VXT 2000+/VXT 2000 Windowing Terminal

User Information

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January, 1994

This document describes how to use the VXT 2000+/VXT 2000 windowing terminal with VXT Version 2.1 software.

Topics include

- Creating X window and terminal window sessions on a host system
- Customizing the terminal's screens and operating features
- Using VXT software or VXT EX (essential X server) software
- Programming with the X windows image extension (XIE)

Internet Address for Reader Comments

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Revision/Update Information This is a revised document.

Operating System & Version: InfoServer Version 2.2
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OpenVMS AXP Version 1.5
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Contents

3 Customizing the Terminal

4 Customizing Communications

5 Customizing Fonts and Startup Settings

6 Checking the Terminal's Status

7 Using VXT DECterm Windows

8 Customizing VXT DECterm Windows

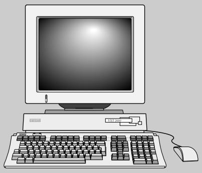
9 Using VXT 3270 Windows

10 Customizing VXT 3270 Windows

11 Using Windows

12 Customizing Windows

Tables



About This Guide

This guide describes how to use VXT software on a VXT 2000 windowing terminal. The terminal makes use of the open windowing environment. The guide describes how to create X window or terminal window sessions on a wide variety of operating systems.

Who Should Use This Guide

This guide is for the general user of the VXT 2000 windowing terminal.

- If you are new to windows or the Motif windows environment, the guide provides basic information on how to use windows and the mouse pointing device.
- If you are familiar with windows, you can use the guide to learn about VXT software features and customize your terminal's operating features.

Organization

This guide contains the following chapters and appendices:

- Chapter 1, ''A Look at the Terminal,'' provides an overview of the terminal and its features.

Terminal Manager Window

- Chapter 2, ''Using the Terminal,'' describes the basic features of the Terminal Manager window. The chapter describes how to create sessions, print the screen, and view online VXT 2000 documentation.
- Chapter 3, ''Customizing the Terminal,'' describes how to customize basic terminal settings for your language, personal preference, and system security.
- Chapter 4, ''Customizing Communications,'' describes how to customize terminal settings that affect communications with host computer systems.

- Chapter 5, ‘‘Customizing Fonts and Startup Settings,’’ describes how to customize more advanced settings. Topics include autostarting sessions and applications, changing font paths, booting VXT software, and loading or unloading VXT software features.
- Chapter 6, ‘‘Checking the Terminal’s Status,’’ describes how to use the Terminal Manager window’s Status menu to monitor memory use, network use, network counters, and the terminal’s system configuration. You can also view TCP/IP routes and use ping to determine the availability of hosts.

VXT DECterm Windows

- Chapter 7, ‘‘Using VXT DECterm Windows,’’ describes how to use DECterm windows, which emulate a VT300 series terminal.
- Chapter 8, ‘‘Customizing VXT DECterm Windows,’’ describes how to customize your DECterm windows for your computing environment and personal preference.

VXT 3270 Windows

- Chapter 9, ‘‘Using VXT 3270 Windows,’’ describes how to use the VXT 3270 terminal emulator to run applications on an IBM SNA host system through a DECnet/SNA gateway.
- Chapter 10, ‘‘Customizing VXT 3270 Windows,’’ describes how to customize the VXT 3270 terminal emulator window.

Window Manager

- Chapter 11, ‘‘Using Windows,’’ describes how to manage windows and use menus, dialog boxes, and scroll boxes. The chapter also shows how to use the mouse.
- Chapter 12, ‘‘Customizing Windows,’’ describes how to check and control the settings for many of the window manager’s features. You can make changes to the settings and save them for all future sessions.
- Chapter 13, ‘‘Launching Applications,’’ describes how to launch sessions, local VXT applications or remote host applications from your terminal.

VXT EX Software

- Chapter 14, ‘‘Using VXT EX Software,’’ describes how to use VXT EX software. VXT EX software is a minimal version of VXT software without a terminal manager and other local clients.

Keyboards

- Chapter 15, ‘‘Using Your Keyboard,’’ describes the keys and indicator lights on the terminal’s ANSI, short ANSI (UNIX), PC, and Sun style keyboards. It also describes how to type additional characters not listed on your keyboard keys and how to use the keyboard in place of the mouse.

Appendixes

- Appendix A, ‘‘Solving Problems and Getting Service,’’ describes how to solve typical operating problems and how to get service.
- Appendix B, ‘‘Mixing Colors,’’ describes how to use the Color Mixing dialog box that lets you change the color of windows and the screen.
- Appendix C, ‘‘Programming with the X Windows Image Extension,’’ provides guidelines for programming with XIE protocol functions.
- Appendix D, ‘‘Related Documentation,’’ lists related documentation.
- Appendix E, ‘‘Options,’’ lists available hardware options.
- Appendix F, ‘‘Specifications,’’ lists the general, environmental, and electrical specifications for the terminal.
- Appendix G, ‘‘Setting Up the Work Environment,’’ lists recommendations for your health and safety while using the terminal.
- The glossary defines new terms introduced in the text and other relevant terms.

Comments?

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When making comments, please include the manual title and part number listed on the front cover. For specific comments, please include a page number, section number, or section title for reference.

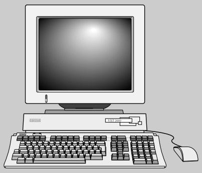
Conventions

This guide uses the following conventions:

Convention	Meaning
VXT 2000 windowing terminal	Refers to all models of the VXT 2000 windowing terminal.
InfoServer system	Refers to a disk server that downloads a VXT system image to the terminal.
Mouse	Refers to any pointing device, such as a mouse, a puck, or a stylus.
MB1, MB2, and MB3	Represent the three mouse buttons: left (MB1), middle (MB2), and right (MB3). Lefthanded users can exchange the MB1 and MB3 button assignments if desired.
key	Keys or switches that are labeled appear in a box. Example: Press the Return key.
Alt	Represents the Alt or Alt Function key on your keyboard.
Ctrl *key* *key*	For Ctrl key sequences, press and hold each key in order until you complete the sequence.
Ctrl+left *Alt*	If a key sequence includes descriptive words, the keys are joined by a plus (+) symbol for clarity.
Caution	Provides information to prevent damage to equipment or software.
Note	Provides general information about the current topic.
Menu item . . .	Menu items followed by . . . display a dialog box when chosen.
Menu item ▹	Menu items followed by ▹ display a submenu when chosen.
Glossary entries	Appear in **bold** when first used in text.
Index entries	The following abbreviations are used in the index: (TM) for Terminal Manager (WM) for Window Manager

Notes to the Reader

The screens and windows shown in this guide represent the latest information available at the time of publication. Some screens and windows may not exactly match those that appear on your terminal or reflect the system-default settings.



1 A Look at the Terminal

This chapter provides an overview of the VXT 2000 windowing terminal and its basic operating features. The chapter tells you where to look in this guide for more information about each feature.

1.1 Terminal Highlights

The VXT 2000 windowing terminal lets you access X window applications and traditional terminal applications on computer systems in your network. You can open several windows on the terminal, to display multiple applications from different systems at the same time.

The VXT 2000 terminal provides many features of a workstation without the need for workstation management. Here are some of the terminal's main features:

Hardware

- A workstation-style display, a keyboard, and a mouse.
- A monochrome, gray scale, or color monitor.
- A choice of Ethernet network connectors: ThinWire, thickwire, or twisted pair.
- A 25-pin RS-232 serial printer/communications port with full modem control.
- A 25-pin parallel printer port.
- Serial interfaces for a keyboard and a mouse or tablet.
- Expandable memory (user installable).

A Look at the Terminal
1.1 Terminal Highlights

Software

- The ability to access several computer systems at the same time, using the TCP/IP, LAT, or DECnet transports.
- A choice of **VXT software** or **VXT EX software**, downloaded from a host computer system or an InfoServer system.
- VXT software provides local applications and features such as
  - A local Terminal Manager window that lets you create and manage connections to computer systems. You can connect to systems using the TCP/IP, LAT, or DECnet transport. See Chapter 2.
  - VXT DECterm windows that let you access VT video terminal applications on computer systems. VXT DECterm windows emulate VT300 series video terminals. See Chapter 7.
  - VXT 3270 windows that let you access applications on an IBM SNA system. See Chapter 9.
  - A local Motif window manager that lets you easily move and resize windows, using a mouse or keyboard for navigation. See Chapter 11.
  - An AutoStart feature to automatically start your selected computer sessions and local terminal applications when you start work, or at any other time. See Section 5.6.
  - A Customize Boot dialog box for choosing the VXT software version you want your terminal to load. See Section 5.7.
  - A Customize Font Path dialog box that lets you access fonts from host systems and font servers on your network. See Section 5.3.
  - Configuration Manager windows that let a system manager configure individual terminals or groups of terminals to share customized settings and fonts. See *VXT Software Version 2.1 Installation and System Management*.
- VXT EX (essential X server) software is a clientless version of VXT software, without local applications. You can use VXT EX software to access X applications on computer systems with minimal memory installed in the terminal. When you use VXT EX software, the system you connect to must provide all window and session management features.

1.2 How the Terminal Works

The VXT software and fonts for your terminal are installed on a host computer system or an **InfoServer system**. An InfoServer system is a high-performance virtual disk server that can efficiently download software to many terminals.

You can use the terminal with one or more computer systems. You can connect the terminal to

- An Ethernet network, using the ThinWire, thickwire, or twisted-pair port
- A computer, using the serial port

The computer system you connect to is called the **host**. You can connect your terminal to several hosts.

You use the keyboard, mouse and monitor to interact with applications on your host. You send data to the application by typing on the keyboard or selecting window options with the mouse. Data sent by the application appears as text or graphics on the terminal's screen. You can print text or graphics on a printer connected to the terminal's printer port or on any networked printer.

You can use a variety of host software applications on the terminal. For example, your host may have applications for word processing, data entry, programming, or business graphics. Most applications involve interactive processing. This means the terminal immediately sends the information you enter from the keyboard or mouse to the host.

1.3 VXT Software

Each time you start up the terminal, it sends out a network request for a host or InfoServer system to download VXT software and fonts to the terminal. This process of starting up the software and bringing it to an operable state is also known as **booting**.

Knowledgeable users can customize the terminal's boot settings to load a particular VXT software version. See Section 5.7 for details.

There are some differences between host-based and server-based operation.

VXT Host-Based Software

If your terminal downloads VXT software from a host system, the terminal always uses its own physical memory to display applications and store your customized terminal settings. Host-based operation provides

- A Terminal Manager window
- VXT DECterm and VXT 3270 windows

- A local Motif window manager
- A configuration manager—Your system manager can use the Configuration Manager dialog boxes to customize and manage individual terminals from a central terminal.

VXT Server-Based Software

If your terminal downloads VXT software from an InfoServer system, the terminal typically operates in server-based mode. In server-based mode, the terminal saves your customized terminal settings on an InfoServer system. Server-based mode provides all the features of the host-based operation, plus

- Virtual memory capability—The InfoServer system provides the terminal with additional memory as needed to display more applications. As a result, the terminal needs less installed memory than when you use host-based operation.
- More configuration manager features—Your system manager can use the Configuration Manager dialog boxes to customize and manage groups of terminals, as well as the fonts they use.
- InfoReader library—You can access this library of online VXT documentation from the Getting Started menu in the Terminal Manager window. The library includes this user guide.

You can also choose the host-based mode of operation when downloading from an InfoServer system. In this case, your customized settings are stored in the terminal's memory, and the terminal cannot use the InfoServer system for memory services. You still have access to the InfoReader library. Your boot settings determine the mode of operation. See Section 5.7.

1.4 VXT EX Software

VXT EX (essential X server) software is a clientless version of VXT software, which means it does not include any local applications such as the Terminal Manager window, VXT DECterm and VXT 3270 windows, or the Motif window manager.

VXT EX software lets you use a VXT 2000 windowing terminal as a workstation companion, relying on the host system to provide a session manager, window manager, and other applications. You can use VXT EX software with minimal memory installed in the terminal.

VXT EX software provides a single dialog box for starting an X session on a host system. You can start a session on a system that supports the LAT or TCP/IP transports and access that system's X window applications. See Chapter 14.

1.5 Memory Requirements

When you turn on the terminal, the VXT software is loaded into the terminal from an InfoServer system or from a host computer system. There are different memory requirements for using server-based or host-based software. The optional image accelerator board for some VXT 2000 models also requires extra memory.

If You Use VXT Software...	And...	Your Terminal Needs At Least...
Server-based	–	4 megabytes of memory
Server-based	Image accelerator board	6 megabytes
Host-based	–	10 megabytes
Host-based	Image accelerator board	12 megabytes

If You Use VXT EX Software...	And...	Your Terminal Needs At Least...
Host- or server-based	–	4 megabytes of memory
Host- or server-based	Image accelerator board	6 megabytes

Standard Terminal (4 MB)

The standard terminal comes with 4 megabytes of memory. You can expand memory up to 18 megabytes by installing memory modules in the terminal. To expand memory on system box models, you must install a memory controller board.

Optional Memory (To 18 MB)

- 2-megabyte memory controller board (for system box models)
- One to three 2-megabyte or 4-megabyte memory modules

To install memory, see *VXT 2000^{+}/VXT 2000 Windowing Terminal Installing and Getting Started*. To order memory, see Appendix E.

1.5.1 Monitoring Memory Use (Host-Based Terminals)

If your terminal uses host-based VXT software, the number of applications and windows you can display is limited by the amount of physical memory in the terminal. The amount of memory in use changes as you open and close windows and applications. If you run out of memory, the terminal may quit all current X sessions and terminal window sessions and reboot itself.

When the amount of available memory is low, the Terminal Manager window displays a warning message. You can also monitor memory use by checking the System Monitor dialog box (Section 6.5).

To regain memory, you can

- Close or quit from any unused applications, windows, or sessions.
- Decrease the number of lines the terminal saves when you scroll them off the top of a VXT DECterm window. See Section 8.4.
- Limit the software options you load to only those you need. See Section 5.8.
- End all current sessions by rebooting the terminal's software. To reboot the terminal's software:
  - Choose Reset, Reboot, or Shutdown from the Terminal Manager window's Session menu.
  - Press the reboot key sequence for your keyboard:

ANSI (LK401) keyboard	Press Ctrl Alt ., using the left Alt key and the period key on the numeric keypad.
PC (LK443/LK444) keyboard	Press Ctrl Alt ., using the period key on the numeric keypad.
Short ANSI (LK421) keyboard	Press Ctrl Alt Extend . .
Sun style (LK460) keyboard	Press Ctrl ◇ Del.

To install more memory in the terminal, see Appendix E.

1.6 X Window Sessions and Terminal Window Sessions

You can use two types of sessions on your host computers: an **X window session** or a VXT **terminal window session**. You can open X window sessions and VXT terminal window sessions at the same time.

X Window and DECwindows Sessions

The X Window System is a graphically oriented user interface that lets you display one or more windows on the screen. Each window can represent a different **software application** running on its own host system. For example, you could run a word processing application in one window and a spreadsheet application in another window. With multiple windows, you can perform many tasks in an easy and efficient manner.

The X Window System was designed at the Massachusetts Institute of Technology. Digital's DECwindows Motif software is based on the X Window System and the Open Software Foundation's Motif standard.

To use an X window session, you log in to a host that has X window applications. In an X window session, you can use all the applications and utilities provided in the X Window System. For more information about Digital's X applications, see the *DECwindows Motif User's Guide* for your operating system.

Terminal Window Sessions

You can create terminal windows to access video text terminal applications on host systems. The terminal lets you create multiple VXT DECterm or VXT 3270 terminal windows. When you open a terminal window, you log in to a host as you would on a conventional video terminal.

1.7 Customizing Your Terminal

VXT software provides menus and dialog boxes that let you customize the operating settings for your terminal's window manager, terminal manager, VXT DECterm windows, and VXT 3270 windows. You can save your own settings or use factory-default settings from memory.

When you save customized settings in dialog boxes, the terminal stores your settings in a **native resource file**. Whenever you turn on or reset the terminal, it reads the settings in the native resource file.

If you use host-based operation, the terminal stores the native resource file in the terminal's nonvolatile memory. If you use server-based operation, the terminal stores the native resource file on an InfoServer system.

If you want central management, you or your system manager can use the configuration manager on any VXT 2000 windowing terminal in your network. The configuration manager lets you customize settings for individual terminals or groups of terminals. Configuration manager settings are stored in the native resource files. Alternatively, you can create your own **host-based resource files** and store them on a host system.

Using Menus

You can use the following menus to customize settings:

- **Terminal Manager—Customize menu**
  You use the Customize menu in the Terminal Manager window to view and change the settings for most of the terminal's operating features.
  - For user-preference features, see Chapter 3.
  - For communication settings, see Chapter 4.
  - For startup settings and fonts, see Chapter 5.
- **Window manager—Options submenu**
  The window manager provides an Options submenu that lets you customize window features such as border colors. You can access the Options submenu from the window menu button (Section 11.3) or from the Workspace pop-up menu (Chapter 12).

  Advanced users can customize window manager menus, mouse buttons, or keyboard keys (Section 12.9). For example, you can define menu items, buttons, or keys to launch local VXT applications or remote host applications (Chapter 13).
- **VXT DECterm Options menu**
  Each VXT DECterm terminal window you create includes an Options menu. This menu lets you change many DECterm operating features for that window while an application is running in the window. However, many applications handle the customization of the VXT DECterm window on their own. Chapter 8 describes how to use the VXT DECterm Options menu.
- **VXT 3270 Options menu**
  Each VXT 3270 terminal window you create includes an Options menu. This menu lets you change certain VXT 3270 operating features while an application is running. However, many applications handle customization of the VXT 3270 window on their own. Chapters 9 and 10 describe how to use the VXT 3270 Options menu.

Central Management

VXT Software Version 2.1 Installation and System Management describes how to centrally manage terminals, using the configuration manager or your own host-based resource files.

- **Configuration Manager**
  When you click on Configuration . . . in the Terminal Manager window's Customize menu, the terminal displays the Configuration submenu. From

the Configuration submenu you can display a Resource Management or Font Management dialog box.

The Resource Management dialog box lets a system manager centrally manage VXT 2000 windowing terminals from one terminal. The system manager can control the customizable features of these menus:

- Terminal Manager window's Customize menu
- Terminal Manager window's Create menu
- Window manager's Options menu
- VXT DECterm window's Options menu

The Font Management dialog box lets a system manager customize and configure font support for terminals on multiple InfoServer systems.

- **Host-based resource files**
  You can create your own host-based resource files to store the customized settings for terminals. You edit these files directly. Host-based resource files provide a way for host-based terminals to share the same settings.

Other Features on Host Systems

Host systems can also customize certain features of your terminal:

- **Host-based control functions**
  Applications can control many terminal features from the host system by using control functions.
- **Client Customize**
  The X window or DECwindows software package includes its own Customize utility, not described here. For more information, see the *DECwindows Motif User's Guide* for your operating system.

1.8 Compatibility with VT Series and 3270 Terminals

The terminal can operate as a video text terminal when you want to log in to a host system and use applications designed for conventional video terminals.

You can use VXT DECterm windows to emulate VT300 series video terminals. See Chapters 7 and 8.

You can use VXT 3270 windows to access applications on an IBM SNA system. See Chapters 9 and 10.

1.8.1 Character Sets

VXT DECterm Windows

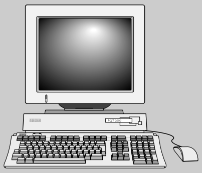
When you use VXT DECterm terminal windows, you can choose different character sets to match your computer system or software application requirements. You can choose from

- Two 8-bit multinational character sets—DEC Multinational or the ISO Latin Alphabet No. 1 set of the International Standards Organization
- Several 7-bit national replacement character sets (NRCs) for Western European languages

Chapter 3 describes how to choose characters sets.

VXT 3270 Windows

VXT 3270 windows use a translation table to translate the characters generated by the terminal into EBCDIC characters that your IBM application uses. See Section 10.3.



2

Using the Terminal

This chapter describes how to start using the terminal with VXT software.

When you turn on the terminal, it normally displays the Terminal Manager window after loading VXT software. This window acts as a control panel for creating sessions and customizing terminal settings.

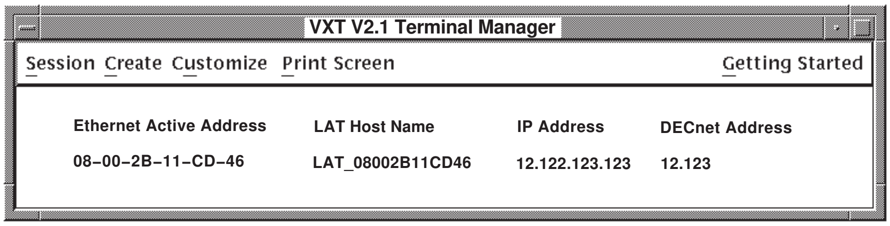
VXT 2000^{+}/VXT 2000 Windowing Terminal Installing and Getting Started provides step-by-step instructions to start creating sessions with the Terminal Manager window. This chapter provides more details and describes other basic functions you can perform from the Terminal Manager window. The chapter covers the following major topics:

- Terminal Manager Window
- VXT Message Box
- Creating Sessions and VXT Applications
- Autostarting, Pausing, or Ending Sessions
- Checking Network and Terminal Status
- Working with Multiple Remote X Session Managers
- Using the Open Look Window Manager from Sun Systems
- Printing
- Getting Started Menu

If you want to use VXT EX software, see Chapter 14. When you use VXT EX software, the terminal displays a VXT EX connection window instead of the Terminal Manager window.

2.1 Terminal Manager Window

When you turn on the terminal, it normally displays the Terminal Manager window and VXT Message Box. Here is the Terminal Manager window:



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- The **title bar** displays the window title and VXT software version.
- The **menu bar** provides access to the following menus:

Session	To end, pause, or autostart a session, or to display network and terminal status information (Chapter 6)
Create	To start X sessions, terminal windows, and local terminal applications
Customize	To customize terminal manager features and access the Configuration Manager dialog boxes
Print Screen	To print all or part of the screen on a local printer, or to cancel a LAT print job
Getting Started	To get help on creating sessions and entering your terminal’s IP or DECnet address To access the InfoReader library of online VXT documentation (server-based terminals)

- The **address** region shows the terminal’s Ethernet, LAT, IP, and DECnet addresses. These addresses define the terminal’s location on a network for LAT, TCP/IP, and DECnet communications.

  Initially, the IP and DECnet addresses are blank. To use TCP/IP or DECnet communications, you must enter and save the terminal’s IP or DECnet address in the appropriate Customize Communications dialog box.

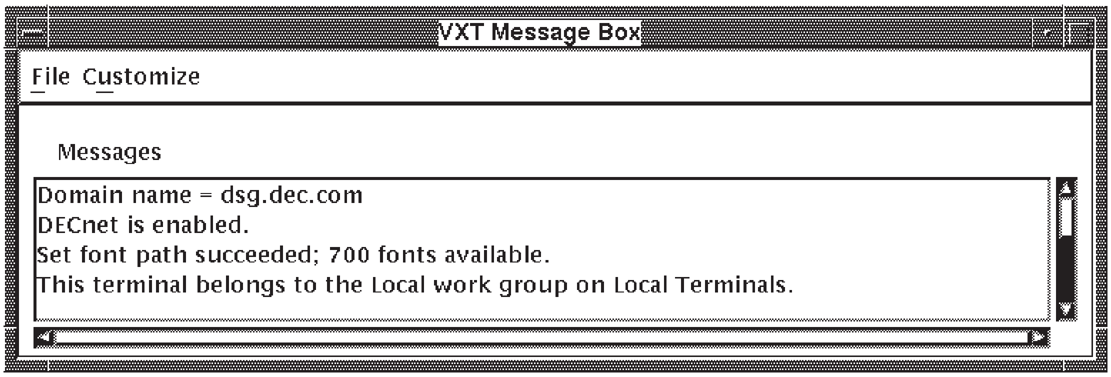
  Initially, the Ethernet Active Address field displays the terminal’s Ethernet hardware address. If you enable DECnet communications, the displayed Ethernet address is converted to a global network address in the network service access point (NSAP) format. In this case, you can still view the Ethernet hardware address in the System Configuration dialog box.

2.1.1 VXT Message Box

The VXT Message Box lets you monitor system messages that affect the terminal's operating status.

The VXT Message Box provides a Customize menu that lets you choose the category of messages displayed and change the box's position and size (Section 3.13).

Normally, the terminal starts the Terminal Manager window and the VXT Message Box as a single application. You can start them as separate applications if you want to control them separately (Section 5.6). In this case, the VXT Message Box also includes a File menu with an Exit item that lets you close the box.



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2.1.2 Closing the Terminal Manager Window and VXT Message Box

The Terminal Manager window and Message box are local VXT applications. You can close these applications without closing your other open sessions. Closing the Terminal Manager window can free the terminal's memory to perform other tasks. You can restart the Terminal Manager window and VXT Message Box if needed.

To close the Terminal Manager window and VXT Message Box:

- Click on the Session menu in the Terminal Manager window.
- Click on the Close menu item.

If you have customized settings in the Customize AutoStart dialog box to run the Terminal Manager window and VXT Message Box as separate applications, the VXT Message Box remains open.

To restart the Terminal Manager window and VXT Message Box:

1. Click and hold MB2 anywhere on the screen background, outside your windows. The terminal displays the pop-up VXT Create menu.
2. Click on the Term Mgr + Msg Box menu item.

Hiding the Terminal Manager Window

You can also hide the Terminal Manager window and Message Box applications without stopping them. You can choose to hide these applications each time you start the terminal or hide them during operation. You can enable the F3 key to act as a toggle switch for hiding or displaying these applications. See Section 3.10.

2.2 Creating Sessions and VXT Applications

You can open two types of sessions on host systems—an X session or a terminal window session. X sessions let you access X window applications on your host. Terminal window sessions provide a VXT DECterm or VXT 3270 terminal emulator for accessing traditional video terminal applications on your host. You can open multiple sessions.

You can also start or stop three VXT applications:

Terminal Manager window
VXT Message Box
Motif window manager

By default, the terminal starts all three applications when you turn on or reset the terminal.

Initially, you use a Create dialog box to start sessions or change VXT applications. After you save a list of preferred services in the dialog box, you can quickly start sessions and VXT applications from the Create pull-down menu or VXT Create pop-up menu (Section 2.2.8).

2.2.1 Displaying the Create Dialog Box

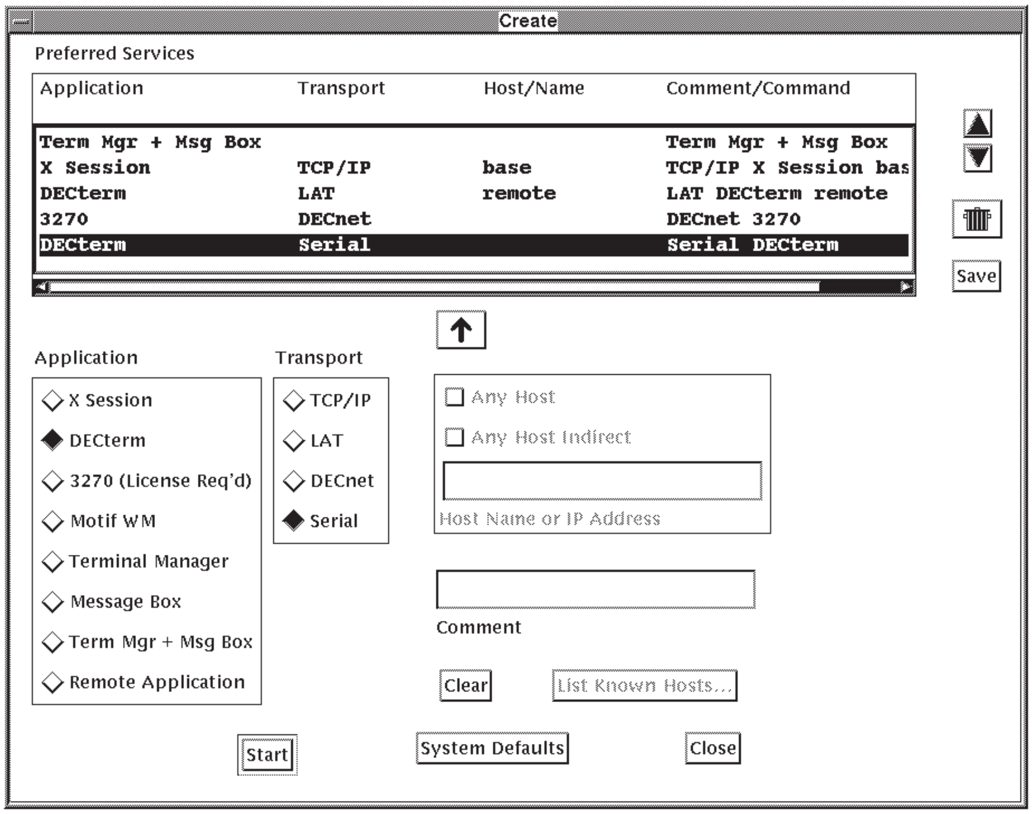
To display the Create dialog box:

1. Click on the Create menu in the Terminal Manager window.
2. Click on Other... menu item to display the Create dialog box.

Note

Your system manager can use the terminal's configuration manager to prevent users from accessing the Create dialog box. In this case, the

Other... menu item is dimmed.



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You can connect to hosts or services on a network supporting the TCP/IP, LAT, or DECnet protocol.

2.2.2 Starting LAT or Serial Sessions

To start a LAT or serial session from the Create dialog box:

1. In the Application box, click on the type of session you want to start: X Session, DECterm, or 3270.
2. In the Transport box, click on the communication method to use for the session: LAT or Serial.

   If you choose the Serial transport, skip the next step.

3. Click on the Host Name or Address box and enter the name or address of the host you want to connect to.
4. Click on the ↑ button to add your session settings to the Preferred Services scroll box.
5. Click on the Save button to save your Preferred Services list for future use. The terminal adds your services to the Create menu and VXT Create pop-up menu for quick access.
6. Click on the Start button to connect to the host. The terminal displays a login window.
7. Log in to the session.

If the Start button is dimmed:

If you are trying to start a serial DECterm window, see Section 4.2 to change the Port Usage feature to set the serial port to work as a host port.

2.2.3 Starting a DECnet Session

Before you create your initial DECnet session, you must enter and save your terminal's DECnet address (Section 4.9).

Your host system must have the VXT$SERVER DECnet object installed. For more information, see the section on the OpenVMS operating system in *VXT Software Version 2.1 Installation and System Management*.

To start a DECnet session from the Create dialog box:

1. In the Application box, click on the type of session you want to start: X Session, DECterm, or 3270.
2. In the Transport box, click on the DECnet button.
3. Click on the Host Name or Address box and enter the DECnet host address or name (up to 6 characters). Host names require at least one alphabetic character.

   You can specify DECnet addresses in two forms:

   - The long form uses a period to separate the area number and node number. For example: 61.513.
   - The short form collapses the area and node numbers into a single decimal value, using the formula (*area_number* × 1024) + *node_number*. For example: 62977 = (*61* × 1024) + *513*.

   If you want to use host names instead of addresses, you first must enter and save the address of your network's DECnet name translator (Section 4.10).

4. Click on the ↑ button to add your session settings to the Preferred Services scroll box.
5. Click on the Save button to save your Preferred Services list for future use. The terminal adds your list to the Create menu and VXT Create pop-up menu for quick access.
6. Click on the Start button to connect to the host. The terminal displays a login window.
7. Log in to the session.

2.2.4 Starting an IP Session

Before you create your initial session, you must enter and save your terminal's TCP/IP address (Section 4.5).

Note

You can create only one IP X session to a given host. If you try to create a second IP X session to the same host, the X display manager (XDM) closes the first IP X session while creating the second IP X session.

To start an IP session from the Create dialog box:

1. In the Application box, click on the type of session you want to start: X Session, DECterm, or 3270.
2. In the Transport box, click on the TCP/IP button.
3. Click on the Host Name or Address box and enter the IP host address or name (up to 30 characters).

   If you want to use host names instead of addresses, you first must enter and save the address of your network's TCP/IP name server (Section 4.6).

   Options:

   - Use the Any Host button if you want to use the first available IP host.
   - Use the Any Host Indirect button to specify a host that will act as a pathway to find the first available IP host. Specify the host in the Host Name or Address box.
   - Use the Comment box to enter optional text comments. For example, if you entered a host name, you may want to enter the IP address as a comment.

- Use the List Known Hosts... button to display a dialog box that lets you list available IP hosts.

See Section 2.2.4.1 for button descriptions.

You can enter a host IP address in one of the following formats:

Format	Example
Decimal whole number	215279382
Decimal dot notation	12.212.231.22
Hexadecimal	0xcd4e716
Hexadecimal dot notation	0xc.d4.e7.16
Octal dot notation	01465163426
Octal whole number	014.324.347.26

For DECterm windows, you can specify the port for Telnet to connect on. Simply append a comma to the host name or IP address followed by the port number.

Format	Example
Host_Name,Port	market,24
IP_Address,Port	12.212.231.22,24

4. Click on the ↑ button to add your session settings to the Preferred Services scroll box.
5. Click on the Save button to save your Preferred Services list for future use. The terminal adds your list to the Create menu and VXT Create pop-up menu for quick access.
6. Click on the Start button to connect to the host. The terminal displays a login window.
7. Log in to the session.

HP–UX Systems: Reset Required if You Cannot Log In

When creating X IP sessions to the HP–UX system, you may have to reset the terminal if you are unable to log in. This is because the HP–UX system does not issue a server reset after closing the login box.

2.2.4.1 Optional Buttons for Specifying IP Hosts

☐ Any Host

Use the Any Host button if you want to connect to first available IP host on the network. When you click on the Any Host button, an asterisk appears in the Host Name or IP Address box.

☐ Any Host Indirect

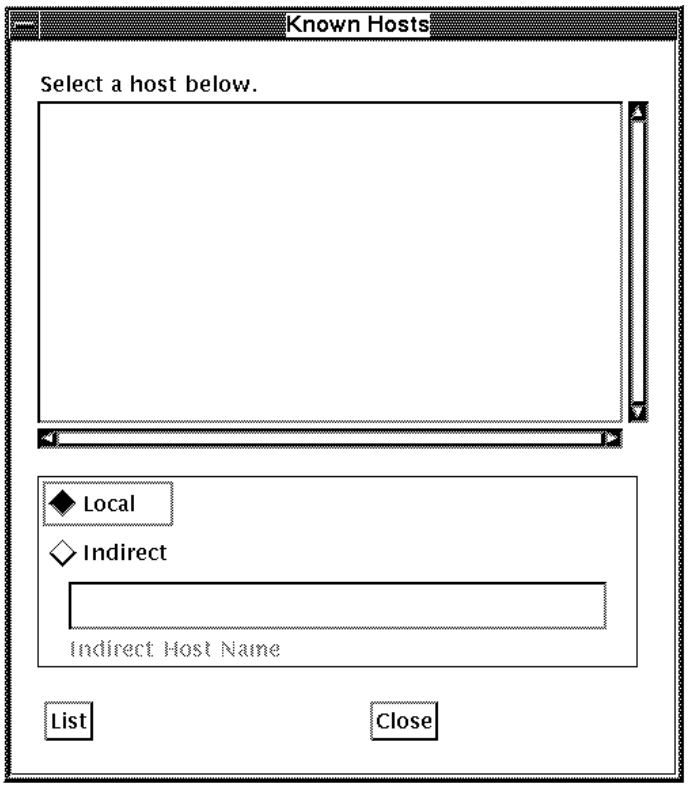
Use the Any Host Indirect button if you want to enter a host to use as a path to your destination host. When you click on the Any Host Indirect button, the title of the Host Name or IP Address box changes to Through Host Name or IP Address. You can then enter the host name or IP address of the host to use as a pathway.

☐ Optional Comment for Host

You can store optional text comments with your host name or IP address. For example, if you entered a host name in the Host Name or IP Address box, you may want to store the IP address as a comment.

☐ List Known Hosts...

You can choose from a list of hosts on your local subnet or on other subnets, by using on the List Known Hosts... button. Click on the button to display the Known Hosts dialog box:



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The Known Hosts dialog box lists the available TCP/IP hosts and services on the network. If the host you want is not listed, it may be currently unavailable. Click on the List button to update the list. You may have to click on this button several times before the host you want is listed. Sometimes it takes a few minutes for the terminal to establish communication with hosts on the network.

If the Known Hosts box displays IP addresses with question marks (?) where host names should appear, you need to enter your TCP/IP Name Server address in the TCP/IP Name Server dialog box (Section 4.6).

To view hosts on the local subnet:

Click on the Local button. The dialog box lists known hosts in the terminal's local subnet. In the following example, 135 represents the local subnet of the terminal.

Subnet example:

`16.122.`*`135`*`.222`

To view hosts on other subnets:

Click on the Indirect button. Then click on the Indirect Host Name box and enter the name of a host to use as a source for subnet information.

To connect to a Host in the Known Hosts scroll box:

There are two ways to connect to a host from the Known Hosts scroll box.

- Double click on the host in the Known Hosts scroll box.
- Click on the host name or address in the Known Hosts scroll box. The name or address appears in the Host Name or IP Address box of the Create Session dialog box.

  Click on the Connect button in the Create dialog box.

To add a host from the Known Hosts scroll box to the Preferred Services scroll box:

1. Click on the host name in the Known Hosts scroll box. The host name appears in the Host Name or IP Address box of the Create dialog box.
2. Click on the ↑ button in the Create dialog box. The host appears in the Preferred Services scroll box.
3. Click on the Save button in the Create dialog box.

To update the Known Hosts scroll box list:

Click on the List button. The terminal updates the list of available hosts.

To close the Known Hosts dialog box:

Click on the Close button.

2.2.5 Starting VXT Applications

To start a VXT application from the Create dialog box:

1. In the Application box, click on the type of local application you want to start: Motif Window Manager, Terminal Manager, Message Box, or Terminal Manager + Message Box.

   By default, the terminal runs the Terminal Manager window and VXT Message Box as a single application.

2. Click on the [↑] button to add the application to the Preferred Services scroll box.

3. Click on the Save button to save your Preferred Services list for future use. The terminal adds your list to the Create menu and VXT Create pop-up menu for quick access.

4. Click on the Start button if you wish to start the application.

   If the application is already running, it will not start again. Only one copy of an application can run at a time.

2.2.6 Starting Remote Applications

You can start a remote application on a host system that you are currently connected to. Before you start a remote application, you must run the VXT application launcher on the host system. For instructions, see Section 13.3.

To start a remote application from the Create dialog box:

1. In the Application box, click on the Remote Application button.

2. In the Name box, enter the name of the VXT launcher. The default name is **VXT**.

   If you plan to launch applications from several host systems, you must specify a unique name for the VXT launcher on each system. You can specify a name when you run the VXT launcher. See *Chapter 13*.

3. In the Command box, enter the host system command to start the application.

   For example, the following command starts a clock:

OpenVMS system	MCR DECW$CLOCK

ULTRIX, DEC OSF/1 AXP, or UNIX system	/usr/bin/dxclock

4. Click on the ↑ button to add your remote application settings to the Preferred Services scroll box.
5. Click on the Save button to save your Preferred Services list for future use. The terminal adds your list to the Create menu and VXT Create pop-up menu for quick access.
6. Click on the Start button to start the remote application. The terminal displays the application.

2.2.7 Preferred Services

You can add, move, and delete services from your Preferred Services list in the Create dialog box.

To add a service to the Preferred Services scroll box:

1. Use the Application, Transport, and Host Name or Address boxes to specify the service you want to add.
2. Click on the ↑ button to add the service to the Preferred Services scroll box.
3. Click on the Save button to save your service's name so you do not have to enter it each time you turn on the terminal.

To start a session or application from the Preferred Services scroll box:

- Double click on a service in the Preferred Services scroll box.
- Click on a service in the Preferred Services scroll box. The service name appears in the Service or Host Name box. Click on the Connect button.

To move a service in the Preferred Services scroll box:

You can move a service up or down in the list. The terminal will display the services in the same order on the Create pull-down submenus and the VXT Create pop-up menu.

1. Click on the service name you want to move.
2. Click on the △ or ▽ button to move the service one place up or down in the list.

To remove a service from the Preferred Services scroll box:

1. Click on the service name you want to remove.

2. Click on the trash can button.

2.2.8 Creating Sessions from a Menu: Preferred Services

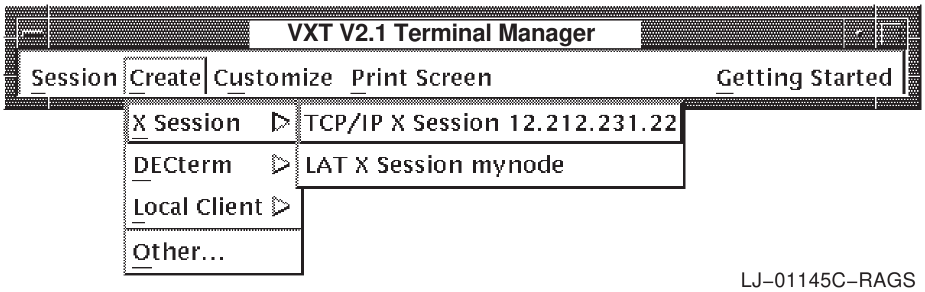
After you save preferred services in the Create dialog box, the terminal adds them to

- The Create menu, as submenus
- The VXT Create pop-up menu (after you restart the window manager)

You can quickly start a preferred service (a session or VXT application) by choosing the service name from these menus.

Create Menu

The Create menu adds a menu item for each type of session you have saved – DECterm, X Session, and so on. When you choose one of these menu items, the terminal displays a submenu that lists all of your preferred services for that type of session.



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VXT Create Pop-Up Menu

After you restart the window manager, the VXT Create pop-up menu also lists all preferred services.

To restart the window manager and view the VXT Create pop-up menu:

1. Click and hold mouse button 1 (MB1) anywhere on the screen background, outside the Terminal Manager window and other windows.

   The terminal displays a Workspace pop-up menu.

2. Drag the pointer to the **Restart...** menu item, then release MB1.

   The terminal displays a confirmation box asking if you really want to restart the window manager.

3. Click on the **OK** button to restart the window manager.

   The borders around the windows on the screen disappear while the window manager is being restarted.

4. After the window borders reappear, click and hold MB2 anywhere on the screen background.

   The terminal displays the VXT Create pop-up menu, listing your preferred services. The default VXT Create pop-up menu lists the combined Terminal Manager and VXT Message Box applications:

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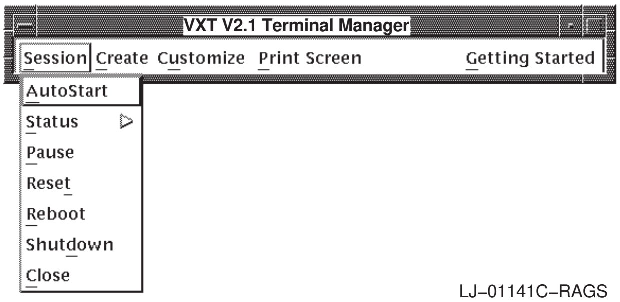
2.3 Autostarting, Pausing, or Ending Sessions

The Terminal Manager window's Session menu lets you automatically start or pause a session. You can also end all sessions by using the Reset, Reboot, or Shutdown items to reset the terminal's VXT software.



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2.3.1 Autostarting a Session

The AutoStart menu item lets you quickly start the list of sessions and VXT applications that you saved in the Customize AutoStart dialog box. The terminal also autostarts this list when you perform any action that restarts the terminal, such as

- Turning the terminal on
- Choosing the Reset, Reboot or Shutdown menu items from the Session menu

To enter your AutoStart settings, see Section 5.6.

To autostart your applications:

1. Click on the Session menu in the Terminal Manager window.

2. Click on AutoStart. The terminal starts up the sessions and applications in the order you listed them in the Customize AutoStart dialog box.

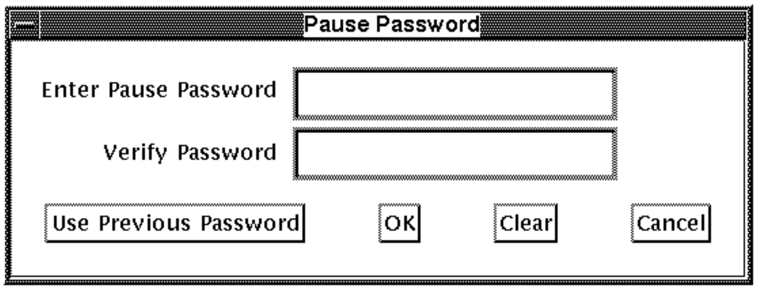
2.3.2 Pausing a Session

If you want to interrupt your work without ending your session, you can pause a session. When you pause a session, the terminal displays the Pause Password dialog box. After you enter and verify a pause password, the terminal clears the screen and displays the `Enter Password to Resume` prompt. Any applications you started continue to run. When you resume your session, you can continue work where you left off.

The pause password is valid for the current terminal session only. The password is not saved when you reboot or reset the terminal.

To pause your session:

1. Click on the Session menu in the Terminal Manager window.
2. Click on Pause to display the Pause Password dialog box.



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3. You can enter a new pause password or use a previous pause password that you saved during the current terminal session.

   To enter a new pause password:

   a. Enter the password in the Enter Pause Password box. The password may be from 1 to 127 characters. Blank spaces are not allowed.

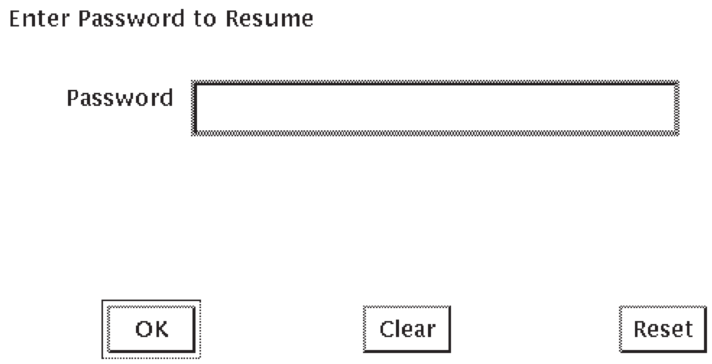
   b. Click on the Verify Password box and enter the same password. If you make a mistake, click on the Clear button to start over.

   c. Click on the OK button to save the password and exit the dialog box.

   To use your previous pause password:

   Click on the Use Previous Password button.

When you click on the OK or Use Previous Password button, the terminal clears the screen and displays the `Enter Password to Resume` prompt.



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To resume your session :

Enter your password into the Password box and click on the OK button.

If you forget the password, you can click on the Reset button to end all sessions and restart the terminal.

If you choose...	The terminal...
OK	Verifies that your password is correct.
Clear	Clears the password box.
Reset	Ends all sessions on the terminal. Resets the X server and restarts applications listed in the Customize AutoStart dialog box.

Note: Serial Window Not Closed

The Reset button does not end a terminal window created on the serial port. To close a session on the serial port, choose the Exit menu item from the terminal window's File menu.

2.3.3 Ending All Sessions and Restarting VXT Software

You can use the Reset, Reboot, or Shutdown menu items on the Session menu to end all active sessions on the terminal. If you choose Reboot or Shutdown, the terminal also reloads the VXT software from a host system or InfoServer system. You must reload VXT software to activate changes you make in some Customize dialog boxes (Language, Boot, Communications, Software Options, Resource Files).

If you choose...	The terminal...
Reset	Ends all sessions on the terminal. Resolicits the network for the terminal's resource file. Restarts your AutoStart sessions and clients. Resets the X server.
Reboot	Ends all sessions on the terminal. Resolicits the network for the terminal's resource file. Reloads VXT software. Restarts your AutoStart sessions and clients. Resets the X server.
Shutdown	Ends all sessions on the terminal and displays the message `Press RETURN to restart VXT` After you press Return, the terminal Resolicits the network for the terminal's resource file. Reloads VXT software. Restarts your AutoStart sessions and clients. Resets the X server.

When you choose the Reset, Reboot, or Shutdown menu item, the terminal displays a confirmation box. To confirm your choice, click on Yes. To remain in the session, click on No. To bypass this confirmation box, see Confirm Reset Session in Section 3.10.

You can also reboot the terminal by pressing Ctrl+left Alt+keypad . .

2.3.4 Ending Individual Sessions

If you have multiple sessions open, you can end individual sessions. The effect of ending a session depends on the type of session.

Ending an IP X Session

You can end an IP X session by using the quit function in the remote session manager for that session. Quitting from the remote session manager (xsession) on a UNIX, ULTRIX, or DEC OSF/1 AXP system ends the xsession and the window manager (xwm).

Ending a LAT X or DECnet X Session

You can end a LAT X or DECnet X session by using the End Session function in the remote session manager for that session.

By default, using the End Session function from an OpenVMS remote session manager restarts the terminal, ending *all* sessions on the terminal. If your terminal is using VXT server-based software, you can customize the terminal so it only ends the LAT X window session without restarting the terminal. See Section 5.4.

Ending Terminal Window Sessions

You can end a Telnet, LAT, DECnet, or Serial terminal window session by using the Exit menu item in the window's File menu.

2.4 Checking Network and Terminal Status

You can use the Status menu item on the Session menu to access screens that help you identify network problems. You can

- View the terminal's configuration—software version, font path, network addresses, memory, installed options, and work group
- View TCP/IP routes and ping hosts to determine their availability
- Monitor and reset LAT and Ethernet counters
- Monitor memory and network utilization

Chapter 6 describes the Status submenu.

2.5 Working with Multiple Remote X Session Managers

Each X session you create has its own session manager on the host system. Each session manager expects to have complete control of your terminal. To maintain a consistent user interface when using multiple remote session managers, you should consider the effects on the terminal's feature settings and the Motif window manager.

Feature Settings

The host session manager changes any settable features of your terminal, such as screen background, security, and keyboard selection.

If you run multiple session managers, each one sets up the terminal according to the terminal's saved settings at the time the session manager starts up. To keep the settings from changing unexpectedly, be sure to change and save all your preferences in all of your session managers.

When you quit from a remote session manager, the system may ask you if you want to save customized settings before quitting. This question refers only to the remote session manager's settings.

Security Settings with OpenVMS DECwindows Session Manager The DECwindows session manager overrides the terminal manager's Customize Security settings. Every time you log into a new OpenVMS host and run its DECwindows session manager, the security settings on the new node override the current settings. To maintain security, enter your settings on each host.

Remote Window Managers

You can choose whether or not a host-based window manager can take over windowing operations on the screen. The terminal's local window manager provides you with quicker response time and overall higher performance. However, a host-based window manager may offer more features. To let the host control windowing operations, click on the Allow Remote Window Manager button in the Customize Terminal Manager dialog box (Section 3.10).

2.6 Using the Open Look Window Manager from Sun Systems

If your host system has the Open Look window manager, you can perform the following steps to use this window manager on the terminal:

1. Load the fonts for the Sun Open Look cursor in the `/vxt/fonts/misc` directory on the host system.
2. In the Customize Terminal Manager dialog box, click on the Allow Remote Window Manager button (Section 3.10).
3. In the Customize Security dialog box, click on the All button to allow all connections for TCP/IP (Section 3.7).
4. In the Customize X Server dialog box, set the X Session Reset Server Action to Ignore Reset Server.

5. In the Create dialog box, create a session on your Sun system. The Sun system must have the X display manager (XDM) installed to be able to display the username and password banner on the terminal.

6. Use the `env` command to verify the following symbol definitions on the Sun system:

```
OPENWINHOME=/usr/openwin
DISPLAY=vxt-ip:0
LD_LIBRARY_PATH=/usr/openwin/lib
```

   If the symbols are not defined, apply them manually. For example:

```
# setenv OPENWINHOME /usr/openwin
# setenv DISPLAY vxt_ip_address:0.0
# setenv LD_LIBRARY_PATH /usr/openwin/lib
```

7. To complete the initialization of the window manager, enter the following commands:

```
# xrdb .Xdefaults (or .OWdefaults for Solaris 2.n systems)
# /usr/openwin/lib/openwin-sys
This is the OpenWindows X11/NeWS Server system
initialization file)
# olwm &
```

   After you complete these steps, the Open Look window manager environment should appear after a short time.

If the system displays errors about elements not found, you may need to modify your path in `.cshrc` to access those elements.

1. Use the `find` command to find the elements' location.

2. Modify the `.cshrc` file to include the correct path to the elements.

3. Enter the following command to have the system read the updated `.cshrc` file.

```
# source .cshrc
```

   The following example uses the `find` command to locate the executable code named `xrdb`:

```
# find / -name xrdb -print
```

Using Sun Open Look Fonts from the Host System

You use the Customize Font Path dialog box (Section 5.3) to enter the path to the Sun Open Look fonts on your host system. By default, the VXT software installation places font directories in the following path:

`/tftpboot/vxt/fonts or /usr/tftpboot/vxt/fonts`

The fonts you need are in the `100dpi` and `misc` directories.

Specify the following two font paths in the Customize Font Path dialog box. You need both font paths to access the fonts for various Sun applications. The font paths you specify depend on whether your host system uses restricted or unrestricted TFTP access. Digital recommends using restricted TFTP access, for security reasons.

Restricted TFTP Systems

`/vxt/fonts/misc/fonts.dir`

`/vxt/fonts/100dpi/fonts.dir`

Unrestricted TFTP Systems

```
/tftpboot/vxt/fonts/misc/fonts.dir
(or /usr/tftpboot/vxt/fonts/misc/fonts.dir)
```

```
/tftpboot/vxt/fonts/100dpi/fonts.dir
(or /usr/tftpboot/vxt/fonts/100dpi/fonts.dir)
```

Using Sun Open Look Fonts from an InfoServer

Server-based terminals can use an InfoServer system to provide the Sun Open Look fonts. *VXT Software Version 2.1 Installation and System Management* describes how to use the terminal's font manager to copy host fonts to InfoServer font sets.

Converting Sun Fonts

The VXT 2000 windowing terminal uses fonts in the portable compiled font (PCF) format. You can convert Sun fonts into PCF format, using conversion utilities provided with the VXT software installation kit. See *VXT Software Version 2.1 Installation and System Management*.

2.7 Customizing Your Terminal's Environment

The Customize menu in the Terminal Manager window lets you check and control the settings for many features—from the keyboard to host communications. See the following chapters for details on the Customize menu:

Chapter 3	Describes user-preference and security settings (top half of the Customize menu).
Chapter 4	Describes settings that affect communication with host systems (Communications submenu).
Chapter 5	Describes advanced settings for autostarting sessions, entering font paths, booting VXT software, and turning VXT software options on or off (bottom half of Customize menu).

2.8 Printing

This section describes how to

- Print the screen from the Print Screen menu
- Send printing jobs from a host system to the terminal's printer

You can also perform printing operations from the Print menu in VXT DECterm windows (Section 7.5).

Supported Printers

The terminal supports level 1 and level 2 Digital printers.

- Level 1 printers include the LA50 and LA70 dot matrix printers.
- Level 2 printers include the LA75 and LA324 dot-matrix printers; LJ250 (serial) and LJ252 (parallel) color ink-jet printers; and LN03, LN05, and LN06 laser printers.

The terminal also supports PostScript printers, including Digital's and ScriptPrinter and DEClaser family, the HP LaserJet II and HP LaserJet III printers, and the IBM 4019 laser printer.

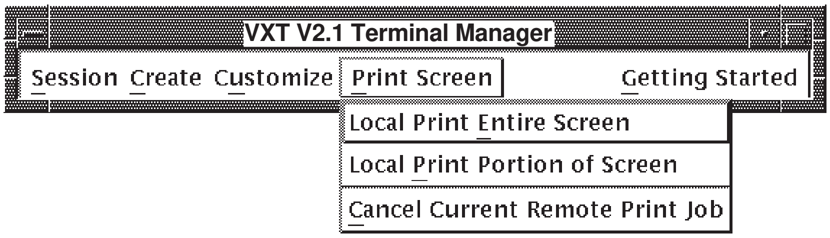
2.8.1 Printing the Screen

The Print Screen menu in the Terminal Manager window lets you print all or part of the screen display, using a serial or parallel printer connected to the rear of the terminal. Depending on your printer, you can print monochrome, gray scale, or color displays in sixel or PostScript format.

You can also cancel a current printing job sent from a remote host system to the terminal's printer.

Before printing, you should customize the print screen settings and select the port you are using (serial or parallel). Normally, the print screen function is set to print a monochrome image in sixel format on the parallel port. To customize the print screen settings, see Section 3.6. To choose the printer port, see Section 4.2.

The Print Screen menu looks like this:



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To print the complete screen image:

Choose the Local Print Entire Screen menu item.

If you are printing from a VR319 monitor to an LA50 printer, the image may be too large for the page. Click on the Rotate/Scale Picture button in the Terminal Manager window's Customize Print Screen dialog box to print the image on the page.

To print a portion of the screen image:

1. Choose the Local Print Portion of Screen menu item. The pointer turns into a cross.
2. Wait for terminal to redisplay the Print Screen menu.
3. Move the pointer to one corner of the area you want to print. Hold down MB1 and drag the pointer to the opposite corner of the desired area. As you drag the pointer, a rectangular outline is displayed.
4. Release MB1 to send the selected image to the printer.

To cancel a remote printing job that is currently printing:

Choose the Cancel Current Remote Print Job menu item. The remote print job currently printing stops.

Normally, the terminal can accept printing jobs from systems using the TCP/IP or LAT transport. To change this setting, see Section 4.2.

Printer Status

When you send a job to the printer, the terminal displays printer status messages in the VXT Message Box.

`Printer Offline`	Indicates that the printer is turned off or not connected. The printer did not assert its DTR signal within 2 seconds after the print request.
`Printer Busy`	Indicates the printer is printing another job.

In both cases, your print request is canceled.

Canceling a Print Screen Operation

During large printing jobs, the terminal displays a Print Cancel dialog box to let you cancel the print operation. To cancel the print operation, click on the Click Here to Cancel Print button. Printing stops when the printer empties its input buffer. The Print Cancel dialog box is not printed.

2.8.2 Printing from a Host System

VXT Software Version 2.1 Installation and System Management describes how to set up the terminal's printer port for printing from a host system. After the host is set up, you can send printing jobs from the host to the terminal's printer.

You can print from hosts that use the TCP/IP or LAT transport.

Printing from Hosts that Use TCP/IP

To use TCP/IP for printing:

- The terminal's TCP/IP or Ethernet address must be displayed in the Terminal Manager window
- The Host Accessible Printer Port button must be enabled in the Customize Serial and Parallel Ports dialog box (Section 4.2). This is the default setting.
- The VXT printer support utilities provided with the VXT software installation kit must be installed on your host system.

The terminal accepts only one TCP/IP printing job at a time. If a second job is sent while the first job is printing, the second job is ignored and no notification is sent to the requester. The requester must wait until the first job completes, then submit the second job again.

Printing from ULTRIX, DEC OSF/1 AXP, SunOS, or IBM AIX Hosts Use the `lpr` command to submit printing jobs to the terminal's printer. Ask your system manager for the printer name to specify.

```
lpr -Pvxt_printer [-Dpostscript] printfile
```

- *vxt_printer* is the name of the printer connected to the terminal.
- *printfile* is the file to print.
- The `-Dpostscript` option is for printing PostScript files from ULTRIX systems. You can use this option if your printer supports PostScript printing.

For more information, see the `lpr` man page.

Printing from an HP–UX or SCO ODT Host Use the `lp` command to submit printing jobs to the terminal's printer. Ask your system manager for the printer name to specify.

```
lp -dvxt_printer printfile
```

- *vxt_printer* is the name of the printer connected to the terminal.
- *printfile* is the file to print.

Printing from an OpenVMS Host

To print from an OpenVMS system to a VXT 2000 windowing terminal's printer, use the DCL PRINT command. Ask your system manager for the printer's queue.

```
$ PRINT/QUEUE=vxt_printer myfile.EXT
```

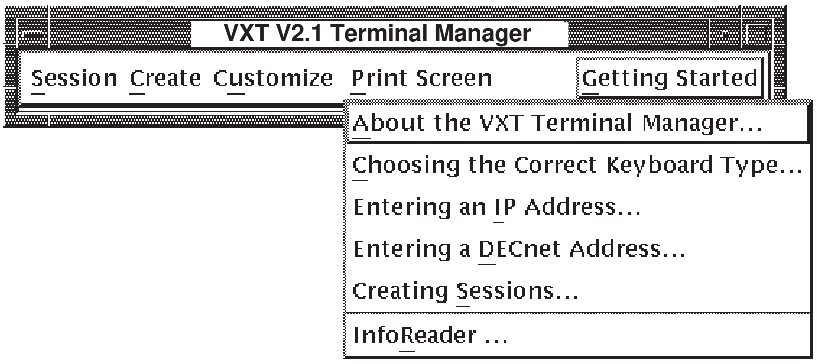
- *vxt_printer* is the name of the terminal's printer queue. Use the queue name that was created when initializing the printer port.
- *myfile.ext* is the file you wish to print.

Canceling a Remote Printing Job

To cancel a printing job from a host that is currently printing, choose the Cancel Current Remote Print Job menu item from the Print Screen menu in the Terminal Manager window. The terminal stops printing the current job.

2.9 Getting Started Menu

The Getting Started menu in the Terminal Manager window provides help on choosing your keyboard type, entering an IP or DECnet address, and creating sessions. If you have a server-based terminal, you can also acess the InfoReader library of online VXT documentation. To display the Getting Started menu, click on the Getting Started menu in the menu bar. The Getting Started menu looks like this:



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InfoReader—Viewing Online VXT Documentation

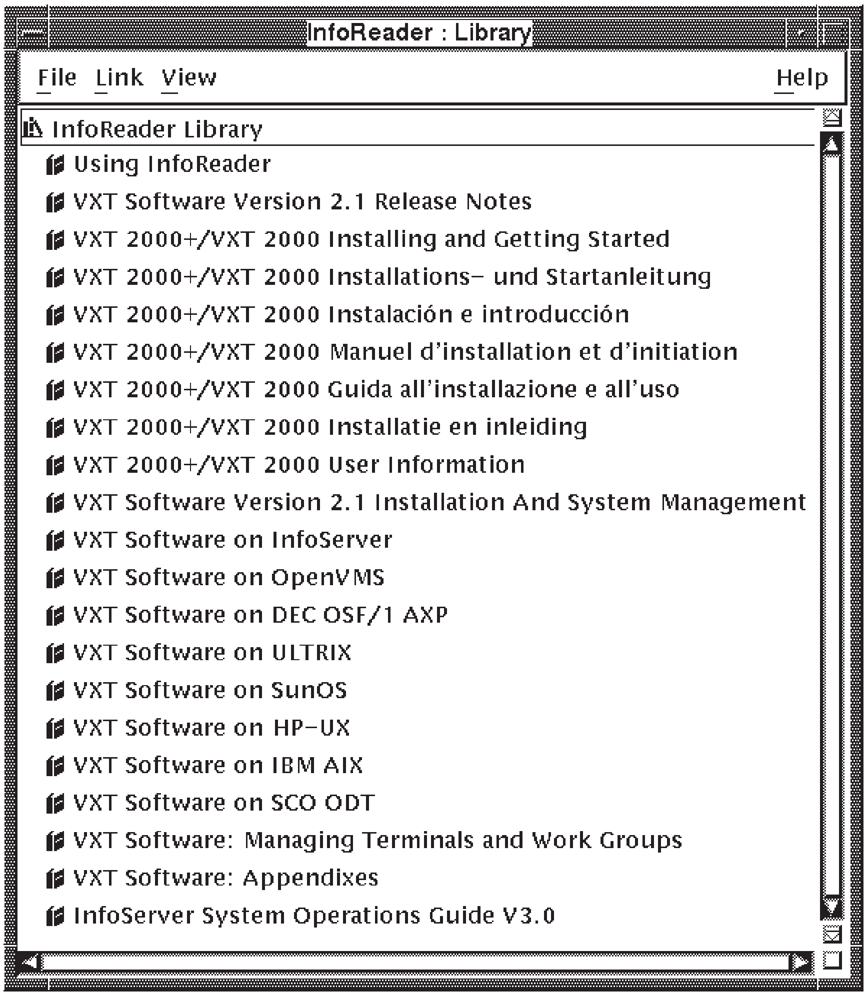
To view online VXT documentation, choose the InfoReader... menu item. The documentation is an optional part of the VXT software installation. The InfoReader utility is similar to the Bookreader utility on DECwindows systems. When you choose the InfoReader... menu item, the terminal displays a new window that lists the available VXT document titles. If you are unfamiliar with Bookreader or InfoReader, double click on the *Using InfoReader* selection.

For VXT Version 2.1 software, the following titles are available:

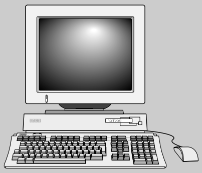
- *VXT 2000^{+}/VXT 2000 Windowing Terminal Installing and Getting Started* (in six languages)
- *VXT 2000^{+}/VXT 2000 Windowing Terminal User Information*
- *VXT Software Version 2.1 Release Notes*
- *VXT Software Version 2.1 Installation and System Management*

  Each section of this document is a separate online book that covers the use of VXT software on different operating systems.

- *InfoServer System Operations Guide*



LJ–03013A–RAGS



3

Customizing the Terminal

This chapter describes how you can customize basic terminal feature settings, using the top half of the Customize menu in the Terminal Manager window. The chapter also describes how to customize the VXT Message Box.

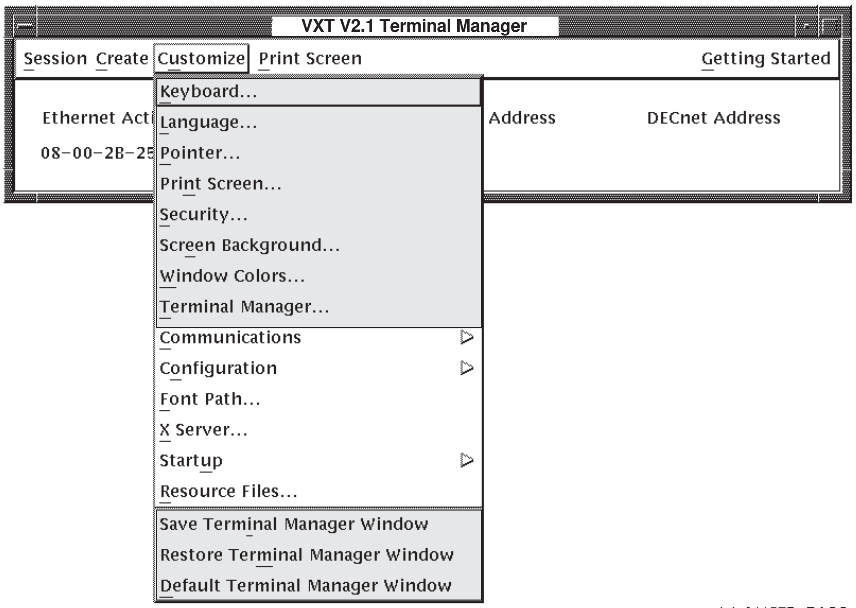
Initially, the terminal uses factory-default settings that work with many host systems. You can make changes to suit your personal preference and computing environment. After you make changes, you can save your settings for all future sessions.

The chapter covers the following major topics:

- Displaying the Customize Menu
- Saving and Restoring Terminal Manager Settings
- Changing Your Keyboard Settings
- Choosing the Display Language
- Changing Your Pointer and Mouse Settings
- Changing Your Print Screen Settings
- Changing Your Security Settings
- Changing Your Screen Background
- Changing Your Window Colors
- Changing Your Terminal Manager Settings
- Changing Your Video Alignment Settings (VX227 Models)
- Saving the Terminal Manager Window's Position and Size
- Customizing the VXT Message Box

3.1 Displaying the Customize Menu

To display the Customize menu, click on Customize in the Terminal Manager window's menu bar. This chapter describes the menu items highlighted in gray:



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When you choose one of the highlighted menu items from the Customize menu, the terminal displays a dialog box with the feature settings for that topic. In dialog boxes, shaded buttons indicate the current settings. You can examine the settings and change them if desired. You can use the last three menu items to save and restore the Terminal Manager window's position and size.

Note

A system manager can customize settings for terminals and work groups. The system manager can also lock or unlock access to one or more of the Customize menu items. Locked menu items are dimmed.

3.2 Saving and Restoring Terminal Manager Settings

Each dialog box has a set of push buttons for saving and restoring settings. After you make changes in a dialog box, you can save your settings for future sessions by clicking on the OK button or Apply button. If you do not want to save your changes, click on the Cancel button. Some new settings do not take effect until you end your current session and begin another one.

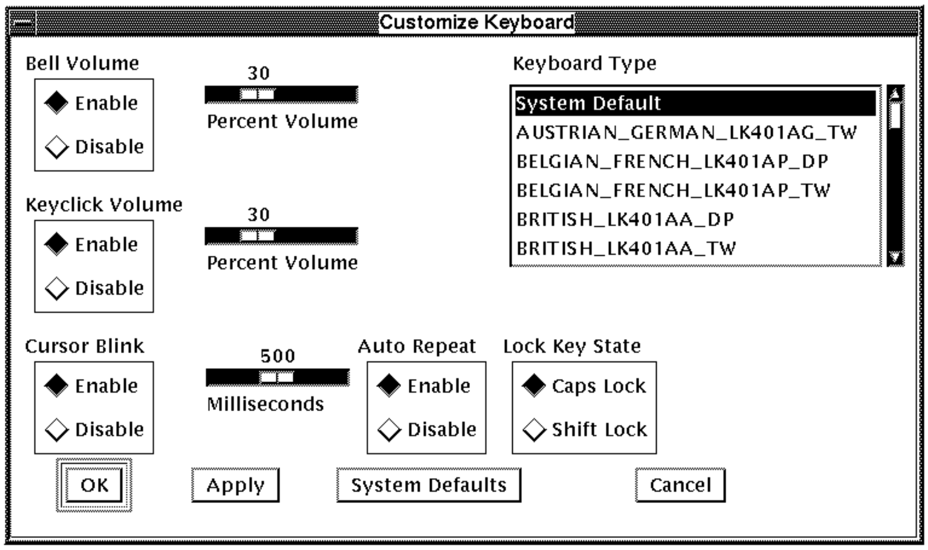
Click on ...	To ...
OK	Apply and save new settings and dismiss the dialog box.
Apply	Apply and save new settings without dismissing the dialog box.
System Defaults	Apply and save the factory-default settings, clearing all text and scroll boxes. **If your terminal is in a work group:** Clicking on the System Defaults button applies and saves the work group's customized settings.
Cancel	Dismiss the dialog box without changing any settings. If you made any changes without applying them, clicking on the Cancel push button cancels those changes.

3.3 Changing Your Keyboard Settings

You can control general keyboard settings from the Terminal Manager window, such as your keyboard type and keyclick volume. The keyboard type setting should match the keyboard you are using. To view or change your keyboard settings, choose Keyboard... from the Terminal Manager window's Customize menu. The Customize Keyboard dialog box looks like this:

Note

You can also customize some keyboard settings for individual VXT DECterm windows. See Chapter 7.



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From the Customize Keyboard dialog box, you can change any of the following settings:

- **Keyboard Type**

The keyboard comes in various models for different languages and dialects. The location of some keyboard characters varies, depending on the keyboard model. Make sure the Keyboard Type setting in the dialog box matches your keyboard model number, so the system will send the correct characters when you use the keyboard.

The System Default setting is the North American model of your standard (LK401), short UNIX style (LK421), PC style (LK443 or LK444), or Sun style (LK460) keyboard. If you are using a keyboard for another language or dialect, you must choose the matching keyboard type.

To find your keyboard model number: Look on the bottom of the keyboard for the label that specifies the model number. The model number should be in a format similar to LK4nn-*xx* or *nn-nnnnn-xx*. Use the *xx* value to choose your keyboard type from the Keyboard Type scroll box.

For example, if you have a British keyboard and the model number is LK401-AA, you choose British_LK401AA_TW or British_LK401AA_DP.

Typewriter (TW) or data processing (DP) keys

You also use the keyboard type setting to specify whether you want your keyboard to act as a typewriter (TW) or data processing (DP) keyboard. This setting affects keys with three or more characters. If you choose data processing, these keys send the characters on the right half of their keycaps. If you choose the typewriter setting, these keys send the characters on the left half of their keycaps.

Typewriter and data processing settings are identical for these keyboard types:

- North American and Dutch
- When using 8-bit multinational characters: British, German, and Portuguese

When using DECwindows: The DECwindows host session manager has a similar Keyboard Type option. Digital recommends that you leave the host setting at System Default to avoid having the host session manager and local terminal manager compete to set the keyboard.

☐ Bell Volume

The keyboard's warning bell alerts you to system messages. To adjust the bell volume, either drag the Percent Volume slider to the right or left, or point to a new location on the scale and click MB1. To disable the bell, click on the Disable button.

☐ Keyclick Volume

When you press a keyboard key, the keyboard makes a clicking sound. To adjust the keyclick volume, either drag the Percent Volume slider to the right or left, or point to a new location on the scale and click MB1. To disable keyclicks, click on the Disable button.

☐ Cursor Blink

Normally, the text input cursor blinks. To adjust the rate of blinking, either drag the Milliseconds slider to the right or left, or point to a new location on the scale and click MB1. To disable blinking, click on the Disable button. Your new setting takes effect when you restart the terminal.

VXT DECterm windows also have a Cursor Blink feature, controlling the text cursor in the VXT DECterm terminal window. The Cursor Blink setting in the Customize Keyboard dialog box has no effect on the VXT DECterm Cursor Blink setting.

☐ Auto Repeat

When you press a key longer than normal, it repeats until you release it. To disable this feature, click on the Disable button. The Help and Return keys never autorepeat.

VXT DECterm windows also have an Auto Repeat feature. When you create a VXT DECterm window, its Auto Repeat setting works independently of the Terminal Manager window's setting. To disable Auto Repeat for the Terminal Manager and VXT DECterm windows, disable both settings.

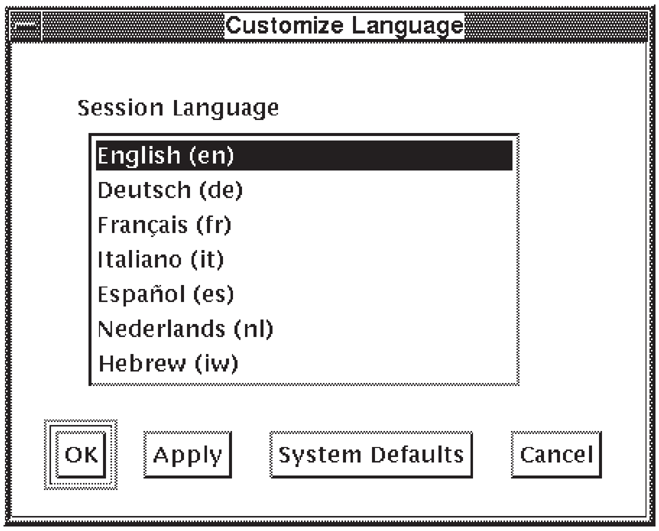
☐ Lock Key State

Normally when you press the lock key, the alphabetic keys send uppercase letters; the number keys and nonalphabetic character keys do not send their shifted character.

When you click on the Shift Lock button, all keys send their shifted character. The new setting takes effect when you restart the terminal.

3.4 Choosing the Display Language

The terminal supports different display languages for VXT screens. To change your display language setting, choose Language... from the Terminal Manager window's Customize menu. The Customize Language dialog box looks like this:



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To choose a new language:

1. Click on the language in the Session Language scroll box.
2. Click on OK to save the setting and dismiss the Customize Language dialog box.
3. Display the Session menu from the Terminal Manager window's menu bar.
4. Click on Reboot to restart the terminal and display the new language.

Hebrew Language for VXT DECterm Windows Only

The Hebrew language setting only affects VXT DECterm windows. All other VXT windows are displayed in English. You may also wish to select the Hebrew keyboard type.

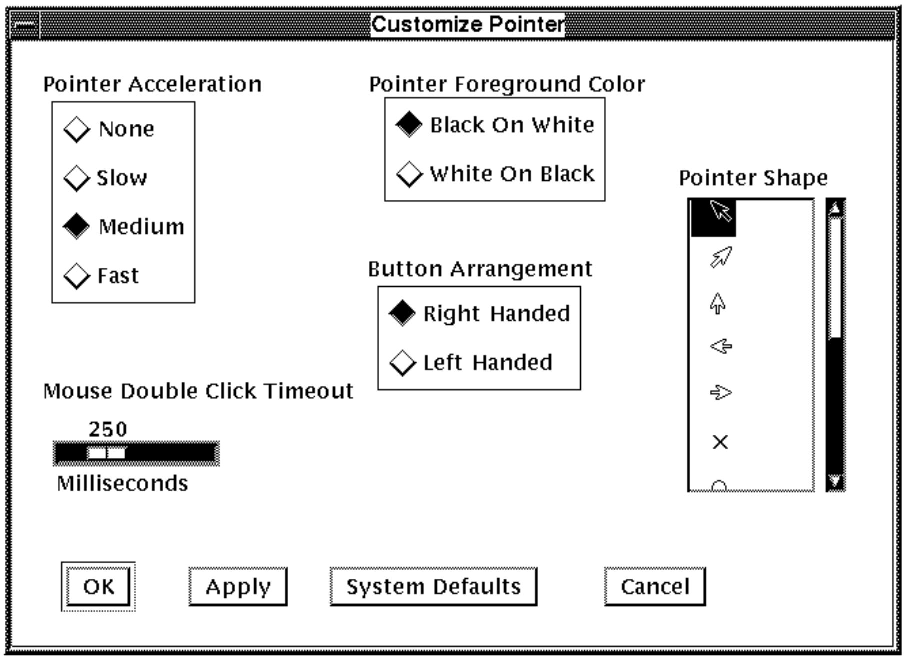
Reenter Your AutoStart Settings

If you have customized AutoStart settings, you must reenter the settings after you change your display language (Section 5.6).

3.5 Changing Your Pointer and Mouse Settings

You can change the shape, color, and speed of the screen pointer for the mouse or other input device. You can set the mouse buttons for a left-handed or right-handed user. You can also set the time limit for performing the second click in a double-click sequence. To change your mouse and pointer settings, choose Pointer... from the Terminal Manager window's Customize menu. The Customize Pointer dialog box looks like this:

Customize Pointer Dialog Box (Monochrome)



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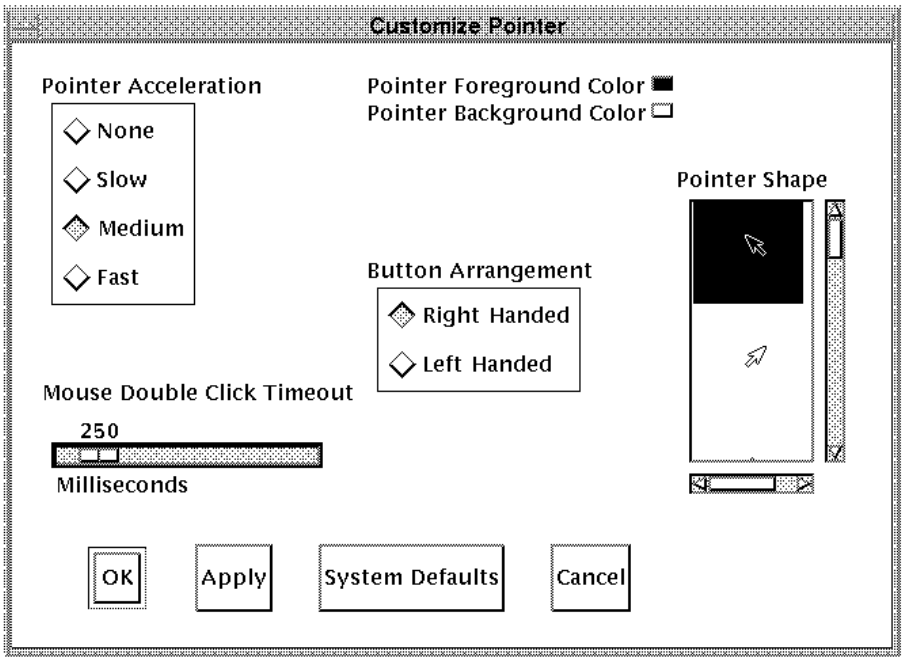
Customize Pointer Dialog Box (Gray Scale or Color)



LJ–01150–RAGS

From the Customize Pointer dialog box, you can change any of the following settings:

☐ **Pointer Acceleration**

Click on one of the four options to vary the rate at which the pointer moves in relation to the mouse. The None setting keeps the pointer speed constant. The Fast setting makes the pointer move farther as you move the mouse faster. The default setting is Medium.

☐ **Button Arrangement**

The default mouse button arrangement is for a right-handed user—MB1 on the left of the mouse and MB3 on the right. If you are left-handed, you can click on the Left Handed button. This makes MB1 the right mouse button and MB3 the left mouse button. MB2 is always the middle button.

☐ Pointer Foreground Color

The pointer consists of an outline and filled center.

On a monochrome terminal: Normally, the pointer's filled area is black with a white outline. To reverse the fill and outline colors, click on the White On Black button.

On gray scale and color terminals: Normally, the pointer's filled area (foreground) is black. To change this setting, click on the Pointer Foreground Color button. The terminal displays a Color Mixing dialog box (Appendix B).

To see your changes, click on Apply or OK in the dialog box.

☐ Pointer Background Color

This button is only on gray scale and color terminals. To change the default color, click on the Pointer Background Color button. The terminal displays a Color Mixing dialog box (Appendix B).

To see your changes, click on Apply or OK in the dialog box.

☐ Pointer Shape

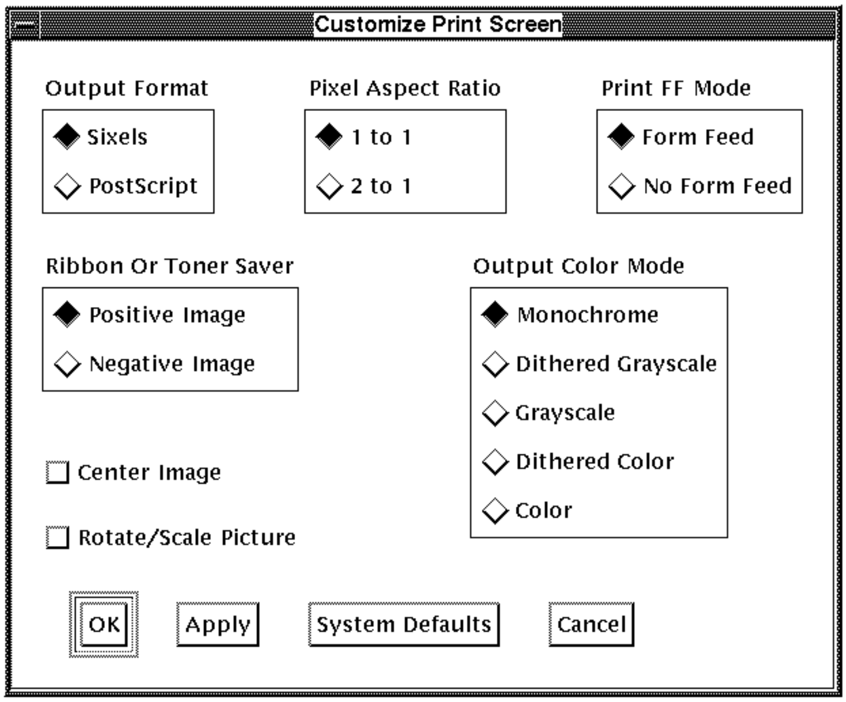
To change the pointer shape, scroll through the list of shapes and choose the one you want.

☐ Mouse Double Click Timeout

Some applications can tell two single clicks from a double click, based on the speed at which buttons are clicked. To change the time allowed for making the second click in a double-click sequence, drag the slider to the right or left, or move the pointer to a location on the scale and click MB1.

3.6 Changing Your Print Screen Settings

Print screen settings affect a printer connected locally to the serial or parallel port on the rear of the terminal. You can control certain printing features for print screen operations, such as the output format and the ability to center or rotate the image. To view the print screen settings, choose Print Screen... from the Terminal Manager window's Customize menu. The Customize Print Screen dialog box looks like this:



LJ–01161–RAGS

From the Customize Print Screen dialog box, you can change the following settings:

☐ Output Format

You can choose the output format to match your printer's data format, sixel or POSTSCRIPT.

☐ Pixel Aspect Ratio

You can choose the pixel aspect ratio to match the dot density of the printer you are using. A pixel aspect ratio of 1 to 1 is appropriate for most printers.

- For level 2 printers such as the LA75 or LN03, use a pixel aspect ratio of 1 to 1.
- For level 1 printers such as the LA50, use a pixel aspect ratio of 2 to 1.

☐ Print FF Mode

The terminal can send a form feed (FF) character to the printer port at the end of a print screen operation. If you want to send a form feed, click on the Form Feed button.

☐ Ribbon or Toner Saver

Normally, you print dark images on a light background. However, a large image may consume a great deal of printer ribbon or toner. To save ribbon or toner, you can click on the Negative Image button; this reverses the dark and light portions of the printed output.

☐ Output Color Mode

Window snapshots are usually printed or captured in black and white.

Click on the Color option if you want to print color pictures. Click on the Grayscale option to print black and white images in various gray tones. The Grayscale setting also makes screen colors easier to distinguish in black and white print.

You may want to use the Dithered Color or Dithered Grayscale buttons when you are printing continuous tone images, such as photographic images.

☐ Center Image

Use the Center Image button to automatically center the screen image on the printed page.

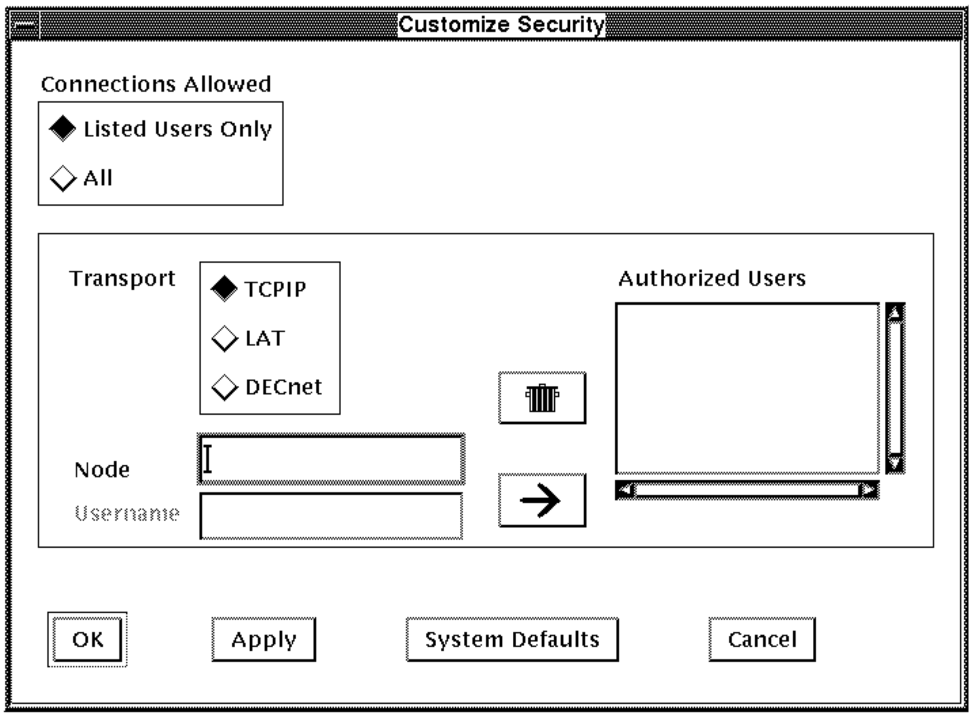
☐ Rotate/Scale Picture

For wide images, you can use the Rotate/Scale button to automatically rotate and scale images so they fit on the printed page.

3.7 Changing Your Security Settings

Initially, you cannot connect to your terminal from another system (unless your system manager has customized your security settings). This means you cannot log in from another system and use your terminal until you authorize yourself to do so.

You can choose which hosts and users can connect to your terminal. Only authorized hosts and users can make connections to the terminal to display applications on your screen or request data from your screen. To change your security settings, choose Security... from the Terminal Manager window's Customize menu. The Customize Security dialog box looks like this:



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Connections Allowed

Normally, only those users listed in the Authorized Users scroll box can connect to the terminal. To allow any user on the network to connect to the terminal, click on the All button.

To prevent any X connection to your terminals, click on the Listed Users Only button and leave the Authorized Users scroll box empty.

Listed Users Only When you choose this setting, only the systems and users entered in the Authorized Users scroll box can establish X connections to your terminal. This setting requires that you authorize your own account in addition to any others that need access to your display.

All When you choose this setting, any system on the Ethernet can establish an X connection to your terminal. Use this setting if you are part of a small group running interactive applications that require sharing of information in real time.

☐ Authorized Users

The Authorized Users scroll box contains the names of those users you allow to have access to your terminal. When you add a user, you associate the user with their communication transport, address, node name, and username, if applicable.

To add users to the Authorized Users List:

1. In the Transport box, click on the type of transport of the user (TCP/IP, LAT, or DECnet).
2. Enter an address or node name in the Node box, then press the Return key.
   - *TCP/IP example:* `market` or `12.345.123.45`
   - *LAT example:* `MARKET`
   - *DECnet example:* `MARKET` or `61.513`
3. For LAT and DECnet, enter a username in the Username box, then press the Return key. You can use the asterisk (*) wildcard character to specify all users.
   - *Example:* `CAROLYN` or `*`
4. Click on the → button to enter the user in the Authorized Users scroll box.
5. Repeat the previous steps for each user you want to add to the Authorized Users scroll box.
6. Click on Apply or OK to save your security settings.

To remove an authorized user:

1. In the Authorized Users scroll box, click on the username you want to remove.

2. Click on the trash can button.

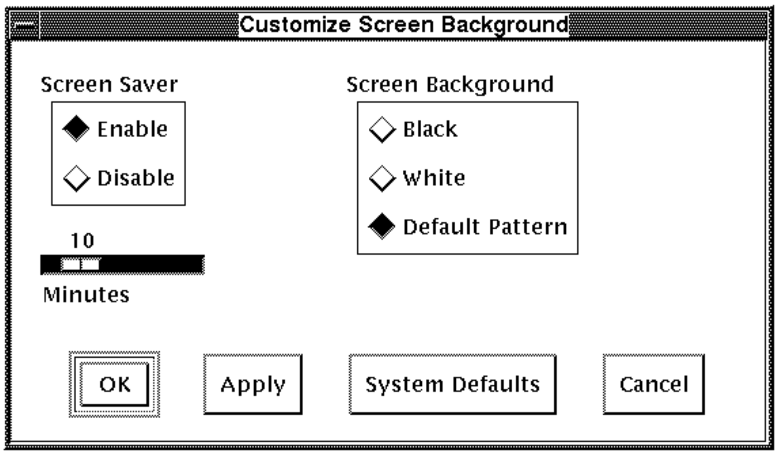
Caution

If you click on System Defaults, you clear the Authorized Users scroll box. If you belong to a work group, System Defaults recalls your work group settings.

3.8 Changing Your Screen Background

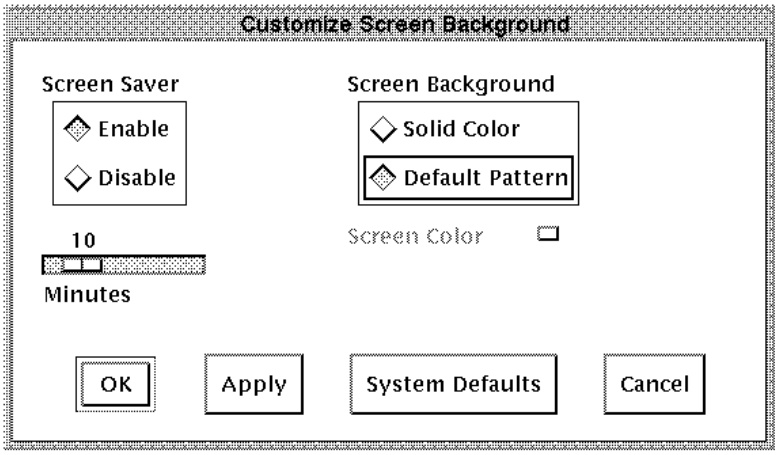
You can change the look of your terminal's screen display. For example, you can change the screen's background color or select the default screen pattern. To change your screen settings, choose Screen Background... from the Terminal Manager window's Customize menu. The Customize Screen Background dialog box is displayed:

Customize Screen Background Dialog Box (Monochrome)



LJ–01163A–RAGS

Customize Screen Background Dialog Box (Gray Scale or Color)



LJ–01177–RAGS

From the Customize Screen Background dialog box, you can change the following settings:

☐ Screen Saver

The Screen Saver extends the life of your monitor by shutting off the display if the terminal is inactive for a specified time. Normally, the terminal shuts off its display after 10 minutes of keyboard or mouse inactivity. You can use the sliding scale to vary the time, from 1 to 60 minutes.

☐ Screen Background

The default screen background pattern is a tight, gray crossweave. To change the screen background to a solid color:

On a monochrome terminal: Click on the Black or White radio button.

On gray scale and color terminals: Click on the Solid Color button. Then click on the Screen Color button. The terminal displays a Color Mixing dialog box (Appendix B).

To see your new setting in effect, click on Apply or OK.

To display the default pattern, click on the Default Pattern button.

DECwindows Session Manager Sets the Screen Background

On host systems that use DECwindows software, the session manager has a similar Screen Background option. If you create an X session to the system, the screen background setting on the host system takes effect. For a consistent screen background, use the same setting on the terminal and the host.

3.9 Changing Your Window Colors

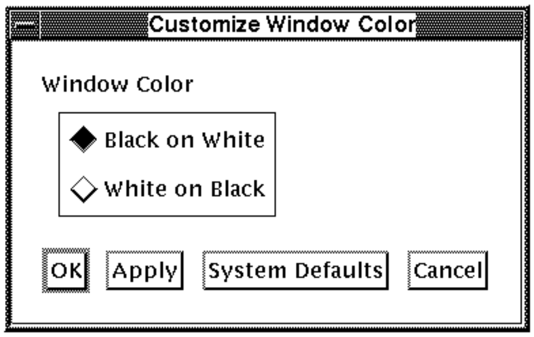
You can change the window colors of your local VXT windows. On monochrome terminals, you can use the default black text on a white background or change to white text on a black background. On gray scale and color terminals, you can change foreground, background, and highlight colors. You can also change the shadow colors that produce the three-dimensional look.

If you have VXT Version 2.1 software, your color settings also affect local VXT DECterm windows.

Your window color settings do not affect windows that you open through a remote session manager. For example, if you open DECterm windows through a remote session manager on a host system, you can set the colors for those windows in the remote session manager.

To change your window color settings, choose Window Color... from the Terminal Manager window's Customize menu. The terminal displays the Customize Window Color dialog box for a monochrome or color terminal.

Customize Window Color Dialog Box (Monochrome)



LJ–01164–RAGS

From the Customize Window Color dialog box, you can change the following settings on monochrome terminals:

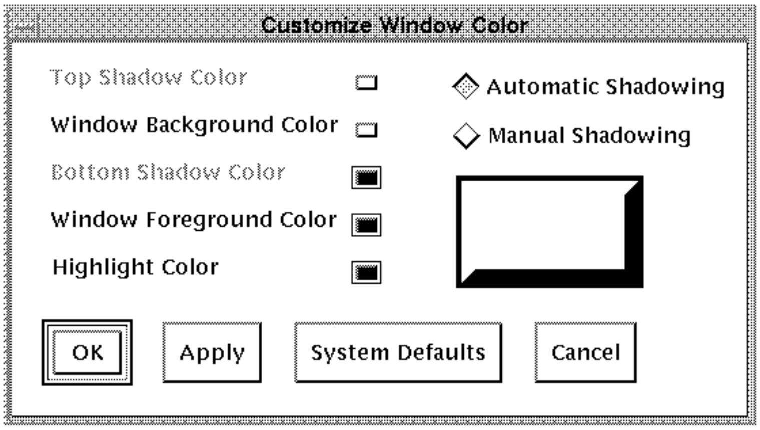
On Monochrome Terminals

☐ Window Color

The window color is normally black on white. Click on the White On Black radio button to reverse the colors.

To see your new setting in effect, click on Apply or OK.

Customize Window Color Dialog Box (Color)



LJ–01165–RAGS

From the Customize Window Color dialog box, you can change the following settings on gray scale or color terminals:

On Gray Scale or Color Terminals

☐ Top Shadow Color

Top and bottom shadow colors must be well matched to present a three-dimensional look. Normally, the terminal automatically determines top and bottom shadow colors when you change the window color. When you use automatic shadowing, the Top Shadow Color and Bottom Shadow Color labels are dimmed.

To choose your own top shadow color:

1. Click on the Manual Shadowing button to disable automatic shadowing.
2. Click on the Top Shadow Color button to display the Color Mixing dialog box (Appendix B).

Window Background Color

The window background color is normally white. To change this setting, click on the Window Background Color button to display the Color Mixing dialog box (Appendix B).

If you save your changes by clicking on Apply or OK in the Color Mixing dialog box, your new settings take effect when you start your next session.

Bottom Shadow Color

The Bottom Shadow button works like the Top Shadow button.

Window Foreground Color

The Window Foreground Color setting changes the color of text and graphics in the window.

To change the window foreground color, click on the Window Foreground Color button to display the Color Mixing dialog box (Appendix B).

If you save your changes by clicking on Apply or OK in the Color Mixing dialog box, your new settings take effect when you start your next session.

Highlight Color

The Highlight Color setting controls the color of screen objects with input focus such as text-entry boxes and check and radio buttons. The highlight color is normally black. To change the highlight color, click on the Highlight Color button to display the Color Mixing dialog box (Appendix B).

If you save your changes by clicking on Apply or OK in the color mixer, your new settings take effect when you start your next session.

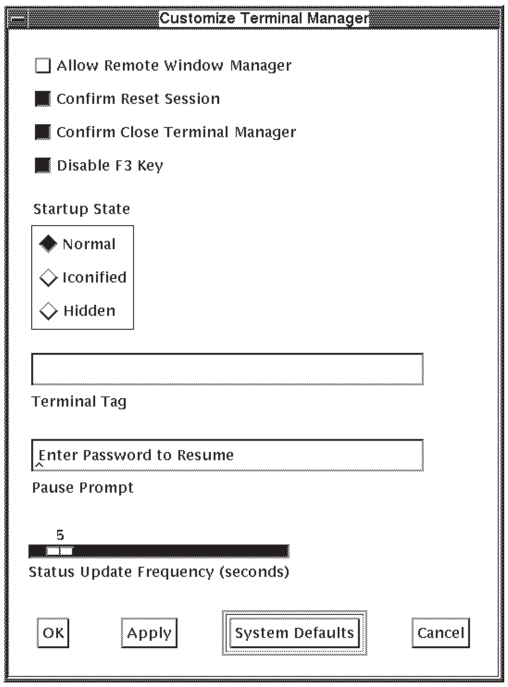
3.10 Changing Your Terminal Manager Settings

The Customize Terminal Manager dialog box lets you choose various settings that affect the terminal manager and window management. You can

- Choose to use the terminal's window manager or a window manager on a host system
- Choose the Terminal Manager window's startup state (normal, icon, or hidden)
- Use the F3 toggle key to hide or display the Terminal Manager window
- Disable the confirmation box displayed when resetting the terminal
- Enter a tag to identify your terminal in the configuration manager
- Enter the text to display when you pause a session

- Specify how frequently to update the status boxes in the Session menu

To change your Terminal Manager window settings, choose Terminal Manager... from the Terminal Manager window's Customize menu. The Customize Terminal Manager dialog box looks like this:



LJ–01166C–RAGS

From the Customize Terminal Manager dialog box, you can change the following settings:

☐ Allow Remote Window Manager

You can choose whether or not a host-based window manager can take over windowing operations on the screen. The terminal's local window manager provides you with quicker response time and overall higher performance. However, a host-based window manager may offer more features. To let the host control windowing operations, click on the Allow Remote Window Manager button.

☐ Confirm Reset Session

When you choose Reset, Reboot, or Shutdown from the Session menu, the terminal normally asks for confirmation. You can turn this feature on or off by clicking on the Confirm Reset Session button. When this feature is off, choosing Reset, Reboot, or Shutdown from the Session menu will immediately end the current session, without displaying the confirmation box. See Section 2.3.3 for details on the Session menu.

☐ Confirm Close Terminal Manager

When you choose Close from the Session menu, the terminal normally asks you to confirm that you want to close the Terminal Manager window. You can turn this confirmation feature on or off by clicking on the Confirm Close Terminal Manager button. When this feature is off, choosing Close from the Session menu immediately closes the Terminal Manager window, without displaying the confirmation box. Closing the Terminal Manager window also closes the VXT Message Box, unless you have customized the terminal to start the VXT Message Box as a separate application.

☐ Disable F3 Key (For Hiding the Terminal Manager Window)

You can choose to use the F3 key as a toggle key for hiding and displaying the Terminal Manager window, VXT Message Box, and their icons. This feature allows you to hide these applications while you are working in other windows, then redisplay them when needed. Normally, the F3 key function is disabled.

When you redisplay the Terminal Manager window and VXT Message Box, the message box receives input focus.

If you have customized the AutoStart dialog box to start the Terminal Manager window and VXT Message Box as separate applications, then the F3 key cannot hide the message box. In this case, the Terminal Manager window receives input focus when you redisplay it.

When you use the F3 key to hide and redisplay the Terminal Manager and VXT Message Box, you lose any customized window size settings for those applications. If you maximize the windows before hiding them, you cannot use the maximize button to return them to their normal size.

☐ Startup State

Normally when you restart the terminal, it displays the Terminal Manager window and VXT Message Box. You can choose to hide the Terminal Manager window and VXT Message Box at startup, or to display them as icons. To change the current setting, click on the appropriate button.

If you have changed the Customize AutoStart dialog box settings to start the Terminal Manager window and VXT Message Box as separate applications, the Startup State only affects the Terminal Manager window.

Caution

Before you change the Startup State to Hidden, decide whether or not you need to make the Terminal Manager window viewable after startup. If you want the window to be viewable, make sure the F3 key is enabled to display the Terminal Manager window. See the Disable F3 Key button in this dialog box. If you forget to enable the F3 key, see your system manager to change the setting from the Configuration Manager: Resource Management dialog box.

Terminal Tag

You can specify a name to identify your terminal in the configuration manager (server-based systems only). To enter a name, click on the Terminal Tag box. Your name can have up to 31 characters. After you click on Apply or OK in the Customize Terminal Manager dialog box, your system manager can display the new terminal tag in the Configuration Manager: Resource Management dialog box.

Your system manager can also create a name for your terminal by using the Optional Name field in the configuration manager's Create Terminal dialog box. The terminal uses the most recently entered name (Terminal Tag or Optional Name).

Pause Prompt

You can specify the text displayed in the pause prompt box when you pause your terminal session. Click on the Pause Prompt box and enter a prompt of up to 80 characters.

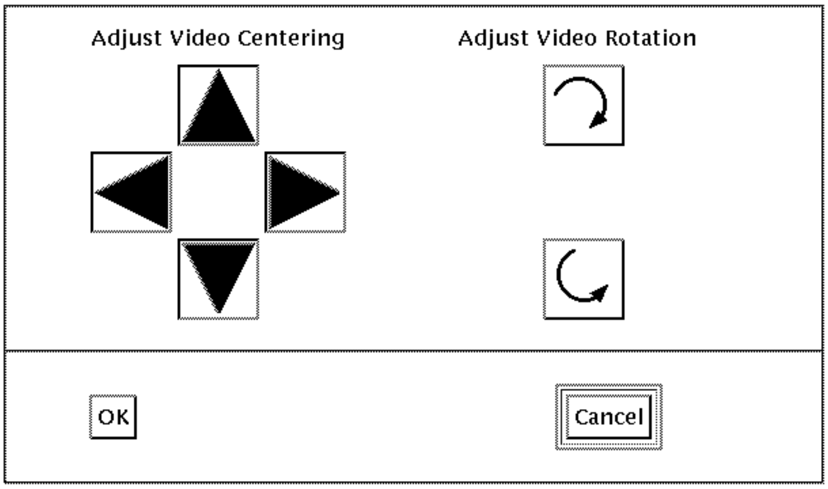
Status Update Frequency (seconds)

You can specify how frequently the terminal updates the information in the status dialog boxes displayed from the Session menu. The normal setting is 5 seconds. Click on the Status Update Frequency (seconds) slider to specify an interval from 0 to 60 seconds.

3.11 Changing Your Video Alignment Settings (VX227 Models)

If you have a VXT 2000 model VX227 windowing terminal, you adjust your video alignment from a Customize dialog box rather than using physical controls on the terminal. The video alignment dialog box is only for VX227 terminals.

To adjust your video alignment settings, choose Video Alignment... from the Terminal Manager window's Customize menu. The Customize Video Alignment dialog box looks like this:



LJ–01139–RAGS

From the video alignment dialog box, you can change the following settings. Your new settings take effect when you click on OK.

Adjust Video Centering

You use the four Adjust Video Centering buttons to center the display on the screen. Each time you click on an ↑ button, the display shifts in the arrow's direction.

Adjust Video Rotation

You use the two Adjust Video Rotation buttons to rotate the display on the screen. Each time you click on one of the buttons, the display rotates in the arrow's direction.

3.12 Saving the Terminal Manager Window's Position and Size

You can make changes to the Terminal Manager window's position and size on the screen, then save the changes for use in all future sessions. You can also recall the factory-default position and size for the Terminal Manager window, or recall the last position and size you saved.

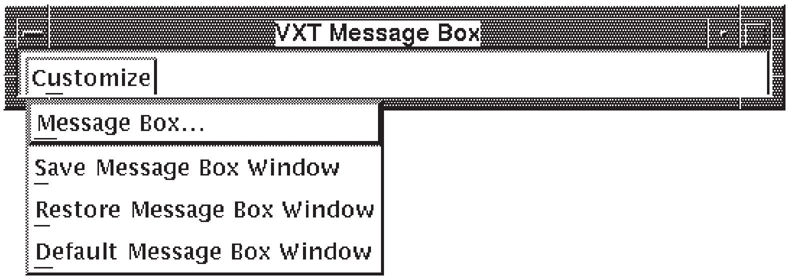
To save or restore the Terminal Manager window's position and size on the screen, use the following menu items from the Customize menu:

Choose...	To...
Save Terminal Manager Window	Save the Terminal Manager window's current position and size for use in all future sessions.
Restore Terminal Manager Window	Restore the last position and size you saved. Choose this menu item if you want to reset features you changed temporarily, but did not save.
Default Terminal Manager Window	Recall the factory-default position and size for the Terminal Manager window.

3.13 Customizing the VXT Message Box

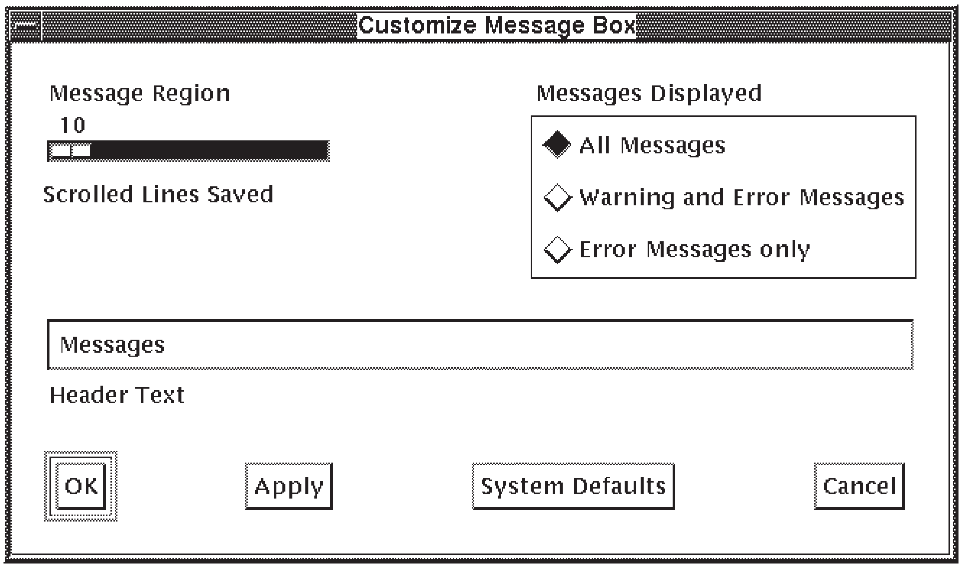
The VXT Message Box displays system status and error messages. You can choose the categories of messages displayed. You can also set the number of message lines saved in the scroll box. To change your VXT Message Box settings:

1. Click on the Customize menu in the VXT Message Box.



TI–03011–RAGS

2. Choose Message Box... to display the Customize Message dialog box.



TI–03012–RAGS

From the Customize Message dialog box, you can change the following settings:

- **Message Region**

  You can scroll through text in the VXT Message Box. The Scroll Lines Saved slider lets you specify how many message lines to save when they are scrolled out of the region. Any extra lines are discarded.

  This feature does not affect the size of the Messages region. You can change the size of the scroll box by changing the size of the VXT Message Box window.

- **Messages Displayed**

  Normally, the terminal displays all informational, warning, and error messages in the Messages scroll box. You can choose to display warning and error messages only, or error messages only.

- **Header Text**

  Normally, the title of the Messages scroll box in the VXT Message Box is Messages. To change the title, click on the Header Text box and enter a new title.

3.13.1 Saving the VXT Message Box's Position and Size

You can make changes to the VXT Message Box's position and size on the screen, then save the changes for use in all future sessions. You can also recall the factory-default position and size, or recall the last position and size you saved.

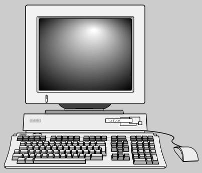
To save or restore the VXT Message Box's position and size on the screen, use the following menu items from the Customize menu:

Choose...	To...
Message Box...	Display the Customize Message Box.
Save Message Box Window	Save the VXT Message Box's current position and size for use in all future sessions.
Restore Message Box Window	Restore the last position and size you saved. Choose this menu item if you want to reset features you changed temporarily, but did not save.
Default Message Box Window	Recall the factory-default position and size for the VXT Message Box.

Closing the VXT Message Box:

Normally, the VXT Message Box runs together with the Terminal Manager window. To close the Terminal Manager window and VXT Message Box, click on the Session menu in the Terminal Manager window and choose Close.

If you customize your AutoStart settings to run the VXT Message Box as a separate application, the VXT Message Box has a separate File menu. In this case, you can close the VXT Message Box alone by clicking on the File menu and choosing Exit. See Section 5.6.



4

Customizing Communications

This chapter describes how to customize communication between the terminal and host systems. Your terminal can use several communication protocols to communicate with host systems: TCP/IP, NFS, LAT, LASTport, and DECnet. You can also choose to use a serial or parallel port for a local printer or host system. After you make changes, you can save your settings for all future sessions.

The chapter covers the following major topics:

- Changing Your Serial and Parallel Port Settings

  These settings affect your local printer or serial host.

- Changing Your LAT Settings

  These settings let a system manager fine-tune communication in a LAT network.

- Changing Your LASTport Group Code Settings (InfoServer Systems)

  The group code determines which InfoServer systems your terminal can communicate with.

- Changing Your TCP/IP IP Address Settings

  You must enter an IP address to communicate with systems that use the TCP/IP transport.

- Changing Your TCP/IP Name Server Settings

  You must specify a name server if you want to identify TCP/IP systems by name in other dialog boxes.

- Changing Your TCP/IP Routing Table Settings

  You can specify routing information for communicating with TCP/IP systems.

- Changing Your NFS Settings

  You must enter NFS Mount Points to communicate with systems that use the NFS transport.

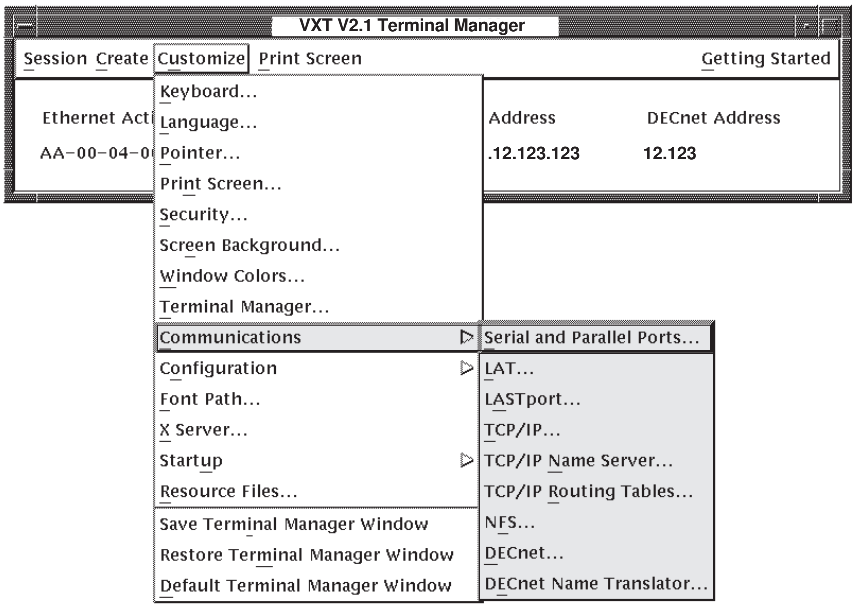
- Changing Your DECnet Name Translator Settings

  You must specify a name translator if you want to identify DECnet systems by name in other dialog boxes.

To customize communications, you use the Communications submenu on the Terminal Manager window's Customize menu.

4.1 Displaying the Communications Submenu

To display the Communications submenu, first click on the Customize menu in the Terminal Manager window and choose Communications. The Communications submenu looks like this:



LJ–03540–RAGS

When you choose a menu item from the Commmunications submenu, the terminal displays a dialog box with the feature settings for that topic. In dialog boxes, shaded buttons indicate the current settings. You can examine the settings and change them if desired.

Note

A system manager can customize settings for terminals and work groups. The VXT manager can also lock or unlock access to one or more of the Customize menu items. Locked menu items are dimmed.

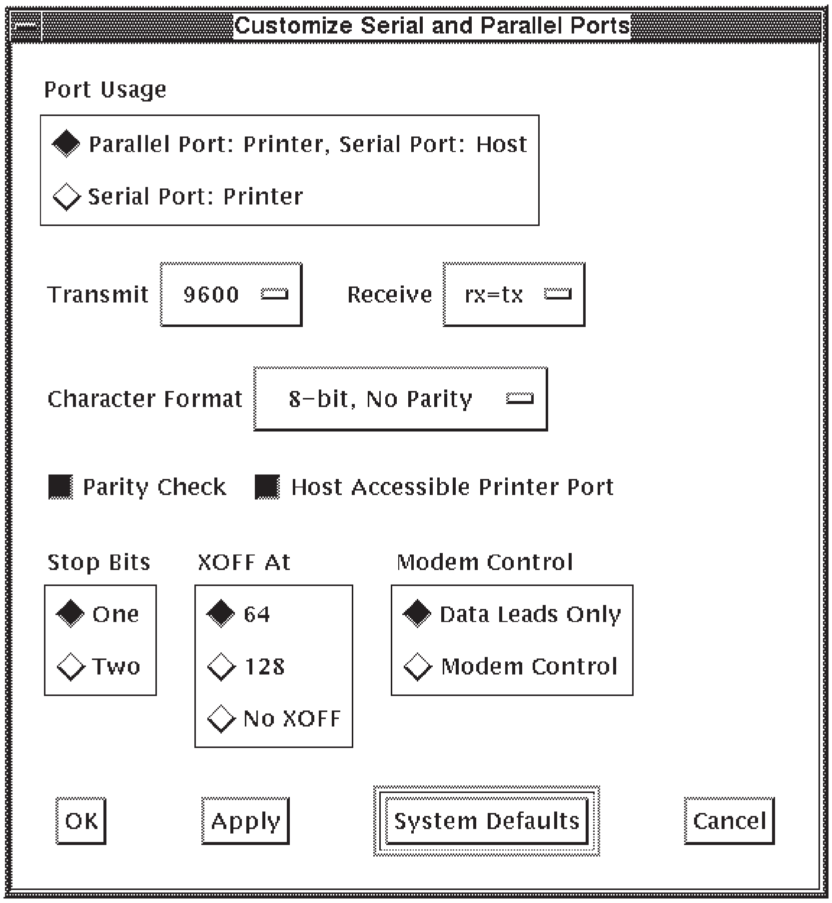
4.2 Changing Your Serial and Parallel Port Settings

You can specify the communication settings of the terminal's serial and parallel ports to make them compatible with a serial host system or a local printer. The default settings work with most Digital systems. Make sure the settings you use match your host system.

The serial port is for connecting a host system or a local serial printer. The parallel port is for connecting a local parallel printer. Each port has one 25-pin connector on the rear of the system box.

When you connect to a host system through the serial port, you use the 25-pin, RS–232 serial port connector on the rear of the terminal. The serial port connector is above the parallel port connector.

To change the port settings, choose the Communications submenu from the Terminal Manager window's Customize menu. Then choose Serial and Parallel Ports... to display the Customize Serial and Parallel Ports dialog box:



LJ–01168B–RAGS

From the Customize Serial and Parallel Ports dialog box, you can change the following settings:

☐ Port Usage

By default, the parallel port acts as a printer port and the serial port acts as a host port. You can set the serial port to act as the printer port. You can choose one of two functions for the serial port:

Choose...	To...
Parallel Port: Printer, Serial Port: Host	Use the parallel port for a parallel printer, and the serial port for a host system.
Serial Port: Printer	Use the serial port for a serial printer.

☐ Transmit

You can change the speed the terminal uses to send data, to match your host system or printer. Normally, the serial port uses a speed of 9600 baud, which works with most Digital systems. To choose another speed, click on the button in the Transmit box and make a choice from the pop-up menu. Your new speed appears in the Transmit box.

The terminal does not support speeds lower than 300 baud.

☐ Receive

You can change the speed the terminal uses to receive data from the host system or printer. Make sure you choose a receive speed that matches your host's or printer's transmit speed. Normally, the terminal's receive speed matches its transmit speed (rx = tx setting). However, the terminal can transmit at one speed and receive at another.

To choose another speed, click on the button in the Receive box and make a choice from the pop-up menu. Your new speed appears in the Receive box.

☐ Character Format

You can choose the word size and number of parity bits used to communicate with the host system or printer. The terminal uses a default word size of 8 bits and no parity. This setting works with most of today's computer systems.

To choose another setting, click on the button in the Character Format box and make a choice from the pop-up menu. Your new setting appears in the Character Format box.

☐ Parity Check

Normally, the terminal performs a parity check on bytes of data. To turn this feature on or off, click on the Parity Check button.

☐ Host Accessible Printer Port

Normally, the terminal can accept remote printing jobs sent from host systems that use the TCP/IP or LAT transport. To turn this feature on or off, click on the Host Accessible Printer Port button. To send printing jobs from a host, see Section 2.8.2.

☐ **Stop Bits**

You can choose the number of stop bits used in the character format. Digital recommends using one stop bit for most applications. To select two stop bits, click on the Two button.

☐ **XOFF At**

You can choose how many characters the terminal stores in its receive buffer before sending the host or printer an XOFF signal to stop sending data. Normally, the terminal sends XOFF to the host when the input buffer contains 64 characters. To choose 128 characters or no XOFF, click on the appropriate button.

☐ **Modem Control**

You can choose Modem Control if you are communicating with a host system and need to use extended modem features. Otherwise, use Data Leads Only.

Data Leads Only Choose Data Leads only if you do not plan to use modem control features or your modem (or modem cable) is not configured for modem control. The terminal uses pin 2 to transmit data and pin 3 to receive data.

The terminal asserts the data terminal ready (DTR) signal on pin 20 whenever the terminal is on.

The terminal receives the data set ready (DSR) signal on pin 6. The terminal uses DSR to detect the status of the connected printer or host system modem and display status messages about the device. Note that in Data Leads Only mode data is always transmitted, regardless of the state of the DSR signal.

Modem Control Choose Modem Control if you plan to use modem features that require additional signals beyond data leads only, such as call origination and dialing from the keyboard. The control lines follow the CCITT V.24 and V.28 and EIA RS–232–C designations and control the flow of data based on the state of various signals.

4.3 Changing Your LAT Settings

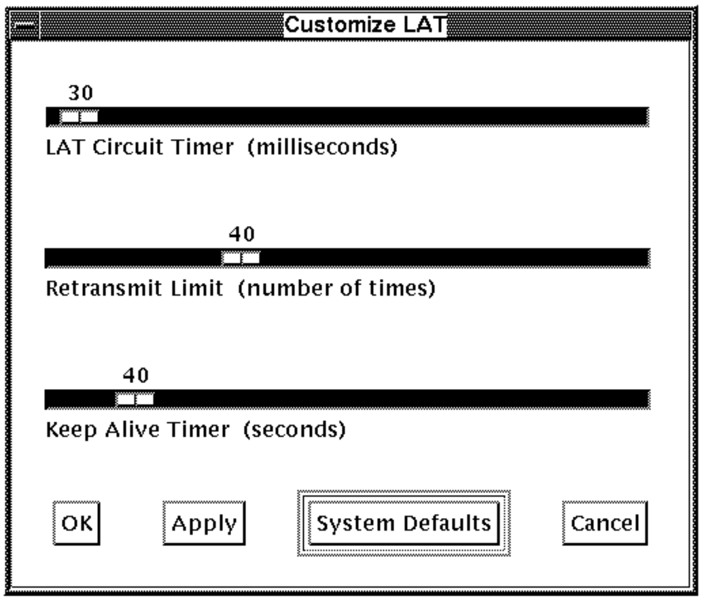
OpenVMS systems typically use the local area transport (LAT) to connect to the terminal. The terminal connects to all LAT group codes (0 to 255); you cannot select group codes.

Your system manager can fine-tune the characteristics of your LAT environment by adjusting the three slide bars in the Customize LAT dialog box.

Note

These settings directly affect the performance of your local area network. Do not try to adjust these settings yourself; they should be adjusted only by system managers. Incorrect adjustments can produce poor network and terminal performance.

To change LAT settings and adjust performance, choose the Communications submenu from the Terminal Manager window's Customize menu. Then choose LAT... to display the Customize LAT dialog box:



LJ–01169A–RAGS

From the Customize LAT dialog box, you can change the following settings:

☐ LAT Circuit Timer

You set the LAT Circuit Timer to tune the network for the best response time and network performance when running an X window or DECterm terminal window session. The optimum setting depends on the number of users on the local area network and the typical network traffic conditions. The normal setting of 30 milliseconds produces the best performance for most systems.

LAT circuit timer settings takes effect when the first LAT circuit is created. If you change the setting while LAT circuits are running, it does not take effect until you exit all existing LAT circuits.

☐ **Retransmit Limit**

To make a LAT connection to a host system, the terminal sends out a request-to-connect message, then waits for an acknowledgement. If the host does not acknowledge the request, the terminal resends the message a specified number of times.

The Retransmit Limit setting tells the terminal how many times to resend the message. If the terminal does not receive an acknowledgement after sending the message the specified number of times, the terminal stops requesting a connection and indicates it could not connect to that host.

Normally, the terminal resends the message 40 times before it stops trying to connect to the host. This setting works well with most Digital systems.

☐ **Keep Alive Timer**

When the terminal is inactive, it sends certain LAT messages out on the network every few seconds to keep the LAT connection alive. Normally, the terminal sends messages out every 40 seconds. This setting works well with most Digital systems.

4.4 Changing Your LASTport Group Code Settings (InfoServer Systems)

Server-based terminals use an InfoServer system for downloading and booting VXT software, configuration management, access to the InfoReader library, virtual memory, and other services. To communicate with a particular InfoServer system, your terminal must have the same group code as the InfoServer. On large local area networks, group codes can help reduce the number of InfoServer systems that your terminal must identify and communicate with.

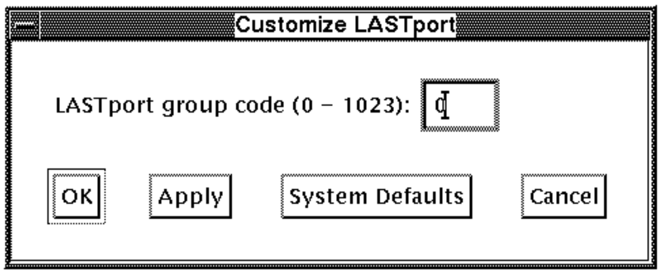
By default, the LASTport group code on InfoServer systems and VXT 2000 windowing terminals is set to 0. If the InfoServer system's group code is not 0, you or your system manager must change the terminal's default group code to match the InfoServer's group code.

The LASTport Group Code dialog box lets you change the terminal's group code setting to match the servers that you want to access. Ask your system manager for your server's group code. New group code settings take effect when you restart the terminal.

If you cannot boot your terminal from an InfoServer system because your terminal has a different group code:

1. Quickly press and release the halt button on the rear of the terminal.
   - If your terminal has a system box, the halt button is next to the indicator lights on the rear of the system box.
   - If your terminal does not have a system box, the halt button is below the keyboard connector on the rear of the monitor.
2. At the >>> prompt, enter the command **b/100000**.
3. At the `LASTport group code (0-1023)>` prompt, enter the group code of the server you want to connect to. See your system manager for the correct group code.
4. After the Terminal Manager window appears, enter the group code in the Customize LASTport dialog box.

To enter or change LASTport group code address settings, choose the Communications submenu from the Terminal Manager window's Customize menu. Then choose LASTport... to display the Customize LASTport dialog box:



LJ–01117–RAGS

To enter a LASTport group code:

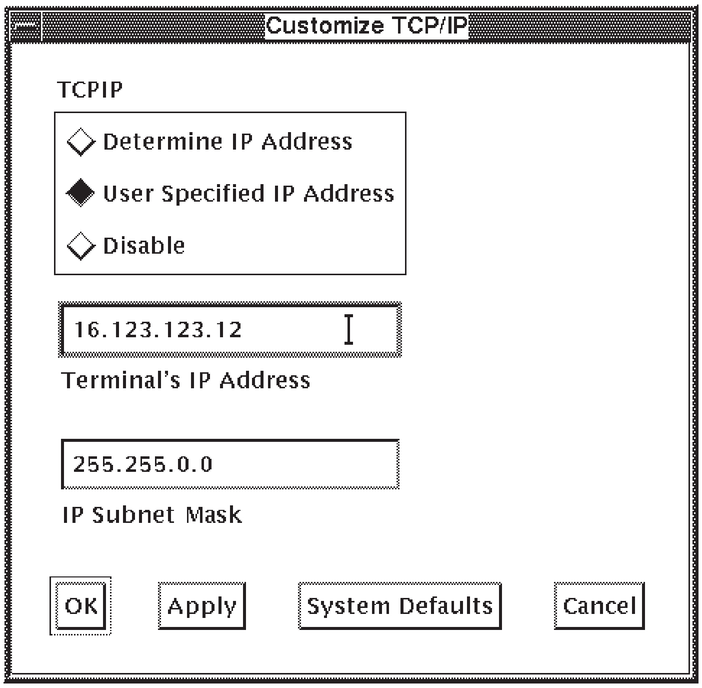
1. Enter the LASTport group code (from 0 to 1023) in the text-entry box.

   Examples: `34` or `567`.
2. Press Return or click on OK or Apply.
3. Restart the terminal.

4.5 Changing Your TCP/IP IP Address Settings

UNIX, ULTRIX, and DEC OSF/1 AXP systems typically use the TCP/IP transport to connect to the terminal. To communicate with systems using TCP/IP, you must enter an IP address and subnet mask for the terminal. You use the Customize TCP/IP dialog box to enable or disable TCP/IP and enter the terminal's IP address and subnet mask. After you enter and save the IP address, it appears at the bottom of the Terminal Manager window.

To enter or change TCP/IP address settings, choose the Communications submenu from the Terminal Manager window's Customize menu. Then choose TCP/IP... to display the Customize TCP/IP dialog box:



LJ–01170C–RAGS

From the Customize TCP/IP dialog box, you can change the following settings:

☐ TCPIP

You can choose to enter an IP address yourself or to have the terminal automatically determine its address from a file set up by your system manager. Normally, the User Specified IP Address button is on. You can disable the use of TCP/IP by clicking on the Disable button.

Determine IP Address Use this setting if you want the terminal to automatically determine its IP address, subnet mask, and the IP address of an optional name server by reading a host system file created by your system manager.

After you reboot the terminal, the terminal's IP address appears in the Terminal Manager window.

Note

Your system manager must enter your terminal's information in the BOOTP daemon's configuration file.

User Specified IP Address Use this setting if you want to enter your terminal's IP address in this dialog box. After you enter the address and reboot the terminal, the terminal's IP address appears in the Terminal Manager window.

Disable Use this setting to disable TCP/IP.

☐ **Terminal's IP Address**

After you click on the User Specified Address button, you can enter an IP address for your terminal. See your system manager for an address to use. After you enter the IP address and subnet mask, click on OK to save the address and dismiss the dialog box. Then reboot the terminal.

☐ **IP Subnet Mask**

After you click on the User Specified Address button, you can enter the IP subnet mask for your terminal. An IP subnet mask acts as a filter for your TCP/IP network. Using the subnet mask makes the terminal ignore certain traffic on the network.

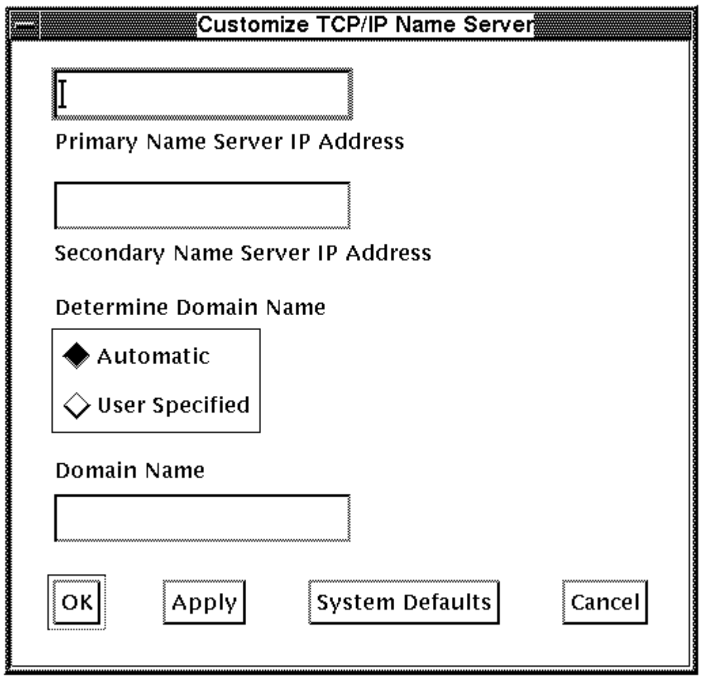
See your system manager for a subnet mask to use. After you enter the IP subnet mask, click on the OK button to save the setting and dismiss the dialog box. Then reboot the terminal.

4.6 Changing Your TCP/IP Name Server Settings

If your network has a name server, you can specify host systems by their names instead of addresses when making entries in the Create and Customize AutoStart dialog boxes. A name server stores host names and addresses, so it can determine a host's address from the name you enter.

You can specify a primary and secondary name server. See your system manager for your name server's IP address.

To enter your name server, choose the Communications submenu from the Terminal Manager window's Customize menu. Then choose TCP/IP Name Server... to display the Customize TCP/IP Name Server dialog box:



LJ–01171B–RAGS

From the Customize TCP/IP Name Server dialog box, you can change the following settings:

☐ Primary Name Server IP Address

The terminal first attempts to use the primary name server to resolve names entered into fields requiring a host name or IP address. If the terminal cannot find the primary name server specified, you need to enter your terminal's domain name.

To enter or change the primary name server, click on the Primary Name Server IP Address box and enter the primary name server's IP address.

☐ **Secondary Name Server IP Address**

If the terminal cannot resolve a host name or IP address with the primary name server, the terminal queries the secondary name server.

If the Automatic button for Determine Domain Name is selected and the primary name server is unavailable, the terminal uses the secondary name server to provide translations from names to IP addresses for connections. However, the secondary name server does not return the terminal's domain name, because it customarily resides within a second domain.

To enter or change the secondary name server, click on the Secondary Name Server IP Address box and enter the secondary name server's IP address.

☐ **Determine Domain Name**

The terminal displays its domain name in the Domain Name box if the primary name server finds it available on the network. The terminal attempts to resolve a domain name only if a primary name server is specified.

To enter a domain name:

1. Click on the User Specified button in the Determine Domain Name box.
2. Enter a domain name in the Domain Name box.
3. Click on Apply or OK.

If you choose the System Defaults button or clear the name server fields and choose OK or Apply, the terminal's Name Server capability is turned off and the terminal no longer has a domain name. The Domain Name field is not cleared, even though there is no domain name.

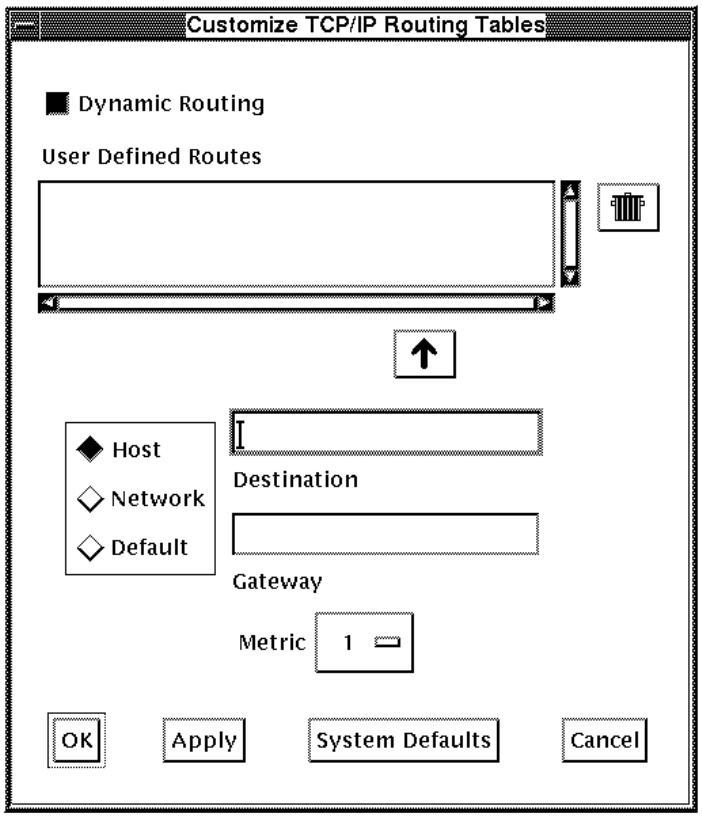
When you reboot the terminal, the domain name is determined and maintained in the name server. If you change your primary name server, the domain of the terminal does not change unless you change the domain name for the subnet and reboot the terminal.

If the primary name server is on a different subnet than the terminal, the domain name may not be available when you reboot the terminal. In this case, the domain name is resolved the next time it is needed.

4.7 Changing Your TCP/IP Routing Table Settings

You can enter TCP/IP routes from your network to hosts on other networks. You can also enable or disable dynamic routing to automatically update the network routing table. After you save your settings, you can view these and other TCP/IP routes in the TCP/IP Routes dialog box (Section 6.3).

To enter your routes, choose the Communications submenu from the Terminal Manager window's Customize menu. Then choose TCP/IP Routing Tables... to display the TCP/IP Routing Tables dialog box:



LJ–01172A–RAGS

From the Customize TCP/IP Routing Tables dialog box, you can change the following settings:

☐ Dynamic Routing button

The Dynamic Routing button lets you enable or disable the VXT software's routing daemon. This daemon listens for routing information protocol (RIP) packets and uses the packets to automatically enter, update, or delete TCP/IP routes in the TCP/IP Routes dialog box (Section 6.3).

☐ User Defined Routes scroll box

The User Defined Routes scroll box lists the route destination for each entry. The gateway for each entry is stored, but not displayed.

To add a route to the User Defined Routes scroll box:

1. Specify whether the route applies to either a host or a network, by clicking on the Host, Network, or Default button. If you click on the Default button, the terminal tries to determine if the route is for a host or a network.
2. Click on the Destination box and enter the route's destination.
3. Click on the Gateway box and enter the route's gateway.
4. Click on the ↑ button to add your route to the Routes scroll box.

To remove a route:

1. In the Routes scroll box, click on the route you want to remove.
2. Click on the trash can button.

☐ Metric button

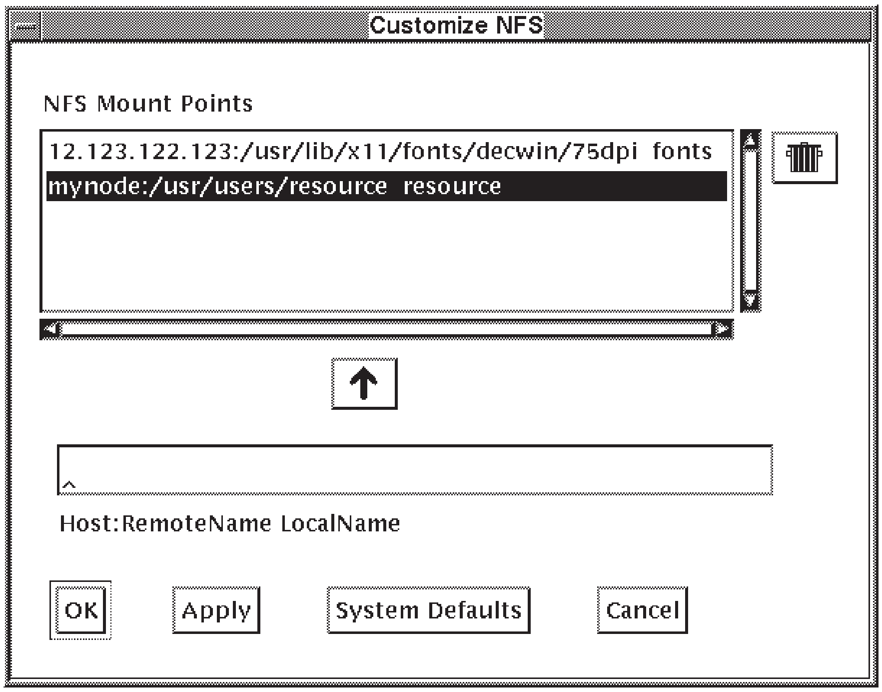
RIP packets contain a metric that helps to determine which gateway to use. Metric values range from 1 to 15, with smaller metrics indicating preferred paths. A 0 metric affects only the system routing table and tells the system the route is locally reachable.

4.8 Changing Your NFS Settings

You can use the NFS transport to load fonts or read your customized terminal resource files from host systems that use an NFS server.

The NFS transport uses mount points to identify locations where files can be accessed. You can define up to 10 mount points in the Customize NFS dialog box. You use these mount points when making entries in the Customize Font Path dialog box (Section 5.3) or Customize Resource Files dialog box (Section 5.9).

To enter your mount points, choose the Communications submenu from the Terminal Manager window's Customize menu. Then choose NFS... to display the Customize NFS dialog box:



LJ–03534–RAGS

From the Customize NFS dialog box, you can change the following settings:

☐ NFS Mount Points

The NFS Mount Points scroll box lists the currently entered mount points. Each entry lists the full mount point name on the host and an equivalent name that you define for local use on the terminal.

☐ Host:RemoteName LocalName

You use the Host:RemoteName LocalName box to add a new mount point in the scroll box.

To add a mount point to the NFS Mount Points scroll box:

1. Click on the Host:RemoteName LocalName box. Enter the mount point in the following format:

   Host:RemoteName LocalName

   - *Host* is the name or IP address of the host with the NFS server.
   - *RemoteName* is the directory path for the NFS server to export.

- *LocalName* is a local name you want to use for this mount point. You use the local name when making entries in the Customize Font Path or Customize Resource Files dialog box.

Examples

Host:RemoteName	***LocalName***
16.122.128.224:/usr/lib/X11/fonts/decwin/75dpi	nfs_fonts
mynode:/usr/users/resource	resource

To load fonts from the first sample mount point, you would use the local name `nfs_fonts` when entering the font path in the Customize Font Paths dialog box.

To load a terminal resource file from the second sample mount point, you would use the local name `resource` when entering the path to the file in the Customize Resource Files dialog box.

2. Click on the ↑ button to add your mount point to the NFS Mount Points scroll box.

To apply your mount points:

Click on OK or Apply. The terminal saves the listed mount points and tries to mount any remote file systems you added.

To remove a mount point:

1. In the NFS Mount Points scroll box, click on the mount point you want to remove.
2. Click on the trash can button.

Notes on Using NFS

For more information about using NFS, refer to your host system's NFS documentation.

- If an error occurs when mounting or accessing file systems, the VXT Message Box displays an NFS error code. See Section A.1.1 for a list of error codes.
- Some NFS mount daemons require name service to honor mount requests that use an address instead of a name.
- Files on the NFS server must be world-readable. The terminal implements NFS for clients only, so the NFS server must provide open file access.

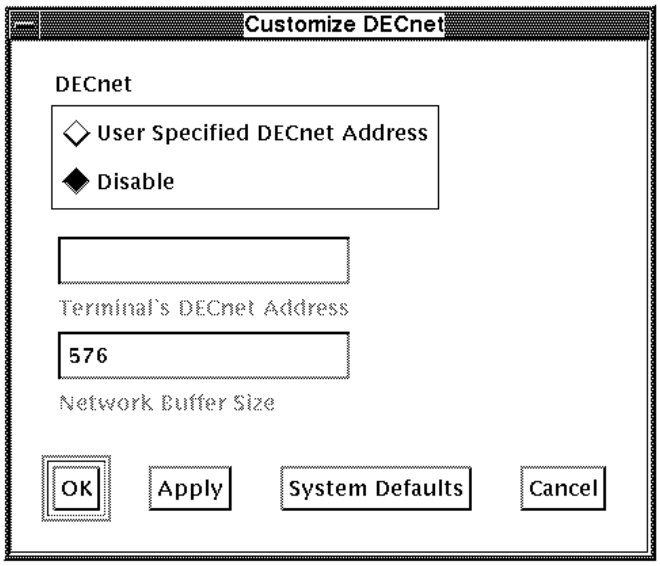
- The NFS server must `export` remote file systems before the terminal can mount them. The exported file system should include the areas holding the desired fonts or terminal resource files.

4.9 Changing Your DECnet Address Settings

To communicate with other DECnet nodes, your terminal must have a unique DECnet address. From the Customize DECnet dialog box, you can enable or disable the use of the DECnet transport and enter the terminal's DECnet address.

See your system manager for your terminal's DECnet address. The new setting takes effect when you reboot the terminal.

To enter or change your terminal's DECnet address settings, choose the Communications submenu from the Terminal Manager window's Customize menu. Then choose DECnet... to display the Customize DECnet dialog box:



LJ–01118–RAGS

From the Customize DECnet dialog box, you can change the following settings:

☐ **DECnet**

Before you can enter an address, you must click on the User Specified DECnet Address button. You can disable the use of the DECnet transport by clicking on the Disable button.

☐ **Terminal's DECnet Address**

After you click on the User Specified DECnet address button, you can enter your terminal's DECnet address in the Terminal's DECnet Address box. Click on OK to save the address and dismiss the dialog box.

You can enter your DECnet address in the long or short form:

- The long form uses a period to separate the area number and node number.

  Example: 61.513.

- The short form collapses the area number and node number into a single decimal value, using the formula (*area_number* $\times$ 1024) + *node_number*.

  Example: (*61* $\times$ 1024) + *513*) = 62977.

☐ **Network Buffer Size**

The system manager chooses a DECnet network buffer size to optimize the traffic flow on a wide area network, minimizing retransmission costs while maximizing throughput. The default network buffer size 576 bytes.

You enter your network buffer size in the Network Buffer Size box. See your VXT manager for the correct size. The buffer size value must be consistent throughout your network. Click on OK to save the size and dismiss the dialog box.

4.10 Changing Your DECnet Name Translator Settings

You can use DECnet node names instead of DECnet addresses to specify host systems in the Create and Customize AutoStart dialog boxes.

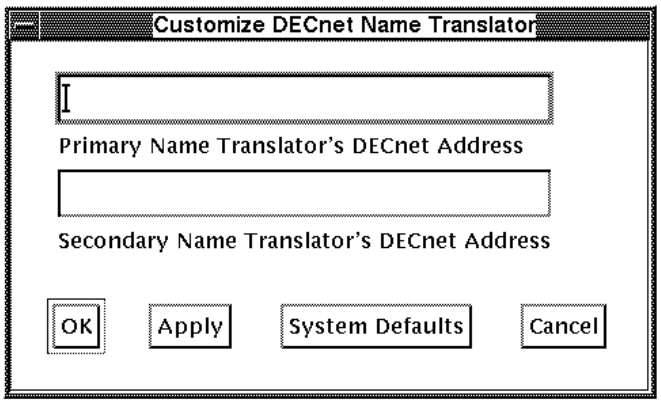
The terminal can check the DECnet node names you use without maintaining a local node name database. To do this, the terminal uses the DECnet Network Management Listener (NML) object (object 19) on a host system as its name translator. You specify the host system in the Customize DECnet Name Translator dialog box.

When resolving a DECnet address, the terminal connects to the NML object and issues a Network Information and Control Exchange (NICE) protocol message. This message conveys the NCP command SHOW NODE *nodename* to the host. The host responds with the DECnet address associated with the supplied node name.

Your terminal first attempts to connect to the primary name translator. If the primary name translator is unavailable, the terminal attempts to use the secondary name translator.

See your system manager for the addresses of primary and secondary DECnet name translator nodes. Settings take effect immediately.

To enter or change DECnet name translator addresses, choose the Communications submenu from the Terminal Manager window's Customize menu. Then choose DECnet Name Translator... to display the Customize DECnet Name Translator dialog box:



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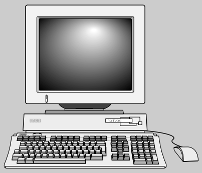
From the Customize DECnet Name Translator dialog box, you can change the following settings:

☐ Primary Name Translator's DECnet Address

Use this box to enter the address of the host that serves as the primary name translator for DECnet addresses. Click on OK to save the address and dismiss the dialog box. You can enter your DECnet address in the long or short form (Section 4.9).

☐ Secondary Name Translator's DECnet Address

Use this box to enter the address of a secondary host for DECnet name translation, if you have one. Click on OK to save the address and dismiss the dialog box.



5

Customizing Fonts And Startup Settings

This chapter describes how you can customize more advanced system settings to autostart sessions and applications, change font paths, boot VXT software, and load or unload VXT software features. To customize these settings, you use the bottom half of the Customize menu in the Terminal Manager window.

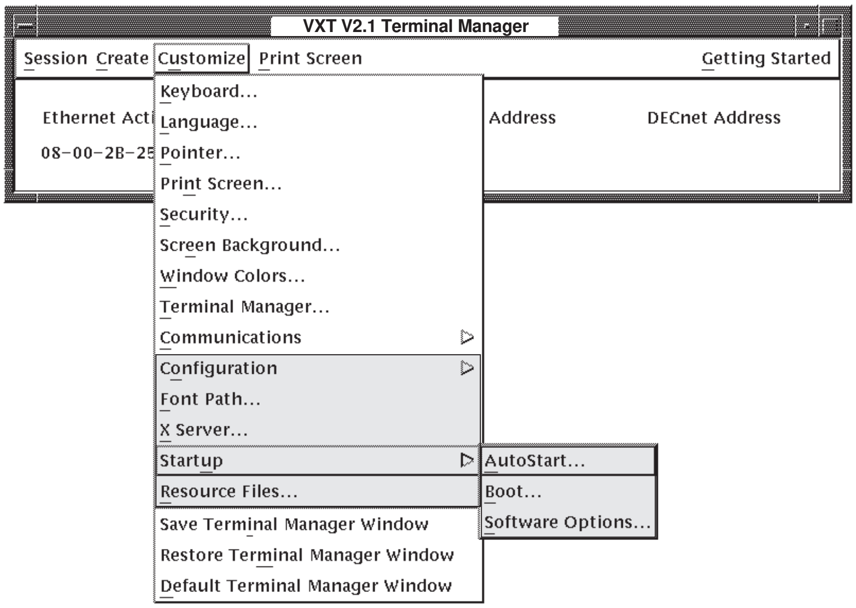
Initially, the terminal uses factory-default settings that work with many host systems. You can make changes to suit your personal preference and computing environment. After you make changes, you can save your settings for all future sessions.

The chapter covers the following major topics:

- Changing Your Font Path Settings
- Changing Your X Server Settings
- Specifying Your AutoStart Settings
- Changing Your Boot Settings for VXT Software
- Changing Your Software Options Settings

5.1 Displaying the Customize Menu

To display the Customize menu, click on Customize in the Terminal Manager window's menu bar. This chapter describes the menu items highlighted in gray:



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Note

A VXT manager can customize settings for terminals and work groups. The VXT manager can also lock or unlock access to one or more of the Customize menu items. Locked menu items are dimmed.

5.2 Changing Your Configuration Manager Settings

The **configuration manager** lets you centrally manage and customize the VXT 2000 windowing terminals on your local network from a single terminal. You also have the alternative of creating your own terminal resource files and storing them on a host system. Typically, these are system management functions. The *VXT Software Version 2.1 Installation and System Management* guide describes the configuration manager, host-based resource files, and how to use them.

From the configuration manager, a system manager can access the Customize dialog boxes for each terminal and lock or unlock customized settings. If you customize settings at your terminal, they override terminal or work group settings entered in the configuration manager.

For host-based terminals, the system manager can customize individual terminals in the configuration manager. The customized settings are written directly to your terminal. The settings take effect the next time you reboot your terminal.

For server-based terminals, the system manager can customize individual terminals or set up terminal work groups to share the same settings. Your terminal stores its customized settings on an InfoServer system rather than in the terminal. The system manager can also set up font sets on an InfoServer system for work groups to share.

To display the Configuration submenu, choose Configuration... from the Terminal Manager window's Customize menu.

5.3 Changing Your Font Path Settings

VXT software provides 23 local fonts for use with the terminal. If you have a server-based terminal, the VXT software on an InfoServer system provides 1166 fonts. You can also access fonts on host systems or font servers in your network. To access fonts from network devices, you enter a font path in the Customize Font Path dialog box.

A **font** is a set of character images in a particular typeface and style. The font defines how characters look. The terminal displays characters as they are defined in the selected font. A **font path** points to the network location of a set of fonts residing on a host or server.

Font Formats and Communication Protocols

The terminal supports the industry-standard X11R5 server for accessing fonts. You can access fonts from multiple sources, in any supported format, using different communication methods. For each font source you want to use, you enter a font path element in the Customize Font Path dialog box. The terminal can use any fonts in the active font path, plus the 23 local fonts.

The terminal can access fonts from the following systems:

System	Communication Method
X11R5 font server	TCP/IP
InfoServer system	LASTport
UNIX host	NFS or TFTP
OpenVMS host	LAT

Fonts can be in any of the following formats:

- Portable compiled format (PCF) (compressed and uncompressed)
- Server natural format (SNF) (Version 1 and Version 4)
- Bitmap distribution format (BDF)
- Speedo outline format
- PostScript Type 1 format (ASCII or binary form)

VXT Software Version 2.1 Installation and System Management also provides information on converting fonts for use on your terminal.

Activating the Font Path

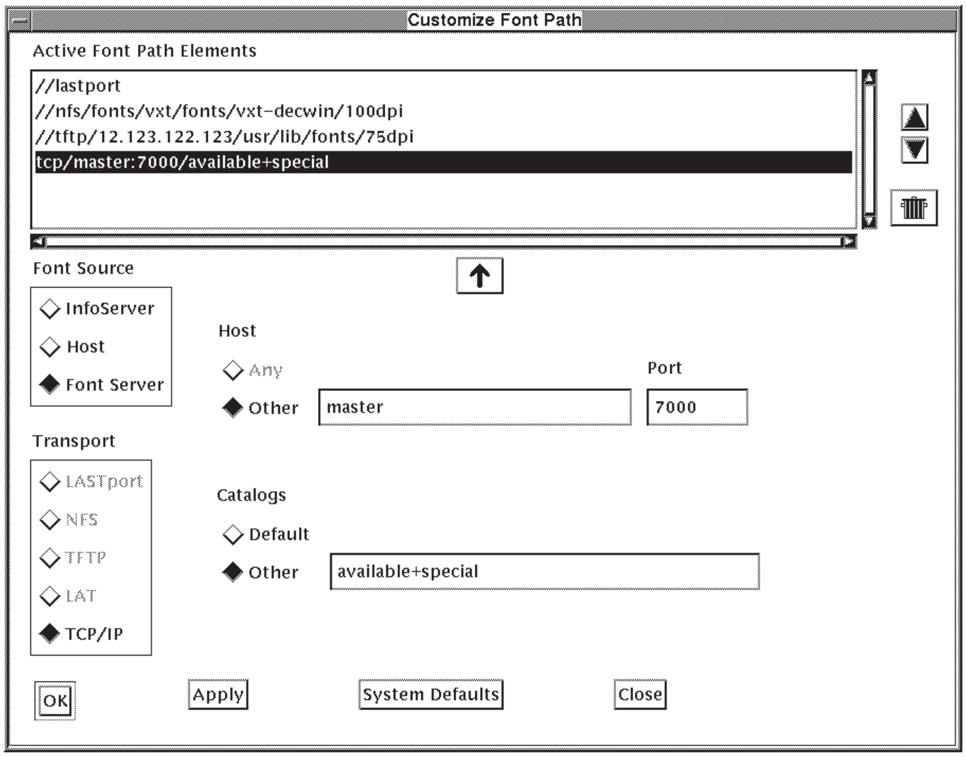
The terminal tries to set a font path when you

- Turn on the terminal
- Reset or Reboot the terminal from the Session menu
- Click on OK, Apply, or System Defaults in the Customize Font Path dialog box

You can make changes to the font path while you are using the terminal. After you apply your changes in the Customize Font Path dialog box, any applications you start use the fonts from the new font path. Applications that were already running continue to use the same fonts; one exception is VXT DECterm windows, which use the new fonts. See Section 8.3.1 for information on using fonts in VXT DECterm windows.

Customize Font Path Dialog Box

To customize the font path, choose Font Path... from the Terminal Manager window's Customize menu. The Customize Font Path dialog box looks like this:



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5.3.1 Entering a Font Path

The Active Font Path Elements scroll box lists the font paths the terminal uses to find fonts. The font server searches for font paths in the order listed in the scroll box.

To enter a font path into the Active Font Path Elements scroll box:

1. In the Font Source box, choose the type of device supplying your fonts: InfoServer, host, or font server.

2. In the Transport box, choose the protocol used to communicate with the font source. The choices available depend on the font source you chose. The titles of the two text-entry boxes also depend on the type of font source you chose.

Font Source	Transport	Server/Host/Mountpoint	Font Sets/Path/Catalogs
InfoServer	LASTport	Server	Font Sets
Host	NFS	Mount Point	Path
Host	TFTP	Host	Path
Host	LAT	Host	Path
Font Server	TCP/IP	Host	Catalogs

3. In the Server/Mount Point/Host box, enter the host name or address of the font source (font server, InfoServer system, host, or NFS mount point) where the fonts reside.
4. In the Font Sets/Path/Catalogs box, enter the path to the directory where the fonts reside.
5. Click on the ↑ button to add the font path to the Active Font Path Elements scroll box.
6. Click on Apply or OK. The terminal tries to set a new font path to each element listed in the scroll box.

To remove a font path:

1. In the Font Paths scroll box, click on the font path element you want to remove.
2. Click on the trash can button.

The following sections provide more detailed examples for each type of font source and transport.

InfoServer Font Path

To enter a font path to fonts on an InfoServer system:

1. Click on the InfoServer button in the Font Source box. The LASTport transport is automatically selected.
2. In the Server box, click on Any if you want to use any InfoServer on your network.

   Click on Other if you want to specify a particular InfoServer. Enter the name of the InfoServer in the Server box.

3. In the Font Sets box, click on Default if you want to use the default font set on the InfoServer.

   Click on Other if you want to specify a particular font set. Enter the font set name in the Font Sets box.

4. Click on the ↑ button to add your font path to the scroll box.

   Examples

`//lastport`	Solicits any InfoServer and its default font set.
`//lastport/InfoServer_1`	Solicits for InfoServer_1 and its default font set.
`//lastport//v2_1`	Solicits for any InfoServer with font set V2_1.
`//lastport/InfoServer_1/V2_1`	Solicits for InfoServer_1 and font set V2_1.

Host System Font Path (NFS)

To set an NFS font path, you must first enter the NFS mount point in the Customize NFS dialog box (Section 4.8).

To enter a font path to a host system using NFS:

1. In the Font Source box, click on the Host button. The NFS transport is automatically selected.

2. In the Host box, enter the local name of the NFS mount point. You define the local name in the Customize NFS dialog box.

   Example: `fonts`

3. In the Path box, click on Default if you want to use the default path.

   Click on Other if you want to specify a particular font path. Enter the path in the Path box.

   Example: `/vxt/fonts/vxt-decwin/100dpi`

4. Click on the ↑ button to add your path to the scroll box.

   Example: `//nfs/fonts/vxt/fonts/vxt-decwin/100dpi`

Host System Font Path (TFTP)

To enter a font path to a host system using TFTP:

1. In the Font Source box, click on the Host button.

2. In the Transport box, click on the TFTP button.

3. In the Host box, enter the name or IP address of the host where the fonts reside.

   Example: `market` or `12.345.678.901`

4. In the Path Box, enter the path to the fonts.

Example: `/usr/lib/fonts/100dpi`

5. Click on the [↑] button to add your font path to the scroll box.

   Example

   `//tftp/12.123.123.122/usr/lib/fonts/100dpi`

Host System Font Path (LAT)

To enter a font path to a host system using the LAT transport:

1. In the Font Source box, click on the Host button.
2. In the Transport box, click on the LAT button.
3. In the Host box, enter the name of the host where the fonts reside.

   Example: `MARKET`

4. In the Path Box, click on Default if you want to use the default font directory search list on the host.

   Click on Other if you want to specify a particular font path. Enter the path into the Path text entry box.

   Example: `fonts$disk:[user_fonts.100dpi]`

5. Click on the [↑] button to add your font path to the scroll box.

   Examples

`lat/market`	Specifies the default font directory search list on host MARKET.
`lat/market/fonts$disk:[user_fonts.100dpi]`	Specifies a particular font path on host MARKET.

Font Server Font Path (TCP/IP)

To enter a font path to a font server using TCP/IP:

1. In the Font Source box, click on the Font Server button. The TCP/IP transport is automatically selected.
2. In the Host box, enter the name or IP address of the host where the fonts reside.

   Example: `expo`

3. If you want to specify a particular port, click on the Port box and enter a port address. The default port address is 7000.
4. In the Catalogs box, click on Default if you want to use the default font catalog on the font server.

Click on Other if you want to specify a catalog. Enter the catalog name in the Catalogs box.

Example: `available`

5. Click on the ↑ button to add your font path to the scroll box.

   Examples

```
tcp/expo:7000/available
tcp/18.30.0.212:7890
```

Font Path Errors

If a font source is unavailable: The VXT Message Box displays a message indicating the terminal could not set a font path to that source.

Backup font services: If a font source fails while in use, the terminal can automatically access the same font from a second source if available. The second source must be listed somewhere after the first source in the Active Font Path Elements scroll box. If the terminal does not find the font on another font source, the terminal sends an error to the client that was using the font.

If no fonts are found in a valid LAT font path: The VXT Message box displays a message indicating that the set font path action succeeded and the number of fonts which are available.

Tips on Setting Font Paths

- If host applications need fonts, use the fonts from the host supplying the application.
- Include backup font sources in your font path. If the primary font source is unavailable, the terminal can find the same fonts on the backup source.
- Use an InfoServer system to supply fonts, if available. If your network has multiple InfoServers, the terminal provides automiatic font failover service to backup InfoServers. You can also use the Font Management dialog box to create and manage font sets on an InfoServer; you can copy fonts from host systems. VXT Software Version 2.1 Installation and System Management describes how to use the Font Management dialog box.
- To reduce the time for setting the font path, make sure your font path includes only fonts required for your applications.

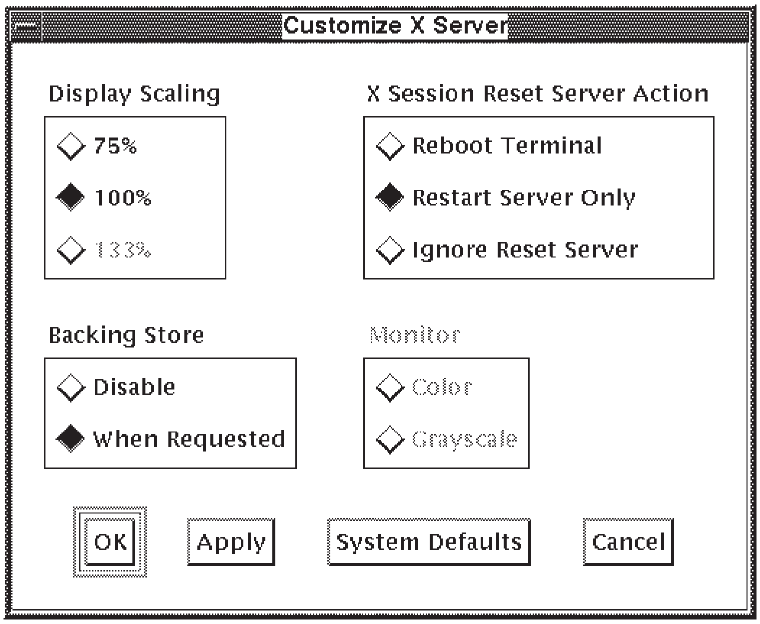
5.4 Changing Your X Server Settings

The Customize X Server dialog box lets you

- Choose whether or not to reset the X server or reboot the terminal's software when you end an X session.
- Scale display fonts to emulate a 75/dots inch display on a 100 dots/inch monitor, or a 100 dots/inch display on a 75 dots/inch monitor
- Set an 8-plane terminal to use color or gray scale settings.

When you end an X session on an OpenVMS system, resetting the server will end *all* open sessions on the terminal. If you do not reset the server, you can end an X session without affecting other open sessions.

To change your X server settings, choose X Server... from the Terminal Manager window's Customize menu. The Customize X Server dialog box looks like this:



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☐ Backing Store

The backing store function improves the time needed to restore a window from an icon, by having the terminal perform the restore instead of the remote application. The Graphics Option dialog box in VXT DECterm windows also has a Backing Store button (Section 8.8).

The Disabled setting causes the terminal to ignore application requests for backing store, and not to save the contents of an obscured window. The terminal informs the client when its window is uncovered, and should be redrawn. Use this setting to conserve the terminal's memory.

The When Requested setting causes the terminal to save the contents of an obscured window, or a portion of that window, when requested by the client. If you select When Requested, the terminal can display an iconified or covered window without waiting for the client to redraw it.

☐ **Display Scaling**

The display scaling option lets you adjust the font size displayed on your terminal to resemble a 75 dots/inch or 100 dots/inch display. Use the 75% button if you have a 100 dots/inch monitor and want your display to look like a 75 dots/inch monitor. Use the 133% button to make a 75 dots/inch monitor display look like a 100 dots/inch monitor display. Your new setting takes effect when you restart the terminal.

☐ **X Session Reset Server Action**

Normally, the terminal restarts the X server when you quit from an X session. If you end an X session on an OpenVMS system, restarting the X server causes the terminal to end all open sessions.

If you click on the Ignore Reset Server button, you can end an OpenVMS X session without ending other open sessions.

If you click on the Reboot Terminal button, the terminal reloads the VXT software when you end an X session.

Your new setting takes effect when you click on Apply or OK.

☐ **Monitor**

You can choose a gray scale or color setting for an 8-plane terminal. These buttons are dimmed on monochrome terminals. Your new setting takes effect when you restart the terminal.

5.5 Changing Your Startup Settings

You can customize the terminal to automatically start up the applications you frequently use. You can also customize the terminal to load a particular VXT system image or turn off individual VXT software options.

To customize startup settings, you use the Startup submenu on the Terminal Manager window's Customize menu. The following sections describe the functions you can perform from the Startup submenu:

- Specifying Your AutoStart Settings

  The AutoStart dialog box lets you enter a list of host sessions and VXT applications to automatically start each time you turn on, autostart, or reboot the terminal.

- Changing Your Boot Settings for VXT Software

  The Customize Boot dialog box lets you customize the VXT software loading process to match your system environment.

- Changing Your Software Options Settings

  The Customize Software Options dialog box lets you turn VXT software options options on or off. Host-based terminals can use this feature to improve memory use.

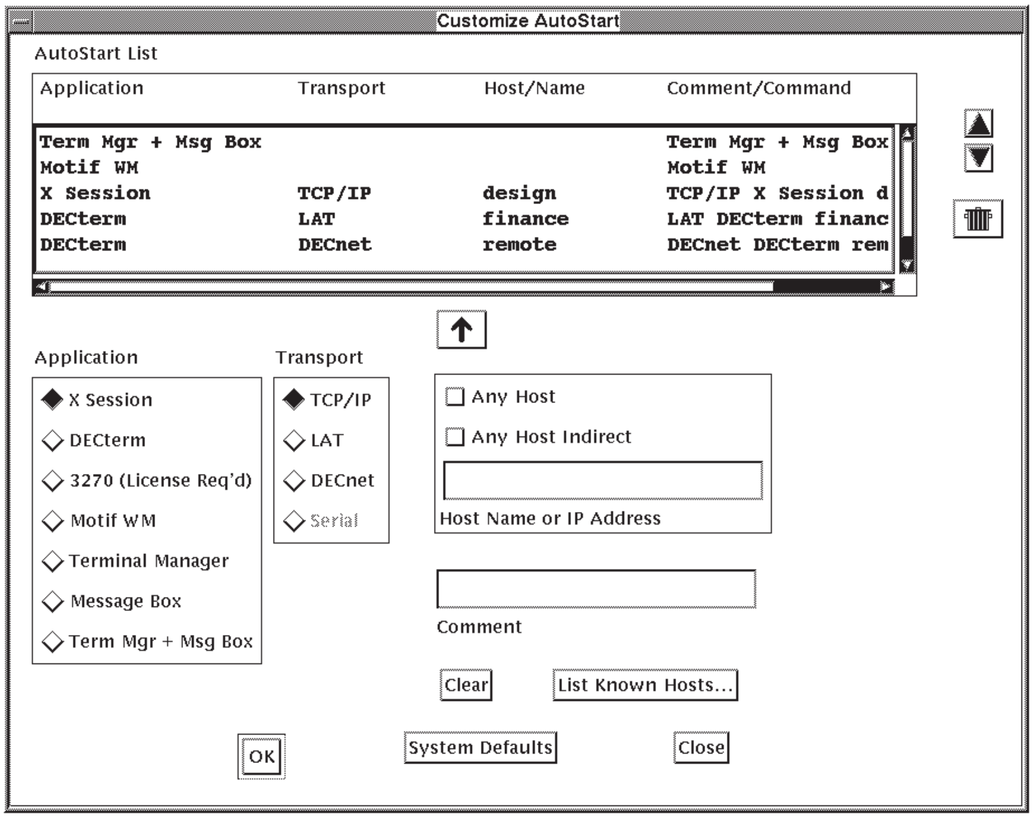
5.6 Specifying Your AutoStart Settings

The AutoStart dialog box lets you enter a list of host sessions and VXT applications to automatically start each time you

- Turn on the terminal
- Choose the AutoStart menu item from the Session menu
- Choose the Reset, Reboot, or Shutdown menu item from the Session menu

By default, the terminal autostarts the Terminal Manager window, VXT Message Box, and local Motif window manager.

The format of the AutoStart dialog box is the same as the Create dialog box. To display the AutoStart dialog box, choose AutoStart... from the Terminal Manager window's Customize menu. The Customize AutoStart dialog box looks like this:



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AutoStart List

The terminal starts applications in the order you list them in the AutoStart List. The default entries in the Customize AutoStart dialog box are

- Terminal Manager window and VXT Message Box
- Motif Window Manager

By default, the terminal starts the Terminal Manager window and VXT Message Box as a single application. You can choose to start them as separate applications.

To add a session or application to the AutoStart list:

Use the following steps. The AutoStart dialog box controls operate the same as the Create dialog box controls. See Section 2.2 for syntax rules and details on buttons.

1. In the Application box, click on the type of session (X Session, DECterm, 3270) or VXT application you want to autostart. For VXT applications, skip steps 2 and 3.

2. In the Transport box, click on the communication method to use for the session. If you choose Serial, skip step 3.

3. In the Host Name or Address box, enter the name or address of the host system. If you make a typing mistake, you can use the Clear button to clear the box.

   For IP sessions:

   - Use the Any Host button if you want to use the first available IP host.
   - Use the Any Host Indirect button to specify a host that will act as a pathway to find the first available IP host.
   - Use the Comment box to enter optional text comments. For example, if you entered a host name, you may want to enter the IP address as a comment.
   - Use the List Known Hosts... button to display a dialog box that lets you list available IP hosts.

4. Click on ↑ to add your entry to the AutoStart List.

   To delete entries, select the entry in the list and click on the trash can button.

   To move entries, select the entry in the list and click on the △ or ▽ button.

5. Click on the OK button to save your settings.

The AutoStart dialog box saves your settings when you click on the OK button. The Create dialog box contains a Save button for saving settings.

Reenter AutoStart Settings After Changing the Display Language

If you change your display language, you must reenter your AutoStart settings.

User Tip: Remove Unused Applications to Start the Terminal Faster

Normally, the terminal autostarts the local Motif window manager and the combined Terminal Manager window + VXT Message Box applications. If you no longer need to use an application, you should remove it from your AutoStart list. The fewer applications listed in the AutoStart List, the faster the terminal can start up and connect to your host sessions.

If you use the remote window manager on a host system, you may want to remove the local Motif window manager application from the AutoStart list. You can enable the use of remote window managers in the Customize Terminal manager dialog box (Section 3.10).

If you remove the combined Terminal Manager window + VXT Message Box applications, you can restart them from the VXT Create pop-up menu. To display the pop-up menu, click MB2 anywhere on the screen workspace.

Caution

If you remove the combined Terminal Manager window + VXT Message Box applications from the Preferred Services list in the Create dialog box, they will not appear on the VXT Create pop-up menu the next time you reset the terminal.

5.7 Changing Your Boot Settings for VXT Software

The Customize Boot dialog box lets you specify a VXT software image and how to load it. You can specify

- VXT software or VXT EX software
- Host-based or server-based mode of operation

You can also turn the following options on or off:

- X image extension, for working with XIE software to display graphics
- MOP trigger feature, for booting the terminal from a remote system

Your new Customize Boot settings take effect when you reboot the terminal. When a loading process succeeds, the terminal saves the successful method in local memory. The next time you reboot the terminal, it attempts to use the same method. When you save your settings in the Customize Boot dialog box, they override any previously saved settings.

Your booting options depend on what type of systems in your network have VXT software and how your system manager has configured them to work with VXT 2000 windowing terminals. For example, your system manager can enter boot settings for your terminal in a file stored on a host system.

You can also enter boot commands at the terminal's >>> prompt. See Section 5.7.5.

Caution

Before you change settings in the Customize Boot box, you should understand how and when the terminal loads its software.

5.7.1 Overview

How Does the Terminal Load VXT Software?

Your terminal operates in a computer network. The terminal loads its VXT software from a host computer system or InfoServer system in the network. To begin the loading process, the terminal sends out a sequence of requests on the network for the *first available* host system or InfoServer system that has VXT software or the VXT loader file. The VXT loader file is for server-based operation only.

The terminal sends each request by using a communication transport. The terminal can communicate with systems that use the maintenance operations protocol (MOP) or the Internet protocol (IP) transport.

By default, the terminal loads its software from one of these systems:

- A host system that your system manager has preconfigured

  VXT Software Version 2.1 Installation and System Management provides instructions to configure systems.

- An InfoServer system

  If your network has an InfoServer system with VXT software, you can use your terminal without a system manager having to configure a host system.

When Does the Terminal Load VXT Software?

Booting is the process of loading a system's software and bringing it to an operable state. The terminal tries to **boot** after you

- Turn on the terminal and the terminal's self-test succeeds
- Restart the terminal by choosing the Reboot or Shutdown menu item from the Session menu
- Press one of these key sequences to reboot the terminal:

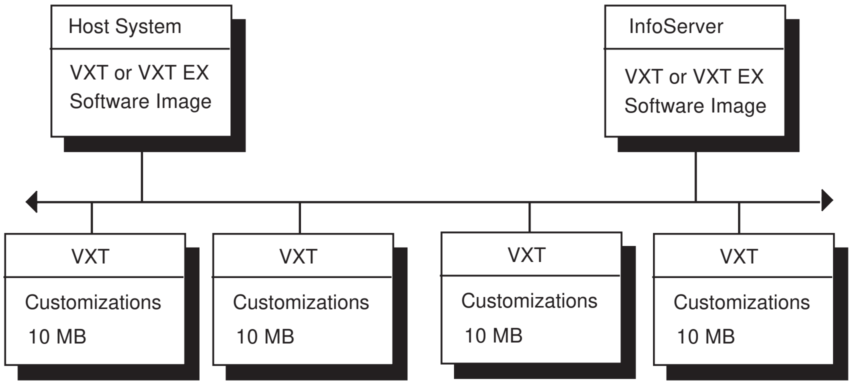
ANSI (LK401) keyboard	Ctrl+left Alt+keypad .

PC (LK443/LK444) keyboard	Ctrl+Alt+keypad .
Short ANSI (LK421) keyboard	Ctrl Alt Function Extend .

5.7.2 Using Host-Based Operation

The terminal can load a VXT or VXT EX software image directly from a host system, using the MOP or IP protocol. You can also load a VXT or VXT EX software image in host-based mode from an InfoServer system; however, the terminal does not make use of the InfoServer's memory services in host-based mode.

When you load a VXT or VXT EX software image in **host-based** mode, the terminal stores all of your customizations in its nonvolatile memory. For host-based operation, the terminal needs at least 10 megabytes of memory installed.



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Setting Up a Host System

Your system manager can preconfigure a host system that uses MOP or IP to load a host-based VXT software image into your terminal. *VXT Software Version 2.1 Installation and System Management* describes how to preconfigure systems.

If you use IP The system manager must preconfigure the host system. *VXT Software Version 2.1 Installation and System Management* describes how to add a line item to the `/etc/bootptab` file listing each terminal's Ethernet address, IP address, and the VXT software image file or VXT loader file (for server-based operation).

If you use MOP The system manager can preconfigure the host system or InfoServer system, or you can enter the name of a VXT software image file in the Customize Boot dialog box.

Specifying a Host-Based Image in the Customize Boot Dialog Box

If your system manager has not preconfigured a host system or InfoServer system to load your terminal, you can specify a host-based VXT or VXT EX software image in the Customize Boot dialog box. Your system must support the MOP transport. To specify a host-based image:

1. Display the Customize Boot dialog box (Section 5.7.4).
2. In the Primary Boot box, click on the MOP button.
3. In the MOP Boot File box, click on the Other button. Enter the name of the VXT or VXT EX software image file.

Enter...	To load this image...
VXT Version 2.1 software provides two VXT software image files:	
VXT	VXT software image
VXTEX	VXT EX software image
VXT Version 2.0 software included version numbers in the software image files:	
VXT020	VXT software image
VXTEX020	VXT EX software image
Earlier versions of VXT software used separate software images to support monochrome and color/gray scale terminals:	
VXTMP00*nn*0	VXT host-based, monochrome image
VXTSP00*nn*0	VXT host-based, color or gray scale image
VXTMPI0*nn*0	VXT host-based, monochrome image with XIE support
VXTSPI0*nn*0	VXT host-based, color or gray scale image with XIE support

nn is the version number. For example, *12* is Version 1.2.

4. Click on the OK button to save your setting and dismiss the dialog box.
5. In the Terminal Manager window, click on the Session menu.
6. In the Session menu, click on the Reboot menu item to reboot the terminal.

   The terminal loads the specified VXT or VXT EX software image from the *first available* host system or InfoServer system that has the software.

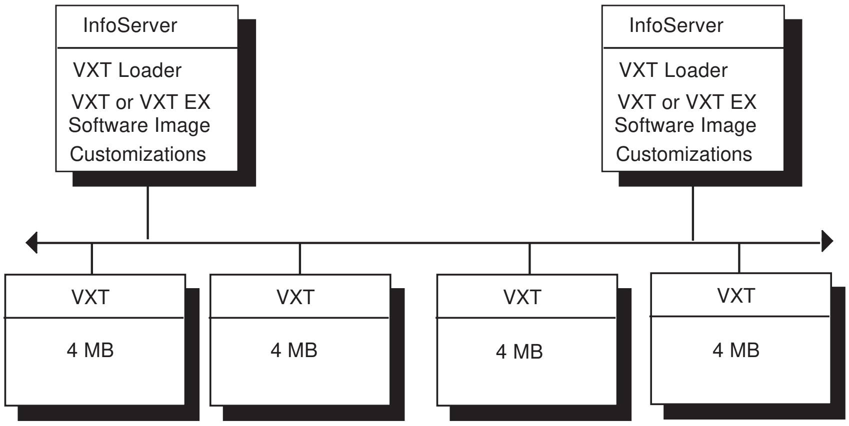
5.7.3 Using Server-Based Operation

When you load a VXT software image file from an InfoServer system, you can choose to operate in **server-based** mode or host-based mode (Section 5.7.2).

In server-based mode, the terminal stores its customizations on an InfoServer system. The InfoServer system also performs certain memory functions for the terminal, so the terminal needs only 4 megabytes of installed memory.

In server-based mode, the terminal takes two steps to load a VXT or VXT EX software image:

1. The terminal loads a VXT loader file from an InfoServer system or host system, using the MOP or IP protocol.
2. The VXT loader file loads the VXT software image file from an InfoServer system, using the LASTport Version 3.1 protocol.



Plug and Play Operation

If you have an InfoServer with VXT software, the terminal can normally load the software without any need to configure a host system or use the Customize Boot dialog box. By default, the terminal looks for a VXT loader file named VXTLDR, which is supplied with VXT software kits for InfoServer systems. By default, the VXT loader first solicits the network for the full-function VXT software image; if the VXT software image is not available, the VXT loader solicits for the VXT EX image.

Network Bridges May Affect the VXT Loader

If your InfoServer system is on the other side of a network bridge that filters MOP messages, your system manager must install the VXT loader file on a host system. Your system manager can preconfigure the host to load the file into the terminal. After the terminal loads the VXT loader file, the VXT loader file loads the VXT software image from the InfoServer system.

Specifying a Server-Based Image in the Customize Boot Dialog Box

If you want to load a particular VXT or VXT EX software version in server-based mode, you can use the Customize Boot dialog box.

1. Display the Customize Boot dialog box (Section 5.7.4).
2. In the Primary Boot box, click on the MOP button.
3. In the MOP Boot File box, click on the Other button.

   Enter the name of the VXT loader file. The default name is **VXTLDR**.

   If needed, you can specify the loader supplied with a particular VXT software version. Normally you do not need to specify a version, unless you are loading a new version of VXT software that has not been made the default on your network yet. For example, if VXT Version 1.3 is the default version and you want to load VXT Version 2.1, you would specify the loader for VXT Version 2.1.

Enter...	To use this loader...
VXTLDR	Default version on your network
VXTLDR_NODENAME	Default version on nodename
VXTLDR021	VXT Version 2.1 loader
VXTLDR020	VXT Version 2.0 loader
VXTLDR0130	VXT Version 1.3 loader
VXTLDR1	VXT Version 1.3 loader (for VXT 2000^{+} terminals)
VXTLDR0120	VXT Version 1.2 loader

VXT Loader Requirements

To load the VXT Version 2.1 software image, you must use the VXT Version 2.1 loader file.

To load the VXT EX software image, you must use the VXT Version 2.0 or 2.1 loader file.

4. In the Secondary Boot box, choose the type of VXT software you want to use. Click on the VXT Software button or the VXT EX button.
5. In the Version box, click on the Default button if you want to load the default version of VXT or VXT EX software on your network.

   Click on the Other button if you want to specify a VXT or VXT EX version other than the default. The terminal displays the letters VXT or VXT EX in front of the box. Enter the value for the version number (three digits for Version 2.0 and Version 2.1, four digits for earlier versions).

Enter...	To load this version...	
	VXT	VXT EX
021	2.1	2.0
020	2.0	2.0
0130	1.3	–
0120	1.2	–
0110	1.1	–
0100	1.0	–

6. Click on the OK button to save your setting and dismiss the dialog box.
7. In the Terminal Manager window, click on the Session menu.
8. In the Session menu, click on the Reboot menu item to reboot the terminal.

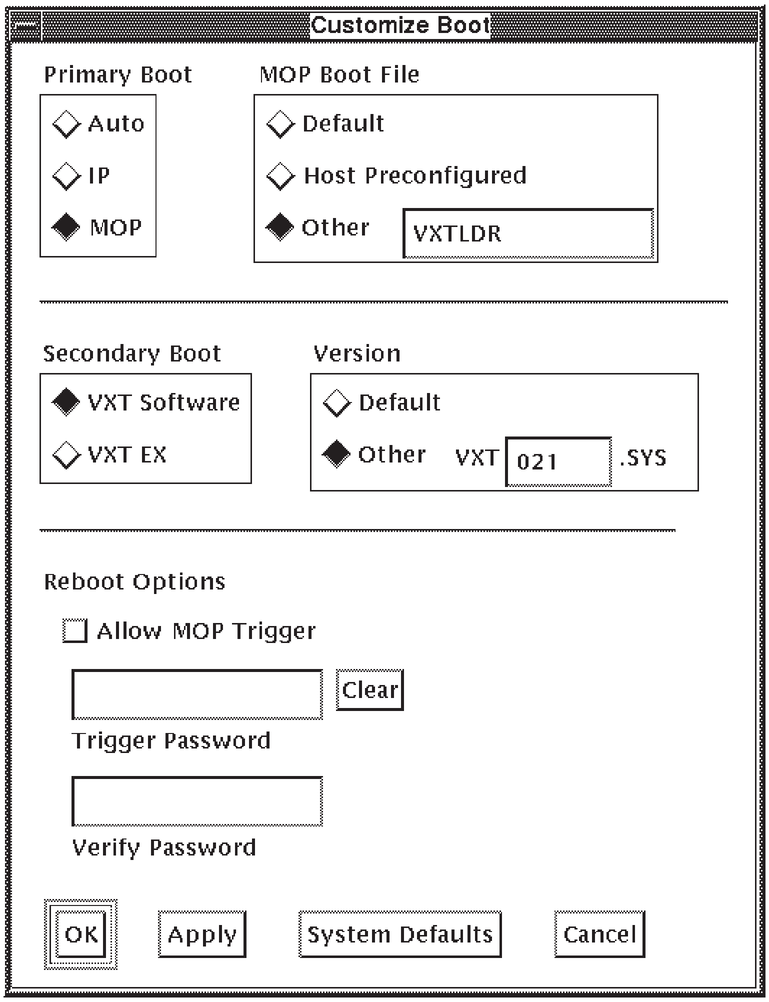
   The terminal loads the VXT loader file from the *first available* system.

Server-Based Customizations and Loading

If you have several InfoServer systems with VXT software, your terminal always loads the VXT software from the first available InfoServer system that has the same LASTport group code. However, your terminal's customized settings are always stored on a specific InfoServer system; therefore, your terminal does not necessarily use the same system to load software and store customizations.

5.7.4 Customize Boot Dialog Box Description

To view or change your boot settings, choose Boot... from the Terminal Manager window's Customize menu. The Customize Boot dialog box looks like this:



LJ-00176D-RAGS

From the Customize Boot dialog box, you can change the following settings:

☐ Primary Boot

Normally, the terminal alternates between using MOP and IP on attempts to boot the VXT software image file (host-based mode) or VXT loader file (server-based mode). To use IP only, click on the IP button. To use MOP only, click on the MOP button.

☐ MOP Boot File

If you use MOP, the MOP Boot File box lets you specify a host-based VXT software image file (from a host or InfoServer system) or a VXT loader file. The VXT loader file is for loading a server-based VXT software image.

Default By default, the terminal looks for the VXT loader file on an InfoServer system or host. The terminal repeats this sequence using different versions of the MOP protocol.

Host Preconfigured The terminal first looks for any host system using MOP that has been preconfigured to load the terminal with VXT software. If it does not find a host, the terminal looks for the VXT loader file on an InfoServer system or host. The terminal repeats this sequence using different versions of the MOP protocol.

VXT Software Version 2.1 Installation and System Management describes how your system manager can add your terminal's Ethernet address and the desired host-based VXT software image file or VXT loader file to a system database.

If you use MOP: OpenVMS system managers use the Network Control Program (NCP), and ULTRIX system managers use the `addnode` utility.

Other This setting lets you specify a host-based VXT software image file or VXT loader file. The image or loader file can be on a host or InfoServer system. Omit the .SYS file extension.

The file should be in a default MOP directory. For example:

- OpenVMS systems—Use VXT$LIBRARY or MOM$SYSTEM. To use VXT$LIBRARY, the system manager must add it to the MOM$LOAD search list. See the OpenVMS section in *VXT Software Version 2.1 Installation and System Management*.
- ULTRIX systems—Use `/usr/lib/mop` on the local subnet.

VXTLDR is the default name of the VXT loader file. If you enter the file name VXTLDR, any MOP service with the load file can respond and supply the file to the terminal. The VXT loader uses the LASTport Version 3.1 protocol to load the system image specified in the Secondary Boot and Version fields.

Typically, the terminal uses the VXT loader file from the InfoServer system that supplies the VXT software image. However, if there is a bridge that filters MOP requests between the terminal and InfoServer system, the system manager should make sure the VXT loader file is available on a host system in the same network segment as the terminal.

☐ Secondary Boot

When you load a server-based VXT software image from an InfoServer system, you use the Secondary Boot box to choose VXT software or VXT EX software.

Version You can use the default version of your Secondary Boot choice (VXT Software or VXT EX) or specify a version in the Other box. If you specify a version, make sure a VXT software image file with that name is available on an InfoServer system.

☐ Options: X Image Extension

VXT software images include an X image extension (XIE) capability that allows server-based and host-based terminals to work with XIE software. The VXT EX software image does not include XIE capability.

Normally, the terminal's XIE capability is turned on. If you turn this feature off and on, you must reboot the terminal before your new setting takes effect. Appendix C describes how to use the terminal with XIE.

VXT 2000 terminals with a system box and 17-inch VX227 models without a system box can use an optional image accelerator board to increase the speed at which the terminal displays XIE bitonal images. However, you do not need the image accelerator board to use the terminal's XIE capability.

☐ Reboot Options

The MOP protocol provides a trigger mechanism for rebooting a remote node. If you enable the MOP trigger feature, your terminal can be rebooted from a remote node.

Allow MOP Trigger Normally, the terminal ignores MOP trigger messages. To enable MOP triggering, click on the Allow MOP Trigger button.

Trigger Password You can also supply a password to restrict rebooting from a remote node. The MOP trigger password can be from 1 to 16 hexadecimal characters (0–9 and A–F characters). If you do not supply a password, a default value of 0 is used (equivalent to no password).

See your host system's network control program (NCP) manual or online help for more information on the syntax for triggering remote nodes.

5.7.5 Entering Boot Commands to Load VXT Software

In addition to the Customize Boot dialog box, you can load VXT software from the terminal's >>> prompt.

Displaying the >>> Prompt

To display the >>> prompt, you must halt your terminal. There are two ways to halt the terminal; you can use the keyboard, or you can use the halt button.

Caution

Halting the terminal closes any currently open sessions.

To display the >>> prompt from the keyboard:

Press Ctrl+left Alt+keypad . . The terminal ends all sessions and begins to boot VXT software. Immediately press Ctrl C to halt the booting sequence and display the >>> prompt.

To display the >>> prompt using the halt button:

Quickly press and release the halt button on the rear of the terminal. The terminal halts all activity and displays a >>> prompt.

- For terminals with a system box: The halt button is next to the indicator lights on the rear of the system box.
- For terminals without a system box: The halt button is below the keyboard connector on the rear of the monitor.

Loading VXT Version 2.0 or 2.1 Software

To load VXT Version 2.0 or 2.1 software, enter the command sequence for host-based or server-based operation.

To load...	In this mode...	Enter...
VXT Version 2.1	Host	`>>> B/100 Return` `Bootfile: VXT Return`

	Server	`>>> B/101 Return`
		`Bootfile: VXTLDR Return`
		`VXTLDR> VXT.SYS or VXT021.SYS Return`

To load...	In this mode...	Enter...
VXT EX*	Host	`>>> B/100 [Return]` `Bootfile: VXTEX or VXTEX020 [Return]`

	Server	`>>> B/101 [Return]`
		`Bootfile: VXTLDR [Return]`
		`VXTLDR> VXTEX020.SYS [Return]`

VXT Version 2.0	Host	`>>> B/100 [Return]` `Bootfile: VXT020 [Return]`

	Server	`>>> B/101 [Return]`
		`Bootfile: VXTLDR [Return]`
		`VXTLDR> VXT020.SYS [Return]`

*If you have VXT Version 2.1 software, you can omit the version number when specifying VXT EX software.

Loading Earlier VXT Software Versions

Earlier versions of VXT software used separate software images to support monochrome and color/gray scale terminals. Enter the command sequence for host-based or server-based operation.

Host-Based Mode

```
>>> B/100 [Return]
Bootfile: host_image [Return]
```

Enter *host_image*...	To load this image...
VXTMP00*nn*0	VXT host-based, monochrome image
VXTSP00*nn*0	VXT host-based, color or gray scale image
VXTMPI0*nn*0	VXT host-based, monochrome image with XIE support
VXTSPI0*nn*0	VXT host-based, color or gray scale image with XIE support

nn is the version number. For example, *12* is Version 1.2.

Server-Based Mode

```
>>> B/101 [Return]
Bootfile:  VXTLDR [Return]
VXTLDR>  server_image [Return]
```

Enter *server_image*...	To load this image...
VXTMV00*nn*0.SYS	VXT server-based, monochrome image
VXTSV00*nn*0.SYS	VXT server-based, color or gray scale image

nn is the version number. For example, *12* is Version 1.2.

5.8 Changing Your Software Options Settings

The Customize Software Options dialog box lets you turn certain VXT software features on or off at startup. By default all options are turned on.

If you have a host-based terminal, you can conserve memory by selecting only those options you need to use. You can monitor your terminal's memory use by checking the Memory Remaining scale in the System Monitor dialog box (Section 6.5).

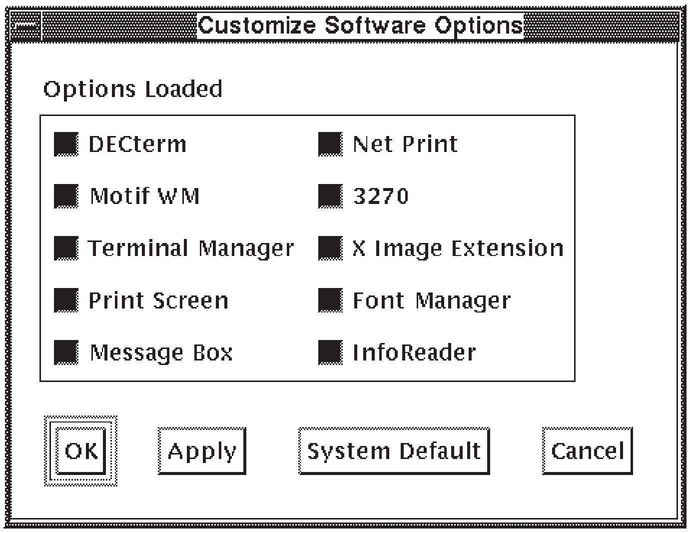
The following table lists the approximate memory saved for each option unloaded.

If You Unload This Option...	You Save This Much Memory (Kilobytes)...
DECterm	235 KB
Motif WM	617 KB
Terminal Manager	1422 KB
Print Screen	19 KB
Message Box	116 KB
Net Print	8 KB
3270	233 KB
X Image Extension	194 KB
Font Manager	37 KB
InfoReader	33 KB
Total	2914 KB

If you try to use a disabled option, the VXT Message Box displays the following message:

```
Software option is disabled.
```

To view or change your software option settings, choose the Startup submenu from the Terminal Manager window's Customize menu. Then choose Software Options... to display the Customize Software Options dialog box:



LJ–03539–RAGS

From the Customize Software Options dialog box, you can turn the following options on or off as startup:

☐ DECterm Terminal Windows

This setting affects your ability to create VXT DECterm windows.

☐ Motif Window Manager

This setting affects your ability to use the terminal's Motif window manager. If you disable this option, you cannot restart the window manager using the Create dialog box or any other method.

☐ **Terminal Manager**

This setting affects your ability to use the Terminal Manager window. This setting also affects the VXT Message Box, unless you autostart the message box as a separate application from the the Terminal Manager window.

Caution

The Software Options dialog box is part of the Terminal Manager window. If you turn off the Terminal Manager window and reboot the terminal, you cannot access the Software Option dialog box to enable the Terminal Manager window again. See your system manager to reenable the Terminal Manager window.

☐ **Print Screen**

This setting affects your ability to use the Print Screen menu item in the VXT's Terminal Manager window.

☐ **Message Box**

This setting affects your ability to use the VXT Message Box.

☐ **Network Printing**

This setting affects your ability to print from a host system to a local printer attached to the terminal. If this setting is disabled, you cannot use the Host Accessible Printer Port setting in the Customize Serial and Parallel Ports dialog box.

☐ **VXT 3270 Terminal Windows**

This setting affects your ability to create VXT 3270 terminal windows. VXT 3270 terminal windows also require a separate software license and access to a DECnet/SNA gateway.

☐ **X Image Extension**

This setting affects the terminal's ability to work with X image extension (XIE) software (Appendix C). VXT EX software does not include XIE capability.

☐ **Font Manager**

This setting affects your ability to use the Font Management dialog box for server-based terminals, described in VXT Software Version 2.1 Installation and System Management.

☐ **InfoReader**

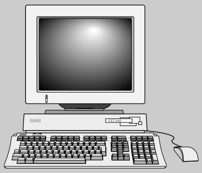
This setting affects your ability to display the InfoReader library of VXT documentation from the Getting Started menu.

5.9 Using Customized Resource Files

VXT software provides two methods for remotely managing terminal settings—the configuration manager or your own host-based resource files. If you use your own host-based resource files, you can create individual terminal resource files and group resource files. You enter the network location of a terminal's individual and group resource file in the Customize Resource Files dialog box.

To display the Customize Resource Files dialog box, choose Resource Files... from the Terminal Manager window's Customize menu. *VXT Software Version 2.1 Installation and System Management* describes the configuration manager, resource files, and how to use the Customize Resource Files dialog box.

You can use the TFTP or NFS transport to access your resource files on the host. If you use NFS, you must first enter the NFS mount point in the Customize NFS dialog box.



6

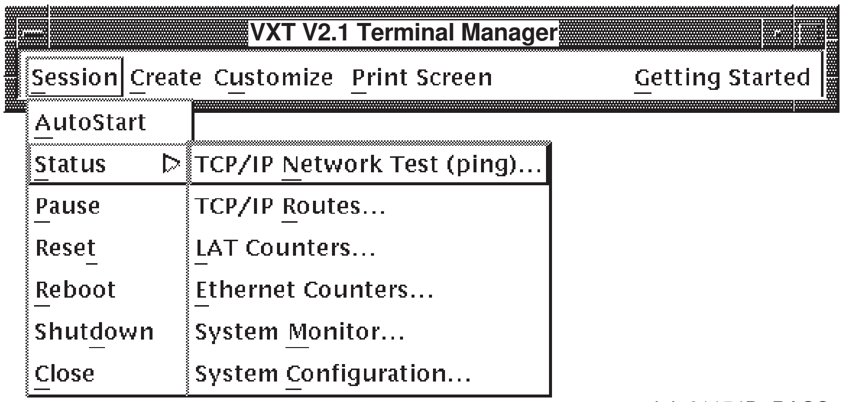
Checking the Terminal's Status

This chapter describes how to monitor the operating status of your terminal and of network communication. To monitor the terminal's status, you use the Status submenu accessed from the Session menu in the Terminal Manager window. This chapter covers the following topics:

- Displaying the Status Submenu
- Checking a TCP/IP Host System
- TCP/IP Routes Dialog Box
- Displaying LAT and Ethernet Counters
- Monitoring the Terminal's Memory and Network Use
- Checking the Terminal's System Configuration

6.1 Displaying the Status Submenu

To display the Status submenu, choose the Status menu item from the Session menu in the Terminal Manager window.



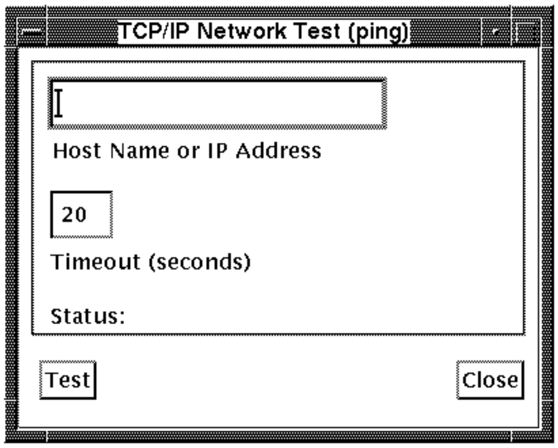
LJ–01154D–RAGS

When you choose a menu item from the Status submenu, the terminal displays a dialog box for that topic.

6.2 Checking a TCP/IP Host System

You can check if a TCP/IP host is available by using the TCP/IP Network Test (ping) dialog box. You specify a host name or IP address and a timeout period for the test. The terminal sends a ping (Packet InterNet Groper) packet once every second for the time you enter in the Timeout box. If you are testing the availability of a remote host on another network, you may want to increase the timeout value.

To display the TCP/IP Network Test (ping) dialog box, choose TCP/IP Network Test (ping)... from the Status submenu.



LJ–01112–RAGS

To run the test:

1. Click on the Host Name or IP Address box and enter a host name or address. Use the <X key if you make a mistake.

   Examples

   ```
   market
   12.212.231.22
   ```

2. Click on the Test button. The terminal displays the status of the host on the Status line:

   - Host name or IP Address is alive
   - No answer from Host name or IP Address
   - Trying...

To change the timeout period for performing the test:

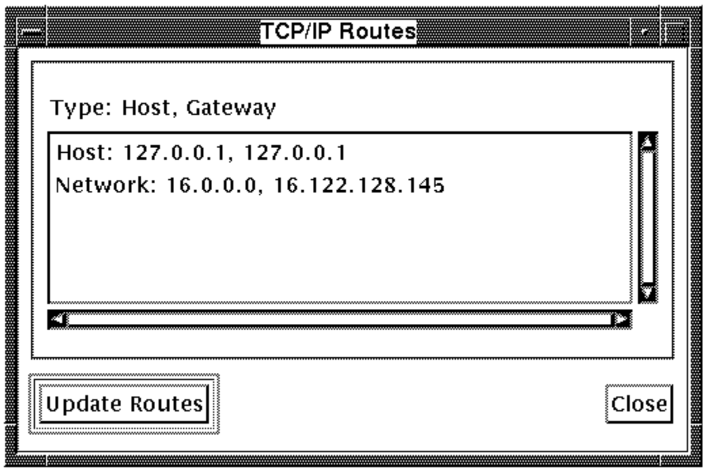
Click on the Timeout (seconds) box and enter a new timeout value from 1 to 99 seconds. Use the <X key if you make a mistake.

To dismiss the dialog box:

Click on the Close button.

6.3 TCP/IP Routes Dialog Box

You can display a list of TCP/IP routes from your network to hosts on other networks. To display the TCP/IP Routes dialog box, choose TCP/IP Routes... from the Status menu.



LJ–01113–RAGS

The dialog box lists routes from four sources:

- Static routes you enter in the Customize TCP/IP Routing Tables dialog box
- Interface routes added by interface initialization (NID startup)
- Internet control message protocol (ICMP) redirects
- Dynamic routes added by RIP packets (Normally dynamic routing is enabled. See Section 4.7 to enable or disable.)

To enter your own routes into the TCP/IP Routes dialog box:

See Section 4.7.

To update the list:

Click on the Update Routes button. The terminal displays the current list of static and dynamic routes.

To dismiss the dialog box:

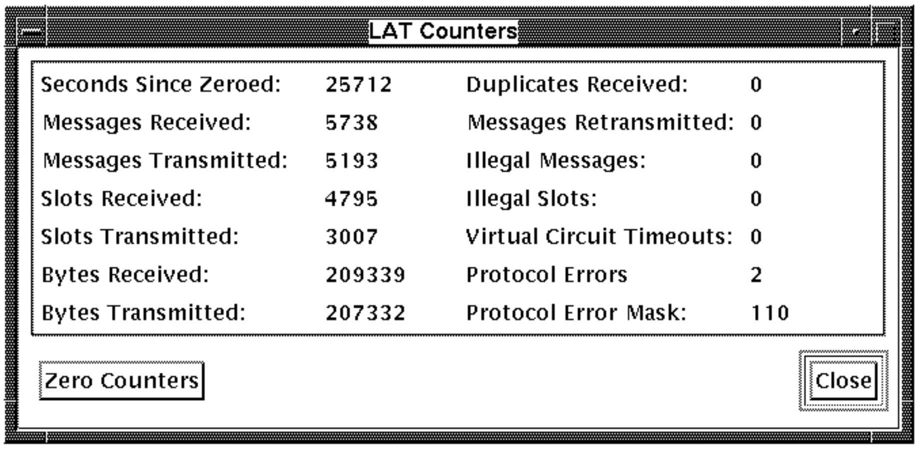
Click on the Close button.

6.4 Displaying LAT and Ethernet Counters

You can check the status of the terminal's LAT and Ethernet counters. Normally, the terminal updates the information in these dialog boxes every 5 seconds. You can set the update frequency time from 1 to 60 seconds, using the Customize Terminal Manager dialog box (Section 3.10).

LAT Counters Dialog Box

To display the LAT Counters dialog box, choose LAT Counters... from the Status submenu. Table 6–1 describes each counter.



LJ–01155A–RAGS

To set all counters to 0:

Click on the Zero Counters button. All counters in the list are set to 0.

To dismiss the dialog box:

Click on the Close button.

Table 6–1 LAT Counters Display Fields

Field	Description
Seconds Since Zeroed	The number of seconds since these counters were set to 0.

(continued on next page)

Table 6–1 (Cont.) LAT Counters Display Fields

Field	Description
Messages Received	The number of LAT protocol messages successfully received by the terminal.
Messages Transmitted	The number of LAT protocol messages successfully transmitted by the terminal.
Slots Received	The number of LAT slots received by the terminal. A slot represents a message segment for a particular LAT session.
Slots Transmitted	The number of LAT slots transmitted by the terminal. A slot represents a message segment for a particular LAT session.
Bytes Received	The number of data bytes received by the terminal over the LAT protocol.
Bytes Transmitted	The number of data bytes sent by the terminal over the LAT protocol.
Duplicates Received	The number of virtual circuit messages the terminal received that were not in the correct sequence.
Messages Retransmitted	The number of virtual circuit messages that the terminal resent to remote nodes.
Illegal Messages	The number of incorrectly formatted LAT messages the terminal has received.
Illegal Slots	The number of incorrectly formatted slots of data in a LAT message that the terminal has received.
Virtual Circuit Timeouts	The number of times that the terminal terminated a LAT connection because the remote node did not respond within the time allowed by the LAT protocol.
Protocol Errors	The number of times that the terminal determined that the LAT protocol has been violated by a remote node. See the Protocol Error Mask field for more information.
Protocol Error Mask	A bit mask providing information about the LAT protocol errors detected by the terminal. The bits in the mask are numbered from right to left, starting with bit 0 on the right. The following bits are defined in the mask: 0 An unknown LAT message type was received. 1 An invalid LAT START message was received. 2 A zero-valued virtual circuit reference was received.

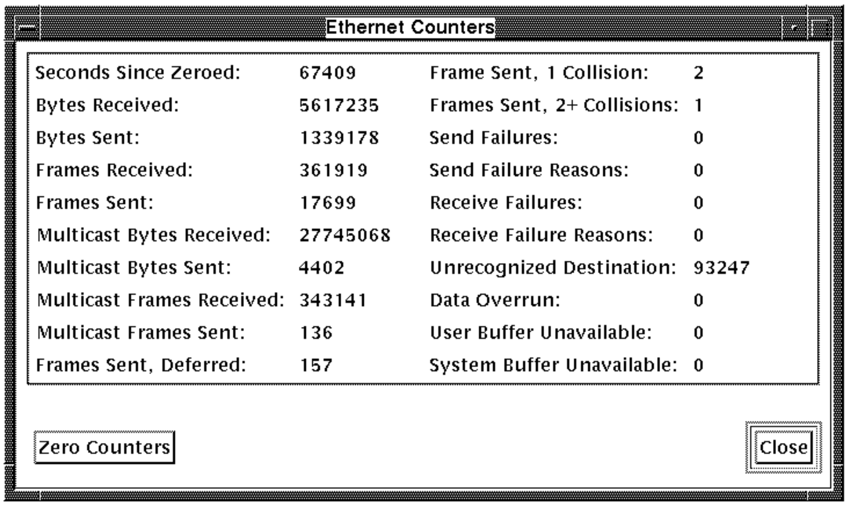
(continued on next page)

Table 6–1 (Cont.) LAT Counters Display Fields

Field	Description	
	3	An out-of-range virtual circuit reference was received.
	4	A reference to a nonexistent virtual circuit was received.
	5	A reference to a virtual circuit no longer in use was received.
	6	An invalid LAT STOP message was received.
	7	An invalid reference to a remote slot was received.
	8	A reference to a nonexistent slot was received.
	9	A credit violation was detected.
	10	A repeated creation of a slot was detected.
	11	An invalid sequence number was received.
	12	A repeated disconnect of a slot was detected.

Ethernet Counters Dialog Box

To display the Ethernet Counters dialog box, choose Ethernet Counters... from the Status submenu. Table 6–2 describes each counter.



LJ–01156A–RAGS

To set all counters to 0:

Click on the Zero Counters button. All counters in the list are set to 0.

To dismiss the dialog box:

Click on the Close button.

Table 6–2 Ethernet Counters Display Fields

Field	Description
Seconds Since Zeroed	The number of seconds since these counters were set to 0.
Bytes Received	The number of bytes contained in datagrams successfully received by the terminal, excluding Ethernet header and CRC data.
Bytes Sent	The number of bytes contained in datagrams successfully sent by the terminal, excluding Ethernet header and CRC data.
Frames Received	The number of datagrams successfully received by the terminal, including multicast frames.
Frames Sent	The number of datagrams successfully sent by the terminal, including multicast frames.
Multicast Bytes Received	The number of bytes received by the terminal in multicast frames, excluding Ethernet header and CRC data.
Multicast Bytes Sent	The number of bytes sent by the terminal in multicast frames, excluding Ethernet header and CRC data.
Multicast Frames Received	The number of multicast frames received by the terminal.
Multicast Frames Sent	The number of multicast frames sent by the terminal.
Frames Sent, Deferred	The number of times that the terminal deferred a frame transmission because the datalink was in use.
Frames Sent, 1 Collision	The number of times the terminal sent a frame on the second attempt after a collision occurred on the first attempt.
Frames Sent, 2+ Collisions	The number of times the terminal successfully sent a frame after collisions during the first two or more attempts.

(continued on next page)

Table 6–2 (Cont.) Ethernet Counters Display Fields

Field	Description
Send Failures	The number of times the Ethernet interface aborted a transmission request. If this count is not 0, see the Send Failure Reasons field for more information.
Send Failure Reasons	A bit mask providing information about the reason for a send failure if the Send Failures counter is not 0. The bits in the mask are numbered from right to left, starting with bit 0 on the right. The following bits are defined in the mask: 0 A transmission failed to complete after 16 retries, usually due to excessive collisions. 1 A loss of carrier occurred on the Ethernet during a transmission. 2 A short circuit occurred on the Ethernet during a transmission. 3 An open circuit occurred on the Ethernet during a transmission. 4 Heartbeat error. 5 Data underflow.
Receive Failures	The number of frames received with an error condition. For more information, see the Receive Failure Reasons field.
Receive Failure Reasons	A bit mask providing information about the type of receive failures encountered if the Receive Failures counter is not 0. The bits in the mask are numbered from right to left, starting with bit 0 on the right. The following bits are defined in the mask: 0 A block check error. The received frame did not pass the cyclical redundancy check (CRC). 1 A framing error. The received packet did not contain an integral number of 8-bit bytes.
Unrecognized Destination	The number of frames received by the terminal that did not contain a multicast address or protocol type recognized by the terminal. These frames are discarded.
Data Overrun	The number of times that the terminal's hardware lost an incoming frame because it was unable to keep up with the data rate.

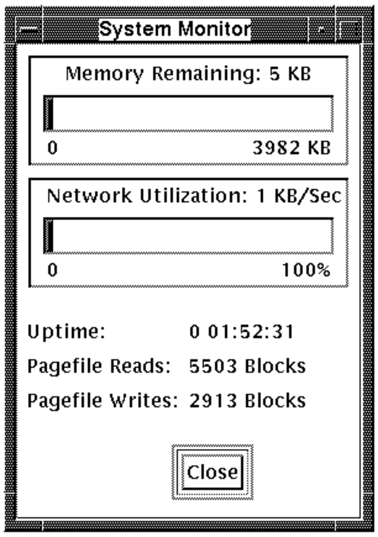
(continued on next page)

Table 6–2 (Cont.) Ethernet Counters Display Fields

Field	Description
User Buffer Unavailable	Currently unused. Should always be 0.
System Buffer Unavailable	The number of times that the terminal's software did not have a buffer available to receive an incoming frame (MISS error).

6.5 Monitoring the Terminal's Memory and Network Use

You can use the System Monitor dialog box to monitor the amount of local memory available for use by the terminal. You can also monitor the percent of the terminal's network capacity currently being used. Normally, the terminal updates this information every 5 seconds. You can set the update frequency time from 1 to 60 seconds, using the Customize Terminal Manager dialog box (Section 3.10). To display the System Monitor dialog box, choose System Monitor from the Status submenu.



LJ–0111A–RAGS

Memory Remaining: Indicates how much of the local memory installed in the terminal is currently available for use.

Network Utilization: Indicates what percent of the network capacity of the terminal is currently being used.

Uptime: Indicates how long the terminal has been running since being booted.

Pagefile Reads: Indicates the number of blocks of memory read by the terminal since being booted.

Pagefile Writes: Indicates the number of blocks of memory written by the terminal since being booted.

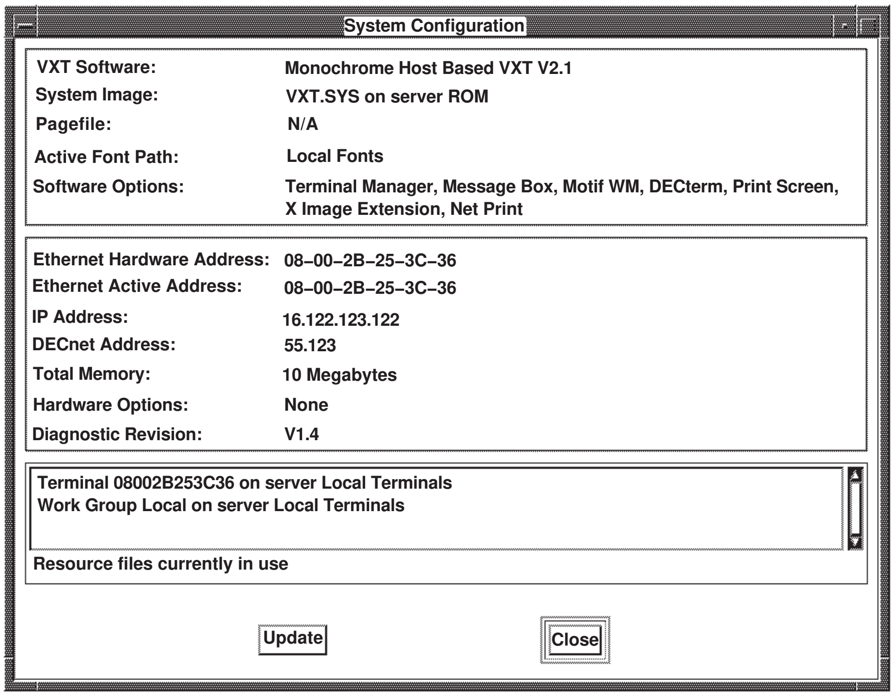
To dismiss the dialog box:

Click on the Close button.

6.6 Checking the Terminal’s System Configuration

You can use the System Configuration dialog box to check the terminal’s software version, network addresses, work group, active font path, installed options, and amount of installed memory.

To display the System Configuration dialog box, choose System Configuration... from the Status submenu.



LJ–0110C–RAGS

Table 6–3 describes the System Configuration fields:

Table 6–3 System Configuration Display Fields

Field	Description
VXT Software:	Lists the VXT software version and type: `{Monochrome, Color} {Host-Based, Server-Based} VXT V`*n.n* A plus symbol (+) after the word Monochrome or Color indicates the terminal has a VXT 2000^+ video board installed.
System Image:	Lists the system image name of the VXT software in use and the name of the server supplying the software. The default system image name for VXT Version 2.0 software is VXT or VXT021. **For host-based software:** the displayed server name is always `ROM`, because VXT host-based software is loaded into the terminal's ROM memory and does not use an InfoServer for memory services. **For server-based software:** the server name is the name of the InfoServer system from where the software was loaded. If you have several InfoServer systems with VXT software on your network, the terminal may use different servers to load software, provide fonts, and store terminal and work group customizations.
Pagefile:	**For server-based software:** this field lists the name of the InfoServer pagefile the terminal is using for memory paging services. The pagefile resides on the InfoServer that loaded the terminal's VXT software. If a pagefile has not been opened yet, this field displays `No Pagefile`. **For host-based software:** this field lists `N/A` for not applicable.

(continued on next page)

Table 6–3 (Cont.) System Configuration Display Fields

Field	Description

Active Font Path:	Lists the location of the fonts currently in use. Font path elements are separated by commas. To change the font path, use the Customize Font Path dialog box (Section 5.3). Font path elements are listed in the order entered in the Customize Font Path dialog box.
	
	For host-based software: by default, the terminal uses the Local Fonts set loaded with VXT software into the terminal's local memory.
	
	`Local Fonts`
	
	For server-based software: by default, the terminal uses the Local Fonts set and the VXT fonts on an InfoServer. The font path indicates the name of the InfoServer system supplying fonts:
	
	`//lastport/`*`server_name`*`/VXT, Local Fonts`

Software Options:	Lists the VXT software options available for use. By default, all options are available. You can turn options on and off in the Customize Software Options dialog box (Section 5.8). Host-based terminals can conserve memory by turning off unused options. `Terminal Manager, Message Box, Motif WM, DECterm, Print Screen, X Image Extension, Net Print, 3270, Font manager, InfoReader`
Ethernet Hardware Address:	Lists the terminal's Ethernet physical address, set at the factory.
Ethernet Active Address:	**If you use DECnet:** this field lists the terminal's global network address, in the network service access point (NSAP) format. DECnet derives this address from the Ethernet hardware address. **If you use TCP/IP or LAT:** this field lists the same address as the Ethernet Address field.
IP Address	Lists the terminal's Internet protocol address, for communicating with systems that use the TCP/IP protocol. If you have not entered an IP address in the Customize TCP/IP dialog box, this field is empty.

(continued on next page)

Table 6–3 (Cont.) System Configuration Display Fields

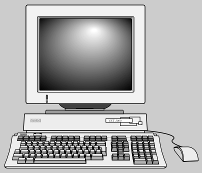
Field	Description
DECnet Address	Lists the terminal's DECnet address, for communicating with systems on a wide area network that use the DECnet protocol. If you have not enabled the DECnet protocol and entered an DECnet address in Customize DECnet dialog box, this field is empty.
Total Memory:	Lists the amount of memory installed in the terminal, from 4 megabytes to 18 megabytes.
Hardware Options:	Lists any option boards installed in the terminal: `Image` VXT image accelerator board
Diagnostic Revision:	Lists the terminal's ROM revision level.
Resource files currently in use:	Lists the name and location of the terminal and work group resource files that store the terminal's customizations. **For host-based software:** the terminal and work group resource files are always listed on the Local Terminals server. **For server-based software:** the terminal and work group resource files reside on the same InfoServer system. This system may be a different InfoServer system than the one that loads the terminal's VXT software. The system manager may have new terminals join the Unregistered Terminals work group.

To display updated information:

Click on the Update button. The terminal displays updates any information that has changed since you opened the dialog box.

To dismiss the dialog box:

Click on the Close button.



7

Using VXT DECterm Windows

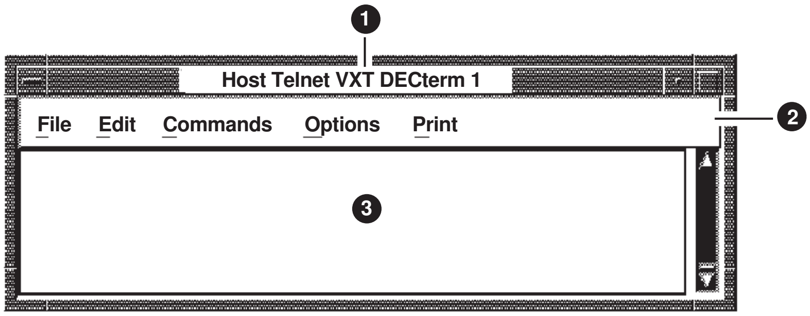
This chapter describes how to use VXT DECterm windows, also known as terminal windows. The chapter covers the following major topics:

- The VXT DECterm Window
- Copying and Pasting Text
- Clearing or Resetting the Window
- Printing the DECterm Window
- Exiting from a VXT DECterm Window

7.1 The VXT DECterm Window

The VXT DECterm window is a VT300 series terminal emulator. You can open several VXT DECterm windows on the screen and run different applications in each window. You can use your mouse to move between windows.

Chapter 2 describes how to create a terminal window session on your host, using the Create menu and dialog box. When you create the session, the terminal displays a VXT DECterm window.



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Chapter 11 describes the basic features of windows. For VXT DECterm windows:

❶ The **window title** uses the following format:

Transport VXT DECterm on *Host n*

Transport is the method used to connect to the host system —Telnet, LAT, DECnet, or Serial. The *Host* system is identified by a host name, service name, or IP address. VXT DECterm windows are numbered sequentially (*n*) in the order you open them during a session. The name VXT DECterm lets you distinguish the terminal's DECterm windows from any remote DECterm windows you create using a host system's session manager. You can change the title by choosing the Window... menu item from the Options menu.

❷ The **menu bar** displays the names of the five pull-down menus available from the window:

```
File    Edit    Commands    Options    Print
```

You can use your mouse or keyboard to display menus and choose menu items. To display a menu from the keyboard, press the Alt key and the key for the underlined letter in the menu name at the same time. After that, you can use the arrow keys to navigate to different menu items and menus. You choose a menu item the same way you choose a menu: Alt + underlined letter.

❸ The **work area** is where you enter text and commands and interact with host applications, similar to a video terminal screen. By default, the size of this area is 24 lines by 80 columns. You can change the terminal size by selecting the Window... menu item from the Options menu.

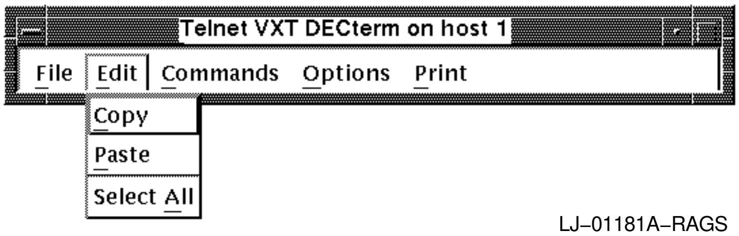
The Terminal Size setting in the Window Options dialog box should match the host system's row and page settings, to ensure the proper display of applications such as editors and mail.

Window Colors

VXT DECterm windows use the same color scheme as other VXT windows. You choose the colors in the Terminal Manager's Customize Window Color dialog box (Section 3.9). You can also use the Display Options dialog box in the VXT DECterm window to choose dark text on a light background or light text on a dark background (Section 8.4).

7.2 Copying and Pasting Text

You can copy and paste text in a DECterm window. You can also copy text from one window and paste the text into another window. To copy and paste text, you use the DECterm window's Edit menu. The Edit menu looks like this:



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From the Edit menu, you can perform the following functions:

Copy

Choosing this item places the currently selected text into the terminal's copy buffer. You can also use the Select All menu item to select the complete window.

Paste

Choosing this item sends the contents of the terminal's copy buffer to the cursor location in the window as if it were typed on the keyboard.

Select All

Choosing this item places all of the window's text into the terminal's copy buffer. You can also use the Copy menu item to place selected text from the window into the copy buffer.

7.2.1 Host Synchronization Required

To prevent loss of data when the contents of the paste buffer is sent to the host, set the host to send XON and XOFF synchronization characters as follows:

On a UNIX or ULTRIX system

```
% stty ixoff ixon
```

On an OpenVMS system

```
$ SET TERMINAL/HOSTSYNC
```

7.2.2 Selecting Text to Copy

You can select a word, a line, or a block of text at a time. A block can be a single character or any number of contiguous characters, up to the complete window. You can also use the Select All menu item in the Edit menu to select the complete window.

To select a block of text:

1. Point to the start of the block.
2. Press and hold MB1, then drag the pointer to the end of the block.
3. Release MB1 to indicate the end of the block. The selected text is highlighted.
4. In the Edit menu, click on the Copy menu item.

To select a single word:

1. Point to the word.
2. Double click MB1 to select the word. The selected word is highlighted.
3. In the Edit menu, click on the Copy menu item.

To select a line of text:

1. Point to the line.
2. Triple click MB1 to select the line. The selected line is highlighted.
3. In the Edit menu, click on the Copy menu item.

7.2.3 Pasting Text

After you select text and store it in the copy buffer, you can paste the text to the text cursor location in the same window or in a different window.

To paste text:

1. Place the text cursor where you want to copy the text.
2. Choose the Paste menu item from the Edit menu of the window that will receive the copied text. The terminal copies the text to the cursor position.

7.2.4 Using Quick Copy

The quick copy feature lets you paste text without storing it in the copy buffer or using the Edit menu. There are two ways to perform a quick copy:

Method 1

1. Select the text as described in Section 7.2.2.
2. Place the text cursor where you want to paste the text.
3. Press and release MB2. If you accidentally move the mouse before releasing MB2, method 2 is activated.

You can use this method to copy text from one window to another. Move the input focus to the other window before clicking MB2. To paste into remote DECterm windows, use MB3.

Method 2

1. Place the text cursor where you want to paste the text.
2. Point to the start of the text you want to copy.
3. Press and hold MB2. Drag the pointer to the end of the text to be copied. Release MB2 to copy the selected text to the cursor position.

Copy and Paste Functions Disabled by Some Applications

If you are running an application that provides support for positioning its pointer or cursor from the mouse, the copy and paste functions may not work. See your application's documentation.

7.2.5 Extending Your Selected Text

After you select an area of text to copy, you may decide that you wanted to copy a larger area. Before you paste text, you can use the mouse or the arrow keys to extend the area you have selected.

To extend your selection with the mouse:

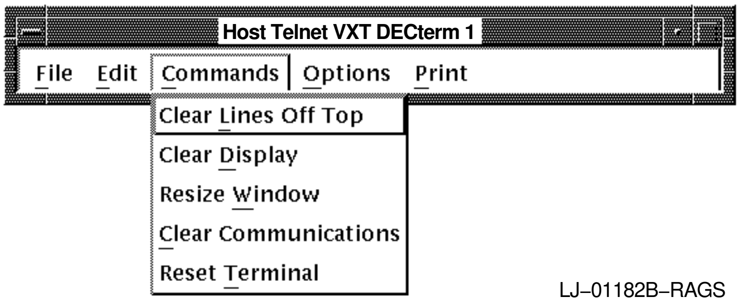
1. After selecting text with MB1, move the mouse cursor to the position that marks the boundary of the area you would like to have selected.
2. Press the Shift key and click MB1. This extends the initially selected area up to the present position of your mouse cursor.

To extend your selection with the arrow keys:

After selecting text with MB1, press the Shift key and any arrow key to extend your selected text in the direction of the arrow.

7.3 Clearing or Resetting the Window

The Commands menu in a VXT DECterm window lets you clear, reset, or resize the window. To display the Commands menu, click on Commands in the VXT DECterm window's menu bar. The Commands menu looks like this:



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From the Commands menu, you can perform the following functions:

Clear Lines Off Top

Choosing this item clears the information stored in the transcript. The **transcript** is an area of memory that contains the last saved lines of your screen display. You can read the transcript by using the scroll bars. The transcript exists as long as the Record Lines Off Top option in the Display dialog box is enabled. To change the size of the transcript, use the Display Options dialog box from the Options menu.

Clear Display

Choosing this item clears the contents of the current window.

Resize Window

Choosing this item resizes the window to match the size (number of rows and columns) of your DECterm terminal.

Clear Communications

Choosing this item performs the following actions:

- Cancels any print operation in progress.
- Cancels any escape sequence, control sequence, control string, or character string processing in progress.
- Clears the keyboard buffer.
- Clears the receive buffer.

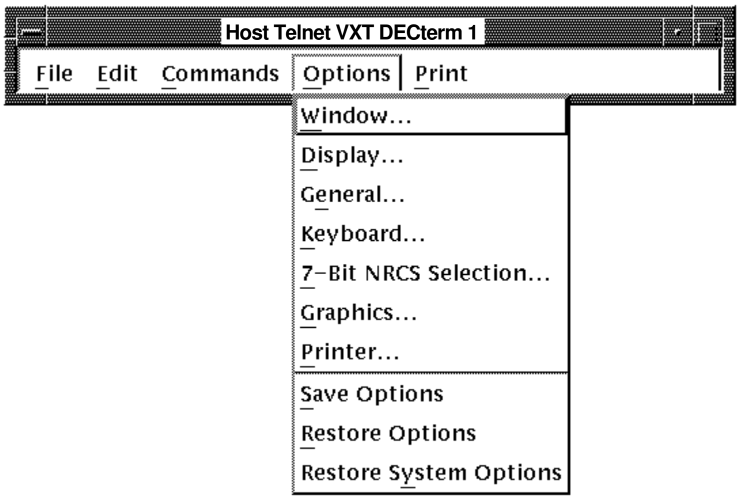
Reset Terminal

Choosing this item sets several terminal operating features to their default settings.

Resets...	To...
Color map	Default.
Cursor mode	Visible.
Insert/replace mode	Replace.
Origin mode	Upper left of window, independent of margins.
Autowrap mode	Off.
Keyboard action mode	Unlocked.
Keypad mode	Numeric.
Cursor key mode	Normal.
Top margin	Line 1.
Bottom margin	The bottom line in the window.

7.4 Using Options

The Options menu in a VXT DECterm window lets you customize the settings for many VXT DECterm features–from window settings to printing. Chapter 8 describes the Options menu and how to use it.



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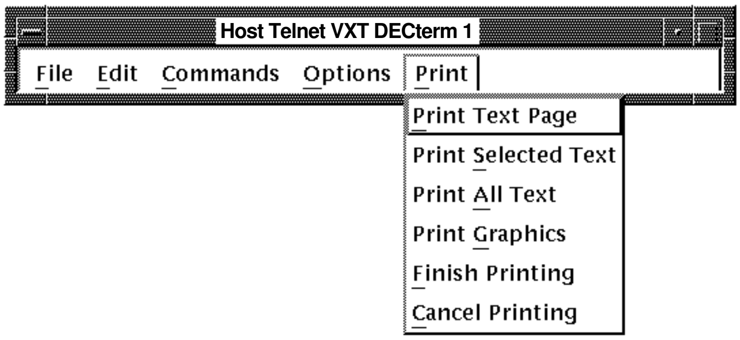
Note

Your VXT manager may choose to restrict your access to the Options menu or certain menu items. In this case, the items are dimmed.

7.5 Printing the DECterm Window

You can print the contents of the DECterm window on a serial or parallel printer connected to the rear of the terminal. See Section 4.2 to activate the serial or parallel printer port. You can print all or part of the window. You can print the window as text, sixel graphics, or PostScript if your printer supports the format. To display the Print menu, click on Print in the DECterm window's menu bar. The Print menu looks like this:



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From the Print menu, you can perform the following functions:

Print Text Page

This option sends the contents of the page to the printer as text. The page size is set by the Terminal Size option in the Window Options dialog box. You can choose the Window Options dialog box from the Options menu in the VXT DECterm window. The default size is 24 lines.

Print Selected Text

This option sends text you select on the screen to the printer.

Print All Text

This option sends the contents of the page and the transcript to the printer as text. The transcript contains the lines that were saved after they were scrolled off the top of the screen. You can control the number of lines saved.

Print Graphics

This option sends the contents of the page to the printer in text, PostScript, or sixel format.

Finish Printing

This option stops the printing after the current contents of the buffer are printed.

Cancel Printing

This option stops the printing immediately.

7.6 Exiting from a VXT DECterm Window

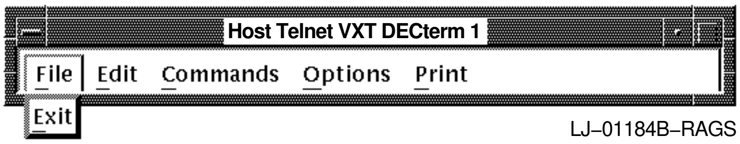
There are two ways to exit from a VXT DECterm window:

- Log out from the window as you normally log out from your host system.

  This action closes the window and stops all applications in the window.

- Click on the File menu in the Terminal Manager's menu bar and choose Exit.

  This action closes the window, but may leave applications running. Depending on your operating system, you may be able to create another DECterm window and reconnect to the application.



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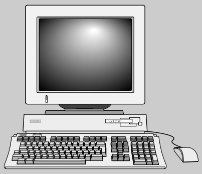


8

Customizing VXT DECterm Windows

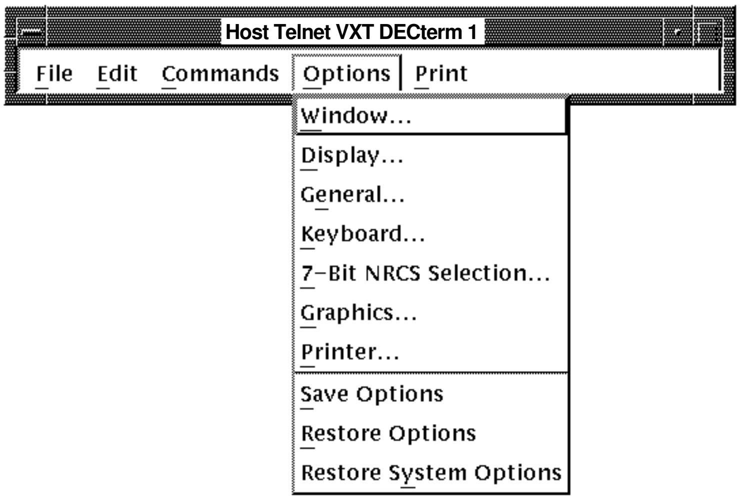
This chapter describes how to set many VXT DECterm window features to suit your personal preference, by using the Options menu in a VXT DECterm window. Initially, the features use factory-default settings that work with many host systems. You can make changes to the settings and save them for all future sessions.

The chapter covers the following major topics:

- Displaying the Options Menu
- Saving and Restoring VXT DECterm Option Settings
- Changing Your Window Settings
- Changing Your Display Settings
- Changing Your General Operating Features
- Changing Your Keyboard Features
- Choosing National Replacement Character Sets
- Changing Your Graphics Display Settings
- Changing Your Printer Settings

8.1 Displaying the Options Menu

To display the Options menu, click on Options in the VXT DECterm window's menu bar. The Options menu looks like this:



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When you choose a menu item from the Options menu, the terminal displays a dialog box with the feature settings for that topic. In dialog boxes, shaded buttons indicate the current settings. You can examine the settings and change them if desired. You can use the last three menu items to save your settings, restore your last saved settings, or restore the system-default settings.

Note

A system manager can customize settings for terminals and work groups. The system manager can also lock or unlock access to menu items on the Options menu.

8.2 Saving and Restoring VXT DECterm Option Settings

Initially, the terminal uses the system-default settings for each VXT DECterm window you create. If you make changes to option settings and save them, the terminal applies your saved settings to each new VXT DECterm window you create. To make changes to VXT DECterm settings and save them:

1. Make your changes in a VXT DECterm Options dialog box, then click on the OK or Apply button. The changes are applied to the current VXT DECterm window.
2. Click on Save Options in the Options menu. The settings are saved for future VXT DECterm windows.

Applying Changes in a Dialog Box

Each VXT DECterm Options dialog box has three push buttons for applying or dismissing new settings in that box:

Click on . . .	To . . .
OK	Apply new settings for the current session and dismiss the dialog box.
Apply	Apply new settings for the current session without dismissing the dialog box.
Cancel	Dismiss the dialog box without changing any settings. If you made any changes without applying them, clicking on the Cancel button cancels those changes.

Some option settings do not take effect until you open a new VXT DECterm window.

OK and Apply Do Not Save VXT DECterm Options

Note that the OK and Apply buttons work differently in VXT DECterm Options dialog boxes than in the Terminal Manager window's Customize dialog boxes. In the Customize dialog boxes, the OK and Apply buttons save the feature settings for future use.

Saving or Restoring Option Settings

To save or restore settings for future sessions, choose from the following menu items on the Options menu:

Choose . . .	To . . .
Save Options	Save your current option settings for use in all future sessions.
Restore Options	Recall the last option settings you saved with the Save Options menu item. Choose the Restore Options menu item if you want to reset any option settings that you changed temporarily, but did not save. To see changes to specific settings, display the dialog box for those settings.
Restore System Options	Restore the terminal's default option settings. To see changes to specific settings, display the dialog box for those settings.

If you have changed some settings and want to use or view the factory-default settings for your VXT DECterm Option dialog boxes, click on Restore System Options in the Options menu. If you saved some customized settings but decide you want to return to the factory-default settings for future sessions, click on Restore System Options and Save Options; remember that this clears the customized settings you saved.

Applications May Customize Some Settings

Some application software that you use may also set certain window features. Programmers can use control sequences in their applications to customize most DECwindows features from the host system. This provides the individual application with more control.

ReGIS and Sixel Graphics

VXT DECterm windows emulate the VT300 series terminal, so you can display ReGIS and sixel graphics on the terminal. You can also use the remote DECterm application available under a host session manager to display ReGIS and sixel graphics.

8.3 Changing Your Window Settings

You can use the Window Options dialog box to control the size of the VXT DECterm window, by choosing the number of rows and columns displayed. You can also control such features as the window title and the font size (big or small) used to display characters. You can use an alternative font on your host system or InfoServer system, if the font meets certain requirements.

Before your resize a VXT DECterm window in the Window Options dialog box, you should understand how host system and window manager settings also affect the window's operation.

Factors Affecting the VXT DECterm Window Size

Three factors affect the display of a VXT DECterm window:

- The Terminal Size setting in the Window Options dialog box
- The host's settings for the DECterm terminal size
- Any adjustments you make to the window size, using a local or remote window manager (such as maximizing the window or using the window border to stretch the window)

The normal Terminal Size in the Window Options dialog box is 24 rows by 80 columns. Keeping the Terminal Size matched with the host's setting ensures the proper display of applications such as editors and mail. If you use unmatched settings, be aware that some application displays may be affected.

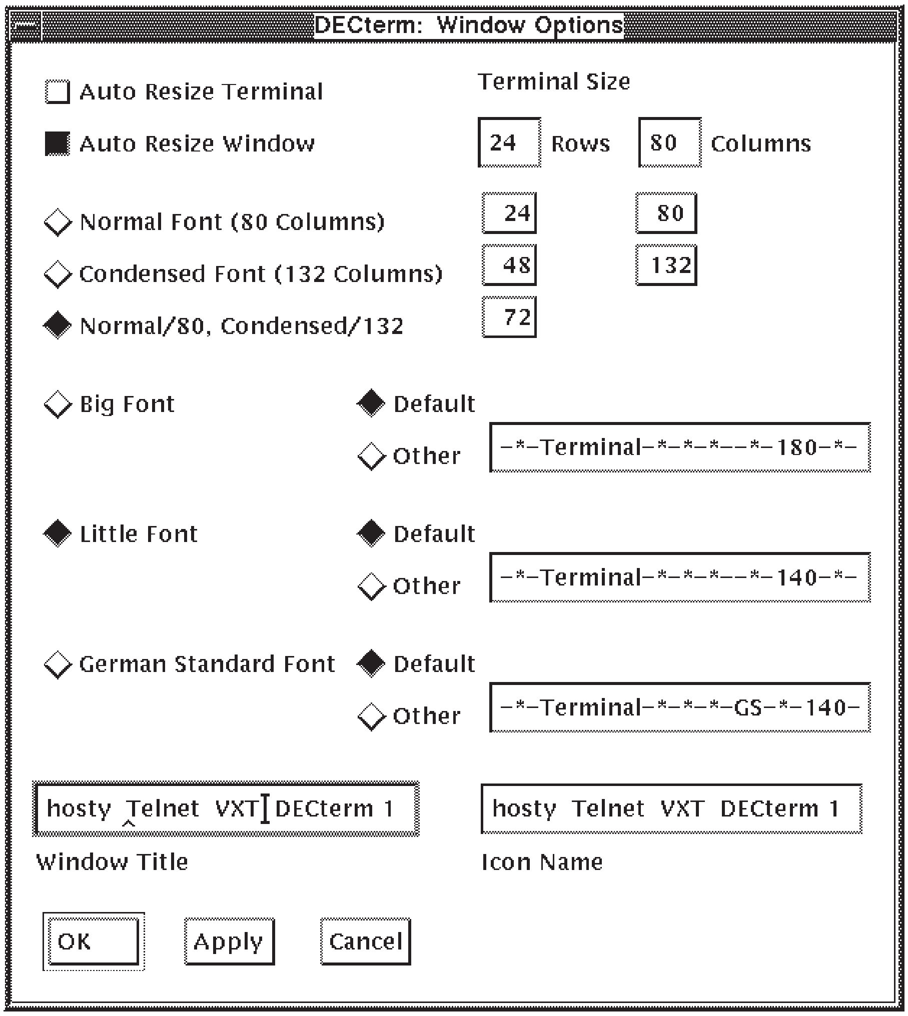
If you change the Terminal Size, you can make the same adjustments on the host. The commands for setting the DECterm window size on the host depend on the operating system.

For example, on OpenVMS hosts you can enter the SHOW TERMINAL command to check the Page and Width settings. These settings should match the Terminal Size row and column settings. You can adjust the host settings with the SET TERM/PAGE=*n* and SET TERM/WIDTH=*n* commands.

The Auto Resize Terminal feature in the Window Options dialog box determines whether or not the Terminal Size automatically changes when you adjust the window with a window manager. Normally this feature is off, so the Terminal Size remains matched with the host's settings. For example, when you click on the window border and stretch the window, the number of rows and columns within the window does not change.

Using the Window Options Dialog Box

To view or change your VXT DECterm window settings, choose Window... from the Options menu. The terminal displays the Window Options dialog box:



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From the Window Options dialog box, you can change the following features:

☐ **Auto Resize Terminal**

Normally, changing the window size does not change the number of rows and columns displayed. If you click on Auto Resize Terminal, the terminal automatically adjusts the number of display rows and columns when you or your application software changes the window size.

☐ **Auto Resize Window**

Normally, the terminal automatically resizes the window when the number of rows and columns changes. You can turn this feature on or off by clicking on Auto Resize Window. If you display a large number of rows and columns when this feature is off, some information may be outside the window boundary.

☐ **Terminal Size**

The default size of the VXT DECterm window is 24 rows and 80 columns. You can choose from standard values or enter your own value:

- Standard values: Choose 24, 48, or 72 rows and 80 or 132 columns.
- Your own value: Click on the Rows box and enter a number from 1 to 99. Click on the Columns box and enter a number from 9 to 254.

☐ **Normal Font, Condensed Font**

Normally, the terminal displays characters in a font suitable for the display width—a normal font for 80 columns, a condensed font for 132 columns. You can also choose to use the normal font or condensed font at all times, by clicking on the Normal Font (80 Columns) button or Condensed Font (132 Columns) button. The condensed font lets you display more characters in a small window.

☐ **Window Title**

You can choose a window title of up to 30 characters for each window you open. The default title is

Host Transport VXT DECterm *n*

- *Host* is the host name, service name, or IP address of the host system.
- *Transport* is the method used to connect to the host system —Telnet, LAT, DECnet, or Serial.
- *n* is the number of the window. VXT DECterm windows are numbered sequentially in the order you open them during a session.

Programmers can change the title by using the following command:

```
<OSC>21;title_string<ST>
```

If you change the title, the terminal stops numbering windows in the session. The only way to restart numbering is to choose Restore Systems Options from the Options menu. In doing so, all VXT DECterm settings are restored to their system-default settings.

☐ Icon Name

You can choose an icon name to identify each window you reduce to an icon. This option works the same as the Window Title option.

Programmers can change the icon name with the following command:

```
<OSC>2L;icon_string<ST>
```

☐ Big Font, Little Font, German Standard Font

You can display characters in a little font, big font, or German standard font. Normally, the terminal displays characters in its little font, which is a 14-point font (10-point font on 100 dots/inch monitors). The big font is an 18-point font.

As an alternative, you can specify a suitable font on your host system or InfoServer system. In any case, you can display only one font in a window at a time. You may use a different font in each VXT DECterm window.

To choose one of the terminal's default fonts:

1. Click on the Big Font, Little Font, or German Standard Font button.
2. Click on the Default button next to the font you chose.
3. Click on OK or Apply to see the new font in the VXT DECterm window.

To save a font selection for future use:

Click on Save Options in the Options menu.

8.3.1 Using Fonts on Your Host System or InfoServer

If you have suitable fonts on your host or InfoServer system, you can use those fonts instead of the terminal's fonts in your VXT DECterm windows. In each VXT DECterm window, you can specify an alternative big font, little font, and German standard font. You can specify fonts from different hosts or InfoServer systems.

To use alternative fonts on a host or InfoServer system, you must specify a font path and font name.

Note

VXT DECterm windows require specific fonts and sizes to run and display properly. Most fonts do not meet these requirements. Problems and error messages will occur if VXT DECterm cannot find the proper fonts.

Step 1: Specify a Font Path

Use the Customize Font Path dialog box in the Terminal Manager window (Section 5.3).

You can set only one font path at a time. You can change font paths while a VXT DECterm window is running. Applications currently running continue to use the old font path.

Step 2: Enter the Font Name in the Window Options Dialog Box

You can specify an alternative font for each of the standard font choices: big font, little font, and German standard font. You can specify different fonts in each VXT DECterm window you create. You can also change fonts while a VXT DECterm window is displayed.

To save your font settings, click on Save Options in the Options menu. New applications will use the new font. Applications currently running will continue to use the same font.

1. Click on the Big Font, Little Font, or German Standard Font button.
2. Click on the Other button next to font you chose in step 1.
3. Clear the text in the box next to the Other button. Double-click on the box. All text in the box is highlighted. Press the Remove key to erase all the text.
4. Enter the name of your font in the box. See your system manager if you need help.

Use the following steps if your font is on an InfoServer system.

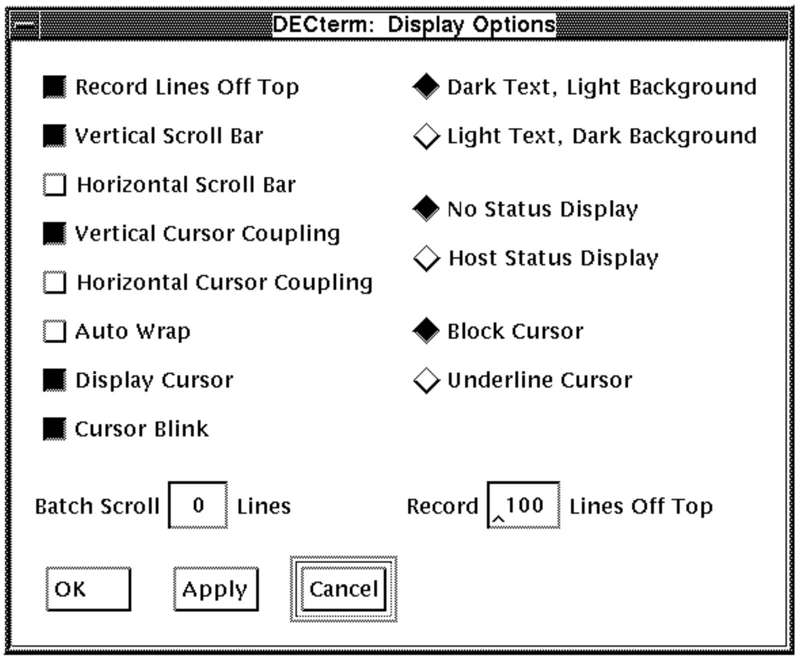
To use a font on an InfoServer system:

After you set the font path, you can use the terminal's Configuration Manager: Font Management dialog box to list the available fonts on your InfoServer system. You can cut and paste the font name into the DECterm Window Options dialog box.

1. In the Terminal Manager window, click on Customize in the menu bar to display the Customize menu.
2. In the Customize menu, click on Configuration... to display the Configuration submenu.
3. Click on the Font Management... menu item to display the Configuration Manger: Font Management dialog box.
4. Click on the name of the font set you want. The font set name appears highlighted in the scroll box.
5. Click on the List Contents... button to display the List Font Set Contents box.
6. In the List Font Set Contents scroll box, find the font you want. Triple click on the font.
7. Click on the DECterm Window Options dialog box. The input cursor should be blinking in the Other box that you cleared. If not, click on the Other box.
8. Click on MB2. The font name is copied to the Other box.
9. Click on Apply or OK. The terminal applies the new font to the VXT DECterm window.

8.4 Changing Your Display Settings

You can control display features such as the type of cursor, use of scroll bars, and appearance of text (light or dark). You can also specify how many lines to save when text is scrolled off the top of the window. To view or change your display settings, choose Display... in the Options menu. The terminal displays the Display Options dialog box:



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From the Display Options dialog box, you can change the following settings:

☐ Record Lines Off Top

Normally, the terminal saves lines that are scrolled off the top of the VXT DECterm window. To view these lines, use the vertical scroll bar. If you do not want to save lines that are scrolled from the display, click on the Record Lines Off Top button to turn it off. To specify the number of lines to save, use the Record 100 Lines Off Top box in this display box.

☐ Vertical Scroll Bar

Normally, the VXT DECterm window has a vertical scroll bar. To remove the scroll bar, click on the Vertical Scroll Bar button to turn it off.

☐ **Horizontal Scroll Bar**

Normally, the VXT DECterm window does not have a horizontal scroll bar. To add a horizontal scroll bar to the bottom of the window, click on the Horizontal Scroll Bar button.

☐ **Vertical Cursor Coupling**

Normally, the cursor automatically returns to the cursor position in the DECterm window to display text when it comes from your host system. For example, if you scroll back into transcript and output from the host occurs, the cursor returns to display the output text. Click on the Vertical Cursor Coupling button if you wish to turn vertical cursor coupling off.

☐ **Horizontal Cursor Coupling**

Normally, the cursor does not return to display text from a host system if you are scrolling horizontally. For example, if you scroll horizontally into transcript and output from the host occurs, the cursor will not return to display the output text. Click on the Horizontal Cursor Coupling button if you wish to turn horizontal cursor coupling on.

☐ **Auto Wrap**

Normally, text does not automatically wrap to the next line when the cursor reaches the right margin in the window. To have text automatically wrap to the next line, click on the Auto Wrap button.

☐ **Display Cursor**

Normally, the terminal displays the text cursor, which is a block or underline character. To turn the text cursor off, click on the Display Cursor button.

☐ **Cursor Blink**

Normally, the text cursor blinks. To have the cursor appear steady, click on the Cursor Blink button. The terminal manager also has a Cursor Blink feature, in the Customize Keyboard dialog box. The two settings have no effect upon each other.

☐ **Text and Window Background**

VXT DECterm windows use the same color scheme as other VXT windows. You choose the colors in the Terminal Manager's Customize Window Color dialog box (Section 3.9). To swap the text and background colors, you can use the Dark Text, Light Background or Light Text, Dark Background buttons.

☐ **Status Display**

If you want to display a host status line, click on the Host Status Display button. The host status line is a line at the bottom of the window where your host application software can display messages.

☐ **Cursor Style**

Normally, the terminal uses a solid block cursor to indicate the active position. To use an underline character for the cursor, click on the Underline Cursor button.

☐ **Batch Scroll [0] Lines**

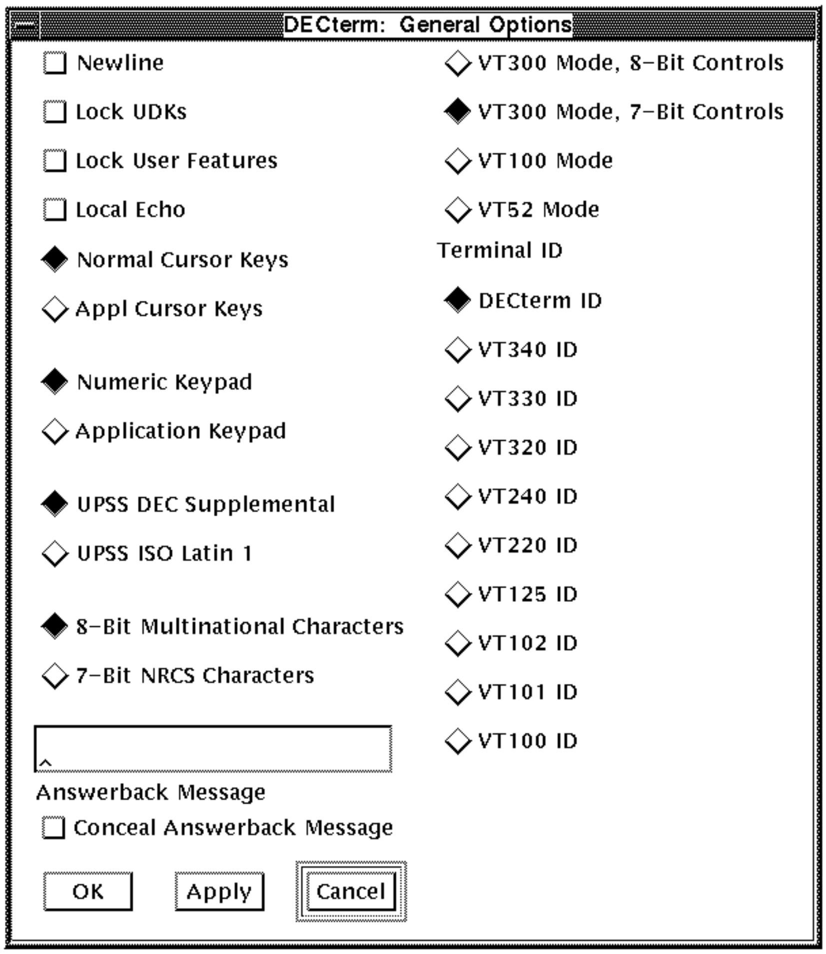
You can specify the speed at which the terminal displays text from your host during scrolling. The slowest settings of 0 or 1 line display every line during scrolling. Faster settings greater than 1 line cause multiple lines to be displayed quickly from the host.

☐ **Record [100] Lines Off Top**

Normally, the terminal saves up to 100 lines that are scrolled off the top of the display. You can specify the number of lines to save (0 to 999) by using the Record [500] Lines Off Top box. Increasing the number of lines saved increases the terminal's memory usage.

8.5 Changing Your General Operating Features

You can set general operating features to match your computing environment and application software. For example, you choose which of the terminal's character sets to use. To view or change general operating settings, click on General... in the Options menu. The terminal displays the General Options dialog box:



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From the General Options dialog box, you can change the following settings:

☐ Newline

Normally when you press the Return key, the cursor moves to a new line because the terminal sends a carriage return (CR) character and a line feed (LF) character. Similarly, when the terminal receives a line feed, form feed (FF), or vertical tab (VT) character, the cursor moves to the first column of the next line.

If you click on the Newline button, pressing Return sends only a carriage return, so the cursor does not move to a new line. When the terminal receives a LF, FF, or VT character, the cursor moves to the current column of the next line.

☐ Lock UDKs

Your keyboard contains keys you can define for your own use (Chapter 15). Normally, the host system can change the function of these user-defined keys (UDKs). If you click on the Lock UDKs button, the host system cannot change your definitions.

☐ Lock User Features

There is a set of VXT DECterm option features that users often set to their own preference, including the terminal size (in Window Options), text and background color (in Display Options), and auto repeat feature for keys (in Keyboard Options). Your host applications can override these option settings unless you click on the Lock User Features button.

☐ Local Echo

Normally, the terminal sends data entered at the keyboard to your host system, which may send it back to the terminal for display after processing. This is called a remote echo.

If you want to send keyboard data to both the host system and the terminal (local echo), click on the Local Echo button.

☐ Cursor Keys

Normally, the arrow keys move the cursor by sending standard ANSI cursor control sequences. Clicking on the Application Cursor Keys button lets the arrow keys send application-specific control sequences.

☐ Keypad

Normally, numeric keypad keys send the character shown on the key (using ASCII codes). If you click on the Application Keypad button, the numeric keypad keys send control sequences used with some applications.

☐ User-Preferred Supplemental Set (UPSS)

If you click on the 8-Bit Multinational Characters button in this dialog box, you can choose one of two supplemental character sets to use—DEC Supplemental or ISO Latin 1 Supplemental. Both character sets feature special characters used in the major Western European languages. The ISO Latin-1 set includes a few more characters that are not included in the DEC Supplemental set.

Normally, the terminal uses the UPSS DEC Supplemental set. Click on the UPSS ISO Latin 1 button to use the UPSS ISO Latin 1 Supplemental set.

☐ 8-Bit Multinational or 7-Bit NRCS Characters

You can select the type of characters the terminal uses, 8-bit multinational or 7-bit national replacement characters.

Normally, the terminal uses 8-bit multinational characters. This setting supports most of today's computing environments. There are two multinational character sets available—the DEC Multinational character set and the ISO Latin Alphabet No. 1 character set. Both sets consist of the ASCII character set and their own supplemental set. To choose one of the multinational character sets, you choose their supplemental set by using the UPSS buttons in this dialog box.

Clicking on the 7-Bit NRCS Characters button lets the terminal use one of several national replacement character sets. This setting is useful in computing environments that are restricted to 7 bits. The 7-bit NRC character sets are for the major Western European languages. When you choose this setting, the terminal uses the NRC set that matches the current Keyboard Type chosen in the Terminal Manager's Customize Keyboard dialog box (Section 3.3). You can also choose the individual NRC set by using the 7-Bit NRCS Selection menu item from the Options menu.

☐ VT Emulation Mode

The terminal can emulate the responses of VT300 series, VT200 series, VT100 series, or VT52 text terminals to text and control functions sent from the host system. If you have application software developed for one of these terminals, you can choose the appropriate operating mode to run that software.

Normally, the terminal uses VT300 7-bit controls. In 7-bit controls mode, the terminal sends 7-bit controls and 8-bit character codes to the host. Use this mode with VT300 and VT200 applications that use 7-bit control characters.

In 8-bit controls mode, the terminal can send 8-bit controls and 8-bit character codes to the host. This mode supports VT300 and VT200 8-bit text applications.

In either VT300 mode, the terminal accepts both 7-bit and 8-bit controls from the host.

VT100 mode lets the terminal run applications that require VT100 compatibility.

VT52 mode lets the terminal run VT52 applications.

☐ Terminal ID

The terminal sends the host system a terminal identification (ID) message to let the system know the terminal's specific operating characteristics. You can choose another terminal ID if needed. The terminal ID is also called the device attributes response.

☐ **Answerback Message**

The terminal sends an answerback message to the host system when (1) you press Ctrl F5, or (2) the host requests the message by sending an ENQ character. Host requests do not affect screen data or require a user response. To enter an answerback message, click on the Answerback Message box. Your message can have up to 30 characters.

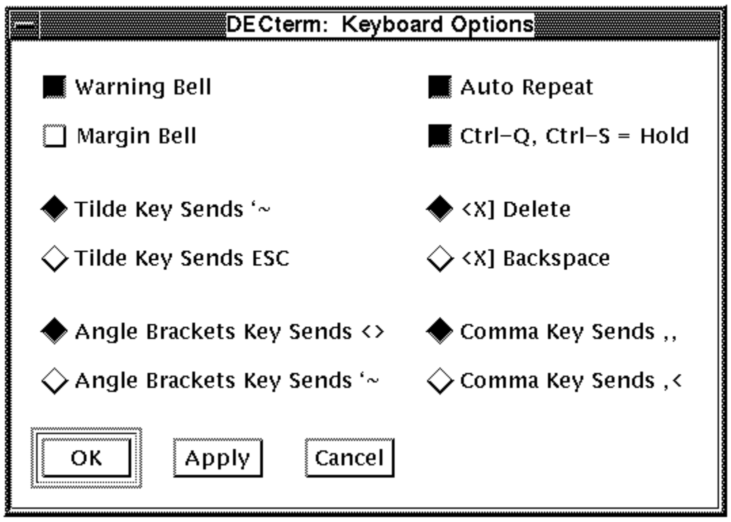
☐ **Conceal Answerback Message**

You can conceal your answerback message by clicking on the Conceal Answerback Message button. Your answerback message is replaced with the text <concealed> in the Answerback Message box.

If you conceal the message, you can never redisplay it. If you click on the Answerback Message box, your concealed message is erased; you can enter a new message and conceal it by clicking on the Conceal button.

8.6 Changing Your Keyboard Features

You can turn the keyboard's warning bell and margin bell on and off. You can also control the function of the <X], tilde, angle bracket, and comma keys to suit your working environment. To view or change these and other keyboard settings, choose the Keyboard... menu item from the Options menu. The terminal displays the Keyboard Options dialog box:



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From the Keyboard Options dialog box, you can change any of the following settings:

Warning Bell

Normally, a warning bell sounds whenever the terminal receives a bell (BEL) character from the host system. To turn this feature off, click on the Warning Bell button.

Margin Bell

The terminal can sound a bell when the cursor approaches the right margin. Normally, the margin bell feature is turned off. To turn this feature on, click on the Margin Bell button.

Tilde Key Sends

North American, British, and Dutch keyboards only: You can use the tilde key ~ ` to send the escape (ESC) character for control sequences. Normally, the tilde key sends an accent mark ( `) when unshifted and a tilde (~) when shifted. To use the tilde key as an ESC key, choose the Tilde Key Sends ESC button. To type an ESC character, press the tilde key twice.

Angle Brackets Key

North American, British, and Dutch keyboards only: If you use the tilde key as an ESC key, you may want to use the < > key to send the accent mark (` ) and tilde ( ~ ) characters. If you click on the Angle Brackets Key Sends `~ button, the < > key sends the accent mark (`) when unshifted and the tilde (~) when shifted.

Auto Repeat

Most keys on the keyboard automatically repeat when you hold them down. You can turn this feature off or on by clicking on the Auto Repeat button. The Return and Help keys never autorepeat.

The Terminal Manager window's Customize Keyboard dialog box also has an Auto Repeat feature. The two settings do not affect each other. To disable autorepeating in both the Terminal Manager and VXT DECterm windows, disable both settings.

Ctrl-Q, Ctrl-S = Hold

Normally, pressing Ctrl S prevents data from the host appearing on the screen. Pressing Ctrl Q allows data to display.

You can turn this feature off or on by clicking on the Ctrl-Q, Ctrl-S = Hold button. If you turn the feature off, pressing Ctrl S or Ctrl Q have no effect on the display of text.

☐ **<X Delete / Backspace Key**

Normally, pressing the <X key sends a delete (DEL) character to the host application.

When you click on the <X Backspace button, the <X key sends a backspace (BS) character.

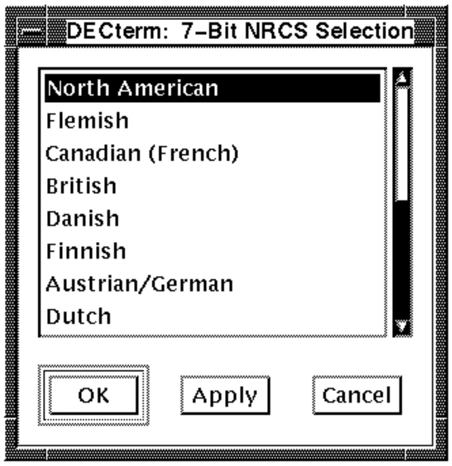
☐ **Comma Key**

North American, British, and Dutch keyboards only: Normally, the , < key sends a comma whether shifted or unshifted, and the . > key sends a period. If you want to use these keys to send angle brackets in the shifted position, click on the Comma Key Sends ,< button.

8.7 Choosing National Replacement Character Sets

You can use 8-bit multinational character sets or 7-bit national replacement character (NRC) sets with VXT DECterm windows. You should use the type of character set that matches your computing environment. To choose the type of character set, select the General... menu item from the Options menu.

When you choose to use 7-bit character sets, the terminal automatically uses the NRC set that matches the current Keyboard Type chosen in the Terminal Manager’s Customize Keyboard dialog box (Section 3.3). You can also choose an NRC set by using the Options menu. Choose 7-Bit NRCS Selection... to display the 7-Bit NRCS Selection Options dialog box:



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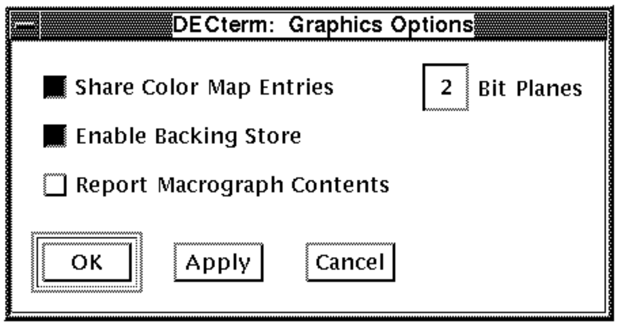
The scroll box lists the available NRC sets. To choose an NRC set for the current window, click on a set in the scroll box. Then click on the OK button.

8.8 Changing Your Graphics Display Settings

You can control some features that affect the display of graphics, such as color map entries. To view or change the graphic settings used with VXT DECterm windows, choose Graphics... from the Options menu. The terminal displays the Graphics Options dialog box:



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From the Graphics Options dialog box, you can change the following settings:

☐ Share Color Map Entries

Normally, color map entries are shared. This prevents the VXT DECterm window from allocating color map entries for its exclusive use. Instead, DECterm allocates shared, read-only colors out of a default color map. This means that DECterm does not need to create a private color map, which would prevent the windows from displaying in their true colors. However, it also means that DECterm colors may not match the colors used on a VT terminal.

☐ Enable Backing Store

The backing store feature enables the terminal to redisplay DECterm graphics after they are covered by another window or iconified. The Customize X Server dialog box in the Terminal Manager window also has a Backing Store button (Section 5.4).

☐ Report Macrograph Contents

The VXT DECterm window does not respond to a request by an application to report macrograph contents. Clicking on this option enables ReGIS commands to report macrograph contents. When reporting is complete, disable this feature to reduce any security risks.

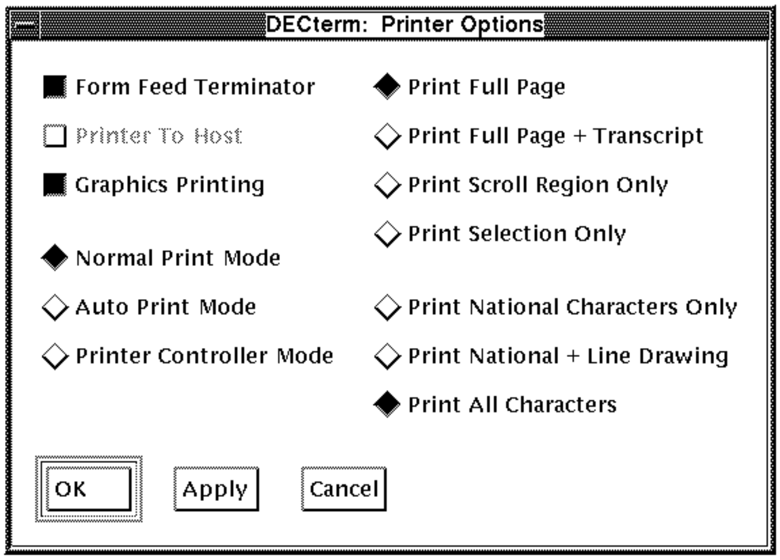
☐ Number of Bit Planes

The number of bit planes supported by your system determines the number of colors available for ReGIS and sixel graphics. With 2-bit planes, the DECterm emulator can display four different colors at the same time. With 4-bit planes, the DECterm emulator can display 16 colors.

The DECterm emulator uses 2-bit planes on 4-plane systems; it uses 4-bit planes on all other systems. This reduces the probability that the DECterm emulator must create a private color map. You can choose the number of colors available in ReGIS and sixel graphics by entering the number of planes supported by your system.

8.9 Changing Your Printer Settings

You can control print settings used with VXT DECterm windows, such as what area of the window to print. To view or change printer settings, choose Printer... from the Options menu. The terminal displays the Printer Options dialog box:



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From the Printer Options dialog box, you can change the following settings:

☐ Form Feed Terminator

Normally, the terminal sends a form feed (FF) character to the printer port at the end of any printing operation started from the VXT DECterm window's Print menu.

☐ Printer to Host

If you use a serial input device connected to the terminal's serial port, the terminal can accept input data from the device and send the data to the host application. By default, the serial port does not work as a printer port, so the Printer to Host button is dimmed. To use the serial port to receive data, change the Port Usage setting to Serial Port: Printer (Section 4.2). Then choose the Printer to Host button.

☐ Graphics Printing

Normally the terminal supports graphics printing operations in addition to text printing.

Printing Modes

You can choose from three printing modes:

- Normal Print Mode
- Auto Print Mode
- Printer Controller Mode

☐ Normal Print Mode

Normally, you can send all or part of the text displayed in a window to a local printer. To print the window's text, press the F2 (Print) key.

☐ Auto Print Mode

Auto print mode immediately sends each line of text received from the host system to your local printer. The terminal sends the current display line to the printer when the cursor moves to the next line after a line feed, form feed, vertical tab, or autowrap.

To turn auto print mode on or off, press Alt A. You return to normal print mode when you leave auto print mode.

You can perform normal printing functions in auto print mode.

☐ Print Controller Mode

Printer controller mode lets a host system send text directly to the local printer, without displaying the text in the VXT DECterm window. You cannot select this mode from the keyboard. Applications select this mode by using VT320 programming functions.

The F2 (Print) key does not work in printer controller mode.

Printing All or Part of the Window

You can print all or part of the VXT DECterm window. You can also choose to print selected characters. To print the window's text, press the F2 (Print) key. You can choose from the following options.

☐ Print Full Page

Normally when you print a VXT DECterm window, the terminal sends the text in the main display to the printer.

☐ Print Full Page + Transcript

This option prints the text in the transcript (the lines saved off the top of the scrolling region), followed by the text in the main display. You can specify the number of lines saved by using the Display Options dialog box.

☐ Print Scroll Region Only

This option prints the text in the scrolling region of the main display.

☐ Print Selection Only

This option prints text that you have selected in the main display.

Matching Your Printer's Capabilities

You can print from character sets that match the capability of your printer.

☐ Print National Characters Only

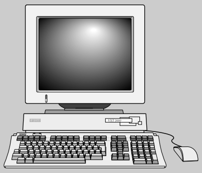
This option prints national replacement characters (NRC) only. Other characters are converted to the corresponding national characters, if any; otherwise they are not sent.

☐ Print National + Line Drawing

This option prints national replacement characters and line-drawing characters.

☐ Print All Characters

This option prints all characters, including multinational and technical characters.



9

Using VXT 3270 Windows

This chapter describes how to create and use VXT 3270 windows. The chapter covers the following major topics:

- VXT 3270 Windows
- Before You Start
- Creating a VXT 3270 Session
- Entering 3270 TE Connection Parameters
- Using the VXT 3270 Window

9.1 VXT 3270 Windows

VXT 3270 windows emulate IBM graphic display terminals. The windows let you access application programs on an IBM Systems Network Architecture (SNA) host system through a DECnet/SNA gateway. You can have several VXT 3270 windows displayed at the same time, running different applications. You can use your mouse to move between windows.

All VXT 3270 terminal emulation tasks are performed by the VXT 2000 windowing terminal, significantly decreasing the load on the host system and on the network.

VXT 3270 windows provide functions similar to the following IBM terminal models:

IBM 3178
IBM 3179–G and 3192–G
IBM 3180 models 1–5
IBM 3270
IBM 3270–S3G
IBM 3278 models 1–5

IBM 3279–S3G

Common features supported by the VXT 3270 include

- Active and passive connects
- Protected and unprotected fields
- Alphanumeric and numeric data
- Audible alarm
- Intensified display, normal display, and nondisplay characters
- Alphanumeric cursor (block cursor)

9.2 Before You Start

Before you create a VXT 3270 window, you need the following:

- ☐ A VXT 3270 software license
- ☐ A DECnet address for your terminal, displayed in the Terminal Manager window (Section 4.9)
- ☐ A DECnet name server address entered in the DECnet Name Translator dialog box (Section 4.10)
- ☐ A gateway name to enter in the Connection Parameters dialog box
- ☐ An access name to enter in the Connection Parameters dialog box

9.3 Creating a VXT 3270 Session

To create a VXT 3270 session:

1. Display the Create dialog box (Section 2.2.1).
   a. In the Application box, click on the 3270 button.
   b. In the Transport box, click on the DECnet button.
   c. In the Host Name or Address box, enter the name or address of the DECnet host to use for the connection.
   d. Click on the ↑ button to save your settings in the Preferred Services list.
   e. Click on Start to start the session.
2. Enter connection information in the 3270 TE Enter Connection Parameters dialog box (Section 9.4).