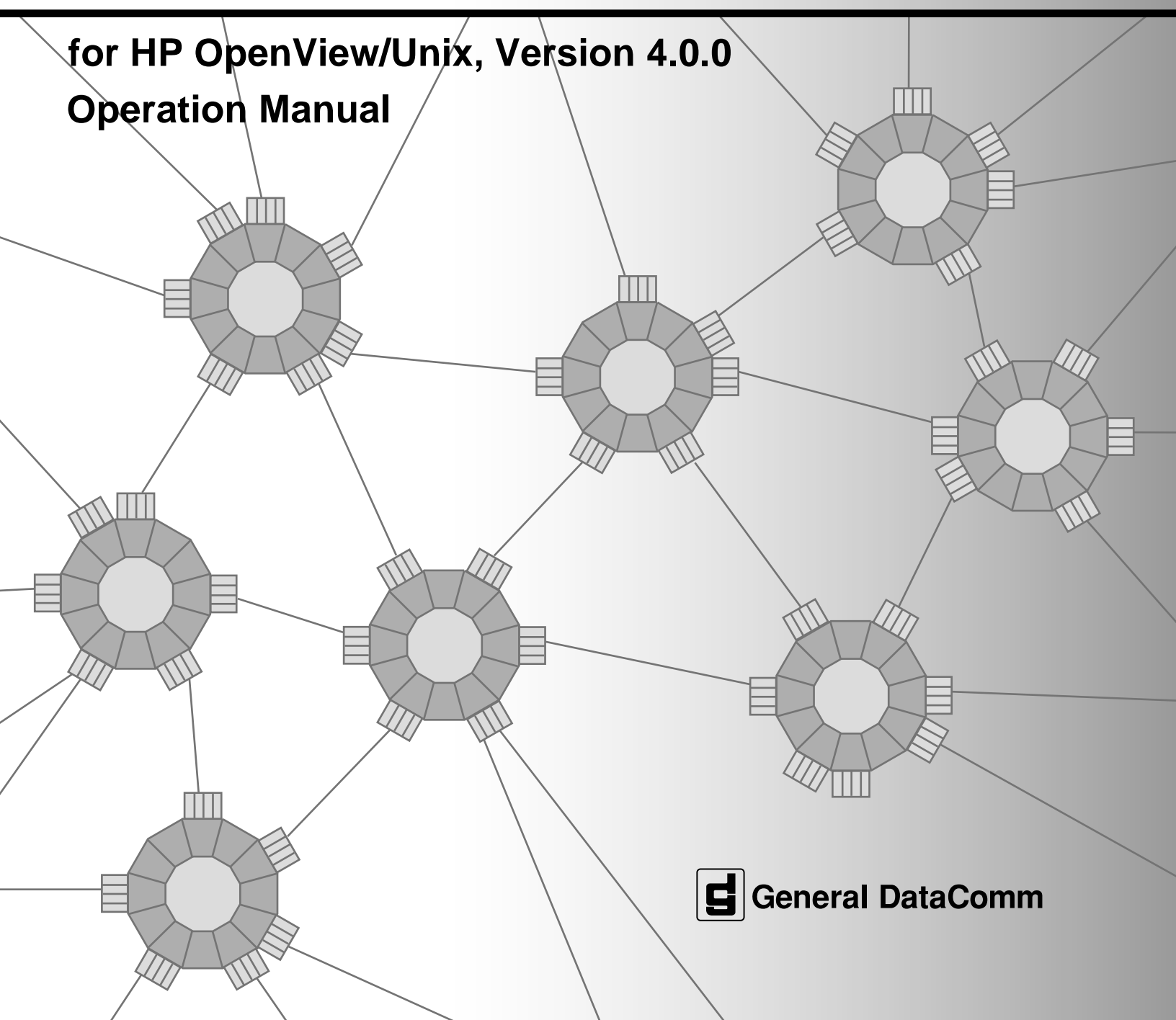


TEAM[®] 5506/5516

**for HP OpenView/Unix, Version 4.0.0
Operation Manual**



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Documentation

Revision History

Issue Number	Date	Description of Change
1	January 2002	Initial Release of TEAM 5506/5516 Version 4.0.0

Related Publications.

Publication Name	Publication Number*
TEAM Core Operation Manual	058R720-VREF
TEAM 5001 Operation Manual	058R726-VREF
TEAM 5002 Operation Manual	058R728-VREF
SpectraComm 5506 OCU-DP Installation & Operation Manual	076R162-REV
SpectraComm 5516 DS0-DP Installation & Operation Manual	076R166-REV
SpectraComm Manager Card Installation & Operation Manual	048R303-REV
SpectraComm 5001 T1 LTU Installation & Operation Manual	076R100-REV
SpectraComm 5002 E1 LTU Installation & Operation	076R112-REV

REV denotes the most current hardware revision (i.e., **-000**, **-001**).

VREF denotes the software revision (i.e., **-V400** is Version 4.0.0) and corresponds to the most current software revision.

In addition to hardware and software manuals, always consult the Release Notes supplied with your GDC products.

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Preface

Scope

This manual describes how to install and operate the GDC TEAM 5506/5516 software applications. 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 presented herein may not be current.

For the latest information on any GDC product, refer to the General DataComm website at <http://www.gdc.com> or contact your GDC Sales Representative.

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Using This Manual

The online (electronic) version of this manual uses active areas which allow you to navigate to specific sections of the manual by clicking on *blue underlined* text. The content in this manual is divided into the following chapters:

[Chapter 1, Introduction](#)

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Chapter 1: Introduction

Introduction to TEAM 5506/5516

This manual describes how to operate TEAM 5506/5516 software applications for HP OpenView. These applications are used to configure and control SpectraComm 5506 OCU-DP and SpectraComm 5516 DS0-DP operations. Throughout this document, all information relates to both devices except where noted. For the individual Installation & Operation manuals provided for each product refer to [Related Publications](#) in the front of this document. A working knowledge of HP OpenView and data port functioning is assumed.

Theory of Operation

The TEAM 5506/5516 Unix application is a collection of integrated applications for the HP OpenView Network Management Platform. TEAM employs Simple Network Management Protocol (SNMP) to control SC 5506 or SC 5516 units installed in a GDC SpectraComm 5000 shelf system. TEAM 5506/5516 applications provides application windows and a Front Panel display for configuring the units, diagnosing the units via loopback tests, and maintaining the firmware stored in the units.

All of the TEAM Controller applications 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 drop-down menu. The TEAM Controller GUI screens meet HP OpenView premier partner requirements. Refer to OpenView documentation for more information.

TEAM Management of the SC 5000 System

TEAM 5506/5516 applications manage the SpectraComm 5000 shelf system which consists of three types of hardware components: the dataport devices (SC 5506 OCU-DPs or SC 5516 DS0-DPs), a Line Terminating Unit (SC 5001 T1 LTU), and a SpectraComm Manager Card (SCM). A future release of TEAM will support the SC 5002 E1 LTU. These TEAM-managed shelf components are described below and in [Figure 1-1](#).

SC 5506 / SC 5516 Dataport Cards

The SpectraComm 5506 High Density OCU-DP card is a SS7 Signal Transfer point (STP) network access device designed for installation in a SpectraComm shelf located at a SS7 point of presence. A single SpectraComm shelf with a SpectraComm Manager Card may hold up to three SC 5001 LTUs, each interfacing with up to four SC 5506 units. Up to four SC 5506 cards in the shelf serve as a channel bank for one SC 5001 LTU, splitting one T1 line into as many as 24 DS0 channels.

The SpectraComm 5516 High Density DS0-DP card is also a SS7 Signal Transfer point (STP) network access device designed for installation in a SpectraComm shelf located at a SS7 point of presence. A single SpectraComm shelf with a SpectraComm Manager Card may hold up to three SC 5001 LTUs, each interfacing with up to four SC 5516 units. Up to four SC 5516 cards in the shelf serve as a channel bank for one SC 5001 LTU, splitting one T1 line into as many as 24 DS0 channels.

With either the SC 5506 or the SC 5516, transmission data occupies 64 kb/s timeslots on one of four 4.096 Mb/s SpectraComm backplane data highways. This data is converted by the SC 5506 to a DS-0 bipolar AMI 56/64 kb/s signal for connection to the SS7 STP. The SC 5516 converts this data to a DS-0A bipolar NRZ AMI 56/64 kb/s signal for connection to the SS7 STP. Since SC 5506 units or SC 5516 units would be co-located with the SS7 STP, line protection for outdoor loop connections is not required.

SpectraComm Manager Card

TEAM 5506/5516 applications operate 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 proxy agent through which TEAM management applications communicate with SpectraComm 5000 shelf components 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.

SC 5001 (LTU)

The SpectraComm 5001 LTU performs network interface and channel grooming functions for a group of dataport units (up to four SC 5506 OCU-DPs or up to four SC 5516 DS0-DPs). Each SC 5001 LTU connects to a T1 line and transmits the combined data traffic of its group of dataport units to a Telco switching site. The T1 line provides 24 channels for that purpose. Telco switching equipment routes the channels to their individual remote destinations. In this way a single T1 connection between an SC 5000 site and a Telco switching site can support up to 24 connections with remote sites. One SC 5506 OCU-DP unit employs six channels (timeslots); one SC 5516 DS0-DP unit employs six channels (DS0s) configured in three consecutive pairs.

In a future release, the SC 5000 system will support a SpectraComm 5002 LTU. This permits connection to the E1 line which provides 30 channels for data and two DS0s for network signaling and framing. The SC 5002 would perform network interface and channel grooming function for up to five dataport units (SC 5506 OCU-DPs or SC 5516 DS0-DPs).

Note For more information on these SpectraComm product cards, refer to the GDC Technical Publications and Release Notes that accompany these products.

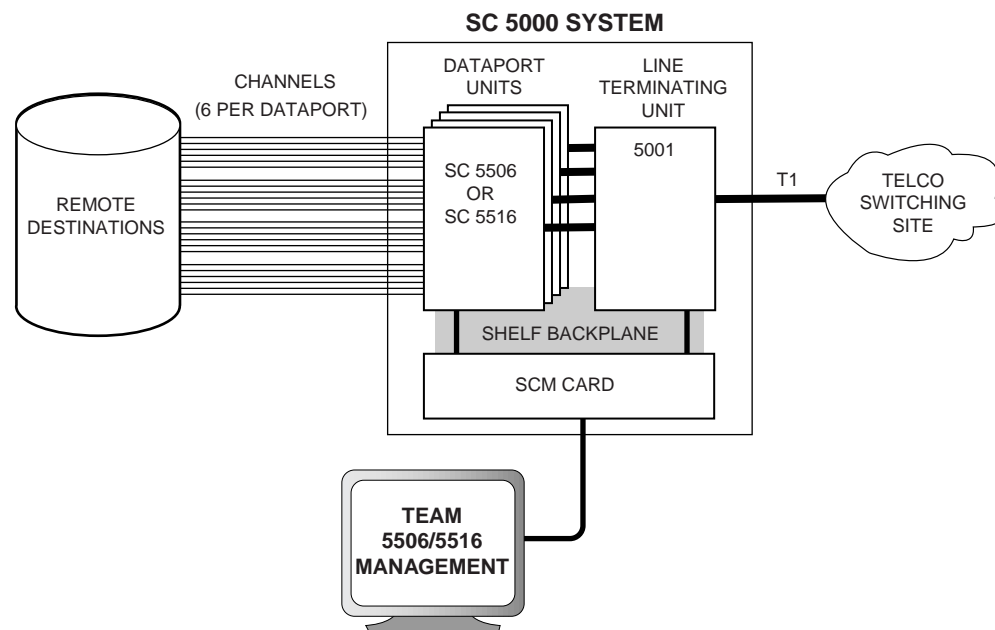


Figure 1-1 Managing the SC 5000 System with TEAM (Shown with SC 5516 DS0-DP)

The TEAM 5506/5516 Applications

All TEAM applications can be accessed from either of two user interfaces. [Table 1-1](#) lists the applications as they appear in the HPOV menu bar interface. [Table 1-2](#) lists the applications as they appear in each managed unit's Front Panel **select** button.

Access from the HPOV Shelf Map Window Menu

1. Select the network element you intend to work with (SC 5506 or SC 5516) by clicking once on its icon in the shelf map.
2. The TEAM 5506/5516 application functions are arranged on the menu bar at the top of the HPOV Map window as shown in [Table 1-1](#).
3. From the Map window, open the TEAM 5506/5516 application you intend to use.
4. To select multiple icons in a map window, click and drag a box around the desired icons, or click on icons individually while holding down the Control and Shift keys. Up to ten icons for the same device type can be selected at a time.

Table 1-1 TEAM Applications from the HPOV Menus

Menu Selection	TEAM 5506/5516 Applications	Description
Performance	Front Panel	Shows the status of the unit's LEDs and provides an interface to the rest of the applications via a Select button menu.
	Alarm Detail...	Displays alarm information in a read-only window. (SC 5506 only)
Configuration	Configuration...	Provides read/write windows for setting unit configuration parameters.
	Maintenance...	Performs device reset functions.
Fault	Diagnose	Accesses the Diagnose application which allows you to command the test functions of the unit.
Misc	Information...	Displays application name and revision level, similar to clicking on the GDC logo in the Front Panel display.
	Front Panel Poll Rate...	Sets a default polling interval to be in effect each time the Front panel display is opened.
	Note Pad	Opens a shell tool (editor, mail tool, etc.) for keeping records on the system.

Note The Note Pad application is selected only from the Misc menu and not available at the Front Panel menu.

Note Your HPOV menu may show additional selections depending on other supported applications.

Access from the Front Panel Display

The Front Panel application summarizes the real-time status of the SC 5506 or SC 5516 by displaying the states of the LED indicators on the unit. A **Select** button on the Front Panel display accesses the application menus and their functions.

1. Select the network element you intend to work with (SC 5506 or SC 5516) by double-clicking its icon in the shelf map. This immediately launches the Front Panel Application for that element and displays the Front Panel for that unit appears.
2. In the Front Panel display, click the **Select** button to access the application menu. [Table 1-2](#) describes the available applications.

Table 1-2 Team Applications from the Front Panel

Menu Selection	Applications	Description
Performance	Front Panel display	Shows the status of the LEDs. Provides an interface to the rest of the applications.
	Alarms	Displays detailed read-only information about alarm state changes. (SC 5506 only)
Configuration	Configure	Provides read/write windows for viewing and configuring a selected unit.
	Maintenance	Performs device reset functions.
Fault	Diagnose	Runs diagnostic tests on a selected SC 5506 or SC 5516.

Note You can access the Information function by clicking the GDC logo icon on the Front Panel display. Note that the Front Panel Poll Rate, Note Pad and Alarm Severity applications are only available through the Map Window menu bar.

Window Features in TEAM Applications

Table 1-3 describes features that are common to all TEAM application windows.

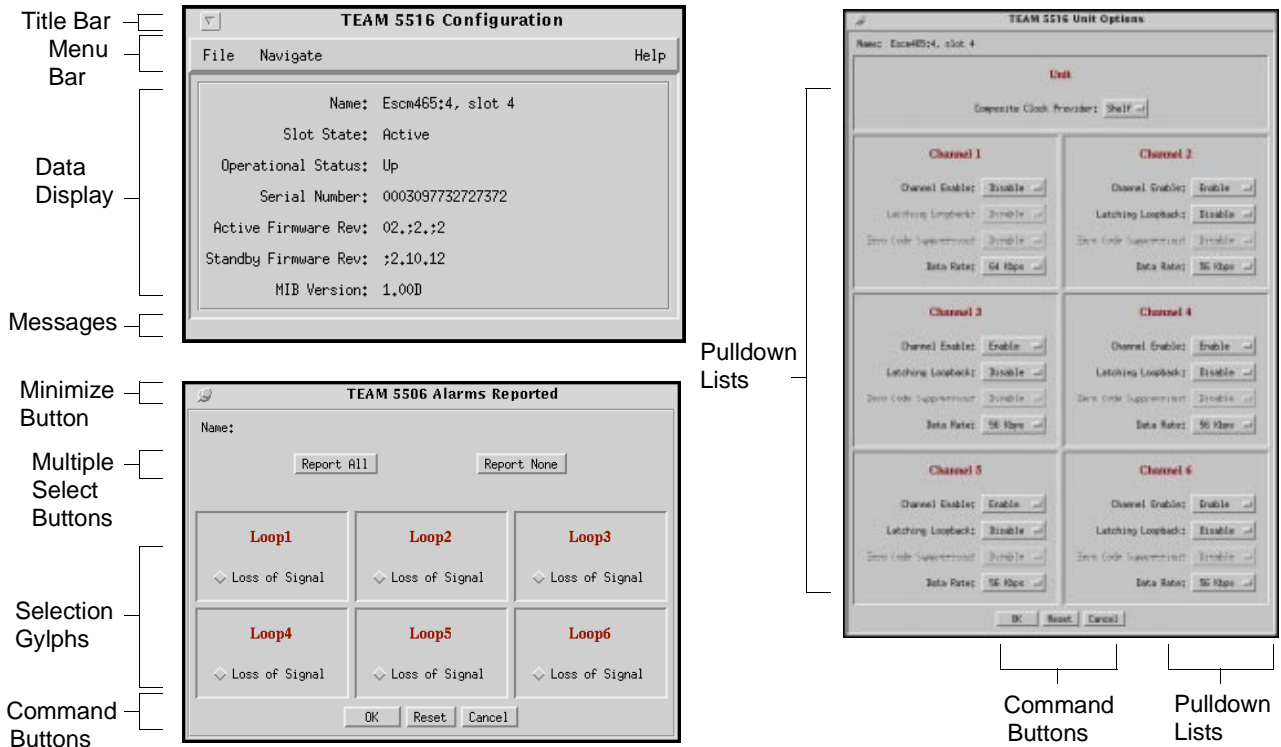


Table 1-3 Typical Application Window Features

Window Feature	Description
Title bar	Identifies the specific TEAM application running in the window, i.e., Configuration, Diagnostics, Alarms Reported, etc.
Minimize button	Available only when TEAM software is running on a SUN workstation in an OpenWindows environment. Click to minimize window to an icon. Double-click icon to restore the window. Located in the Title Bar of each application window.
Menu bars	Provides pull-down menus for common utilities, such as File->Exit and Help. Icon menus provide application-specific options.
Name field	Identifies the shelf and slot location of the card of interest, followed by the card's slot: line: drop notation.
Command buttons	Click command buttons to execute a command instantly, such as Reset, Cancel or OK.
Pull-down lists	Pull-down and scroll to select options for equipment types, function parameters or operation controls for the application.
Glyphs	Click grayed-out diamond glyphs to select options, click again to deselect.
Entry Fields	Click to activate entry field for user-defined data, such as IP addresses, shelf names, system information.
Multiple Select buttons	Click to globally select and deselect frequently grouped options.
Data Display	Read-only information configured by the user or determined by the system.

Note Grayed-out selections represent options that are disabled or not available with the current configuration.

Chapter 2: Operations

Overview

This chapter describes the operation of the TEAM 5506/5516 applications as they are grouped under the Performance menu, Fault menu, and Misc(ellaneous) menu. Note that these TEAM applications operate the same for both the SC 5506 OCU-DP and the SC 5516 DS0-DP, except where noted.

Note TEAM 5506/5516 Configuration applications are described in Chapter 3.
TEAM 5506/5516 Diagnostics and TEAM 5506/5516 Maintenance applications are described in Chapter 4.

TEAM 5506/5516 Performance Applications

The Performance menu launches the following applications:

- Front Panel application displays a representation of the dataport unit's front panel which shows the status of LEDs and provides access to the rest of the TEAM applications
- Alarms application displays alarm information in a read-only window (SC 5506 units only).

Front Panel Application

The Front Panel application is a graphical interface of a selected SC 5506 or SC 5516's Front Panel, with associated menu items. This application launched from the HPOV Map (shelf sub-map) window, or by double-clicking on the slot icon of the desired unit.

Each time the Front Panel display is opened, its initial polling rate is determined by the Front Panel Poll Rate selection of the HPOV map window Misc menu. The application polls the unit to keep the states of the LEDs in the Front Panel display current. The time of the most recent poll appears at the bottom of the Front Panel display, to the left of the Help button.

The Front Panel **Select** menu provides two Poll selections which determine when the application collects new information from the unit to update the Front Panel window:

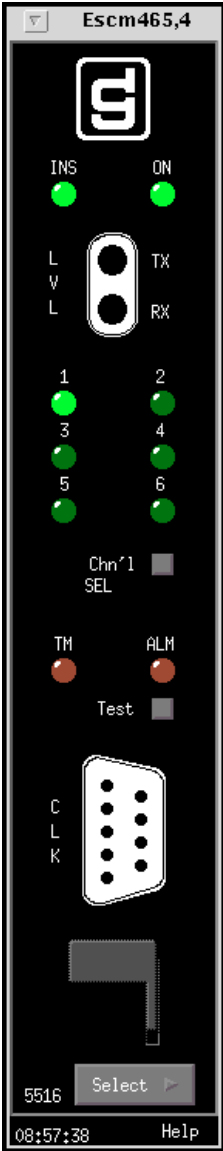
- Demand Poll
Selecting Demand Poll causes an immediate update of the Front Panel display.
- Auto Poll
When Auto Poll is enabled the last poll time appears in white on the Front Panel display.
When disabled, the last poll time appears yellow

Note [Table 2-1](#) describes in detail the Front Panel application. Front Panel Poll Rates are discussed in detail later in this chapter.

Front Panel Display and Menus

The Front Panel display reflect the states of the actual LED indicators on the physical units (SC 5506 or SC 5516). Both types of dataports have the same appearance; functional differences are noted in [Table 2-1](#), below.

Table 2-1 The Front Panel Display (Shown SC 5516 DS0-DP)

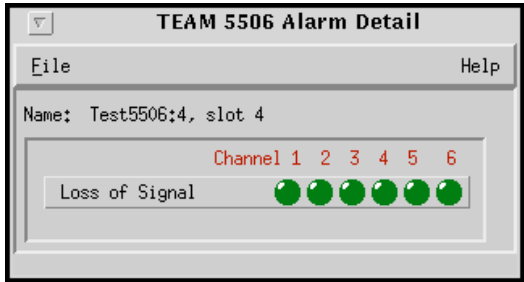
Front Panel Displays	LEDs/Menus	Description
 <p>The image shows a vertical front panel display for a unit labeled 'Escm465,4'. At the top is a GDC logo. Below it are two green LEDs labeled 'INS' and 'ON'. A central control knob is flanked by 'LVL' on the left and 'TX' and 'RX' on the right. Below the knob are two columns of LEDs numbered 1 through 6. Further down are two red LEDs labeled 'TM' and 'ALM', and a 'Test' button. At the bottom is a 'CLK' port with six pins, a '5516' label, a 'Select' button, a time display '08:57:38', and a 'Help' button.</p>	ON	Steady GREEN LED indicates the unit is getting shelf power.
	INS	Steady GREEN LED indicates the unit has been put into service by the SCM.
	Channels 1 - 6	Steady GREEN LED indicates which timeslot (SC 5506) or which DS-0A (SC 5516) has been selected for external testing via the Front Panel LVL test jacks.
	TM	Steady RED LED indicates the selected channel is being tested with intrusive TX data.
	ALM	Steady RED LED indicates an alarm condition exists on the selected channel. (SC 5506 only)
	Select Menu	Opens menu list for selecting other TEAM applications:
	Alarm Detail	Displays alarm information in a read-only window. (SC 5506 only)
	Configuration	Provides read/write windows for configuring unit options.
	Maintenance	Provides read/write windows for performing unit maintenance
	Diagnostics	Accesses the Diagnose application for commanding the test functions of the unit and viewing test results.
	Demand Poll	Causes an immediate update of the LED states.
	Auto Poll	Updates the LED states at user-selected polling intervals: 15, 30, or 60 seconds.
	Disable (Polling)	Display a static snapshot of the LED states as they were at the last poll (when window was first launched or from the most recent Demand Poll.)
	Exit	Dismisses the Front Panel
Message Area	Displays messages which describe application activity and unit interactions, i.e., time, responding, etc.	
GDC Logo	Clicking the GDC icon displays the application name and the revision level.	

Alarm Detail Application

The Alarms application is accessed from the HPOV menu bar Performance menu or from the Front Panel's Select menu. This application opens an Alarm Detail window for the selected SC 5506 unit, displaying the status of all reporting LOS alarms configured by the user. Once the desired alarms are configured at the Alarms Reported screen, the Alarms application retrieves the most current alarms from the selected unit at user-defined polling intervals. Alarms Detail window selections are described in [Table 2-2](#).

Note The TEAM Alarms application is available for SC 5506 OCU-DP units only.

Table 2-2 The Alarm Detail Application

Alarm Detail Window	Selection	Description
	Loss of Signal	A RED LED indicates an absence of network signal on any channel (1-6) configured for alarm reporting. Absence of signal for a time equivalent to 175 bits (± 75) is considered no signal.
	File -> Exit	This menu command closes the application window.

Note To set polling intervals, refer to the Front Panel Poll Rate application, later in this chapter. To configure the unit to report LOS alarms for one or more loops, refer to Chapter 3, Configuration: Alarms Reported window.

TEAM Miscellaneous Applications

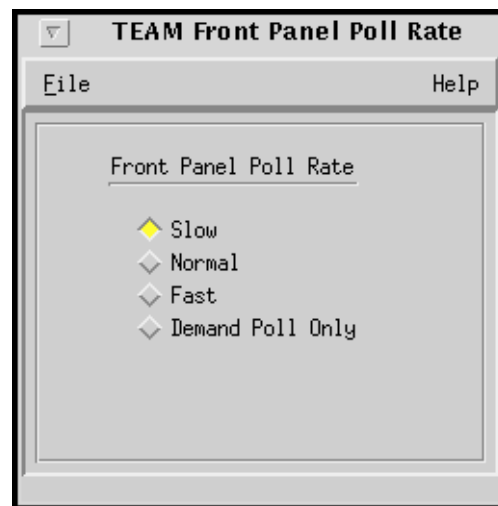
Front Panel Poll Rate Application

Launch the Front Panel Poll Rate window from the HPOV shelf map Misc menu. The setting you select in this window determines the initial polling rate for Front Panel displays each time they are opened.

The rate selection is a global function. It selects initial polling rate for all front panel displays linked to a TEAM Core application, regardless of which individual application you access it from. The precise polling frequency that results from a setting of Slow, Normal, or Fast depends on a number of factors. The higher the rate, the more communication and processor capacity is devoted to maintaining the display.

Setting a Global Poll Rate

1. Set the a global polling rate for all front panels by clicking an appropriate diamond:
 - Slow
 - Normal
 - Fast
 - Demand Poll Only
 - From the Front Panel Poll Rate File menu, select **Save to File** to store the setting for all front panel displays.
2. From the File menu select **Exit** to dismiss the window.



Setting an Individual Poll Rate

To change the polling rate for an individual front panel, access the Front Panel application for that unit and use the Select menu to set Auto Poll. The change is only valid for the duration of a session and is not saved when the Front Panel display for that unit is closed.

Note Pad Application

Launch the Note Pad application from the shelf submap Misc menu. The application opens a text editor which can be used for keeping records on the system.

TEAM Information Application

Launch the TEAM 5506/5516 Information window from the HPOV shelf map Misc menu or by double-clicking on the GDC logo in the Front Panel display. This application displays one read-only window that contains the name of the application, software revision level information, and copyright information. The File menu in the menu bar provides the **Exit** command which closes the application window.

Other TEAM 5506/5516 Applications

TEAM 5506/5516 Configuration Applications

The TEAM 5506/5516 Configuration Application launches three smaller application windows used to configure SC 5506 or SC 5516 operation. These configuration windows are launched from the shelf map Configuration Menu or from the Front Panel **select** button menu:

- The Alarms Reported window is used to select alarms that will be reported and monitored via the Alarm Details application (SC 5506 OCU-DP units only).
- The Unit Options window is used to configure parameters for each loop.
- The Maintenance Options window allows the user to perform a soft reset, or perform a reset using factory defaults.

Note Detailed descriptions and procedures for the Configuration Application are provided in Chapter 3.

TEAM 5506/5516 Diagnostics Application

The TEAM 5506/5516 Diagnostics Application launched from the shelf map Fault Menu or from the Front Panel **select** button menu. This application is used to select diagnostic test parameters, start and stop tests, and display test data in the current diagnostics session.

Note Detailed descriptions and procedures for the Diagnostics Application are provided in Chapter 4.

Chapter 3: Configuration

Configuration Application Overview

The TEAM 5506/5516 Configuration application is launched from the shelf map Configuration menu or the Front Panel **Select** button menu. When the application is launched, a Main Configuration window appears, providing read-only unit identification information, a status message area, a File menu for managing configuration templates and a Navigate Menu.

The Navigate Menu provides one or two additional configuration windows which control network element operation:

- Alarms Reported window (SC 5506 OCU-DP only)
- Unit Options window

Using Configuration Templates

A specific unit's configuration is determined by the settings of several configuration options and parameters. Configuration templates allow the user to acquire the configuration settings from a unit without interrupting the unit's operation or changing its configuration. Similarly, a configuration can be acquired, modified and saved as a variation, leaving the unit's current configuration unchanged.

Once a configuration has been acquired and modified for a particular functionality, it can be stored as a template on the workstation that runs the TEAM 5506/5516 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 from the Main Configuration window File menu. A Quick Configuration procedure for loading a previously stored template is provided below. To acquire and save configuration templates, refer to the more detailed Basic Configuration procedure that follows.

Quick Configuration from a Stored Template

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 they 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. A stored template can be loaded to a unit or retrieved and changed.

Note *You can keep multiple configuration subwindows open and move between them with a mouse click. The Main Configuration window remains on-screen throughout the configuration process.*

Note *When you change an option, the application displays the option name and the new value in white text. The option text will turn black when the changes are stored to the unit or template, or discarded.*

Configuration Application Windows

The Main Configuration window is launched from **HPOV menu -> Configuration**. [Table 3-1](#) describes the application window layout and read-only information. [Table 3-2](#) describes the application menu selections.

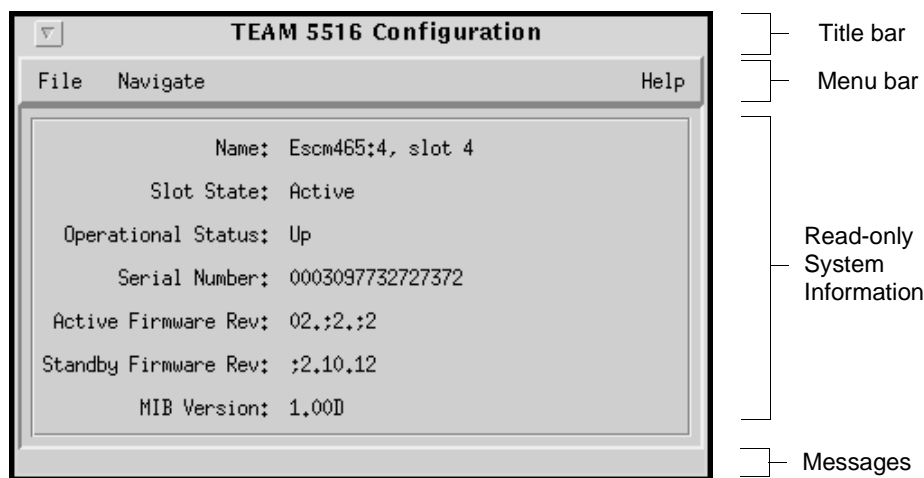


Table 3-1 Main Configuration Screen

Display / Menu Selection	Description
Name	Read-only field that displays the shelf identification and the slot number of the selected unit.
Slot State	Displays the state of the slot occupied by the unit: Active or Inactive.
Operational State	Displays the operational state of the unit: Up or Down.
Serial Number	Displays the serial number of the unit.
Active Firmware Revision	Shows version of the currently operating (active) firmware on the unit.
Standby Firmware Revision	Shows version of the non-operating firmware on the unit. This is typically the previously released version of the firmware.
MIB Version	Displays the MIB version (Management Information Base) for the unit.
Message Area	Displays application activity and unit interaction messages in the lower left corner of the window, such as: Reading, Writing, Saving to Template , etc.

Note The SC 5506 or SC 5516 unit can be switched from the current operating version of firmware to a stored version of firmware. This function is performed via the TEAM Core Firmware Download Application. Refer to the TEAM Core documentation and TEAM Core Release Notes for detailed procedures.

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 3-2](#) describes the menu selections.

Table 3-2 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 SC 5506 or SC 5516 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 SC 5506 or SC 5516 template to be compared with the screen display.
	Exit	Terminates application with outstanding edits discarded first.
Navigate	Unit Options...	Displays the Unit Options window.
	Alarms Reported...	Displays the Alarms Reported window. (Available for SC 5506 units only)
	All Screens...	Displays both the Unit Options and the Alarms Reported windows of the Configuration application. (Available for SC 5506 units only)

Note *If the Configuration Application Main Menu is exited while pending (unsaved) edits exist on any of the subordinate configuration screens, the following prompt will appear:*

Pending edits exist, do you want to save or exit without saving the changes?

Unit Options Window

The Unit Options window is launched from the Main Configuration **Navigate** menu. [Table 3-3](#) describes the unit and channel option settings. .

Table 3-3 Unit Options Window (Shown: SC 5516)

Selections	Description
Composite Clock Provider	Selects the composite clock timing: Primary, Secondary or Shelf. (Selectable for SC 5516 DS0-DP units only)
Channel Enable	Enables or Disables the specific channel (1 - 6).
Latching Loopback	Enables or Disables Latching Loopback for the specific channel (1 - 6). (Selectable for 54Kbps, forced Disabled for 64Kbps)
Zero Code Suppression	Enables or Disables zero code suppression for the specific lchannel (1 - 6). (Selectable for SC 5506 OCU-DP units only)
Data Rate	Select the customer data rate at 56Kbps or 64 Kbps
OK	Closes the window, similar to a pin pull. Edits are maintained but not saved.
Reset	Undoes pending edits since the last "File --> Save to Unit" operation.
Cancel	Undoes pending edits since the last "File --> Save to Unit" operation, and then closes the window.

Composite Clock Guidelines

- Only one card in a shelf can be selected as **Primary** composite clock provider.
- Only one card in a shelf can be selected as **Secondary** composite clock provider.
- Any card not selected as **Primary** or **Secondary** must be selected as **Shelf**.

Alarms Reported Options

The Alarms Reported window appears when you select **Navigate-> Alarms Reported** from the Main Configuration window menu. This screen allows you to set which alarms are reported at the Alarms Detail Application. [Table 3-4](#) describes the window selections.

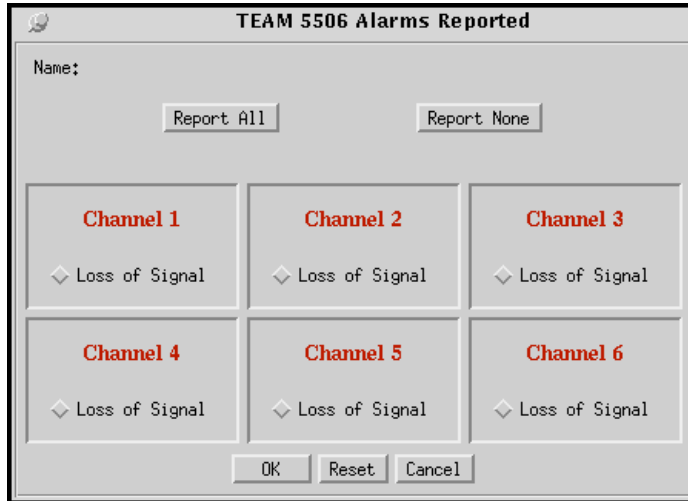


Table 3-4 Alarms Reported Window

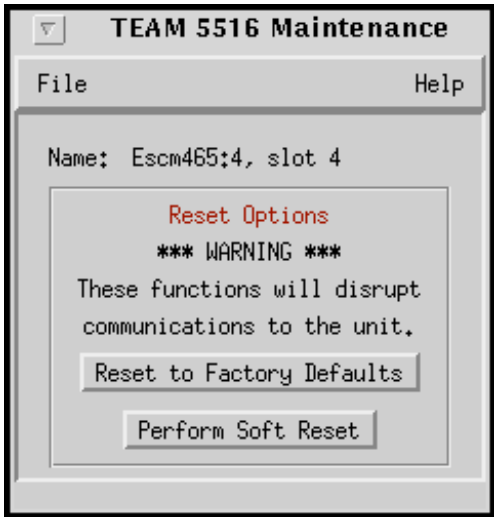
Selection	Description
Report All	Globally selects all channels (1 - 6) for reporting the LOS alarms.
Report None	Globally de-selects all channels (1 - 6) so that no LOS alarms are reported.
Loss of Signal	The unit detects a loss of signal on the selected channel. Loss of signal for a time equivalent to 175 bits (± 75) is considered no signal. Click a check diamond to enable the reporting of the LOS alarm for that channel.
OK	Closes the window, similar to a pin pull. Edits are maintained but not saved.
Reset	Undoes pending edits since the last "File --> Save to Unit" operation
Cancel	Undoes pending edits since the last "File --> Save to Unit" operation and then closes the window.

Chapter 4: Maintenance & Diagnostics

Maintenance Options

The TEAM 5506/5516 Maintenance application is launched from the HPOV Map Configuration Menu or from the Front Panel Select menu. The application provides a Maintenance window ([Table 4-1](#)) that displays a read-only Name field and provides unit reset options.

Table 4-1 TEAM Maintenance Reset Options (Shown: SC 5516 DS0-DP)

Maintenance Window	Field/Option	Description
	Name Field	Displays shelf and slot identification for the SC 5506 or SC 5516 dataport unit.
	Reset to Factory Defaults	The unit performs a reset and then configures itself to the factory default settings. In order to resume operation, the user must repeat the highway configuration procedures and may need to change other configuration options.
	Perform Soft Reset	The unit performs a board reset and then resumes operation using its existing configuration.

Maintenance Procedures

1. To perform on the unit a Soft Reset or a Reset to Factory Defaults, click the appropriate reset command button. A warning appears as follows:

Resetting to factory defaults will disrupt communications to the unit. Do you want to continue?

2. At the confirmation window, click **Cancel** to resume operation with the existing unit options. Otherwise, click **OK** to reset the unit for operation with factory default settings.

TEAM Diagnostics Application

The Diagnostics application is launched from the HPOV menu bar Fault menu or from the Front Panel tool bar. This application tests a SC 5506/SC 5516 unit or the network and displays results.

Diagnostics Overview

The Diagnostics application provides read-only data, test options, command buttons and a diagram which reflects the diagnostic data path for the selected test. Arrows on the diagram indicate current data paths and change to show loopback paths associated with each test. [Figure 4-1](#) and [Table 4-2](#) describe each component of the the Diagnostics window. The Diagnostics procedure follows.

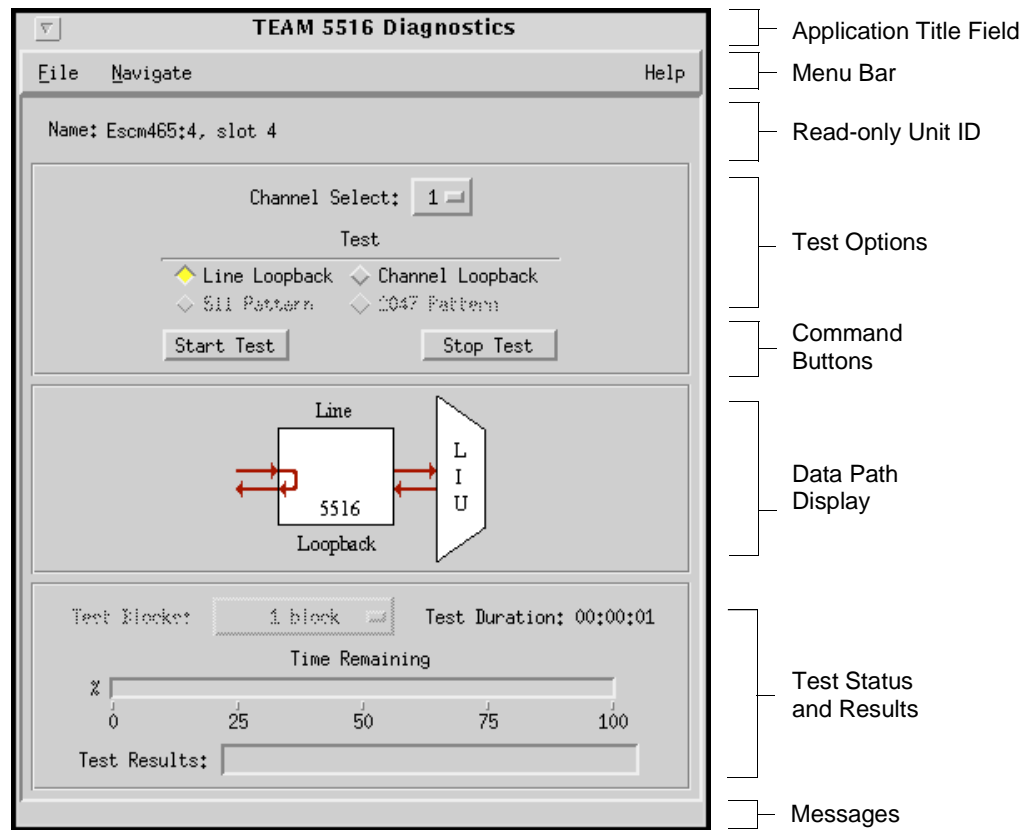


Figure 4-1 The Diagnostics Window (Shown: SC 5516 DS0-DP)

Note Multiple units can be selected for simultaneous Diagnostic testing; however for any single instance of the Diagnostics Application, only one channel can be tested at a time.

Note Diagnostic test selections will appear grayed-out when the selection is not supported by the unit or in combination with other test options.

Note All TEAM 5506/5516 Diagnostics require that the unit is receiving shelf timing and has its channels assigned to DS0 numbers on a shelf backplane data highway.

Table 4-2 Test Selections

Selection	Option	Available on:	Description
Channel Select	Channel 1 - 6	SC 5506 SC 5516	Selects a channel (1 - 6) for diagnostic testing.
Test Options	Line Loop	SC 5506 SC 5516	The unit activates a loopback test where data is looped back towards the DS-0A (SC 5516) or towards the DS0 (SC 5506). The data is checked by external test equipment.
	Channel Loop	SC 5506 SC 5516	The unit activates a loopback towards the DS-1. The data is checked by external test equipment.
	511 Pattern	SC 5506 only	The unit activates an internal 511 test pattern generator/checker.
	2047 Pattern	SC 5506 only	The unit activates an internal 2047 test pattern generator/checker.
	Test Blocks	SC 5506 only	Selects the number of data blocks sent during the test; applies only to tests using a test pattern.
Test Command Buttons	Start Test	SC 5506 SC 5516	Starts the selected test.
	Stop Test	SC 5506 SC 5516	Stops the selected test.
Test Status & Results	Test Duration	SC 5506 only	Read-only display of the time displays how long the 511 or 2047 pattern test will take to complete.
	Time Remaining	SC 5506 only	A meter display of the time remaining in the current 511 or 2047 pattern test, in percent.
	Test Results	SC 5506 SC 5516	Depending on the unit type and test selected, displays test progress message or bit error results.
Messages	Last Update	SC 5506 SC 5516	Lower left side of window displays the time of the last update
	Status	SC 5506 SC 5516	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)

Diagnostics Menus and Read-only Fields

- The File menu provides the **Exit** command for closing the application window. The Diagnostics application polls continuously until the **Exit** command is made.
- The Navigate menu provides a **History** option which displays a read-only screen of test results from the current session. [Table 4-3](#) describes the Diagnostics History screen.
- The read-only Name field displays the shelf identification and the slot number of the selected unit.

Diagnostics Procedure

1. Click the check box for the test to be performed: **Line Loop**, **Channel Loop**, **511** or **2047**.
2. If desirable for SC 5506 units, click on **511** or **2047** to use an internally generated test pattern. Test patterns are not available for SC 5516 units or when a channel loopback test is selected.
3. If an internally test pattern is selected, set the desired number of **Test Blocks** to run during the test (1000 bits/block).
4. Click on the **Start Test** button. While the test runs, the graphic panel illustrates the data path employed by the test.
 - If you are using one of the internally generated test patterns, the **Time Remaining** field counts down from 100% to 0%. The **Test Duration** field displays how long the test will run until completed.
 - When a internally generated test pattern is in use, the **Test Results** field appears as follows:
Running: *[number of errors detected]*
 - When a line or channel loopback test is selected, the **Test Results** field can display various status messages, such as **OK**, **Running**, **Stopped**, etc.
5. To terminate any test, click the **Stop Test** button at any time.
 - Tests with internally generated test patterns will stop automatically when completed.
 - Line and channel loopback tests will run continuously and must be stopped with the **Stop Test** button.

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 4-3](#) describes the read-only test data fields.

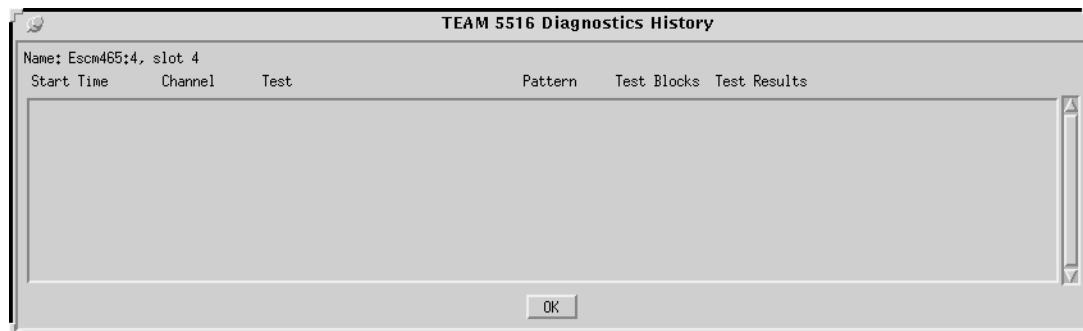


Table 4-3 Diagnostics History Window (Shown: SC 5516 DS0-DP)

Field	Test Data Description	
Name	Displays the shelf identification and the slot number of the selected unit.	
Start Time	Displays the day, month, date and time the test was started.	
Test	Displays the type of test performed.	
Channel	Displays the channel selected for the test.	
Pattern	Displays the internally generated test pattern selected: 511, 2047	
Test Blocks	Displays the number of test blocks sent in a 511 or 2047 pattern test.	
Test Results	Idle: [##/##]	Indicates a completed test with test pattern and displays the Bit/Block Errors.
	OK	Indicates a completed test without test pattern.
	No Results for this test...	Indicates ??
	Test Stopped	Indicates a 511 or 2047 pattern test that was stopped before its completion time.
OK Button	Closes the Diagnostics history window.	

Note *During an on-going diagnostic session the Diagnostics History window can be closed without loss of test data. If the Diagnostics application is exited, any Diagnostics History screen test data will be lost.*

