TEAM® 800 T3

Operation Manual Version 3.0.0

General DataComm
Network Access Division

TEAM ® *800 T3*

Operation Manual, Version 3.0.0

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Documentation

Revision History

Issue Number	Date	Description of Change
1	1 June 2000	Initial Release

Related Publications

A listing of related user manuals is provided below. In addition to the hardware and software manuals, always read the software System Release Notes supplied with your product.

Publication Name	Publication Number*
SpectraComm Manager Card Installation & Operation Manual	048R303-REV
TEAM CORE Release Notes	058R957-VREF

* For publications numbers, **REV** is the hardware manual revision (for example, -000, -001, etc.) **VREF** (if listed) is the software revision (for example, -V120 would read, Version 1.2) and corresponds to the most current revision.

Table of Contents

Preface

Scope

This manual describes the operation of the TEAM 800 T3 Unix application for HP OpenView. The user should be familiar with HP OpenView and the operation of SpectraComm Units (SCU) and the SpectraComm Manager Card (SCM) to use this manual effectively. Operating instructions for the SCM appear in the *TEAM CORE Operation Manual.* The information contained in this manual has been carefully checked and is believed to be entirely reliable. However, as General DataComm improves the reliability, function, and design of their products, it is possible that information may not be current. Contact General DataComm for updated information on this or other GDC products.

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Manual Organization

This manual should be read in its entirety and all procedures completely understood before installing or operating the unit. The notes that appear throughout this manual must be read prior to any installation or operating procedure. Examples of notes used in this manual are shown below.

This manual is divided into the following chapters:

> *Chapter 1: Operation*
>
> *Chapter 2: Configuration*
>
> *Chapter 3: Reports*

Note *Indicates a note. It is something you should be particularly aware of; something not readily apparent. A note is typically used as a suggestion.*

Important *Indicates an emphasized note. It is something you should be particularly aware of; something not readily apparent. Important is typically used to prevent equipment damage.*

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Chapter 1: Operation

Introduction to the TEAM 800 T3

TEAM 800 T3 software consists of integrated applications on the HP OpenView Network Management platform. The applications use Simple Network Management Protocol (SNMP) to configure and control the operation of SpectraComm 800 T3 cards. The SC800 T3 card connects data from a standard High Speed Serial Interface (HSSI) port, typically connected to a router, running up to 44 Mbps to a standard DS-3 port. The TEAM 800 T3 application communicates with the SC800 T3s through a SpectraComm Manager (SCM) card that shares the same shelf.

The application can also control a remote SC800 T3 connected to the SC800 T3 under local control. The workstation that runs the TEAM 800 T3 application must also be running the TEAM CORE application for managing the SCM.

TEAM 800 T3 applications allow you to:

*   Configure the SC800 T3s

*   Monitor the operation of the SC800 T3 by means of an Alarm Detail display and a Front Panel display that represents the LED indicators on the front panel of the physical unit

*   Diagnose suspected problems using local tests, remote loopbacks, and self test patterns

Theory of Operation

All of the TEAM Controller application interfaces use the HP OpenView APIs (Application Programmer Interfaces) to integrate with HP OpenView Windows and other network management applications. Menu items are accessed via pulldown menus from the appropriate HP OpenView submap or from the Front Panel toolbar.

SpectraComm Manager Card

The SpectraComm 800 T3 operates in conjunction with a SpectraComm Manager (SCM) card to provide comprehensive network management capabilities using the Simple Network Management Protocol (SNMP). The SCM acts as the SNMP agent through which TEAM management applications communicate with SC800 T3s and other compatible equipment.

All management communications are directed to the SCM card Internet Protocol (IP) address. The SCM card relays commands and responses between management applications and hardware components, using a slot addressing scheme to communicate over the SpectraComm shelf backplane with the other components. The SCM is transparent to the applications, which operate as though they were communicating directly with the hardware units. The SCM card is managed by the TEAM Core application, which is also responsible for the Discovery and Mapping functions of TEAM Applications within the HP OpenView framework.

TEAM 800 T3 Applications

The SC800 T3 Front Panel display allows the user to monitor conditions at the SC800 T3 according to colored LED status indicators. The Front Panel display also provides a glyph menu for accessing TEAM 800 T3 applications by either of the following two methods:

- Select a SC800 T3 shelf icon, then select **Front Panel** on the Performance menu of the HPOV menu bar

- Double-click on the shelf icon of the desired unit

The HPOV Menu Bar Interface

The table below illustrates the arrangement of the TEAM 800 T3 applications on the HPOV menu bar. Note that the HPOV menu bar may include additional selections besides TEAM 800 T3 applications. Select the SC800 T3 unit you intend to work with by clicking once on its icon in the shelf slot. Then make the desired menu selection and TEAM application.

Menu Selection	TEAM 800 T3 Application	Description
Performance	Front Panel...	Displays front panel LEDs and an application tool bar.
	Alarm Detail...	Provides detailed information about alarm state changes
Configuration	Configure...	Allows the user to configure a selected SC800 T3
Fault	Diagnose...	Allows the user to run diagnostic tests on a selected SC800 T3
Misc	Front Panel Poll Rate...	Allows the user to set a default polling interval which will take effect each time the Front Panel display is opened.
	Note Pad	Opens a shell tool on the workstation running the TEAM software for keeping records on the system. Also used to run other resident software on the workstation, i.e., text editor, mail tool, etc.
	Alarm Severity	Allows the user to change the severity of the alarms for a device type

Note   *The Note Pad and the Alarm Severity applications in the Map window Misc menu will not appear in the Front Panel Select button menu.*

The Front Panel Application

Clicking the Performance menu **Front Panel** selection opens the Front Panel display for a DSU. Table 1-1 describes the LEDs and icons on the display. Front Panel procedures follow the table.

Table 1-1   800 T3 Front Panel Selections

Front Panel Display	LEDs / Icons	Description
	NTWK LED	Illuminates green to indicate a properly operating network interface
	ON LED	Power on
	TM LED	Test Mode illuminates red while the 800 T3 performs a diagnostic test. During a test, a double-headed arrow indicates errors detected.
	ALM LED	Indicates an alarm condition; identification is made by matching color of light to the slot icon for the unit.
	Configuration	Opens the main Configuration window.
	Diagnostics	Opens the main Diagnostics window.
	Alarm Detail	Opens the Alarm Details window.
	Reports	Opens the Reports main window
	Soft Reset	Performs a soft reset of the unit, deleting unsaved edits.
	Defaults	Restores factory default settings, deleting user changes.
	LEDs	Performs a test of the Front Panel LEDs
	Demand Poll	Polls the unit on demand, updating the LED states. At the bottom of the display, the time of the last Autopoll is displayed in white. A yellow display indicates auto polling is disabled.
	Stop Polling	Displays a static snapshot of LED states at the last poll.
	15, 30, 60 Sec	Sets a polling interval.
	GDC logo	Displays version information of the unit.
	Select arrows	Shows or hides the tool bar for accessing all applications except Front Panel Poll Rate, Note Pad and Alarm Severity.
	Exit	Dismisses the Front Panel display.

Front Panel Procedures

To launch a Front Panel display, perform the following steps:

1. Select the desired unit in the HPOV map window.

2. Click on the desired slot icon of the unit, then select **Front Panel** from the Performance menu for that window.

3. An alternate method is to double-click on the unit's icon. The Front Panel display appears.

4. To access other TEAM applications, click on the Select buttons (directional arrows) to show the tool bar. Moving the mouse over each icon displays a help string in the lower left corner.

Note   *A boxed slot icon indicates no associated remotes. An unboxed icon indicates an associated remote.*

Note   *Double-clicking on a slot icon with a remote opens another submap with icons of the unit connected to its remote, indicating a link. Double-click on the icon in this link submap to access the Front Panel display.*

The Alarm Detail Application

The Alarm Detail application is accessed from the HPOV menu bar Performance menu or from the Front Panel toolbar. Once the desired alarms are enabled at the Alarms reported screen, the Alarm Detail application retrieves the most current alarms from the selected unit. The Alarm Detail LEDs display the status which is continually updated as new alarms are received from the unit. Table 1-2 describes the Alarm Detail window selections. Menu selections follow the table.

Table 1-2   Alarm Detail Selections

Alarm Detail Window	Heading	Alarms Reported
	Network Alarms	Loss of Signal
		Out of Frame
		Alarm Indication Signal
		Remote Not Responding
		Remote Alarm Indication
		Errored Seconds - Line
		Errored Seconds
		Code Violations
		Severely Errored Seconds
		Severely Errored Frame/AIS
		Unavailable Seconds
	DTE Alarms	DTE Ready Loss
		DTE Tx Clock Loss
		RxD No Transitions
		TxD No Transitions
		DTE Test
	Unit Alarms	Unsolicited Test
		Configuration Change
	Unit Failed	Unit failed its power up self test
	Power Supply Alarms (Valid for SC2000 Twin Pack Only)	Top Supply Fail
		Bottom Supply Fail
	Exit icon	Dismisses the Alarms Detail window.

Alarm Detail Menus and Read-only Fields

The **File** menu window provides file operations and basic Help.

The read-only **Name** field displays the IP Hostname of the SCM in the shelf, the slot number and symbol label of the selected unit.

The Diagnostics Application

Use the Diagnostics application to test a SC800 T3, the network, any associated remote SC800 T3 units, and display results. Separate Diagnostics windows can be launched from the HPOV menu bar Fault menu or from the Front Panel tool bar for each selected 800 T3 unit and its associated remote on the open map. Read-only data and test options and commands are provided along with a graphic which depicts the diagnostic data path for the selected test. Arrows indicate the current data paths and change to show loopback paths associated with each test. Figure 1-1 and Table 1-3 describe each component of the the Diagnostics window. Diagnostics menus are described below.
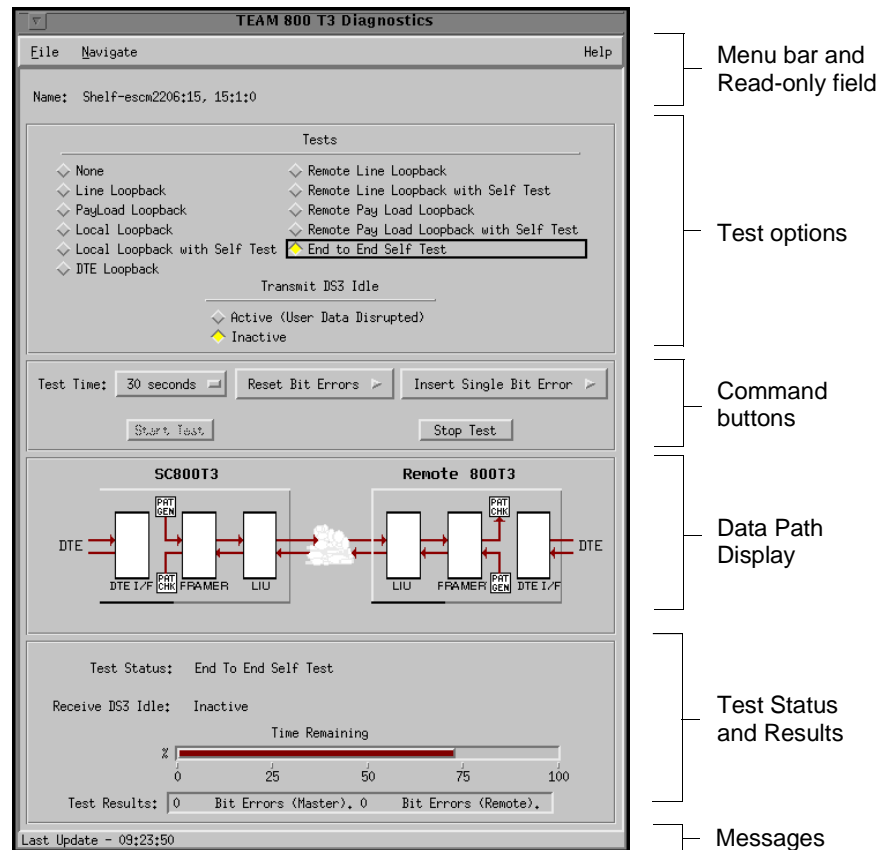
Figure 1-1   The Diagnostics Window

Diagnostics Menus and Read-only Fields

The File menu provides a **Status Poll** option for selecting the poll rate (10, 20, 30 seconds). It also provides an **Exit** command which dismisses the Diagnostics application. Note that the Diagnostics application polls continuously until the **Exit** command is made.

The read-only **Name** field displays the IP Hostname of the SCM in the shelf, the slot number and symbol label of the selected unit.

The Navigate menu provides a **History** option which displays a read-only screen of test results from the current session. Table 1-4 describes the Diagnostics History screen.

Table 1-3 Test Selections

| Selection	Option	Description
Tests	None	
	Line Loopback	
	PayLoad Loopback	
	Local Loopback	
	Local Loopback w/Self Test	
	DTE Loopback	
	Remote Line Loopback	
	Remote Line Loopback w/Self Test	
	Remote PayLoad Loopback	
	Remote Payload Loopback w/Self Test	
	End to End Self Test	
Transmit DS3 Idle Signal	Select: Inactive or Active (User Data Disrupted)	
Test Command Buttons	Test Time	Select: 30 Seconds; 1,2,..10 minutes; 15, 20, 25, 30 minutes, Infinite
	Reset Bit Errors	Select: Master or Remote
	Insert Single Bit Error	Select: Master or Remote
	Start Test or Stop Test	
Test Status & Results	Test Status	Reports the current condition of the test status (i.e. idle or running)
	Receive DS3 Idle	Displays the current state of the network receive DS3 Idle Signal state. (Active or Inactive)
	Time Remaining	The gauge monitors the time remaining in the current test
	Test Results	Displays the result of the test in progress or the last test performed
Messages	Last Update	Lower left side of window displays the time of the last update
	Status	Lower right side of window displays intermittent messages which describe the application activity and unit interaction (i.e. waiting for response from unit; initialization messages; communication errors)

Special Considerations

During a Line Loopback test the communication between the master and remote is interrupted and the diagnostic window will not display the remote. At the completion of the test, communication resumes when the SCM sends the next poll (approximately 30 seconds).

Diagnostics History

The Diagnostics History screen, shown below, is accessed from the Diagnostics window **Navigate** menu. This screen displays test data for all tests run during the current session, including stopped tests. Table 1-4 describes the test data provided.
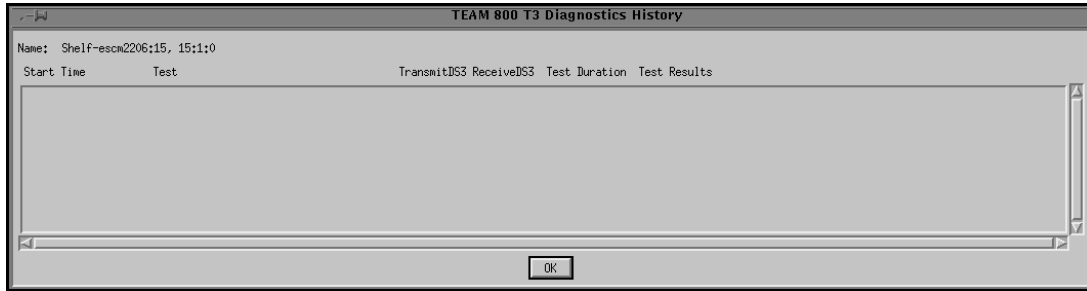
Table 1-4 Diagnostics History Window

Read-Only Fields	Description
Name	Displays the shelf name.
Start Time	Displays the date and time the test started.
Test	Displays the type of test performed.
Transmit DS3	Displays the state of the Network Transmit DS3 Idle Signal during the test.
Receive DS3	Displays the state of the Network Receive DS3 Idle Signal during the test.
Test Duration	Displays the duration of the test performed.
Test Results	Displays the bit error rate for a self test.
OK Button	Dismisses the screen.

Note   *When the Diagnostics application is exited, the data on the Diagnostics History screen will be lost.*

Chapter 2: Configuration

Overview

The TEAM 800 T3 Configuration application provides a tool for conditioning the SC800 T3 operating parameters through a set of Motif style windows: Administrative Information, Network Options, DTE Options, Alarms Reported and Local Alarms. The application also provides a method of copying configurations to other units. The user can make configuration changes based on a stored configuration template, or based on the current configuration of the unit. In either case, the unit continues to operate using its unchanged current configuration.

Using Configuration Templates

Configuration procedures are described below. Throughout the text descriptions in this chapter, default values will be shown in **Bold**. Accompanying screens are representative and may appear differently on your system. Once a configuration has been defined for a desired unit functionality, it can be stored as a template on the workstation that runs the TEAM 800 T3 application. Any number of templates can be stored for retrieval when particular configuration settings are needed.

The three template functions (Save, Load and Compare) are accessed via the File menu or glyph. When you select a template function, a dialog window appears for specifying the template file name. To save configuration templates refer to the basic configuration steps below.

To load configuration settings from an existing template into the SC 800 T3, perform the following steps:

1. Select **Load Template** from the File menu and select the template from the resulting dialog window. The application retrieves the configuration settings of the selected template.

2. Select **Save to Unit** from the File menu. The application makes the template configuration settings the current operating configuration for the unit.

3. Select **Compare** from the File menu to compare the screen's configuration data to a specific template.

Configuration Basics

This section provides the basic steps for configuring the unit. The next sections describe each configuration window menu and its selectable options.

1. Access the main Configuration window, either from the submap configuration or from the Front Panel configuration display. When the main window opens, the application reads the current main configuration from the unit.

Note   *The File menu Refresh selection also reads the current configuration from the unit.*
If you select **Refresh** *during the configuration process, any configuration changes made in any configuration window will be lost unless thay have been saved to a template or to the unit.*

2. If you want to make changes to the configuration based on a template, select **Load Template** from the File menu and then select a template from the resulting list before proceeding.

3. Click on the **Navigate** button to display a menu of the configuration windows and then select the first one in which you intend to make changes.

4. Click on the desired input fields to open a list of available values for each option, then click on the desired value.

5. You can discard changes made in a configuration window and return all its fields to their stored values in two ways:

    •   Click on the **Reset** button to discard changes while keeping the window open

    •   Click on the **Cancel** button to discard changes and close the window.

6. Close a configuration window without losing changes by clicking on either the **OK** button or the push-pin glyph in the upper left corner of the window.

7. Continue to select other configuration windows to make additional changes. Refer to the following sections of this chapter for descriptions of each configuration window menu and its selectable options.

8. When you have accessed all the configuration windows for changes, use the main configuration window File menu to save all changes in two ways:

    •   Select **Save to Unit** to send the changes to the unit as the new current configuration. This activates the changes instantly in the unit.

    •   Select **Save to Template** to save the changes to a template on the workstation. This allows the unit to continue operation without changing any of its configuration settings.

        A list of existing templates appears with a field for entering a new template name. Select an existing template to overwrite it with the new configuration, or enter a new name to create a new template. The stored template now be loaded to a unit or retrieved for modification.

Note   *You can keep multiple configuration windows open on-screen and move between them by clicking the mouse on the one in which you intend to operate. The main configuration window remains on-screen throughout the configuration process.*

*Note*   *When you change a value or setting, the application displays the option name and the new value in white text, rather than black. The option will remain white until the changes are stored to the unit or a template or discarded.*

Configuration Application Windows

The main Configuration window is launched from **HPOV menu -> Configuration**. The following figure and tables describe the Configuration menus, toolbar items and the read-only data.
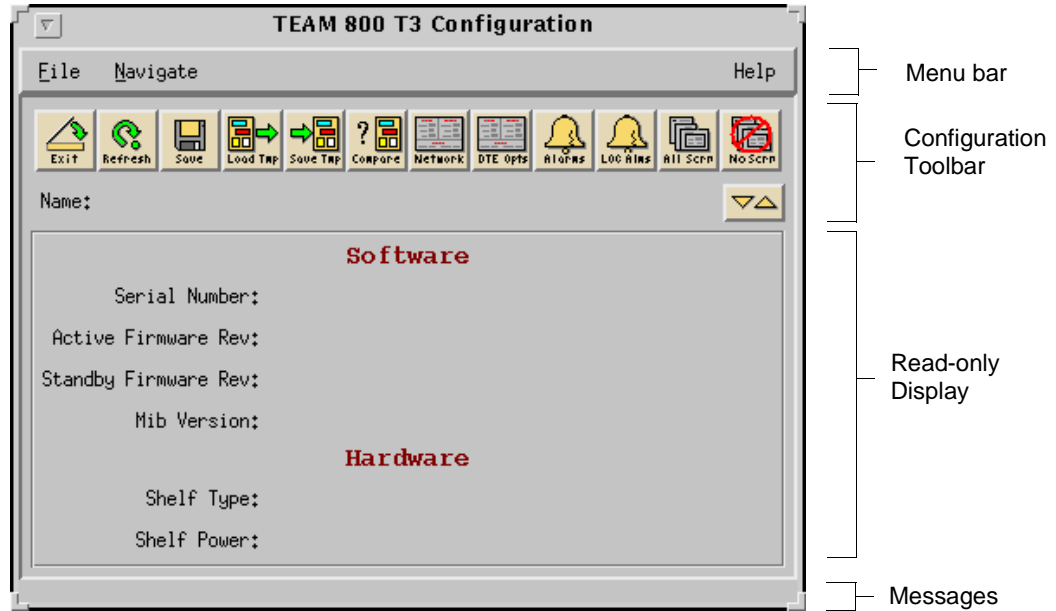
Read Only Displays

Name is a read-only field that displays the IP Hostname of the SCM in the shelf and the slot number of the selected unit. A **Message** area displays application activity and unit interaction in the lower left of the window. The **Hardware** and **Software** read-only fields are described in *Table 2-1*.

Table 2-1   Read-Only Fields

Heading	Selections	Description
Software:	Serial Number	Presents the serial number of the unit.
	Active Firmware Revision	Shows version of the operating firmware on the unit.
	Standby Firmware Rev.	Shows version of the non-operating firmware on the unit.
	Mib Version	Shows mib version of the unit.
Hardware:	Shelf Type	Shows the type of shelf in use (i.e., SpectraComm 5000, SpectraComm 2000)
	Shelf Power	Bottom Supply, Top Supply or Redundant Supplies; 100 watts - 10 slot; 96 watts - 16 slot; 192 watts - 16 slot; 288 watts - 32 slot; and 384 watts - 32 slot

Configuration Menu Bar

The menu bar provides a File and Navigate menu for configuring the selected unit. Use the **Navigate** menu to select the individual configuration windows for change. Use the **File** menu for storage and retrieval of previously stored templates of configuration settings. Table 2-2 describes the menu selections.

Table 2-2   Configuration Menu Selections

Menu Buttons	Selections	Description
File	Refresh	All options are read from the unit and outstanding edits are lost.
	Save to Unit	All outstanding edits are sent to the unit.
	Load Template	Allows the selection of an existing 800T3 template to be applied as edits to the current application. Your next File-->Save to Unit implements the template changes.
	Save to Template	Configuration data is saved as a specific template.
	Compare to Template	You can select an existing 800T3 template to be compared with the screen display.
	Exit	Terminates application with outstanding edits discarded first.
Navigate	Network Options...	Displays the Network Options window.
	DTE Options...	Displays the DTE Option window.
	Alarms Reported...	Displays the TEAM 800 T3 Alarms Reported window.
	Local Alarms	Displays the TEAM 800 T3 Local Alarms window. (This window is used in conjunction with the alarm card presentation.)
	All Screens...	Displays all subordinate windows of the application
Help	Displays the Help on-line manual.	

Configuration Toolbar
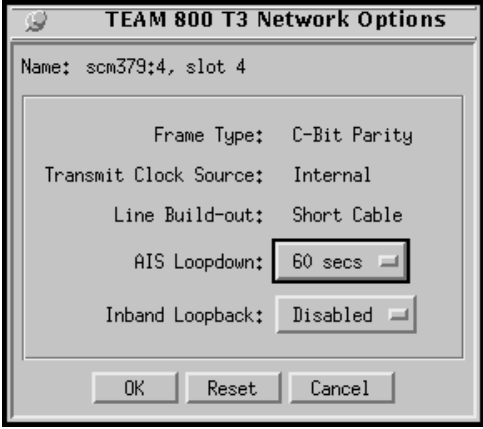
Similar to the Configuration Menu bar, the Toolbar buttons access the TEAM applications, with the addition of a **No Screens** button which hides all screens. The **Up/Down** button adjusts the footprint of the application on the workspace. As the mouse moves over the toolbar, a help string appears, describing button action.

Note   *If the configuration application is exited while pending (unsaved) edits exist on any of the configuration screens, the following prompt will appear: Pending edits exist, do you want to save or exit without saving the changes?*

Network Configuration Options

The Network Options window appears when you select **Navigate -->Network Options** from the main window. This window (*Table 2-3*) allows configuration of network options. The **Name** read-only field appears with the same designation on all other subordinate screens.

Table 2-3   Network Option Selections

Network Options Window	Selections	Description
	Frame Type	Read-only display indicates if the frame is **C-Bit parity**
	Transmit Clock Source	Read-only display indicates: **Receive** Internal
	Line Buildout	Read-only display indicates: Long Cable 50 -450 ft DS-3 mode **Short Cable** 0 - 100 ft DSX-3
	AIS Loopdown	Select **Disable** for no timeout protection on AIS transmission Select a maximum interval (5-60 seconds) the AIS can be transmitted.
	Inband Loopback	Enable or **Disable**
	OK	Dismisses the window, similar to a pin pull. Edits are maintained but not saved.
	Reset	Undoes pending edits since last "File --> Save to Unit" operation
	Cancel	same as Reset, and dismisses the screen

DTE Configuration Options

The DTE Options Window appears when you select **Navigate->DTE Options** on the 800 T3 Configuration main window. This function allows configuration of DTE options, described below. The **Name** field is read-only and appears with the same designation on all other subordinate screens.

Table 2-4   DTE Options Window

DTE Options Window	Unit Options	Description
	DTE Loop Time-out	Enable - After the unit is in test for a fixed interval, the application drops the test. **Disable** - When the DTE Loop is activated, the unit stays in test mode until the loopdown code is received.
	DTE Test	Enable - Allows the unit to go into a loopback when loopback code is sent. **Disable** - Allows the unit to ignore any loopcode sent.
	DCE Ready	Select: **Follows DTE** Ready Force On
	OK	Dismisses the windows and saves the changes.
	Reset	Restores the settings to the last File-->Save to Unit.
	Cancel	Dismisses the DTE Options window without saving the changes.

Alarms Reported

The Alarms Reported window (*Table 2-5*) appears when you select **Navigate --> Alarms Reported** from the main window. This screen allows you to configure alarm reporting. Click the **Report All** button to select all alarms for reporting; click the **Report None** button to deselect all alarms so that no alarms will be reported; or click alarms individually.
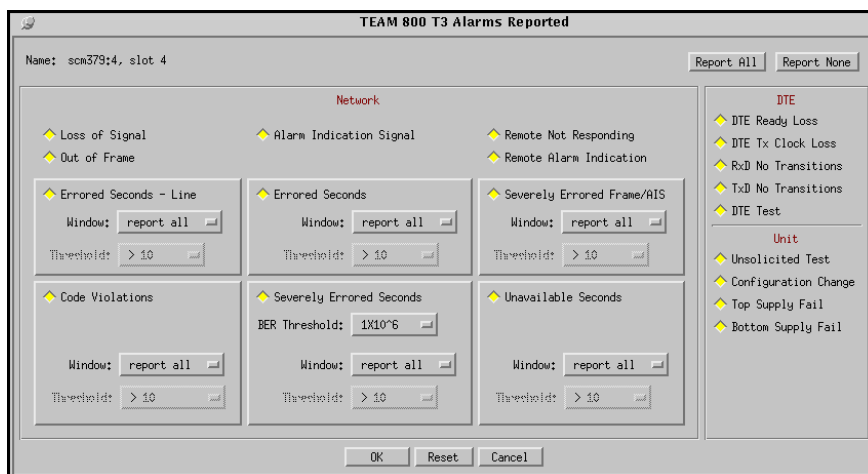
Table 2-5 Alarms Reported Window

Heading	Selection	Description
Network Alarms	**Loss of Signal**	The unit detects an absence of network signal. Absence of signal for a time equivalent to 175 bits ($\pm$ 75) is considered no signal.
	Out of Frame	The unit misses two out of four framing bits in the signal coming from the network. The count increments by one each time framing is lost, regardless of the number of frames affected.
	Alarm Indication Signal	Detects alarm conditions and sends traps to the event log.
	Remote Not Responding	Detects when the remote is not responding.
	Remote Alarm Indication	Reception of remote alarm indication signal on the T3 interface.
	Errored Seconds - Line	When enabled, allows errored seconds reporting.
		Sets window to: Report All, 1 second, 1 minute, 1 hour or Report When.
		Sets threshold at >10, >100, >1000, or >10,000
	Errored Seconds	When enabled, detects seconds with at least one CRC error event.
		Sets window to: Report All, 1 second, 1 minute, 1 hour or Report When.
		Sets threshold to: >10, >100, >1000, and >10,000.
	Code Violations	When enabled, allows code violation reporting.
		Sets window to: Report All, 1 second, 1 minute, 1 hour or Report When.
		Sets threshold to: >10, >100, >1000, >10,000, >10,000 and >1,000,000
	Severely Errored Seconds	When enabled, allows severe errored seconds reporting.
		Sets the bit error rate threshold for one SES to: 1X10-6 or 7.5X10-5
		Sets window to: Report All, 1 second, 1 minute, 1 hour or Report When.
		Sets threshold to: >10; >100; and >1000.

(Sheet 1 of 2)

Table 2-5 Alarms Reported Window (Continued)

Network Alarms (continued)	Severely Errored Frame/AIS	When enabled, detects severely errored frames/AIS
		Sets window to: Report All, 1 second, 1 minute, 1 hour or Report When.
		Sets threshold to >10, >100, or >1000.
	Unavailable Seconds	When enabled, detects unavailable seconds.
		Sets window to: Report All, 1 second, 1 minute, 1 hour or Report When.
		Sets threshold to: >10, >100, or >1000.
DTE Alarms	DTE Ready Loss	
	DTE Transmit Clock Loss	
	Receive Data No Transitions	
	Transmit Data No Transitions	
	DTE Test	
	DTE Ready Loss	
Unit Alarms	Unsolicited Test	
	Configuration Change	
	Top Supply Fail (SC2000)	When enabled, detects a failure in the unit's top power supply.
	Bottom Supply Fail (SC2000)	When enabled, detects a failure in the unit's bottom power supply.

(Sheet 2 of 2)

Note   *The **check diamond** for each alarm selection controls the state (enabled or disabled) of the associated window and threshold. By clicking the check diamond, the alarm selection is activated.*

Using Alarm Thresholds

For those alarms with threshold options, consider the following:

• Select **Report All** to command the unit to report every occurrance of the associated alarm. This selection disables the threshold control of traps sent to the event log.

• Select **Report When** to command the unit to report one alarm event only when the specified number of associated alarms has occured. This selection activates the threshold control of traps sent to the event log.

• The **SES BER Threshold** is always enabled, using the selected values of 1 x 10-6 or 7.5 x 10-5.

Local Alarms

The Local Alarms Configuration screen *Table 2-6* appears when you select **Navigate --> Local Alarms**. This screen is used to disable or set the severity of the selected alarms that can trigger an alarm display on the Local Alarm Card light panel. Local Alarms do not create SNMP traps; these settings are stored within the 800 T3. The **Name** field is read-only.

Note   *The fields for Remote Not Responding, Unsolicited Test, DTE Test and Configuration Change are located on the Alarms Reported screen.*

```
┌────────────────────────────────────────────────────────────────────────┐
│              Team 800 T3 Local Alarm Configuration                       │
│  ┌                                                                       │
│   Name: scm379:4, slot 4                                                 │
│                                                                          │
│  ┌──────────────────────────────────────────────┐  ┌──────────────────┐ │
│  │              Network                          │  │        DTE        │ │
│  │   Declared                Performance         │  │ DTE Ready Loss: [Enabled Major]│
│  │ Loss Of Signal: [Enabled Major] Errored Seconds - Line: [Enabled Major] │ DTE Tx Clock Loss: [Enabled Major]│
│  │ Out of Frame: [Enabled Major]  Code Violation: [Enabled Major] │ RxD No Transistions: [Enabled Major]│
│  │ Alarm Indication Signal: [Enabled Major] Errored Seconds: [Enabled Major] │ TxD No Transistions: [Enabled Major]│
│  │ Remote Alarm Indication: [Enabled Major] Severely Errored Seconds: [Enabled Major] │        Unit       │
│  │                   Severely Errored Frame/AIS: [Enabled Major] │ Top Supply Fail: [Enabled Major]│
│  │                   Unavailable Seconds: [Enabled Major] │ Bottom Supply Fail: [Enabled Major]│
│  └──────────────────────────────────────────────┘  └──────────────────┘ │
│                    [ OK ] [ Reset ] [ Cancel ]                           │
└────────────────────────────────────────────────────────────────────────┘
```

Table 2-6   Local Alarms Selections

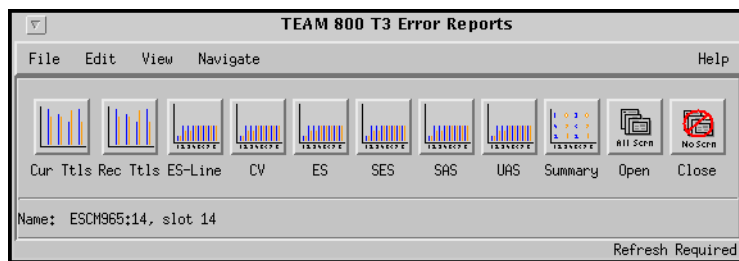| Heading	Selection	Options

Network - Declared	Loss of Signal	Select:
		  Enabled Major
		  Enabled Minor
		  Disabled

	Out of Frame	
	Alarm Indication Signal	
	Remote Alarm Indication	

Network - Performance	Errored Seconds - Line	Select:
		  Enabled Major
		  Enabled Minor
		  Disabled

	Code Violation	
	Errored Seconds	
	Severely Errored Seconds	
	Severely Errored Frame / AIS	
	Unavailable Seconds	

DTE	DTE Ready Loss	Select:
		  Enabled Major
		  Enabled Minor
		  Disabled

	DTE Transmit Clock Loss	
	Receive Data No Transitions	
	Transmit Data No Transitions	
Unit (SC2000 shelf only)	Top Supply Fail	Reports on top power failure according to alarm severity.
	Bottom Supply Fail	Reports on bottom power failure according to alarm severity.

Overview

The TEAM SC800 T3 Reports application is used to display error statistics accumulated by the unit. You can launch the application by selecting the HPOV Shelf Map slot icon and then selecting the `Performance->Reports` menu item; or you can use the Front Panel display `Select` button menu.

The Main Reports Window

The Main Error Reports window is the starting point for all report screens and functions. It provides a menu bar and a glyph bar which are described below.


Table 3-1   The Reports Main Screen Selections

Selections	Options	Description
File Menu	Refresh	An on-demand update of the error data.
	Auto Refresh	`On` polls the unit for current data, updating the report screens. `Off` disables the periodic poll only. Other poll options refresh data at the selected intervals.
	Save Error Data to File	Saves the data from the last poll to a file.
	Exit	Dismisses all report windows and exits the application.
Edit Menu	Reset Statistics	Sends an SNMP set to clear statistics in the unit and clears the data from the report screens.
View Menu	Legend	Displays or inhibits useful notation, such as expanded acronyms, in any screen with a Legend area.
Navigate Menu	Individual network-side error report screens	Each screen displays detailed statistics for each error type. 24 Hour Error Totals, Errored Seconds, Severely Errored Seconds, Bursty Errored Seconds Unavailable Seconds, Loss of Frame Count, Summary, All Screens
Report Glyphs	Click any X-axis report glyph to open the associated report screen.	

Note   *The most current data collected by the unit is displayed on each report screen only after the user selects the Refresh command from the File menu.*

24-Hour Current Totals Report Screen

The Current Totals Report screen is accessed from the **Navigate** menu at the main Report window, or by clicking on its glyph. This report screen charts the errors detected in data collected over a 24 hour period, in 15 minute intervals. Near-end and Far-end errors are graphed separately with colored bars. Table 3-2 describes the read-only report data and button functions.
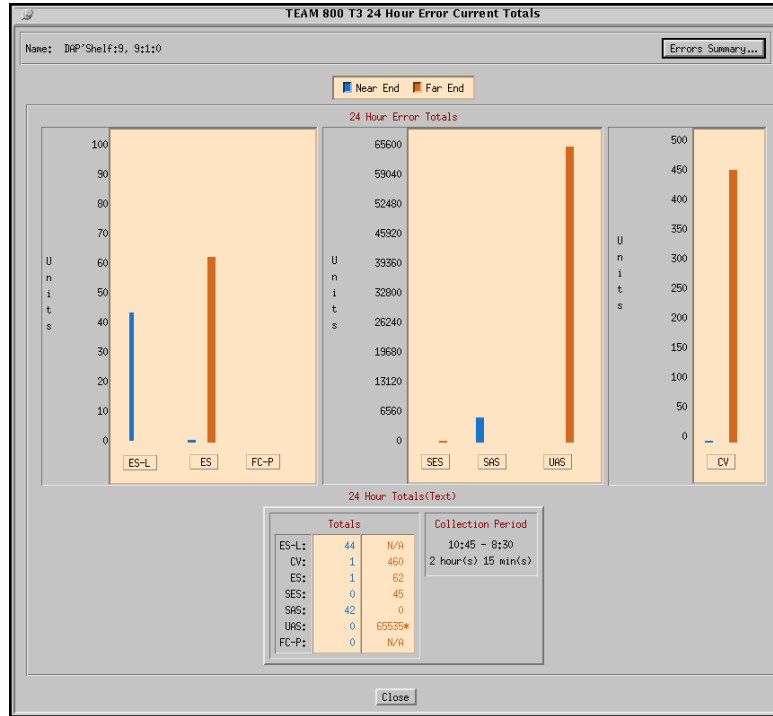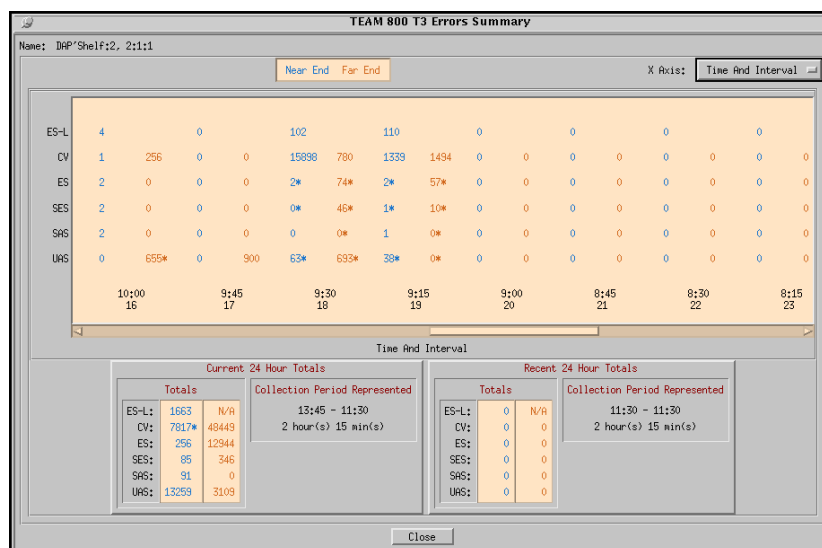

Table 3-2   The 24-Hour Error Current Totals Screen

Screen Displays	Description	Details
Name field	The user-selected ID and the slot number (Read-only)	
Collection Period field	The time interval during which displayed statistics were collected (Read-only)	
24-Hour Totals for detected near-end and far-end errors (Graphed or Text)	ES-L	Line Errored Seconds
	ES	Errored Seconds
	FC-P	Near-end Path Failure Count
	SES	Severely Errored Seconds
	SAS	Severely Errored Frames/AIS
	UAS	Unavailable Seconds
	CV	Code Violations
Error Summary Button	Opens the Error Summary screen	
Close Button	Dismisses the 24-Hour Error Current Totals screen	

Note   *Far-end counts for Line Errored Seconds and Path Failures are supported via the Telnet Far-end Current or Previous report tables only.*

Error Summary Screen

Click the Error Summary button on the 24-Hour Error Current Totals screen to display the Error Summary, shown below. It can also be accessed from the main Report window glyph bar or **Navigate** menu. Near-end and Far-end errors are graphed separately with colored bars. Table 3-3 describes the read-only report data and button functions.

Table 3-3   The Error Summary Screen

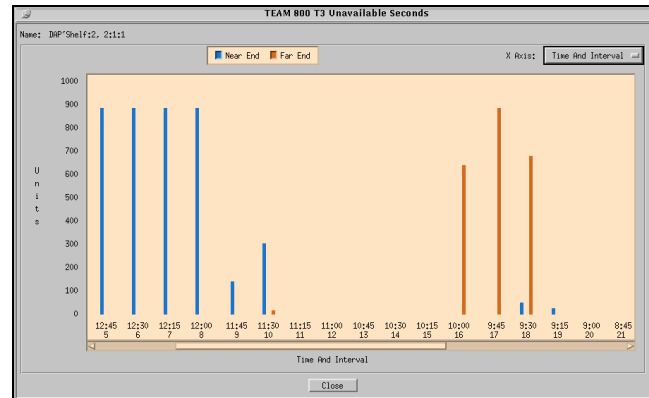| Screen Displays	Description	Details
Name field	The user-selected ID and the slot number (Read-only)	
Collection Period field	The time interval during which displayed statistics were collected (Read-only)	
Error Summaries for detected near-end and far-end errors (Graphed or Text)	ES-L	Line Errored Seconds
	ES	Errored Seconds
	CV	Code Violations
	SES	Severely Errored Seconds
	SAS	Severely Errored Frames/AIS
	UAS	Unavailable Seconds
X-Axis Button	Selects X-axis label options	Displays time label only
		Displays interval label only
		Displays time and interval label
Close Button	Dismisses the 24-Hour Error Current Totals screen	

Note   *An asterick (*) alongside an error value indicates an invalid interval where the error data collected is incomplete.*

Note   *To view Near-end path failure counts (FC-P), use the 24-Hour Current Totals Report.*
            Far-end path failure counts are supported via the Telnet Far-end Current or Previous report tables only.

The Error Report Screens

Error Report screens have the same appearance and functionality. Each is accessed at the main Report window glyph bar or **Navigate** menu.

Near-end and Far-end errors are graphed separately with colored bars. Table 3-4 describes each individual error report screen along with the typical read-only report data and button functions.

A Typical Error Report Screen

Table 3-4   The Error Report Screens

Screen Displays		Description
Name field		The user-selected ID and the slot number (Read-only)
Individual Error Report screens with detected near-end and far-end errors	Line Errored Seconds (ES-L)	For a one second interval, one or more BPVs, or one or more EXZs, or one or more LOS defects are detected. (BPVs that are part of the zero substitution code are excluded from the count.)
	Errored Seconds (ES)	For a one-second interval, at least one CRC error event is detected. Near End or Far End errored seconds occur when the line terminating unit detects at least one LCV or CRC error event in the received signal.
	Code Violations (CV)	For the accumulation interval, there is a count of frame synchronization bit errors (FE) in the superframe format, or a count of CRC-6 errors in the extended superframe format.
	Severely Errored Seconds (SES)	For a one second interval, the unit has detected seven or more CRC error events, one or more OOF events, or 30% or more errored blocks. A Near end SES occurs when the local LTU detects 300 or more CRC error events in the received signal. A Far end SES occurs when the remote unit detects 300 or more CRC error events.
	Severely Errored Frames/ AIS (SAS)	For a one second interval the unit has detected at least one SEFs or one AIS defect.
	Unavailable Seconds (UAS)	Service is not available for ten or more consecutive SES events. The error event is cleared after a 10-second interval with no SES events.
X-Axis Button	Selects X-axis label options	Displays time label only
		Displays interval label only
		Displays time and interval label
Close Button		Dismisses the associated Error Report screen.

Note   *To view Near-end path failure counts (FC-P), use the 24-Hour Current Totals Report.*
Far-end path failure counts are supported via the Telnet Far-end Current or Previous report tables only.