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PREFACE

This manual describes how to use the ManageNet Dispenser Networking Software.

Material in this manual is subject to change without notice. Manual revisions will be made on an as needed basis. Special circumstances involving important design, operation or application information will be released via Equipment Technical Bulletins.

If the equipment is used in a manner not specified by Beta Technology, the protection provided by the equipment may be impaired.

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GETTING STARTED

INTRODUCTION

ManageNet allows you to connect all of the dispensers at a single account site into one network and communicate with the network from a local or remote PC.

DIFFERENCES IN NEW VERSION OF SOFTWARE

1. ManageNet 3.1 operates only with Windows® XP and Windows® Vista.
2. With ManageNet 3.1, any consumer modem that can be installed and operated with the operating systems mentioned in #1 can be used for the PC modem, including USB modems.
3. ManageNet 3.1 features new reporting software that uses an XML text-based data format.

PC REQUIREMENTS

- Windows XP or Windows Vista.
- A CD ROM drive from which to install the program.
- For local connections, an available serial or USB (requires converter) port.
- For remote connections, a modem.

NETWORK INFORMATION

The communication protocol for information coming from the dispenser network is RS-485. This must be converted to RS-232

before connecting to the PC's communication port. There are two ways to do this: with the B&B Model 485COSR Converter (used with older networking software) or with the Protocol Converter/Port Selector. The advantage to using the Protocol Converter/Port Selector is that it allows a modem to be connected to the network so that both a local PC and a remote (via modem) PC can alternately supervise the network. The Protocol Converter/Port Selector automatically switches between the local PC and modem (remote PC), because only one PC can supervise the network at one time.

HARDWARE REQUIREMENTS

The following hardware is required to connect the dispensers to form the dispenser network, and to connect the dispenser network to a remote or local PC.

Two-conductor, 22-gauge (CSA 0.35mm²) twisted-pair cable to link the dispensers in a daisy chain. This cable runs between all of the dispensers, connecting at each on the Main or Model 100 PCB's RS-485 two or three-conductor Phoenix Connector, or the dispenser's terminal block. Shielding is not required, except in extreme applications.

If Using the B&B Model 485 COSR Converter

- An RS-485 cable is used to connect the Converter to the dispenser network. It may be necessary to extend this cable to cover the distance between the dispensers (probably located in the wash aisle) and the PC (probably located in an office) using 22-gauge (CSA 0.35mm²) cable.
- These converters are commercially available.
- The RS-485 to RS-232 Converter B&B Model 485COSR and power supply. This may be a direct connection but a generic 25- to 9-pin adapter and/or a short cable may be required or desired depending on the PC configuration and access to the communication ports. The RS485 to RS232 Converter should be located near the PC.

If Using the Protocol Converter/Port Selector

- The cable connecting the dispenser network to the Protocol Converter/Port Selector is two-conductor, 22 gauge (CSA 0.35mm²) twisted-pair cable. The Protocol Converter/Port Selector should be located near the PC.
- The Protocol Converter/Port Selector and power supply.
- Serial cable with either a 9-pin or a 25-pin female D connector for the PC side and a 25-pin male D connector for the Protocol Converter/Port Selector side.

CONNECT THE DISPENSER NETWORK

1. The RS-485 connection provides the basis for communication between the dispensers and the PC. The ILS (Industrial Laundry System) is manufactured with the RS-485 connection wired directly from J10 on the Model 100 PCB to a 5-pin DIN connector on the front panel. If this is the case, remove this connection before wiring the

dispensers together. Other dispensers have the Model 100 PCB's RS-485 port available at a terminal block. See Figure 1 to locate your dispenser's network connection. Figure 1 shows a dispenser network with four styles of dispenser. It also illustrates the RS-485 to RS-232 conversion using both the B & B Converter and the Protocol Converter/Port Selector.

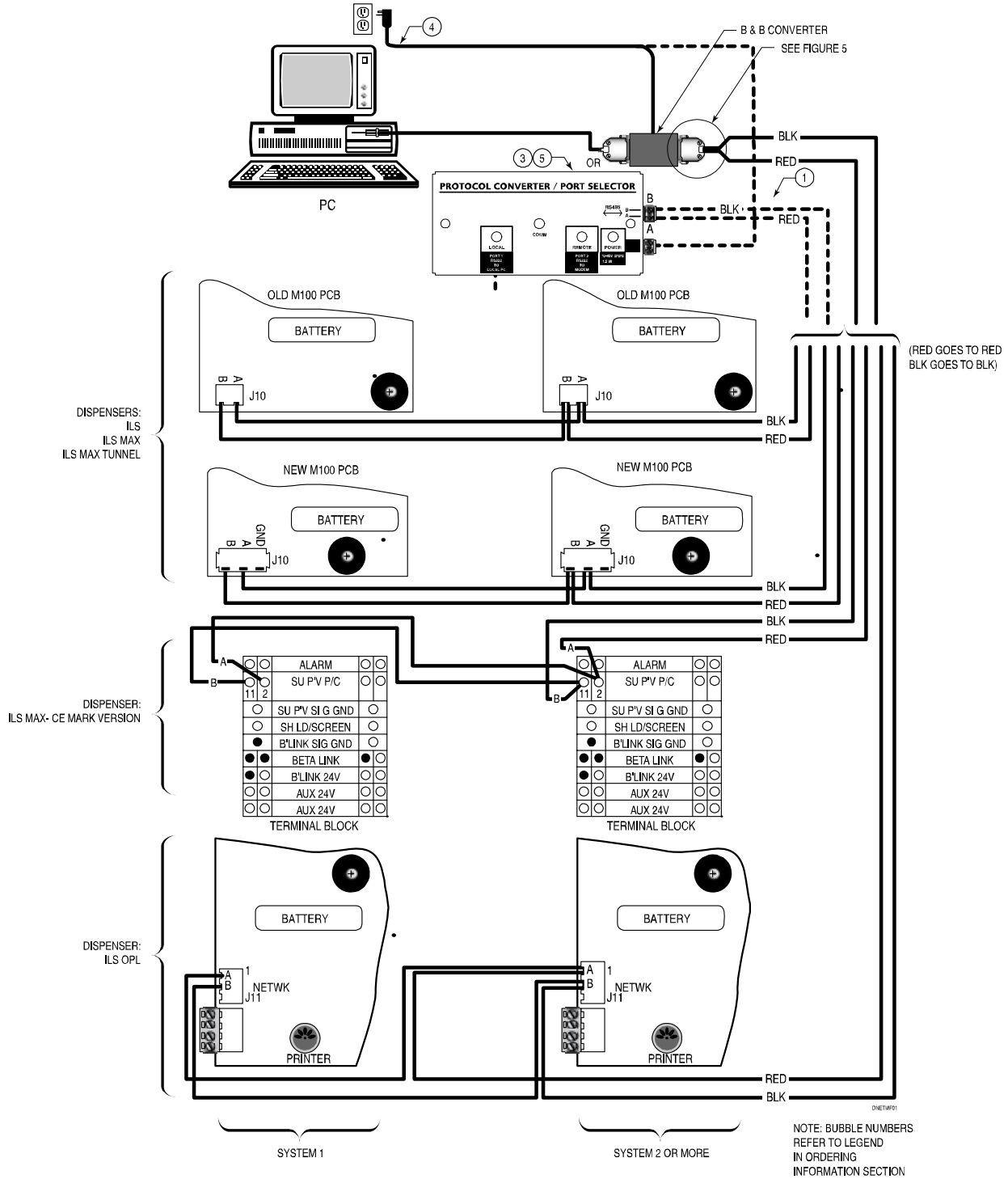


Figure 1. Dispenser Network Connections

- Disconnect power to all of the dispensers and locate their network connections. Remember that these connections are polarized. Connect A of one unit to A of the next unit and B to B. (The polarity markings are visible when the connector portion is disconnected from the PCB). Disregard +/- designation. You can also connect different model dispensers into a network, as shown in Figure 2. Take special note of polarity connections between units (see Figure 3). You may need to lengthen your RS-485 cable to accommodate the new network. Use a 22-gauge (CSA 0.35mm²) twisted-pair cable. Refer to Figure 5 for exact wiring details.

NOTE *The various dispensers are daisy-chained in parallel (see Figure 3). The order of connection is not important, nor is the point at which the computer connection is made.*

- You will now need to change the network address of each dispenser to a unique, nonzero number. Do this at the dispenser's front panel. Go to program mode (refer to the dispenser's Installation and Operating manual). Scroll to the Account ID menu and change the network ID. It is recommended that the dispensers be addressed sequentially beginning with 01, but it is not necessary that the PC be directly connected to the dispenser with Network ID 01. The maximum number of network ID's is 30.

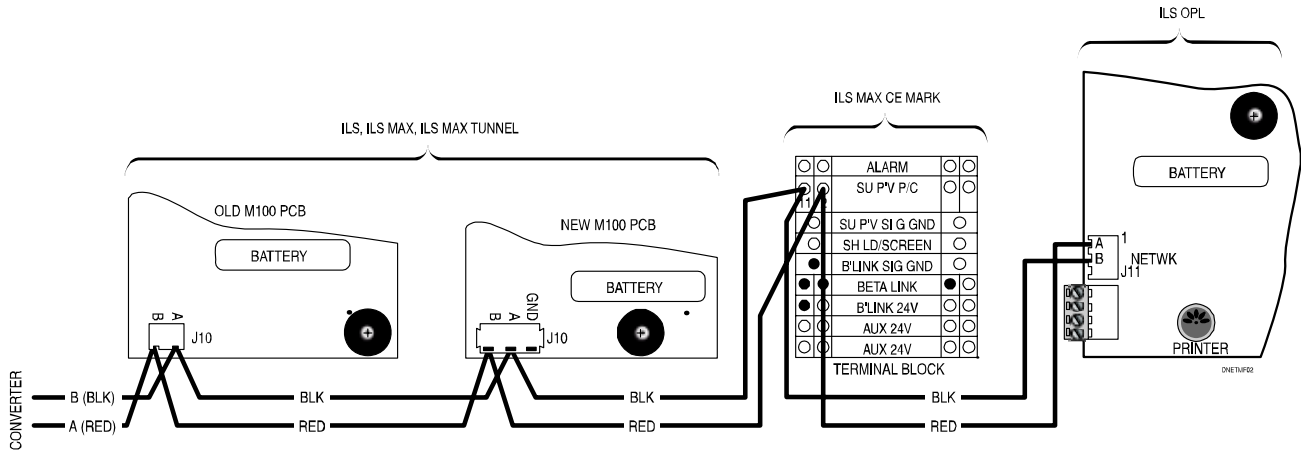


Figure 2. Multiple Dispenser Models in a Dispenser Network

UNIT OR PCB	CONVERTER TERMINAL A (RED)	CONVERTER TERMINAL B (BLACK)
Old Model 100	B	A
New Model 100	B	A
ILS Max CE	2	11
ILS OPL	A	B

Figure 3. Connection Polarities

Connect the Dispenser Network to a Local PC Using the B&B Model 485 COSR Converter

Refer to Figure 4. Connect the 25-pin D-connector end of the cable to the RS-485 side of the Converter. You may need to lengthen your RS-485 cable to accommodate the new network. Use a 22-gauge (CSA 0.35mm²) twisted pair cable. Refer to Figure 5 for exact wiring details.

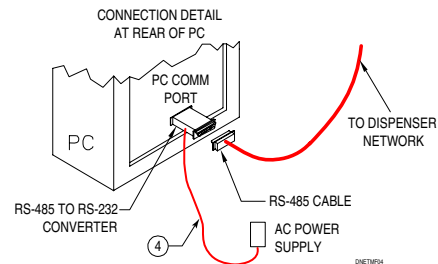


Figure 4. Network to Local PC Connection Using Converter

- Plug in the power supply for the Converter.
- Connect the RS-232 side of the Converter directly into an available serial communication port on your PC. You may need to use a 9-pin to 25-pin serial cable if your PC has a 9-pin serial port. (Available at any electronics store.)

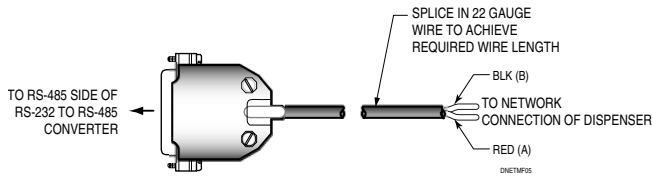


Figure 5. RS-485 Cable

Connect Dispenser Network to a Remote PC Using Converter and Modem

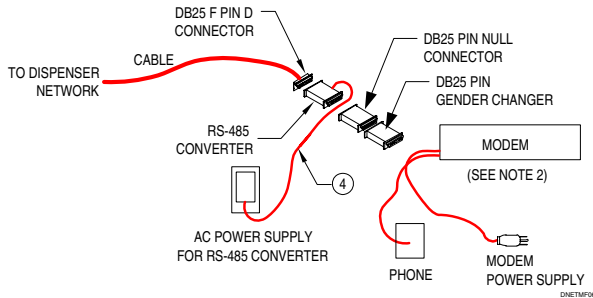


Figure 6. Network to Remote PC Connection Using Converter and Modem

1. Refer to Figure 6. Create the dispenser network as explained above, but rather than connecting the RS-232 side of the RS-485 converter to the PC's serial port, connect it to a 25-pin Null Modem and then to a 25-pin male-to-male gender changer (both items are commercially available).
2. Connect the free end of the gender changer to the serial port of the US Robotics external modem (Classic, Classic V, Sportster or 56k FAX models). Note that the modem must have a bank of 8 DIP switches.
3. Set the modem's DIP switches 1, 3, 7, and 8 down and the rest up.
4. Plug in the power for the modem and connect it to a phone jack.
5. Turn on the modem. Communication between the dispenser and modem will be at 9600 baud, regardless of the modem speed.

Connect Dispenser Network to a Local PC with Protocol Converter/Port Selector

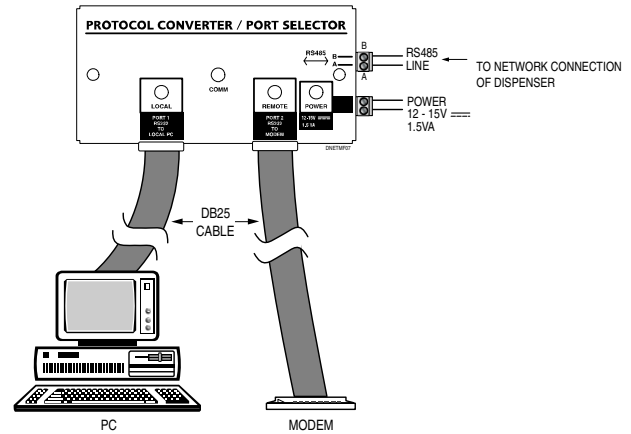


Figure 7. Network to Local PC Connection Using Modem and Protocol Converter/Port Selector

1. See Figure 7. Run 2-conductor cable from the dispenser network to the Protocol Converter/Port Selector.
2. Connect the 485 lines to the Protocol Converter/Port Selector input lines A/B.
3. Power the Protocol Converter/Port Selector using a 12-15 VDC power supply, which are commercially available or may be purchased from Beta Technology. If you purchase the power supply from Beta, you will need to cut off the existing connector, strip the wires and attach them to the Phoenix plug. Polarity of the power supply is unimportant.
4. Connect the female DB-25 LOCAL output of the Protocol Converter/Port Selector to the PC's serial port. You will need a standard 9 or 25-pin RS-232 serial cable to make this connection.

Connect Dispenser Network to a Local and Remote PC with Protocol Converter/Port Selector and Modem

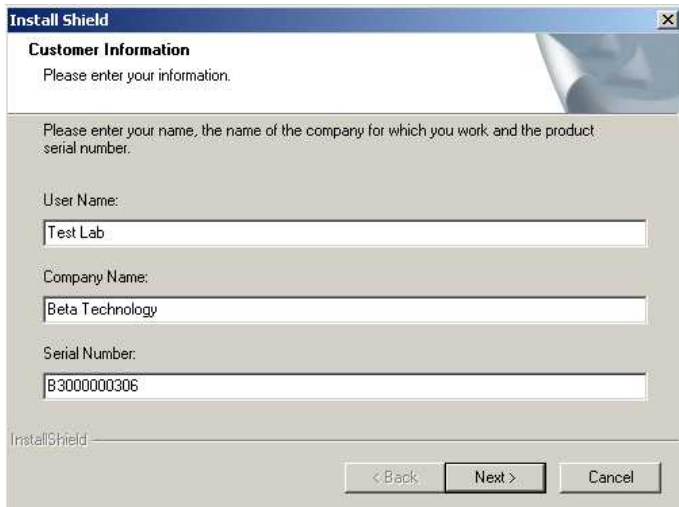
1. Do steps 1 - 4 above.
2. Refer to Figure 7 and connect the male DB-25 remote output of the Protocol Converter/Port Selector to a US Robotics modem (Classic, Classic V, Sportster or 56k FAX models). Use a 25 to 25-pin RS-232 serial cable to make this connection.
3. Set DIP switches 1, 3, 7 and 8 down. All other switches should be up.
4. Plug in the power for the modem and connect it to a phone jack.



When a remote PC connects, it automatically becomes the RS-485 network supervisor; when it disconnects, the local PC regains the supervisor role.

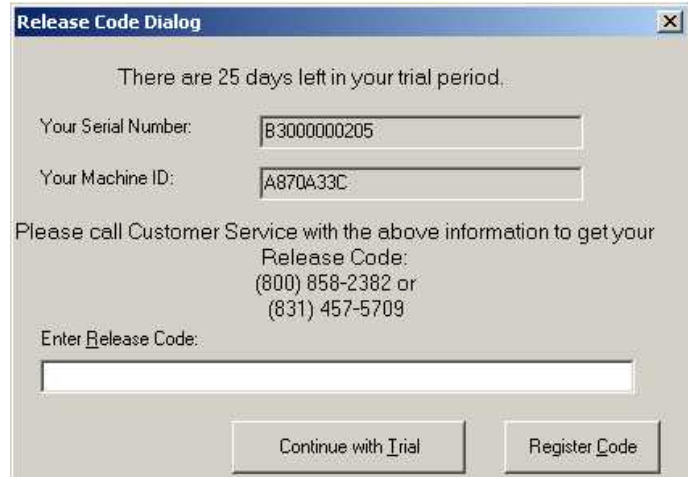
INSTALLING THE SOFTWARE

1. Insert the CD-ROM in the disk drive of your PC.
2. The software will begin an autoinstall sequence.
3. If the autoinstall sequence doesn't start you will need to do a manual install. From the **Start** menu, choose **Settings | Control Panel**. Double click on the **Add/Remove Programs** icon. Windows should automatically find setup.exe on the CD ROM drive. Click **OK** to launch the setup program.
4. Follow the on-screen directions to install the software. Make sure you enter the serial number printed on the ManageNet packaging card accurately. When you complete the setup, remove the CD ROM. Store the CD ROM in a safe location.



The screenshot shows the 'InstallShield' dialog box with the 'Customer Information' section. It prompts the user to enter their name, company name, and product serial number. The fields are filled with 'Test Lab' for User Name, 'Beta Technology' for Company Name, and 'B3000000306' for Serial Number. Navigation buttons for '< Back', 'Next >', and 'Cancel' are visible at the bottom.

5. Once the software is installed and run, the following dialog box will appear each time the software is used and ask for the release code. The software will operate for 25 days without the release code. Contact Technical Support/Services at the applicable phone number listed on the last page of this manual. You will be asked for the software serial number and the PC machine ID number shown in the release code dialog box to receive the proper release code.



The screenshot shows the 'Release Code Dialog' box. It states 'There are 25 days left in your trial period.' It displays the user's 'Your Serial Number' as 'B3000000205' and 'Your Machine ID' as 'A870A33C'. It instructs the user to call Customer Service with this information to get a release code, providing two phone numbers: (800) 858-2382 or (831) 457-5709. There is an 'Enter Release Code:' field and two buttons: 'Continue with Trial' and 'Register Code'.

6. The program is password protected. To log on after installation, select Default Supervisor from the dropdown list as your user name, type "zaybx" as the password and click O.K. For access protection, keep this password private.



The screenshot shows the 'Log On' dialog box. It prompts the user to 'Choose the user log on name:' with a dropdown menu showing 'Default Supervisor'. Below it is an 'Enter Password:' field. There are 'OK' and 'Cancel' buttons on the right side.

7. You should set your personal log on name, password and access level during your first session and thereafter use that name and password to log on.
8. If you have difficulty installing the software, contact your local IT group.

USING THE SOFTWARE

ABOUT THE DROP DOWN MENUS

The Home Screen as shown below is the main control panel. The Home Screen allows you to configure the software, dispensers and networks. You can also work with logged data and view and modify reports. Each dispenser on the Home Screen is presented in its own information box. A graphic image of the dispenser is shown for ease of use. You can double-click the dispenser image to monitor the status of the dispenser continuously. The "live" status information appears in a new window and includes chemical feed information. The number in the top right hand corner of the information box is the dispenser's network ID.



Home Screen



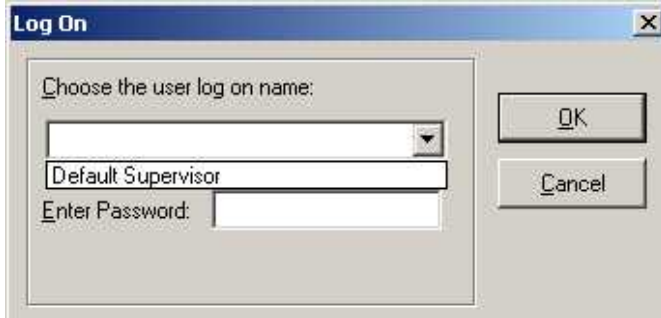
Home Screen, File Dropdown Menu

File

The File dropdown menu contains the **Password**, **Site Setup** and **Save** functions of the software. Each menu does the following:

Change Access Level

Allows user to change access level by entering a new user name and password.



Edit Passwords

Allows user to change and/or edit passwords depending on access level. Logon access to the program is password protected. You can add, delete and change your password and set up access for additional users at an account site.



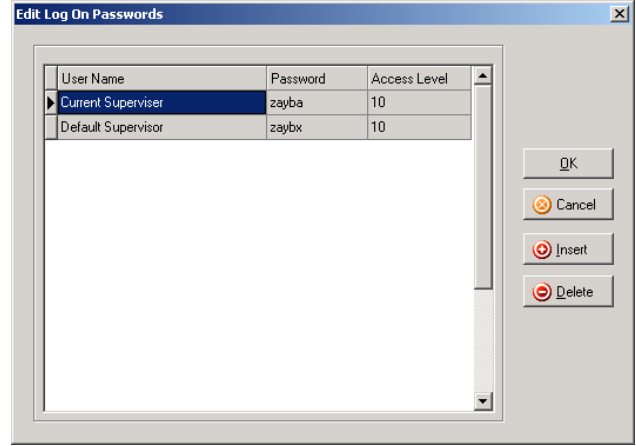
Never delete all the passwords. If you do, you will be unable to logon.



If you delete and replace the default password, be sure to remember the new password or you will be unable to logon.

1. Select **Edit Passwords** from the **File** menu.
2. Click **Insert** to add a new user. Type the user name, a 1 to 5-character password and an access level. Passwords are case sensitive. You can right-click in the **Access Level** field to display a list of access levels. Select one in the list by clicking on it. The possible access levels are:

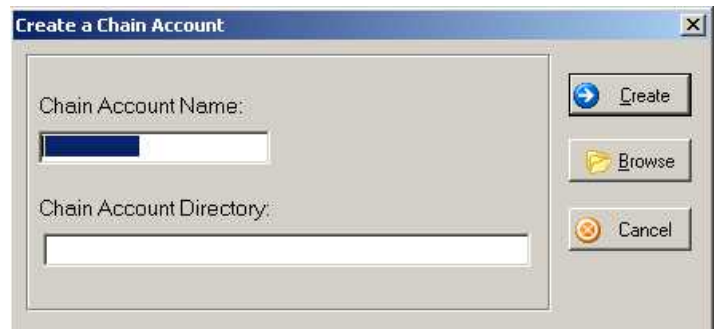
		Access Level #
Viewer	The user can logon but cannot send or retrieve data, do any setups, create or delete accounts, add or remove dispensers, set program options or use the modem.	3
Employee	The user can logon but cannot send setups, copy setups, edit setups, set program options, create or delete accounts or add or remove dispensers. Communications are available.	5
Technician	All communication and editing is available. The user cannot set program options or create or delete accounts.	7
Manager	All functions are available except password editing.	9
Supervisor	All functions are available.	10



3. To delete a user, click in the user name to highlight that user and then click **Delete**. In the confirmation dialog box, click **OK**.
4. To change an entry, click in the field and type the change.
5. When you are finished editing passwords, click **OK**. If you click **Cancel**, none of the changes will be saved.

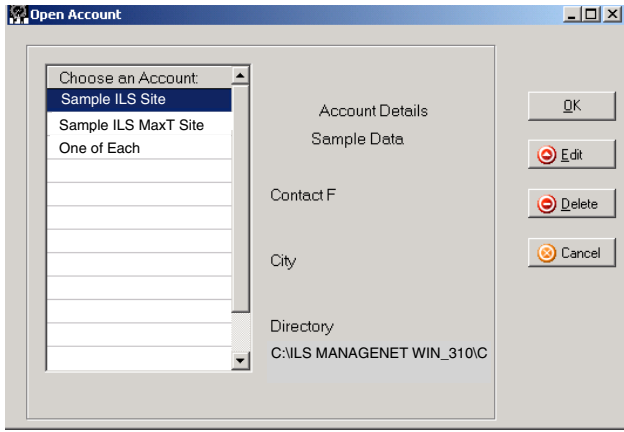
New Chain

Allows user to create new Chain Account names and directories.



Open Account

Allows user to open existing Chain Account. The software will automatically open the last account site that was used. Another existing account site can be opened at any time. Use this dialog box to open an existing account site, to edit an existing account's information, or to delete an account.



1. Select one of the account sites in the list. Details about the selected account are displayed to the right of the list.
2. To open the account, click **OK**.
3. To edit the account, click **Edit**. The program displays the selected account in the **Account Site Information** dialog box. You can change any of the fields as if you were creating a new account. However, you cannot change the site directory field.
4. To delete an account site, click **Delete** or press the Delete key. The program displays a confirmation message. Click **Cancel** or press the Esc key to cancel the delete and preserve the account site. Click **OK** to delete the account site. It is not possible to delete a currently active account. If you try to do so, you will get an error message. The currently active account site is the one displayed on the Home Screen when you choose **Open Account** from the **File** menu.
5. To open the account, click **OK**.

New Account



Allows user to create a new account. Use this dialog box to create a new account site. When you run the program for the first time, you will be taken through the following dialog boxes to initialize an account site.

To add an account site:

1. Click the **New Chain** button in this dialog box to create a new chain. You can also add a new chain by choosing **New Chain...** from the **File** menu.
2. In the Create a Chain Account dialog box, type the chain account name (up to 20 characters). Press the Tab key to move to the chain account directory field.

3. The chain account directory field displays a default subdirectory of the folder in which the executable program resides. The default folder is named **chainX** (where X is a number). You can backspace over this default folder name and give it a more meaningful name, if you wish. You may also use the **Browse** button to search for another location for this chain folder. However, it is recommended that you keep all chain account folders as subdirectories of the program folder.
4. Click **Create**. This creates the new chain and closes the dialog box. The name of the new chain will now appear in the **Chain Name** dropdown list.

To add an account site to an existing chain:

1. Display that chain's name in the **Chain Name** dropdown list.
2. Type a name for the site in the **Site Name** text box (up to 20 characters).
3. Click in (or tab to) the **Site Directory** text box. The program displays a default directory name for this account site. If this is part of a chain account, then the account site will be a subdirectory of the chain directory. You may change the default name (siteX), but it is recommended that you keep the default path.



*You can use the **Browse** button to navigate to the desired path, but be sure to specify a new folder for the new account site. The rest of the information on this dialog box is optional. However, if you will use a modem connection for remote operation of the program, you should fill in the **Modem** and **Password** fields.*

4. For the **Contact** fields, you may type the name, address, city, state and zip code for the customer account. Contact information is optional. If specified, it will appear in reports you generate for this account site.
5. In the **Phone** field, type the contact's area code and telephone number.
6. In the **Modem** field, type the area code and telephone number of the modem at the account site. (If you choose to connect via modem this number will be automatically dialed when you open an account and choose **Connect** from the **Communication** menu or click the telephone speed button on the Home Screen.)
7. In the **Password** field, type the password you will use for remote connection (1-5 characters, case-insensitive).

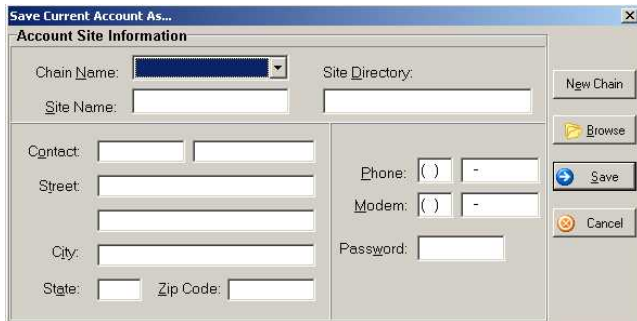


This password must match the password established at the site for dispenser 1. When you attempt to dial the modem, you will be disconnected unless the two passwords match, unless the password is blank in dispenser 1. If you should forget the password, you can reset it at the site and then reenter the new password by opening and editing the existing account. Do not divulge the password to others. It is your safeguard for dispenser access. If the password for dispenser 1 is blank (never set), then no password is necessary to connect via modem. For direct connections, the password is also ignored, though it can be set.

- Click **Create** to create this account site.
- The program asks you to specify how many dispensers exist at this site. Use the up and down arrows to display the correct number (you can always add more later), then click **Next**.
- The program asks you to choose the type for each of the dispensers. Use the dropdown list to select the right type of dispenser. If there is another dispenser, click **Next** and select a type. When you've selected a type for the last dispenser, the **Next** button changes to **OK**.
- Click **OK**. The account site is created, setup tables are initialized with default values, and the Home Screen is displayed.

Save As

Allows user to save an Account in a different directory and name. Use this dialog box to save the current account site's setup files to use as a template for other account sites. You can save the setup tables from one site in a chain to another site in the same chain or to a different chain.



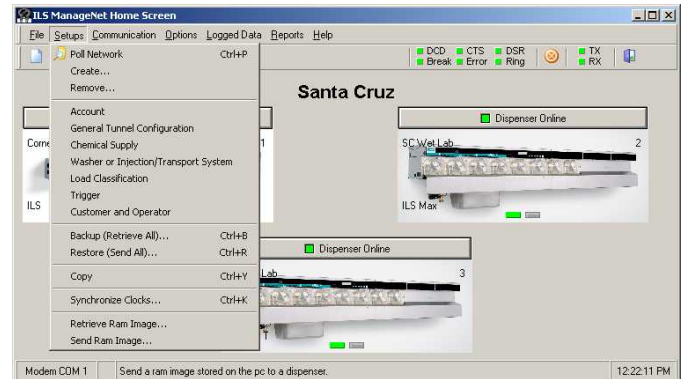
- Choose **Save As** from the **File** menu.
- Select the name of a chain in the dropdown list or click **New Chain** to create a new chain. Fill out the rest of the dialog box the same as for creating a new account. Be sure to give this new site a new site directory. You can create a new site directory automatically by pressing the **Tab** key while in the **Site Name** field.

Exit

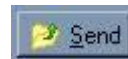
Allows user to exit the software program. The last 5 accounts used are listed between the "Save As" and "Exit" options in the **File** dropdown menu.

Setup

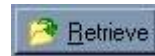
The Setup dropdown menu allows the user to setup networks, dispensers, tunnel configurations and accounts. On the setup screens, if a field is white, you can enter data there. If a field is gray, you may not change it.



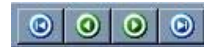
Setups screens all have a toolbar with similar buttons. The only difference is that some have more than one set of navigator buttons.



Click **Send** to transmit setups. If you are on the account, chemical or washer setup screen, only the setups for the current dispenser are sent. If you are on the classification or trigger setup screen, only the setups for the current washer are sent.



Click **Retrieve** to get setups from the account site. Depending on the setup screen displayed, this type of setup is retrieved for every active dispenser.



Use the navigator buttons to display the first, prior, next or last record of the type identified to the left of the buttons.



Cancel the current communications.



TX is red when transmitting data to the dispenser.

RX is red when receiving data from the dispenser



Return to the Home Screen.

Poll Network

Polls the network (either direct or by modem) to initiate communication with dispensers setup on the active account. The program polls the network according to the polling options set for program configuration. The modem for the computer or the direct connect must be installed and all of the communication setup completed prior to polling the network. Once this is done, to initiate a poll:

- Select **Poll Network** from the **Setups** menu. You may also click the **Poll Network** speed button on the toolbar or just type **Ctrl + P** from the Home Screen.



Poll Network Button

The dispenser on/off switches on the Home Screen graphically illustrate which dispensers respond to the poll. If a dispenser does not answer and its on/off switch was on, it is turned off (red). If a dispenser is off and does answer the poll, its on/off switch is turned on (green). Answering the poll means the dispenser is connected, its power is on and it is set to the address the program polled.

If the account site has a dispenser that the program does not "know about", but which answers the poll, the dispenser is added to the Home Screen and its account setups are retrieved. However, to get the additional setups, you must do a backup. See **Backup (Retrieve All)** section for instructions on performing a backup.

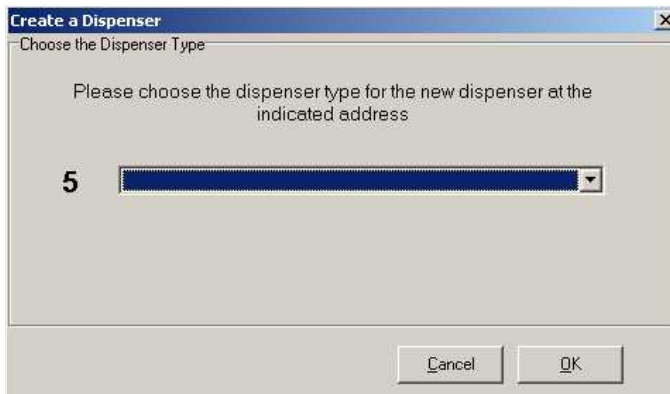
- To cancel a poll that is in progress, press the **Cancel** button or hit the **Esc** key.



Cancel Button

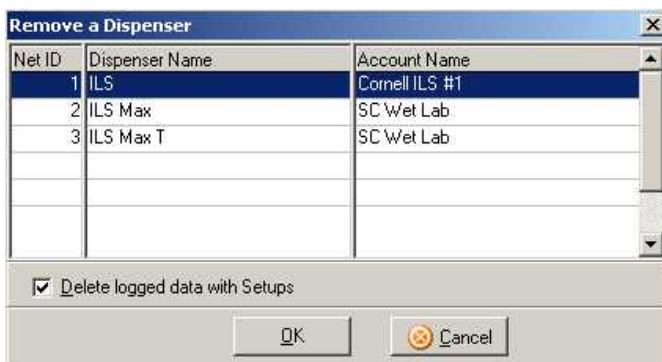
Create

Adds a new dispenser to the active account. The drop-down menu will show which dispenser options are available. The next available network ID will be shown.



Remove

Removes a dispenser from the active account. The dispenser highlighted will be removed after the OK button is selected. If the check box marked "Delete logged data with Setups" is selected, the log data as well as setup information will be deleted.



Account

Configures the active account. Use this dialog box to provide the name of the account, fluid unit of measurement and shift start times.

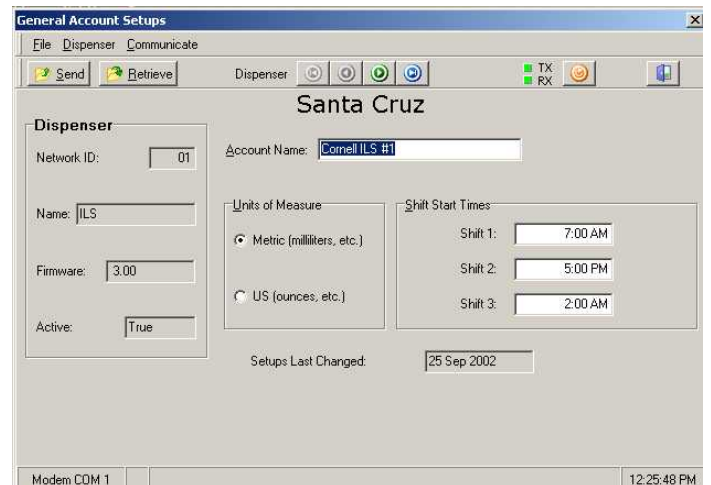
- Type the account name in the text box. If you have more than one dispenser at a given account site, you may want to use a number at the end of the name to give each a distinct name, such as ABC Laundry 1.



You need to do an account setup for each individual dispenser if there is more than one at a single account site.

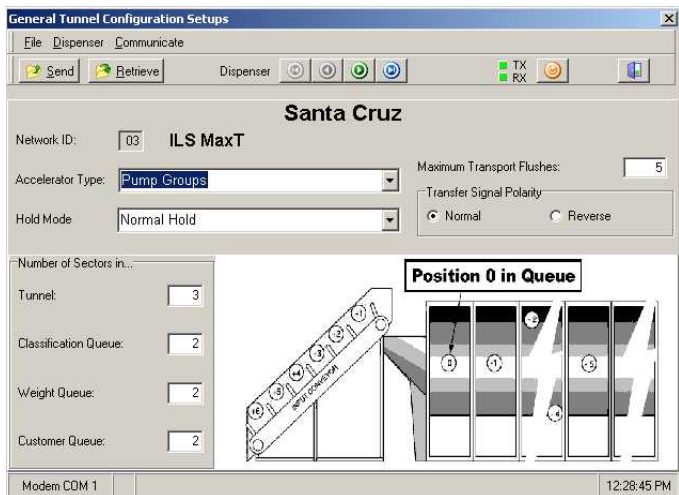
- Click **Metric** or **US** for the fluid unit of measure to be used for this dispenser. You should always set this when you first install an account and generally never change it. Since setups, logged data and reports reflect this unit of measure, they will be erroneous if you change it without first emptying all the logged data tables and retrieving all of the logged data again. **It is imperative that you set the fluid unit to the same choice for every dispenser in the network.**
- Type the start time of each shift. This must be entered in a 24-hour clock format (0:00 = midnight).
- The **Grand Total Flush** amount is the total water flow to-date through the dispenser.
- To move to the next dispenser, click one of the **Dispenser** arrows.
- To send the account setups for this dispenser only, you may click **Send**.
- To retrieve the current account setups for all dispensers, you may click **Retrieve**.

The rest of the information in this dialog box updates automatically. You cannot change it in this dialog box.



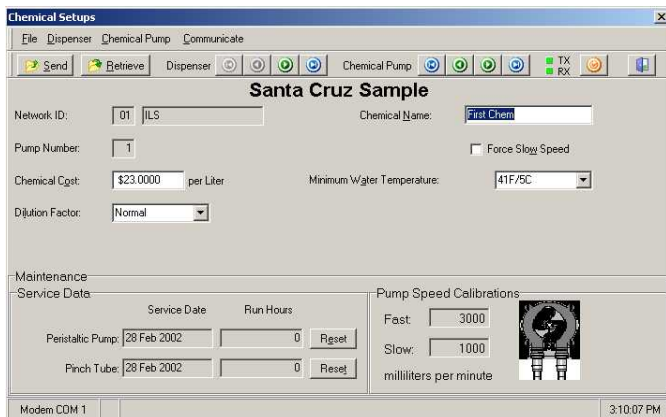
General Tunnel Configuration

Configures the selected tunnel dispenser in the active account.



Chemical Supply

Configures chemical information, chemical pump maintenance data and pump speed calibration. Use this dialog box to view or edit each peristaltic pump's chemical setup. The information you need to provide varies depending on the dispenser type. The Network ID and pump number are displayed. To display a different dispenser or pump, use the navigator buttons in the toolbar. You can also view pump maintenance data on the chemical setup screen.



- **Chemical Name** – Type the name of the chemical this pump will feed.
- **Speed** – Choose the desired pump speed from the **Speed** dropdown list.
- **Force Slow Speed** – Check this box if you want this pump to run at slow (1/3) speed for all doses. If unchecked, the pump runs at full speed except for doses less than 5 ounces (150 ml).
- **Chemical Cost** – Type the cost of this chemical (per liter).
- **Minimum Water Temperature** – Select one choice from the dropdown list for the transport water temperature. The two possible choices represent hot and cold. If the POF cell does not have a temperature sensor, the present temperature will be blank, and you cannot set the minimum temperature.

- **Dilution Factor** – Select one choice from the dropdown list. The choices are:
 - **Normal** – The calibration chamber is minimally 1/2 full during the dispensing stage of delivery, which is suitable for most chemicals.
 - **Extra** – The calibration chamber is minimally 2/3 full during the dispensing stage of delivery, thereby increasing the chemical dilution.
- **Priority** – Select one choice from the dropdown list. Choose between normal and high priority for this chemical pump. Only one chemical may be designated as high priority. Requests for this chemical will be promoted to the top of the feed stack and will be serviced before any other pending requests. This is useful for situations where all washers may not have washer hold, or where time-critical chemicals are injected.
- **POF/POD Threshold** – Select one choice from the dropdown list that is best suited to the chemical being pumped. Proper setting ensures best performance of the POF out of chemical detection feature.

Off Disables the POF/POD function. Choose this for non-conductive products such as hydrogen peroxide and mildewcides. When POF/POD is disabled, the auto-prime and out-of-chemical features do not work.

Low Use for low-conductivity chemicals such as softeners, anionic surfactants, starch and non-built detergents. Provides a threshold 150 microsiemens above the baseline water conductivity.

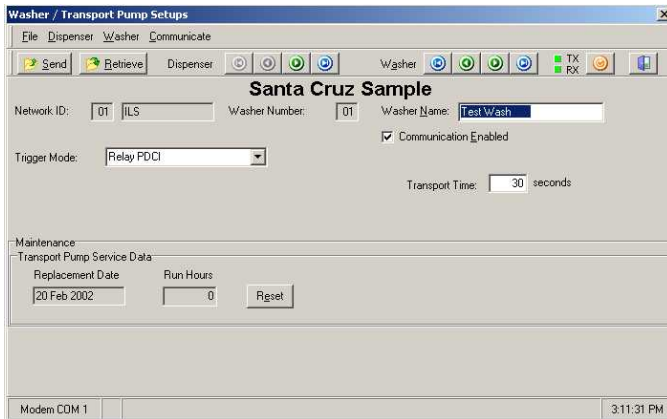
Medium Use for chemicals in the mid-range of conductivity such as built detergents, sour/softener combinations and any other chemicals that are not quite as conductive as the high conductivity products. This setting provides a threshold of 5,000 microsiemens above the baseline water conductivity.

High Use for highly conductive chemicals such as alkali, bleach, sour, and some built detergents. This setting provides a threshold of 30,000 microsiemens above the baseline water conductivity.

Washer or Injection/Transport System

Configures transport pump maintenance data, transport time, trigger mode and signal logic. Use this dialog box to view or edit each washer's setups. The information you need to provide differs depending upon the type of dispenser and the feed mode. Washer setups involve enabling each washer and transport pump, and setting the delivery mode and transport time. You can also view washer maintenance data on the washer setup screen.

1. To display the dispenser you wish to setup, click the **Dispenser** arrows. The fields in the setup screen change for the different dispenser types.
2. To display the washer you wish to setup, click the **Washer** arrows. For each washer, do the following setup steps.



If a step is described here but does not appear on your screen, it is because it is not pertinent to the dispenser type and/or feed mode.

3. Type the washer's name in the **Washer Name** text box. This is optional but is useful for identifying the washer in reports because the name can show the type of washer (for example, Big Wheel 550#).



You cannot edit the Network ID and washer number.

4. Click **Communication Enabled** to enable the washer triggers to be sensed by the dispenser. If you want this washer to be temporarily disabled, be sure this box is not checked. When a washer is disabled, the dispenser ignores triggers coming from it. You might disable a washer (which can also be done at the dispenser controller screen) when it needs to be serviced. After unchecking this box, send the setup to the washer by clicking **Send** to actually disable the washer.



*If you check the program configuration option **Create Setup Reports for Active Dispensers Only** (on the **Reports** tab), all disabled washers or washers that do not exist at the account site are ignored when you generate setup and load classification reports.*

5. Select the chemical feed mode from the choices in the **Trigger Mode** pulldown list. The choice you make here determines the trigger setup dialog box that is displayed for this washer.
6. Click **Strip Chart Enabled** to activate the washer stored strip for this washer. If active, the stored strip records a history of all the washer's trigger signals.
7. Type the **Transport Time** in the text box. Transport time is the amount of time it takes the transport pump to transport chemical to this washer. If the washer supports POD, then the dispenser automatically measures the transport time and displays it in this field. You can change this time if you think it is inaccurate. You may also reset the time to zero to cause the dispenser to re-measure it.

If the washer does not support POD, you must measure the transport time manually and type it into this field. The correct transport time is essential because it ensures that all pumped chemical gets to the washer. After you send this setup, observe an actual transport to verify the transport time, and reset if necessary.

8. If the feed mode is Automatic PDCI, check **Microprocessor** or **Card/Chart Reader** for the type of washer processor.
9. If the feed mode is Formula Latched or Formula Miele, type the number of the **Latch Reset Trigger**. You may use any of the five triggers to reset the latch, or if the trigger is set to zero, the machine ON signal can perform this function.
10. For **Signal Logic**, click **Normal** or **Reverse**. The default is normal. The dispenser uses the machine ON signal to tell when a wash cycle starts and ends. Normal means that a high signal is interpreted as on. Reverse means that a low signal is interpreted as on.
11. For **Sewer Drain, Cold Water, Reuse Drain, Hot Water, Steam** and **Reuse Fill**, click **Normal** or **Reverse**. As you position the cursor in each field, a popup hint reminds you what each setting means.



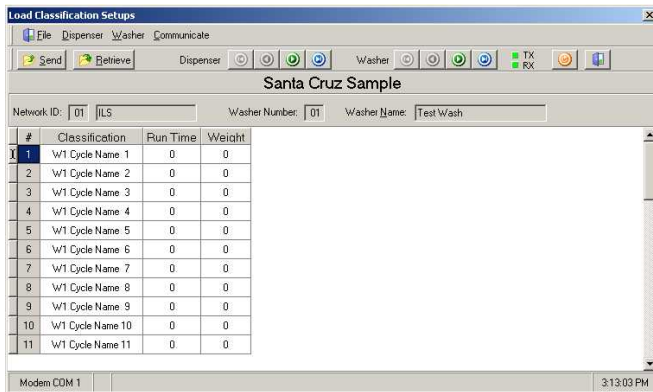
*The **Transport Pump Service Data** fields include the last date the pump was serviced and the total number of hours it has run since that service date. When you service the pump, be sure to click **Reset** to restart these fields.*

12. Click **Reset** in the **Maintenance** box to set the pump run hours to zero and the service date to today, and send this information to the dispenser. You should do this on the day the pump is serviced.

Load Classification

Configures load classifications used in reports. Use this dialog box to view or edit load classifications. This involves specifying, for each washer and each load, the load classification name and other identifying information. This information is useful when interpreting logged cycle records. It is not required for washer setup.

1. To display the dispenser you wish to setup, click the **Dispenser** navigator buttons.
2. To display the washer you wish to setup, click the **Washer** navigator buttons.



The Network ID, washer number and washer name are updated automatically. The table columns vary depending on the type of dispenser you are setting up and the feed mode established for the washer in washer setup. In all cases, the first column is the cycle number.

- For each cycle, type the classification name (the name of the wash load; for example, sheets) in the Classification column. Once you have named one classification, that name will appear in a dropdown list for the rest of the classifications, and you can choose a name from that dropdown list. This helps you use identical names for identical loads.



*If you ensure that every identical load is named the same in the **Classification** column, then you can request the combination of data for reports, which makes the report data much more meaningful and easy to understand. For information on combining data in reports, see the **Reports** tab in Program Configuration.*

- Type the nominal cycle run time, and the load's estimated weight.

Trigger

Configures feed triggering. Use this dialog box to view or edit the way the dispenser will interpret the supply triggers. This involves specifying, for each washer, the chemical dose to be triggered by the trigger module installed at the washer. When you select a particular washer, the setup screen displayed will be appropriate for the feed mode you selected on the washer setup screen. For example, if a washer is in Relay Mode, the setup screen asks you to specify the call rate and maximum allowed dosage for each chemical delivered by the dispenser. The setup screen displays the current Net ID, washer and feed mode. The trigger modes are:

Automatic Mode (Strobed, Strobeless and PDCI) Triggers

You can have 32 functions per washer. Five washer triggers are used (via the Trigger Module) to specify one of these 32 functions by using a binary code for the trigger combination.

- Function** – The number of the function. The program displays 1-32. To scroll forward and backward, use the navigator buttons.

- Function Name** – These names might include Start Cycle, Light Soil No Alkali, Light Soil with Alkali, Heavy Soil No Alkali, Heavy Soil with Alkali, Bleach, and so on. These are the building blocks of the feed formula.
- Chemicals** – Choose up to three chemical pumps per function from the list displayed on the screen. (The list reflects the already-setup chemical names.) Note that start and end of cycle triggers are included in the list. This is useful if the machine does not have a machine ON signal readily available, and you are not using PDCI mode.
- Dose** – Enter the desired dose in ounces or milliliters for each chemical. The current unit of measure is noted on the screen.

PDCI (Pre-Dose Classification Identification)

PDCI is available for Automatic Mode, Relay Mode and Formula Mode. PDCI Automatic Mode allows up to 30 different chemical request codes. Up to three chemical doses may be delivered for each chemical request code.

PDCI Relay Mode is designed for use with microprocessor-controlled washers. PDCI Formula Mode is designed for use with chart or card driven controllers. PDCI Automatic Mode works with either type of controller.

In PDCI Mode, the dispenser reads multiple triggers by "accumulating" all triggers that occur during a defined time period, whether they appear simultaneously or not. The only requirement is that no more than five seconds separate qualified triggers. The advantage of this method is that washer controllers that can activate only one or two supply outputs at one time can generate sufficient information for the dispenser to automatically identify cycle start and end, and wash classification. By using PDCI, it is no longer necessary to install an FS-1600 (RS-3000) or locate an alternate machine ON signal.

Programming the washer controller for PDCI mode is discussed in detail in the dispenser's **Installation and Operation Manual**.

Formula Mode Triggers

The setup screens for normal, Latched and PDCI formula modes are identical.

- Formula #** - The number of the formula. Each washer can have up to 30, although only 16 are available when using a mode other than PDCI. To scroll forward and backward, use the navigator buttons.
- Name** – Type an optional name for this formula (such as Heavy Soil). This name is not used as the name of the wash load. When a load is logged, it is logged with the load classification name from the load classification setup table. However, this name appears in the Washer Setup Report.
- Pump #** - For each of the possible six triggers for this formula, select the pump (which delivers the desired chemical) from the list displayed on the screen. Enter the pump number only. Note that a ninth and tenth pump appear in the list even though there are only eight pumps. This allows you to use pump 9 as start of cycle and pump 10 as end of cycle if the machine does not have a machine ON signal readily available and you are not using PDCI mode.

Relay Mode Triggers

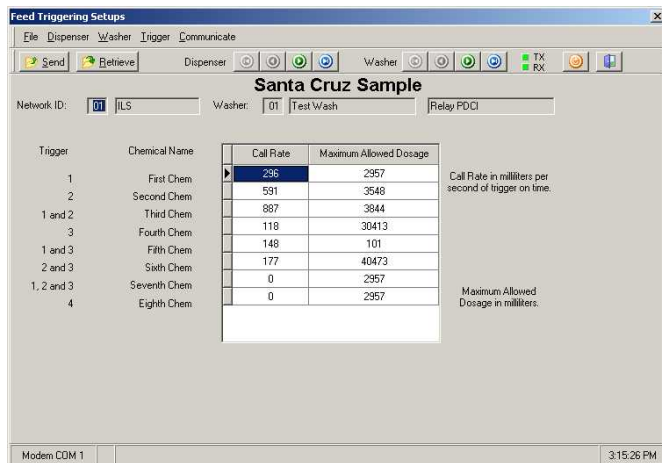
You can feed up to six chemicals. Each of six triggers can call one chemical. The seventh trigger is dedicated to machine on. Relay Mode requires that a trigger be on for a very specific duration.

- **Call Rate** – The number of ounces or milliliters per second of trigger-on time. Trigger-on time is programmed at the washer's microprocessor.
- **Maximum Allowed Dosage** – Base this on how big the washer is and the maximum dosage you want per chemical. The value should be 10% larger than the largest chemical dose for this washer to prevent overdosing in the case of washer trigger malfunctions.

Enhanced Relay Mode Triggers

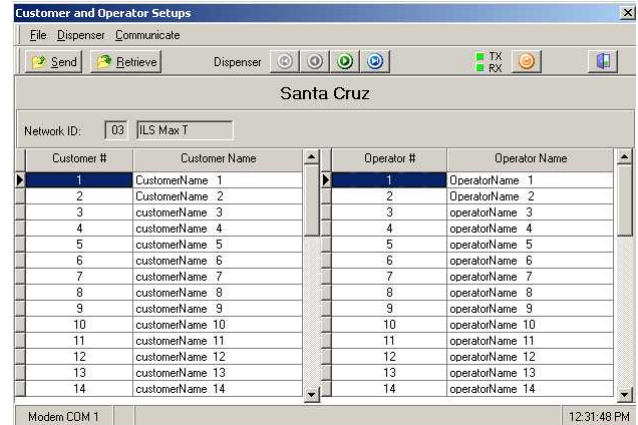
You can feed chemicals for all eight pumps and you may also use the start and end triggers to delimit a wash load. For each washer, you can set four triggers (not six) and more than one trigger may be turned on simultaneously. In this way, you can access the seventh and eighth chemicals. For each trigger number of trigger combination, enter:

- **Call Rate** – The number of ounces or milliliters per second of trigger-on time. Trigg- on time is programmed at the washer.
- **Maximum Allowed Dosage** – Base this on how big the washer is and the maximum dosage you want per chemical. The value should be 10% larger than the largest chemical dose for this washer to prevent overdosing in the case of washer trigger malfunctions.



Customer and Operator

Configures customer and operator information for account and dispensers.



Backup (Retrieve All)

Retrieves all records from dispensers currently on the network. It is important to note that when you retrieve setups, only those dispensers that the program considers active are queried. The retrieved setups will overwrite any setups that happen to be in the current working directory. It is generally a good idea to poll the network before doing a backup, because polling lets you know which dispensers are active and backups only occur for active dispensers. You can configure the program to always do a poll before doing a backup.

To cancel a backup that is in progress, press the **Cancel** button or hit the **Esc** key.



Cancel Button

Restore (Send All)

Restores all records to dispensers currently on the network. If you only want to send a specific setup (for example, chemical supply setups), you can do so from that specific setup screen.

To cancel a restore that is in progress, press the **Cancel** button or hit the **Esc** key.

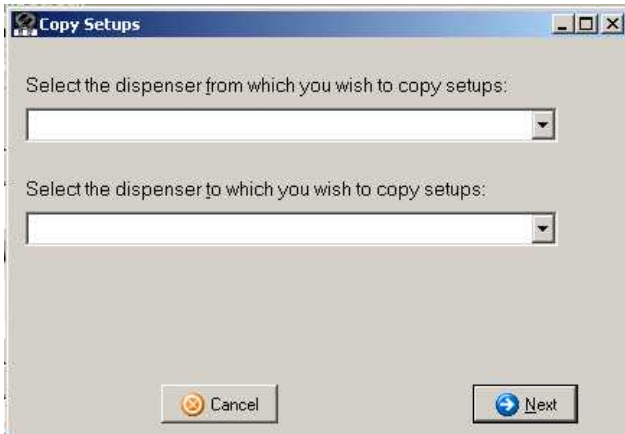


Cancel Button

Copy

Use this dialog box to copy setup information from one dispenser to another or from one washer to another. You can copy the setups at the PC and then send them immediately or wait to send them later using the appropriate setup screen. Display this dialog box by choosing **Copy** from the **Setups** menu.

1. Choose the dispenser you are copying from in the first dropdown list. The name will appear in the text box.
2. Choose the dispenser you are copying to in the second dropdown list. The name will appear in the text box. If you wish to copy from one washer to another fed by the same dispenser, choose that dispenser in both dropdown lists.
3. Click **Next** to advance to the next dialog box.



All of the dispenser types at this account site appear in both dropdown lists. The second dialog box allows you to choose the types of setups to copy. The choices in the second dialog box vary depending on the type of dispenser you are copying from and to and are limited to compatible types of setups.

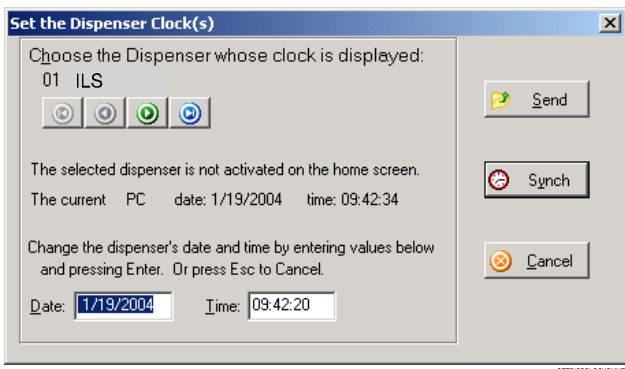
4. In the **Setups to Copy** box, click on the type of setup you wish to copy. If you are copying from one washer to another, additional dropdown lists ask you to specify the washer from which you are copying and to which you are copying.
5. Click **Copy** to do the copy at the PC. So far, you have not sent the copied setups to the dispenser or washer.
6. Click **Send** if you wish to send the copied setups now. Click **Cancel** if you wish to send the copied setups later using the appropriate setup screen.



*If you click **Cancel**, the copied setups are saved in the database at the PC.*

Synchronize Clocks

Allows dispenser clocks to be set to a specific time and date.



Retrieve Ram Image

Allows data in RAM in a dispenser to be saved to a directory on the PC. **Choose these functions only on the advice of Technical Support.**



Sending the RAM image could result in unpredictable program operation if it is not being sent to the same firmware version. The RAM image of a dispenser contains all the setup and logged data of a particular dispenser. Because different ROM versions of the dispenser may store this data differently, it is very dangerous to retrieve one dispenser's RAM image and send it to another dispenser.

1. To retrieve or send a RAM image, choose **Retrieve RAM image** or **Send RAM image** from the **Setups** menu.
2. In the dialog box, type the name of the RAM image file or select a name by double clicking it in the list of RAM image files.
3. When retrieving a RAM image, choose the directory in which you wish to store the image file and give it a name. Keep the **.img** file extension so you will know that it is a RAM image file. Click **OK** to retrieve the binary representation of the dispenser's memory. You will then be asked to choose which dispenser's image you would like to retrieve. Retrieving the image will then take approximately 20 minutes.
4. When sending a RAM image file, you will be asked to locate the RAM image file. After selecting the file, choose the dispenser whose memory you wish to overwrite. It is imperative that the NetID of the dispenser match the NetID of the dispenser from which the image file was originally retrieved.

Send Ram Image

Allows data in RAM in the PC to be sent to a dispenser.

Communication

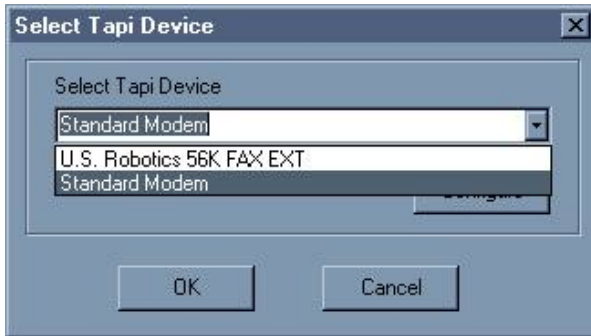
The Communication dropdown menu allows the user to configure the method of connection, passwords and software alarms.

Setting the Modem Speed

Before using the modem with ManageNet, you will need to set the modem speed to 9600 bps (bits per second). There are three methods for doing this:

Method 1. Sets Modem to 9600 bps for Current Session Only.

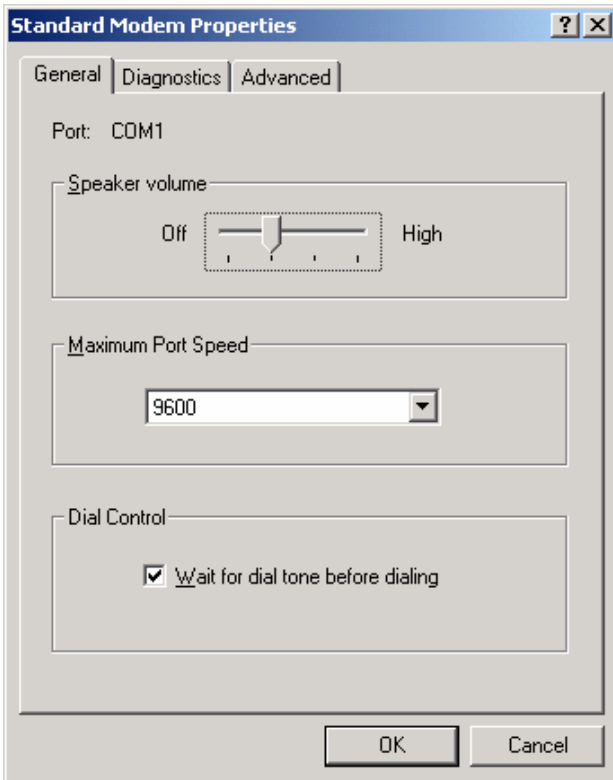
1. From the Home Screen, select **Communication**, and then **Connection Setup**.
2. Click on **Modem**.
3. Select the modem you are going to be using with your PC from the dropdown list.



4. Click **Configure**.
5. Under the **General** tab, set the **Maximum Speed** to 9600 bps.
6. Click the **OK** button until you see the Home Screen. Note that this method will **ONLY** set the port speed to 9600 bps for your current session. Each time you open ManageNet, you will need to repeat this procedure.

Method 2. Sets Modem to 9600 bps for All Sessions

1. From the Windows **Start** menu (bottom left of screen) select **Settings** and then **Control Panel**.
2. Double-click on **Modems**.
3. Select the modem you are using, and click on **Properties**.



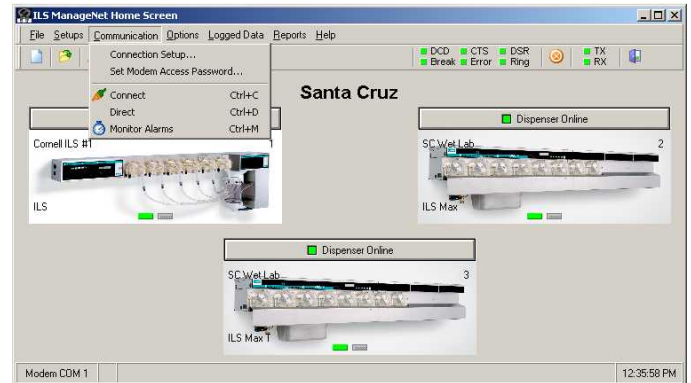
4. Go to the **General** tab, and set the **Maximum Port Speed** to 9600 bps.
5. Click the **OK** button until you are back to the **Control Panel** Window (which can be closed at this time). Note that this method will set this modem to *always* connect at 9600 bps. If you want to use the modem to connect to the

internet, for example, you will need to change the speed back from 9600 bps when you are done using ManageNet. Not doing so will result in poor performance in applications other than ManageNet.

Method 3. Sets Dispenser Modem to 9600 bps

Some PC modems do not obey the **Maximum Speed** setting and will always try to connect at the fastest speed possible. This will prevent ManageNet from being able to communicate with the dispenser network. To solve this problem, the dispenser modem may be configured to connect only at 9600 bps, which will force the PC modem to the same speed without requiring any special settings. For details on how to perform this configuration, see **Appendix B**.

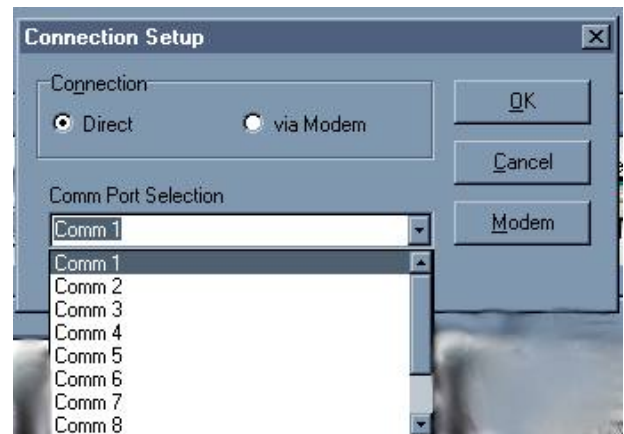
NOTE *The dispenser modem may be set to 9600 bps even if the PC modem works correctly; this will eliminate the need to reconfigure the PC modem and may be preferred by some users.*



Connection Setup

Allows modem or direct configuration setup. The default connection is Comm1. To configure the software, select **Modem** and then choose from the list of installed modems.

NOTE *Comm Port Selection (in the Connection Setup dialog) is not used when using a modem.*



Set Modem Access Password

Allows user to set modem access password for remote access. The program uses passwords to protect remote (modem) access to dispensers.



This password is for modem access only and is not the same as the logon password.

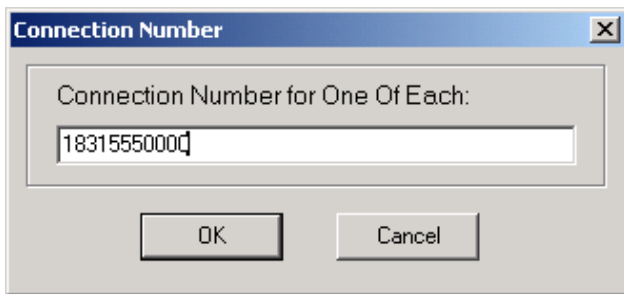
The password at the PC must match the password for dispenser. There are two ways to set the dispenser 1 password:

1. Direct Connect – If you are connecting directly to the network, you need not know the existing password (if any). Simply follow the instructions below.
2. Via Modem - Knowing the current password or, if there is no password already set for dispenser 1, you can connect to the dispenser via modem and then send a password, as described below.
3. When you attempt to dial the modem, you will be disconnected unless the two passwords (the password in the dispenser and the password in the PC's account data) match. If you should forget the password, you can reset it at the site and then set this new password in the program. Do not divulge the password to others. It is your safeguard for remote dispenser access.



Connect

Allows user to choose connection method and select modem phone number to dial. Once the connection method is specified the following screen allows the user to connect if a modem has been selected.



This dialog box displays the site's modem phone number (as entered in the account site information). You can edit the phone number or use it as displayed. Click **OK** to dial the modem. After a connection is established, the program will attempt to retrieve the password stored in the first dispenser in the network. If this password is not blank, the program will compare the

password that is entered in the account site information. If the passwords do not match, the program will disconnect the modem. This also means that if the first dispenser in the network is not communicating (if, for example, it is turned off), the connection will also be terminated.



*The default number in the Connection Number dialog box is derived from the number listed in **Account Site Information** screen. If the number in **Account Site Information** has the same area code as the number listed in the **User Configuration** screen (under **Options** menu), the software knows not to dial the area code.*

Direct

Allows user to direct connect to networked dispensers.

Monitor Alarms

Allows user to have the software monitor selected alarms.

Options

The Options dropdown menu allows the user to configure the software and setup user information. Most preset options work for all account sites that are being used. The exception is the Auto-Logging script, which only applies to a specific account.



Program Configuration

Provides user with the following tab selections to configure the software.

General

1. Click **Hints** to display one-sentence hints on the meanings of buttons and menu choices, and other controls.
2. Click **Audible Alarms** if you want to hear a beep when an alarm condition occurs. If you have an exclamation sound in your Windows control panel, that sound will play. If you don't have that sound, you will hear a beep.
3. Click **Diagnostic Log File Recording** if you want to create an in-depth diagnostic file. This may be very disk-space expensive, and should only be done for troubleshooting purposes. If you select this option, all communications with a dispenser network are recorded.

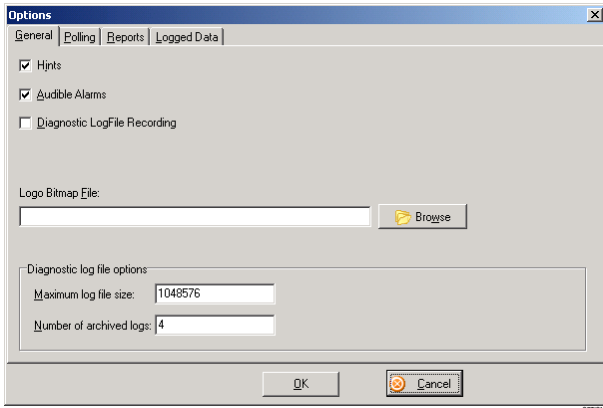


Some information, including program errors, is recorded even if Diagnostic Log File Recording is disabled.



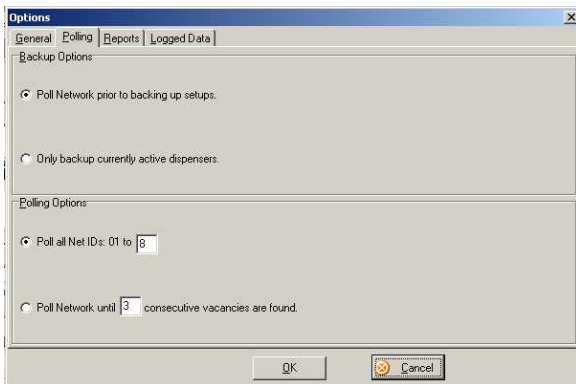
The Diagnostic Log File Recording function is intended to be a troubleshooting tool only. Activating it during normal use will slow the program's performance.

4. Type the complete path and filename of a **Logo Bitmap File** in the text box to direct that an existing logo be displayed on the Home Screen and in reports. The file may be in .bmp (bit map) or .wmf (Windows metafile) format. You can use the **Browse** button to locate the path to the file.
5. Type a number into the **Maximum log file size** text box to set the maximum size (in bytes) to which a diagnostic file will grow. This will prevent the file from growing large enough to affect system performance. The default is one megabyte (1,048,576 bytes), but for most users a smaller value (100,000 bytes) is sufficient.
6. Type a number into the **Number of archived logs** text box to set the number of old diagnostic log files that will be kept. Diagnostic data is always written to a file called DNet.log. When this file reaches the maximum log file size set in step 5, an archive copy is made and DNet.log is erased and writing starts over. This continues until the Number of archived logs limit is reached. Beyond this, older archived logs are erased to make room for new ones.



Polling

Configure backup and polling options as follows:



Backup Options

1. **Poll Network prior to backing up setups** – This choice causes the program to automatically initiate the polling function when you choose **Backup** from the Setups menu.

This ensures that the program will only attempt to backup setups from dispensers that are currently active. (That is, they responded to the poll.)

2. **Only backup currently active dispensers** – with this, the program skips the poll and only retrieves the setups for the dispensers that are currently displayed as active on the Home Screen. This allows you to turn *off* certain dispensers on the Home Screen in order to backup selected dispensers only. To turn off a dispenser, click the dispenser's on/off button to the offline position (red) on the Home Screen.

Polling Options

1. **Poll at Net Ids 01 to ...** – This choice allows you to limit network polls to the dispensers you know exist. Type a number in the text box corresponding to the address of the last dispenser you have installed. This affects every poll until you change this option again.
2. **Poll Network until ... consecutive vacancies are found** – This choice allows you to limit the number of "misses" during a poll. The smaller the number, the quicker the poll. If you know that your Net Ids are all consecutive (01, 02, 03, and so on), you can use a 1 or a 2. However, if you know there are gaps in the Net Ids (for example, 01, 05, 07), you would have to use a number equal to the highest gap (4 in this example). The default is 3.

Reports

Configure reports, combine chemical supplies on performance reports, and combine classification data on performance reports as follows:

1. **Create Setup Reports for Active Dispensers Only** – Click this option if you want setup reports to include only those dispensers that are enabled.



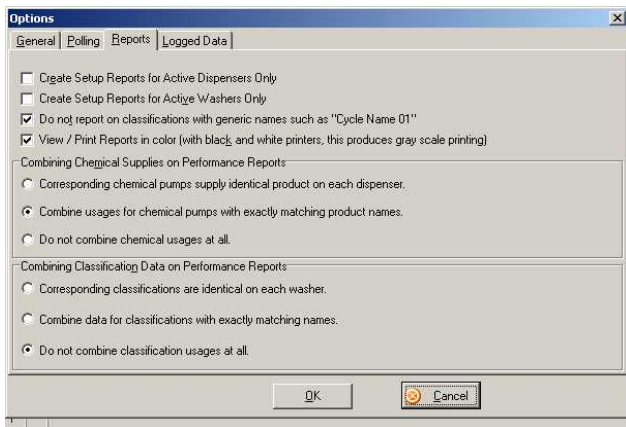
The program allows you to toggle a dispenser on (enabled) or off (disabled) on the Home Screen. When the button is green, the dispenser is enabled; when the button is red, the dispenser is disabled. This does not turn the dispenser off at the site (it will keep on feeding the washers); this method just tells the program to ignore the disabled dispenser in the setup reports.

2. **Create Setup Reports for Active Washers Only** – Click this option if you want the washer setup and load classification reports to include only those washers that exist at the account site and are currently enabled. It is a good idea to leave this option checked, except in the rare instance when you want a report on an intentionally disabled washer.



*You can enable or disable washers at the dispenser controller or on the washer setup screen. If you check the option **Communication Enabled** on the washer setup screen and send that setup to the dispenser, then that washer is enabled. If you send the setup with **Communication Enabled** unchecked, then that washer is no longer online, ignores feed requests, and is not included when you generate setup and load classification reports.*

- Do not report on classifications with generic names such as "Cycle Name 01"** – If checked, the Production Summary Report and Cycle Records Report will ignore cycles with these default names. Because these are generally unused cycles, this option should usually be checked.
- View/Print Reports in color** – If checked, reports are displayed on the PC monitor and printed in color. If you are printing to a color printer with a black ink cartridge, you should uncheck this to prevent the reports from printing in grayscale. When unchecked, reports are in black and white but the company logo, if included, is in color. To specify a company logo, use the **General** tab described above (under **Program Configuration**).



NOTE

Combining Chemical Supplies on Performance Reports
Performance reports are designed to reflect the performance of your entire wash aisle whenever possible. To achieve this, the program must know if each dispenser supplies the same product and if each washer is set up to wash the same classifications. If so, the best choice for both sets of options below is the first one and the worst choice is the last one.

Choose only one of the following options:

- Multiple Dispensers: Corresponding chemical pumps supply identical product on each dispenser** This is useful if, for example, pump 01 on every dispenser at an account site is the same chemical. If checked (and only if this option is checked), you can produce a single Cycle Records Report for multiple dispensers. If you use this option, be sure the chemicals match on all the pumps in the entire dispenser network. To ensure matching chemical names, use the **Copy** function from the **Setups** menu. Because this is the only option that allows combining of chemical usage and cost data, it is the recommended choice.
- Multiple Dispensers: Combine usages for chemical pumps with exactly matching product names** – If checked, the Chemical Usage Report (requested for all dispensers in a site) combines values for all chemical names that are spelled exactly the same. The same number pump on different dispensers need not deliver the same chemical. However, this option does not allow the creation

of multiple-dispenser reporting for the Cycle Records Report.

- Do not combine chemical usages at all** – If checked, you can only generate chemical usage and cost reports for each dispenser individually.

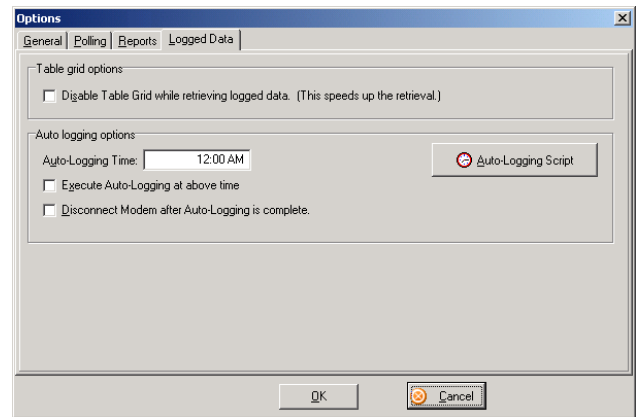
Combining Classification Data on Performance Reports

Choose only one of the following options:

- Multiple Dispensers: Corresponding classifications are identical on each washer** – If checked, you can produce a single Cycle Records Report for multiple classifications. To ensure that the classification names match on all the washers, use the **Copy** function from the **Setups** menu. Note that reported classifications are given generic names that indicate their sequential numbering.
- Multiple Dispensers: Combine data for classifications with exactly matching names** – If checked, the Cycle Records and Production Summary Reports (requested for all dispensers in a site) combine values for all classification names that are spelled exactly the same. This option also allows for the generation of multiple-dispenser graphs. This is the recommended option.
- Do not combine classification usages at all** – If checked, you will see report data for each classification separately. You will not be allowed to combine classification (production) reports or graphs for more than one washer.

Logged Data

Allows user to disable table grid and configure auto-logging. The recommended time for auto-logging is just after midnight to capture the previous day's events and be available the next day. The Auto-logging script can be edited by selecting the Auto-Logging script button on the Options, Logged Data page.



User Configuration

Setup user information. The area code for your phone number tells the program whether or not modem connections to selected account sites are long distance calls. The other dialing information is also used when dialing to an account site's modem.

- User Name** – Type your name.
- Company Name** – Type your company's name.
- Address** – Type your company's address.
- City, State, Zip** – Complete your company's address.

5. **Fax Number** – Type your fax number.
6. **Phone Number** – Type your phone number. The area code is used to determine (when connecting to an account site via modem) whether you are dialing within the same area code.
7. **Dialing Prefix** – Type the optional number that must be dialed first to reach an outside line. For example, some phone systems required dialing a 9 to reach an outside line.
8. **Credit Card** – To charge the call to a credit card number, type your credit card number.
9. **Always use area code** – If checked, the area code will always be displayed in the connection dialog when you connect via modem, even if you are dialing within the same area code.
10. **When to dial '1'** – Choose the appropriate option. **With area code** is the normal choice.

The screenshot shows a 'User Configuration' dialog box with the following fields and options:

- User Name: []
- Company Name: []
- Address: []
- City: []
- State: [] Zip: []
- Country: []
- E-Mail: []
- Phone Number: [()] - []
- Fax Number: [()] - []
- Dialing Prefix: []
- Credit Card: []
- Always use area code:
- When to dial '1':
 - With area code
 - Always
 - Never

Buttons: OK, Cancel

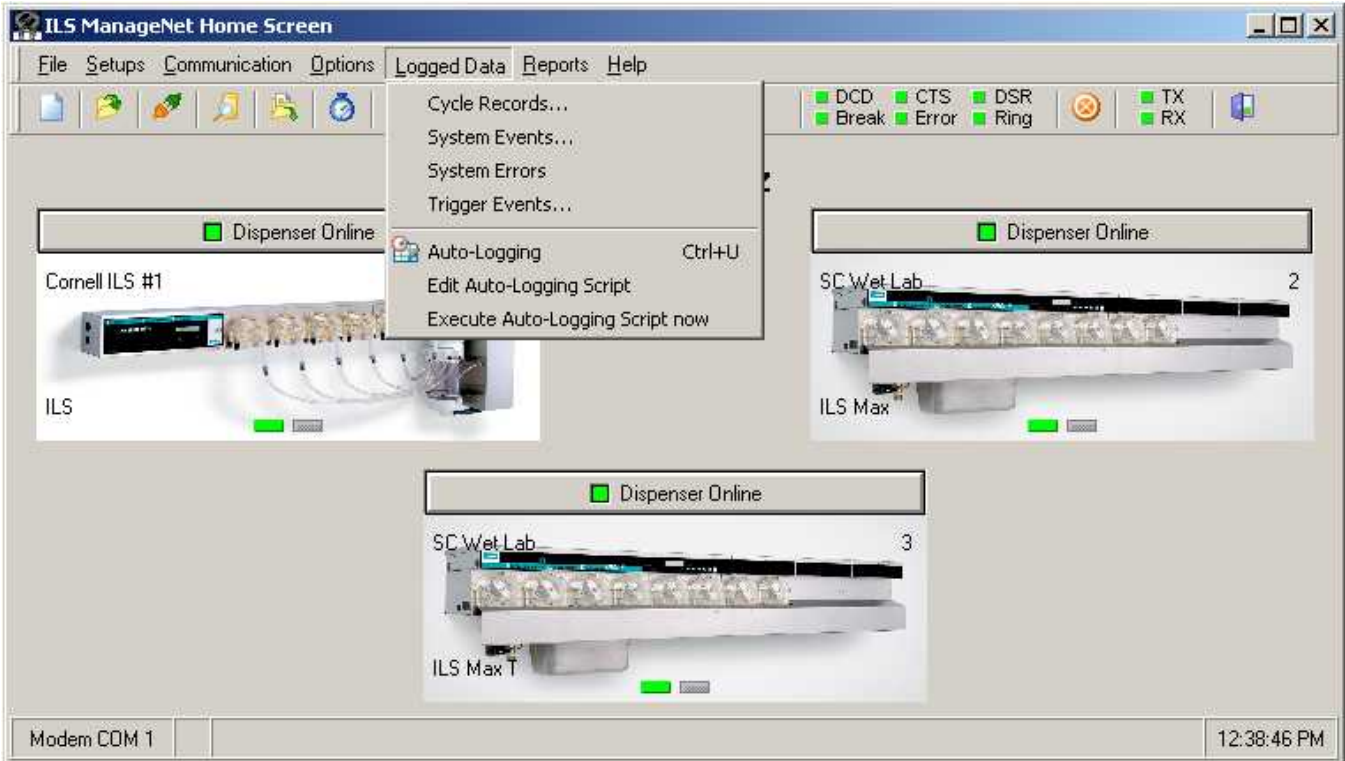
1. **Cycle Records** – One production record for each wash load run.
2. **System Events** – All events the dispenser logs, such as cycle end, cycle begin, washer disabled, washer re-enabled, system on, feed requests, deliveries, and so on.
3. **System Errors** – An archived list of all system errors.
4. **Trigger Events** – Any event triggered by the trigger module or formula selector. The dispenser logs a trigger event each time a change in the triggers is detected.

You can also use the auto-logging feature to define which types of logged data to retrieve and establish automatic retrieval and generation of reports based on the logged data. Logged data (cycle records, system events, and so on) are the building blocks for all the performance reports and graphs you can generate using the program. Logged data is stored in the dispensers at the account site. You can access it from the computer for reporting only after you retrieve it from the dispensers. The report or graph will be meaningful only after you retrieve current data.

Cycle records are of the most interest. All the other logged data types are for diagnostic purposes. You can automate the process of retrieving logged data (and even generating some reports) by using auto-logging. Remember that the dispensers overwrite the oldest data with new records. If you use the **Retrieve** button from the logged data toolbar, or choose **Retrieve Latest** from the **Communicate** menu on a logged data screen, the program attempts to retrieve only the records generated since the last retrieval. If you do this regularly (even once a day), the program will remain in sync. Any time you are missing records for a chunk of time, it likely means the program and dispenser are out of sync. If this occurs, choose **Retrieve All** from the **Communicate** menu from that dispenser's logged data screen.

Logged Data

The Logged Data dropdown menu allows the user to retrieve the logged information from networks and dispensers connected to the software. The following types of logged data are available:



Cycle Records

Connects to dispenser to retrieve cycle records.

Date	Time	Washer #	Load #	Shift	Run Time	Chemical 1	Chemical 2	Chemical 3	Chemical 4	Chemical 5
30-Dec-189	12:00 AM	1	0	3	0	0	0	0	0	0
30-Dec-189	12:00 AM	1	0	3	0	0	0	0	0	0
20-Jun-2002	11:32 AM	3	1	1	1.092	0	31000	0	1200	0
04-Jun-2002	01:06 PM	2	31	1	1.092	0	3400	2700	0	0
04-Jun-2002	11:13 AM	2	2	1	112	100	3600	3600	100	0
26-Feb-2002	11:39 AM	2	1	1	1.092	300	600	600	300	0
30-Dec-189	12:00 AM	1	31	3	1.092	160	110	190	110	0
12-Feb-2002	03:58 PM	2	2	1	1.092	1323	1180	1180	1323	0
30-Dec-189	12:00 AM	1	31	3	1.092	990	60	210	330	0
12-Feb-2002	03:35 PM	2	2	1	18	441	353	353	441	0

System Errors

Connects to dispenser to retrieve system errors.

Date	Time	Washer #	Pump #	Amount	Event
20-Feb-2002	16:22:27	0	0	0	ERROR: MIXING CELL OVERFLOW
20-Feb-2002	16:22:41	0	0	0	ERROR: MIXING CELL OVERFLOW
20-Feb-2002	16:22:57	0	0	0	ERROR: MIXING CELL OVERFLOW
21-Feb-2002	08:48:41	0	0	0	ERROR: MIXING CELL OVERFLOW
28-Feb-2002	14:34:15	0	0	0	ERROR: MIXING CELL OVERFLOW
28-Feb-2002	14:37:13	0	0	0	ERROR: MIXING CELL OVERFLOW
10-Apr-2002	09:06:41	0	0	0	ERROR: MIXING CELL OVERFLOW
10-Apr-2002	09:07:48	0	0	0	ERROR: MIXING CELL OVERFLOW
10-Apr-2002	09:08:02	0	0	0	ERROR: MIXING CELL OVERFLOW
10-Apr-2002	09:08:11	0	0	0	ERROR: MIXING CELL OVERFLOW
19-May-2002	12:55:56	0	0	0	ERROR: MIXING CELL OVERFLOW
19-May-2002	12:56:14	0	0	0	ERROR: MIXING CELL OVERFLOW

System Events

Connects to dispenser to retrieve system events.

Date	Time	Washer #	Pump #	Amount	Event
20-Feb-2002	16:22:26	0	0	0	MANUAL MEMORY PURGE; LOGGED DATA CLEARED
20-Feb-2002	16:22:27	0	0	0	ERROR: MIXING CELL OVERFLOW
20-Feb-2002	16:22:32	0	0	0	ILS SYSTEM OFF
20-Feb-2002	16:22:39	0	0	0	ILS SYSTEM ON
20-Feb-2002	16:22:39	0	0	0	MANUAL MEMORY PURGE; SET UP DATA CLEARED
20-Feb-2002	16:22:41	0	0	0	ERROR: MIXING CELL OVERFLOW
20-Feb-2002	16:22:48	0	0	0	ILS SYSTEM OFF
20-Feb-2002	16:22:55	0	0	0	ILS SYSTEM ON
20-Feb-2002	16:22:55	0	0	0	MANUAL MEMORY PURGE; SET UP DATA CLEARED
20-Feb-2002	16:22:57	0	0	0	ERROR: MIXING CELL OVERFLOW
20-Feb-2002	16:24:41	1	0	0	WASHER RE-ENABLED FROM NETWORK
20-Feb-2002	16:24:41	2	0	0	WASHER DISABLED FROM NETWORK

Trigger Events

Connects to dispenser to retrieve trigger events.

Date	Time	Washer On	Trig 1	Trig 2	Trig 3	Trig 4	Trig 5	Trig 6	Trig 7	Form 1	Form 2	Form 3
20-Feb-2002	16:22:41											
30-Dec-189	00:00:00											
30-Dec-189	00:00:00											
30-Dec-189	00:00:00											
30-Dec-189	00:00:00											
30-Dec-189	00:00:00											
30-Dec-189	00:00:00											
30-Dec-189	00:00:00											
30-Dec-189	00:00:00											
30-Dec-189	00:00:00											
30-Dec-189	00:00:00											
30-Dec-189	00:00:00											

Auto-Logging

Initiates auto-logging script at preset time. The time will be shown on the Home Screen.

Edit Auto-Logging Script

Setup and edit menu for configuring auto-logging script. Use this dialog box to setup an auto-logging script for the account site. This is entirely optional but is a useful way to automatically retrieve selected logged data and generate reports you can use for performance evaluation and troubleshooting. You can also use this dialog box to configure automatic retrieval of logged data without generating any reports. Then you can create your reports on an as-needed basis. For auto-logging to occur, you must leave the PC on with the program running and **only** its Home Screen visible on the monitor. Alarm monitoring can be on simultaneously. Note that a unique auto-logging script can be created for each account site.



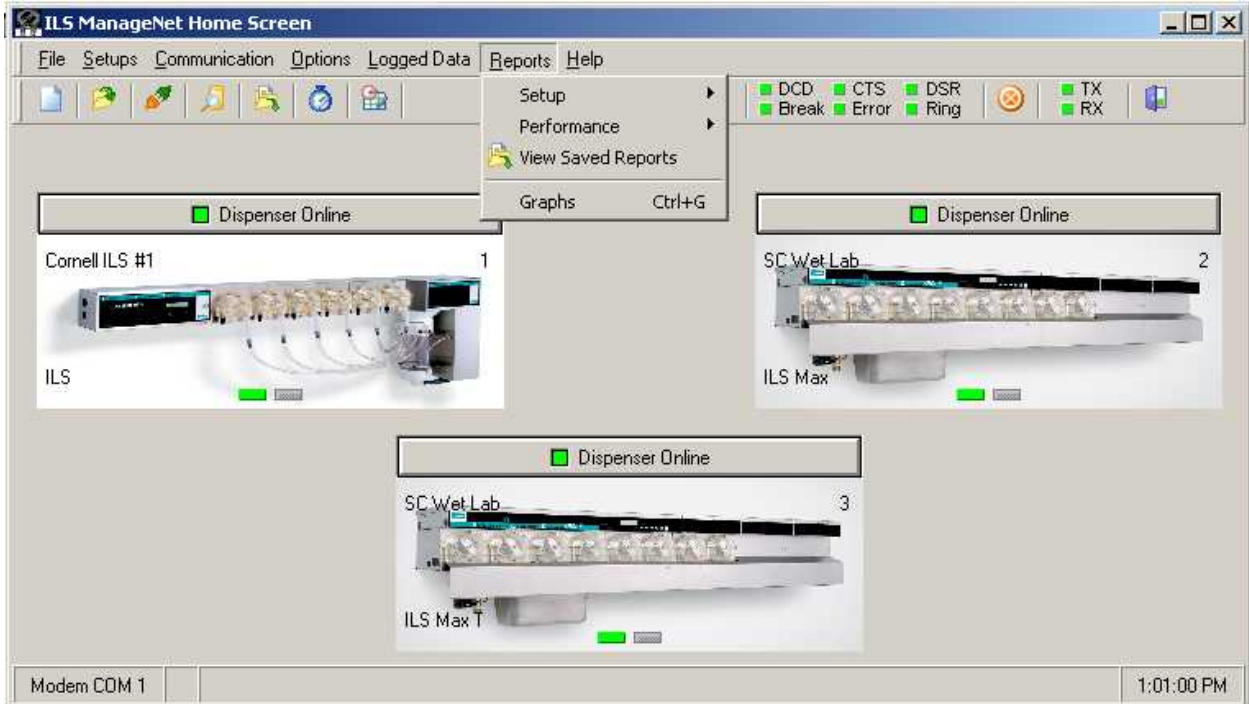
Execute Auto-Logging Script now

Initiates auto-logging script immediately. The software can be set to disconnect from the dispenser when complete and a button allows the user to cancel the auto-log at any time.



Reports

The Reports dropdown menu allows the user to manipulate the logged data in graphical form for use in analysis of performance and costs of the laundry equipment and staff.



Setup

Allows user to generate reports by system, washer and load classification.

System

Report of system setup information. It contains present chemical pump calibrations, service life and replacement date for the peristaltic pump tubes and pump motors as well as the chemical and account setups. Print this report at each service call or whenever you change setups.

Washer

Report of washer setup information.

Load Classification

Report of load classification setup.

Performance

Allows user to generate reports by Cycle Records, System Events/Errors, Washer Triggers, Chemical Use, Production Summary, and Daily Totals.

Cycle Records Reports

Allows user to create reports of cycle records by classification, shift and date. When you select the Cycle Records Report, the program displays this dialog box so you can choose a subset of cycle records for the report. You should reduce the report to just what you wish to see, since you may have thousands of records stored on your PC. Follow these instructions to use the cycle records report:



If you request the combining of data on the Reports tab of Program Configuration, you can produce a Cycle Records report with combined data on load classifications and chemical supplies from multiple dispensers at an account site.

1. The report will include the load classifications that appear in the list box at the top. You can empty the list box by clicking the **Clear Specifications** button. To add classifications to the list, click the **Cycle Specifications** button. In the new dialog box, you can select one washer and dispenser whose classifications you want included (the highlighted washer's classifications appear in the list at the right). You may also select all washers in the dispenser network by clicking **All**, or clear the list by clicking **None**. When you click **OK** in this dialog, the selected classifications appear in the list box on the Cycle Records Report dialog box.
2. Type dates in the **Start Date** and **End Date** fields. The end date defaults to the date of the last cycle record. The start date defaults to the date of the first cycle record.
3. Select **All Shifts** or one of the shifts.
4. On the **Chemical Injections/Errors** tab, select the types of cycles you want in the report.
5. On the **Run Time/Weight** tab, you can click **Weight >=** and type a weight in the text box to select only loads that weighed this weight or more than this weight. You can also click **Weight <=** and type a weight in the text box to select only loads that weighed this weight or less than this weight.

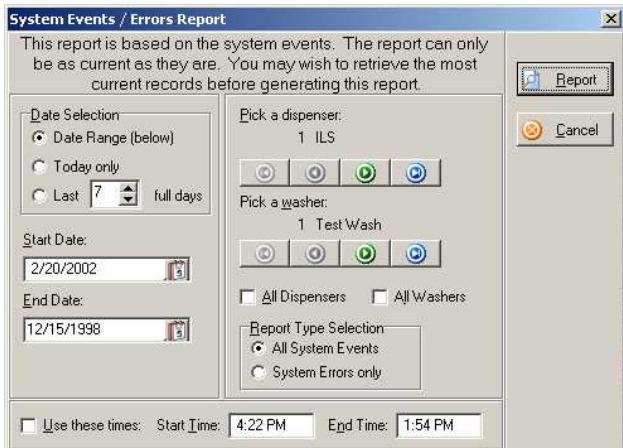
For **Cycle Length Selection**, make similar selections to include only those cycles that lasted greater than and/or less than the time you specify.

- On the **Excess/Turnaround** tab, you can request only cycles that took an excess of time greater than and/or less than a time you specify. For **Turn Around Time Selection**, make similar selections to include only cycles whose turnaround time is greater and/or less than a time you specify.
- When you are ready to generate the report, click **Report**. The report is generated and you can use the report menu and toolbar to customize viewing and printing.



System Events/Errors Report

Report of either all system events or only system events by washer and date/time. This report is used as a diagnostic tool to look at and possibly send to the factory for diagnosis of a suspected problem. For example, if you suspect a dispenser is missing feeds, retrieve the system events and generate a System Event report to see if the dispenser received the appropriate feed requests.



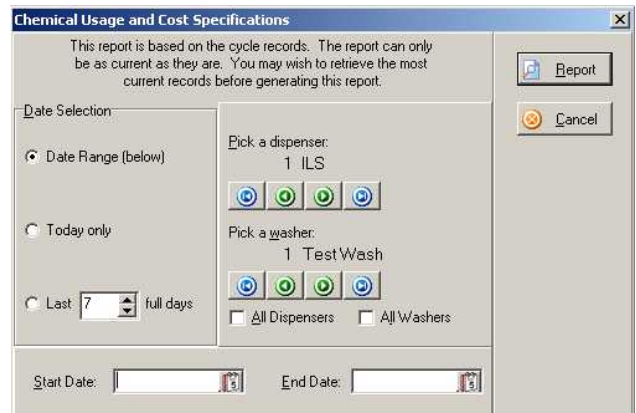
Washer Trigger Events Record

Trigger strip report by dispenser, date/time. This report is used as a diagnostic tool to look at and possibly send to the factory for diagnosis of a suspected problem. For example, if you suspect a washer missed a feed, retrieve the washer triggers and generate a Washer Trigger Events report to see if the washer received the appropriate trigger(s) for the feed request.



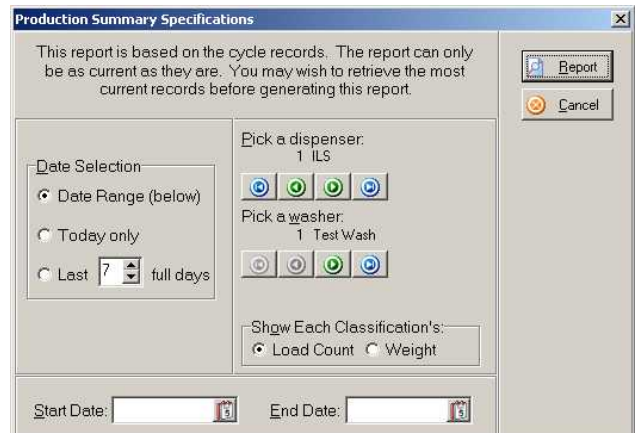
Chemical Usage and Cost Specifications

Report of chemical usage and cost specifications.



Production Summary Report

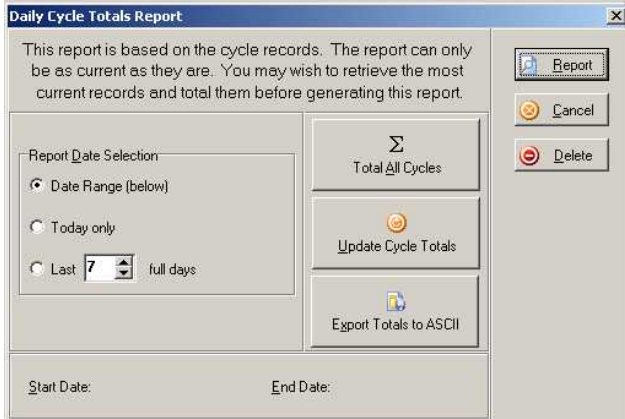
This report is a summary of all cycles washed in a given period, with the cycles organized by load classification. For each classification, you can choose to show total weight or total number of loads washed, along with the cost.



Daily Totals Report

Generating this report builds a Cycle Totals Table from cycle records logged data. The program goes through all the cycle records and combines data according to the combining options you have checked in the **Reports** tab in the **Program Configuration** dialog. The Cycle Totals Table remains a historical summary of all cycle totals, since no records are

deleted and newer records are added to the end of the table. Thus, from this table, you can always generate a Daily Cycle Totals Report for any day or range of days. Before generating the report, you should retrieve the most current cycle records from the dispenser(s) by choosing **Backup** from the **Setups** menu.



View Saved Reports

Allows user to view previously generated and saved reports.



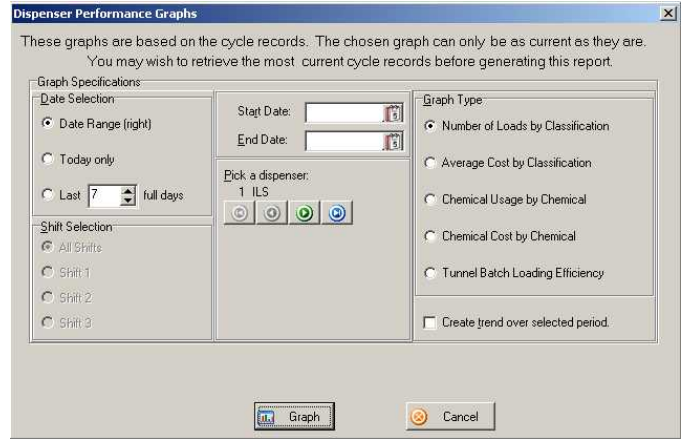
While ManageNet 3.1 uses an ".ace" file type for saved reports and ManageNet 2 uses a ".rpt" file type, the file format is still the same and ManageNet 3.1 can read reports saved by ManageNet 2.

Graphs

Allows user to create dispenser performance graphs using logged data. Use the right mouse button to view a dropdown menu with graphing options. You can generate the following dispenser performance graphs:

1. Number of Loads by Classification
2. Average Cost by Classification
3. Chemical Usage by Chemical
4. Chemical Cost by Chemical
5. Tunnel Batch Loading Efficiency

Graphs are based on logged data cycle records. Before generating a graph, it is a good idea to retrieve the latest cycle records so the graphs can reflect the latest production. Once you have retrieved the desired cycle records, you can select the graph you want, specify the scope of the graph, view the graph on screen and optionally export or print it. To do so, choose **Graphs** from the **Reports** menu.



HOT BUTTONS



Just below the drop down menus there are 7 hot buttons. They are:

1. **New Account** – create a new account site or new chain account.
2. **Open Account Site** – open, edit or delete a selected account.
3. **Connect to current remote account site** – connects to currently selected remote account site.
4. **Poll network** – polls network to establish which dispensers are communicating to the software
5. **View a previously created report** – allows the user to view previously created and saved reports of logged data.
6. **Monitor alarm state of active dispenser in Home Screen** – allows user to have alarms on the Home Screen to monitor the state of the active dispensers.
7. **Initiate the autoscript (mouse right click to edit script)** – starts the autoscript at the preset programmed time as setup in the script.

STATUS INDICATORS



To the right of the hot buttons are six modem status lights as follows:

1. **DCD** – Data Carrier Detect
2. **Break**– The modem has received a “break” character.
3. **CTS**– Clear to Send
4. **Error**– The modem has experienced an error.
5. **DSR** – Data Set Ready
6. **Ring**– The phone line is ringing.

To the right of the modem status lights is a hot button to cancel communications or stop a process such as polling.

To the right of the cancel communications hot button are 2 more modem status lights as follows:

1. **RX** – ManageNet is receiving data.
2. **TX** – ManageNet is transmitting data.

To the right of the RX/TX status lights is a hot button to exit the program.

DISPENSER INDICATORS

The main display area of the Home Screen is where the dispensers installed for the active account are shown. Each dispenser on the main display area is shown separately and indicates the type and name of the dispenser.



The square area at the top of each dispenser that is shown on the Home Screen can be selected by the user by placing the mouse cursor over the area and clicking the left mouse button. When the indicator is green the software is enabled and will communicate with the dispenser. If the indicator light is red the software will not communicate with the dispenser. The indicator lights on the bottom of the display graphic are as follows:

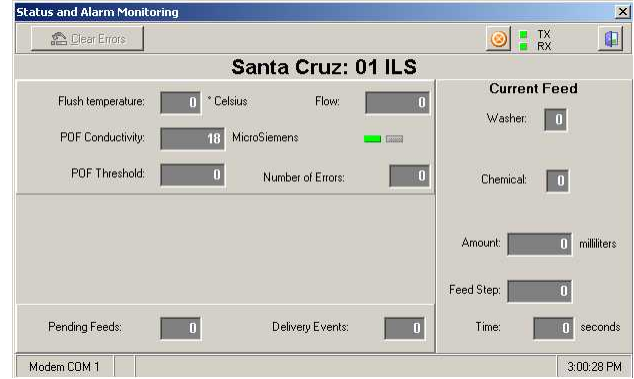
1. **Left Indicator:** Same as top indicator. Green means the software is enabled to communicate with the dispenser. If the indicator is not green it means the software is disabled from communicating with the dispenser.
2. **Right Indicator:** When flashing indicates an alarm has been activated.

The bottom of the Home Screen shows which method of communication and port the software is using. A PC-generated clock shows the time set on the computer.

Double-click the dispenser image to view the Status and Alarm monitoring screen.



This function will not work unless you are connected to the account site.



FREQUENTLY ASKED QUESTIONS

1. **Can I export collected data to other software applications?**
Yes, select **Logged Data**, and then select the data to export. Select **File**, and then **Export Data**. The data can be exported as a text file (CSV— Comma Separated Variable format) and then imported into any program.
2. **Is the software available in other languages?**
At this time the software and manual is only available in English.
3. **The software is installed, the dispensers are properly connected and I have set up my accounts and dispensers, but I can't connect to one of the dispensers.**
Make sure the network ID for the problem dispenser is a non-zero address. The address for each dispenser in the wash aisle should match the address of the dispenser that shows up on the program's Home Screen for that account.
4. **How is the logged data stored?**
The data is stored in XML format, which is text based.
5. **How do I import older versions of my data into this software?**
A software utility is provided with the CD-ROM that will convert older data to a format that can be used by this version of the software. See **Appendix A** for instructions.
6. **When I type in the password to log on to a dispenser I am told that my password is incorrect.**
Ensure that the computer modem is set to the correct speed of 9600 bps to connect to the dispenser network. If the computer modem is not set correctly the software will give the incorrect password message even though the correct password is used.

If the computer modem is set correctly but the password is still not accepted, it may be that the computer modem does not obey the speed setting and is connecting at a faster speed. See **Appendix B** for a solution to this problem.

7. **The program is running VERY slowly. What is going on?**

Go to the **Options** dropdown menu, and select **Program Configuration**. Make sure that the **DiagnosticLogFile Recording** option is unchecked.

DEFINITIONS

Account Name

This is the Account Name field that is part of the dispenser's account setups. Do not confuse this with the Account Site name, which is not stored in the dispenser and appears on the Home Screen below the toolbar.

Account Site

An account site is one customer location with a dispenser network. A chain account is one customer with more than one account site. The program allows you to organize one or more account sites into chain accounts. Because each account site's data is stored in an individual folder, the account sites that make up a chain can be organized as sub-folders of the chain account folder.

Chain Account

A chain account is one customer with more than one account site. Optionally, you can group account sites into chain accounts. This is just for organization, but is recommended if you will be working with data from more than one account site.

Cycle Run Time

The dispenser compares the actual run time to the nominal time you set and logs the difference as excess time in the cycle records. For example, if the excess time is a positive number, this tells you it may be taking too long to fill the washer with water, or the washer may have been placed on hold. If the excess time is a negative number, it tells you that the load may have been rushed.

Folder of Account Data

When you create a new account site in the program, you are creating a "folder" on the computer that will contain all the setup data, logged data and reports for the actual account site. When you open an existing account site while using the program, you are asking the program to use the data that is contained in that account site's folder.

Net ID

Net ID is equivalent to the dispenser address. Each address is a unique, two-digit, non-zero number, preferably sequential and starting with 01 (for example, 01, 02, 03 and so on). You set each dispenser address at the account site using the dispenser LCD screen. If there is more than one site in an account chain, begin each site's first dispenser address with 01.

APPENDIX A

IMPORTING DATA FROM MANAGENET 2.10 OR 2.11

If you have data from ManageNet 2.11 or ManageNet 2.10, it can be converted to work with ManageNet 3.1 using the Data Importer V1.0. The Data Importer will have been installed on your system when you installed ManageNet 3.1.



The exit button.



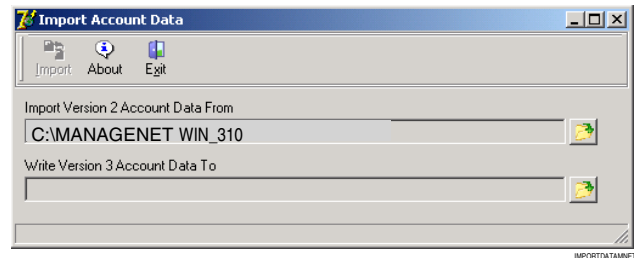
The "About" button



The "Import" button

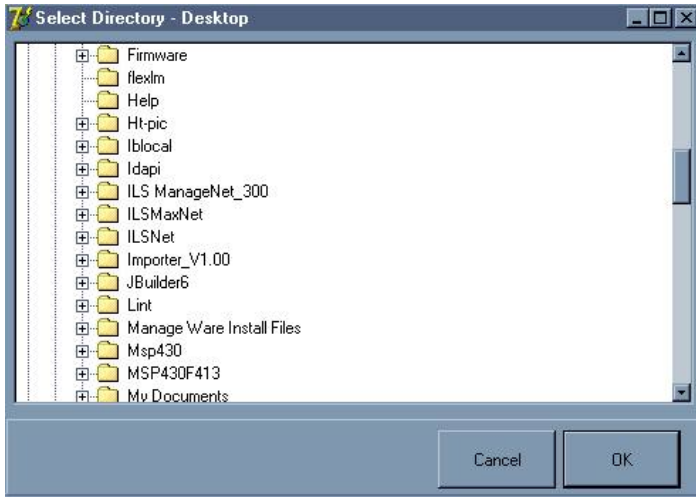


The "Folder" button

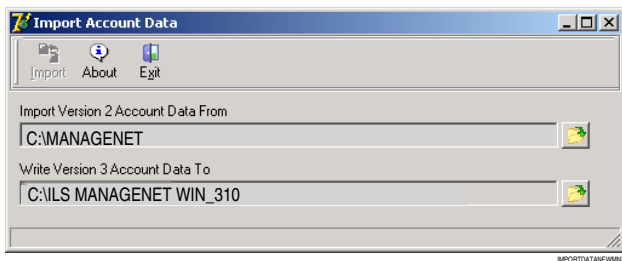


To Use the Importer:

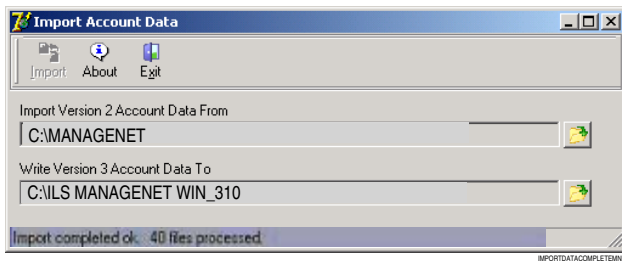
1. Open the application. It should be located on the Windows **Start** menu under Programs, ManageNet, Data Importer V1.0.
2. Now you must tell the application when your old data is, and where ManageNet 3.1 is. First click on the folder button near the "From" box in the **Import Utility** window. Locate the location of your old copy of ManageNet from the **Select Directory** window. If you installed your older version of ManageNet to the default location, it will be located in "C:\ManageNet".



- Now you must tell the application where your **new** version of ManageNet is. First click on the folder near the “To” box in the **Import Utility** window. Locate your new copy of ManageNet. If you installed your new version of ManageNet to the default location, this will be “C:\ILS ManageNet_310”.



- The Import process will take some time (up to 20 minutes or more) and it may look like the program is frozen. When you are ready to begin, click on the “Import” button.
- A message will appear in the lower left corner when the import process is complete. You can now open ManageNet 3.1 and view your converted data.




APPENDIX B

CONFIGURING THE DISPENSER MODEM FOR 9600 BPS

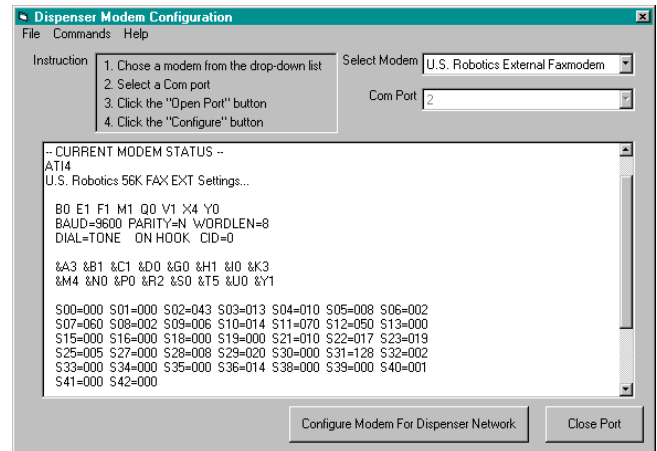
It is possible to configure the dispenser modem to connect to a PC modem only at 9600 bps (bits per second), as required for communication with a dispenser network. This eliminates the

need to force the PC modem to connect at 9600 bps, and also allows ManageNet to be used with those PC modems that do not obey when told to connect only at 9600 bps. This configuration need be done only once, after which the dispenser modem will always connect only at 9600 bps, no matter which PC modem is calling it. This configuration is performed by the Dispenser Modem Config. application, which was installed on your system when you installed ManageNet 3.1.

To Configure the Dispenser Modem:

NOTE  Only the dispenser modem should be configured as described below. The PC modem (internal or external) should not be configured.

- Connect the modem to be configured to the PC on which ManageNet is installed, using the same serial port that ManageNet uses (a USB to serial port adapter may be used if the PC does not have a built-in serial port). The modem does not need to be connected to a telephone line. If using a US Robotics faxmodem equipped with DIP switches, set switches 1, 3, and 8 down, and the rest up. Switch on the modem.
- Open the Dispenser Modem Configuration application. It should be located on the Windows **Start** menu under Programs, ManageNet WIN, Dispenser Modem Config. ManageNet must *not* be running, as it may use the same serial port.
- When the Dispenser Modem Configuration window opens, select your dispenser modem from the **Select Modem** dropdown list. Currently the application supports only the US Robotics external faxmodem, but more choices may be added in the future.



- Select the com port using the **Com Port** dropdown list. Use the same com port that ManageNet uses. Click the **Open Port** button to open the selected com port.
- To verify that the application is communicating with the modem, select **Show Current Settings** from the **Commands** menu. If the modem responds with a list of the current settings, you may proceed with the configuration. If it does not, make sure the correct serial port is selected, the modem DIP switches are set correctly (do this *before*

switching the modem on), and the proper serial cable is being used.

6. Click the **Configure Modem For Dispenser Network** button. This will cause the modem's configuration to be adjusted for use as a dispenser modem, and then saved in the modem's internal non-volatile memory, so that the new configuration will automatically be used whenever the modem is turned on.



*It is also possible to issue the configuration commands individually using the **Command** menu. This is normally done only when troubleshooting a problem.*

7. Switch off the modem, and disconnect it from the PC. If using a US Robotics faxmodem equipped with DIP switches, set switches 1 and 3 down, and the rest up.



This is different than the DIP switch settings used if the modem has not been configured.

8. Close the Dispenser Modem Configuration application. It is not necessary to close the com port first.

Using The Configured Modem

Once the modem has been configured, it may be disconnected from the PC and connected to the dispenser network as described in the installation section of the manual, except that the modem's DIP switches must be left as set in step 7 above.

When using ManageNet to contact a site that is using a configured modem, it is not necessary to set the PC modem to connect at 9600 bps, and so the *Setting the Modem Speed* section of the manual may be skipped. It will be necessary to set the PC modem speed if contacting a site that has not had its modem configured.



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