46082
E2A TEST SET
SOFTWARE

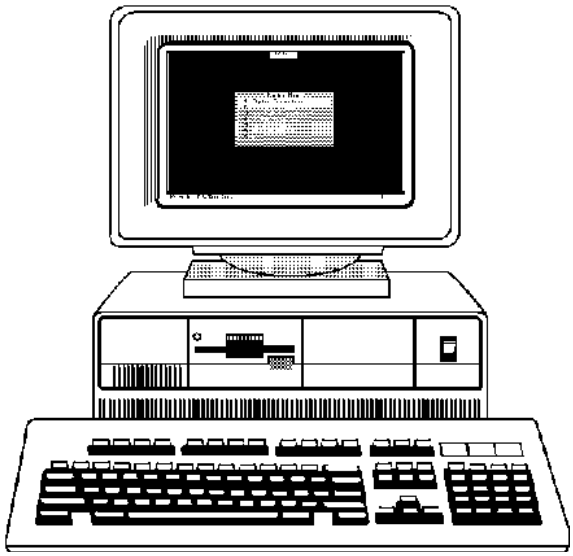

Table of Contents

Ordering Information 2
Installation 2
Getting Started 6
Interrogator Mode 11
Responder Mode 35
Monitor Mode 48
Terminal Emulator 58
Troubleshooting 59
Warranty 62

CAUTION

- Install or remove modules from the shelf only when the power is off. If you install a module in the shelf with the power on, the internal circuitry may suffer damage and the product warranty will be void.
- Remove and install circuit boards only in a static-safe environment (use antistatic wrist straps, smocks, footwear, etc.).
- Keep circuit boards in their antistatic bags when they are not in use.
- Do not ship or store circuit boards near strong electrostatic, electromagnetic, magnetic, or radioactive fields.
- For more complete information on electrostatic discharge safety precautions, refer to Bellcore™ Technical Reference # TR-NWT-000870.

About this Practice:

This practice has been reissued to:

- Meet ISO 9001 requirements.

Reissued Practices: Updated and new content can be identified by a banner in the right margin.

UPDATED

Previous issue: April 1996

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ORDERING INFORMATION

NOTE: This section lists the different options available for this product. To order any of the available options, contact Dantel Inside Sales through our toll-free number, **1-800-432-6835.**

OPTION NUMBER	FEATURES
A22-46082-02	E2A Test Set Software

INSTALLATION

This chapter explains how to install the 46082 E2A Test Set software on your computer.

This software can be installed on an IBM™-compatible computer equipped with the following:

- Windows 3.1, Windows 95 or Windows NT 3.51
- 8M of memory (16M for Windows NT)
- VGA/high-resolution color (recommended), monochrome, or LCD monitor
- One serial port
- One 3.5" diskette drive
- One hard disk drive

There are two sections to this chapter: one for installing the E2A Test Set software on Windows 3.1 and Windows NT 3.51, and one for installing the software on Windows 95. Go to the appropriate section.

WINDOWS 3.1 AND WINDOWS NT INSTALLATION

There are two parts to this section: one for installing the E2A Test Set software with a mouse, and one for installing the software without a mouse. Go to the appropriate part of this section.

INSTALLATION WITH A MOUSE

NOTE: *Windows must be installed on your computer. This manual assumes that you are familiar with how to use Windows.*

1. Open Windows.
2. Open the Program Manager, if it is not already open.

CONTINUED . . .

NOTE: *Make sure all other Windows programs are closed. The installation program may require system resources used by other programs and may upgrade some files. Any upgrades should not affect the operation of any of your Windows programs.*

3. The E2A Test Set software is on two disks. Insert disk 1 into one of the diskette drives of your computer.
4. Open the *File* menu.
5. Click the *Run* command.
6. In the Command Line type the letter of the drive where you installed the disk (either drive A or B). Then type a colon, a backslash (\) and *setup.exe*. For example, type **B:\setup.exe**
7. Click OK.
8. Follow the instructions on the screen for installing the software. The software will be installed in the default directory of C:\Dantel\E2A, unless you specify a different directory.

CAUTION: *Make sure you install the program in a new directory. Do not install the program in an existing directory.*

NOTE: *Disk 2 may install in a couple of seconds, and you may think there is a problem. Actually there may not be a problem. It could mean the files on disk 2 are already installed by other programs, such as Dantel's TBOS Test Set software.*

9. When the installation is complete, store the disks in a safe place.

INSTALLATION WITHOUT A MOUSE

NOTE: *Windows must be installed on your computer. This manual assumes that you are familiar with how to use Windows.*

1. Open Windows.
2. Open the Program Manager, if it is not already open. To open the Program Manager, hold down the Alt key and press the Tab key repeatedly until the Program Manager program appears in the window. Then release the Alt key.

NOTE: *Make sure all other Windows programs are closed. The installation program may require system resources used by other programs and may upgrade some files. Any upgrades should not affect the operation of any of your Windows programs.*

CONTINUED . . .

3. The E2A Test Set software is on two disks. Insert disk 1 into one of the diskette drives of your computer.
4. Open the *File* menu (Alt+F).
5. Select the *Run* command (press R).
6. In the Command Line type the letter of the drive where you installed the disk (either drive A or B). Then type a colon, a backslash (\) and *setup.exe*. For example, type **B:\setup.exe**
7. Press Enter.
8. Follow the instructions on the screen for installing the software. The software will be installed in the default directory of C:\Dantel\E2A, unless you specify a different directory.

CAUTION: *Make sure you install the program in a new directory. Do not install the program in an existing directory.*

NOTE: *Disk 2 may install in a couple of seconds, and you may think there is a problem. Actually there may not a problem. It could mean the files on disk 2 are already installed by other programs, such as Dantel's TBOS Test Set software.*

9. When the installation is complete, store the disks in a safe place.

WINDOWS 95 INSTALLATION

There are two parts to this section: one for installing the E2A Test Set software with a mouse, and one for installing the software without a mouse. Go to the appropriate part of this section.

INSTALLATION WITH A MOUSE

NOTE: *Windows must be installed on your computer. This manual assumes that you are familiar with how to use Windows.*

1. Open Windows 95.
2. Click the *Start* button.

NOTE: *Make sure all other Windows programs are closed. The installation program may require system resources used by other programs and may upgrade some files. Any upgrades should not affect the operation of any of your Windows programs.*

CONTINUED . . .

3. The E2A Test Set software is on two disks. Insert disk 1 into one of the diskette drives of your computer.
4. Click the *Run* command.
5. In the Command Line type the letter of the drive where you installed the disk (either drive A or B). Then type a colon, a backslash (\) and *setup.exe*. For example, type **B:\setup.exe**
6. Click OK.
7. Follow the instructions on the screen for installing the software. The software will be installed in the default directory of C:\Dantel\E2A, unless you specify a different directory.

CAUTION: *Make sure you install the program in a new directory. Do not install the program in an existing directory.*

NOTE: *Disk 2 may install in a couple of seconds, and you may think there is a problem. Actually there may not be a problem. It could mean the files on disk 2 are already installed by other programs, such as Dantel's TBOS Test Set software.*

8. When the installation is complete, store the disks in a safe place.

INSTALLATION WITHOUT A MOUSE

NOTE: *Windows must be installed on your computer. This manual assumes that you are familiar with how to use Windows.*

1. Open Windows 95.
2. Press the Tab key repeatedly until the *Start* button is highlighted.
3. Press Enter.

NOTE: *Make sure all other Windows programs are closed. The installation program may require system resources used by other programs and may upgrade some files. Any upgrades should not affect the operation of any of your Windows programs.*

4. The E2A Test Set software is on two disks. Insert disk 1 into one of the diskette drives of your computer.
5. Select the *Run* command (press R).
6. In the Command Line type the letter of the drive where you installed the disk (either drive A or B). Then type a colon, a backslash (\) and *setup.exe*. For example, type **B:\setup.exe**
7. Press Enter.

CONTINUED . . .

8. Follow the instructions on the screen for installing the software. The software will be installed in the default directory of C:\Dantel\E2A, unless you specify a different directory.

CAUTION: *Make sure you install the program in a new directory. Do not install the program in an existing directory.*

NOTE: *Disk 2 may install in a couple of seconds, and you may think there is a problem. Actually there may not a problem. It could mean the files on disk 2 are already installed by other programs, such as Dantel's TBOS Test Set software.*

9. When the installation is complete, store the disks in a safe place.

GETTING STARTED

The E2A Test Set software is a program that tests alarm and control equipment that uses E-system telemetry.

EQUIPMENT CONNECTION

To test the equipment the computer must be connected to Dantel's 00459 Test Set.

To Connect the Computer to the Test Set:

Follow the instructions in the Installation and Operation Practice for the 00458 and 00459 Test Sets.

SOFTWARE START-UP

You can open the E2A Test Set software program in Windows 3.1 or Windows NT 3.51, or in Windows 95. Go to the appropriate section.

OPENING THE SOFTWARE IN WINDOWS 3.1 AND WINDOWS NT

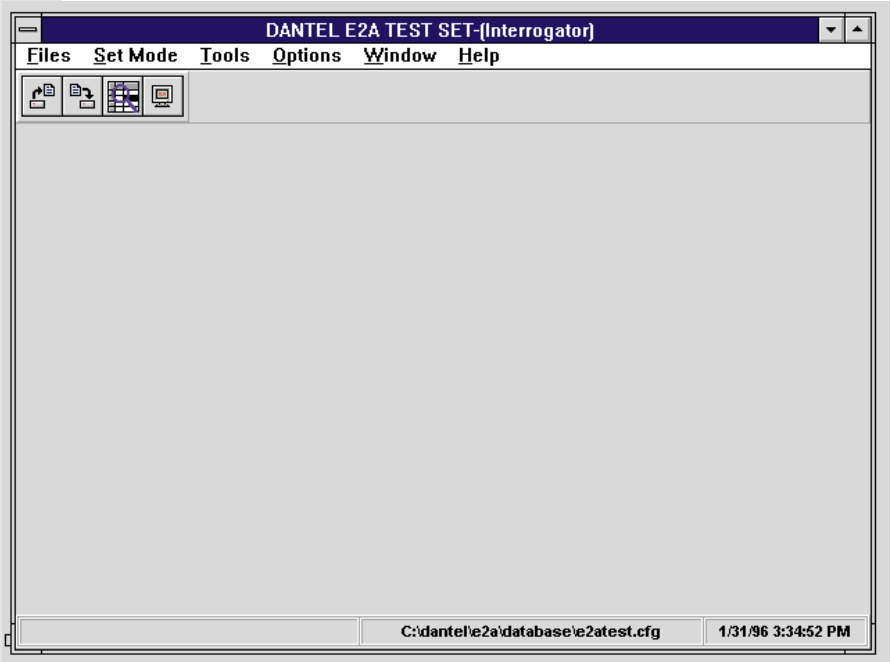
You can open the E2A Test Set software program with or without a mouse. Go to the appropriate section.

Opening the Software With a Mouse

1. Open Windows.
2. Open the Program Manager, if it is not already open.
3. Open the Dantel Software group window, if it is not already open.

CONTINUED . . .

4. Double-click the *E2A Test Set* icon to start the program. The Dantel E2A Test Set screen appears.



5. In the menu bar, click *Set Mode*.

6. In the Set Mode menu, click either the Interrogator, Responder, or Monitor mode, depending on how you want to use your test set. Here are explanations of the three modes:

   Interrogator Mode - In this mode the test set emulates an E-system operations center and Interrogates (polls) the rest of the system for testing or troubleshooting.

   Responder Mode - In this mode the test set acts as a remote device (Responder) to test or troubleshoot polls from the E-system operations center.

   Monitor Mode - In this mode both the transmit and receive paths can be monitored between the E-system operations center and central office. Communications are not interrupted.

   For typical applications showing the three modes of operation, refer to the 00458/00459 Test Sets practice.

7. Go to the chapter for the mode you selected.

Opening the Software Without a Mouse

1. Open Windows.

2. Open the Program Manager, if it is not already open. To open the Program Manager, hold down the Alt key and press the Tab key repeatedly until the Program Manager program appears in the window. Then release the Alt key.

CONTINUED . . .

3. Open the Dantel Software group window, if it is not already open. To open the group window, hold down the Ctrl key and press the Tab key repeatedly until the window is highlighted. Then press Enter.
4. Use the arrow keys to highlight the *E2A Test Set* icon.
5. Press Enter to start the program. The Dantel E2A Test Set screen appears.
6. If you are not using a mouse and the keys are not active when you try to select a Menu Bar item, press Alt+Tab keys and repeat until the E2A box appears in the screen. The Title Bar assumes the color for the active window and the program focuses on the current screen.
7. In the menu bar, open the *Set Mode* menu (Alt+S).
8. In the Set Mode menu, select either the Interrogator (press I), Responder (press R), or Monitor mode (press M), depending on how you want to use your test set. Here are explanations of the three modes:

   Interrogator Mode - In this mode the test set emulates an E-system operations center and Interrogates (polls) the rest of the system for testing or troubleshooting.

   Responder Mode - In this mode the test set acts as a remote device (Responder) to test or troubleshoot polls from the E-system operations center.

   Monitor Mode - In this mode both the transmit and receive paths can be monitored between a the E-system operations center and central office. Communications are not interrupted.

   For typical applications showing the three modes of operation, refer to the 00458/00459 Test Sets practice.
9. Go to the chapter for the mode you selected.

OPENING THE SOFTWARE IN WINDOWS 95

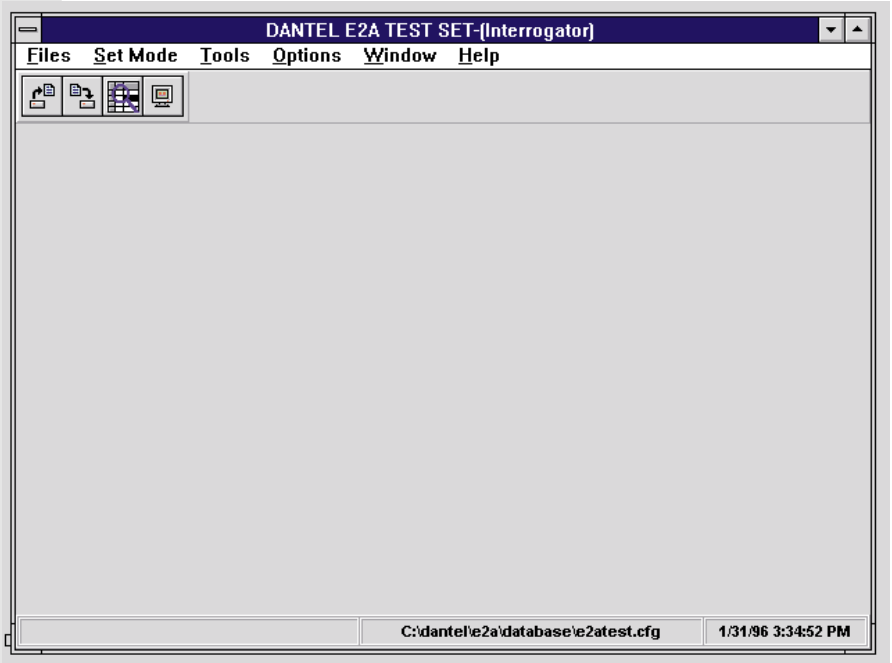
You can open the E2A Test Set software program with or without a mouse. Go to the appropriate section.

Opening the Software With a Mouse

1. Open Windows 95.
2. Click the *Start* button.
3. Click *Programs*.
4. Click *Dantel Software*.

CONTINUED . . .

5. Double-click *E2A Test Set* to start the program. The Dantel E2A Test Set screen appears.



6. In the menu bar, click *Set Mode*.
7. In the Set Mode menu, click either the Interrogator, Responder, or Monitor mode, depending on how you want to use your test set. Here are explanations of the three modes:

   Interrogator Mode - In this mode the test set emulates an E-system operations center and Interrogates (polls) the rest of the system for testing or troubleshooting.

   Responder Mode - In this mode the test set acts as a remote device (Responder) to test or troubleshoot polls from the E-system operations center.

   Monitor Mode - In this mode both the transmit and receive paths can be monitored between the E-system operations center and central office. Communications are not interrupted.

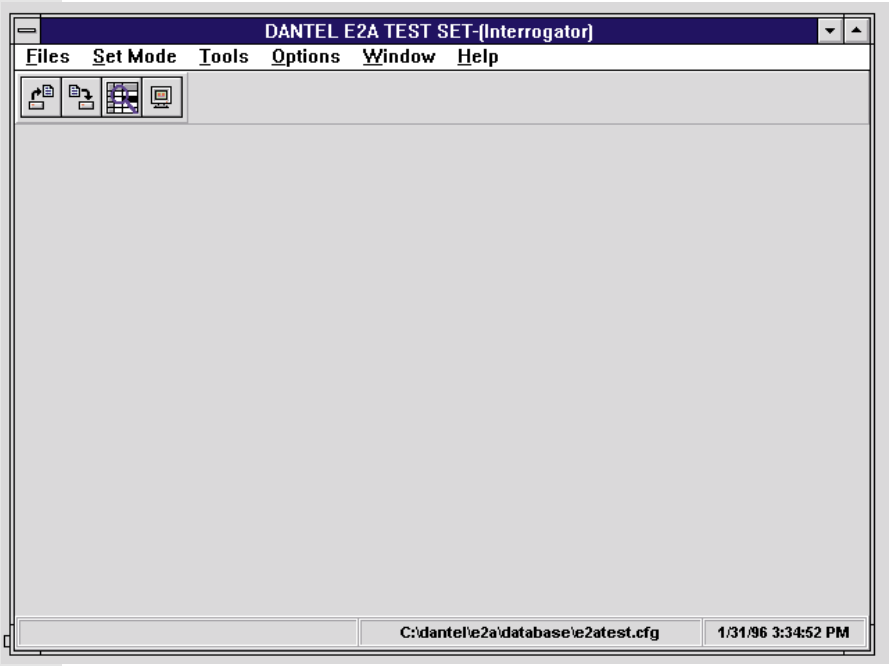
   For typical applications showing the three modes of operation, refer to the 00458/00459 Test Sets practice.
8. Go to the chapter for the mode you selected.

Opening the Software without a Mouse

1. Open Windows 95.
2. Press the Tab key repeatedly until the *Start* button is highlighted. Then press Enter.
3. Press the Tab key repeatedly until *Programs* is highlighted. Then press P or press Enter.

CONTINUED . . .

4. Use the arrow keys to highlight *Dantel Software*.
5. Use the arrow keys to highlight *E2A Test Set*.
6. Press Enter to start the program. The Dantel E2A Test Set screen appears.



7. If you are not using a mouse and the keys are not active when you try to select a Menu Bar item, press Alt+Tab keys and repeat until the E2A box appears in the screen. The Title Bar assumes the color for the active window and the program focuses on the current screen.
8. In the menu bar, open the *Set Mode* menu (Alt+S).
9. In the Set Mode menu, select either the Interrogator (press I), Responder (press R), or Monitor mode (press M), depending on how you want to use your test set. Here are explanations of the three modes:

   Interrogator Mode - In this mode the test set emulates an E-system operations center and Interrogates (polls) the rest of the system for testing or troubleshooting.

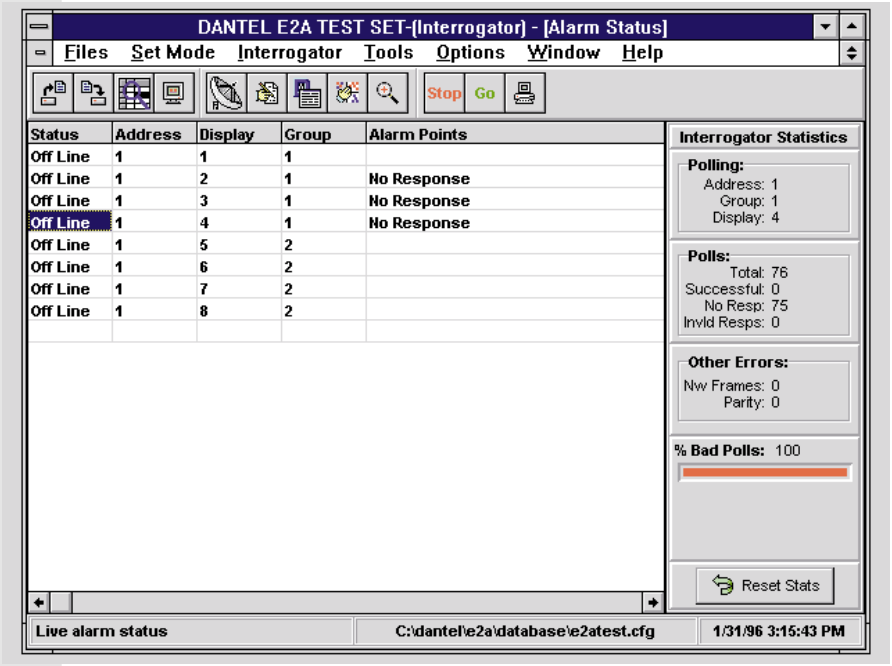
   Responder Mode - In this mode the test set acts as a remote device (Responder) to test or troubleshoot polls from the E-system operations center.

   Monitor Mode - In this mode both the transmit and receive paths can be monitored between a the E-system operations center and central office. Communications are not interrupted.

   For typical applications showing the three modes of operation, refer to the 00458/00459 Test Sets practice.
10. Go to the chapter for the mode you selected.

INTERROGATOR MODE

When you select Interrogator Mode from the Dantel E2A Test Set screen, the Interrogator–Alarm Status window pops up.



The test set automatically begins interrogating (polling) the E-system equipment for alarms. The screen shows the alarm displays that the test set is polling. The bottom line of the screen shows the configuration (.CFG) file that the software is using to poll for alarms.

In this window you can:

- Watch the responses from the alarm displays that the test set polls (refer to ***Polling Alarms*** in this chapter).
- Configure a list of alarm displays to interrogate (refer to ***Configuring a Polling File*** in this chapter).
- Operate controls in the E-system (refer to ***Operating Controls*** in this chapter).
- Analyze the data being transmitted and received (refer to the ***Troubleshooting*** chapter).
- Use a terminal emulator (refer to the ***Terminal*** chapter).

MENU BAR

Here are descriptions of the items on the menu bar.

Files

Open - Opens a different configuration file. Each configuration file contains the communications, protocol, and alarm polling parameters for interrogating a system. The file that is open is the one the test set is using.

Save - Saves the changes that you make to a configuration file.

Save As - Creates a new configuration file.

Exit - Exits the test set software program.

Set Mode

Interrogator - Changes the operation of the test set to the Interrogator Mode.

Responder - Changes the operation of the test set to the Responder Mode.

Monitor - Changes the operation of the test set to the Monitor Mode.

Not Configured - When the program first initiates there is no configuration in the system for Interrogation, Responder or Monitor Mode. This is an information message only.

Configuration Summary - Gives a quick summary of the Communications setup, the Polling setup and other information. This is an information screen only and no parameters can be changed on it.

Interrogator

Configure - Changes an existing configuration file or creates a new configuration file. A configuration file includes the communications and protocol parameters, and the list of alarm displays that the test set will use to poll a system.

Filter - Allows you to select which alarms you want to poll when you do not want to see all the alarms in the polling list.

Start/Stop - Starts or stops the alarm polling.

Test Modes - Allows you to send a test pattern of alarms to the E-system equipment to determine if the equipment is reporting alarms properly.

Control Status - Allows you to operate control points, and displays the status of control points that you have operated.

History - Displays a history of all alarms.

Hide Statistics - Hides the interrogator statistics that are displayed on the right side of the screen. If the statistics are hidden, selecting this option displays the statistics.

Reset Statistics - Resets the interrogator statistics counters to zero. The interrogator statistics appear on the right side of the screen and show what is happening during the polling.

Close - Closes the Interrogator window.

Tools

Protocol Analyzer - Activates the protocol analyzer that displays the data being transmitted and received during alarm polling. The data is displayed in hexadecimal or English format.

Editor - Opens Microsoft Windows Write.

Terminal - Opens the terminal emulator in your Windows program.

Window

When you have more than one window open, you can use the commands below to display all of them. All the open windows are listed below the *Tile Cascade* command.

Tile Horizontal - Displays all open windows horizontally across the screen.

Tile Vertical - Displays all open windows vertically on the screen.

Tile Cascade - Displays all open windows on top of each other.

Help

Provides information to help you use this software.

TOOL BAR

The tool bar is located below the menu bar and contains a row of icons that you can use to select many of the options in the Interrogator Mode.

NOTE: *You need a mouse to use the tool bar. If you are not using a mouse, you can activate all the commands from the menu bar.*

Here are the functions of the Tool Bar buttons:

Load Database - Opens a different configuration file. Each configuration file contains the communications, protocol, and alarm polling parameters for interrogating a system. The file that is open is the one the test set is using.

Save Database - Saves the changes that you make to a configuration file.

Configuration Summary - Displays the current configuration parameters. You can not change the parameters. To change to the parameters, click the *Communications Setup, Polling Parameters,* or *Polled Device List* icons.

Terminal Emulator - Opens the terminal emulator in your Windows program.

Communications Setup - Allows you to change the communications parameters of an existing configuration file or to choose the parameters for a new file.

Polling Parameters - Allows you to change the protocol parameters of an existing configuration file or to choose the parameters for a new file.

Polled Device List - Allows you to change the alarm polling list of an existing configuration file or to create a list for a new file.

Filter - Allows you to select which alarms you want to poll when you do not want to see all the alarms in the polling list.

Protocol Analyzer - Activates the protocol analyzer that displays the data being transmitted and received during alarm polling. The data is displayed in hexadecimal format.

Stop - Stops alarm polling.

Go - Starts alarm polling.

Controls - Opens the control panel window where you can select control points you want to operate. This button becomes active after you select the Control Status option in the Interrogator menu.

CONFIGURING A POLLING FILE

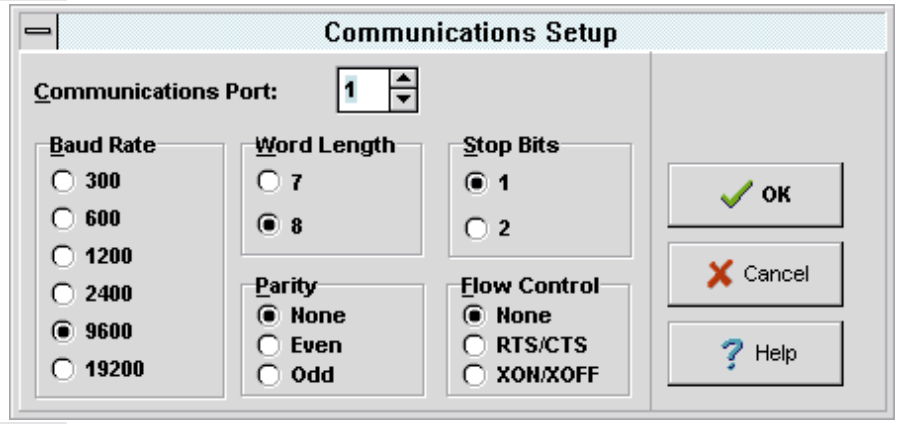
The bottom line of the screen shows the configuration (.CFG) file that the software will use to poll alarms.

TO CHANGE OR CREATE A CONFIGURATION FILE:

NOTE: *A mouse is optional. If you use a mouse, click the button you want to select. If you do not use a mouse, the steps are given in parentheses.*

Communications Setup

1. In the menu bar, select *Interrogate* (Alt+I).
2. Select the *Configure* (press G) command.
3. Select the *Communications* (press C) command. The Communications Setup window appears.



NOTE: *If you are not using a mouse and you need to exit (cancel) the window, or if you need help, press the Tab key repeatedly until you highlight the button. Then press Enter.*

4. Set the following communications parameters (the defaults are shown in brackets). When you use Dantel's 00459 Test Set, use the default settings except for the port setting. The port setting can be either 1 or 2, depending on which communications port you want to use on your computer to communicate with the test set.
   - ♦ Communications Port (Alt+C) [1]
   - ♦ Baud (Alt+B) [1200]
   - ♦ Word Length (Alt+W) [8]
   - ♦ Stop Bits (Alt+S) [1]
   - ♦ Parity (Alt+P) [None]
   - ♦ Flow Control (Alt+F) [None]

   If you do not have a mouse, use the Tab key to move between fields or buttons and use the arrow keys to move between the selections within a field.

   Flow control refers to the type of communications handshaking that will be used between your computer and the test set.

   None means that no handshaking controls will be used.

   RTS/CTS refers to Request-to-Send and Clear-to-Send controls. These signals are transmitted over dedicated wires between two pieces of communications equipment.

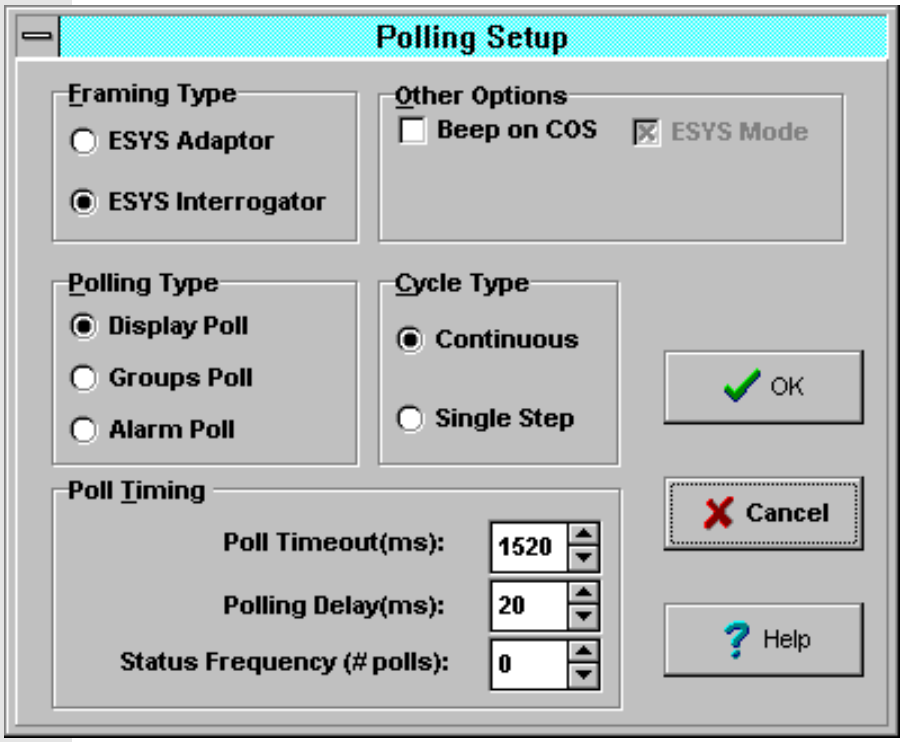
CONTINUED . . .

XON/XOFF turns data transmission on and off through a control bit in the data stream.

5. Select *OK* (Enter).

Protocol Setup

1. In the menu bar, select *Interrogate* (Alt+I).
2. Select the *Configure* (press G) command.
3. Select the *Protocol* (press R) command. The Polling Setup window appears.



NOTE: *If you are not using a mouse and you need to exit (cancel) the window, or if you need help, press the Tab key repeatedly until you highlight the button. Then press Enter.*

4. In the Framing Type area use the ESYS adapter when using the Dantel 00458/00459 test sets. (Alt+F, then use arrow keys). Use the Framing type for ESYS Interrogator when using the Dantel A11-46037-XX Interrogator.
5. In the Other Options area:
   - **Beep on COS** - Choose whether you want the computer to beep every time there is a change in the status (COS) of an alarm point (Alt+O, then press spacebar).
   - **ESYS Mode** - Select this mode only in Responder Mode and if you choose the *Alarm Poll* option in the Polling Type area.

CONTINUED . . .

- **Parity Errors (%) -** Leave this field at 0 in the Interrogator Mode.

6. In the Polling Type area, select the type of polling that you want to do (Alt+P, then use arrow keys). Here are descriptions of each polling type:

Display Poll - Polls all 64 alarm points in each E-system display that you want to interrogate. The equipment interrogated will send back the status of all points in the displays that are polled.

Groups Poll - Polls groups of four displays. Select this option if you want to poll only certain displays, or if the test set will emulate a Switching Control Center.

Alarm Poll - Polls the system for a COS.

In alarm polling the interrogator sends a request for an alarm response word. If the New/Change alarm bit is set, the interrogator transmits a display report word for display 1. Any of the bits set in this display are used for pointers and the interrogator then polls the displays corresponding to the set points in display 1.

Example: If the polling device sees a New/Change bit set it polls display 1. If point 9 was set in display 1 the interrogator knows that it must poll display 9 for existing new alarms.

Display 1 does not directly monitor alarms. It is referred to as an Index Serial Display Register and is a New/Change alarm index display.

Display 2 is the ANY Display Register. A bit is set as long as there is an active alarm in the corresponding display.

Display 3 is an error display for devices such as GTPs and is not described here (they may be device specific). SDRs 4-64 do directly monitor alarms and are called regular SDRs.

Hybrid Poll - Polls the system for COS and for status.

Hybrid polling is activated by setting the status frequency number of polls to anything other than 0 when the device is in the Alarm Poll Mode.

Hybrid polling is a combination of alarm and status polling. When the polling device polls the telemetry device, the format of the poll is that of an alarm poll. If the new alarm indicator in the response word is set, the test set performs a status poll on the telemetry device.

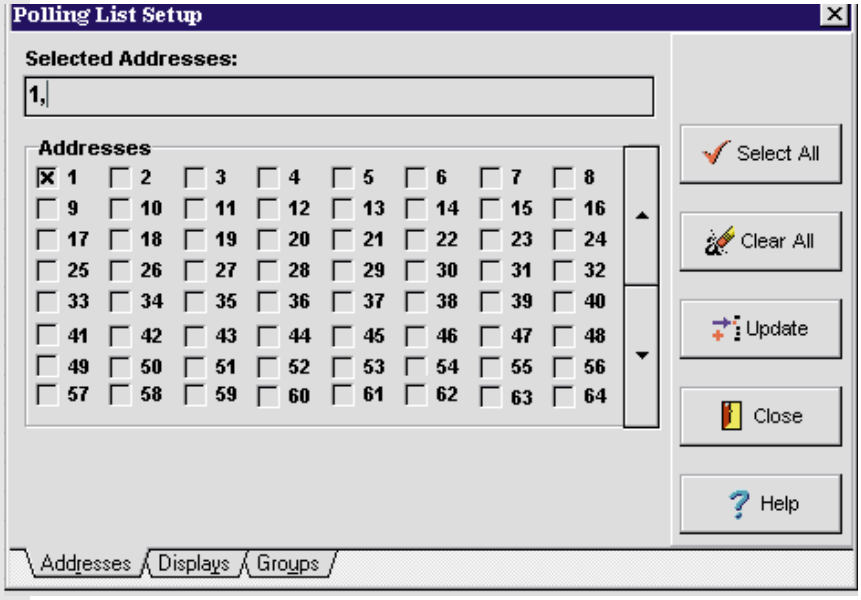
The alarm and status polls are both active with the alarm poll executing continuously and the status poll polling at predetermined cycles up to an interval of 9,999 cycles of alarm polls. This is set up using the status frequency number of polls on the polling setup screen of the test set.

CONTINUED . . .

7. In the Cycle Type area, select the polling cycle that you want to use (Alt+C, then use arrow keys). Here are descriptions of the cycle types:
   - **Continuous** - The test set continuously polls the alarm displays.
   - **Single Step** - The test set polls the alarm displays one time, then stops.
8. In the Poll Timing area:
   - Set the poll timeout (Alt+T, then use arrow keys). This is the time in milliseconds that the software will wait for a response after sending out a poll. Acceptable values are 0-9999. The default is 1500 milliseconds.
   - Set the polling delay (Tab, then use arrow keys). This is the time in milliseconds between continuous polls. Acceptable values are 0-9999. The default is 20 milliseconds.
   - Set the status frequency (Tab, then use arrow keys). Set to 0 if you want the test set to do alarm polling only. If you select a number, the test set does alarm polling for that number of cycles. Then it does a full update poll; that is, the test set requests the status of all alarm displays, not just those that have new alarms or changes of state. Acceptable values are 0-9999. The default is 0.
9. Select *OK* (Enter).

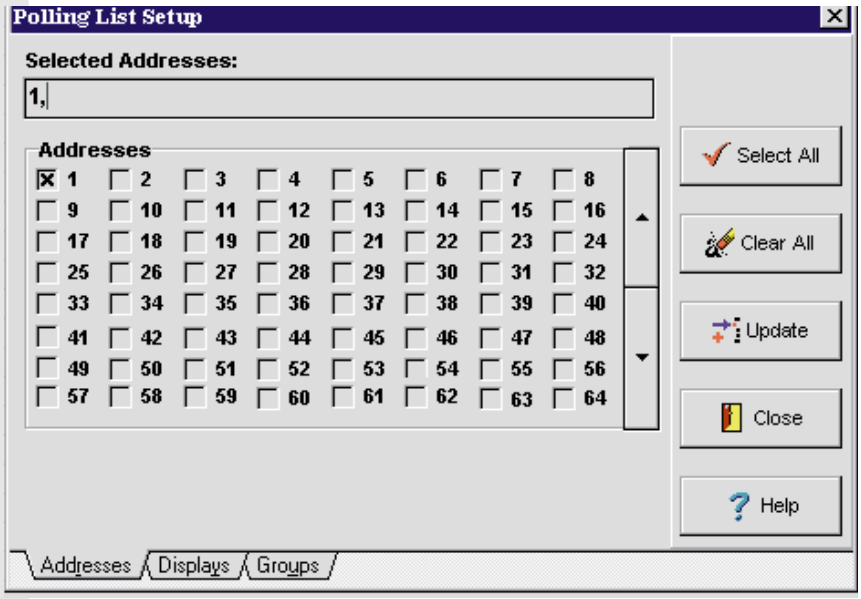
Polling List Setup

1. In the menu bar, select *Interrogate* (Alt+I).
2. Select the *Configure* (press G) command.
3. Select the *Polling* (press P) command. The Polling List Setup window appears.



Addresses

1. At the bottom of the window there are three options: *Addresses, Displays*, and *Groups*. If *Addresses* is not selected, choose it (press R). Here is the window for selecting addresses:



2. Either type the E-system addresses that you want to poll in the *Selected Addresses* field or select the addresses in the *Addresses* field.

   (Use the Tab key to access the fields. In the *Addresses* field, use the arrow keys to move to the address numbers, then use the spacebar to select or deselect. To select addresses above 64, use the Tab key to select the top, large arrow button to the right of the numbers. Then use the arrow keys. Then Tab back to the *Addresses* field.)

   Valid entries are 1-256. If you type the addresses, use only commas or hyphens between numbers; do not use spaces.

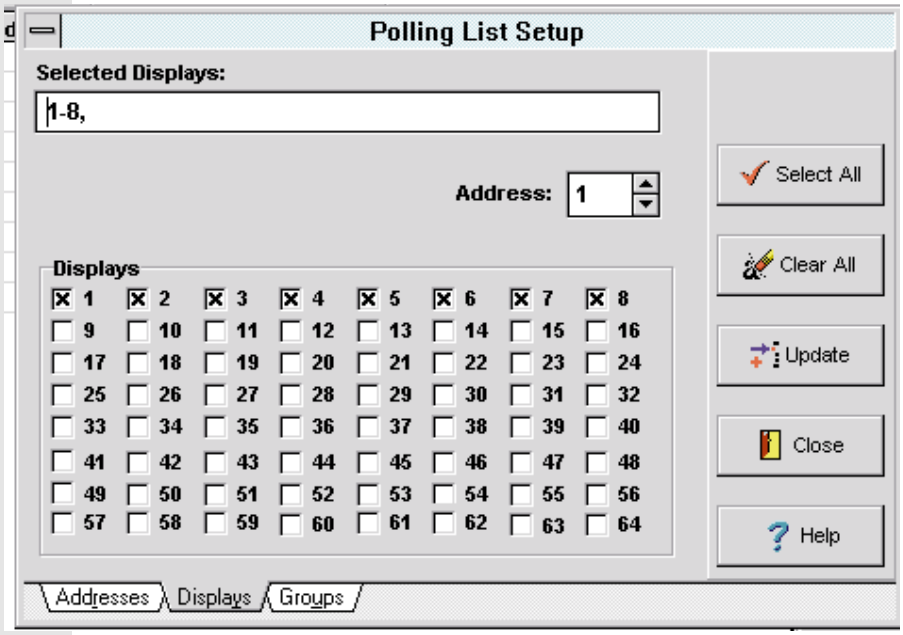
3. Select *Update* (Tab to button, then press Enter).

4. End of Address setup.

POLLING LIST SETUP CONTINUED . . .

Displays

1. Select the *Displays* option at the bottom of the window (press Y). Here is the window for selecting displays:



2. Either type the displays that you want to poll in the *Selected Displays* field or select the displays in the *Displays* field.

   (Use the Tab key to access the fields. In the *Displays* field, use the arrow keys to move to the display numbers, then use the spacebar to select or deselect.)

   Valid entries are 1-64. If you type the displays, use only commas or hyphens between numbers; do not use spaces.

3. In the *Address* field, select an E-system address (Tab to field, then use arrow keys).

4. Repeat steps 2 and 3 until you have selected displays for all the E-system addresses that you want to poll.

5. Select *Update* (Tab to the button, then press Enter).

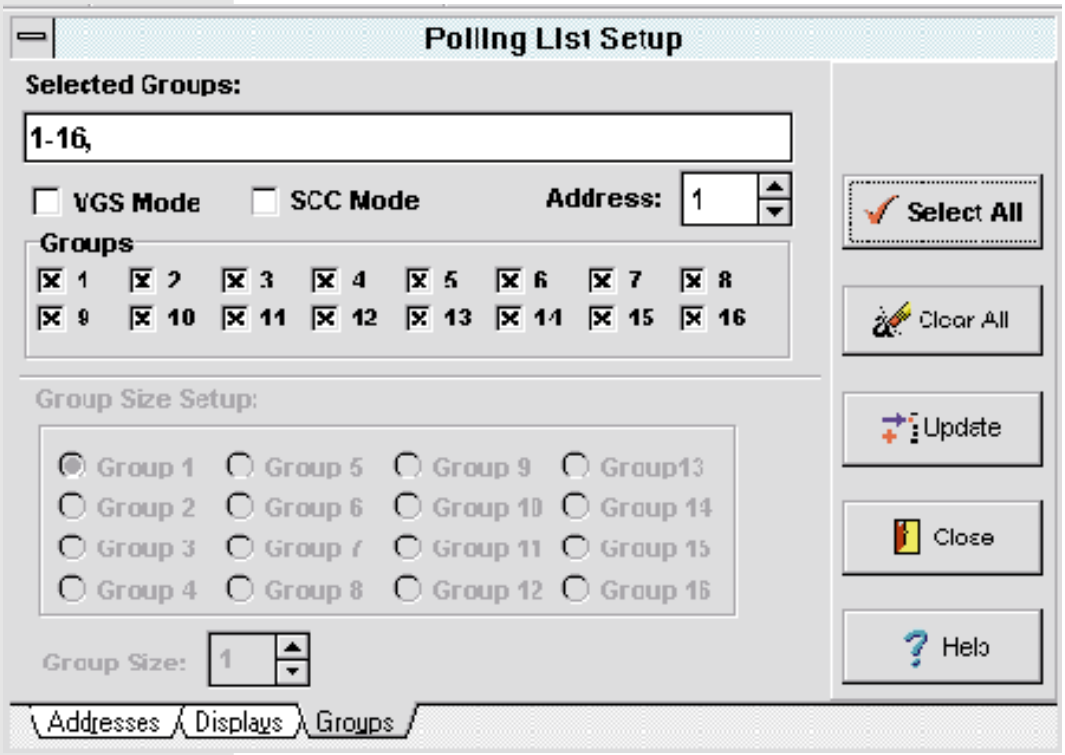
6. End of Display setup.

POLLING LIST SETUP CONTINUED . . .

Groups

NOTE: *Skip steps 1-8 unless you selected the Groups Poll option in Protocol Setup step 6.*

1. Select the *Groups* option at the bottom of the window (press U). Here is the window for selecting groups:



2. In the *Address* field, select the E-system address you want to poll (use the Tab key to access the field, then use the arrow keys).

3. Under the mode checkboxes, select the VGS Mode box or the SCC Mode box (Tab to the option, then press the spacebar to select). Select no checkboxes for Group Mode. The responder and the interrogator must agree on the type of group polling.

   Here is a description of each mode.

   Group Mode - 256 adjacent points (four displays) are reported at one time.

   The index displays are conditioned as if 4 displays were reported individually.

   There are 4 displays per group

   There are 16 Sub Groups per group.

   There are 256 alarms per group.

   Group size (or sub groups) must be set to 16 for group polling.

POLLING LIST SETUP CONTINUED . . .

Variable Group Size (VGS) - Four polled displays can be set up from 16 to 256 points within the group of 4 displays. Size can be set from 1 to 16 for each group.

SCC Mode - Use with a Switching Control Center. Sends the first 16 points of a group. Group size is always 1.

4. Enter responding groups in the Selected Groups field. You can also select groups in the Groups field.

   (Use the Tab key to access the fields. In the *Groups* field, use the arrow keys to move to the group numbers, then use the spacebar to select or deselect.)

   Valid entries are 1 to 16. When you type the groups, use only commas or hyphens between numbers; do not use spaces.

   An E-system address has 64 displays that are divided into 16 groups of 4 displays each. Group 1 is displays 1-4, Group 2 is displays 5-8, and so on.

5. Click the *Update* button (Tab to the button, then press Enter).

6. Click the *Close* button (Tab to the button, then press Enter).

VGS Mode

Repeat steps 2 to 4

7. Select VGS Mode (Use the Tab key until the VGS Mode box is highlighted and then press the spacebar).

8. In Group Size Setup, select the group size for one of the groups you selected in Step 6:

   - In Select Group, select a group (use the Tab key to access the field, then use the arrow keys to move to the group, then use the spacebar to select).
   - In Group Size, select the number of subgroups you want the Group to respond to, from 1 to 16 (Use the Tab key, then use arrow keys).
   - Select the update (Tab to the button, then press enter).
   - Repeat above steps for all groups selected for VGS.

     A group consists of 4 displays (256 alarm points). The 256 alarm points are divided into 16 groups of 16 points each. Group size 1 reports the first 16 alarm points; group size 2 the first 32 alarm points, group size 3 the first 48 alarm points, and so on.

NOTE: *If you select the SCC Mode of alarm reporting, the group size must always be 1.*

9. Repeat steps 2-8 for all other E-system addresses you want to poll.

10. End of Group setup.

SAVING THE FILE

1. Close the Polling List Setup window (Tab to the button, then press Enter).
2. You have now changed the configuration file, but the changes will remain in effect only as long as you are in the Interrogator Mode.

To save the changes to the existing configuration file:

- In the menu bar, select *Files* (Alt+F).
- Select the command *Save* (press S).

To create a new configuration file:

- In the menu bar, select *Files* (Alt+F).
- Select the command *Save As* (press A).
- Type the name for the new file.
- Select *OK* (Enter).

POLLING ALARMS

The bottom line of the screen shows the configuration (.CFG) file that the software uses to poll alarms.

NOTE: *A mouse is optional. If you use a mouse, select the button you want to select. If you do not use a mouse, follow the instructions in parentheses.*

To select a different configuration file:

1. In the menu bar, select *Files* (Alt+F).
2. Select the *Open* command (press O).
3. Select the file.

To start the alarm polling:

1. If you have not done so, connect your computer to Dantel's 00459 Test Set. Follow the instructions in the Installation and Operation Practice for the 00458 and 00459 Test Sets.
2. In the menu bar, select *Interrogator,* then the *Start/Stop* command, and then *Start* (Alt+I+S+T).

   Hold down the Alt key, press each letter, then release the Alt key.

   If you are using continuous polling, the software polls for alarms until you tell it to stop.

   If you are using step polling, the software polls for alarms once, then stops. To poll the alarms again:

CONTINUED . . .

Select *Interrogator,* then the *Start / Stop* command, and then *Start* (Alt+I+S+T).

Hold down the Alt key, press each letter, then release the Alt key.

ALARM DISPLAYS

The alarm window shows the addresses, display, and groups that are being polled. Any displays with alarms are shown in the Alarm Points Field. Here are descriptions of the three types of polling:

Display Poll - Polls all 64 alarm points in each E-system display that you want to interrogate. The equipment interrogated sends back the status of all points in the displays that are polled.

Groups Poll - Polls groups of four displays. The equipment interrogated sends back the status of some or all points in the groups that are polled.

Alarm Poll - Polls the system for a COS.

In alarm polling the interrogator sends a request for an alarm response word. If the New/Change alarm bit is set, the interrogator transmits a display report word for display 1. Any of the bits set in this display are used for pointers and the interrogator then polls the displays corresponding to the set points in display 1.

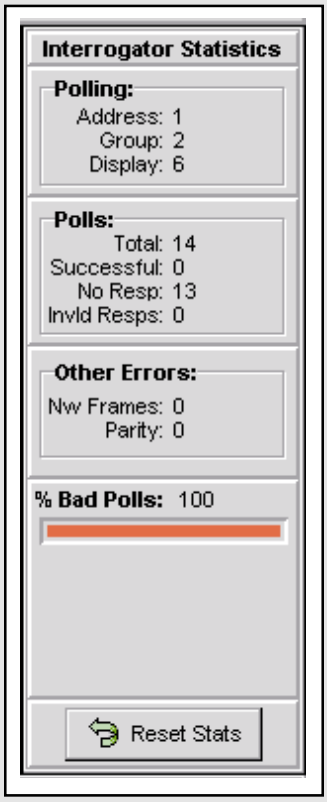
Example: If the polling device sees a New/Change bit set it polls display 1. If point 9 was set in display 1 the interrogator knows that it must poll display 9 for existing new alarms.

Display 1 does not directly monitor alarms. It is referred to as an Index Serial Display Register and is a New/Change alarm index display.

Display 2 is the ANY Display Register. A bit is set as long as there is an active alarm in the corresponding display.

Display 3 is an error display for devices such as GTPs and is not described here. SDRs 4-64 do directly monitor alarms and are called regular SDRs.

INTERROGATOR STATISTICS



When polling starts, the Interrogator Statistics portion of the alarm screen shows the status of the polling process. To reset the statistics to zero, select *Reset Stats* (Alt+I, then release the Alt key and press R).

Here are descriptions of the Interrogator Statistics:

Polling

Address - This is the address of the E-system equipment that the test set is polling.

Group - This is the group of displays within the E-system address that the test set is polling (this applies only to Group, VGS, or SCC methods of polling).

Display - This is the display within the E-system address that the test set is polling.

Polls

Total - This is the total number of polls that the test set has sent out.

Successful - This is the number polls that have been properly answered.

No Responses - This is the number of polls for which no responses have been received.

Invalid Responses - This is the number of responses that have come back with invalid data.

Other Errors

Timeouts - The number of times the test set has not received responses to polls.

New Frames - This error occurs when a new request to poll alarms is issued before all the data from the last polling request is received. This should not occur in the continuous polling mode, but could occur in the step polling mode if you start the next polling cycle before the previous one is completed.

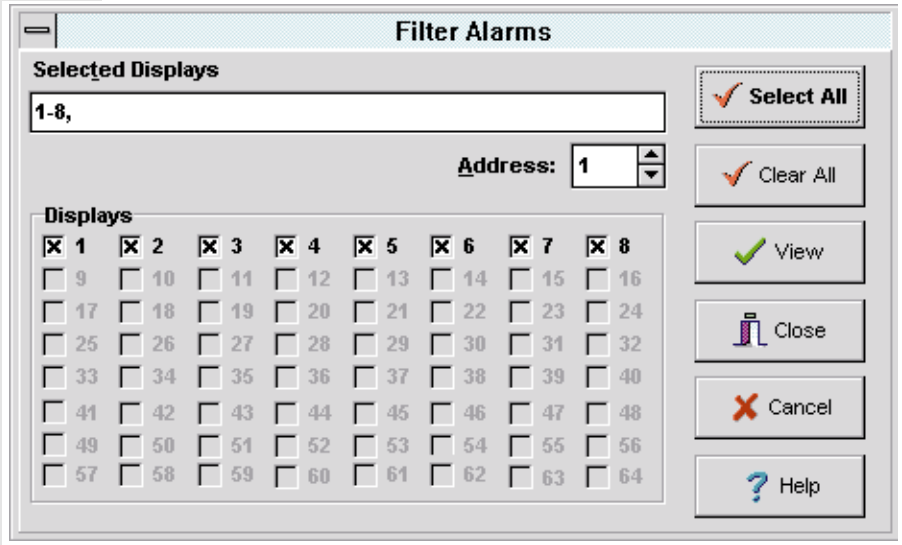
Parity Errors - This is the number of times the data received has not been the same as the data transmitted. There could be a communications problem between the test set and the E-system equipment.

% Bad Polls

This is the number of no-response polls and invalid polls as a percentage of the total number of polls.

FILTERING ALARMS

If you decide you do not want to view all the alarm displays the test set is polling, you can specify only the alarm displays you want to see. This is called alarm filtering.



To filter alarms:

1. In the menu bar, select *Interrogate* (Alt+I).
2. Select the *Filter* (press F) command.
3. Either type the displays that you want to poll in the *Selected Displays* field or select the displays in the *Displays* field.

   (Use the Tab key to access the fields. In the *Displays* field, use the arrow keys to move to the display numbers, then use the spacebar to select or deselect.)

   If you type the displays, use only commas or hyphens between numbers; do not use spaces.
4. In the *Address* field, select an E-system address (Tab to field, then use arrow keys).
5. Repeat steps 3 and 4 until you have selected displays for all the E-system addresses that you want to filter.
6. Select *View* (Tab to the button, then press Enter).
7. Select *Close* (Tab to the button, then press Enter).

TESTING ALARMS

You can use the Test Mode to activate alarm points at a remote scanner:

Request the remote to set all of its points to 1 or 0 on a selected E2A address. After the device is set to all ones, the test software can do an Alarm, Display, or Group poll to see that the remote E2A device is responding correctly.

When the 1 or 0 command goes to the responder, the software checks or turns on the Alarm bit in the Responder Statistics window and tells you that the responder is in Test Mode. The 1 and 0 test overrides any existing status for an alarm point at a remote location. When testing device sends the Normal command, the checked bit turns off and the remote is back to normal.

When the remote device is not in the ESYS Mode, the Alarm Change and Alarm Present boxes at the interrogating end recognize real alarm changes and set the COS and ANY bits. The interrogator does not act on the alarms until Test Mode is complete. If you choose Alarm Test, the remote must be in ESYS Mode for these boxes to be active.

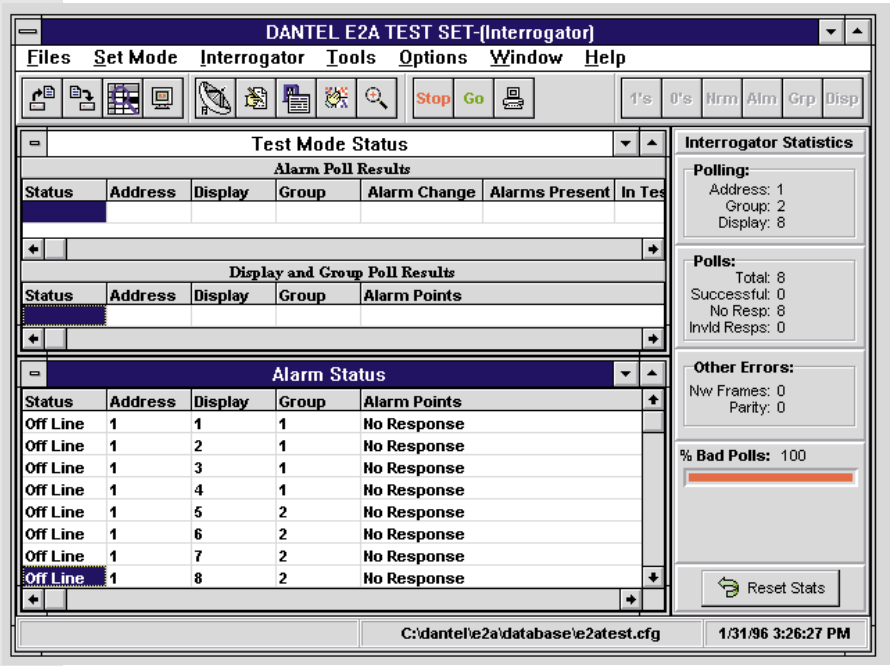
When you choose Alarm Poll in Test Modes, the device looks at only displays 1 and 2 for bits that have been set by active alarms to activate the Alarm Change and Alarm Present boxes. If the remote system is in ESYS Mode, you can detect any alarm changes if you select Alarm Poll. You can then continue with the test or go back to Normal Mode and see what the new alarms are.

When you finish testing, return to Normal Mode.

USE OF TEST MODE (INTERROGATION)

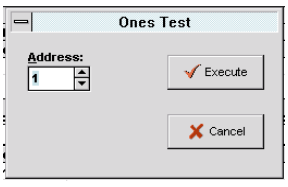
To start the Test Mode, set up the test set for Interrogation mode.

1. Select Test Mode from the Interrogator menu (Alt+I, then press T). A window showing the Test Mode Status and the Alarm Status pops up.



2. Select Ones Test from the Test Modes menu on the menu bar. (Alt+M, then press O).

3. The Ones Test window will appears. Select Execute. This places a one or an alarm bit in every point of each display at the remote device address. If you try to view it on a test set at the remote location, you don't see the Test Mode ones. These ones are internal to the Test Set.



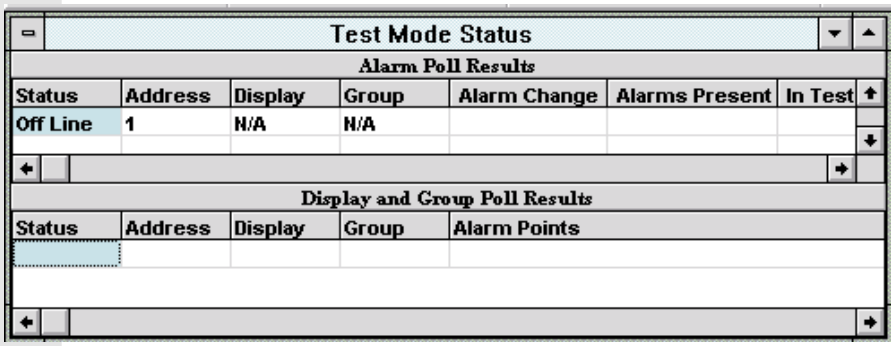
If you select Ones, Zeros, Alarm, Group, or Display in Test Mode, normal interrogation stops. If you are polling the remote normally and select Normal, interrogation continues.

CONTINUED . . .

4. To see the current polling status of the remote, select Alarm Status and select the Start command (Control+Tab, Alt+I, then press S, then press T).

   In Test Mode Status, the status of where the ones were sent is Off Line. In Alarm Status, the address shows that all displays from 3 to 64 have point 1-64 set. To update the Alarm Status in Test Mode, use any mode other than Alarm Poll.

5. Select Alarm Poll in the Test Mode menu (Control+Tab, Alt+M, then press A). The Alarm Poll window pops up.



6. Select Execute and press Enter.

   The In Test Mode Status says On in the In Test Mode box. This is the Scan Test mode. No other boxes are on unless there has been a change in the status of the remote device since the operation started. If there is an active alarm, the Alarm Change and the Alarms Present boxes say On.

   If you select Zeros Test instead of Ones Test, the Zeros Test window appears. If you select Execute, all of the ones set by the test return to zeros or clear.

   Any real alarms stay on but do not go to the interrogation station because the remote is still in Test Mode.

   After you set ones or zeros you can do a Group or Display Poll. Repeat step 1 and choose Display or Group Poll under Test Mode.

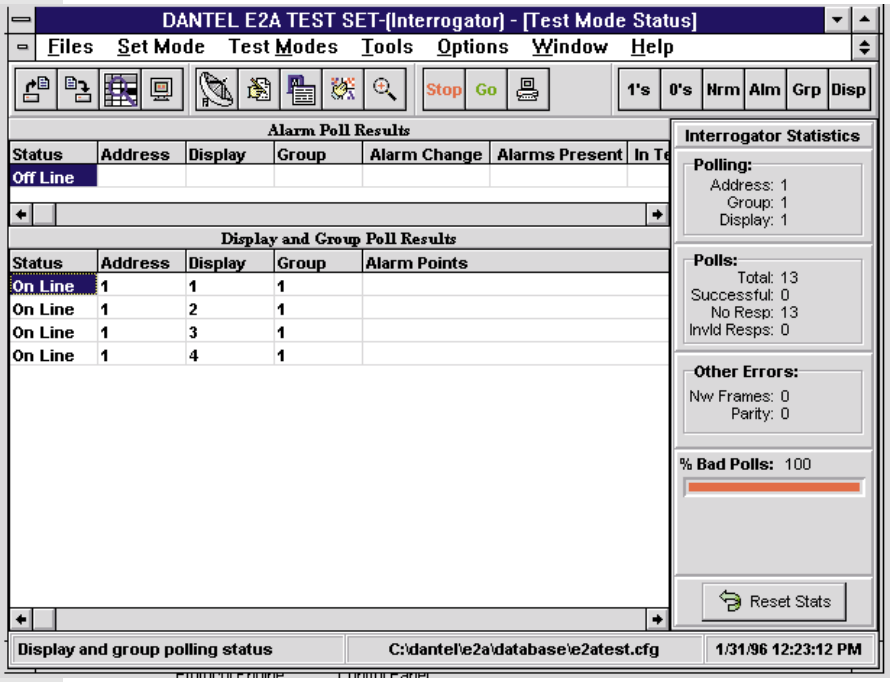
   Selected displays or groups return all alarms or all clears when the alarm system is operating correctly.

7. Click the Go button or select Start (Alt+I, then press S, then press T) and alarm polling resumes.

GROUP POLLING TEST

1. Select Group Poll from the Test Modes menu (Alt+M, then press G).
2. The Group Poll window appears.
3. Select the Address and Group to poll.
4. Select Execute and press Enter.

   The Status column shows the test status of the selected Address and Group.



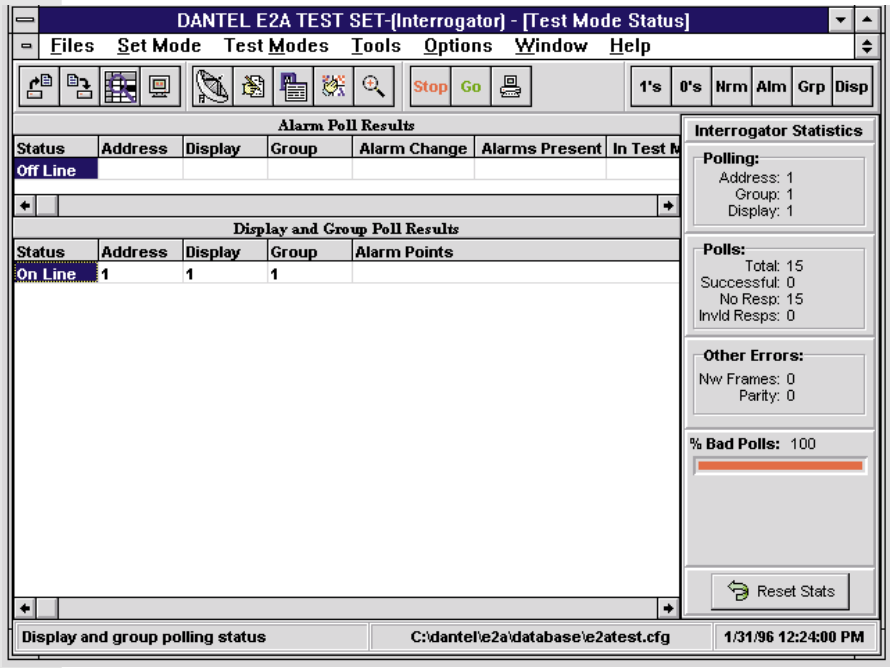
DISPLAY POLLING TEST

1. Select Display Poll from the Test Modes menu (Alt+M, then press D).
2. The Display Poll window appears.
3. Select the Address and Display to poll.

CONTINUED . . .

4. Select Execute and press Enter.

   The Status column shows the test status of the Address and Display.



RETURNING THE TEST MODE BACK TO NORMAL

1. When you finish testing, select Normal from the Test Modes menu (Alt+M, then press N).
2. Select the Address to return to Normal Mode.
3. Select Execute and press Enter.

   The selected Address and Group test status appears. The remote returns to normal polling.

   Remotes not polling normally ignore alarm points that set or clear.

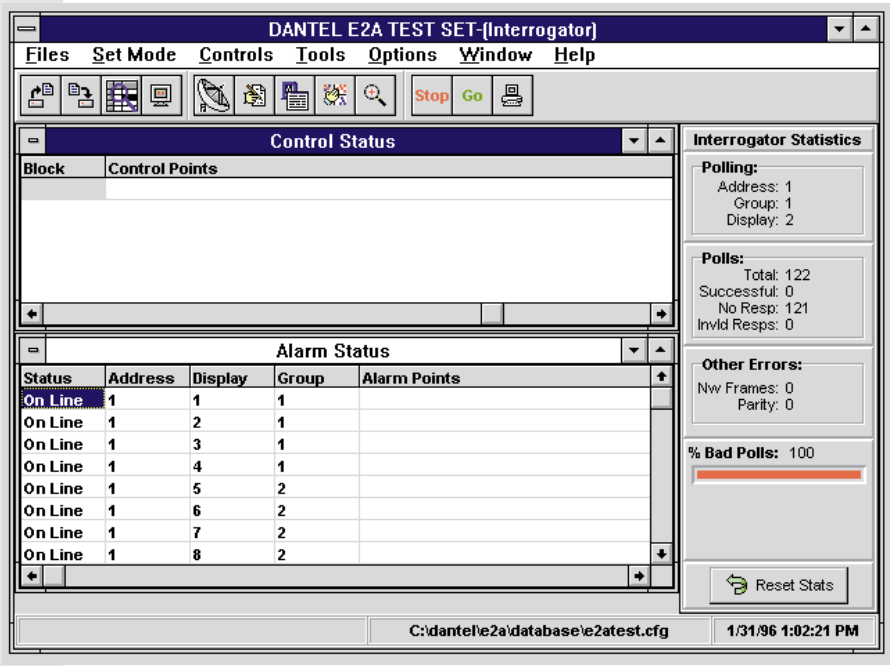
   When you finish testing, return to Normal Mode.

OPERATING CONTROLS

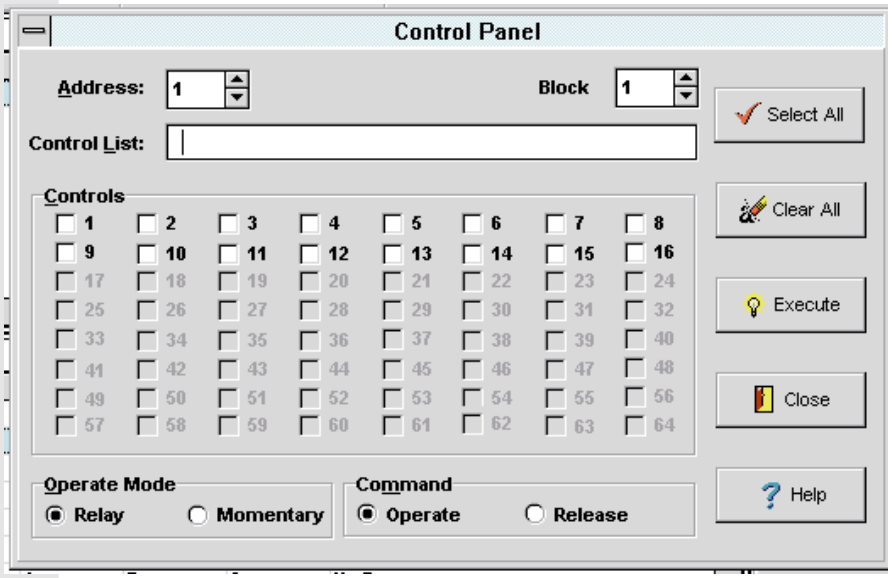
The test set can activate momentary switches or relay latch functions. Switches can be from 1 to 4096 and Relays can be from 1 to 512. Switches are momentary in nature and relays can be set to latch or release.

To activate relays:

1. Select Control Status from the Interrogator menu (Alt+I, then press N). The Control Status panel pops up and shows a blank screen with nothing active.



2. Click the Control Panel button or select Control Panel from the Controls menu (Alt+C, then press P). The Control Panel pops up.



CONTROL PANEL

1. Highlight the Address box. (Press Tab until the box is highlighted.) Type in the address or use the up and down arrow keys.
2. Select Operate Mode (Alt+O). Select Relay or Momentary with the arrow keys. Relay controls number from 1-16, and momentary controls number from 1-64.
3. Enter desired control numbers, separated by spaces or commas, in the command box (Alt+L).

   You can also select control numbers from Controls (Alt+C). Move between addresses with the arrow keys and select or deselect addresses with the space bar.

   You can enter more than one control into the Control List at one time. The interrogator sends control commands one after another.

   To select all addresses click the Select All button. To delete all addresses in the Control List, click the Clear All button.

Relay Operation

1. Highlight the Block box. (Press Tab until the box is highlighted.) Type in the block number from 1 to 32, or use the up and down arrows.
2. Select Command Mode (Alt+M). Select Operate or Release with the arrow keys. Operate shows the status of chosen relays in the Control Status window. Release does not show relay status.
3. Click the Execute button. (Press Tab until the button is highlighted and press Enter.)

CONTINUED . . .

4. Click the Close button.

Momentary Operation

1. Highlight the Display box. (Press Tab until the box is highlighted.) Type in the display number from 1 to 64, or use the up and down arrows.
2. Click the Execute button. (Press Tab until the button is highlighted and press Enter.)
3. Click the Close button.

The Control Status window shows Status, Address, Display, Block and Control points.

Select Close from the Control Panel menu (Alt+C, then press C).

HISTORY LOG

You can save archived information to a log file for further analysis.

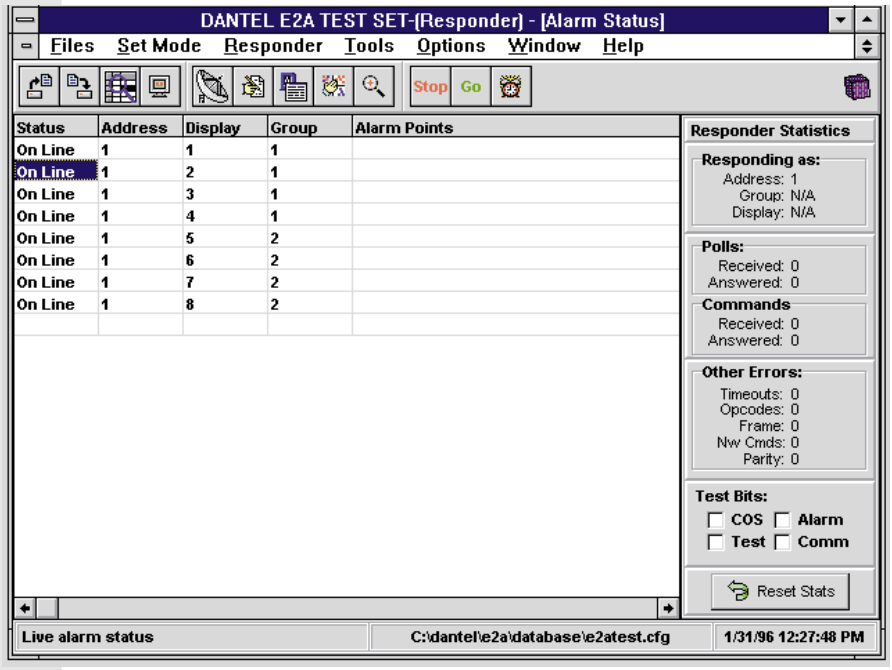
1. Select History from the Interrogator menu (Alt+I, then press H). The History window pops up.
2. Select Logging from the History menu, then select Open (Alt+H, then press S, then press O).
3. The "Save as" window pops up. Enter the path and the eight-letter file name of the log file.
4. Click the OK button.
5. Select Start/Stop from the History menu, then select Start (Alt+H, then press S, then press S).

To stop logging, select Start/Stop from the History menu, then select Stop (Alt+H, then press S, then press T). A confirm logging window pops up. Click the Yes button.

You can also select Close from the History menu to stop logging. (Alt+H, then press C).

NOTE: *No further information is saved to the log file. You can view the information using Windows Write; select Editor from the Tools menu (Alt+T, then press E). If you want to use your favorite word processor, consult the README file.*

When you select Responder Mode from the Dantel E2A Test Set screen, the Responder–Alarm Status window pops up.



The screen shows alarms displays and alarm points set within the displays. When the E-system equipment polls the test set, the test set shows alarms that are set. The bottom line of the screen shows the configuration (.CFG) file that the software uses to respond to polls.

In this window you can:

- See which alarm points are set in the displays (refer to ***Responding to Polls*** in this chapter).
- Set the alarms the software responds to when it is polled (refer to ***Configuring a Responder File*** in this chapter).
- Analyze the data transmitted and received (refer to the ***Troubleshooting*** chapter).
- Use a terminal emulator (refer to the ***Terminal*** chapter).

MENU BAR

Here are descriptions of each item on the menu bar.

Files

Open - Opens a different configuration file. Each configuration file contains the communications, protocol, and polling parameters that the test set uses when responding to polls.

Save - Saves the changes that you make to a configuration file.

Save As - Creates a new configuration file.

Exit - Exits the test set software program.

Set Mode

Interrogator - Changes test set operation to Interrogator Mode.

Responder - Changes test set operation to Responder Mode.

Monitor - Changes test set operation to Monitor Mode.

Not Configured - When the program first initiates, there is no configuration in the system for Interrogator, Responder, or Monitor Mode. This is just an information message.

Responder

Configure - Changes an existing configuration file or creates a new configuration file. A configuration file includes the communications and protocol parameters and the list of alarms.

Filter - Selects the alarm displays the test responds to. The test set ignores polls from any other alarm displays. This is useful when you want to see certain responses.

Start/Stop - Starts or stops responding to polls.

Control Status - Displays the status of control points the interrogator has operated.

History - Displays a history of all alarm responses.

Alarm Panel - Allows you to set the alarm points the test set responds to.

Hide Statistics - Hides the responder statistics displayed on the right side of the screen. If the statistics are hidden, selecting this option displays the statistics.

Reset Statistics - Resets the responder statistics counters to zero. The responder statistics appear on the right side of the screen and show what is happening while polling.

Close - Closes the Responder window.

Tools

Protocol Analyzer - Activates a protocol analyzer that displays the data transmitted and received during an alarm poll. The data is displayed in hexadecimal or English format.

Editor - Opens Microsoft Windows Write.

Terminal - Opens the terminal emulator in your Windows program.

Window

When you have more than one window open, you can use the commands below to display all of them. All the open windows are listed below the *Tile Cascade* command.

Tile Horizontal - Displays all open windows horizontally across the screen.

Tile Vertical - Displays all open windows vertically on the screen.

Tile Cascade - Displays all open windows on top of each other.

Help

Provides you with helpful information about this software.

TOOL BAR

The tool bar is located below the menu bar and contains a row of icons to select many of the options in Interrogator Mode.

NOTE: *You need a mouse to use the tool bar. If you are not using a mouse, you can activate all tool bar commands from the menu bar.*

Here are the functions of the icons:

Load Database - Opens a different configuration file. Each configuration file contains the communications, protocol, and alarms for responding to a poll. The open file is the one the test set is using.

Save Database - Saves the changes you make to a configuration file.

Configuration Summary - Displays the current configuration parameters. To change the parameters, click the *Communications Setup, Polling Parameters,* or *Polled Device List* icons.

Terminal Emulator - Opens the terminal emulator in your Windows program.

Communications Setup - Changes the communications parameters of an existing configuration file or chooses the parameters for a new file.

Polling Parameters - Changes the protocol parameters of an existing configuration file or chooses the parameters for a new file.

Polled Device List - Changes the alarm polling list of an existing configuration file or creates a list for a new file.

Filter - Selects the alarm displays the test set responds to. The test set ignores polls from any other alarm displays. This is useful when you want to see certain responses.

Protocol Analyzer - Activates the protocol analyzer that displays the data transmitted and received during an alarm poll. The data is displayed in hexadecimal or English format.

Stop - Stops responding to polls.

Go - Starts responding to polls.

Alarms - Opens the alarm panel window where you can set alarms.

CONFIGURING A RESPONDER FILE

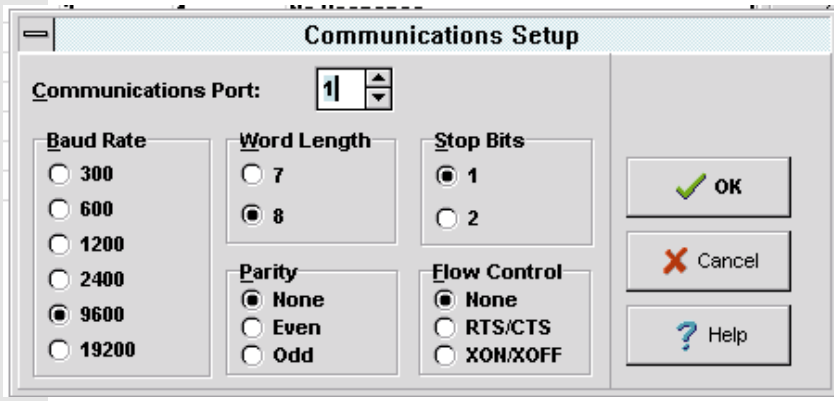
The bottom line of the screen shows the configuration (.CFG) file that the software will use to respond to alarm polls.

COMMUNICATIONS SETUP

NOTE: *A mouse is optional. If you use a mouse, click on the button you want to select. If you do not use a mouse, follow the instructions in parentheses.*

Configure the test set to respond to the alarm displays that the E-System equipment interrogates.

1. Select *Responder* from the menu bar (Alt+R).
2. Select *Configure* (press G).
3. Select *Communications* (press C). The Communications Setup window pops up.



CONTINUED . . .

NOTE: *If you are not using a mouse and you need to exit (cancel) the window, or if you need help, press the Tab key repeatedly until you highlight the button. Then press Enter.*

4. Select the following communications parameters (the defaults are shown in brackets). When you use Dantel's 00459 Test Set, use the default settings except for the port setting. The port setting can be 1 or 2, depending on which communications port you use on your computer.

   - Communications Port (Alt+C) [1]
   - Baud (Alt+B) [1200]
   - Word Length (Alt+W) [8]
   - Stop Bits (Alt+S) [1]
   - Parity (Alt+P) [None]
   - Flow Control (Alt+F) [None]

   If you do not have a mouse, move between selections within a field with the arrow keys.

   Flow control refers to the type of communications handshaking that is used between your computer and the test set.

   None means that no handshaking controls are used.

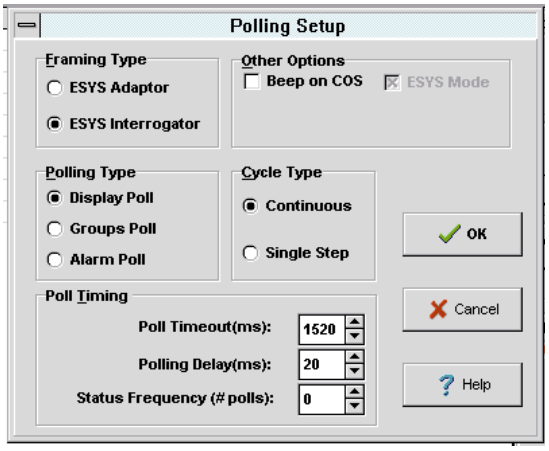
   RTS/CTS refers to Request-to-Send and Clear-to-Send controls. These signals are transmitted over dedicated wires between two pieces of communications equipment.

   XON/XOFF turns data transmission on and off through a control bit in the data stream.

5. Click the *OK* button (Enter).

PROTOCOL SETUP

1. Select *Responder* from the menu bar (Alt+R).
2. Select *Configure* (press G).
3. Select *Protocol* (press R). The Polling Setup window pops up.



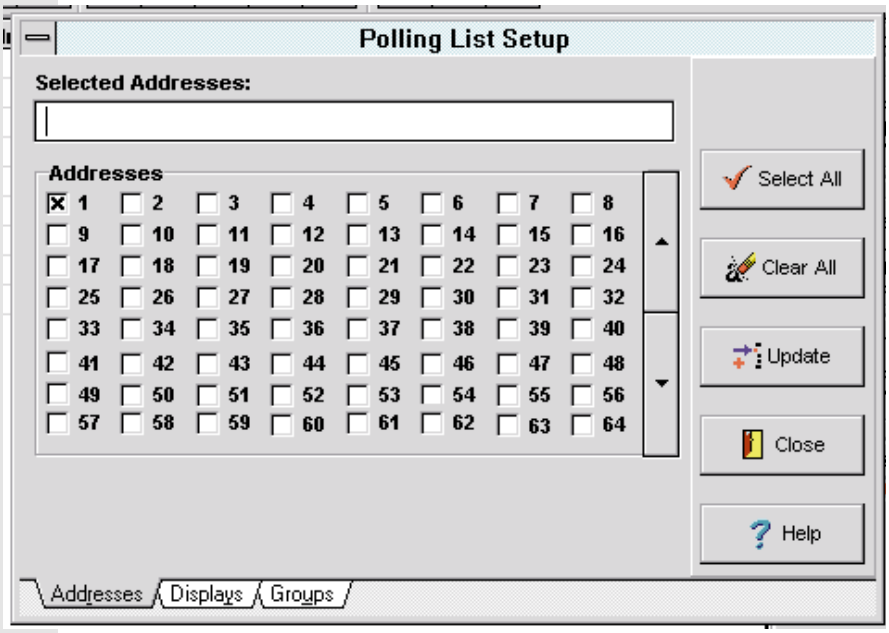
4. In the Framing Type area, use the ESYS adapter when using the Dantel 00458/00459 test sets (Alt+F, then use the arrow keys). Use the Framing type for the ESYS interrogator when using the Dantel A11-46037-XX Interrogator.

5. In the Other Options area:

   - **Beep on COS** - Choose whether you want the computer to beep every time there is a change in the status (COS) of an alarm point (Alt+O, then press spacebar).
   - **ESYS Mode** - Set to On when the system is being alarm polled.
   - **Parity Errors (%)** - You can deliberately generate parity errors to see if they are detected. Acceptable values are 0-100 percent (use the arrow key to reach the selection box, then use the arrow keys to select the value).

POLLING LIST SETUP

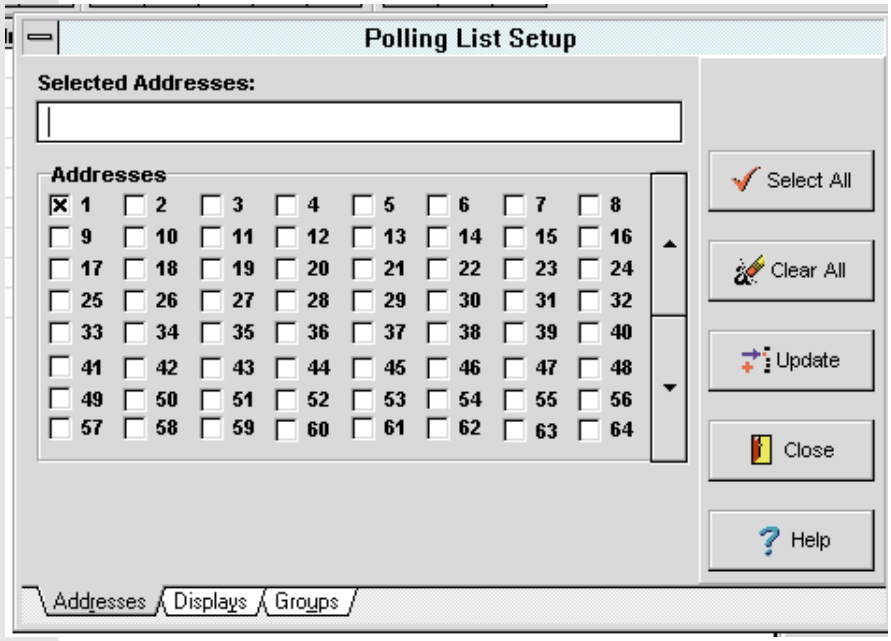
1. Select *Responder* from the menu bar (Alt+R).
2. Select *Configure* (press G).
3. Select *Polling* (press P). The Polling List Setup window pops up.



POLLING LIST SETUP CONTINUED . . .

Address

1. At the bottom of the window there are three tabs: *Addresses, Displays*, and *Groups*. Click the *Addresses* tab (Alt+R). The following window pops up.



2. Enter responding E-system addresses in the Selected Addresses field. You can also select addresses in the Addresses field.

   (Use the Tab key to access the fields. In the *Addresses* field, use the arrow keys to move to the address numbers, then press the spacebar to select or deselect. To select addresses above 64, use the Tab key to select the large up-arrow button to the right of the numbers. Then use the arrow keys. Then Tab back to the *Addresses* field.)

   Valid entries are 1 to 256. When you type addresses, use commas or hyphens between numbers; do not use spaces.

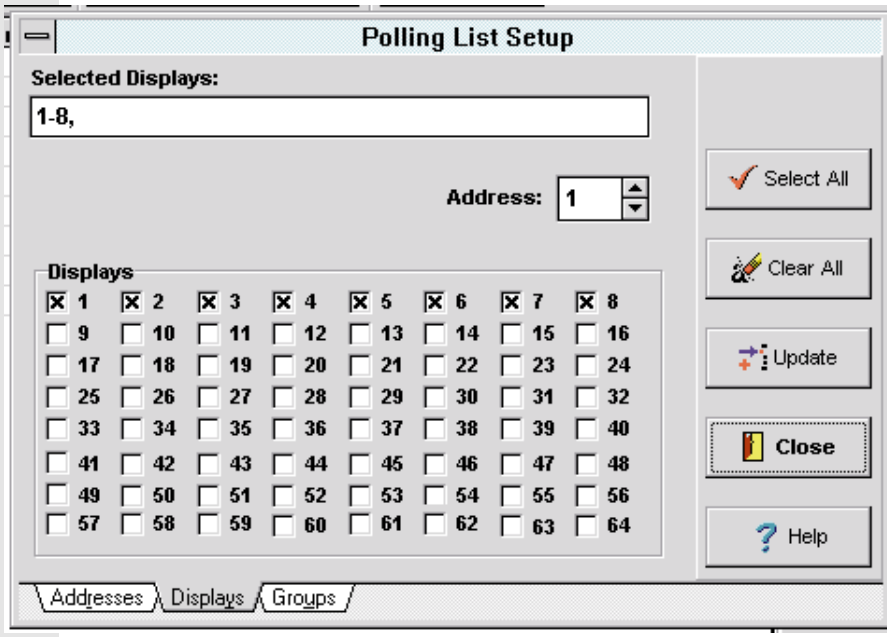
3. Click the *Update* (press Tab until the button is high-lighted, then press Enter).

4. End of Address setup.

POLLING LIST SETUP CONTINUED . . .

Displays

1. Select the *Displays* tab at the bottom of the window (Alt+Y). The following window pops up:



2. Enter responding displays in the Selected Displays field. You can also select displays in the Displays field.

   (Press the Tab key to access the fields. In the *Displays* field, use the arrow keys to move to the display numbers, then use the spacebar to select or deselect.)

   Valid entries are 1 to 64 when you type the addresses, use only commas or hyphens between numbers; do not use spaces.

3. Select an E-system address in the *Address* field (Tab to the field, then use the arrow keys).

4. Repeat steps 2 and 3 until you have selected displays for all responsive E-system addresses.

5. Click the *Update* button (Tab to the button, then press Enter).

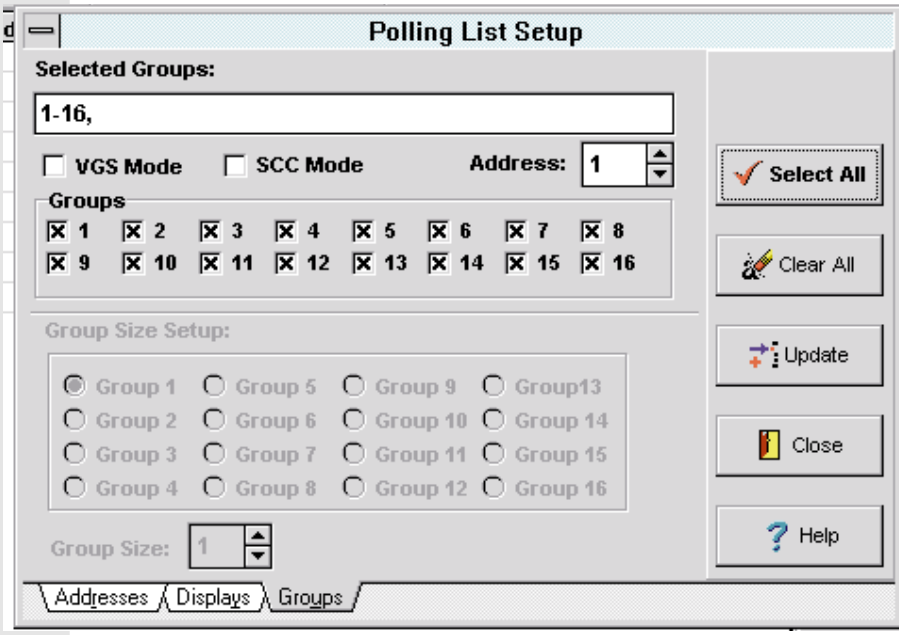
6. End of Display setup.

POLLING LIST SETUP CONTINUED . . .

Groups

NOTE: *Skip this section unless you are polling groups.*

1. Select the *Groups* option at the bottom of the window (press U). The following window pops up.



2. In the *Address* field, select the E-system address you want to respond (press the Tab key until you access the field, then use the arrow keys).

3. Under the mode checkboxes, select the VGS Mode box or the SCC Mode box (Tab to the option, then press the spacebar to select). Select no checkbox for Group Mode. The responder and the interrogator must agree on the type of group polling.

   Here is a description of each mode.

   Group Mode - 256 adjacent points (four displays) are reported at one time.

   The index displays are conditioned as if 4 displays were reported individually.

   There are 4 displays per group

   There are 16 Sub Groups per group.

   There are 256 alarms per group.

   Group size (or sub groups) must be set to 16 for group polling.

POLLING LIST SETUP CONTINUED . . .

Variable Group Size (VGS) - Four polled displays can be set up from 16 to 256 points within the group of 4 displays. Size can be set from 1 to 16 for each group.

SCC Mode - Used with a Switching Control Center. Sends the first 16 points of a group. Group size is always 1.

4. Enter responding groups in the Selected Groups field. You can also select groups in the Groups field.

   (Use the Tab key to access the fields. In the *Groups* field, use the arrow keys to move to the group numbers, then use the spacebar to select or deselect.)

   Valid entries are 1 to 16. When you type the groups, use only commas or hyphens between numbers; do not use spaces.

   An E-system address has 64 displays that are divided into 16 groups of 4 displays each. Group 1 is displays 1-4, Group 2 is displays 5-8, and so on.

5. Click the *Update* button (Tab to the button, then press Enter).

6. Click the *Close* button (Tab to the button, then press Enter).

VGS Mode

Repeat steps 1 to 4

7. Select VGS Mode (Use the Tab key until the VGS Mode box is highlighted and then press the spacebar).

8. In Group Size Setup, select the group size for one of the groups you selected in Step 6:

   - In Select Group, select a group (use the Tab key to access the field, then use the arrow keys to move to the group, then use the spacebar to select).
   - In Group Size, select the number of subgroups you want the Group to respond to, from 1 to 16 (Use the Tab key, then use arrow keys).
   - Select the update (Tab to the button, then press enter).
   - Repeat above steps for all groups selected for VGS.

   A group consists of 4 displays (256 alarm points). The 256 alarm points are divided into 16 groups of 16 points each. Group size 1 reports the first 16 alarm points; group size 2 the first 32 alarm points, group size 3 the first 48 alarm points, and so on.

NOTE: *If you select the SCC Mode of alarm reporting, the group size must always be 1.*

9. Repeat steps 4-8 for all other E-system addresses you want to respond.

10. End of Group setup.

SAVING THE FILE

1. Close the Polling List Setup window (Tab to the button, then press Enter).
2. You have now changed the configuration file, but the changes will remain in effect only as long as you are in the Responder Mode.

To save the changes to the existing configuration file:

1. In the menu bar, select *Files* (Alt+F).
2. Select the command *Save* (press S).

To create a new configuration file:

1. In the menu bar, select *Files* (Alt+F).
2. Select the command *Save As* (press A).
3. Type the name for the new file.
4. Select *OK* (Enter).

RESPONDING TO POLLS

The bottom line of the screen shows the configuration (.CFG) file that the software will use to respond to polls.

NOTE: *A mouse is optional. If you use a mouse, click on the button you want to select. If you do not use a mouse, follow the instructions in parentheses.*

To select a different configuration file:

1. In the menu bar, select *Files* (Alt+F).
2. Select the *Open* command (press O).
3. Select the file.

To start responding to polls:

1. If you have not done so, connect your computer to Dantel's 00459 Test Set. Follow the instructions in the 00458/00459 Test Set practice.
2. In the menu bar, select *Responder,* then the *Start / Stop* command, and then *Start* (Hold down the Alt key. Press R, then press S, then press T. Release the Alt key.)

   If you are using continuous polling, the software responds to alarms until you tell it to stop.

ALARM DISPLAYS

The alarm window shows the addresses, displays, and groups that are responding. Any displays with alarms are shown in the Alarm Points Field. Here are descriptions of the three types of alarm polling responses:

Display Poll - The test set sends back the status of all points in the displays that are polled.

Groups Poll - The test set sends back the status of some or all points in the groups of displays that are polled.

Alarm Poll - The test set sends back the status of displays 5-64 of each E-system address that is polled.

RESPONDER STATISTICS

When responding starts, the Responder Statistics portion of the alarm screen shows the status of the polling process. To reset the statistics to zero, select *Reset Stats* (Alt+R, then release the Alt key and press E).

Here are descriptions of the Responder Statistics:

Now Responding

Address - The E-system address that is responding to polling.

Group - The group of displays within the E-system address that is responding to polling (this applies only to Group, VGS or SCC methods of polling).

Display - The display within the E-system address that is responding.

Polls

Received - The total number of polls that the software has received.

Answered - The number of polls that have been answered.

Other Errors

Opcodes - Invalid command opcode structure received.

Frame - E2 Framing error detected.

Data - New command was received before last one could be acted on.

Parity - The number of times the data received has not been the same as the data transmitted. There could be a communications problem between the test set and the E-system equipment.

CONTINUED . . .

Status Bits

COS Bit - Change of state detected and a Change Index Display bit has been set.

Alarm Bit - An alarm has been detected and an ANY Index Display bit is set.

Test Bit - The responder is in the Status Test Mode.

Comm Bit - (future use)

FILTERING ALARMS

If you decide you do not want to respond to all the alarm displays being polled, you can specify only the alarm displays that you want to respond. This is called alarm filtering.

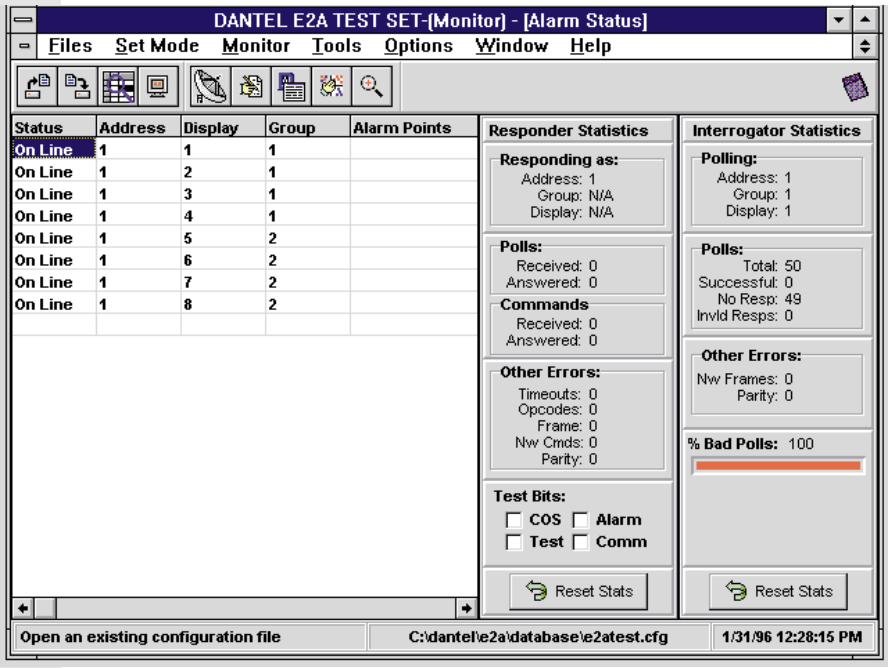
To filter alarms:

1. In the menu bar, select *Responder* (Alt+R).
2. Select the *Filter* (press F) command.
3. Either type the displays that you want to respond in the *Selected Displays* field or select the displays in the *Displays* field.

   (Use the Tab key to access the fields. In the *Displays* field, use the arrow keys to move to the display numbers, then use the spacebar to select or deselect.)

   If you type the displays, use only commas or hyphens between numbers; do not use spaces.
4. In the *Address* field, select an E-system address (Tab to field, then use arrow keys).
5. Repeat steps 3 and 4 until you have selected displays for all the E-system addresses that you want to filter.
6. Select *View* (Tab to the button, then press Enter).
7. Select *Close* (Tab to the button, then press Enter).

When you select Monitor Mode from the Dantel E2A Test Set screen, the Monitor–Alarm Status window pops up.



The screen shows the alarm displays that the test set monitors when polling starts. The bottom line of the screen shows the configuration (.CFG) file that the software uses to monitor alarms.

In this window you can do the following:

- Observe the alarm displays that the test set monitors (refer to ***Monitoring Alarms*** in this chapter).
- Configure a list of alarm displays to monitor (refer to ***Configuring a Monitoring File*** in this chapter).
- Analyze the data being transmitted and received (refer to the ***Troubleshooting*** chapter).
- Use a terminal emulator (refer to the ***Terminal*** chapter).

MENU BAR

Here are descriptions of the items on the menu bar:

Files

Open - Opens a different existing configuration file. Each configuration file contains the communications, protocol, and polling parameters that the test set uses to monitor a system.

Save - Saves the changes you make to a configuration file.

Save As - Creates a new configuration file.

Exit - Exits the test set software program.

Set Mode

Interrogator - Changes test set operation to Interrogator Mode.

Responder - Changes the operation of the test set to the Responder Mode.

Monitor - Changes the operation of the test set to the Monitor Mode.

Not Configured - When the program first initiates, there is no configuration in the system for Interrogator, Responder, or Monitor Mode. This is just an information message.

Monitor

Configure - Changes an existing configuration file or creates a new configuration file. A configuration file includes the communications and protocol parameters, and the list of alarm points the test set uses to monitor a system.

Filter - Allows you to select which alarms you want to monitor when you do not want to see all the alarms in the polling list.

Start/Stop - Starts or stops the alarm monitoring.

Control Status - Displays the status of control points.

History - Displays a history of all alarms.

Hide Statistics - Hides the interrogator and responder statistics displayed on the right side of the screen. If the statistics are hidden, select this option to display the statistics.

Reset Statistics - Resets the statistics counters to zero. Statistics appear on the screen to show what is happening during alarm polling.

Close - Closes the Monitor menu.

Tools

Protocol Analyzer - Activates a protocol analyzer that displays the data being transmitted and received during alarm polling. The data is displayed in hexadecimal or English format.

Editor - Opens Microsoft Windows Write.

Terminal - Opens the terminal emulator in your Windows program.

Window

When you have more than one window open, you can use the commands below to display all of them. All the open windows are listed below the *Tile Cascade* command.

Tile Horizontal - Displays all open windows horizontally across the screen.

Tile Vertical - Displays all open windows vertically on the screen.

Tile Cascade - Displays all open windows on top of each other.

Help

Provides information to help you use this software.

TOOL BAR

The tool bar is located below the menu bar and contains a row of icons that use can use to select many of the options in the interrogator mode.

NOTE: *You need a mouse to use the tool bar. If you are not using a mouse, you can activate all tool bar commands from the menu bar.*

Here are the functions of the icons:

Load Database - Opens a different configuration file. Each configuration file contains the communications, protocol, and alarm polling parameters for interrogating a system. The open file is the one the test set is using.

Save Database - Saves the changes you make to a configuration file.

Configuration Summary - Displays the current configuration parameters. You can not change the parameters. To change to the parameters, click the *Communications Setup, Polling Parameters,* or *Polled Device List* icons.

Terminal Emulator - Opens the terminal emulator in your Windows program.

Communications Setup - Allows you to change the communications parameters of an existing configuration file or to choose the parameters for a new file.

Polling Parameters - Allows you to change the protocol parameters of an existing configuration file or to choose the parameters for a new file.

Polled Device List - Allows you to change the alarm polling list of an existing configuration file or to create a list for a new file.

Filter - Allows you to select which alarms you want to poll when you do not want to see all the alarms in the polling list.

Protocol Analyzer - Activates the protocol analyzer that displays the data being transmitted and received during alarm polling. The data is displayed in hexadecimal or English format.

Stop - Stops alarm monitoring.

Go - Starts alarm monitoring.

CONFIGURING A MONITORING FILE

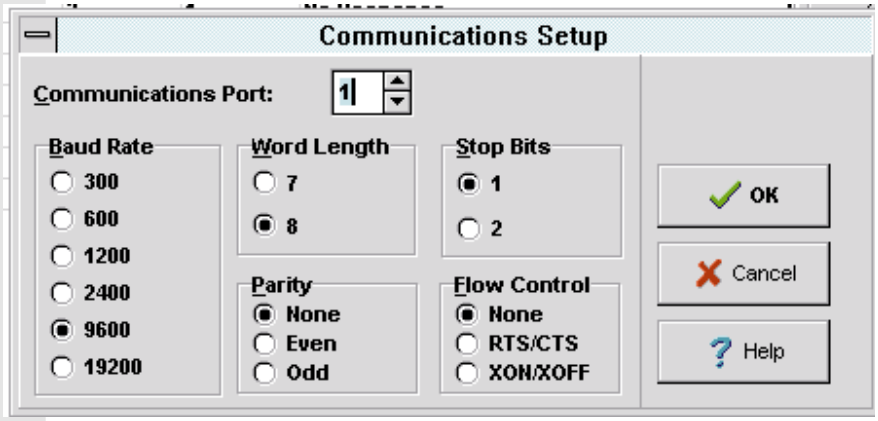
The bottom line of the screen shows the configuration (.CFG) file that the software will use to monitor alarms.

To change or create a configuration file:

NOTE: *A mouse is optional. If you use a mouse, click on the button you want to select. If you do not use a mouse, follow the instructions in parentheses.*

COMMUNICATIONS SETUP

1. In the menu bar, select *Monitor* (Alt+M).
2. Select the *Configure* (press G) command.
3. Select the *Communications* (press C) command. The Communications Setup window appears.



CONTINUED . . .

NOTE: *If you are not using a mouse and you need to exit (cancel) the window, or if you need help, press the Tab key repeatedly until you highlight the button. Then press Enter.*

4. Set the following communications parameters (the defaults are shown in brackets). When you use Dantel's 00459 Test Set, use the default settings except for the port setting.

   The port setting can be either 1 or 2, depending on which communications port you want to use on your computer to communicate with the test set.

   - Communications Port (Alt+C) [1]
   - Baud (Alt+B) [1200]
   - Word Length (Alt+W) [8]
   - Stop Bits (Alt+S) [1]
   - Parity (Alt+P) [None]
   - Flow Control (Alt+F) [None]

   If you do not have a mouse, use the arrow keys to move between selections within a field.

   Flow control refers to the type of communications handshaking that will be used between your computer and the test set.

   None means that no handshaking controls will be used.

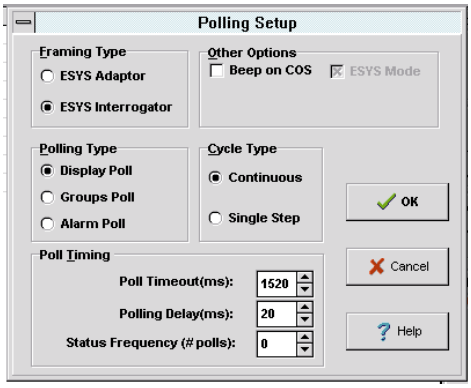
   RTS/CTS refers to Request-to-Send and Clear-to-Send controls. These signals are transmitted over dedicated wires between two pieces of communications equipment.

   XON/XOFF turns data transmission on and off through a control bit in the data stream.

5. Select *OK* (Enter).

PROTOCOL SETUP

1. In the menu bar, select *Monitor* (Alt+M).
2. Select the *Configure* (press G) command.
3. Select the *Protocol* (press R) command. The Polling Setup window appears.



CONTINUED . . .

NOTE: *If you are not using a mouse and you need to exit (cancel) the window, or if you need help, press the Tab key repeatedly until you highlight the button. Then press Enter.*

4. In the Framing Type area, select the *ESYS Adapter* option (Alt+R, then use arrow keys).

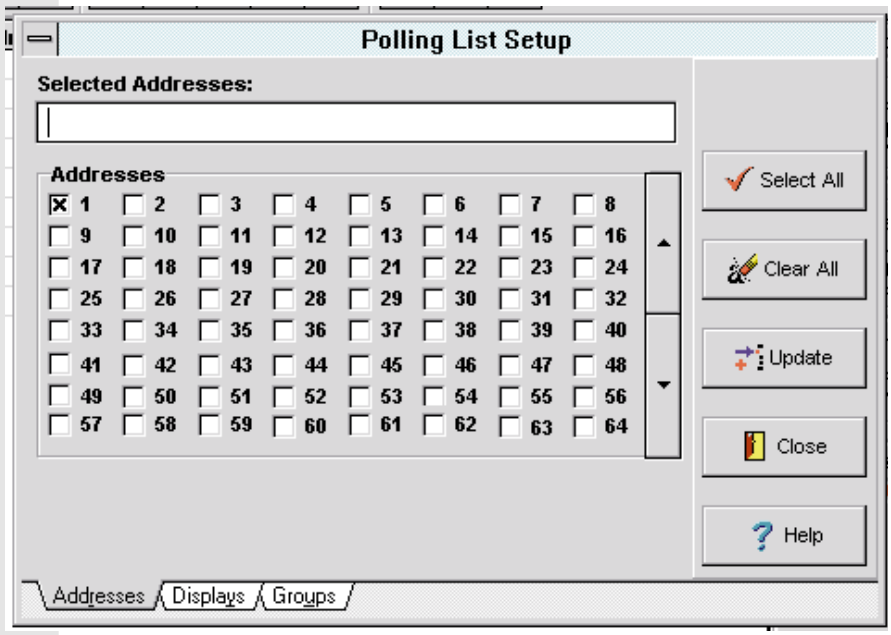
NOTE: *Select the ESYS Adapter option if you're using the Dantel **00458/00459** test set. Use the Framing Type for ESYS Interrogator with the Dantel A11-46037-XX Interrogator.*

5. In the Other Options area:

   - **Beep on COS** - Choose whether you want the computer to beep every time there is a change in the status (COS) of an alarm point (Alt+O, then press spacebar).

POLLING LIST SETUP

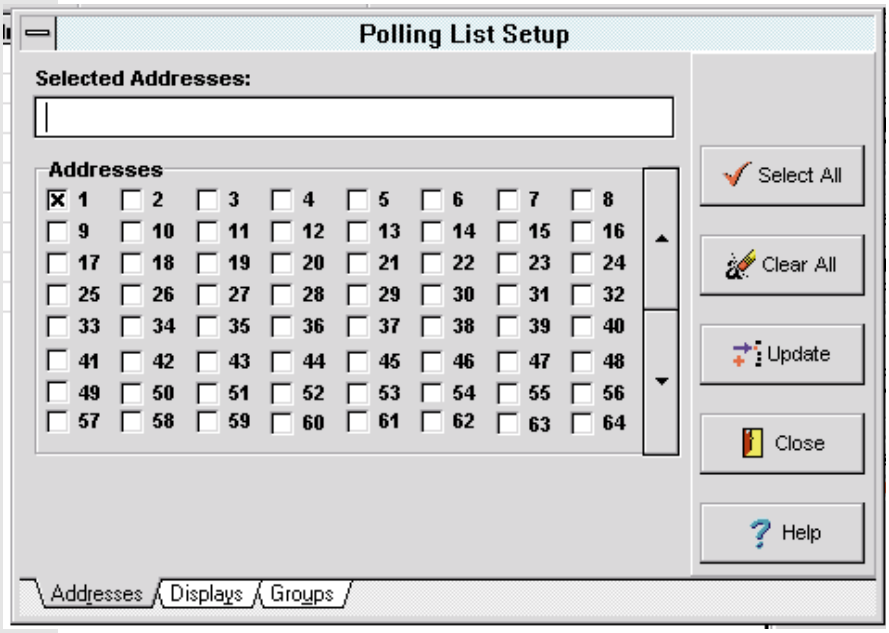
1. In the menu bar, select *Monitor* (Alt+M).
2. Select the *Configure* (press G) command.
3. Select the *Polling* (press P) command. The Polling List Setup window appears.



POLLING LIST SETUP CONTINUED . . .

Addresses

1. At the bottom of the window there are three options: *Addresses, Displays*, and *Groups*. If *Addresses* is not selected, choose it (press R). Here is the window for selecting addresses:



2. Either type the E-system addresses you want to monitor in the *Selected Addresses* field or select the addresses in the *Addresses* field.

   (Use the Tab key to access the fields. In the *Addresses* field, use the arrow keys to move to the address numbers, then use the spacebar to select or deselect. To select addresses above 64, use the Tab key to select the top, large arrow button to the right of the numbers. Then use the arrow keys. Then Tab back to the *Addresses* field.)

   Valid entries are 1-256. If you type the addresses, use only commas or hyphens between numbers; do not use spaces.

3. Select *Update* (Tab to button, then press Enter).

Displays

In the monitoring mode, the interrogating and responder devices control the setting of Displays. You do not need to set them.

Groups

In the monitoring mode, the interrogating and responder devices control the setting of Displays. You do not need to set them.

SAVING THE FILE

1. Close the Polling List Setup window (Tab to the button, then press Enter).
2. You have now changed the configuration file, but the changes remain in effect only as long as you are in the Monitor Mode.

To save the changes to the existing configuration file:

- In the menu bar, select *Files* (Alt+F).
- Select the command *Save* (press S).

To create a new configuration file:

- In the menu bar, select *Files* (Alt+F).
- Select the command *Save As* (press A).
- Type the name for the new file.
- Select *OK* (Enter).

MONITORING ALARMS

The bottom line of the screen shows the configuration (.CFG) file that the software will use to monitor alarms.

NOTE: *A mouse is optional. If you use a mouse, click on the button you want to select. If you do not use a mouse, follow the instructions in parentheses.*

To select a different configuration file:

1. In the menu bar, select *Files* (Alt+F).
2. Select the *Open* command (press O).
3. Select the file.

To start the alarm monitoring:

If you have not done so, connect your computer to Dantel's 00459 Test Set. Follow the instructions in the 00458/00459 Test Set practice.

INTERROGATOR STATISTICS

When polling starts, the Interrogator Statistics portion of the alarm screen shows the status of the polling process. To reset the statistics to zero, select *Reset Stats* (Alt+M, then release the Alt key and press R).

Here are descriptions of the Interrogator Statistics:

Now Polling

Address - The address of the E-system equipment that is being polled.

Group - The group of displays within the E-system address being polled (this applies only if you selected the VGS or SCC method of polling).

Display - The display within the E-system address being polled.

Polls

Total - The total number of polls the interrogator has sent.

Successful - The number polls that have been properly answered.

No Responses - The number of polls for which no responses have been received.

Invalid Responses - The number of responses that have come back with invalid data.

Other Errors

Timeouts - The number of times there have been no responses to polls.

New Frames - This error occurs when a new request to poll alarms is issued before all the data from the last polling request is received.

Parity Errors - The number of times the data received has not been the same as the data transmitted. There could be a communications problem between the equipment being interrogated and the equipment responding.

% Bad Polls

The number of no-response polls and invalid polls as a percentage of the total number of polls.

RESPONDER STATISTICS

When polling starts, the Responder Statistics portion of the alarm screen shows the status of the polling process. To reset the statistics to zero, select *Reset Stats* (Alt+M, then release the Alt key and press R).

Here are descriptions of the Responder Statistics:

Now Responding

Address - The E-system address that is responding to polling.

Group - The group of displays within the E-system address that is responding to polling (this applies only if you selected the VGS or SCC method of polling).

Display - The display within the E-system address that is responding.

Polls

Received - The total number of polls the responder equipment has received.

Answered - The number of polls the responder has answered.

Other Errors

Opcodes - Invalid command opcode structure received.

Frame - E2 Framing error detected.

Data - New command was received before last one could be acted on.

Parity - The number of times the data received has not been the same as the data transmitted. There could be a communications problem between the test set and the E-system equipment.

Status Bits

COS Bit - Change of state detected and a Change Index Display bit has been set.

Alarm Bit - An alarm has been detected and an ANY Index Display bit is set.

Test Bit - The responder is in the Status Test Mode.

Comm Bit - (future use)

MONITOR MODE

FILTERING ALARMS

If you decide you do not want to monitor all the alarm displays being polled, you can specify only the alarm displays that you want to monitor. This is called alarm filtering.

To filter alarms:

1. In the menu bar, select *Monitor* (Alt+M).
2. Select the *Filter* (press F) command.
3. Either type the displays that you want to monitor in the *Selected Displays* field or select the displays in the *Displays* field. (Use the Tab key to access the fields. In the *Displays* field, use the arrow keys to move to the display numbers, then use the spacebar to select or deselect.) If you type the displays, use only commas or hyphens between numbers; do not use spaces.
4. In the *Address* field, select an E-system address (Tab to field, then use arrow keys).
5. Repeat steps 3 and 4 until you have selected displays for all the E-system addresses that you want to filter.
6. Select *View* (Tab to the button, then press Enter).
7. Select *Close* (Tab to the button, then press Enter).

TERMINAL EMULATOR

Although it is not required to operate the 00459 Test Set, the test set software offers a terminal emulator. This allows you to use the software in situations where you do not need the test set, but do require a dumb terminal.

You can access the terminal emulator from the Interrogator, Responder, or Monitor windows.

To open the terminal emulator:

1. In the menu bar, select Tools (Alt+T).
2. Press T.
3. The terminal emulator is actually part of your Windows program. To use it, refer to your documentation for Windows.

If you need to look at the data being sent between the test set and the E-system equipment, use the protocol analyzer.

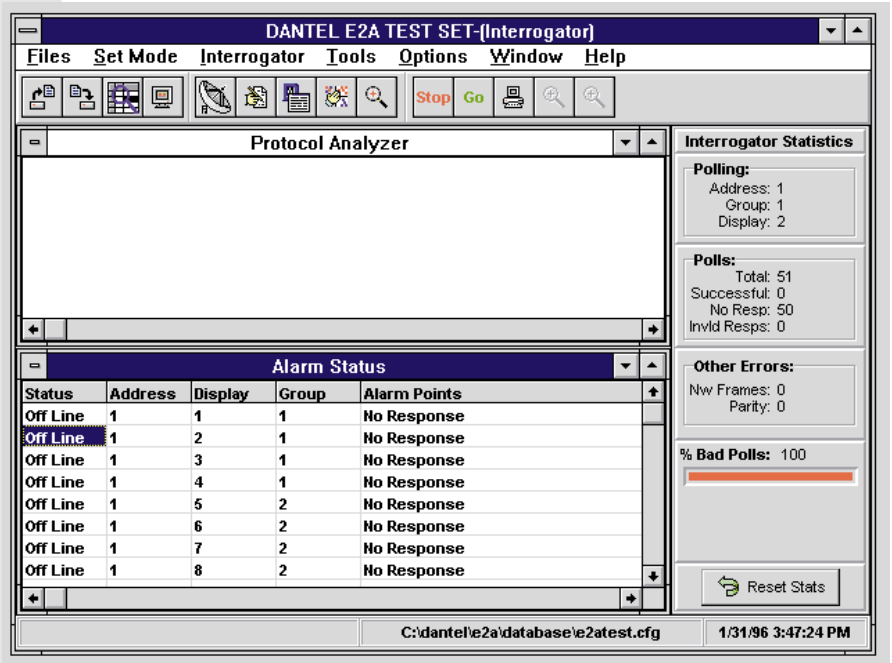
PROTOCOL ANALYZER

You can access the analyzer from the Interrogator, Responder, or Monitor windows.

TO OPEN THE PROTOCOL ANALYZER:

1. In the menu bar, select Tools (Alt+T).
2. Press P.

The data is displayed in hexadecimal or English format. To change between English and hexadecimal select Analyzer, then Mode, then English or Raw. (Alt+A, then press M, then press E or R).



Starting the Analyzer

1. Select the Analyzer on the Tool bar.
2. Select Start/Stop on the Expanded Tool bar.
3. Select Start on the next Expanded level of the Tool bar. (Alt+A, then press S, then press S.)

There are two Buttons on the menu bar you can use to start and stop the Analyzer. If you are using a mouse, click on the Start button.

Stopping the Analyzer

1. Select the Analyzer on the Tool bar.
2. Select Start/Stop on the Expanded Tool bar.
3. Select Stop on the next Expanded level of the Tool bar. (Alt+A, then press S, then press T.)

Closing the Analyzer Mode

Select Analyzer on the Tool bar, then select Close. (Alt+A, then press C.)

If you select a choice on the Set Mode on the Tool bar, it will also close the Analyzer.

LOGGING ANALYZER INFORMATION

When the analyzer is up and running you can save the analyzer information to a log file for further analysis.

Logging

Enter the Analyzer Mode on the tool bar, select Logging and then select Open. (Alt+A, then press L, then press O.)

The Save as window appears and you select the path and the file name where you want the log file to be saved. The extension for the file is .AFG After you enter the path and name, select the OK button. The log file is now open and any data coming into the analyzer is written to the log file.

If you go into the Analyzer Mode and stop the Analyzer, the log file will still be open but no information will be written to it. (Alt+A, then press S, then press T.)

If you start the Analyzer, it starts the log file. (Alt+A, then press S, then press T.)

Closing the Logging file

Enter the Analyzer Mode on the tool bar then enter the Logging selection. Select Close. (Alt+A, then press L, then press C.)

A Confirm window asks: Close logging file? Select the Yes button.

The protocol analyzer Logging is turned off.

NOTE: *You can save information in a log file and be retrieve it on a word processor, such as Write, under the Tool function on the Tool bar.*

NOTES

WARRANTY

LIMITED WARRANTY

The Seller warrants that the standard hardware products sold will be free from defects in material and workmanship and perform to the Seller's applicable published specifications for a period of 18 months for hardware, and 3 months for software, from the date of the original invoice. The liability of the Seller hereunder shall be limited to replacing or repairing, at its option, any defective products which are returned F.O.B. to the Seller's plant, (or, at the Seller's option, refunding the purchase price of such products). In no case are products to be returned without first obtaining permission and a customer return authorization number from the Seller. In no event shall the Seller be liable for any consequential or incidental damages.

Equipment or parts which have been subject to abuse, misuse, accident, alteration, neglect, unauthorized repair or installation are not covered by warranty. The Seller shall make the final determination as to the existence and cause of any alleged defect. No warranty is made with respect to custom equipment or products produced to the Buyer's specifications except as specifically stated in writing by the Seller in the contract for such custom equipment.

This warranty is the only warranty made by the Seller with respect to the goods delivered hereunder, and may be modified or amended only by a written instrument signed by a duly authorized officer of the Seller and accepted by the Buyer.

Warranty and remedies on products not manufactured by the Seller are in accordance with warranty of the respective manufacturer. THE SELLER MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED; AND ALL IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEEDS THE AFORESAID OBLIGATIONS IS HEREBY DISCLAIMED BY THE SELLER.

IN CASE OF DIFFICULTY

If you experience difficulty with this equipment, check the following, as appropriate:

1. **Switch settings**
2. **Signal levels**
3. **Software configuration**
4. **Connections between Dantel's equipment and your equipment.**

If there is still a problem, substitute equipment that is known to be good. For additional assistance, call Dantel's Technical Field Service Department weekdays, 6 A.M. to 5 P.M. pacific time:

1-800-4DANTEL (1-800-432-6835).

If a thorough checkout shows a piece of equipment has malfunctioned, you may return it to the factory. For repairs and emergency replacements, obtain a Return Material Authorization (RMA) number from the Customer Service Representative at **1-800-4DANTEL** (1-800-432-6835).

To ensure expedient processing of your order, provide a purchase order number and shipping and billing information when requesting an RMA number. Also, when the units are returned to Dantel, include a description of the failure symptoms for each unit returned. Send defective equipment to:

Dantel, Inc. • 2991 North Argyle Avenue • Fresno, California 93727-1388