by the system.

Elevator Control — The card will be able to access floors defined by the floor groups during the corresponding Time Periods. Enter the time period (0-999) which will enable the cardholder to access the corresponding floor group. (ELV must be enabled in the ConfigLN program).

***CardFile: Variable Length Field Sizes for First and Last Names**

Modifying the field length in the default path **C:\Program Files\PCSC\LiNC-NET version 5.14** folder can expand the fields for **Card First Name** and **Last Name**. Click on the **ZCAfield.DAT** file. This file contains two columns. The first column indicates the size of the field. The second column contains a comment indicating the field for which the size is intended. The order of the fields is critical. For First name (standard 32 characters) see **zFirstName**. For Last name (standard 32 characters), see **zLastName**.

32	zFirstName
32	zLastName
10	zCaEmpNo
10	zCaCompany
10	zCaDept
10	zCaDiv
10	zCaRegion
10	zCaSite
10	zCaCarMake
10	zCaCarModel
20	zCaCarUse
4	zCaCarYear
10	zCaCitizen
10	zCaColor
5	zCaDependents
10	zCaHeight
5	zCaMarital
5	zCaSex
10	zCaSSN
10	zCaWeight
10	zCaWhoRel
20	zCaCity
20	zCaStreet
20	zCaTelNo

To Change the Size of a Field

Use a text editor such as NotePad© or Microsoft Word© to change the integer corresponding to the field. Care should be taken in describing the field sizes. The size of each record is affected by the size of its components (i.e., fields). Having too many large fields could degrade the overall performance of LiNC-NET.

1. The Create DataBase program must be launched after each change in ZCAfield.DAT.
2. Select the Panel tab and scan all panels.
3. Select the Files tab and select All files.
4. Create the database.
5. Select the LiNC-NET icon to launch the LincnetNT program.
6. Verify that the changes have taken effect in the Card names fields in Card Add.

2.2.6.2 Card: Change Card

LiNC-NET offers a feature that allows bulk card changes. On the **Change Card** form, a check box precedes each data field:

Example- **Card Active**.

These check boxes are used to select the field(s) that will be affected once the bulk change is initiated.

> **NOTE** Card numbers can be assigned from 1 to 65,000. The total number of card assigned depends upon the size of the memory card and the firmware version installed in your panels.

Changing a Card Enter the card number in the Card number block. To change a card name, highlight the name of the cardholder and then enter the new name.

You must right mouse click on the fields along with the check box. This will activate the field to be downloaded.

If you want to bulk update, you have to make all changes and then put in the range of cards.

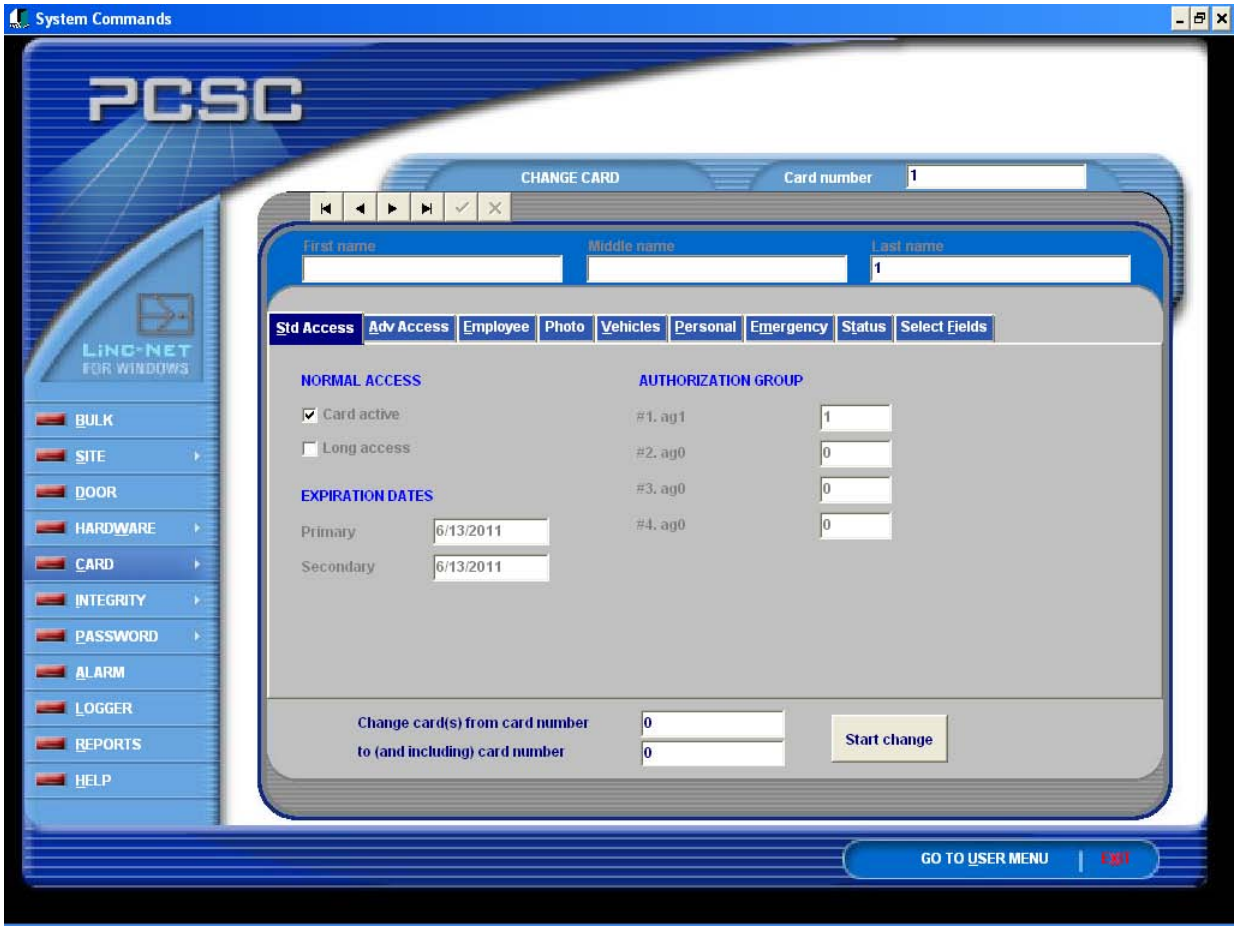
1. Make all changes.
2. Right-mouse click those items to bulk update.
3. Change card(s) from card number to (and including) card number.
4. Press **Start Change**.

2.2.6.2.1 Card: Change Card: Standard Access

2.2.6.2.1.1 Normal Access

Card Active Indicates whether the card is active or inactive.

Long Access Access time is the time a door lock is energized. There are 2 access timers for each door lock: **Normal** and **Long**. The choice of which timer to be used will be determined by the cardholder's Long attribute. If a person requires longer access time, choose **Long Access**; leave blank, if normal access is adequate.



2.2.6.2.1.2 Expiration Date(s)

The card will be denied access from the end of the expiration date. LiNC-NET can support two expiration dates:

Primary Expiration

If you have previously selected Global (in Panel setup- card table format = Park/Global), the system uses the Primary expiration date for all types of readers. You must select Global if user-select PIN is to be used.

Secondary Expiration

If you select Park-only, each cardholder has 2 card expiration dates. The **Primary Expiration Date** is for all non-Park reader (ie. Building and Department readers). The **Secondary Expiration Date** controls the access privilege for parking type readers This unique function allows the system administrator to automatically deny access to cardholders at parking readers, yet allow them to pass through facility related readers.

2.2.6.2.1.3 Authorization Group

Assign the authorization group number (1-99,999) that describes the authorization level for the cardholder. An authorization group is a valid list of readers at various panels and the time period that the cardholder can gain access. Enter a second, third, or fourth authorization group number if applicable.

NOTE A **MicroLPM-Plus4** is required to specify the third and fourth authorization groups. PLUS4 must be entered in the LINCETW.INI file in order for the 3rd and 4th Ags to display. In the ConfigLN program from the Main tab under Miscellaneous, select **Plus4**. See the section on **"Initialization Setup for LiNC-NET for Windows".**

Tab to the **Authorization Group** field and click on the **Scroll** button to display or change the **Authorization Group** assigned to the Card. Once complete, click on the **OK** button to assign this to the Card.

Click on the **Search** button within the **Authorization Group** to scroll through all the existing groups. After highlighting the desired **Authorization Group**, click on the **OK** button to change to a different **Authorization Group**.

2.2.6.2.2 Card: Change Card: Advanced Access

2.2.6.2.2.1 Capable to Override

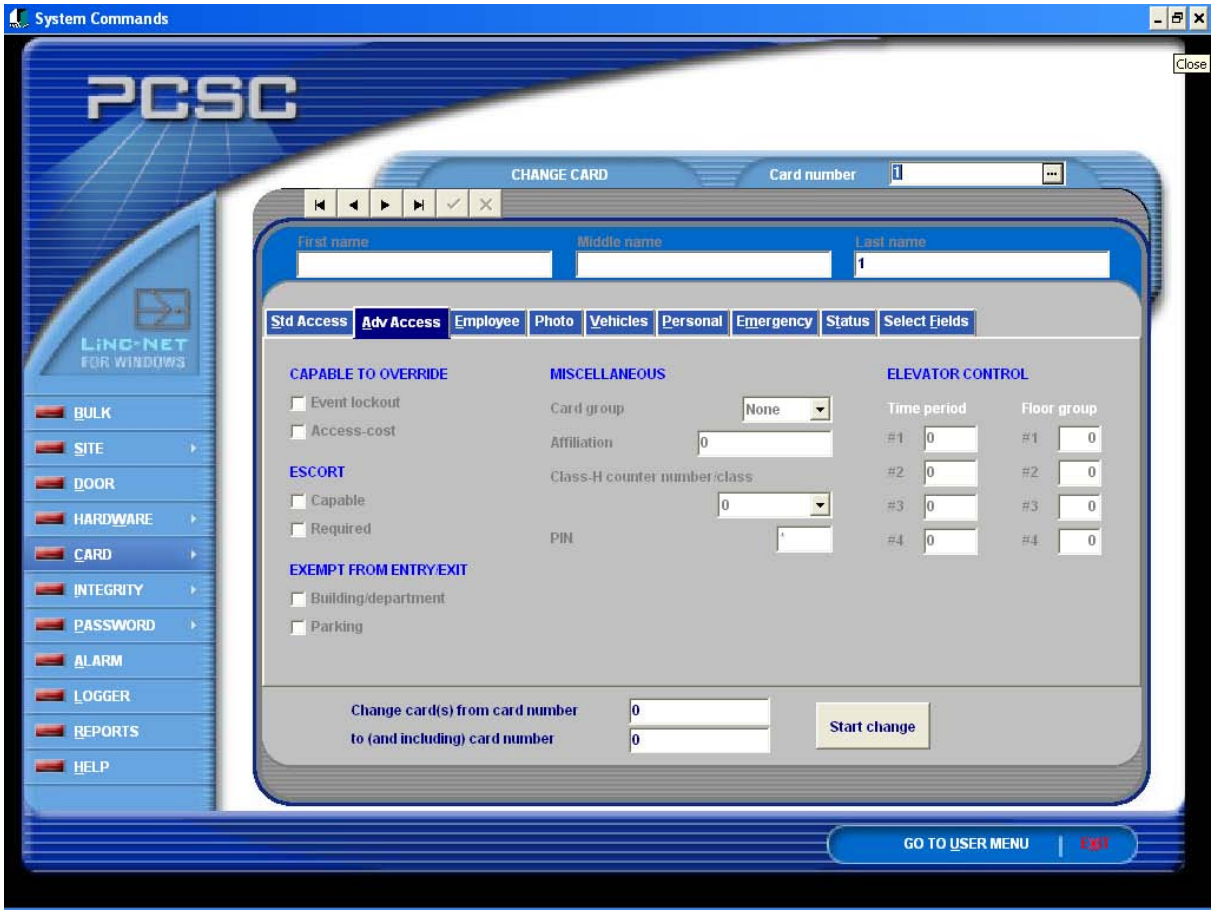
Event Lockout LiNC-NET provides a feature to disable access upon an event or alarm condition. If the user is allowed to override this condition, select this option.

Access-Cost The ability to override the cost/debit criteria.

2.2.6.2.2.2 Escort

Escort Capable Ability to grant access to a cardholder that is accompanying a cardholder that has the escort required attribute.

Escort Required The holder must be accompanied by a cardholder that has the escort capable attribute. A cardholder may have both capable and required attributes, but will always require a second unique cardholder with a capable attribute to gain access. If the cardholder can be assigned as an Escort, check Capable. If the cardholder must be escorted, select Required. The Escort resource (Capable/Required) is enforced at ALL readers of ALL panels and cannot be segregated.



2.2.6.2.2.3 Exempt from Entry/Exit

LiNC-NET supports 3 levels of **Entry/Exit** enforcement: **Parking, Building,** and **Department**. **The cardholder's Entry/Exit status and the function type of the access reader determine Entry/Exit decisions**. A reader is assigned an **Entry/Exit** function. The terminal type (Parking, Building, or Department access) determines the function. Each terminal type has an **Entry/Exit** direction associated with it (In or Out). **Building In/Out, Department In/Out** and **Parking In/Out** readers cannot provide anti-passback, as the system cannot track the cardholder as being **In** or **Out** when they are authorized for access. When an **Entry/Exit** reader reads a card, the system checks the cardholder's **In/Out** status against the terminal type. The status of the cardholder must be OPPOSITE of the Terminal type (e.g., if a cardholder is to be granted entrance, his status must be OUT and vice-versa).

NOTE 5.14 also allows for Regional Anti-Passback. For more information, see the 5.14 Install Manual- Appendix A (P/N – 33-10055-002).

Example If a card is presented to a **Bldg In** (Building In) reader, the cardholder's **Bldg** status must be OUT prior to use. That is to say, he cannot be in the building and attempt to get back in again. The feature stops the "passback" of cards. LiNC-NET can be programmed to ignore or bypass the **Entry/Exit** logic to specific cardholders by setting the individual **Entry/Exit** exemption status. If the cardholder does not follow the **Entry/Exit** logic, access status will be one of the following:

1. **Strict** Always denied access (when strict anti-passback is selected in the panel setup) and a possible alarm and logger message will be generated.
2. **Lenient** A single violation ONLY is allowed (when lenient anti-passback is selected in the panel setup) and a possible alarm and logger message will be generated.
3. **Soft** Always ALLOWED access (when soft anti-passback is selected in the panel setup) and a possible alarm and logger message will be generated.

Building/Department The cardholder with this attribute can go against the entry/exit criteria for building or department type readers.

Park The cardholder with this attribute does not have to comply with the entry/exit criteria of parking type readers

2.2.6.2.2.4 Miscellaneous

Card Group — There are 4 classes of cards that a cardholder may be assigned to: **None, Group A, Group B,** and **Group AB**. Card group/class is used to activate different outputs or used to provide counting by the different groups. Enter the Card group: **A, B, AB,** or **None**.

Affiliation — A cardholder can be assigned to an Affiliation Group using the Affiliation pop-up screen

Class-H Counter Number/Class — This feature permits allocation of a specific output (called Class-H counters [1-40]) to be controlled by a specified card when presented to any number of specified readers. Define the counter number or class for counter Class-H during terminal access. (For MicroLPM-Plus panels only.)

PIN — The **PIN (Personal Identification Number)** field allows the operator to assign a 4-digit number to a cardholder. The PIN is "encrypted" (****) in the data files so that other programs are unable to view them. Hence, the passwords and PIN codes are NOT displayed. This PIN must be used when entering through a door that includes a reader and PIN pad. The PIN can be entered before or after presenting the card.

NOTE A Duress Code can be derived from the Normal PIN code by incrementing the first and second digits by "one". If the first and second Regular PIN digit is a 9, the duress code digit is calculated as a 0. Duress can only be initiated from a cardreader with PIN Pad, not from a PIN only terminal.)

Example of a Duress Code assignment:

Regular PIN = 3219	Duress Code would be: 4319
Regular PIN = 1999	Duress Code would be: 2099

Do NOT assign user-defined PINs 0000, 0911 and 9811, as they are reserved by the system.

Elevator Control — The card will be able to access floors defined by the floor groups during the corresponding Time Periods. Change to the time period (1-31) which will enable the cardholder to access up to 4 corresponding floor groups.

To make bulk card changes:

1. For each data field to be changed, position the icon on the field name (in gray text). Push the right mouse button to select this field for bulk change (in black text). Refer to Add Card definitions (Administrator Guide) for the field descriptions.
2. Type in the card range to be changed by setting the from and to fields with the first and last card numbers.
3. Press the **Start Change** button.

2.2.6.2.3 Card: Change Card: Employee

Entering employee personal information is optional, as it does not affect access control operations. We have recently updated the Employee form. We've removed the several layers of sub-tabs and in the Employee screen and rearranged it between here and a new screen Photo (to be explained below). The Employee form contains data fields for the following information: **Employee Information**, **Dates of Employment** and **Telephone Numbers**.

Card: Change: Employee

Employee Information

Employee Number	11 characters
Company	11 characters
Division	11 characters
Department	11 characters
Region	11 characters
Site	11 characters

Dates of Employment

Hire	8 characters
Termination	8 characters

Telephone Numbers

Office	20 characters
Mobile	20 characters
Pager	20 characters

2.2.6.2.4 Card: Change Card: Photo

A newly designed screen, **Photo** allows an administrator to store not only the Photo of the employee, but also the individual's **Signature**. Also the LiNC-ID sub-program is accessed through the **Layout** and **Print Badge** sub-sections.

Photo and **Signature** have the same basic operation. A Photo or Signature (using a signature tablet) can be captured, enhanced using LiNC-NET's graphic tools and removed whenever necessary.

In the Layout section, a user's card may use an existing Departmental layout or design an unique card for the individual using LiNC-ID. A new personal badge can be previewed or printed in the PRINT BADGE sub-section.

Card: Change: Photo

2.2.6.2.5 Card: Change Card: Vehicles

Click on **Vehicles** file-tab. It contains the following fields for five vehicles per cardholder.

Card: Change: Vehicles

License	10 characters
Make	10 characters
Model	10 characters
Year	4 characters
Color	10 characters
Use	20 characters

2.2.6.2.6 Card: Change Card: Personal

Card: Change: Personal

Home Address

Home Address Street	20 characters
Home Address City	20 characters
Home Address State	20 characters

Home Telephone Number

#1 Home Telephone Num.	20 characters
#2 Home Telephone Num.	20 characters

Personal Data

Social Security Number	10 characters
Marital status	5 characters
Dependents	5 characters
Citizen	10 characters

Physical Description-

Weight	10 characters
Height	10 characters
Hair color	10 characters
Eye color	10 characters
Sex	5 characters

2.2.6.2.7 Card: Change Card: Emergency

Click on the **Emergency** page file tab. It contains the following fields for primary and secondary contacts.

Card: Change: Emergency

Name	32 characters
Relationship to Employee	10 characters
Primary Telephone Number	20 characters
Secondary Telephone Number	20 characters

2.2.6.2.8 Card: Change Card: Status

The system must be on-line in order to monitor card status. Clicking on the Status tab allows the administrator to upload real-time information for an employee. The first portion of the panel displays the LAST authorization information for an employee, derived from all panels (i.e., it includes the LAST card read from ALL panels on-line to the PC host). The LAST read feature of the LiNC-NET is maintained by reviewing each history record uploaded from each panel to the PC host. The most recent card read information is kept on hard disk and is displayed in the first portion of the panel. The second portion of the panel displays the status of a single panel, and is shown on the screen for each request.

2.2.6.2.8.1 Last Access/Last Denied

If In building is selected, the in/out building status of a cardholder will be displayed. The system will display the last date and time that the card was used, and the panel and reader used. If the card was denied at any time the system will also document the Last Denied access attempt. The reason for the denied access will also be shown (e.g., expired card, invalid authorization group, etc.).

Card: Change: Status

Click on the Search button to change to another panel. You can then observe a card's specific status (last usage) and the readers connected to it.

Click on the Card Number Fields Search button to scroll to another card record. Click on the OK button to observe its status.

2.2.6.2.8.1 Status at a Selected Panel

The card status selections are input automatically by the system and indicate whether the cards have been used in the system. This is used in conjunction with entry/ exit of the parking, building, and department.

The Parking indicator will show In, if the employee is in the parking lot. The Parking indicator will show Out, if the employee is not in the parking lot.

The Department indicator will show **In**, if the employee is in the area designated as department. The Department indicator will show **Out**, if the employee is not in the department area.

The Building indicator will show **In**, if the employee is in the building. The Building indicator will show **Out**, if the employee is not in the Building.

First Usage	When the card is issued for the first time, the entry/exit rule is not applied for the first access. Select this option if you wish to ignore the Entry/Exit rule for the first access. If you do NOT select the option, the Entry/Exit rule will be followed.
Park First Usage	Select this option if you wish to ignore the entry/exit rule for the first access to the parking area. If you do NOT select the option, the entry/exit rule will be followed.
Invalid PIN Entry Counter	This area will show the number of PIN entries before a user PIN error occurs. This field will normally be blank.

Credit Balance

Enter the number of credit units an employee will be assigned when the system is enabled for access cost. Refer to Door Overview/Features for access cost per transaction for each card group. Depending upon the number of credits issued to a card group, the Access cost for a card group will be subtracted from that balance. The system will subtract the value that was assigned for the card group as access cost for every valid transaction. The range of the credit balance is 0 to 999.

The system will display the last date and time that the card was used, and the reader accessed at the selected panel.

NOTE	When toggling status for In/Out of doors, either an Authorized card or an Authorized card followed by a door open activation will toggle In/Out status, depending on the panel firmware version.
NOTE	Firmware versions 1.9.5 and 7.9.5 or higher provide for an Authorized card followed by a Door Open to toggle In/Out status. Firmware versions 1.9.5, 3.9.5, 5.9.16, or 7.9.5 or lower provide for an Authorized card ONLY to toggle In/Out status.
NOTE	All IQ and SIM panels require that the door be opened prior to updating card status.

2.2.6.2.9 Card: Change: Select Fields

Card: Change: Select Fields

***Card File: Variable Length Field Sizes for First and Last Names**

Modifying the field length in the C:\Program Files\PCSC\LiNC-NET version 5.14 folder can expand the fields for Card First Name and Last Name. Click on the **zCAfield.DAT** file. This file contains two columns. The first column indicates the size of the field. The second column contains a comment indicating the field for which the size is intended. The order of the fields is critical. For First name (standard 32 characters) see zFirstName. For Last name (standard 32 characters), see **zLastName**.

33	**zFirstName**
33	**zLastName**
11	**zCaEmpNo**
11	**zCaCompany**
11	**zCaDept**
11	**zCaDiv**
11	**zCaRegion**
11	**zCaSite**
11	**zCaCarMake**
11	**zCaCarModel**
21	**zCaCarUse**
6	**zCaCarYear**
11	**CaCitizen**
11	**zCaColor**
7	**zCaDependents**
11	**zCaHeight**
5	**zCaMarital**
5	**zCaSex**
11	**zCaSSN**
11	**zCaWeight**
11	**zCaWhoRel**
21	**zCaCity**
21	**zCaStreet**
20	**zCaTelNo**

2.2.6.2.9.1 To Change the Size of a Field

Use a text editor such as NotePad© or Microsoft Word© to change the integer corresponding to the field. Care should be taken in describing the field sizes. The size of each record is affected by the size of its components (i.e. fields). Having too many large fields could degrade the overall performance of LiNC-NET.

The Create DataBase program must be launched after each change in zCAfield.DAT:

1. Open **ConFigLN**.
2. Open **Create Data Base**.
3. Select the **Panel** tab and scan all panels.
4. Select the **Files** tab and select **All Files**.
5. Select the Reorg tab and select Reorg to reorganize all LiNC-NET data files.
6. Select the **LiNC-NET** icon to launch the LiNC-NET program.
7. Verify that the changes have taken effect in the **Card Names** fields in **Card Change**.

2.2.7 Integrity: Backup

2.2.7.1 Backup to Selected Drive-

Only **History** files will be backed-up to a selected drive. Press the arrow key and the drop down menu will display the available drives. Available Backup drives may be any physical drive on either your **Host** or **Workstation PC**, as well as any mapped Network Drives.

If using a 3.5 inch floppy disk, insert the disk for the backup procedure into the selected drive. Click on the drive and press the **Start Save** button. If the diskette was used for a previous history backup, the system presents the following options:

1. Appending the existing file

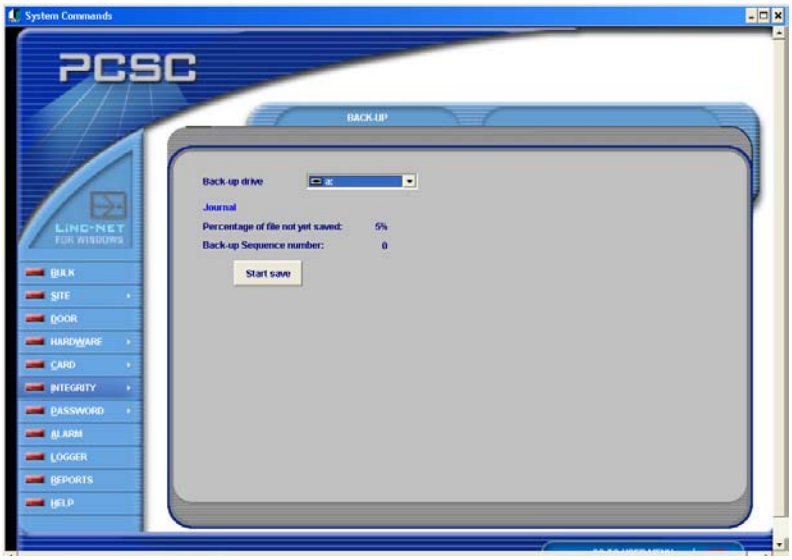
2. Overwriting the file

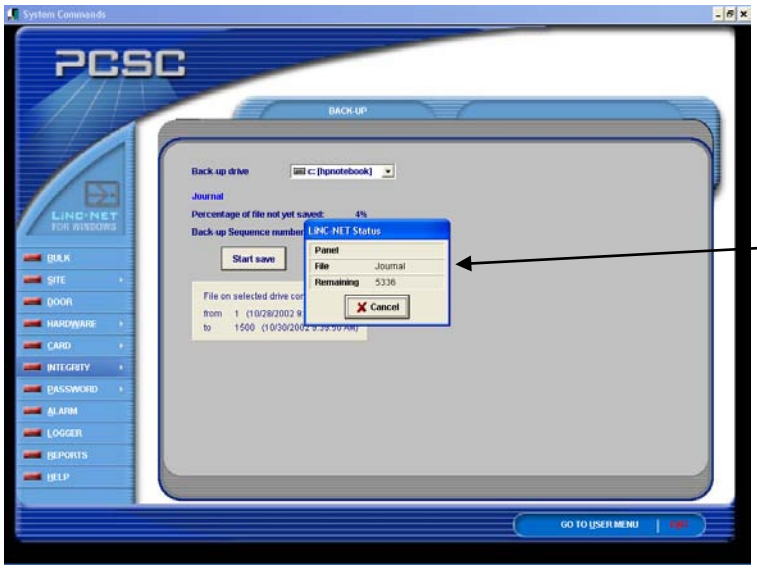
3. Saving to another diskette

Or

4. Canceling the backup operation. The menu will display the percentage of files not yet saved as the back up progresses.

NOTE Backup does NOT save the data files. To save the data files, use the Windows XP Professional backup procedures.





Example of a backup of data underway to Drive C.

2.2.8 Password

2.2.8.1 Password: Password

NOTE The default ID to enter LiNC-NET is **0** and the password is **PYMTF** (uppercase sensitive).

NOTE The default ID to exit LiNC-NET is **1** and the password is **EXIT** (uppercase sensitive).

Passwords determine which menus, **System Commands**, or **User Commands** operators can access. The system also determines a password time schedule. Thus, an operator's access to the LiNC-NET system can be limited by time, day, or holidays. Each password is cross-referenced to a unique ID number.

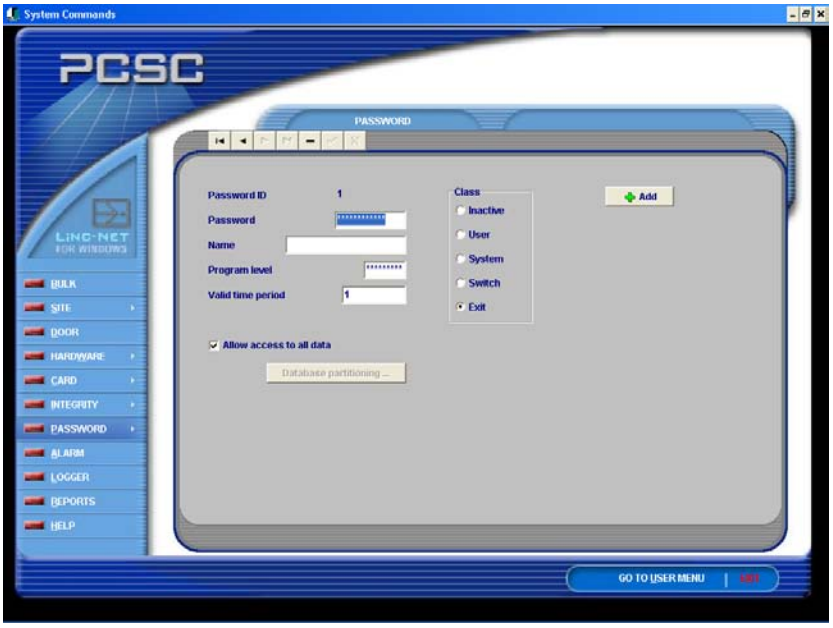
Different password level assignments work in conjunction with **Program level** assignments to prevent unauthorized persons from accessing specific menus and sub-menus (system resources). **Password/Program** level values range from 0 to 99, where zero yields the highest and 99 allows the lowest level of access. For a particular password to access a menu, the **Password Program** level must be less than or equal to the **Menus** level. (Password level [numeric value] = Menus level [numeric value]). A matrix of priority value levels should be noted. To configure the **Password** level values, enter the number in the **Program level** block.

NOTE Accidental lockout of the system could occur if all high level (low numeric) values be assigned to LiNC-NET menus (modes) and sub-menus (icons within each mode of operation), and the passwords have low level (high numeric) values assigned to them. This would mean that the level required to access the password setup menu is of greater authority than any password actually possesses.

Each password ID number can also be assigned a valid **Time Period** during which access to the system will be permitted. View the range of **Time Periods** available. Refer to the **Time Period** menu from the User Commands Menu to view **Time Period** parameters.

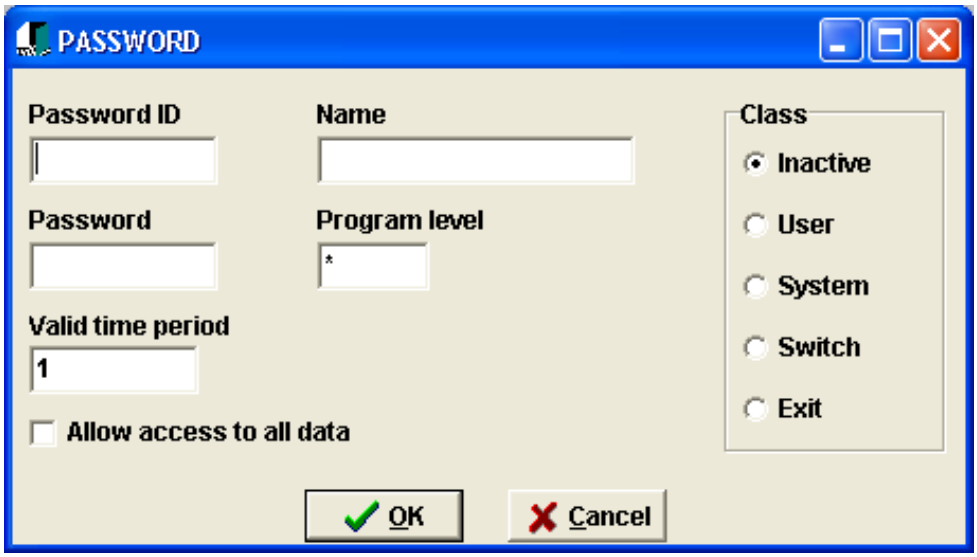
The Class attribute limits the particular mode **(System Commands, User Commands)** that the operator may access with his password. A **Switch Class Password** may access both the **User** and **System** modes.

Additionally, this **Class** determines if the user is permitted to terminate (Exit) the operation of the LiNC-NET program. It is possible to have a password defined in the software, but not permit its use (Inactive class). If the class definition is changed for the password used by the current operator, the changes do not take effect until the next time the password is used. Therefore, once a change is made, the operator should Logoff and back on again to implement the modification to the password definition.



The Password Menu

NOTE **Program Level** values are configured in a separate file to prevent tampering. Only the System Administrator or security personnel should access this file. Any password which has access to the Password menu has access to the **Program Level** menu. The security administrator should perform program Level values, as all of the access levels will be determined by his or her data entry. If authorized, see the following restricted instructions for setting these password levels.

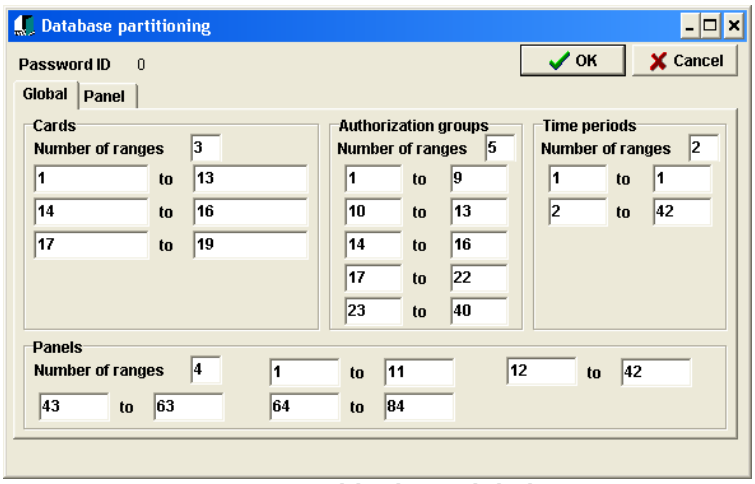


Password ID Add

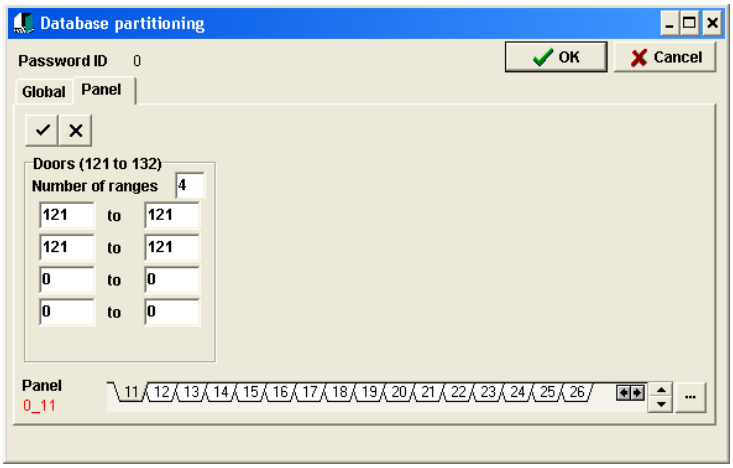
2.2.8.1.1 Data Partitioning

This feature makes it possible to limit the data accessible to the operators. A data partition can be defined for each password. A password's data partition consists of up to five ranges each for cards, authorization groups, time periods, panels, doors, and floor groups. The operator is allowed to view and change only the data in the partition defined for his/her password. The data partitions for different passwords can overlap.

NOTE: To bypass this feature and allow an operator to have access to all data, select "Allow access to all data" for the operator's password.



Data Partitioning: Global



Data Partitioning: Panel

2.2.8.1.2 Field Definitions

Password ID Cross-reference number for passwords.

Password A case-sensitive word or acronym for accessing LiNC-NET menus. The password is “encrypted” (****) in the data files so that other programs are unable to view them.

Program Level Restricts accessibility by assignment of higher and lower values for each operator.

Valid Time Period Segment of time that allows the password access into the system. Specify a time period that a password will have access to your system from 0-999. 0=never allowed to sign on. 1=always allowed to sign on. 2 through 999 allows specified sign on times.

Class Defines menu access-

- **Inactive** Not used
- **User** Only user menu commands accessible
- **System** System menu commands accessible
- **Switch** Both System and User menu commands accessible
- **Exit** Password required to Shutdown LiNC-NET for Windows XP Professional and Vista Business Edition.

2.2.8.2 Password: Program Level

This is a restricted section! The following instructions are intended for use by the System Administrator or those individuals who will be responsible for configuring the Password and Password Program levels, which allow restricted access to the LiNC-NET for Windows XP Professional and Vista Business Edition menus. Any password whose program level permits it to access the Password Menu will also permit access to the Program Level Menu.

The **Program Level** menu is used for configuring access levels to the menus in LiNC-NET for Windows. The program level values are “encrypted” (****) in the data files so that other programs are unable to view them.

The **Program Level** menu is divided into 4 tabs. The first tab lists each of the **System Menus** that can be programmed for access. The second tab assigns the program levels for the **User Menus**. The third tab allow for the **Switch** that both system and user modes can access. The fourth tab is **Reports**. Each tab label can be assigned a level of access to that function in the form of a numeric value.

The administrator configuring this system must carefully fill in the appropriate program level entry, being aware that access to each field must be coordinated with each operator’s password ID number, password, access time period, and designated accessibility to **System**, **User**, **Switch** and **Reports** modes.

NOTE Before beginning this procedure, please be sure that the principles of the Password levels are understood. A Program Level is a hierarchical (organized according to rank) arrangement of authority used to govern which logon passwords may access the different areas of the LiNC-NET for Windows XP Professional and Vista Business Edition program. Once the Program Level system is configured, access to the Password menu itself becomes limited to those given access. Avoid accidentally preventing key operators or security from accessing the Password menu!

2.2.8.2.1 To Begin

Click on the **Program Level** and the **Program Level** screen will appear. The file is divided into three columns. The first column describes the **menu heading**. The second column identifies the sub-menu description. The third column is reserved for assigning a **numeric value for access** to each menu. By default, all LiNC-NET menus and sub-menus have **program level 98** assigned to them. (This is the second lowest program level.)

2.2.8.2.2 Program Level Hierarchy

Range of numeric values = 0 to 99 (100 possible levels) where:

Default **PYMTF***	**0**	Highest program level
	1	
	Ø	
Assigned to menus by default	**98**	2nd Lowest Program Level
	99	Lowest Program Level

* The default password, **PYMTF**, has program level 0 (zero) assigned initially. It therefore possesses the highest level of authority and may access all LiNC-NET resources

> **NOTE** Before changing the **Program Level** values, make a list of operators and the levels of accessibility that they will be assigned. Each password entry will have an assigned program level. When the **Program Level** value (numeric value between 0 and 99) of the operator's password (as programmed in the Program Level field of the Password Setup screen) is less than or equal to the **Program Level** assigned, that menu function is available. If the menu's **Program Level** is less than the operator's **Program Level**, then the function is NOT available.

Program Levels may also be programmed from **0** to **99**. Operators whose **Program Level** is 99 (the Highest numeric value) would only be able to access menus whose **Program Level** is equal to ninety-nine (Lowest Program Level). Conversely, operators whose **Program Level** is **0** (Lowest numeric value) would be able to access menus whose **Program Level** is equal to zero (Highest Program Level) as well as menus whose **Program Level** is lower than this operator's assigned Program Level. Since all other Program Levels are lower than the level zero, such a password would grant access to all menus.

> **NOTE** In order for a password to access a menu:
> **The lower the numeric value, then the higher the Program Level authority.**

Enter the values for each field, keeping in mind that it is best to stay within the highest level (level zero) of access so that no tampering will occur after the initial setup.

2.2.9 Alarm Definition

2.2.9.1 Sense Input Alarms

Besides assigning a sense input to an alarm record, the operator may assign a priority level, a location, text for the journal record, and instructions in the event of an alarm.

2.2.9.1.1 Alarm Definitions

Number Refers to **Alarm** number. This is also the **Sense** Input number. Press Enter after selecting the alarm number. The name of the sense input, which was programmed in the Sense Input panel, is displayed to the right of the number.

NOTE Add or delete a number using the add/delete option at the bottom of the screen.

Shunt Time Period This is the specified time period that an alarm is disabled. 0 = never shunted, 1 = always shunted, and 2 through 999 shunts the alarm during the specified time period. When a sense input status changes to a normal state, the event will be logged if the alarm condition occurred when the alarm was not shunted or if the sense status was not in a normal state when LiNC-NET was started.

Priority Active alarms are presented in priority order. Alarms with the lowest priority number are displayed first. For each alarm being configured, assign a value (0 being the highest) which will dictate in which order it will be acknowledged. Enter a number from 0 to 9999 and press **Enter**.

Location This is an informational field and can contain any text. Enter a name for the location of the alarm.

For Example 3rdFloor, East Wing. Press the [✔] after entering the location to save entry.

Text for Alarm Journal Log The text entered in this field will be appended to the journal record that is logged for this alarm.

Instructions Enter text in this field which provides directions to the person responding to the alarm. The message may refer to other control counters, sense inputs, or any other reaction information. Press the [✔] to enter the instructions into the system.

Add Alarm Enter the number of the alarm, then select the **Add** button. An alarm must be added before it can be defined.

Delete In the event that a user wishes to Delete an Alarm record, it is possible using the Delete [**-**] button at the top-left of the screen.

Panel Select a panel from the tabs at the bottom of the screen.

NOTE An alarm record CANNOT be changed or deleted while the alarm is active.

Routing

LiNC-NET has the ability to route alarms to specific workstations. **Alarm Routing** offers two **Groups** that alarms may sound. **Group 1** is timed by a customizable **Minutes** box, before sending the alarm to the workstations in **Group 2**.

Routing Templates

A template can be created when setting **Routing** parameters. Once correct routing has been determined for a panel, press the **Save as template** button. This saves the configuration for use with another panel configuration.

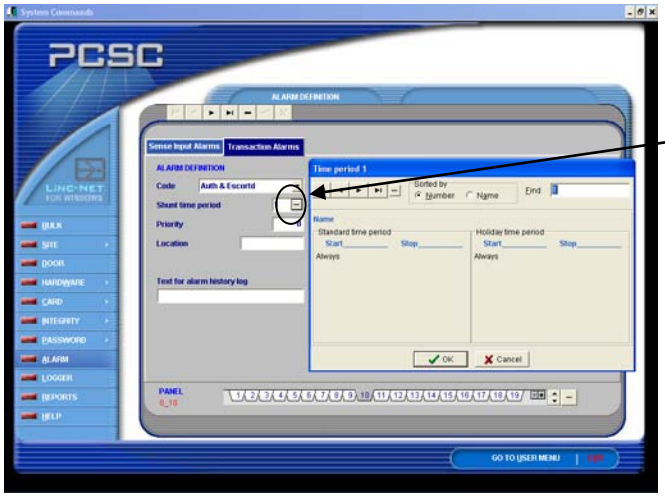
To use the saved Routing template, press the **Use Template** button. This will reset the configuration to the **Alarm Routing** parameters that were saved previously. Only one template can be saved at a time.

2.2.9.2 Transaction Alarms

There are two types of Transaction Alarms:

- Panel Transactions (see section 2.2.9.2.2)
- Host Transactions (see section 2.2.9.2.3)

Click on the Search button to scroll to another panel and define alarms.



Tab to Shunt Time Period field and click on the Search button to scroll to a different Shunt Time Period for the Sense Input/Transaction Alarms

2.2.9.2.1 Transaction Alarms Definitions

Code	Enter the Transaction code to be defined. Codes must be added from the add/delete box at the bottom of the screen before they can be defined and entered into the system. See the Real-time alarm code definitions at the end of this section.
Shunt Time Period	Enter the time period number whereby the alarm will be shunted (disabled) when that time period is in effect.
Priority	Alarms are presented in priority order. Alarms with the lowest priority number are displayed first. For each alarm being configured, assign a value (0 being the highest) which will dictate in which order it will be acknowledged. Enter a number from 0 to 9999 and press Enter.
Location	This is an informational field and can contain any text. A transaction alarm can take place at the Host or at the panel/reader location. Enter the location where the transaction alarm occurs.
Text for Alarm History Log	The text entered in this field will be appended to the journal record that is logged for this alarm.
Instructions	Enter text in this field that gives directions to the person responding to the alarm. The message may refer to other control counters, sense inputs, or any other reaction information.
Host Transactions	Select this radial button to define alarms for transactions that are generated at the Host PC. Panel selection has no effect when this button is selected.
Panel Transactions	Select this radial button to define alarms for transactions that occur at panels. Select a panel with one of the tabs at the bottom of the screen.
Add/Delete Alarm	Select the code of the alarm, then select the Add or the Delete button. An alarm must be added before it can be defined. An alarm can only be deleted if it's alarm codes have been deleted.
Panel	Select a panel from the tabs at the bottom of the screen. This has no effect if the Host transactions radial button is selected.

NOTE An alarm record CANNOT be changed or deleted while the alarm is active.

2.2.9.2.2 Transaction Alarms Originating at the Panel (Panel transactions)

Auth & Escorted	Access was granted to a cardholder who is required to have an escort.
Auth Escort	Cardholder attempting access is recognized as an authorized escort.
Authorized	Cardholder has a valid card.
Bldg Entry Error	Occurs whenever a user tries to use a card without Bldg “Out” status to enter the building.
Bldg Exit Error	Occurs whenever a user tries to use a card without Bldg “In” status to exit the building.
Card Trouble	Six unsuccessful card-reads at a reader in one minute due to an unmatched card format or unmatched facility code.
Communication Error	A communication error has occurred from Controller to Host.
Cost > Credit	The cost to gain access through the reader is greater than the cardholder’s credit balance. (Cost/Access accounting is supported in LiNC-NET for Windows XP Professional and Vista Business Edition as of version 5.10.1 software)
Data Disparity	When uploading records from the panel’s host, the system compares the data against the records at the host. For each record that differs, “Data Disparity” is logged with the file name and record number.
Database Corrupt	A checksum error is found in the battery backup RAM database or memory expansion card in the panel.
Date/Time Change	The date and time change at the panel was changed. This occurs each time that the panel is brought on-line.
Daylight Savings	The Daylight Savings date programmed into the panel has gone into effect.
Department Entry Error	Occurs whenever a user tries to use a card without Dept “Out” status to enter the department.
Department Exit Error	Occurs whenever a user tries to use a card without Dept “In” status to exit the department.
Download Error	A disparity exists between the download number and the checksum number.
Duress	A cardholder or PIN terminal-user has entered a special PIN duress code at the PIN terminal.
Entry/Exit Error	Occurs whenever a user tries to use a card twice successively to enter or exit an area already entered or exited (e.g., tries to enter the building twice without exiting in between).

Escort Required	Cardholder is required to have an escort in order to gain access.
Event Lockout	Each door can be assigned to an event lockout counter. If the counter is ON, access will be denied and the “event lockout” error code will be displayed to cardholders that do not possess override capability.
Expired Card	The current date is past the expiration date defined in the card holder’s record.
Host Logoff	The host has logged OFF of the panel
Host Login	The host has logged ON to the panel
Inactive Card	Occurs whenever an inactive card is used in the system.
Invalid Reader	Cardholder is not allowed at this reader because it is not included in any of the Authorization Groups assigned to their card.
Invalid Time	The cardholder has tried to use a cardreader at a time that is not assigned to the card’s Authorization Group.
Panel Down	A panel is no longer on-line.
Panel Up	A panel is on-line after a panel-down occurrence.
Not An Escort	Cardholder attempting to escort another cardholder (who is escort required) through the reader is not recognized as escort capable.
Park Entry Error	Occurs whenever a user tries to use a card without Park “Out” status to enter the parking facility.
Park Exit Error	Occurs whenever a user tries to use a card without Park “In” status to exit the parking facility.
PIN Entry Error	The cardholder has entered an erroneous PIN number at the terminal.
PIN Retry Error	An erroneous PIN has been entered on the cardholder’s fourth consecutive attempt at entering their PIN.
Soft Entry/Exit Error	Cardholder has incorrect entry/exit status, but soft enforcement allows access and statuses are synchronized.
System Fault	The panel has lost power.
System Restart	The power to the panel was restored or a “warm” boot of the panel occurred.

TPMOR Auth 1	The first of two cards was authorized to satisfy the Two-Person Minimum Occupancy Rule.
TPMOR Auth 2	The second of two cards was authorized to satisfy the Two-Person Minimum Occupancy Rule.
TPMOR Violation	Violation of the Two-Person Minimum Occupancy Rule (one or both cards are not authorized).
Undefined Card	The cardholder has used a card that has not been defined in the system.
Upload Error	An error has occurred during the upload process.

2.2.9.2.3 Transaction Alarms Originating at the Host

Alarm Not Acknowledged

Anomaly	A general programming error code. Operator should notify their Technical Support entity when this occurs.
Close Door	Someone manually closes the door.
Data Format Error	Host computer not set for a 4-digit year.
Disk Error	A disk error has occurred while accessing a specific record.
History Full	The disk is full.
LINC-NET System Start	Operator has signed ON to the system and LiNC-NET is in operation.
Lost Card	An inactive card is being presented for access
Manual Shunt	Able to manually shunt/Turn-off an input point.
Manual Unshunt	Able to manually restore the point.
Open Door	Door has been held open longer than the Shunt Time.
Operator Signoff	System operator has logged ON to the Host.
Operator Signon	System operator has logged OFF of the Host.
Operator Signon Fail	System operator has entered incorrect password at the Host.
Start of Day	Indicates the start of the new day. When time changes from 23:59 to 00:00.

2.2.9.3 Alarm Acknowledgment

An alarm occurs whenever any of the above listed Transaction or Sense Input alarm conditions are tripped. The System or User Main screens will display a flashing alarm clock with intermittent beeps sounding.

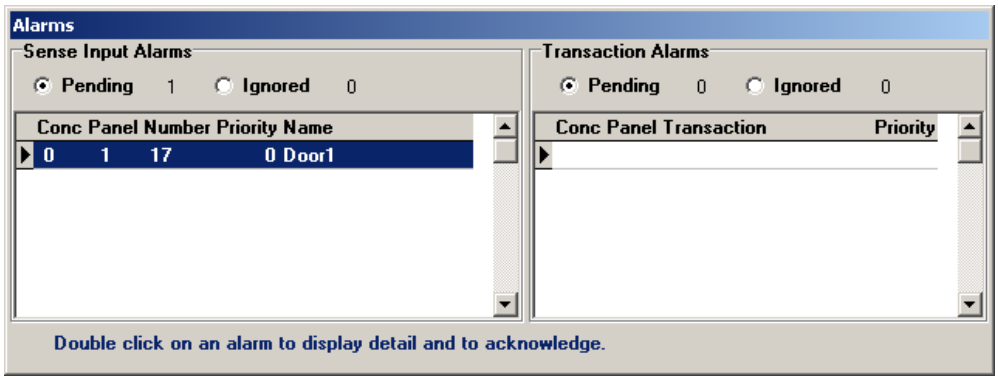
To acknowledge an alarm, the operator can double click on the alarm transaction that comes up on the Sense Input or Transaction Alarm window. A detail screen appears which lists panel, code, status, priority, History record information, and an Acknowledgment and Ignore button. Before acknowledging the alarm, the operator may specify the **Action Taken** in response to the alarm. The action taken is written as a part of the "alarm acknowledge" journal record, which is logged upon acknowledgment of the alarm. The audio and visual reference indicators of a pending alarm stay active until the operator has acknowledged all pending alarms. Optional software exists for graphic (ALARM VIEW) alarm annunciation. Contact your dealer for more information.

NOTE A sound blaster card and speakers may be installed, and a sound byte (WAV File) may be used to annunciate alarms.

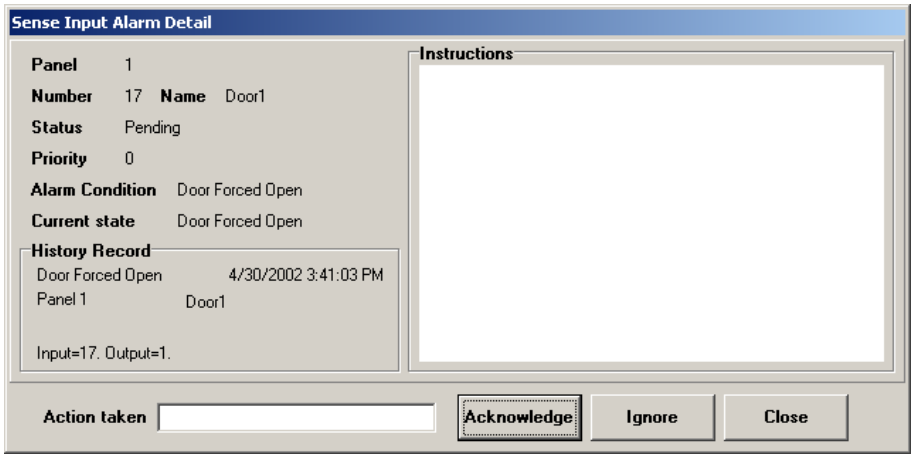
2.2.9.3.1 Manual Shunt and Restore nomal operations of Alarms from Input Screen.

If the case of an alarm becoming active inappropriately, LiNC-NET 5.14 now has a feature that allows a User to Manually Shunt an alarm and then later restore it to Normal status directly from the Input Status screen.

1. If an alarm becomes active, double-click on the specified alarm in the **Alarms** window.

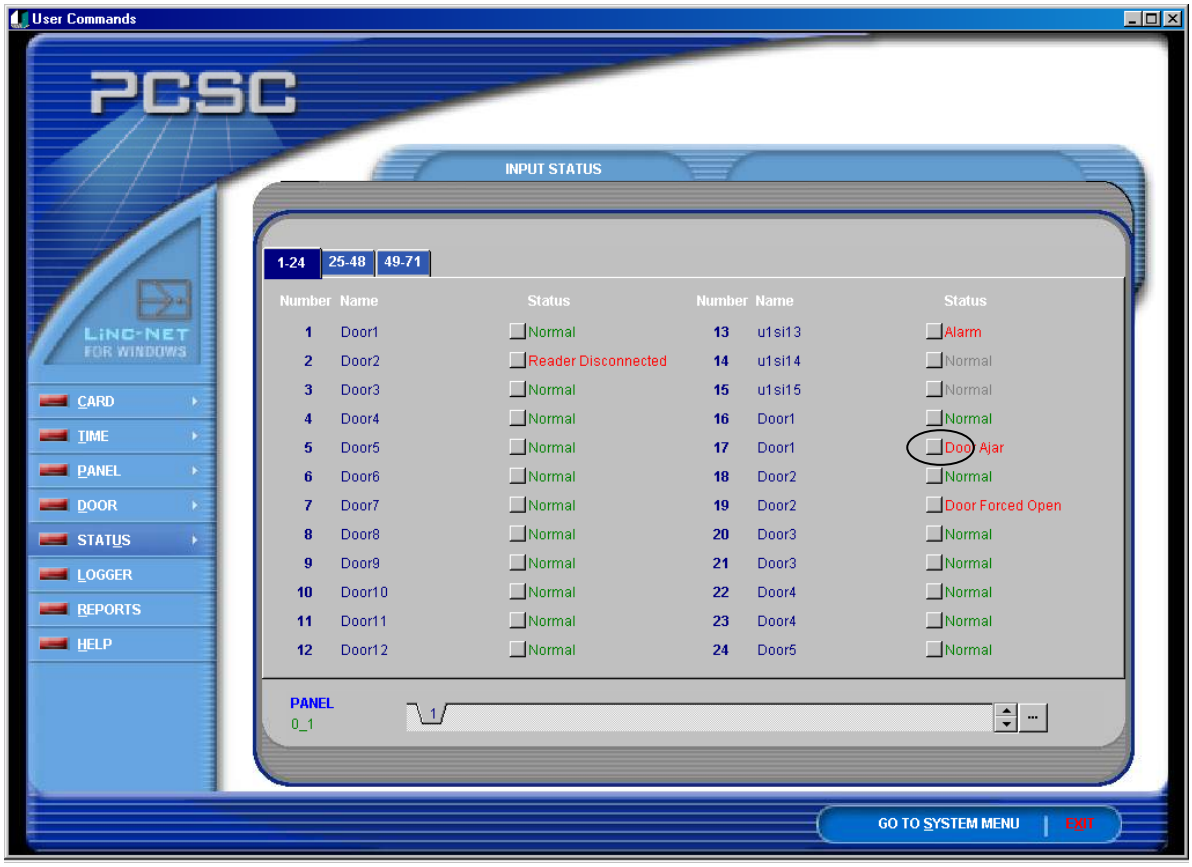


2. The **Sense Input Alarm Detail** window will open. Click the **Acknowledge** button to close the window.



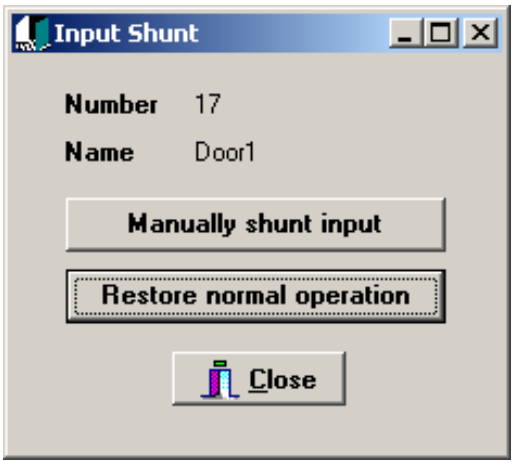
1. To shunt the alarm from sounding again, access the **Input Status** screen in the **User** menu. Press the box next to the alarm number. This will cause the **Input Shunt** window to open.

2. In the **Input Shunt** window, Press the **Manually Shunt Input** button. This will cause the existing alarm to turn from red (or green if it is not currently active) to yellow (as 17 does in the example below). The alarm will not sound for that reader, but will remain yellow until a user presses the **Restore normal operation** button.

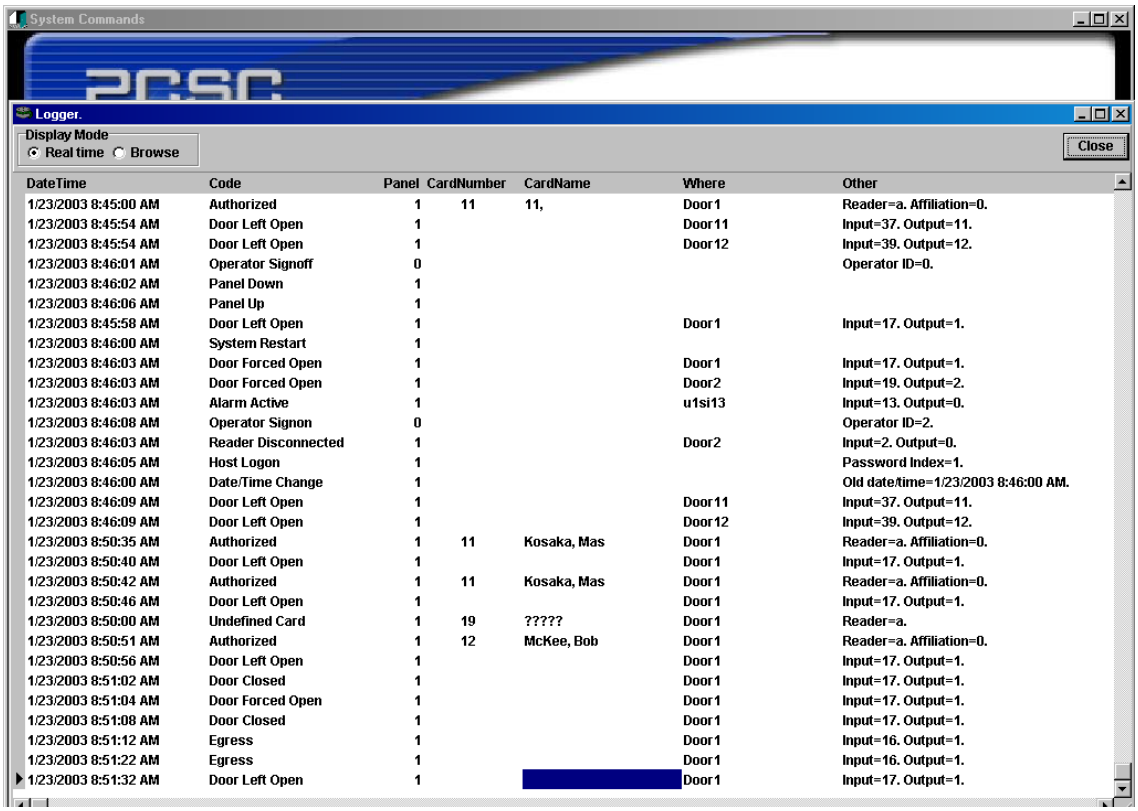


2.2.9.3.2 To Restore a Shunted Alarm to Normal Operation

1. Go to the **Input Status** screen in the **User** manual. You can find the shunted reader by its yellow font.
2. Select the box next to the shunted alarm. This will cause the **Input Shunt** window to appear.
3. Press the **Restore normal operation** button to restore normal status to the selected reader. On the Input Status screen, the reader's font color should go from yellow to green (or red if the alarm is active).



2.2.10 Logger



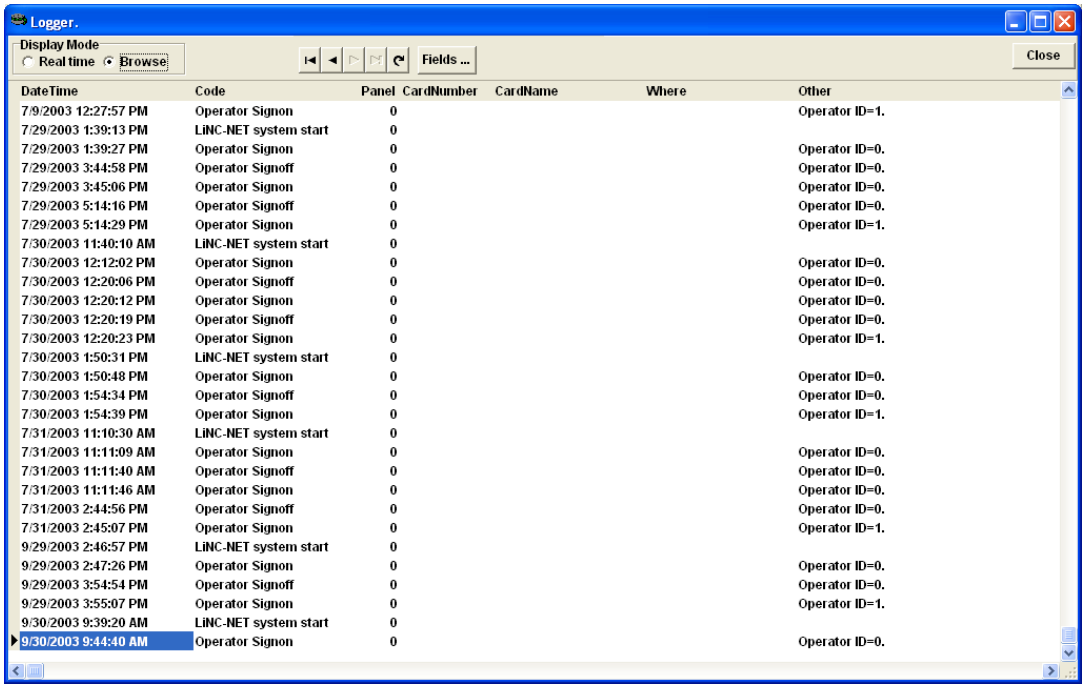
DateTime	Code	Panel	CardNumber	CardName	Where	Other
1/23/2003 8:45:00 AM	Authorized	1	11	11,	Door1	Reader=a. Affiliation=0.
1/23/2003 8:45:54 AM	Door Left Open	1			Door11	Input=37. Output=11.
1/23/2003 8:45:54 AM	Door Left Open	1			Door12	Input=39. Output=12.
1/23/2003 8:46:01 AM	Operator Signoff	0				Operator ID=0.
1/23/2003 8:46:02 AM	Panel Down	1				
1/23/2003 8:46:06 AM	Panel Up	1				
1/23/2003 8:45:58 AM	Door Left Open	1			Door1	Input=17. Output=1.
1/23/2003 8:46:00 AM	System Restart	1				
1/23/2003 8:46:03 AM	Door Forced Open	1			Door1	Input=17. Output=1.
1/23/2003 8:46:03 AM	Door Forced Open	1			Door2	Input=19. Output=2.
1/23/2003 8:46:03 AM	Alarm Active	1			u1si13	Input=13. Output=0.
1/23/2003 8:46:08 AM	Operator Signon	0				Operator ID=2.
1/23/2003 8:46:03 AM	Reader Disconnected	1			Door2	Input=2. Output=0.
1/23/2003 8:46:05 AM	Host Logon	1				Password Index=1.
1/23/2003 8:46:00 AM	Date/Time Change	1				Old date/time=1/23/2003 8:46:00 AM.
1/23/2003 8:46:09 AM	Door Left Open	1			Door11	Input=37. Output=11.
1/23/2003 8:46:09 AM	Door Left Open	1			Door12	Input=39. Output=12.
1/23/2003 8:50:35 AM	Authorized	1	11	Kosaka, Mas	Door1	Reader=a. Affiliation=0.
1/23/2003 8:50:40 AM	Door Left Open	1			Door1	Input=17. Output=1.
1/23/2003 8:50:42 AM	Authorized	1	11	Kosaka, Mas	Door1	Reader=a. Affiliation=0.
1/23/2003 8:50:46 AM	Door Left Open	1			Door1	Input=17. Output=1.
1/23/2003 8:50:00 AM	Undefined Card	1	19	?????	Door1	Reader=a.
1/23/2003 8:50:51 AM	Authorized	1	12	McKee, Bob	Door1	Reader=a. Affiliation=0.
1/23/2003 8:50:56 AM	Door Left Open	1			Door1	Input=17. Output=1.
1/23/2003 8:51:02 AM	Door Closed	1			Door1	Input=17. Output=1.
1/23/2003 8:51:04 AM	Door Forced Open	1			Door1	Input=17. Output=1.
1/23/2003 8:51:08 AM	Door Closed	1			Door1	Input=17. Output=1.
1/23/2003 8:51:12 AM	Egress	1			Door1	Input=16. Output=1.
1/23/2003 8:51:22 AM	Egress	1			Door1	Input=16. Output=1.
1/23/2003 8:51:32 AM	Door Left Open	1			Door1	Input=17. Output=1.

LiNC-NET maintains a logger (history) file comprised of records transferred from various panels. History records are transferred (uploaded) automatically when the panel is on-line. The on-screen real-time journal appears when the “blue” button at the top of the screen is clicked on, and continues to scroll upward as additional transactions occur at the panels and readers. The logger records the following information: The PC host number (unless the system is a stand-alone unit), the panel number, the alarm status, the date and time logged, the date and time of occurrence, the name and location of where the transaction took place, and a code reference.

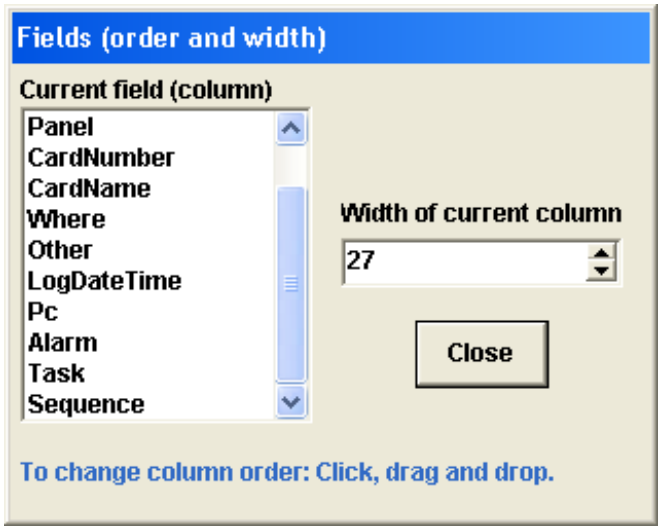
NOTE: LiNC-NET 5.14 has enhanced the time stamp used in **Logger**, allowing for each record to display **Hour:Minute:Second** for every transaction.

If the current **Display Mode** is **Real Time**, the current history file displays ongoing transactions as they are logged. To view past logger entries, select the **Browse** radio button (upper left-hand corner of the logger window) in the **Display Mode** box. Different entries may be viewed using the navigator arrows or scroll bar.

To change the column order, click on **Browse**. A navigator bar will appear along with the Fields... button. Select the **Fields**... button and the screen below will appear.



To change the column order, click on the field name under **Current Field** (column) and drag it before or after the field where you want it to appear. The width of the column can also be customized by clicking on the up or down arrows under the **Width of Current Column** heading. Select **Close** when you have completed the changes.



2.2.11 User

When signed on with the **Switch** class option password, the operator may switch to the User Commands Menu by clicking on the **Go to User Menu** heading at the bottom of the screen.

2.2.12 EXIT

Logoff and return to the sign-on screen by clicking on the **EXIT** button.

2.2.13 Help

LiNC-NET provides on-line information to assist in understanding your access control system. More often than not, you will refer to **Help** for procedures used infrequently, but it will also remind you of certain routine maintenance procedures.

Once the Help window is displayed, you may move or resize it to your preference. Click on **Contents** once you have selected **Help**.

After you are in the Help screen, you can access other sub-topics by clicking on the topics given. Text links provide a direct reference point from major topic to more specific areas. The cursor or pointer will change to a finger-pointing hand when there is a topic that can be clicked on for further information.

2.2.13.1 Printing a Help Topic

Help topics may be printed on the default printer. If more than one printer is hooked up to your system, you can select any one of them.

1. Select **Print.**
2. Select the printer that you are using.
3. Change the default printer options as required. (Optional)
4. Select the options desired.
5. Click on the **OK** button.

NOTE You cannot print information from a pop-up window.

Traveling through the Help Screens

There are several different methods of accessing the different topics in Help. You can jump forward, move back, and search for specific information.

Moving Backward	Select the **Back** button on the **Help** button bar or type b. You will move backwards in the order that you previously viewed topics.
Display the Help	Select the **Contents** button from the Help menu.
Return to Help Topics Previously Viewed	Select the **Display History** window. Double click on the topic that you wish to return to or select it and click Enter. Use the scroll bar, if necessary.
Search for a Topic	Select the **Search** button from the Help menu, then select the word or phrase that you want to search for. When you start typing, the words that most closely match the text you type are displayed. Select the **Display** button.

3.0 Reports

LiNC-NET is capable of producing reports to the screen or printer. The report setup window contains a tabbed notebook. The Display page allows the user to select the fields to be included in the report and the Search page allows the user to specify the search criteria. The Display page also contains buttons under Change Heading that allow the user to alter the heading and the width of the field.

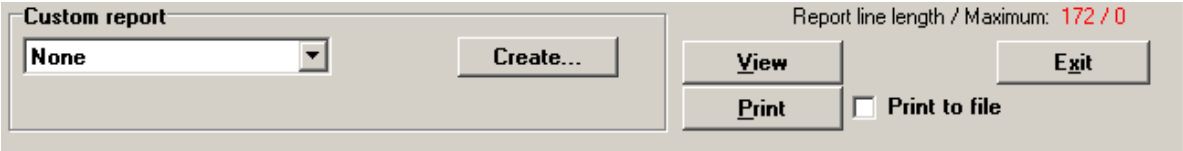
3.1 Generate a Report

Reports generated by LiNC-NET give the user the ability to display or print system parameters and user-entered data. The following is a list of the reports available from LiNC-NET:

History	Record of transactions by date and time
Host	Host configuration
Panel	Panel configuration
Operator Audit	Record of Operator actions
Building Hours	Record of hours of access in affiliation to a panel.
Reader	Reader assignment and configuration
Input	Sense Input assignment and configuration
Output	Output assignment and configuration
Floor Group	Floor Group assignment and configuration
Card (Auth)	Cardholder's Access Control parameters
Auth Group	List of Readers and valid Time Periods
Card Personal	Cardholder's Personal Data
Card Status	Cardholder's Last access and Building IN status
Time Period	Time Period Lis
Holiday List	List of Company holidays
Print Badge	Allows user to print cardholder badges in batches
Input Alarm	Record of sense input alarms generated
Xaction Alarm	Record of transaction alarms generated
Print Photos	Allows user to print cardholder photos in batches

From the **System** or **User Commands Menu**, click on the **Reports icon** and the **Reports Main Menu** will appear. The **Reports Main Menu** displays icons for all of the **Report Options** available. Click on an icon or click on **Select Report** and choose a report option.

3.2 Creating Custom Reports

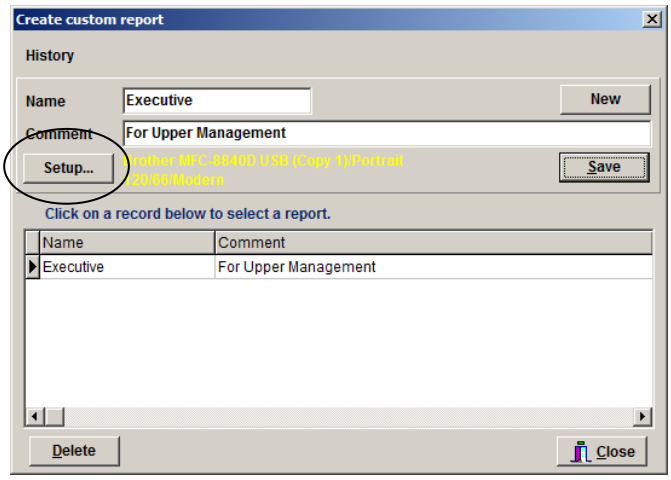


LiNC-NET has the ability to save Custom Report settings. At the bottom of each **Report** page (with the exception of the **Print Badges** and **Print Photos** pages), is a **Custom report** section where settings can be saved and later re-used.

3.2.1 To save a custom report setting

1. Select the items that you wish to view in the report.
2. In the **Custom report** section, press the **Create…** button. This will cause the **Create Custom Report** window to appear.

A user can choose the printer that will print a custom report from the Setup button. See **Setup: Reports – Printer Attributes**



3. In the **Name** field, name the **Custom Report** setting as it should be known.
4. In the **Comment** field, place any other necessary information.
5. Press the **Save** button to save the setting.
6. Press the **Close** button to close the **Create custom report** pop-up window.

3.2.2 Selecting a Custom Report setting

1. In the **Custom report** section for of the selected **Report** page, select the pull-down menu that displays the setting that was created.

3.2.3 To delete a Custom report setting

1. In the **Create custom report** window, select the report name that you wish to remove.
2. Press the **Delete** button.
3. A **Warning** window will appear informing you of the report you are about to delete. Press the **Yes** button to delete.

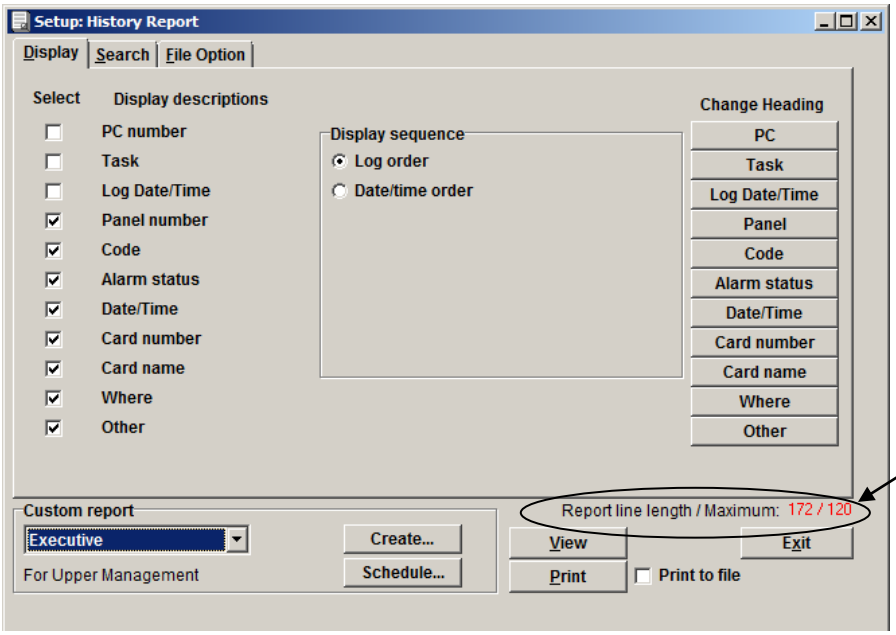
3.3 To Schedule a Report

After a **Custom report** has been created, it is possible to schedule that report to run at a specific time (ie. during non-peak hours). The process is simple and can be used for most reports and for scheduling **Host to Panel** downloads (see the **LiNC-NET 5.14 User** manual).

> **NOTE** For a scheduled Report to run, it must be in the Logon/Logoff screen to take affect.

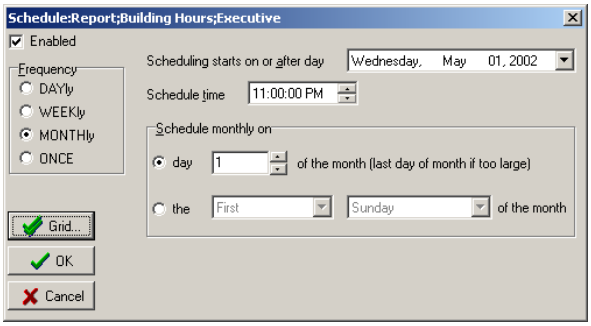
Procedure:

1. Save a **Custom Report** by using the method described above.
2. Once the report has been saved, go to the **Custom reports** pull-down menu and select a custom report. A button will appear named **Schedule…** with the report description preceding it.



See **Reports-Printer Attributes** for an explanation of maximum line length.

3. Press the **Schedule…** button. This will cause a **Schedule:Report** pop-up window to appear.



4. Select the **date**, **time** and **frequency** of the report you wish to run. It is also possible to cross-reference other scheduled reports and downloads by pressing the **Grid…** button.
5. Press the **OK** button once your settings are correct.

3.3.1 Display

Some of the reports exceed 80 characters per line in length. Therefore, when using an 80-column printer, the records will be truncated (deleted) past the 80th character on the right side of the screen. In order to display or print the reports without having to "lose" the data, the user should select only those fields that need to be printed. If a report exceeds the 80-character length, the user must de-select other fields until the selected data fits within the maximum length. A second report may be required for additional field selections. If a 132-column printer is used, then truncated fields should not result.

3.3.2 Search

Within each file, records are broken into fields. Depending on the report, the fields can be searched individually or collectively. When selecting a search field, the user can select a particular value, group, or string of values, depending on the field. When a field is selected, the field must satisfy (match) all search criteria requested. That is, if 3 separate fields are to be searched, the record to be printed/displayed must satisfy (match) each of the 3 search fields. When a field is selected to be one of the search criteria, a value for the search must be entered. These values will vary depending on each report. When selecting a value, be sure to follow the same conventions as those followed when entering data within LiNC-NET.

Procedure:

a. Select the appropriate report icon.

b. The report screen for the icon you have selected is displayed. Refer to the **Help** screen for assistance in definition and parameters. If printing a report, it is necessary to select a printer that will allow for a line-length to display the report appropriately.

c. Select **View** to preview and display the report.

NOTE A monitor only Displays 39 rows. If reports exceed 39 rows, then you will have to scroll down to the rest of the report.

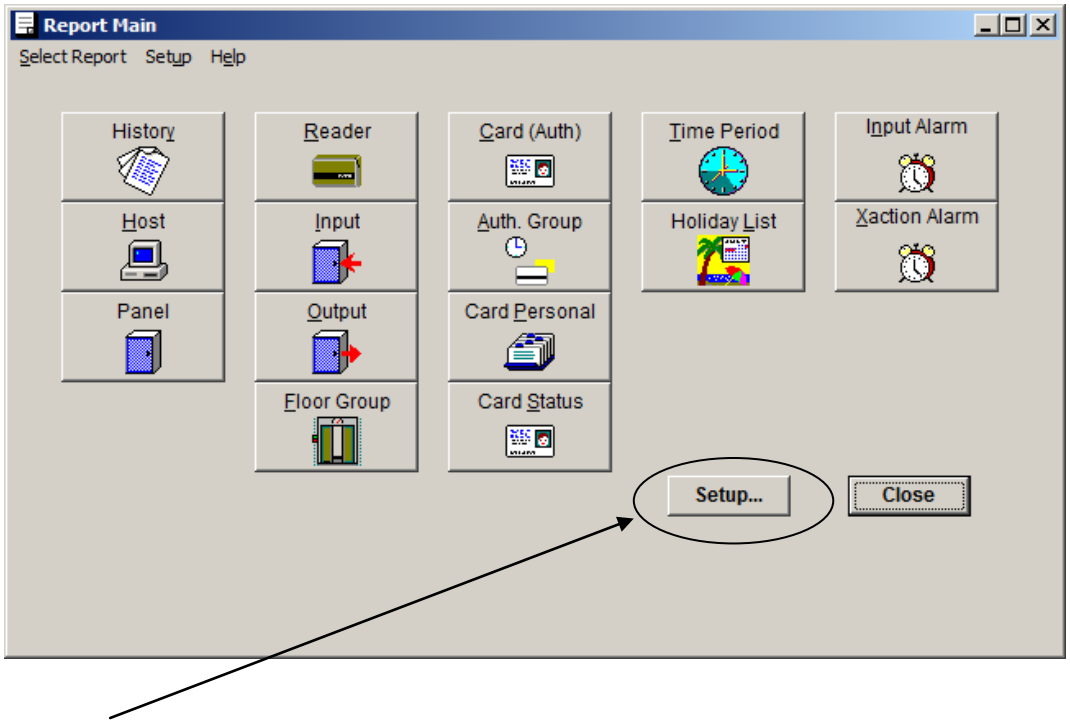
3.3.3 To Print the Report:

When the report is displayed:

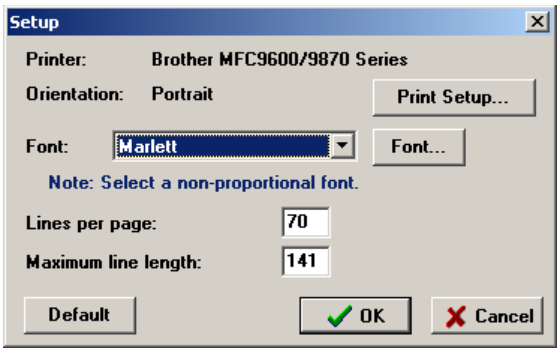
1. Select the **View Option** to view the report. To print the current page press the **Print Page** button within the **View Option**.

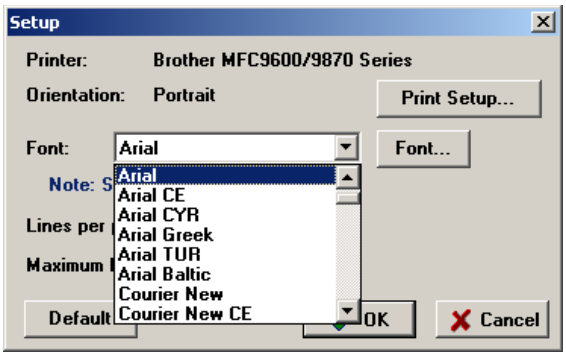
2. Press the **Print** button from the Main Report Setup screen to print the entire report.

3.3.3.1 Reports- Setup Printer Attributes



The '**Setup**...' button on the **Main Report** screen brings up the **Setup** screen, which allows the user to select a font from the list of fonts available on the default printer. It also allows the user to specify the maximum number of lines the printed page will hold, as well as the maximum line length across the page. The '**OK**' button makes the selection permanent by writing to a disk file. The '**OK**' button closes the **Setup** window. Any change made and not saved will be retained while REPORT is still running.





NOTE The font must be set to Courier or Courier New to properly align and view the report correctly.

3.4 Report Headings

3.4.1 Report Headings: History

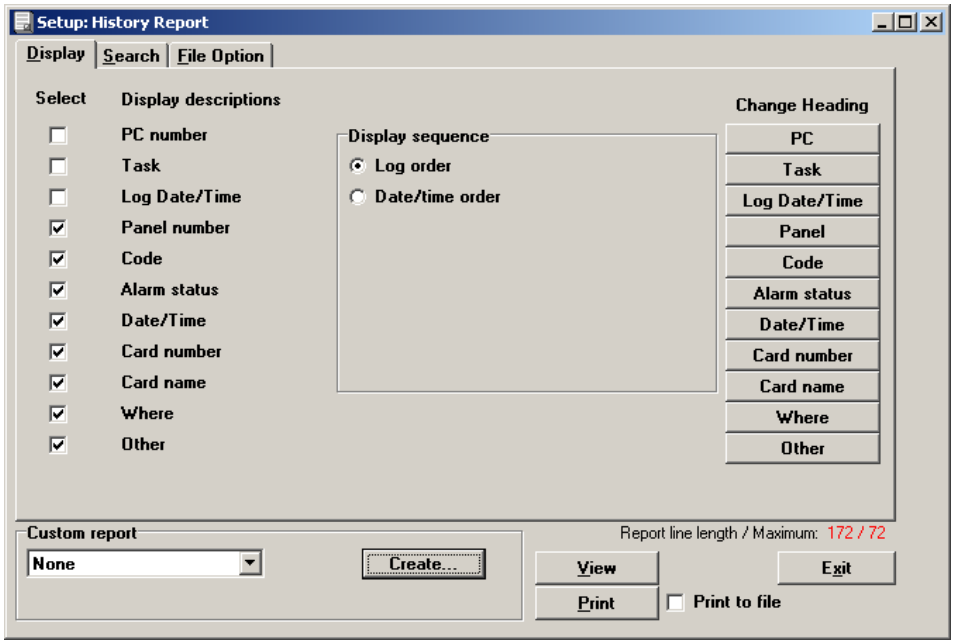
Press the Report Icon to view the "Logger" History listings at any time.

History reports can be the most important tool at the user's disposal. The history report has the capacity to:

1. Determine which cardholder used a facility by:
   a. Time
   b. Date
   c. Card Number (or range of card numbers) or Name
   d. Reader Location
   e. Transaction Type (Code)

2. Provide a hard copy of the transactions for historical archiving.

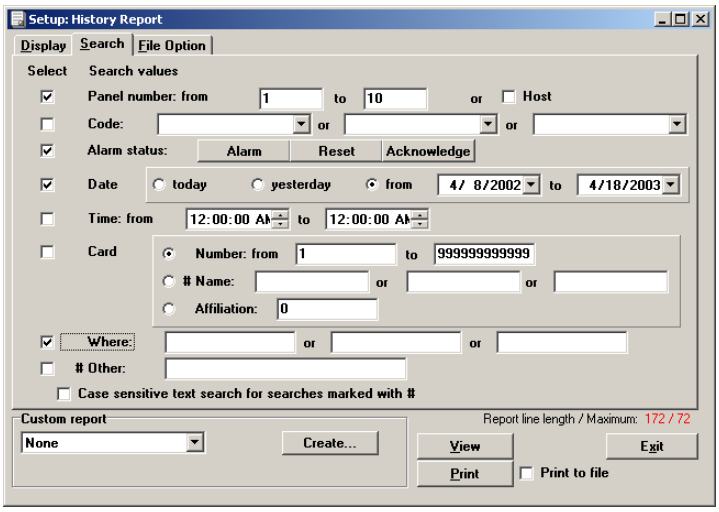
3.4.1.1 History Reports: Display



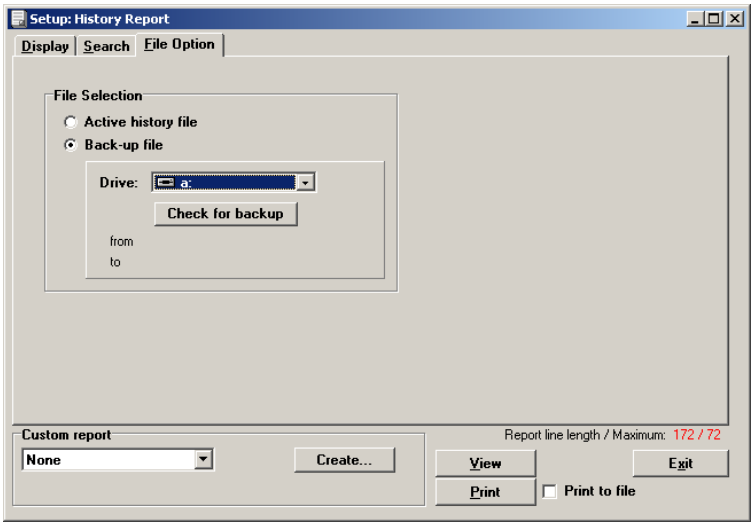
In the **Display Sequence** box, you can display the report in **Log** order. This produces all records within the specified range in chronological order. If you select **Display Sequence** by **Date/Time** order and choose **Limit** report to date/time range, the report will begin with the first record in the system. You can limit the report by entering the starting date and time in the **From** box and then entering the ending date and time in the **To** box. The **Change Heading** buttons permit you to rename the field headers.

On the left side of the screen are the fields which can be printed in the reports. Checking the box before the field [✔] will select it for printing.

3.4.1.2 History Reports: Search



3.4.1.3 History Reports: File Option

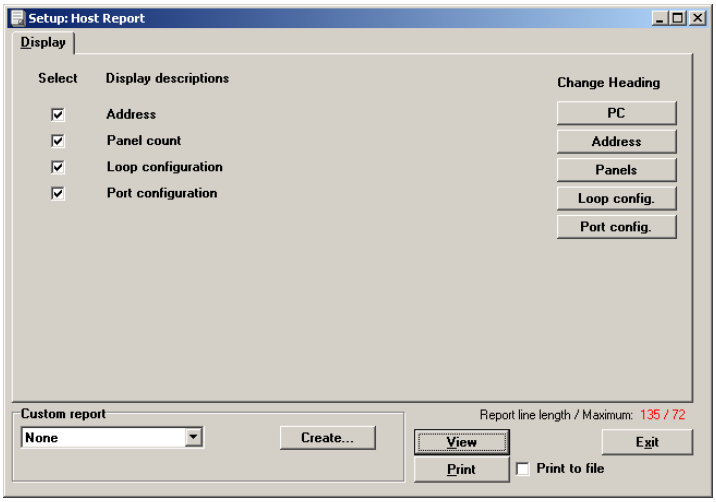


Under **File Selection**, select **Active history file** to view transactions logged on the hard disk. Select **Back-up file** to view the back-up files logged on any physical drive on either your **Host** or a mapped Network Drive. The system will check for the files on the drive or diskette and will show the date range found in the **From:/To:** area, just below the **Check for Backup** button.

3.4.2 Report Headings: Host

The Host report has no values or search field option and serves only to provide information regarding the location of the computer, its address, loop configuration, and the number of panels in the system. At the host report panel, press View and the report information will be displayed or press Print to print a hard copy.

3.4.2.1 Host Report: Display

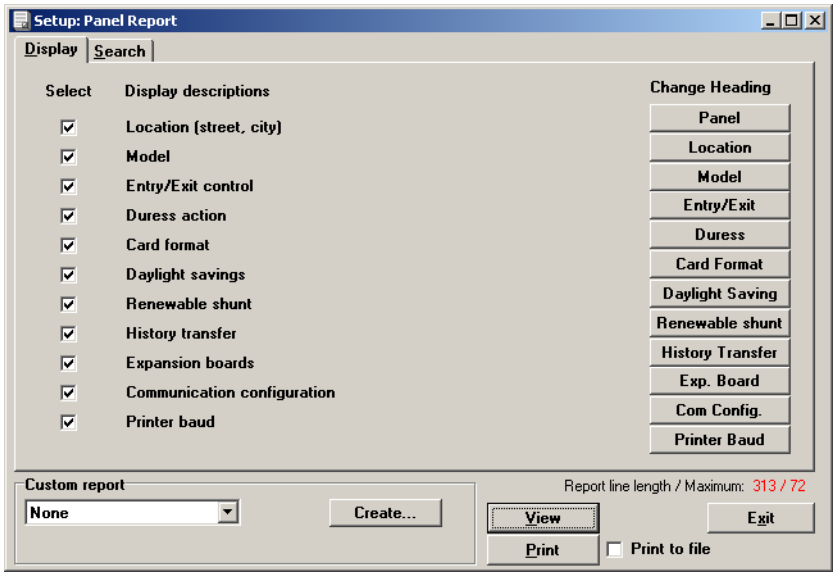


NOTE The **Change Heading** buttons permit the renaming of the field headers.

3.4.3 Report Headings: Panel

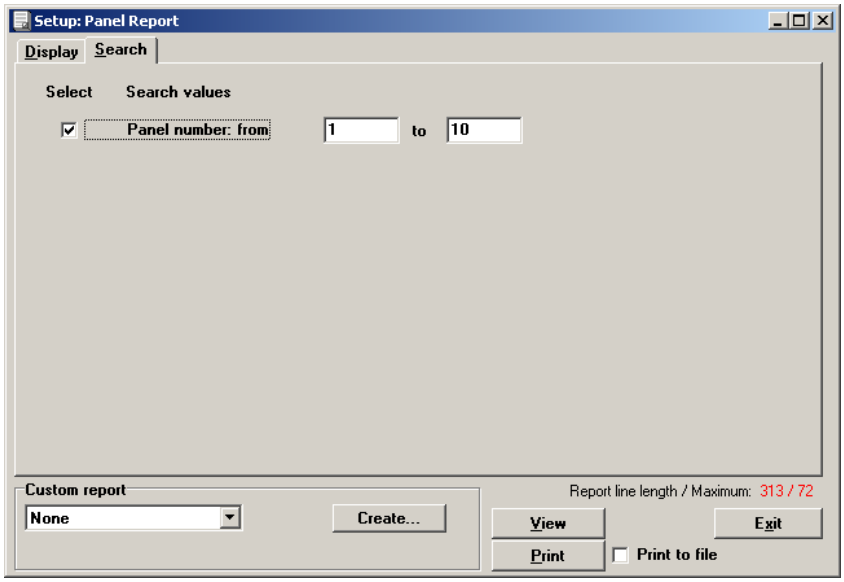
The service personnel require configuration documentation for the panel. The hardware configuration and its software definitions help in diagnosing any problems that may occur in the future.

3.4.3.1 Panel Report: Display



NOTE The **Change Heading** buttons permit the renaming of the field headers.

3.4.3.2 Panel Report: Search



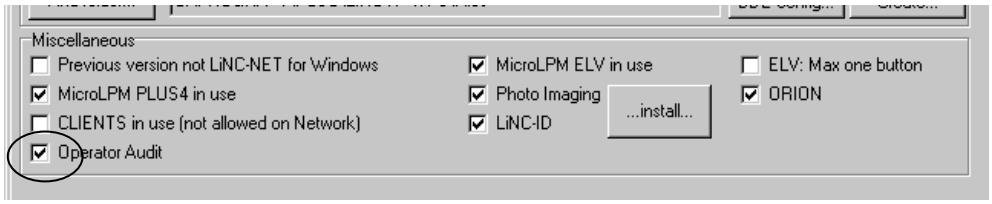
3.4.4 Report Headings: Operator Audit

This feature tracks any changes that an operator makes to the system, such as changing a card ID or adding/deleting holidays. The stored information is viewed by generating the Operator Audit Report in the Report section and may be sorted by date/time, ID #, action type, panel, door, and detail.

> **NOTE**: Access to this feature can be determined by program level and password-protected.

Procedure:

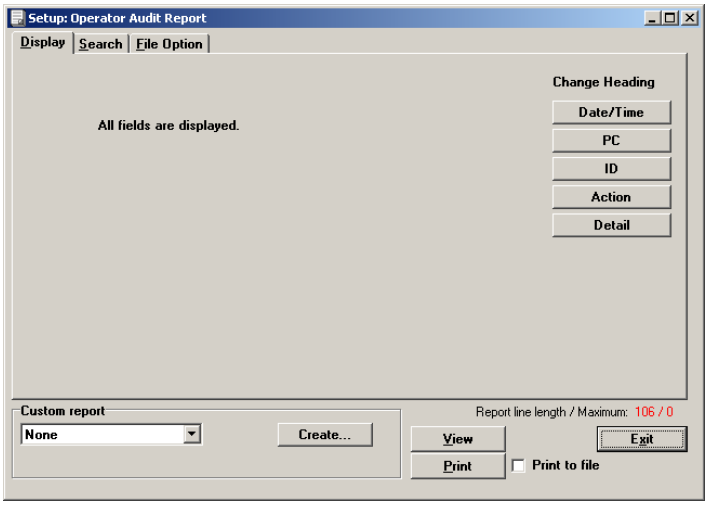
1. Go to **START Menu/Programs/LNv5_14_xx/ConfigLN**.
2. In **ConfigLN** check the **Operator Audit** box in the **Miscellaneous** section.



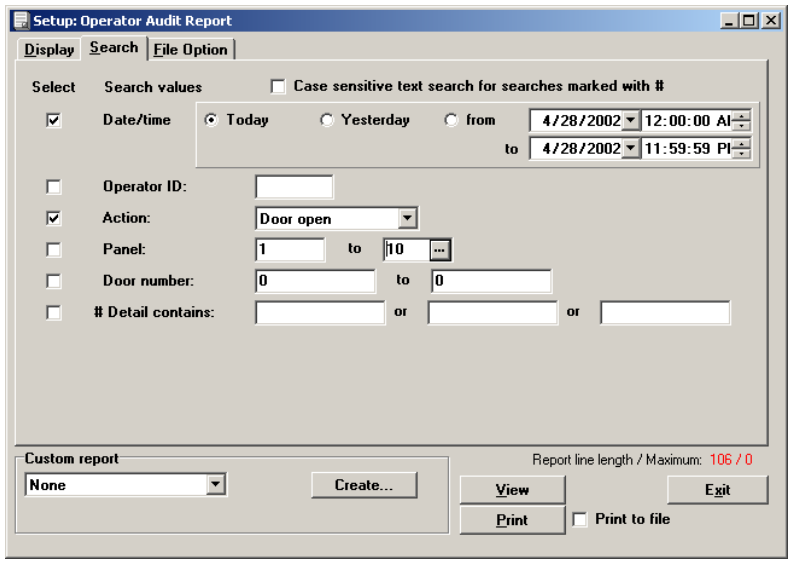
3. Click the **Write** button.
4. Click the **Exit** button.

You have now activated Operator Audit.

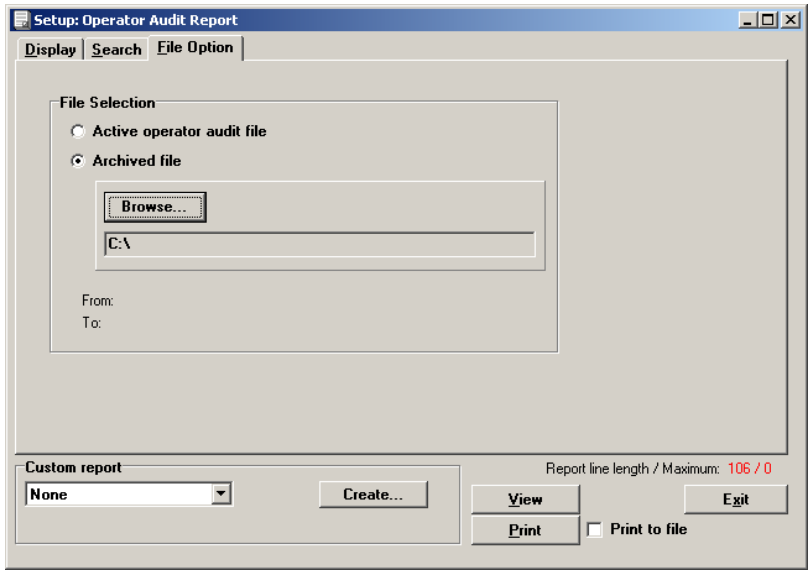
3.4.4.1 Operator Audit: Display



3.4.4.2 Operator Audit: Search



3.4.4.3 Operator Audit: File Option

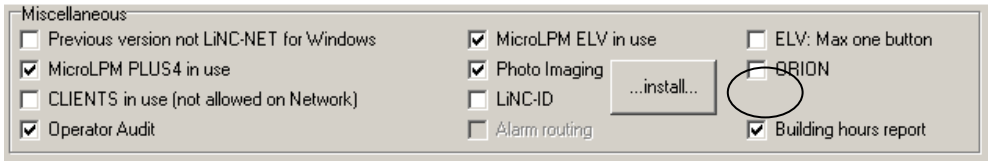


3.4.5 Report Headings: Building Hours

This feature allows an individual to see all the hours of access affecting any given department or affiliation within a panel.

Procedure:

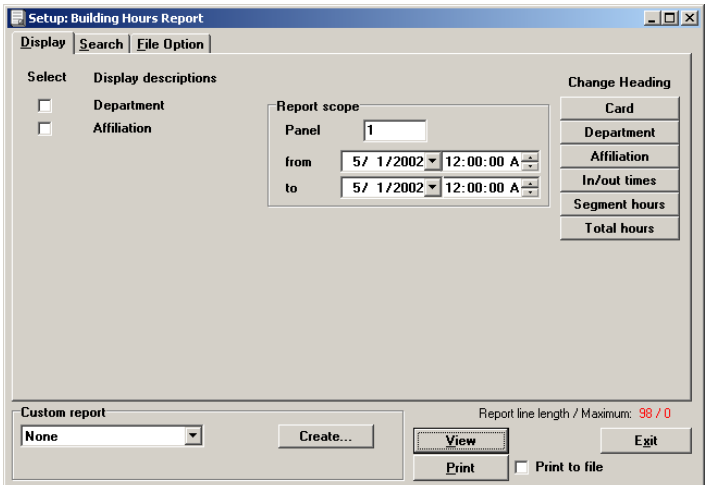
1. Go to **START Menu/Programs/LNv5_14_xx/ConfigLN**.
2. In ConfigLN check the **Building hours report** box in the **Miscellaneous** section.



3. Click the **Write** button.
4. Click the **Exit** button.

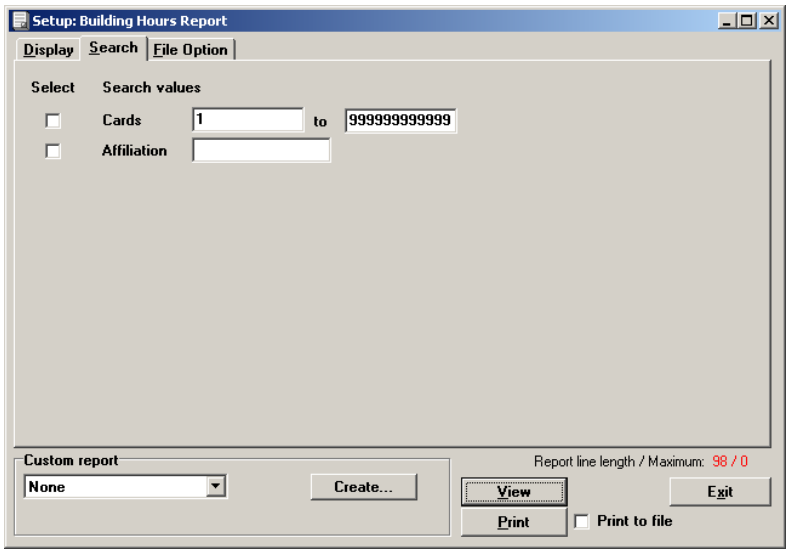
You have now activated **Building hours report**.

3.4.5.1 Building Hours: Display

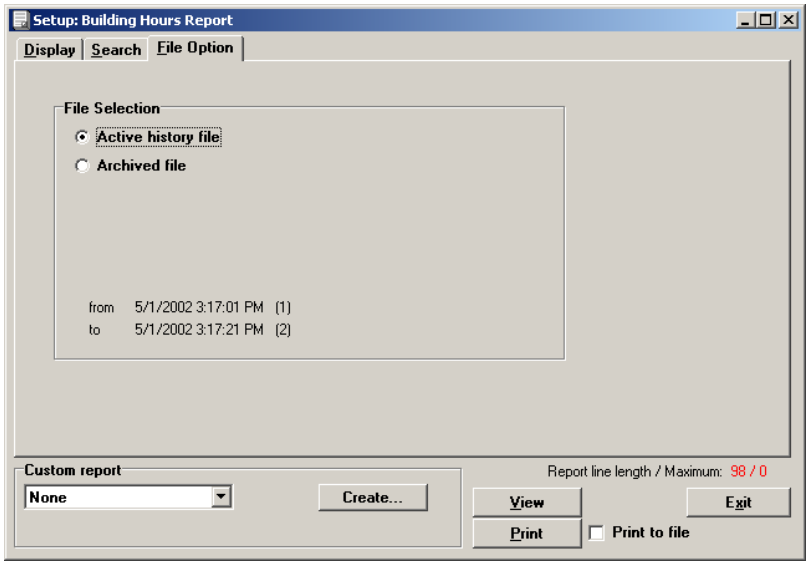


Report Headings: Building Hours (cont.)

3.4.5.2 Building Hours: Search



3.4.5.3 Building Hours: File Option

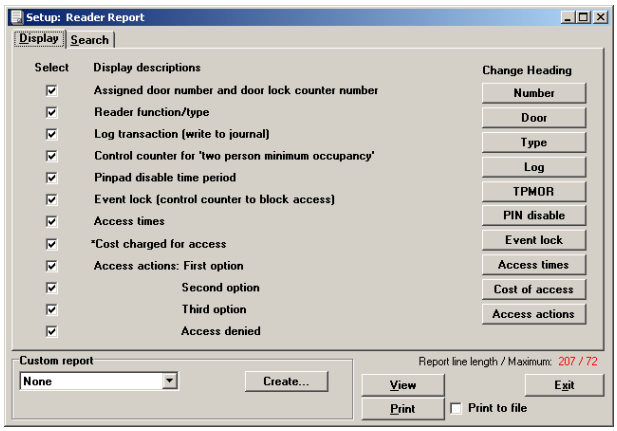


3.4.6 Report Headings: Reader

The reader report describes how the reader is defined and if any outputs are linked with the card transactions. The report is used to:

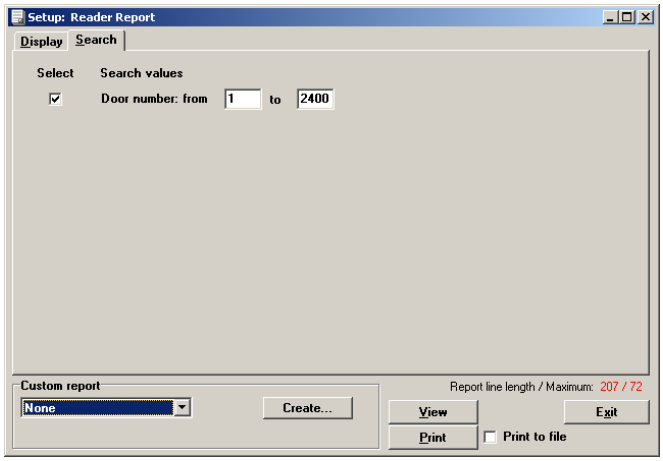
a. Indicate which door the reader is controlling.
b. Indicate which lock output is assigned to the reader.
c. Indicate “Reader Fuction,” which describes how the reader is being used by the system.
d. Indicate whether the “Two-Person Minimum Occupancy Rule” is in effect.
e. Describe the access time (lock activation time) for standard and long access.
f. Indicate access actions, which describe whether output functions are for transaction by:
    i. Authorized Card Transactions
    ii. Card Group(s)
    iii. Denied Access

3.4.6.1 Reader Reports: Display



NOTE The **Change Heading** buttons permit the renaming of the field headers.

3.4.6.2 Reader Reports: Search



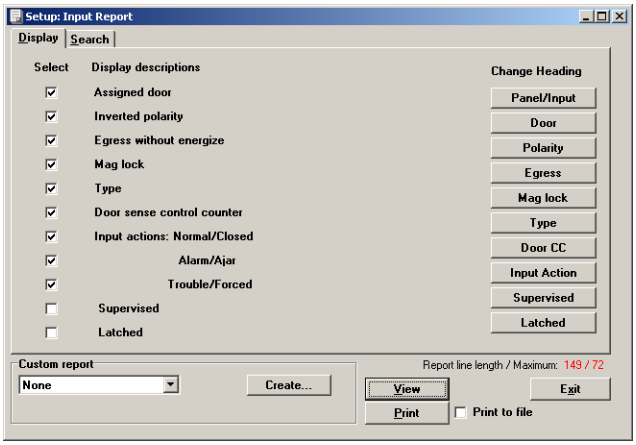
3.4.7 Report Headings: Input

A sense-input report documents the configuration and functionality of the sense inputs. Inputs can be linked to outputs depending on its state. The sense-input report can indicate the following:

1. Input assignment to a door.
2. Inverted polarity (Yes/No).
3. Egress-Without Energized.
4. Magnetic Lock Option. (Required when using a magnetic door lock).
5. Sense input "Type" (e.g., alarm, input switch, event)
6. Sense input Activation of outputs by:

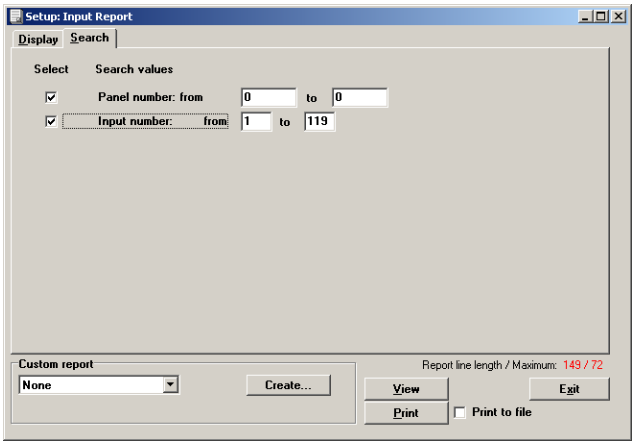
Alarm		**Door**
a. Normal	or	Closed
b. Alarm	or	Left Open
c. Trouble	or	Forced Open

3.4.7.1 Input Reports: Display



NOTE The **Change Heading** buttons permit the renaming of the field headers.

3.4.7.2 Input Reports: Search

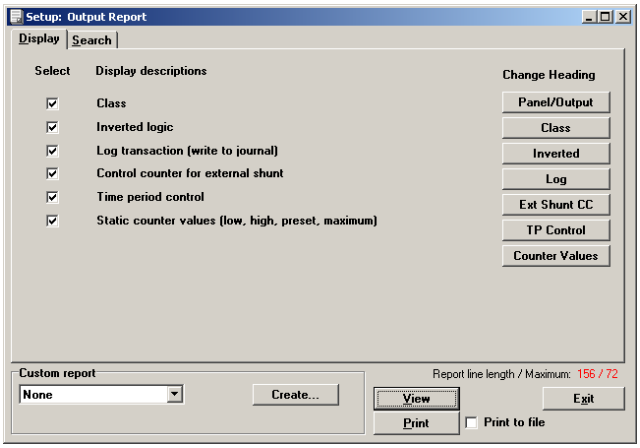


3.4.8 Report Headings: Output

An output report documents the configuration and functionality of the outputs. Outputs are linked to control counters and/or time periods. The output report can indicate the following:

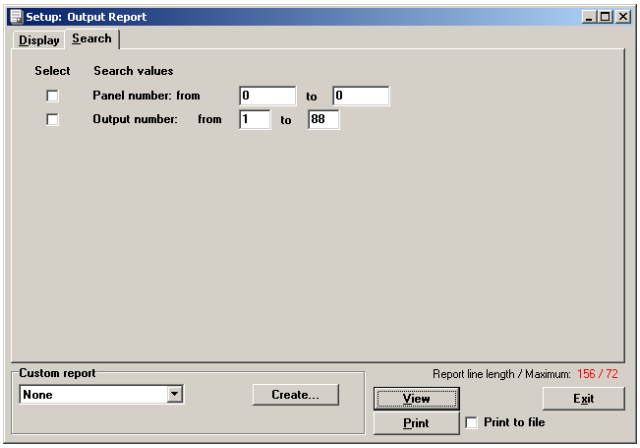
1. Control Counter Class
2. Inverted Logic Status
3. Log Transactions
4. CC for External Shunt
5. Time Period Control
6. Static Counter Values

3.4.8.1 Output Reports- Display



NOTE The **Change Heading** buttons permit the renaming of the field headers.

3.4.8.2 Output Reports: Search



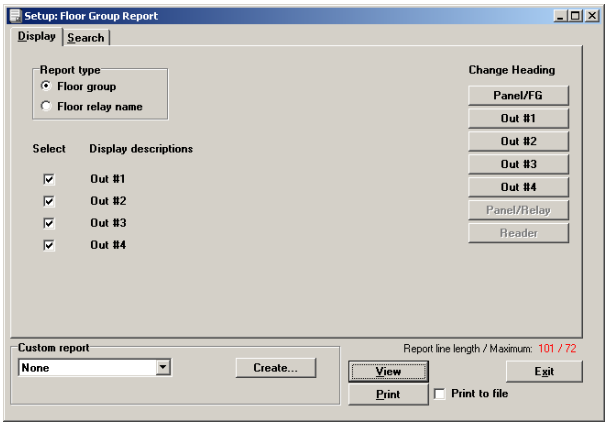
3.4.9 Report Headings: Floor Groups

A floor group report describes the groups of relays that are associated with each floor group number controlled by each MicroELV in the system. Affected readers and Output boards can also be listed. The Report details the following:

1. The panel number associated with each floor group
2. Floor Group number and name
3. The range of relay numbers associated with each Output board in the system
4. The reader terminal associated with each floor group

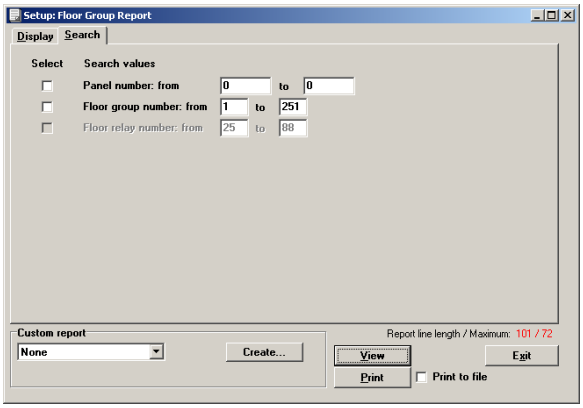
Under **Report Type**, select the **Floor group** button to view which floor group has which floors. Select **Floor Relay Name** to display the panel, relay number, name, and the reader terminal associated with each floor group.

3.4.9.1 Floor Groups Reports: Display



NOTE The **Change Heading** buttons permit the renaming of the field headers.

3.4.9.2 Floor Groups Reports: Search



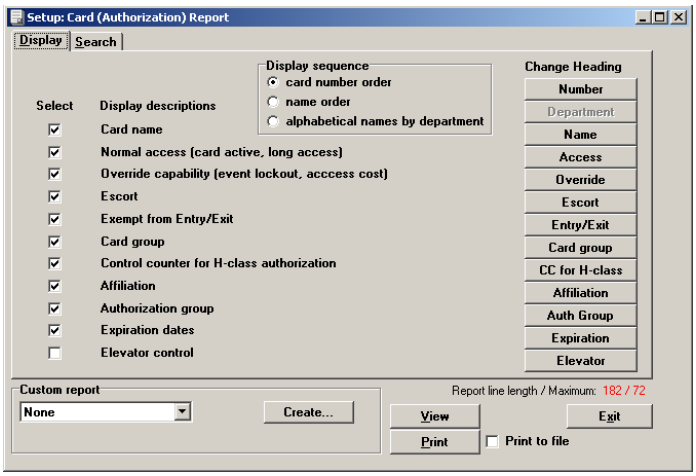
3.4.10 Report Headings: Card (Authorization)

A **Card Authorization** report describes the cardholder's access control parameters (active, long access, etc.). It can also be useful to search for the following.

1. List a sequence of cardholders
2. Check those that are exempt from **Entry/Exit**
3. Look for a specific person by name or card number
4. Look for a particular affiliation and authorization group
5. Look for particular access privileges
6. Look for expiring or expired cards
7. Verify all active cardholders

3.4.10.1 Card (Authorization) Report: Display

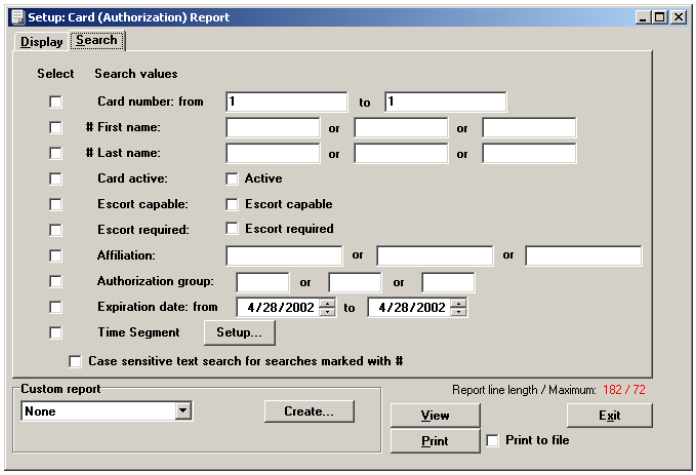
Under **Display Sequence**, select the order in which you want the display to appear. The default card number order will display the cards in ascending numerical order. Selecting **name order** will display the card name alphabetically by last name. **Alphabetical names by department** lists cardholder names in the order programmed in the **Card (Personal)** screen.



NOTE The **Change Heading** buttons permit the renaming of the field headers.

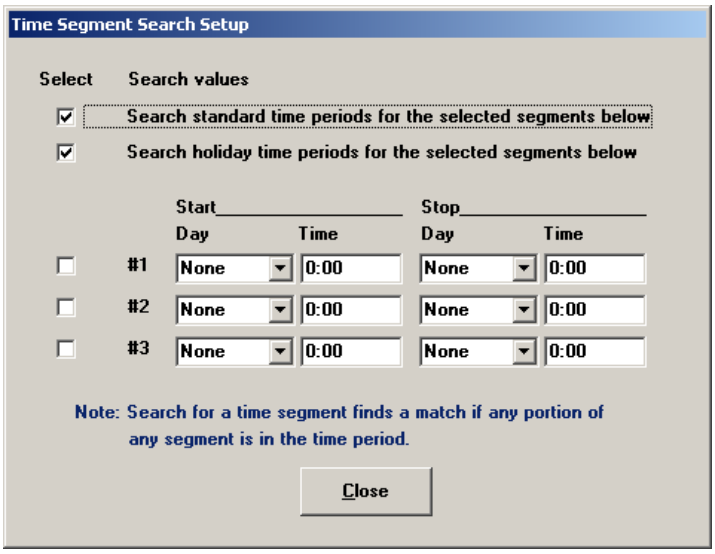
3.4.10 Report Headings: Card (Authorization) Report (cont.)

3.4.10.2 Card (Authorization) Report: Search



3.4.10.3 Card (Authorization) Report: Search "Time Segment Search Setup"

At the bottom of the menu is the **Time Segment Setup** option that is also contained in the **Authorization Group** report section. This option provides the operator with a means of querying the system by an instance in time rather than by **Authorization Group** definition. The Time Segment Search option is useful when it is not known which or how many authorization groups are defined to include a specific period of time. By using this resource, the block of time itself is stipulated and then the system is searched for records relevant to that period of time.

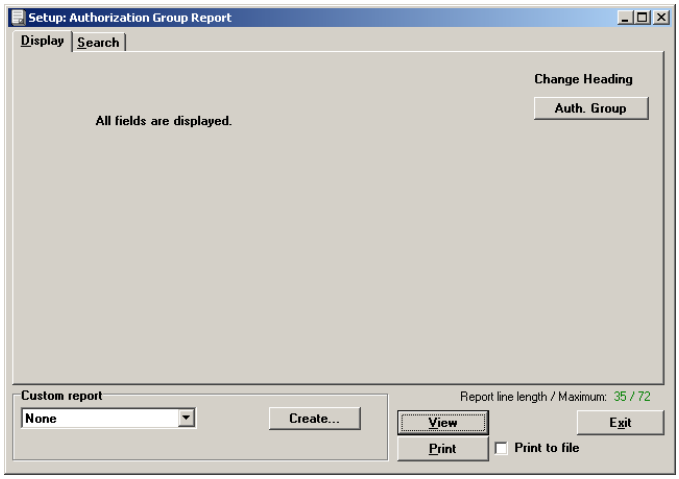


3.4.11 Report Headings: Authorization Group

An Authorization group describes the area and time in which a cardholder has valid access. The report can be used as follows:

4. List one or more of the **Authorization Groups** (1-99,999).
5. Search for an **Authorization Group** by: **Time Periods**, **Panel(s), readers (a- l),** and **Time Segment Setup** (search by standard and/or holiday time periods for selected segments).

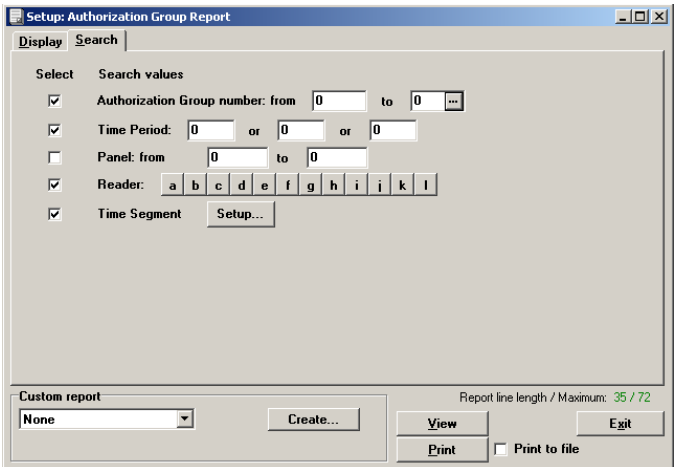
3.4.11.1 Authorization Group Reports: Display



NOTE The **Change Heading** buttons permit the renaming of the field headers.

3.4.11.2 Authorization Group Reports: Search

At the bottom of the menu is the **Time Segment Search** option that is also contained in the **Card Authorization** report section. This option provides the operator with a means of querying the system by an instance in time rather than by **Authorization Group** definition. This is useful when it is not known which or how many authorization groups are defined to include a specific period of time. By using this resource, the block of time itself is stipulated, and then the system is searched for records relevant to that period of time.



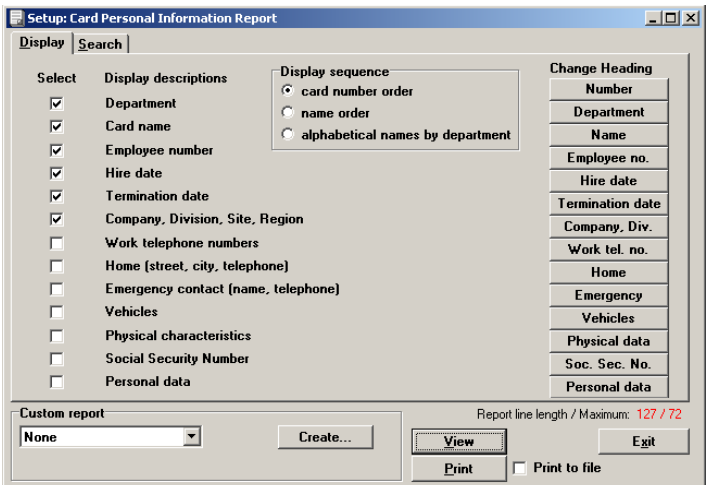
See also **Card (Authorization) Report- Search "Time Segment Search Setup"** screen.

3.4.12 Report Headings: Card Personal

LiNC-NET permits the user to enter personal data for each cardholder. This report can be used to:

1. Search for a particular cardholder
2. Search for a particular automobile license number
3. Generate a Department Cardholder Report.
4. Access an emergency contact
5. Determine a cardholder's hire and termination date

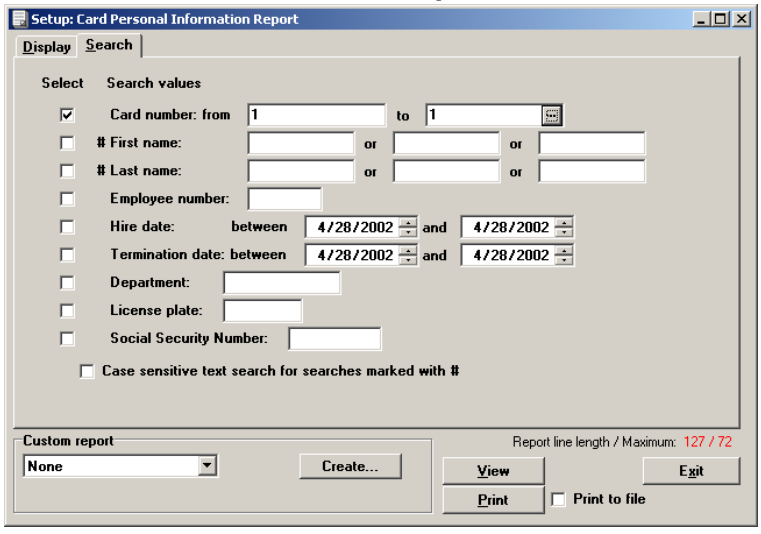
3.4.12.1 Card Personal Information Report: Display



Under **Display Sequence**, select the order in which you want the display to appear. The default **card number order** will display the cards in ascending numerical order. Selecting **name order** will display the card name alphabetically by last name. **Alphabetical names by department** lists cardholder names in the order programmed in Card (Personal) screen.

NOTE The **Change Heading** buttons permit the renaming of the field headers.

3.4.12.2 Card Personal Information Report: Search



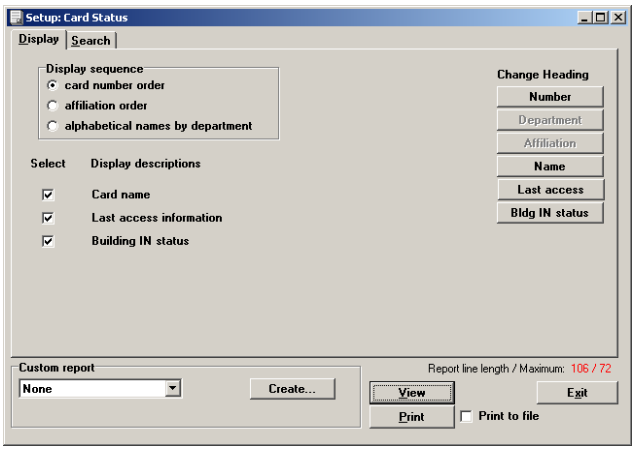
3.4.13 Report Headings: Card Status

Card In/Out status can be reported by **Card Number, Affiliation,** or **Department**.

1. Card Name
2. Last Access Information
3. Building IN status (by card number, affiliation, or department)

3.4.13.1 Card Status Reports: Display

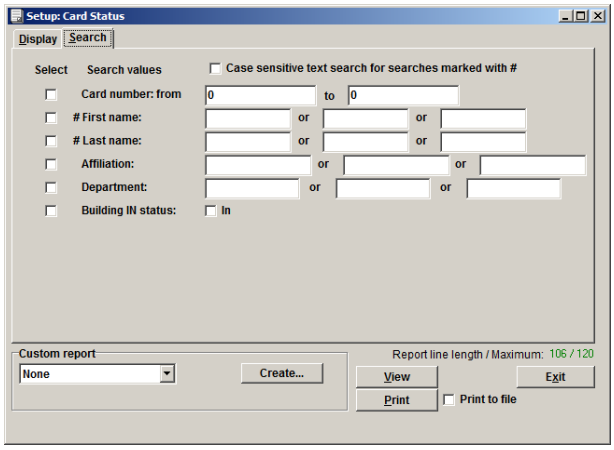
Under **Display Sequence**, select the order in which you want the display to appear. The default **card number order** will display the cards in ascending numerical order. Selecting **affiliation order** (listed by **auth** group) will display the **auth** group alphabetically. **Alphabetical names by department** lists cardholder names in the order programmed in **Card (Personal)** screen.



NOTE The **Change Heading** buttons permit the renaming of the field headers.

3.4.13.2 Card Status Reports: Search

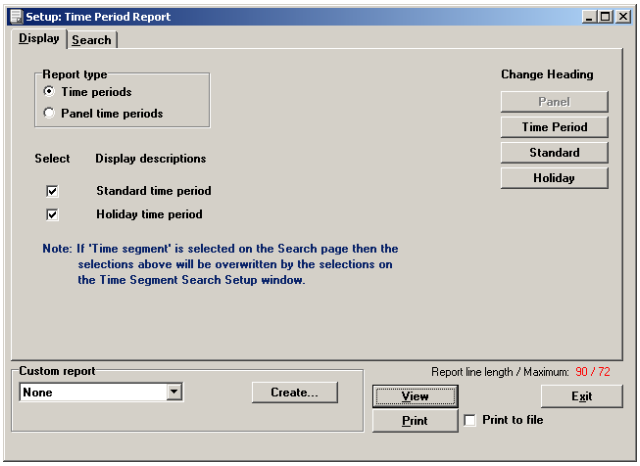
Note that the **Building IN Status** field allows the operator to perform a search report of cardholders that are in the building. This is accomplished by selecting both the **Building IN Status** and the **In** boxes. The **Card Status** report can also provide information about which cardholders are presently NOT in the building. This is accomplished by selecting ONLY the **Building IN Status** box, and NOT the In box.



3.4.14 Report Headings: Time Period

3.4.14.1 Time Period Reports- Display

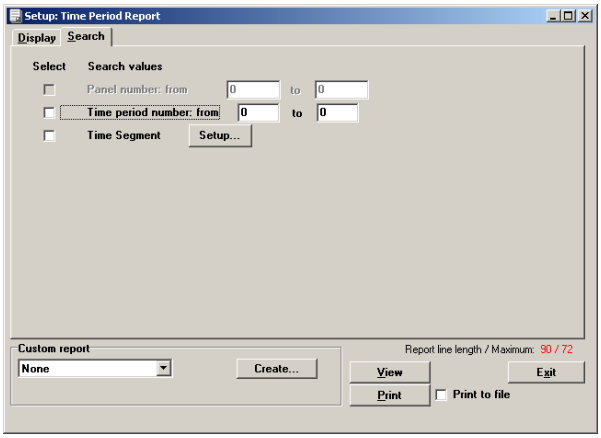
LiNC-NET uses **Time Periods** in a variety of ways, such as validating card usage, scheduling automatic door-open, and shunting alarms. The report prints or displays the **Time Periods** (2-999) with or without its **Holiday Time Period** counterpart.

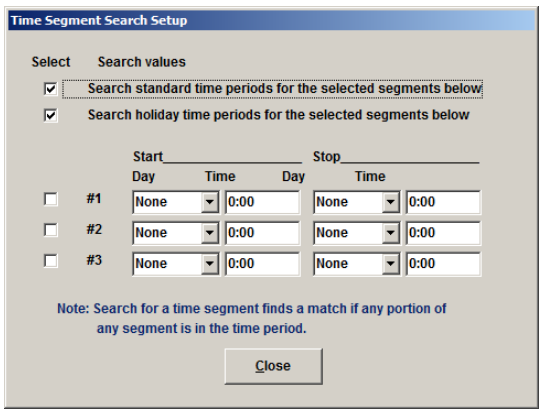


NOTE The **Change Heading** buttons permit the renaming of the field headers.

3.4.14.2 Time Period Reports: Search and Time Segment Search Setup

At the bottom of the menu is the **Time Segment Search** option that is also contained in the **Card Authorization** and **Authorization Group** search reports sections. This option provides the operator with a means of querying the system by an instance in time rather than by **Time Period** number range. This is useful when the number of time groups is not known. By using this resource, the block of time itself is stipulated and then using this resource searches the system for records relevant to that period of time. See Setup: Card (Authorization) Report- Search “Time Segment Search Setup” screen.



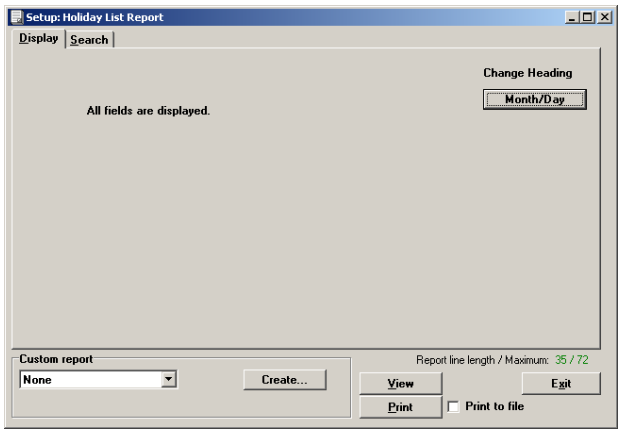


3.4.15 Report Headings: Holiday List

LiNC-NET supports up to 365 days of holidays plus 1 additional day for leap year. The report will generate a list of holidays by year then month. The days that appear in the report determine when the system will utilize the **Holiday Time Period**. The following functions are affected by holiday:

Card Access **Alarm Monitoring** **Automatic Door Open** **Inputs/Outputs** **Outputs**

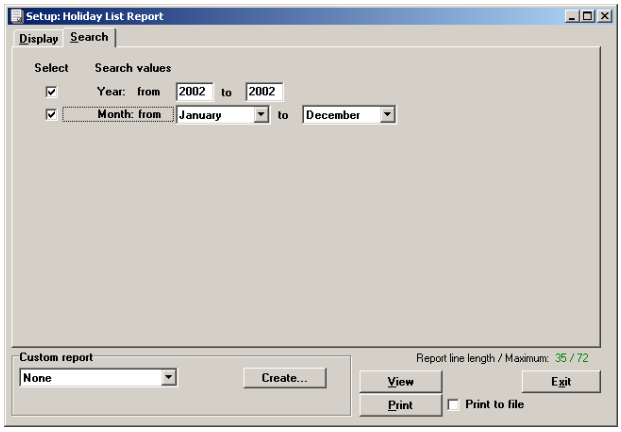
3.4.15.1 Holiday List Reports: Display



NOTE The **Change Heading** buttons permit the renaming of the field headers.

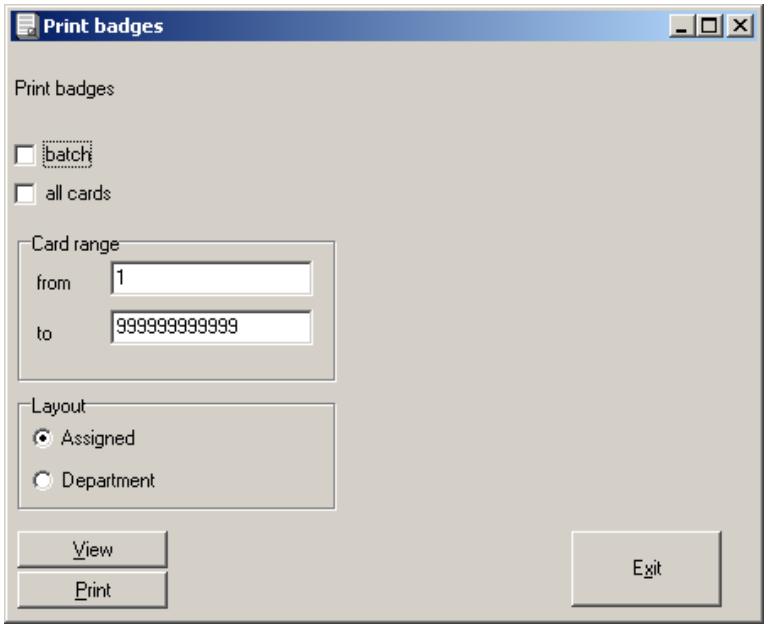
A range of up to 10 years may be searched in the **Holiday List Reports Setup** menu.

3.4.15.2 Holiday List Reports: Search



3.4.16 Report Headings: Print Badges

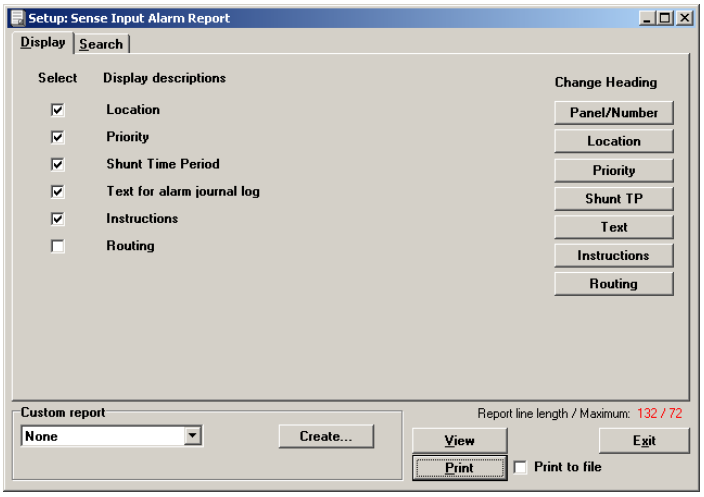
Print Badges allows you to batch print as many cards as necessary, using the data entered in LiNC-NET. Printing can be done as a batch, or all at the same time.



3.4.16 Report Headings: Input Alarm

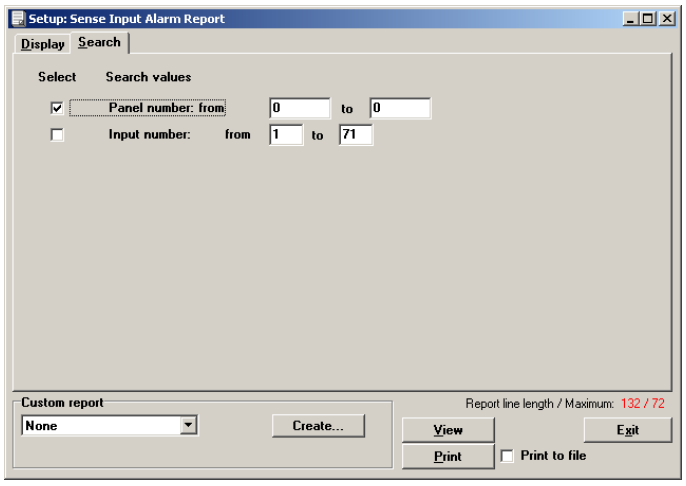
Select the desired fields to be displayed or printed by clicking on each selected box. The report will list, in columns, all the inputs requested and any or all of the following data: the Alarm Number(s), the Alarm Location, the Alarm Priority number (0-9999), the Shunt Time Period (2-999), Text message, and Instructions regarding an alarm acknowledgment.

3.4.16.1 Sense Input Alarm Reports: Display



NOTE The **Change Heading** buttons permit the renaming of the field headers.

3.4.16.2 Sense Input Alarm Reports: Search



If a Search is performed, only the range of sense input alarm numbers and panel numbers is user selectable. Enter the range of input numbers to be used in the search, then click on the Select box.

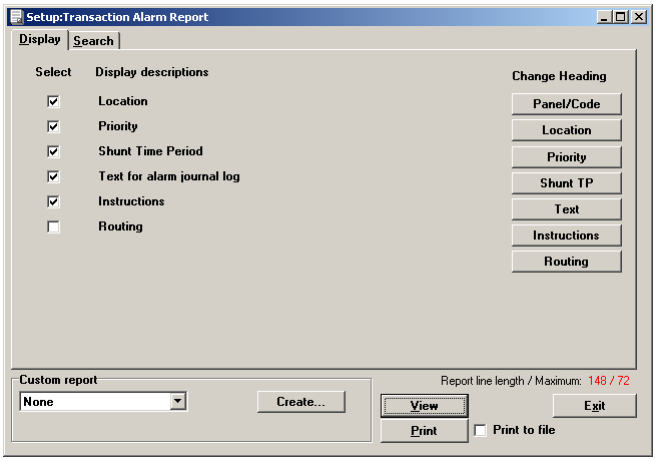
3.4.17 Report Headings: Xaction Alarm

Select the desired fields to be displayed or printed by clicking on each selected box. The report will list, in columns, all the transaction alarm numbers requested and any or all of the following data: the Alarm Location, the Alarm Priority number, the Shunt Time Period (1-999), Text message, and Instructions regarding an alarm acknowledgment.

Display Options:
1. Location/Transaction Code
2. Priority
3. Shunt Time Period
4. Text for Alarm Journal
5. Instructions

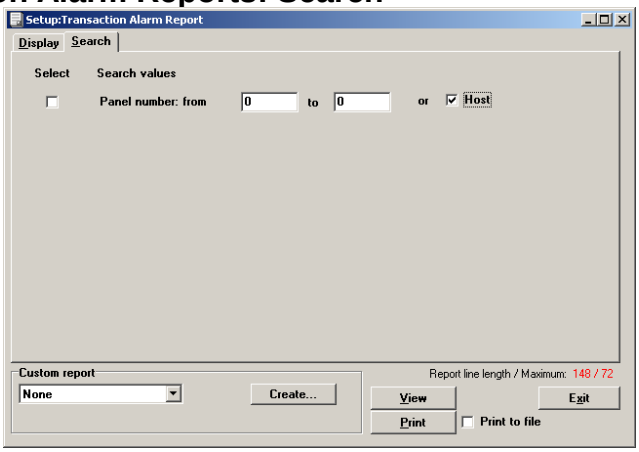
Search Options:
1. Panel Number

3.4.17.1 Transaction Alarm Reports: Display



NOTE The **Change Heading** buttons permit the renaming of the field headers.

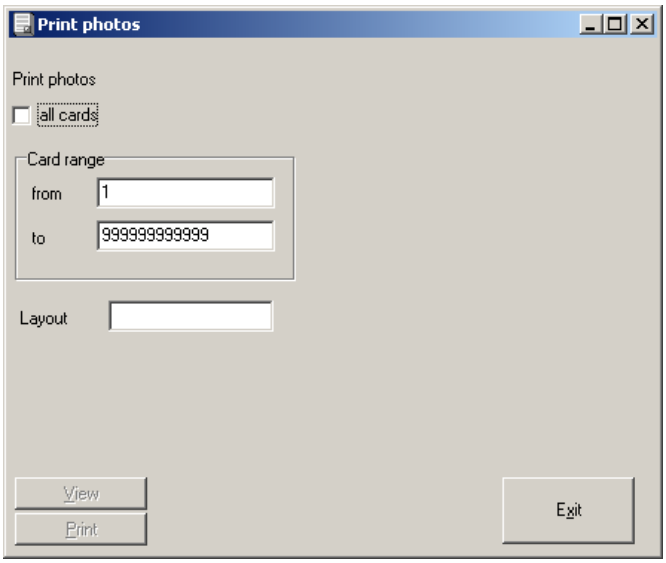
3.4.17.2 Transaction Alarm Reports: Search



If a Search is performed, only the range of panel numbers is user selectable. Enter the panel number(s) to be used in the search, then click on the Select box.

3.4.18 Report Headings: Print Photos

Print Photos allows you to print the employee photographs that are currently in the Employee tab of the **Change Card** directory. Select **all cards** or the **Card range** of that you wish to print.



4.0 Miscellaneous

4.1 Understanding Control Counters

Control Counters (CC's) provide output for relays to control door strikes, external alarm shunts/outputs, open collector outputs, digital dialers, gates, alarm bells, lights, etc. Individual action and control are defined by the programmed parameters of the CC. Control counters can also be used for timers and counters depending on the application. The flexibility and versatility of the CC is defined as "User Programmable Logic" (UPL).

Control counter operations are divided into 3 parts:

Input Computation Output

Action of the CC is provided by card access, sense input, or by Time Period (Input). Control Counters require an "input" to provide a trigger to perform a "computation" and provide an output determined by the results of that computation.

4.1.1 Table of Inputs, Computations, and Outputs

Input	Computation	Output
Card Access	No Operation	Relay Output
Sense Input	Increment	Voltage Output
Time Period	Decrement	
	Increment each second	
	Decrement each second	
	Increment each minute	
	Decrement each minute	
	Clear auto Inc/Dec	
	Override Time Period for one cycle	
	Suspend Time Period Control Until a Restore	
	Restore Time Period Control	
	Energize (Load High Value)	
	De-energize (Load Low Value)	

Control Counters have user-defined values that determine when an output is to be energized or de-energized. When a CC is set to the energize level, the output associated with that CC will energize. This level is defined as the "High Value". The Output de-energizes when the value of the associated CC is less than or equal to the "Low Value". The "input" (card access, sense input, and time period) determines how the CC is affected.

The association of a CC to an output relay or voltage output is FIXED within the panel. For example, CC1 is the first relay on the Panel PCB, designated by P5, and CC2 is the second relay on P7, and so on.

The MicroLPM board has 8 outputs (4 relays and 4 voltage outputs). The relays on the MicroLPM board are numbered 1, 2, 3, and 4, respectively, and the Voltage Outputs are numbered 13, 14,15, and 16.

Therefore, the MicroLPM is defined as having:

4 reader interfaces

8 Outputs-

4 Relays (Control Counters 1 through 4)
4 Voltage Outputs (Control Counters 13 through 16)

where Control Counter = Output number

Example CC1 = Output number 1 (relay number 1) on MicroLPM board
CC25 = Output number 25 (relay number 1) on Output board
CC13 = Output number 13 (Voltage Output) on MicroLPM

NOTE The Voltage Outputs are 12 VDC, 100-milliamp output. The MicroLPMs also have inputs that will be assigned later.

4.1.2 Examples

To fully understand the operations of the control counter, the user must understand the problem and goal of the application. The following examples describe how the LiNC-NET Control Counters are programmed in different applications.

4.1.2.1 EXAMPLE A: Programming an Alarm to Activate an Output Horn

For this example, we will activate a horn when someone opens the panel enclosure. The horn will be connected to Relay number 4 of the panel. Since the panel is equipped with a tamper switch, which is defined as a FIXED sense input number (13), it will be used as an "input" variable in our CC "formula". Sense inputs 1 through 12 are also fixed and defined as Supervised Reader detects for readers 1 through 12, respectively. The formula should be as follows:

Input	**Computation**	**Output**
Tamper Switch	Energize Horn	Relay 4
(Sense Input 13)	(Load High Value)	(CC4)

To program this example, the following is required:

· Select Input menu
· Enter the sense input record number for the Tamper Switch (13)
· Sense input record 13 should be defined as follows:

	CC	**Preload**	**T**	**Operation**
Normal	0	No-Load	--	None
Alarm/Ajar	4	LoadHigh	--	Clear
Trouble/Forced	0	NoLoad	--	None

NOTE This example will leave the horn ON indefinitely. The following examples will demonstrate how to time and control outputs through events.

4.1.2.2 EXAMPLE B: Program Activation of an Output Horn When a Door is Left Open

Problem: 30 second horn activation is required when a door has been left open longer than the programmed shunt time.

Solution: Door Left Open or Ajar is controlled by the door sense that is assigned to that door. The door sense is the "input" portion of the equation. The computation will involve turning on the horn through a relay for 30 seconds and then turning it off. To do so, set the CC to energize (LoadHigh Value into the CC) and decrement the CC each second until it reaches the low value, at which time it de-energizes the relay. The High Value of the CC must be set to a 30 (for seconds) and the Low Value set to 1.

-Set Sense Input
-Select Input
-Select the Sense Input record number for the door sense
-Name the Door Sense (8 characters max)
-Check and verify polarity of door sense input
-Set Ajar CC to 4 (relay number)
-Set PreLOAD action to Energize the relay (LoadHigh)
-Set Operation to decrement each second (DecrementSec)
-Sense input Record 13 should be defined as follows:

	CC	**Preload**	**T**	**Operation**
...Normal	0	NoLoad	--	None
...Alarm/Ajar	4	LoadHigh	--	DecrementSec
...Trouble/Forced	0	NoLoad	--	None

Set CC Value: Select Input Menu
Define Control Counter Value as shown below.

Counter	**Value**
1 = Low	30 = High
30 = Max	

> **NOTE** CC4 is defaulted to be door strike output by LiNC-NET. It may be necessary to de-select CC4 from the Door Overview menu. Once in the menu, highlight 4 under "Control Counter" and replace it with a 0.

4.1.2.3 EXAMPLE C: Program De-activation of an Output Horn When a Door is Closed

Problem: Example B described a horn that will always activate for 30 seconds and automatically turn off. To turn the horn off after 30 seconds, or when the door closes (Normal status) another set of instructions is required.

Solution: Perform the same procedures as Example B. The Normal status of the door sense input is when the door is closed. This part of the sense input should be programmed as follows:

· Set CC to 4 (relay output for horn)
· Set Preload to de-energize the relay (LoadZero)
· Set Operation to stop auto-increment/decrement (Cl)

	CC	Preload	T	Operation
...Normal	4	LoadZero	--	Clear
...Alarm/Ajar	4	LoadHigh	--	DecrementSec
...Trouble/Forced	0	NoLoad	--	None

4.1.2.4 EXAMPLE D: Program Constant Activation of a Horn Until Door Closes

Problem: The door ajar horn is to stay ON until the door is closed.

Solution: To keep the horn ON until the door is closed, the 30 second timer is not required because the horn will be turned off when the door is closed. The sense-input record should be programmed as follows:

	CC	Preload	T	Operation
...Normal	4	LoadZero	--	Clear
...Alarm/Ajar	4	LoadHigh	--	Clear
...Trouble/Forced	0	NoLoad	--	None

4.1.2.5 EXAMPLE E: Program Automatic Door Open During Working Hours

Problem: Automatically opening doors or gates during normal working hours.

Solution: The input for our equation is Time Period, because it will be used to control the conditions of the output. The computation involves energizing (LoadHigh) the door strike at the start of the normal working ours and de-energizing (LoadZero) the door strike at the end of the normal working hours.

The following parameters are assumed:

- Door lock is connected to relay 1 (CC1)
- Time Period 5 is set to Mon-Fri 8:00am to 5:30pm

Proceed to the Control Counter menu in Input

- Name the door
- Set CC to Class D
- Set the Time Period that will control the CC to 5
- The control record should be as follows:

Time Period Control

Time Period Number **5**

Upon

Time Period	**Preload**	**T**	**Op**
...Entry	LoadHigh	--	Clear
...Exit	LoadZero	--	Clear

4.2 EDDAT

EDDAT is a program that allows the user to translate the text files used by LiNC-NET into another language. If the directory for the data files does not exist yet, then create a directory. Refer to the Initialization Setup File (INI.edit) for LiNC-NET for Windows XP Professional and Vista Business Edition Language menu for instructions. To access EDDAT, click on the EDDAT icon in the LiNC-NET for Windows group.

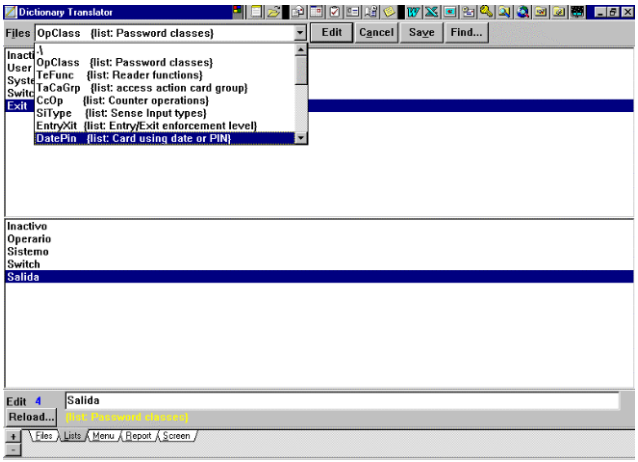
Translate the *.dat files using EDDAT. Files accessed from FILES and LISTS tabs must be edited before the data files are created. Other files can be edited later.

To make the edits easier, the original English text is shown in the top window and the text being edited is displayed in the bottom window. Perform the following steps for each file to be edited:

1. Select a tab at the bottom of the screen.
2. Select a file from the drop down menu.
3. Select the **Browse** button. Now the focus is on the content of the file and the up and down arrows will highlight a line in the file. The top window shows the original file and the bottom window shows your translation.
4. Highlight the line to be changed.
5. Select the **Edit** button. The cursor moves to the edit field.
6. Type the new text in the edit field.
7. Select the **Update** button to store the change in memory, or click the **Cancel** button to discard the change.
8. Repeat steps 4 through 7 for each line to be changed in this file.
9. Select the Save button to store the changes to the disk file.

Following types of text can be translated:

Fields
Menu Items
List
Report Heading
Messages, Labels and Other



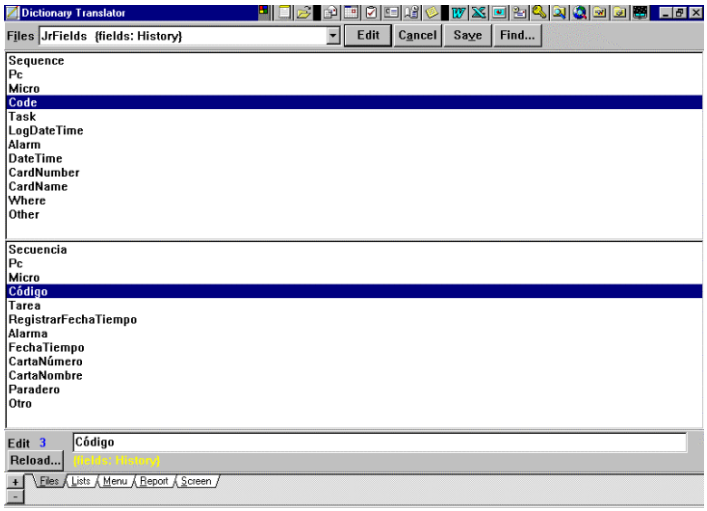
Sample screen showing pull-down menu of translatable text

4.2.1 Files

Under **Files**, there is only one file to select:

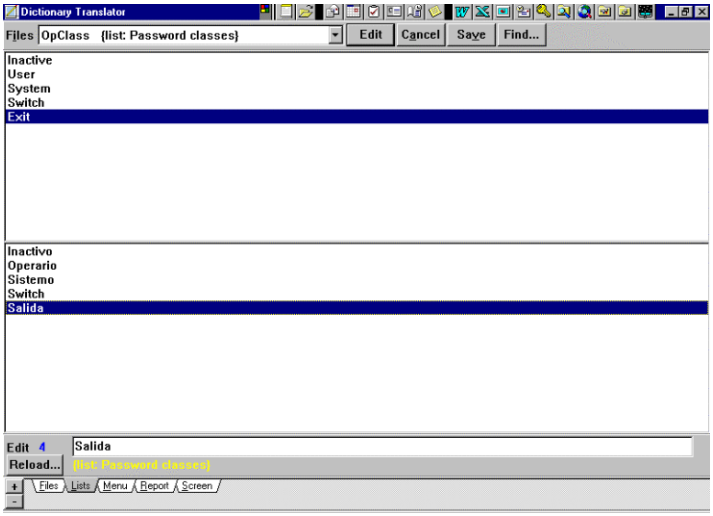
JrFields fields: History

In the screen example for **Files**, the Spanish translations have been entered at the lower window by following the above instructions. In the following screens, there are several selections that contain text that may be translated. By clicking on the down arrow at the top of the screen under each tab category, the list of selections will appear.



Sample Screen Showing Journal Fields-
Fields: History with Translation

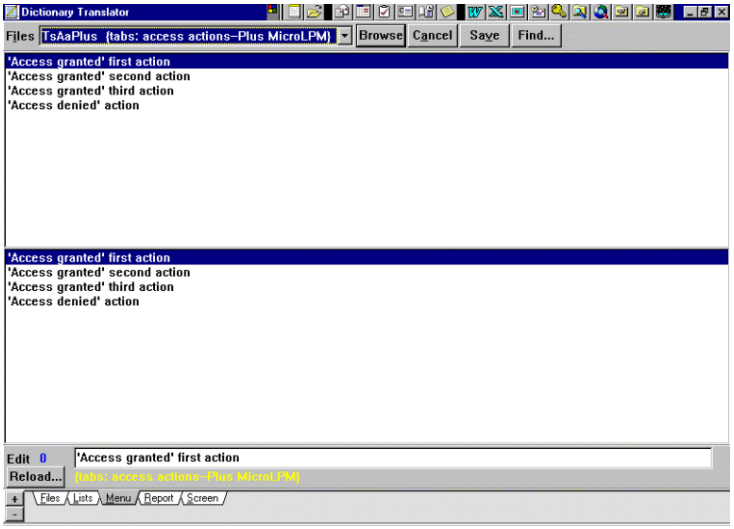
4.2.2 Lists



In the screen example for **Lists**, **OpClass** list: Password classes have been selected and the translatable text is listed. Under Lists, there are 21 files that contain translatable text:

OpClass	list:	Password classes
TeFunc	list:	Reader functions
TaCaGrp	list:	access action card group
CcOp	list:	Counter operations
SiType	list:	Sense Input types
EntryXit	list:	Entry/Exit enforcement level
DatePin	list:	Card using date or PIN
DatePIN	list:	Card using date or PIN
PrimXpir	list:	Card primary expiration date
TPDow	list:	Time Period day of week
Month	list:	Months of year
Dow	list:	Day of week
DowShort	list:	Day of week, abbreviated
JrCodes	list:	Journal codes
JrAlarm	list:	Journal alarm status
AaStatus	list:	Pending alarm status
SiState	list:	input status @ panel
XactAls	list:	Transaction alarm [keys]
UplodErrr	list:	Upload error codes
NoYes	list:	No, Yes
TaskComm	messages:	Task Communication

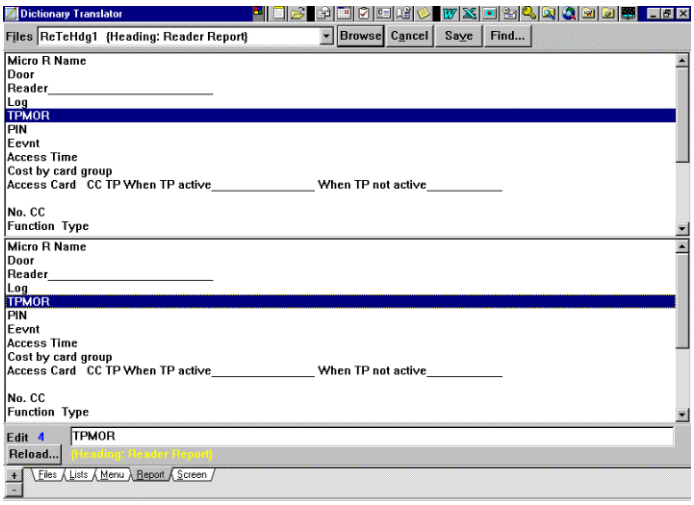
4.2.3 Menu Items



In the screen example for Menu, **TsAaPlus** (tabs: access actions-Plus MicroLPM) has been selected and the translatable text is listed below it. Under Menu, there are 4 files that contain translatable text:

TsAaPlus	tabs:	access actions-Plus MicroLPM
TsAaStd	tabs:	access actions-Standard MicroLPM
Umsgs	error messages	
Ulogcom	phrases used in history logs	

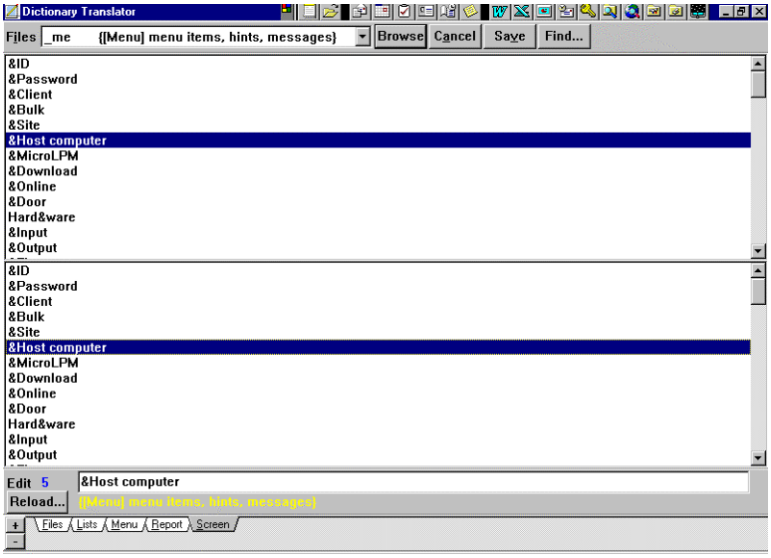
4.2.4 REPORT Heading



In the screen example for **Report**, **ReTeHdg1{Heading: Reader Report}** has been selected and the translatable text is listed below it. Under **Report**, there are 14 files that contain translatable text:

ReTeHdg1	Heading:	Reader Report
ReCcHdg1	Heading:	Output Report
ReSiHdg1	Heading:	Input Report
ReUlHdg1	Heading:	Panel Report
ReCaHdg1	Heading:	Card (Authorization) Report
ReNaHdg1	Heading:	Card Personal Information Report
ReHoHdg1	Heading:	Host Report
ReAgHdg1	Heading:	Authorization Group Report
ReTpHdg1	Heading:	Time Period Report
ReHlHdg1	Heading:	Holiday List Report
ReTaHdg1	Heading:	Input Alarm Report
ReXaHdg1	Heading:	Transaction Alarm Report
ReFgHdg1	Heading:	Floor Group Report
ReKsHdg1	Heading:	Card Status Report

4.2.5 Screen Messages



In the screen example for Screens, {[menu] menu items, hints, and messages} has been selected and the translatable text is listed below it. Under Screens, there are 48 files that contain translatable text:

_menu	menu	items, hints, messages
umostat	menu	LiNC-NET Status
syal	menu	Alarm Definition
_sybi	menu	Bulk Initialization
_sydoov	menu	Door Overview
_syfg	menu	Floor Groups
_syin	menu	input
_syot	menu	output
_sypl	menu	Program Level
_sypw	menu	Password
_sysipc	menu	Host Computer
_sysiul	menu	Panel Setup
_sygbu	menu	Back-up
_usca	menu	Add Card
_uscaac	menu	Activate/Deactivate Card
_uscaag	menu	Authorization Group
_uscafi	menu	Find Card
_uscana	menu	Personal Data
_usdocl	menu	Close Door
_usdoop	menu	Open Door
_ustiho	menu	Holiday List
_ustitp	menu	Time Period
_usuldl	menu	Download to panel, Upload from panel
_usulol	menu	Panel Online
ualarm		Alarm
ulog	Logger	main form
ulogflds	Logger	Fields (order & width)
Ure	Report	menu items
Urestrs	Report	button captions, messages...
uresetup	Report	Font and lines per page
urehdr	Report	Heading and Column Width Definition
ureag	Report	Setup: Authorization Group Report

ureca	Report	Setup: Card (Authorization) Report
urecc	Report	Setup: Output Report
urefg	Report	Setup: Floor Group Report
urehl	Report	Setup: Holiday List Report
ureho	Report	Setup: Host Report
urejr	Report	Setup: History Report
ureks	Report	Setup: Card Status
urena	Report	Setup: Card Personal Information Report
uresi	Report	Setup: Input Report
ureta	Report	Setup: Sense Input Alarm Report
urete	Report	Setup: Reader Report
uretp	Report	Setup: Time Period Report
uretpx	Report	Setup: Time Segment Search Setup
ureul	Report	Setup: Panel Report
urexa	Report	Setup: Transaction Alarm Report
finddat	FindDat	captions & messages

4.2.6 Dictionary Translator: FindDat

FindDat is a program which allows the user to find translated as well as untranslated text in the EDDAT database. To access FindDAT, click on the FindDAT icon in the LiNC-NET for Windows group. FindDAT can also be accessed within the EDDAT program by clicking on the Find button.

Perform the following steps for each word or text to be searched:

1. Click on the Find button in FindDAT or EDDAT and a pop-up menu will appear.

2. Enter the word or text that you wish to find, e.g., card, history, name, etc.

3. Select [4] Use original files, if you wish to search for the untranslated original text. Or do not select this option if you wish to find translated text.

4. Click on the First button and the program will locate the first appearance of the word or text.

5. Click on the Next button and the program will locate the next occurrence of the word or text.

6. Continue clicking on the Next button until all occurrences of the word or text have been found.

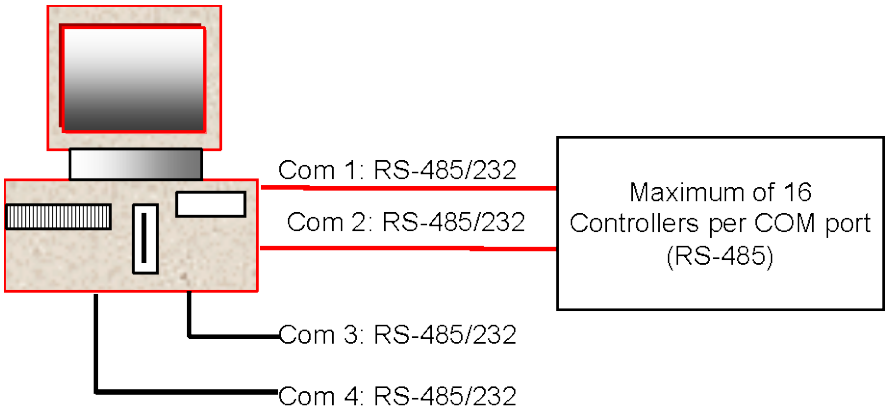
7. The FindDAT program allows the user to locate and change translations without going through each screen one by one.

8. Repeat steps 1 through 6 for each word or text in your search.

9. Select the Save button to store changes to the disk file.

4.3 Communication between LiNC-NET for Windows XP Professional and Vista Business Edition and the Panels

LiNC-NET for Windows XP Professional and Vista Business Edition can communicate to the panel(s) via 13 loops. Each loop occupies one COM port. COM ports 1 through 13 should be used. Each loop can be configured for RS-485, RS-232, or Ethernet 10 mbps. RS-485 cabling length is 4,000 ft. maximum.



NOTE To get up to 13 ports you will need to install a Stallion Board. However, such a configuration has not been evaluated by UL and is not suitable for UL1076 Installations.

4.3.1 LiNC-NET Initialization of Direct Connect Panels

4.3.1.1 Access the Site/Host Computer Menu:

Click on **Site**, and then **Host Computer**. The **Host Computer** menu will appear. To select the Loop or Port tab, click on the appropriate tab and the parameters will be displayed. LiNC-NET will support up to 64 **Direct Connect** control panels. These may be distributed among the 16 possible communication (COM) ports displayed. A COM port may be either a RS-232 or a RS-485 serial communication loop (channel) and LiNC-NET allows for 13 possible loops.

> On a **RS-232 loop**, only one panel is allowed per loop. Furthermore, an RS-232 loop may be of an overall distance of 25 feet prior to implementing modems or line drivers that will extend this limitation. Still, only a single panel may reside on an RS-232 channel regardless of the length of the data loop
>
> On a **RS-485 loop**, 16 panels may share a single RS-485 loop,. Alternatively, if the RS-485 loop distance should exceed its 4,000-foot limit, line drivers or a repeater may be implemented while preserving the capabilities of up to 16 panel(s) on the channel. The maximum number of Direct Connect panels supported by LINC-NET is 64, regardless of which protocol is used.

To assign a COM port to a particular loop, use the pull-down menu to select COM port 1 through 16.

NOTE For Non-PCI cards in Host Computers

The default configurations for the COM ports on a standard PC are:

COM port #1 = IRQ4 COM port #2 = IRQ3

When adding RS-485 boards or auto dial modems and more COM ports are required, the following configuration should be used:

COM port #3 = IRQ5 COM port #4 = IRQ11

This will eliminate a conflict between the COM ports. A change of an IRQ to a specific COM port may require a jumper change and/or a change in the control panel (PORTS) to the desired IRQ.

4.3.1.2 Port Tab

To specify the type of connection for the COM port click on the **Type of Connection** field. Click on the box to access the drop-down box. Using the up/down keys highlight the **Direct Connection** selection and click the mouse. The **Type of Connection** field will now display the **Direct** type of connection between the PC and the panel(s).

To specify the Baud rate for PC to panel communications, click on the **Baud Rate** field to access the drop-down box. Highlight the **9600** selection and click the mouse. The Baud rate field will now display the **9600**.

To write this information to the system, click on the checkmark [✓] button in the navigator box on the upper left side of the screen. All data entered will be written to the hard disk drive. This is indicated by the check mark changing to a gray tone.

4.3.1.3 Add/Delete Panel Tab

The panel must now be defined in the LINC-NET database. (This procedure may be by-passed if the panel has already been defined).

This is accomplished by the following method:

1. In **Site: Host computer**, click on the **Add/Delete Panel** tab.
2. Highlight the **Panel** field.
3. Using the drop-down box, type the **Panel** number (address) for the panel that is to be defined in the LINC-NET database.
4. Click on the **Add Panel** button. The panel specified will now be included in the LINC-NET database.

To include additional panels in the LINC-NET database, repeat the steps above. Note that up to 64 total panels may be supported in this release. The panel's address may be any value between 1 and 64, although every panel address must be unique.

Once the unique COM port has been defined in the **Host** computer, assigning the specific port to a panel is a fairly simple process.

1. Proceed to **Site: Panel**.
2. In the **Hardware** tab of the **Panel** screen, define **Primary Loop** to **Direct Connect**..
3. Press the **[√]** check button to save your changes.
4. Make this change for every panel using Direct Connect.

Now that the communication port and panels have been defined in the LINC-NET database, communications between these two devices may be established. This is accomplished by pressing **<Alt>** and then **X**. This will clear the screen and log the user off. The sign-on screen will now appear. Log back on with the password and the Systems Administrator menu will appear.

The final phase of implementing Host PC to panel communications is to request that the panels be brought on-line.

Access the User mode by clicking on **Go the User Menu** button in the bottom right-hand of the screen. Click on the **Define Panel Online Status** button to access the **Panel On-line** page. At the bottom of the page are panel tables illustrating the address(es) of the panel(s) defined previously in the database. Click on the mouse once and a page of panels defined within the LINC-NET database will be displayed. Click on the appropriate box next to each panel. Placing an checkmark [✓] button in the box indicates that the panel has been selected to be on-line for data exchange with the Host PC. To the right of the screen is the **Panel Status** field. It should transition from **Off-line** to **On-line** indicating that successful communications have been established between the Host and the panel PCB. Repeat the previous steps until all required **Direct Connect** panels are communicating with the Host PC.

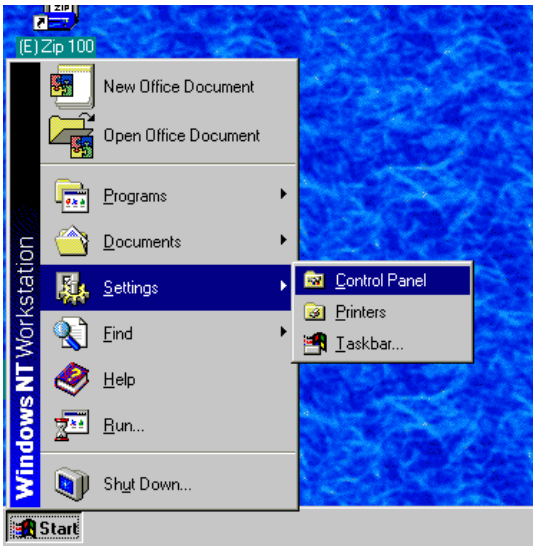
4.3.2 Date Format Modification

A feature of LiNC-NET is the enforcement of proper Date format.

LiNC-NET assesses your internal settings as it boots up. A Date setting that does not allow for 4-digit year will cause the internal alarm to sound. Your internal Date settings should should always be set to a four-digit year.

Procedure:

1. Go to the **Start** menu : **Settings** and choose **Control Panel** from the sub-menu.

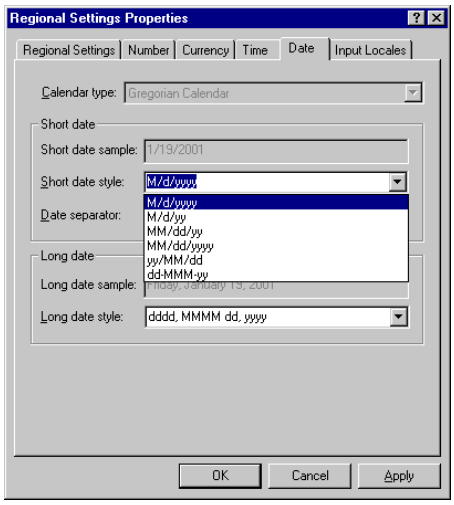


2. In the **Control Panel** menu, choose **Regional Settings**.

3. In **Regional Settings** display, choose the **Date** tab.

4. In the **Short Date Style** pull-down menu, choose any four-digit year setting.

5. Click the **Apply** button, and then the **OK** button.



You have now set the proper date setting to work with LiNC-NET 5.14.

4.4 Adding a Client Database

NOTE This resource is not available in a LiNC-NET Multi-user system.

Before a client database can be created, two things must occur:

1. The Main Database must be created. If this has not yet been done, then refer to the LiNC-NET software installation section before proceeding.

2. Once the main database has been created, the Windows XP or Vista Operating system must be configured to permit all data and program files stored in the PC to be displayed when accessing the **Explorer**. Refer to the appropriate section below and configure the **Explorer** accordingly.

4.5 Configuring Windows XP Professional to Display All Files

1. From the Windows XP Professional desktop, right-click on the Start button.

2. Left-click on the **Explorer** option. The **Explorer** application will open.

3. Located in the upper left corner of the screen is the Menu bar. Left-click on the View selection. Left-click on **Folder Options** to display the **Folder Options** Menu.

4. Left-click on the **View File** tab.

5. Under the **Files and Folders-Advanced** settings, confirm that only the **Show File Attributes in Detail View** is selected. Under **Hidden Files** confirm that only **Show All Files** is selected.

6. Click on the **OK** button.

7. Close the **Explorer.**

4.7 Adding Facility Code for Client

Copy **LincNetW.ini** from the LiNC-NET 5.14 CD to a diskette. Rename the diskette file to the Client name with the extension of .CLI. (Examples: **PCSC.CLI** or **6565.CLI**). Copy the **Clients.CLI** file to the C:\ProgramFiles\PCSC\5_14_xx folder (Default location of where LiNC-NET Program Files are stored on a standalone system). Client names must follow standard DOS conventions.

1. Click on **Start/Programs/LNv5_14_xx/CONFIGLN**. The ConfigLN screen will now appear.

2. Set **Task Communication** to **Standalone** setting.

3. Click on the **Clients in Use (Not Allowed on Network)** field located in the **Miscellaneous** section. Doing this will place a check in the box. A **Database** box will appear in the upper left side of the screen.

4. Click on the **Clients** button within the **Database** box and a dot will appear in the circle to the left of the word **Client**.

5. Click on the **Write** button.

6. Click on the **Create** button located in the **Data Base** section of the screen. The **Create Data Base** screen will now be displayed.

7. Enter the client's name in the **Client** box.

8. Click on the **Add Client** button. The client's name will now appear in the **Current Client** list box.

9. Click on the **Panel** folder and define each panel as required.

10. Click on the **Files** tab. Click on the **Select All** button. All check boxes will be checked, indicating that all files are selected for creation.

11. Click on the **Main** folder. Click on the **Start** button to begin creating the **Client Database**. The screen will illustrate the action of the files actually being created.

12. When the **Client Database** has been created, click on the **Client** folder.

13. Click on the client's name in the **Current Client** list box, and the clients database files will now be displayed in the **Files (for Current Client)** box.

14. Click on the client's name located in the **List of Lincnetw** files box.

15. Click on the **Transfer** file button. And the clients facility code (PCSC.CLI or 6565.CLI) is now transferred to the client database.

16. Click on the Main folder. Click on the Exit button and the Create Data Base screen will close. The ConFigLN screen will now be displayed.

17. Click on the **Exit** button to close the **ConFigLN** screen and return to the desktop.

This concludes the addition of the **Client Database procedure**.

> **NOTE** Launch the LiNC-NET 5.14 program and notice that the sign-on screen contains a Client box with the option for accessing the Main Data Base (when client box is blank) or the Client Data Base (when client box contains the client's name).

When logging onto the client database for the first time, use the default ID (**0**) and password (**PYMTF**).

Proceed with standard customary programming within the **Client Database**.

4.8 LiNC-NET Multi-User Systems

4.8.1 LiNC-NET XP Professional System

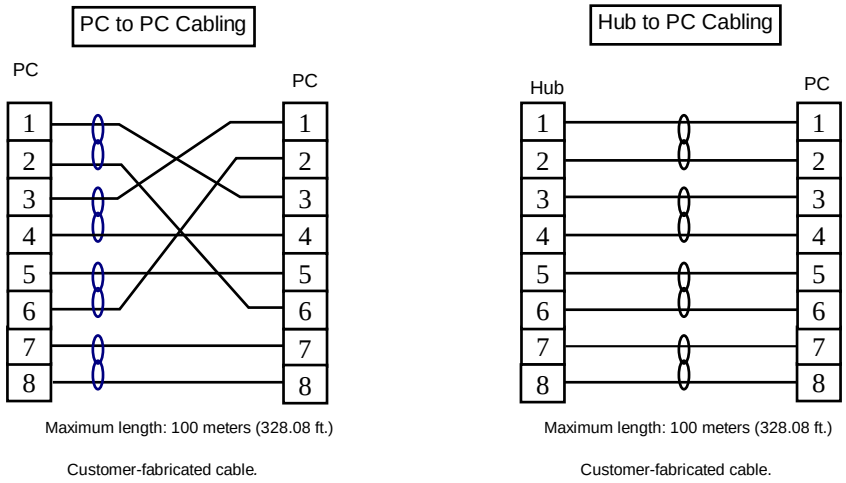
In a LiNC-NET XP Professional Multi-User configuration, one PC is designated as a Host and all others are identified separately as Guard or WorkStations. Each Station can modify the data files that are maintained by the Host. All the panels are connected to the Host PC. The Guard Stations communicate to the Host through the use of LiNC-NET for Windows XP Professional and Vista Business Edition software.

The hardware required for networking LiNC-NET:

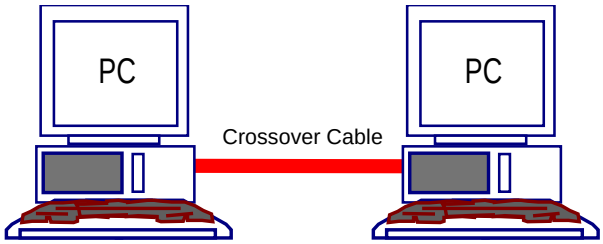
1. 3Com 3C90X TPO Network Interface Card

2. Category 5 twisted-pair 10 base T Network cable, 4 pairs (Plenum or PVC)

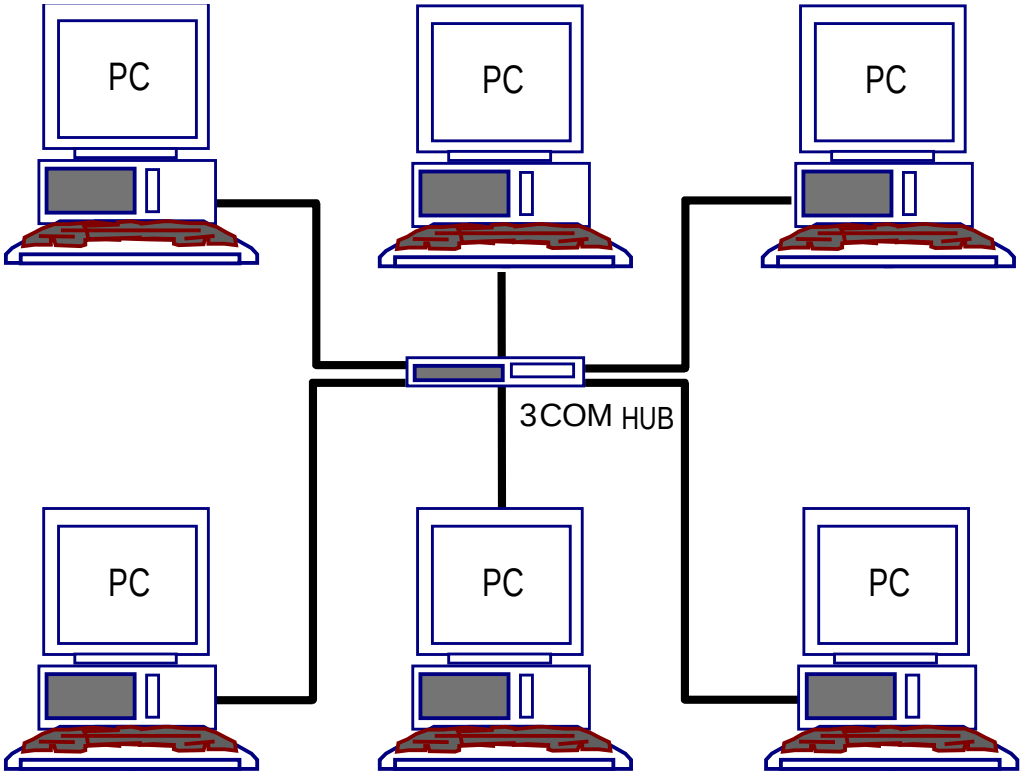
3. 3Com Office Hub (For more than 2 LiNC-NET Stations)



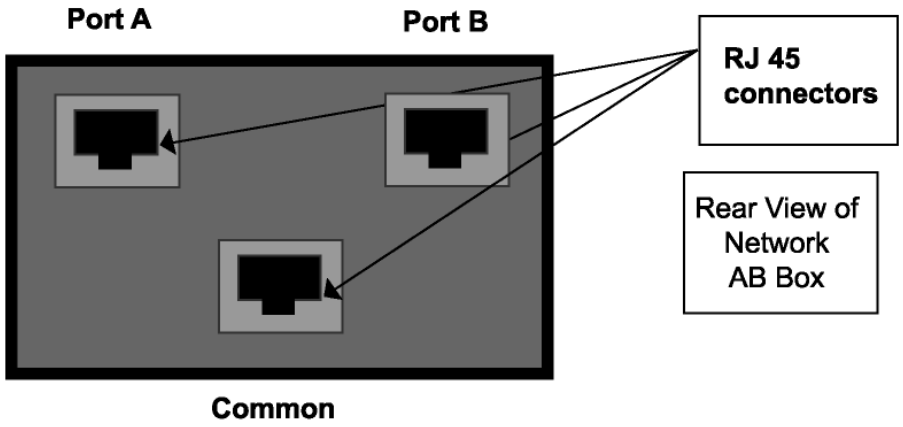
4.8.2 PC to PC Cabling

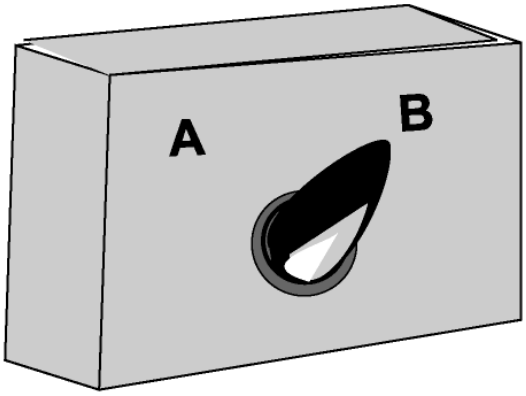


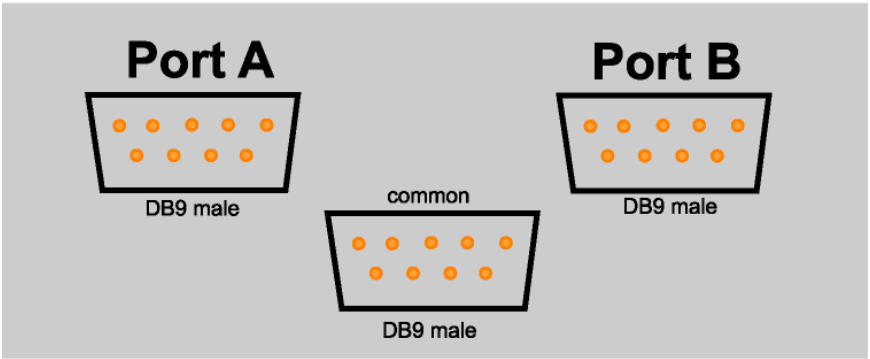
4.8.3 Hub to PC Cabling



4.8.4 AB Box for Use in LiNC-NET Networks



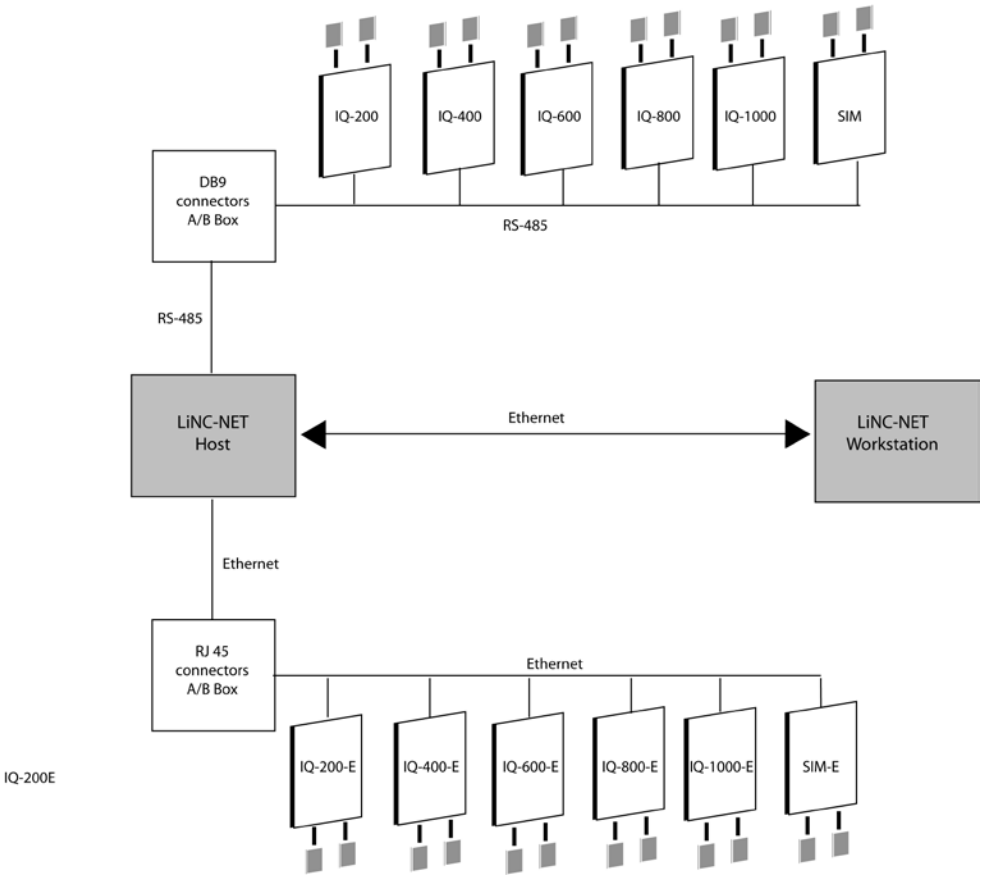




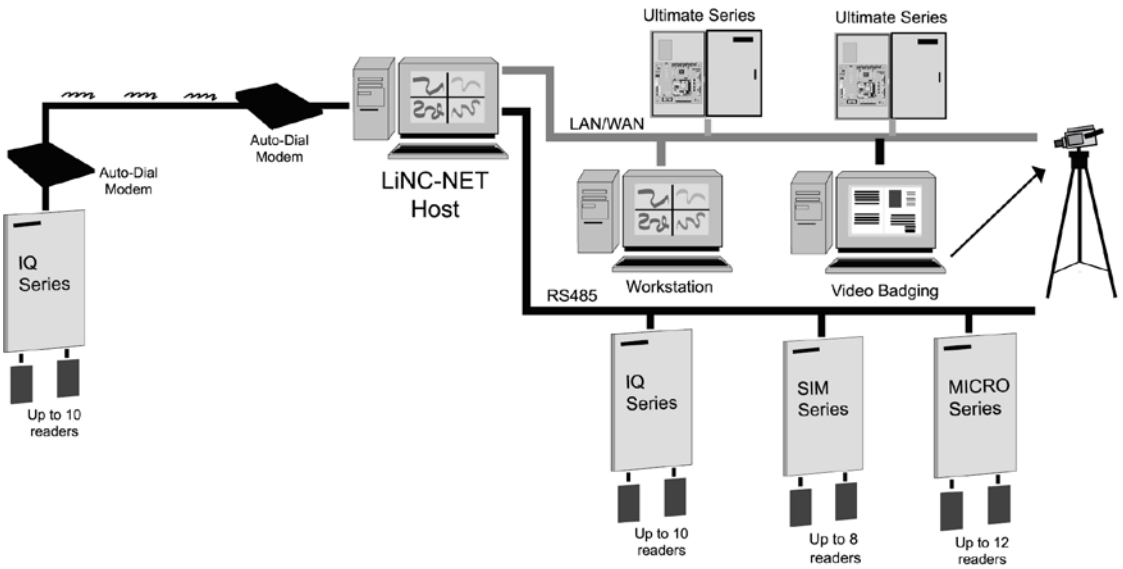
Rear View of serial AB Box

Serial RS485

4.8.4.1 LiNC-NET Systems Architecture with Redundant Computers for Fault Tolerance



MULTI-USER CONFIGURATION



4.8.5 UL 1076 25A Central Supervisory Station Equipment

25A.1 This section describes alternate methods for the evaluation of central supervisory station equipment meeting the conditions specified in 25A.2. This section does not apply to equipment intended for use at the protected premise such as control units, intrusion detection units, and the like.

25A.2 Receiving equipment meeting all the conditions specified in 25A.2 (a) – (m) need not be subjected to Sections 27 – 29, 31 – 39, and 41 – 51.

a) Data processing equipment and office appliance and business equipment used as central supervisory station equipment shall comply with:

1) The Standard for Office Appliances and Business Equipment, UL 114;

2) The Standard for Information-Processing and Business Equipment, UL 478; or

3) The Standard for Information Technology Equipment, UL 1950.

b) The manufacturer specifies the minimum system configuration consisting of the following:

1) Operating system class, minimum revision levels/or kernel type and revision level - Windows NT 4.0 Service Pack 5

2) Minimum revision Microprocessor - PIII 800

3) Minimum disk storage - 20Gig

4) Minimum memory requirements - 128MB 133MHz

5) Monitoring software revision level- LiNC-NET rev. 5.14

c) A system meeting, but not exceeding the specifications of 25A.2(b), shall be submitted for compliance with those tests not specified in this paragraph.

d) The installation instructions shall specify supply line transient protection complying with the Standard for Transient Voltage Surge Suppressors, UL 1449, with a maximum marked rating of 330V.

e) The installation instructions shall specify signal line transient protection complying with the Standard for Protectors for Data Communications and Fire Alarm Circuits, UL 497B, with a maximum marked rating of 50 V.

f) The installation instructions shall specify that communication circuits and network components connected to the telecommunications network shall be protected by secondary protectors for communication circuits. These protectors shall comply with the Standard for Secondary Protectors For Communications Circuits, UL 497A. These protectors shall be used only in the protected side of the telecommunications network.

g) The installation instructions shall indicate that equipment be installed in a temperature controlled environment. A temperature controlled environment is defined as one that can be maintained between 13 – 35ºC (55 – 95ºF) by the HVAC system. Twenty-four hours of standby power shall be provided for the HVAC system. The standby power system for the HVAC system may be supplied by an engine
driven generator alone. A standby battery is not required to be used.

h) All receiving equipment shall be completely duplicated with provision for switchover to the backup system within 30 seconds. The backup system shall be fully operational within 6 minutes

of the loss of the primary system. This allows 30 seconds for the backup system to be fully energized and connected to necessary communication lines and other devices, followed by 5-1/2 minutes for the system to boot up, conduct memory tests, file system check, security verifications and prepare for full system operation. The backup computer shall have the capabilities of the primary, such as memory, speed and the like.

i) Failure of the main computer system, hard disk, and alarm monitor shall result in switchover to the backup system and shall be indicated by an audible or obvious visual indication.

j) The installation instructions shall specify that a fault tolerant system may be used in lieu of complete duplication of the system if every component in the fault tolerant system, including the software and the power supply, is duplicated.

k) The installation instructions shall specify that in addition to the main power supply and secondary power supply that are required to be provided at the central supervisory station, the system shall be provided with an uninterruptable power supply (UPS) with sufficient capacity to operate the computer equipment for a minimum of 15 minutes. If more than 15 minutes is required for the secondary power supply to supply the UPS input power, the UPS shall be capable of providing input power for at least that amount of time.

l) The installation instructions shall specify that the UPS shall comply with the Standard for Uninterruptable Power Supply Equipment, UL 1778, or the Standard for Fire Protective Signaling Devices, UL 1481.

m) The installation instructions shall specify that in order to perform maintenance and repair service, a means for disconnecting the input to the UPS while maintaining continuity of power to the automation system shall be provided.

n) The central supervising station equipment shall be designed and constructed so that any critical component can be replaced and the system restored to service within 30 minutes.

o) If the central supervising station equipment is completely duplicated with standby equipment and a switchover can be accomplished in not more than 90 seconds with no loss of signals during this period, the capacity of the system is to be considered unlimited.

- This only applies for UL1076 Installation were the Redundant Central Supervising Station, the Back Up Host in Hot Back-up Mode.

p) Supervision signals between premises alarm equipment and supervising station alarm receiver equipment shall be managed by the supervising station receiving equipment and not an intermediary network agent, device or service unless investigated for such service.

q) Network addressing of devises shall not make use of public domain name servers.

r) The communication medium between protected property and communications service provider shall be for the exclusive use of the protected property and is not to be shared with other communications service provider subscribers.

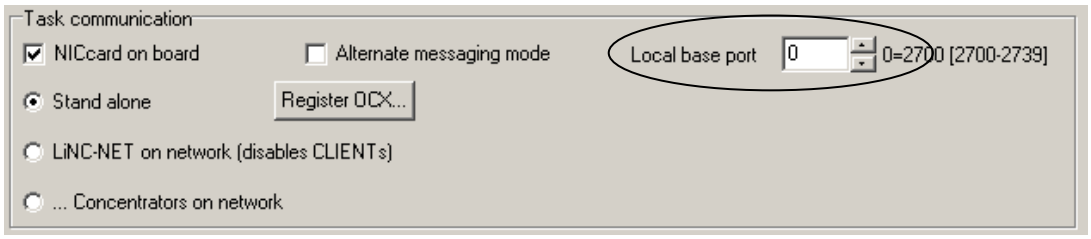
s) The SIM, IQ-200,IQ-200E, IQ-400, IQ-400E, IQ-600, IQ-600E, IQ-800, IQ-1000 and IQ-1200 are suitable only for use as Standard Line Security Equipment.

4.8.6 Assignable LiNC-NET TCP/IP Port Numbers

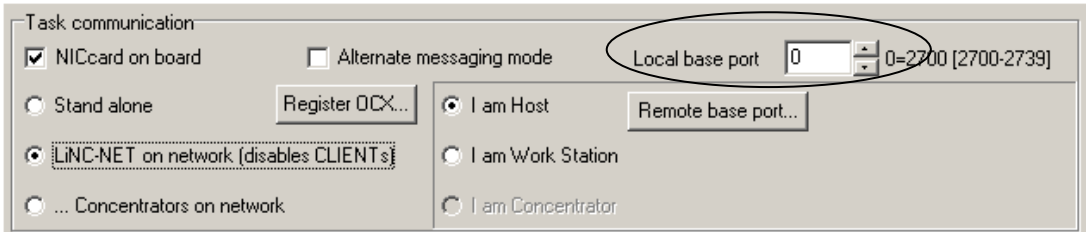
In the possibility that LAN communication of LiNC-NET to its panels could conflict with the communication of other networked programs on the same computers, PCSC has created assignable TCP/IP ports that will allow a unique port be used in the communication between LiNC-NET Hosts and Concentrators to their specific panels.

4.8.6.1 To create a specific TCP/IP port for a Standalone or Host PC-

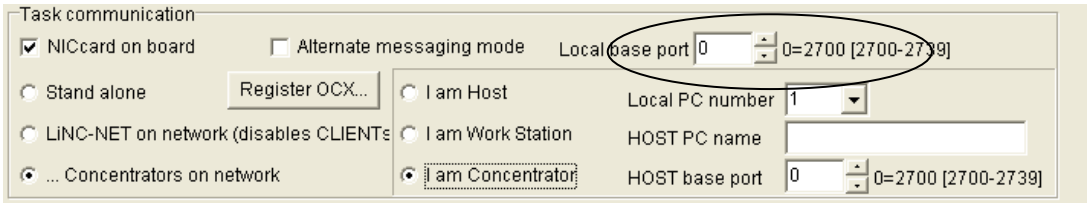
1. Open **ConFigLN**
2. In the **Task Communication** section of the **Main** screen, select the **Local base port** to the unique number you wish to your system to use.



Standalone Setup in ConFigLN



Host/Workstation Setup in ConFigLN

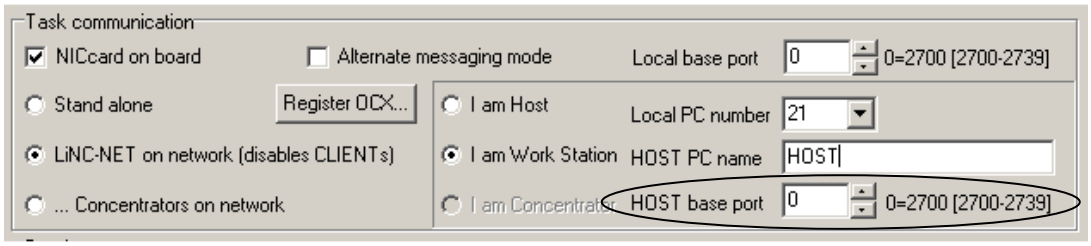


Concentrator Setup in ConFigLN

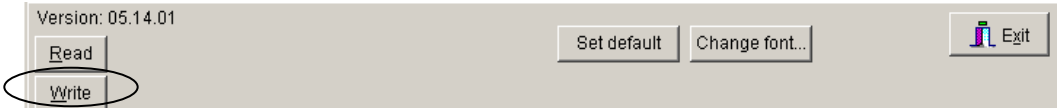
3. Press the **Write** button at the top left of the ConFigLN screen.

4.8.6.2 To create a specific TCP/IP port for a Host/Workstation PC

1. Open **ConFigLN**
2. In the **Task Communication** section of the **Main** screen, select the **Host base port** to the unique number that was set in the **Host** computer.



3. Press the **Write** button at the top left of the **ConFigLN** screen.



4.8.6.3 To assign a specific TCP/IP port to a panel

Once the unique TCP/IP port has been defined in the **Host** computer, assigning the specific port to a panel is a fairly simple process.

5. Open **LiNC-NET**
6. In the **System** menu and proceed to the **Site: Host computer**.
7. In the Port tab, define the chosen **COM port** to the **LAN** setting (under **Type of connection**).
8. Proceed to **Site: Panel**.
9. In the **Hardware** tab of the **Panel** screen, define **Primary Loop** to the same setting as in Step 2.
10. In the **Hardware** tab of the **Panel** screen, under **LAN connection**, enter the **IP** to the unique TCP/IP port that was defined for the **Host** computer.
11. Press the **[✓]** check button to save your changes.
12. Make this change for every **LAN connected** panel.

Site: Host computer: Port

Site: Panel: Hardware

4.9 Updating/Upgrading to LiNC-NET for Windows XP Professional and Vista Business Edition ver. 5.14

The following procedures are compatible with both LiNC-NET Windows XP Professional upgrades, in addition to previous versions (5.05.02 - 5.12.01) of LiNC-NET.

Before beginning the update/upgrade procedures, you should back-up both the LiNC-NET Program Files and the Data files. This precaution will allow you to have all prior LiNC-NET information archived should any mishap occur during the update.

4.9.1 Backing up a LiNC-NET system:

Standalone System LiNC-NET Data Files (At the LiNC-NET PC create a folder Windows XP Professional) on the Hard Disk drive to preserve the currently used data files. This folder should be named Backup. Then copy all data to the backup folder.

Example Copy **C:\LiNC-NETW\Files** (Default location of currently used Data Files) to **C:\Backup** (folder to store current data)

Or

Copy **C:\Program Files\PCSC\5.xx.01\Files** (Default location of currently used data files) to **C:\Backup** (folder to store current data)

Multi-User System LiNC-NET Data Files (At the LiNC-NET PC create a folder Windows-) on the Hard Disk drive to preserve the currently used data files. This folder should be named Backup. Then copy all data to the backup folder. In a Multi-User LiNC-NET system, the data files are stored in a shared folder. This folder is called Files (by default) and this folder is mapped to a Network Drive. Copy the contents of the shared folder Files to the Backup folder.

Example Copy **C:\Files** (Default location of currently used Data files) to **C:\Backup** (folder to store current data)

4.9.2 Setting Runtime Parms in ConFigLN

In order to maintain your existing database when upgrading from LiNC-NET 5.12 to 5.14 it is necessary to be aware of Runtime Parms in ConFigLN.

This will preserve the existing database in case of any problems during the upgrade. You may now proceed to the update/upgrade procedure.

Step A Click on the **Start-Programs-LiNC-NET-INI**. If you have LiNC-NET version 5.08.01 already installed, you will need to observe the Directory of Database field.

Example It will display **C:\LnwFiles** (Default for stand-alone system)
or
T:\ (Default location for a multi-user system)

In either of the above cases, note where the LiNC-NET data files are stored. It will be needed after loading the LiNC-NET 5.14 software.

Step B Install the software as described at the beginning of this manual.

For a multi-user system the Borland Database will need to be configured to permit the LiNC-NET Database to be shared from a mapped network drive. This is accomplished by setting the NET DIR parameter to **T**:\ (See the **software installation** section of this manual for configuring the Borland database).

For a stand-alone system the Borland Database has to be configured to permit the LiNC-NET Database to function apart from a mapped network drive. This is accomplished by setting the NET DIR parameter to **C**:\ (See the software installation section of this manual for configuring the Borland database).

Step C Click on **Start-Programs-LNv5_14_xx-ConFigLN** using the noted location where the LiNC-NET data files reside (refer to Step A). LiNC-NET 5.14 is configured to point to the existent database. Located in the **Database** section, click on the **Find Folder** button. Select the appropriate hard disk (example **C**:\ or **T**:\) and, if applicable, click on the appropriate folder and the existing LiNC-NET database files will be viewed on the right side of the screen. Click on the File option of the Get Data Base directory dialog box. Click on the OK option. The Get Data Base directory dialog box will close and the screen will return to the ConFigLN page. The Data Base section will now indicate the location of the pre-existing database as noted in Step A. Click on the Write button to record the modifications of the ConFigLN to the Hard Drive.

NOTE If this is a multi-use system, click on the Use Shared Drive field. Then click on the LiNC-NET on Network button located in the Task Communication section. To record the changes made to ConFigLN, click on the Write button.

Step D To permit the now upgraded LiNC-NET for Windows XP Professional and Vista Business Edition, ver. 5.14 software to use the pre-existing LiNC-NET data, the database will have to be reorganized. Located in the Database section, click on the Create button. This brings u p the Create DataBase screen.

Extreme care must be exercised to prevent accidentally erasing LiNC-NET data. If this should occur, the previous backup will need to be restored before proceeding!

Select the Reorg file tab. Click on the Start Reorg button. The screen will momentarily flash and the hard drive will be accessed as the LiNC-NET Database is reorganized.

When the hard drive stops, click on the Files tab. Click on the Deselect All button. Refer to the upgrade reference chart to determine which files must be selected to complete the upgrade process. Note that this is determined based upon the original software version. Click on the appropriate file(s) ONLY according to the chart. If an inappropriate file is accidentally selected, clicking on it again will deselect it.

4.9.3 Upgrade Reference Chart - Required Files to be Created from Earlier Versions

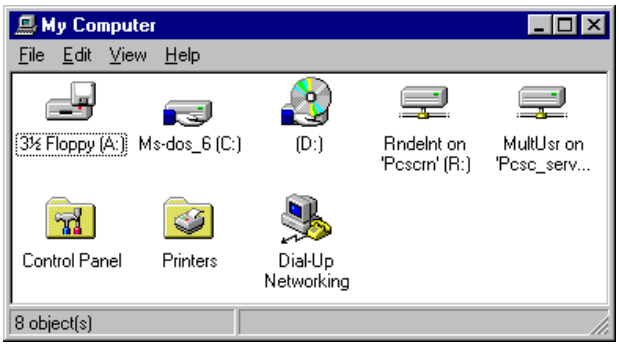
*When upgrading from versions 5.04.03, 5.04.05, 4.04.01-4.05.02, to **5.14**, the old **proglev.db** file will be deleted. An icon will appear in its place. This icon will reside in the LiNC-NET program called PROGRAM LEVELS. A copy of the old **Proglev.db** must be made to assure accuracy when keying information into the program levels field.

Once all appropriate files have been selected, click on the **Main** folder. Click on the **Start** button. The screen will flash as the selected files are created. When the process is complete the screen will clear. Click on the **Exit** button to return to **ConFigLN**.

Click on the **Exit** button again to return to the desktop. This completes the upgrade procedure. LiNC-NET 5.14 should now be launched and, after logging on, verify that all previous information was retained. If necessary, re-type the **Program Level** information in the **Program Level** screen.

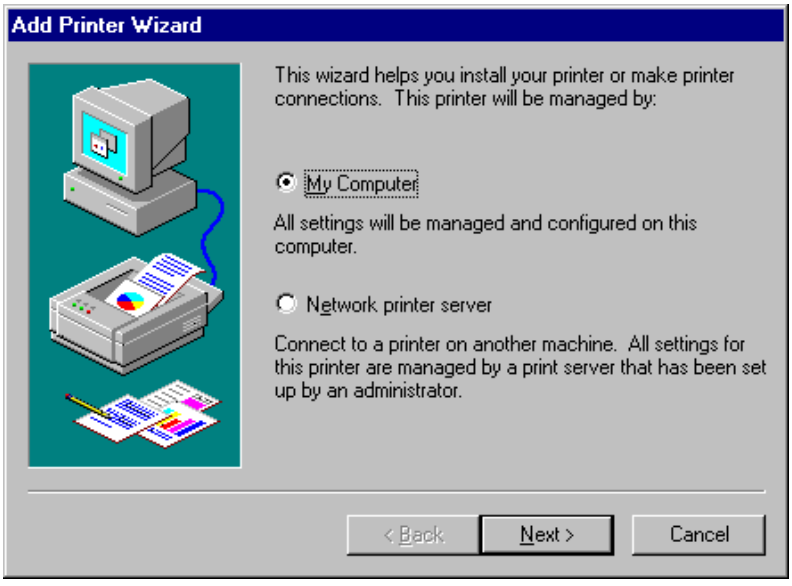
4.10 Printer Text Setup

To set the proper printer text, click on the Windows **My Computer** icon and double-click on **Printers** icon.



Double-click on the **Add Printer** icon.

Follow the prompts in the **Add Printer Wizard** file. Select **Generic/Text Only** or the Manufacture/Model that correctly identifies your printer. Press **Install**. The text setting is now defined.



4.11 UPS Shutdown Software

In order to prevent database corruption caused by sudden power surges and failures, PCSC has created a software patch that will work with PowerChute UPS shutdown software and other analogous brands. To learn the proper setup of UPS software and how to install the LiNC-NET software patch, reference the user manual of your particular brand.

To access the PCSC LiNC-NET Shutdown software patch-

1. Right-click the Start button on your Windows desktop.
2. Open Windows Explorer.
3. Using Windows Explorer, open the folder containing the LiNC-NET database files. The default location for most systems is **C:\Program Files\PCSC\ version 5.14.xx**.
4. Select the **Shutdown.exe** file.
5. Right-click the file and select Copy.
6. Place the PCSC Shutdown.exe file in the appropriate folder for use with the UPS shutdown software (see UPS software manual for appropriate location).

5.0 Configuring your Panel(s) with ConFigUL

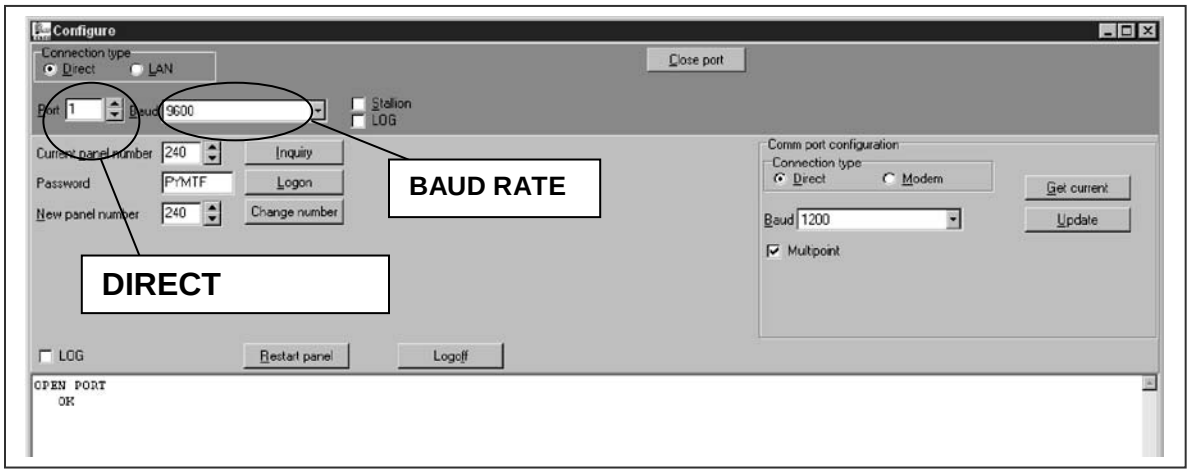
- Connecting to a Panel through a Direct Connection (RS-232 and RS-485)
- Connecting to a Panel through a LAN (Local Area Network)
- Changing a Panel's Number
- Changing the Panel's Password
- Changing the Direct Connection/MODEM Configuration
- Changing the Connection Baud Rate- MODEM/Direct
- Add/Change Panel Modem Telephone Numbers
- Logging Off from a Panel
- Exiting ConFigUL

ConFigUL ConFigUL was created by PCSC to set options within each panel, such as the communications Baud rate, password, address and Direct Connect/AutoDial communications method.

NOTE: Modem configurations for the LiNC-NET system have not been evaluated by UL and are not suitable for UL1076 installations.

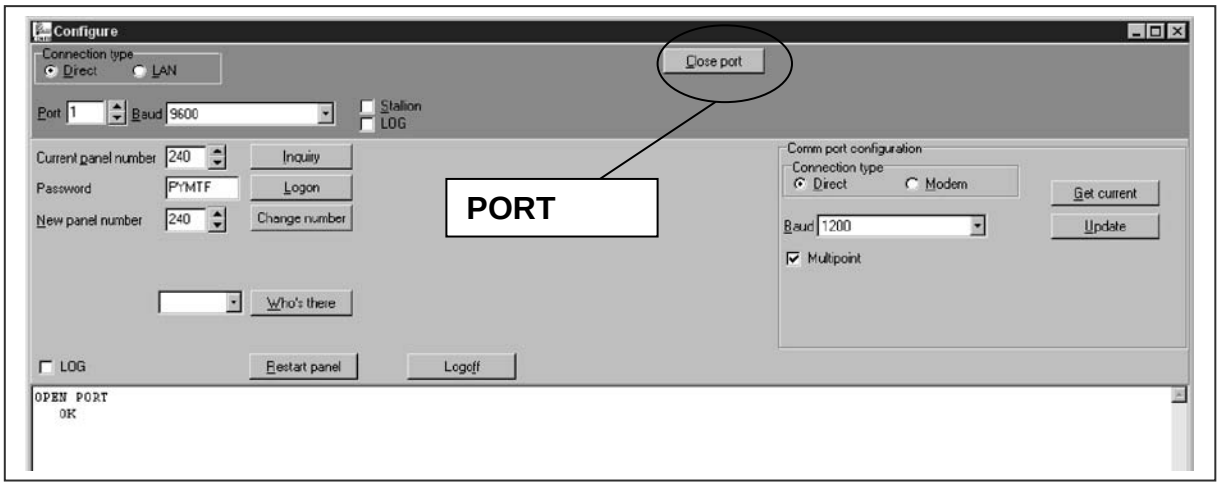
5.1 Connecting to a Panel through a Direct Connection

1. If the connection is **Direct Connect**, click on the **Direct** button.



2. Enter the port number (i.e. **COM 1**, **COM 2**, **COM 3** or **COM 4**) that you are using for the Direct connection and select the Baud rate (factory default is **9600**).

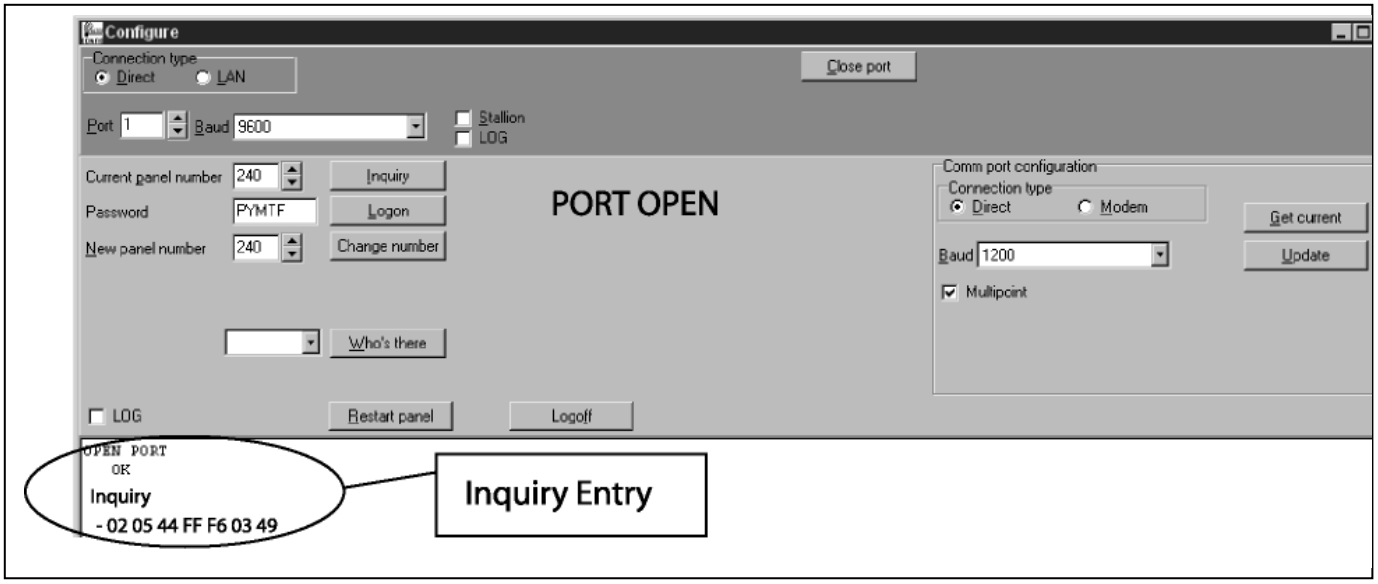
3. Select the **Open Port** button. The display will expand to illustrate various configuration parameters.



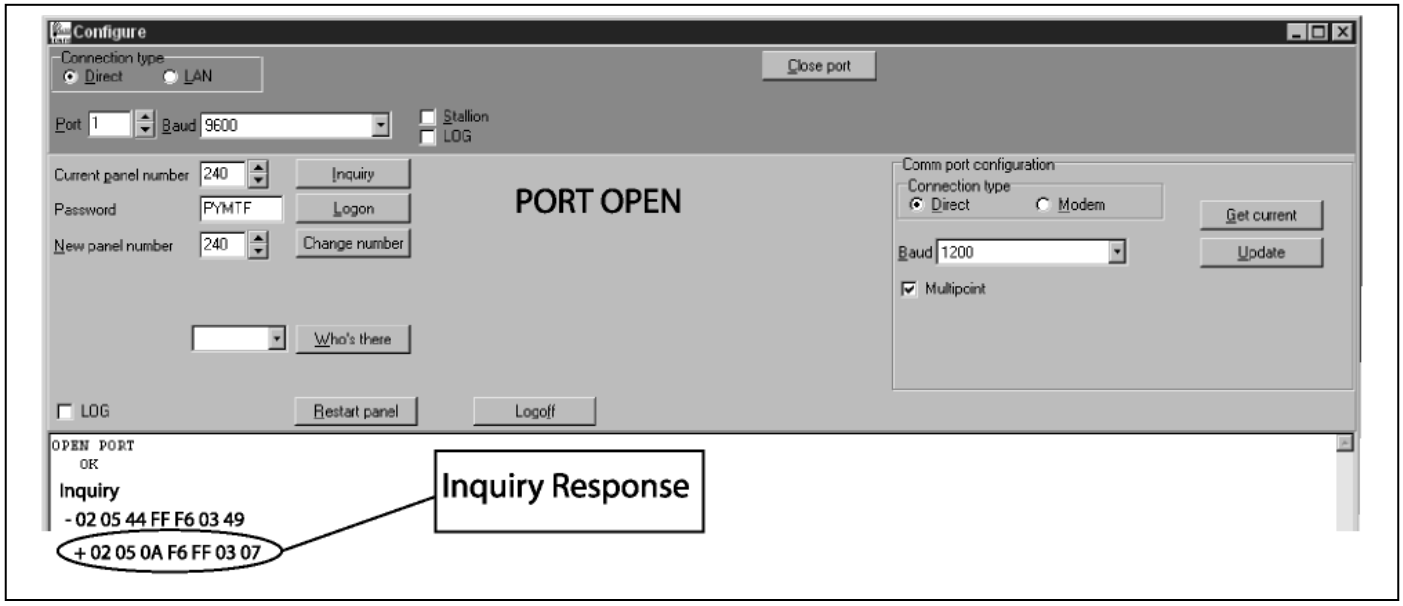
4. Check to see which Panel(s) are connected to the computer by selecting the **Whose There** button. This will send a signal to every panel connected to the system at that time and request a return signal.

5. In order to configure a panel, you must type the current number of the Panel connected to the selected port (provided that you know what it is). Type the panel number that you want to configure (1 - 200) in the "**Current Panel Number**" block.

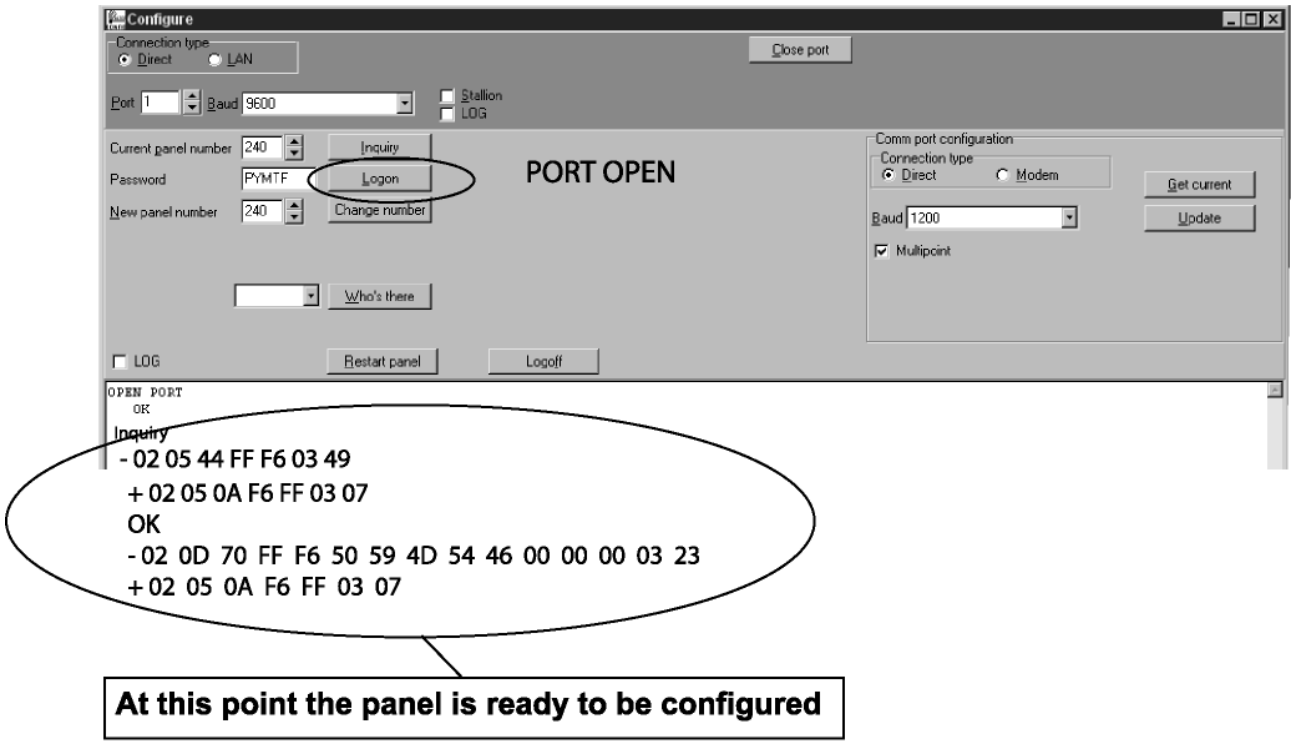
6. To confirm the number, click on the **Inquiry** button. The system will confirm the current panel number first with a '-' prefix and display a '+' prefix if the number is correct.



In the example, the Inquiry reflects a correct panel number entry (first a '-' prefix) and confirms the correct entry (with a '+') prefix.

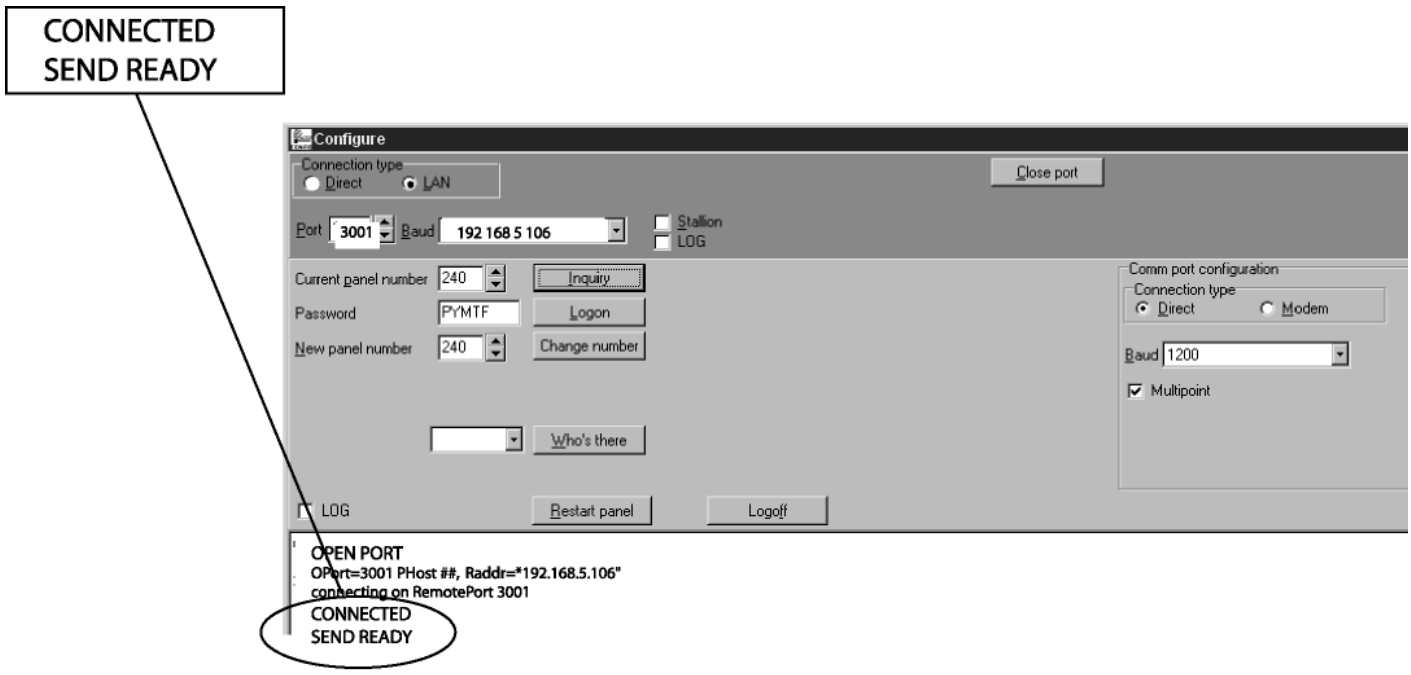


7. At this point, you need to type in the panel's password. All panels are shipped from factory with the default password **PYMTF** (It will be discussed later in this chapter how to change a panel's password). Type in the panel's password and press the **Logon** button.

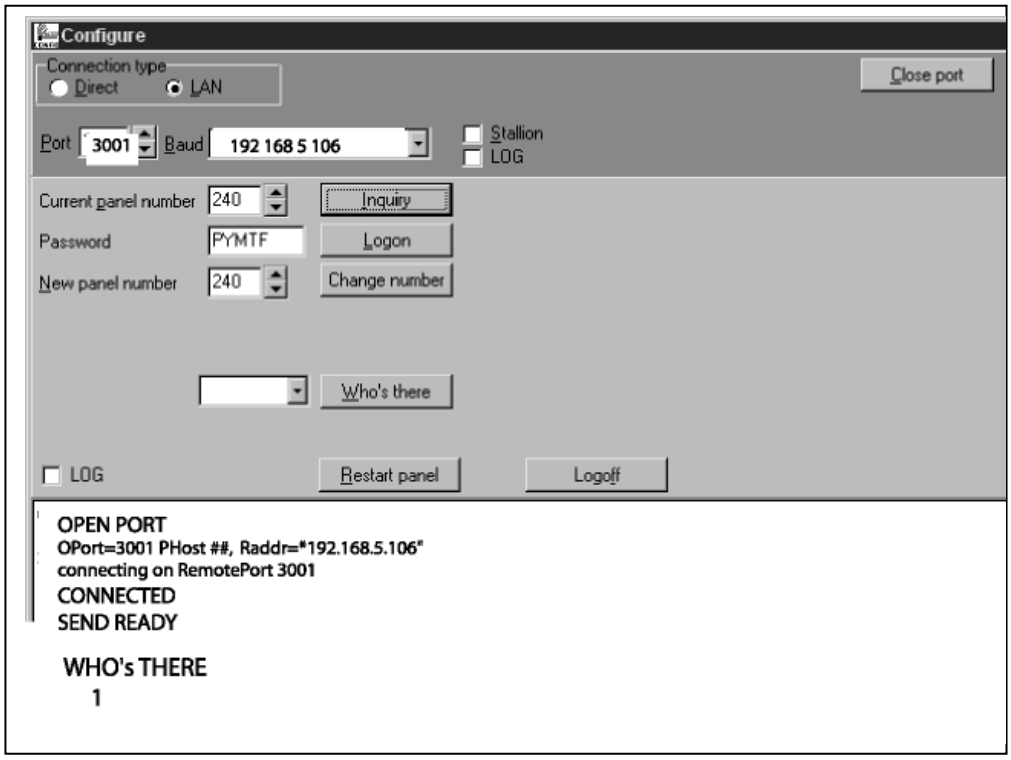


5.2 Connecting to a Panel(s) through a LAN Connection

1. Click on **LAN** under **Connection type**.
2. Select the port number (**2001** for Ultimate, **3001** for Lantronix or Black Box).
3. Type the IP address (if you don't know the IP address to set, see your network administrator). Click on the **Open Port** button. This screen will confirm the connection by displaying the IP address and the port number.
4. Check on **Terminal Serve** (if you are using this kind of device) so that the panel will interface the network.



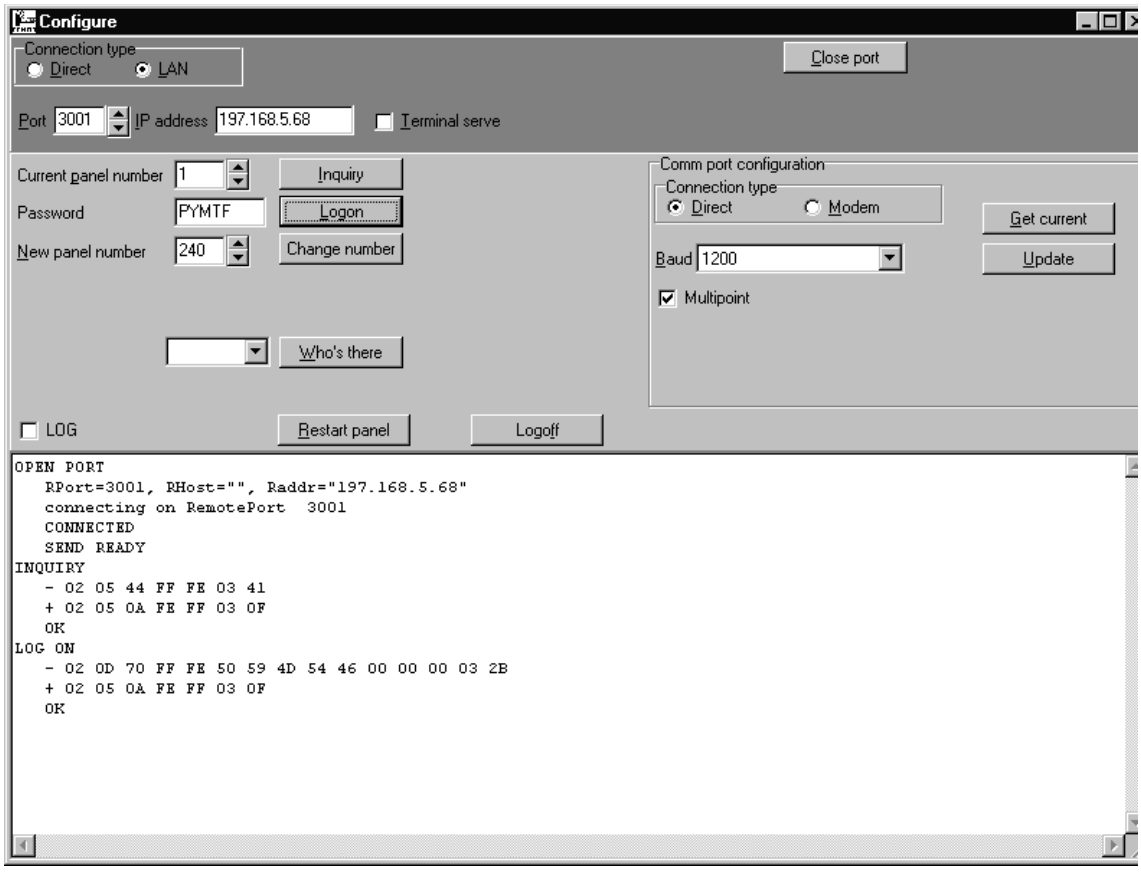
5. Check to see which panel(s) is connected to the computer by selecting the **Who's There** button. This will send a signal to every panel connected to the system at that time, and request a return signal.



6. The first entry required is the current number of the panel connected to the selected port. Type the panel number that you want to connect to in the "**Current Panel Number**" block.

7. To confirm the number click on the **Inquiry** button. The system will confirm the current panel number first with a '-' prefix and display a '+' prefix if the number is correct. **Inquiry** reflects a correct panel number entry (first a '-' prefix) and confirms the correct entry (with a '+' prefix).

8. At this point, you need to type in the panel's password. All panels are shipped from the factory with the default password PYMTF (It will be discussed later in this chapter how to change a panel's password). Type in the panel's password and press the **Logon** button.

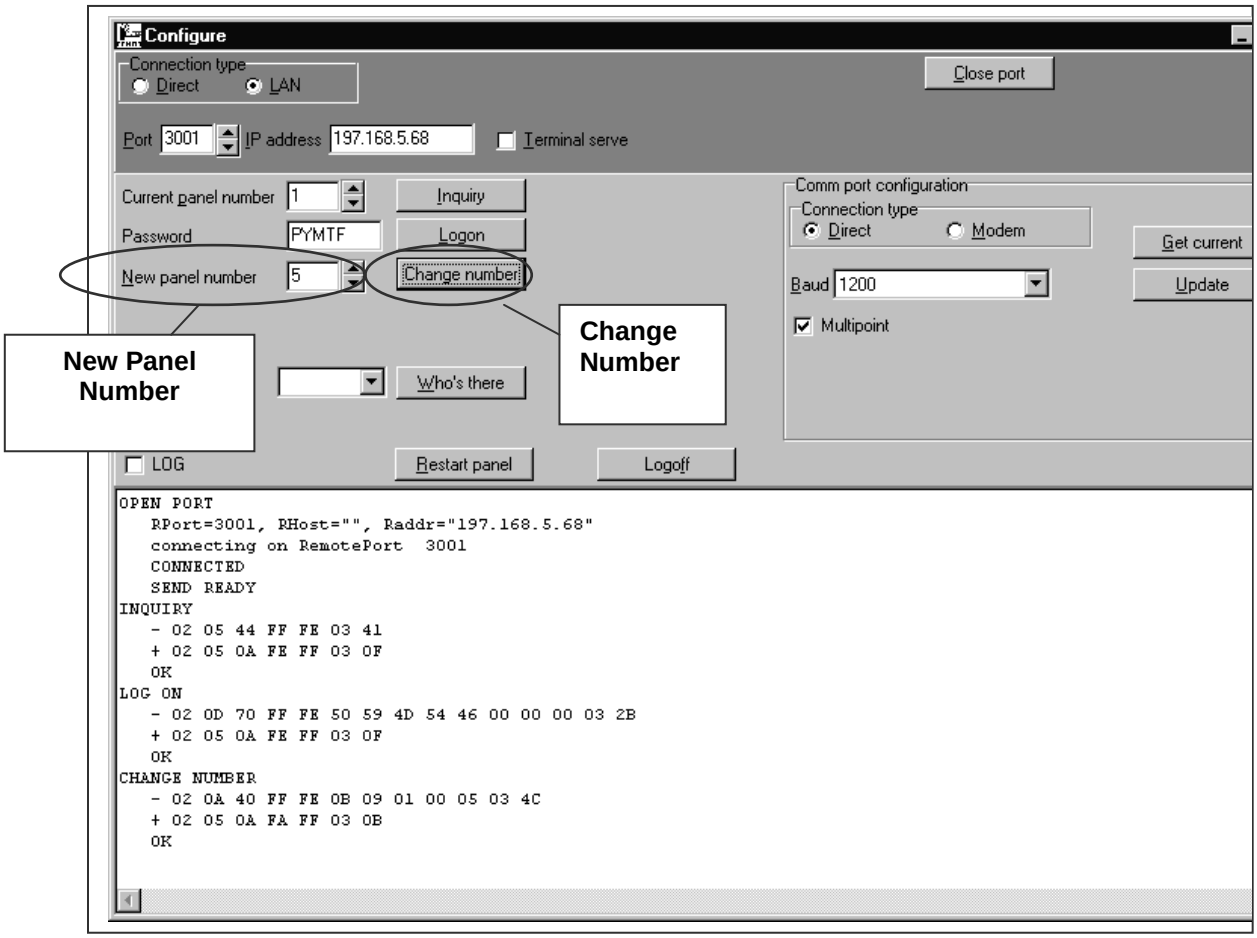


At this point the panel is ready to be configured.

5.3 Changing a Panel's Number

To change the current number of a controller or the default number, you must:

1. In the **Current Panel Number** window, type the present number (1-200) of the panel.
2. In the **New Panel Number**, type the number (1-200) you want to assign.
3. Click on the **Change Number** button.
4. Under the **Change Number**, you will see two lines starting with '-' and '+' followed by a last line stating OK. This means that the panel has been modified successfully.
5. Click on the **Restart** button to implement the modification(s).



5.4 Changing the Panel's Password

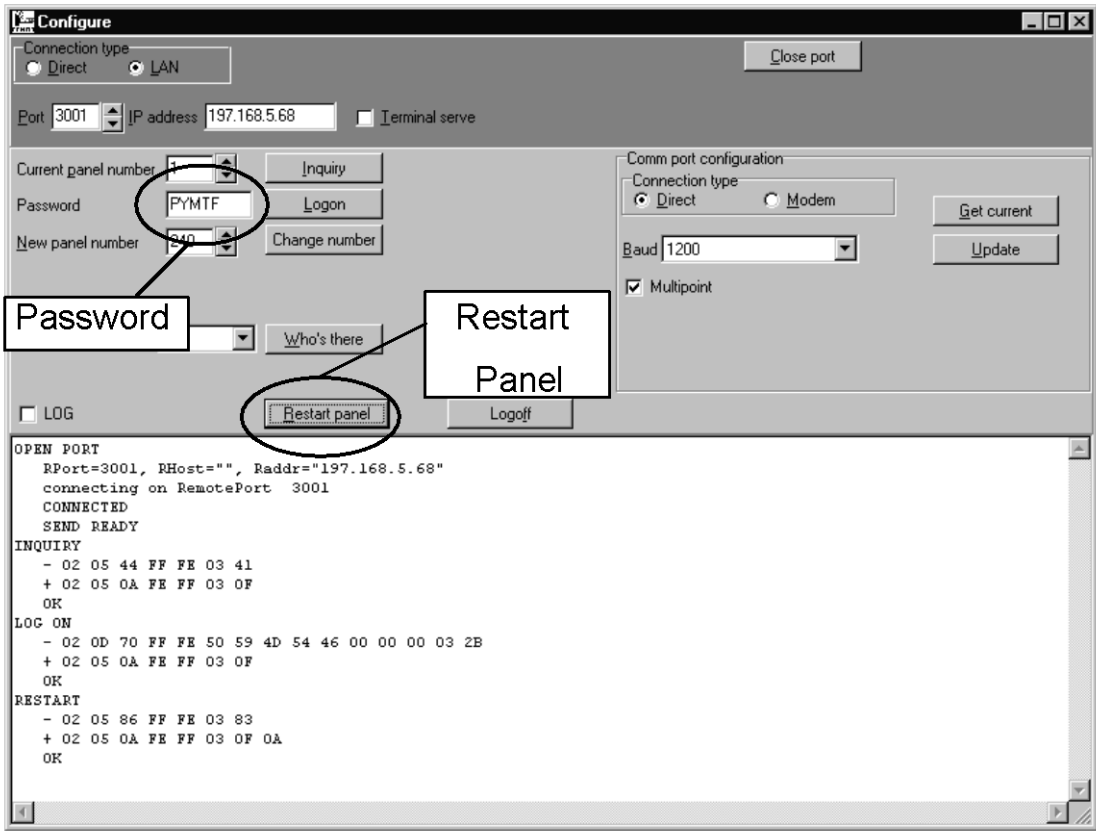
A default password of PYMTF is set for every panel at the factory. However, if you need to change the password to a particular panel, it's an easy process. Once you have logged onto a panel (using its current password) you can change the panel's password in a few simple steps.

1. In the **Password** box, delete the current password.

2. Type in the new password (a maximum of 8 characters). Be aware that the password is case-sensitive.

3. Click on the **Restart Panel** button to implement the changes to the panel.

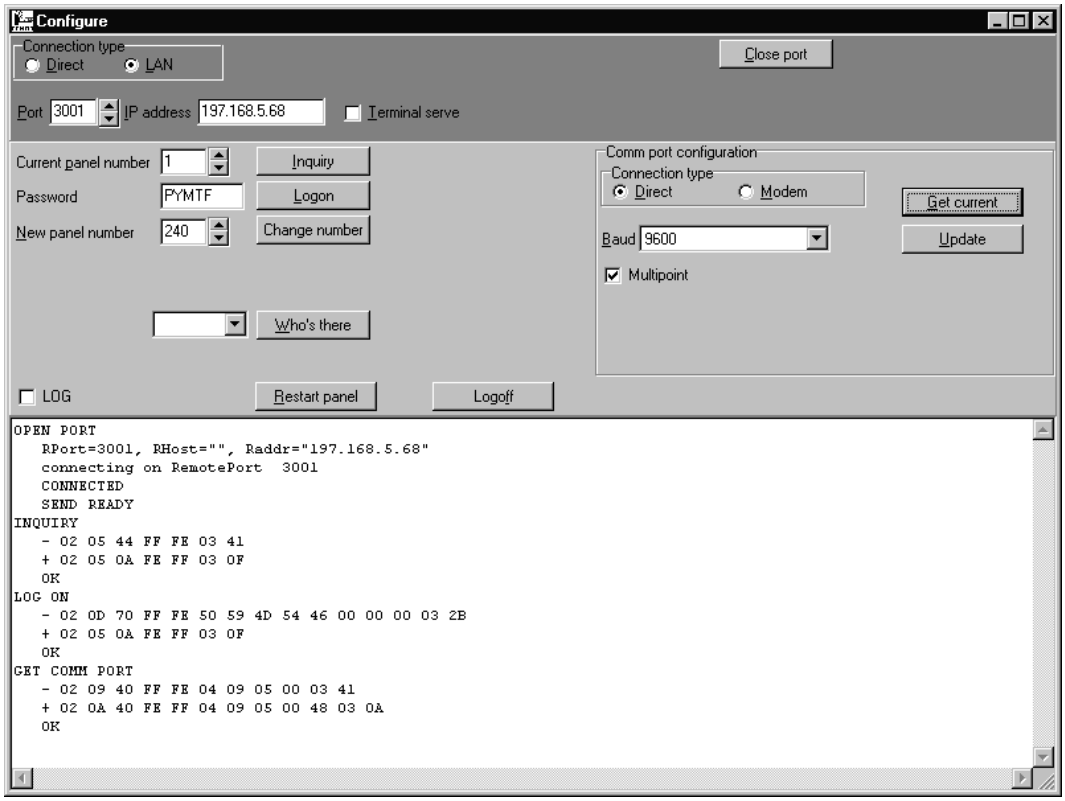
> **NOTE** Once you change a password from its default (**PYMTF**), you must make the change in the **Panel Setup/Features** screen before it will communicate to the LiNC-NET.



5.5 Changing the Direct Connection/MODEM Configuration

To the right of the ConFigUL port section is the Comm port configuration section.

1. Click on the **Get Current** button. The panel will display the panel's current baud rate.



2. Click on the button next to **Direct** or **Modem** to change the connection configuration.

- If you are changing the connection to **Direct** and you using a RS-485 cable between your panels and the Host computer, check the **Multiport** button to allow different panels to share a common communications channel (Multidrop Protocol).
- If you are changing the connection to a modem, a Telephone numbers section will appear in the Comm port configuration square.

3. Click on the **Update** button to implement the changes to the Comm Port configuration.

5.6 Changing the Connection Baud Rate - Modem/Direct

You may find it necessary to change the Baud Rate connection between the host and the panels in either a **Modem** or **Direct** connection. The default baud rate is 9600, however sometimes modem configurations differ or communication is smoother at a slower rate (For example, when telephone lines experience induced noise due to bad weather conditions.).

1. Click on the **Get Current** button. The panel will display the panel's current baud rate.
2. Click on the pull-down screen and select the appropriate baud rate.
3. Click on the **Update** button to implement the changes to the panel's baud rate.

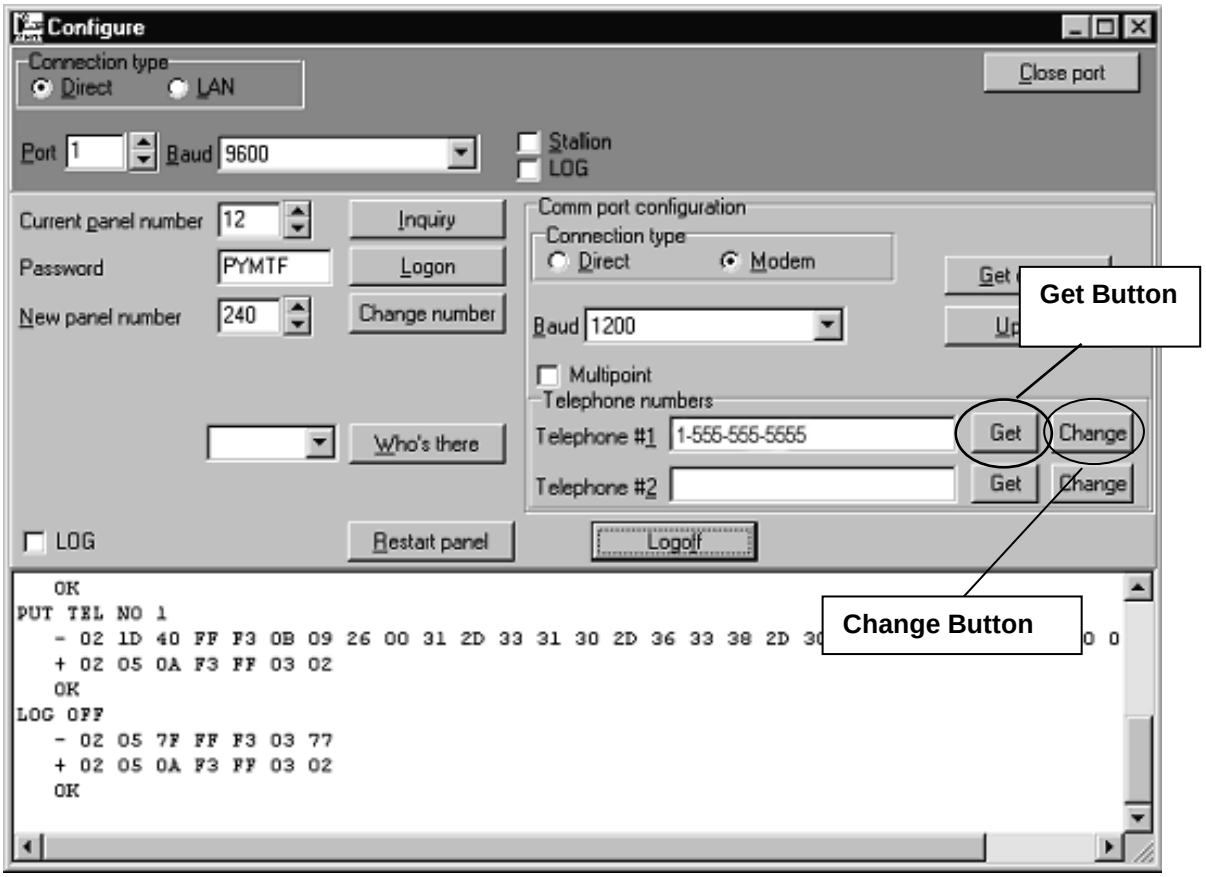
5.7 Add/Change Panel-Modem Telephone Numbers

If you have changed the **Comm Port Configuration** or need to update the telephone number that the panel will dial to the Host computer, you can make changes in the **Telephone Numbers** section.

1. Click on the Get button for **Telephone #1** to confirm the phone number currently being used as the primary modem phone number.

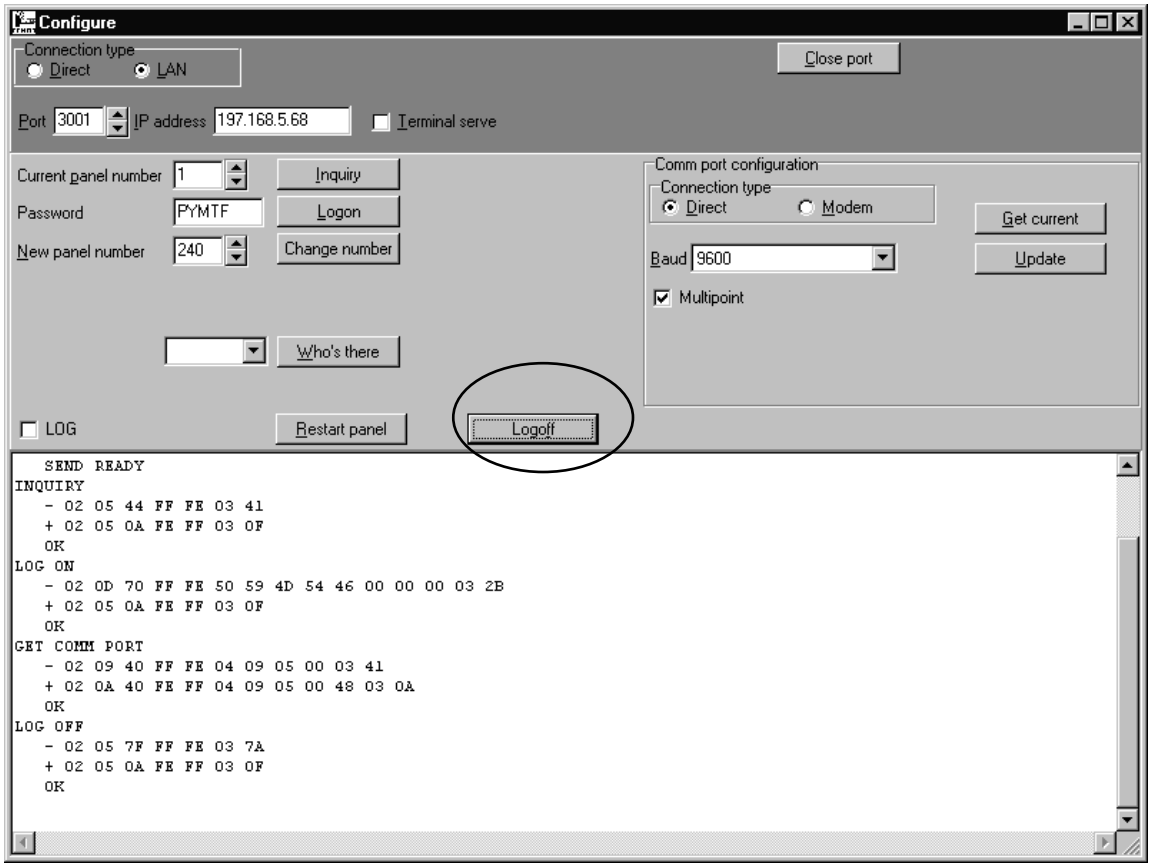
2. If necessary, change the number in the **Telephone #1** box.

3. Click on the **Change** button to implement the changes to the panel's primary modem telephone number



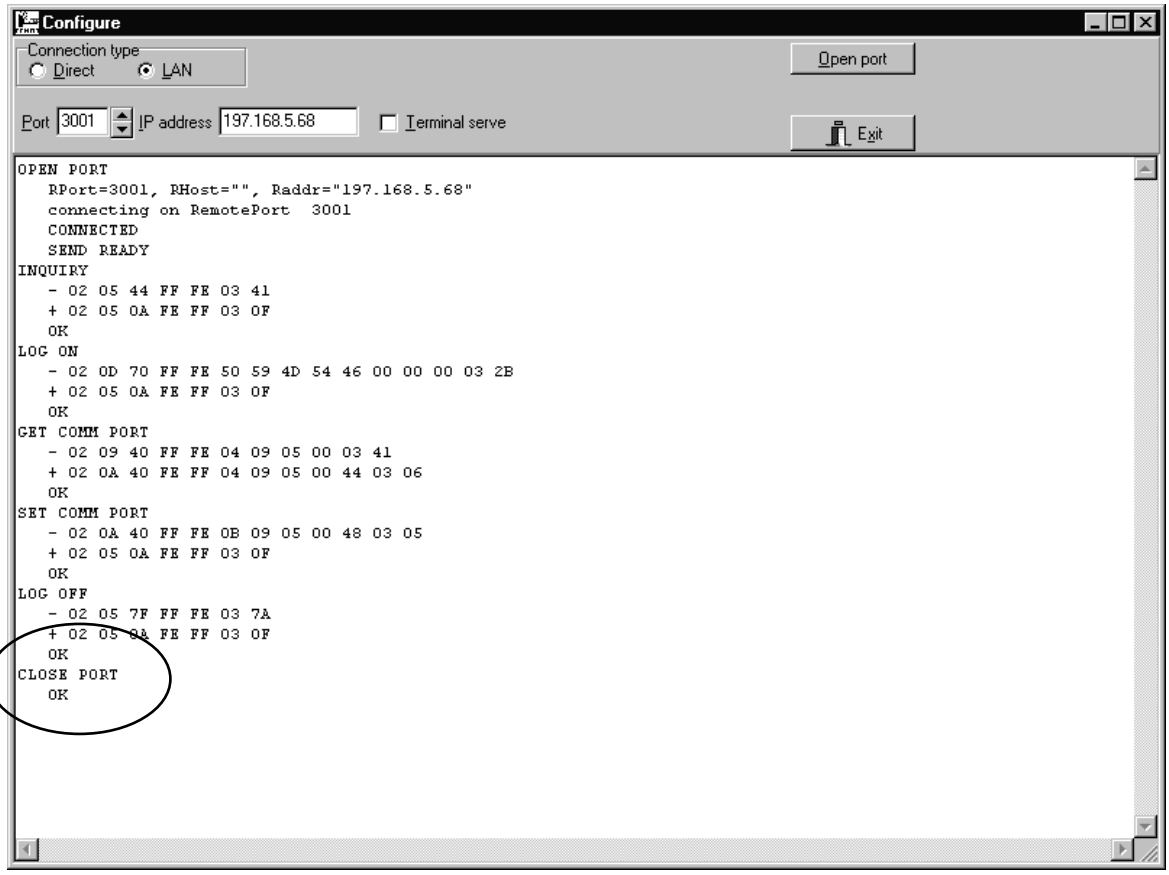
5.8 Logging Off from a Panel

Once you have made all the configuration changes necessary to the panel, remember to click the **Logoff** button to exit the panel. Though the panel will eventually **Logoff** by itself via a timer, you will eliminate any communication complications by logging off properly.



5.9 Exiting ConFigUL

At the end of your session with ConFigUL, click on the **Close Port** button, which ceases your connection to the panels and exits the **Configuration Menu**. You may exit ConFigUL or reestablish a connection using a different connection type (Direct or LAN).



5.10 ConFigUL- Configuration Glossary

Connection Type:

Direct	A connection using a RS232 or a RS485 cable
LAN	A connection through a network

Change — Click on this button when all information is set (Baud rate, connection type, telephone number, if choosing modem). Do not forget to restart the panel after each change.

Change Number — To change the current or default number of a panel, you must:

1. In the **Current Panel Number** window, type the present number of the panel.
2. In **New Panel Number**, type the number you want to assign.
3. Click on **Change Number** button.
4. Under **Change Number**, you will see 2 lines starting with '-' and '+' followed by this last line stating OK. This means that the panel number has been modified successfully.

Close Port — Closes the connection and exits from the configuration menu.

Get Current — Clicking on this button will give the current setting for the panel number set in "Current panel number": Baud rate, connection type, modem information [if set], multipoint state.

IP Address — (LAN connection) Refer to your LAN administrator for the IP address of the terminal server/Ultimate Panel and enter it in this block.

Logoff — Log off from the panel currently connected.

Logon — Log on to the panel to examine or change other settings (Baud rate, Protocol, etc.)

Modem — When this option is selected, it is possible to get/change the current telephone numbers already set in the panel. Don't forget to set the number of the desired panel in Current panel number window before performing any change.

> **NOTE** Do not select Multipoint when the connection type is a modem!

Open Port — When the connection type has been chosen and configured, click on this button to open the port and to configure or modify the actual panel setting.

Password — This password is used for the panel and to log onto LiNC-NET, ver. 5.14 (PYMTF is the default password).

Port — Allows you to select your COM port (Com 1, Com 2, Com 3, Com 4-13, etc.).

Restart — Restart the panel to implement all the information set for the current panel.

Terminal Server	(LAN Connection) Terminal Servers convert serial communication protocols to TCP/IP Ethernet protocol. Click on this option if you are using this type of device.
Who’s There	Allows you to identify which panels are connected (1 to 200). The scroll menu on the left side of the Who's There button lists all the panel numbers found during this task. All panel numbers on the port chosen (whether by direct daisy chain or LAN) will be listed below under **Who's There**.

End of Manual

October 2008