User's Guide

PowerTerm® WBT Terminal Emulator

Ericom® Software Ltd.

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About This Guide

PowerTerm WBT is a fully functional terminal emulator for Microsoft Windows-based Terminals.

This guide assumes that you are familiar with Windows conventions and the operation of the terminal you intend to emulate.

The PowerTerm WBT User's Guide is comprised of the following chapters:

Chapter 1: Introduction to PowerTerm WBT, presents PowerTerm WBT and describes its main features. It also provides a quick guide to working with PowerTerm WBT.

Chapter 2: The PowerTerm WBT Window, provides an overview of the PowerTerm WBT window and its components.

Chapter 3: Using PowerTerm WBT, provides step-by-step instructions for using PowerTerm WBT.

Chapter 4: Scripts, describes the Power Script Language (PSL).

Chapter 5: Menu Reference, describes each of the PowerTerm WBT menu options.

Chapter 1: Introduction to PowerTerm WBT

This chapter presents PowerTerm WBT and describes its main features. A quick guide to PowerTerm WBT is also provided in this chapter. It describes the basic steps for users who are familiar with accessing remote hosts.

☞ **This chapter describes the following topics:**

What is PowerTerm WBT?

PowerTerm WBT Features

PowerTerm WBT Setup

A Quick Guide Through PowerTerm WBT

What is PowerTerm WBT?

PowerTerm WBT is a fully functional terminal emulator for Microsoft Windows-based Terminals. It emulates various terminal types, including UNIX, HP, VMS, Tandem and IBM. PowerTerm WBT enables you to connect to a single or multiple hosts via both network and remote connections.

PowerTerm WBT provides two main features to enable the WBT to act and feel like a real host terminal:

- **Terminal display emulation**: PowerTerm WBT emulates the exact display of the chosen terminal. It presents host applications exactly as they would appear on an actual terminal.

  Once the WBT connects to a host computer, all host operations can be performed as if the WBT is an actual host terminal.
- **Terminal keyboard emulation:** PowerTerm WBT enables you to emulate the selected terminal's keyboard by mapping the WBT keys to match the host keys. Keyboard mapping definitions are stored in the registry.

PowerTerm WBT includes a special programming language, Power Script Language (PSL), which enables you to create scripts for automating tasks. For example, you can create a PSL script which logs you into the host automatically.

PowerTerm WBT also provides various options to customize and optimize the working environment:

- **Power Pad:** a programmable floating keypad.
- **Soft buttons:** programmable buttons located at the bottom of the PowerTerm WBT window.

PSL commands can be assigned to the Power Pad and soft buttons to enable additional functions with a click of the mouse.

PowerTerm WBT Features

- Compact, light and high performance program.
- Supports TCP/IP WinSock.
- Supports RS-232.
- Power Script Language (PSL) with over 100 existing commands.
- Macro recorder for automation of tasks.
- String functions, including substring, index, concatenation.
- Enables you to save parameters for all sessions.
- Language support for all Western European languages.
- User programmable buttons.
- Floating Power Pad with programmable buttons.
- Control of color selection and screen attributes.
- Easy to use keyboard mapping.
- SCS Printer emulation.
- Online help.
- Setup replication.

PowerTerm WBT Setup

To enable WBT - host interaction, you need to define two sets of parameters: terminal parameters and communication parameters. These are both saved in the registry.

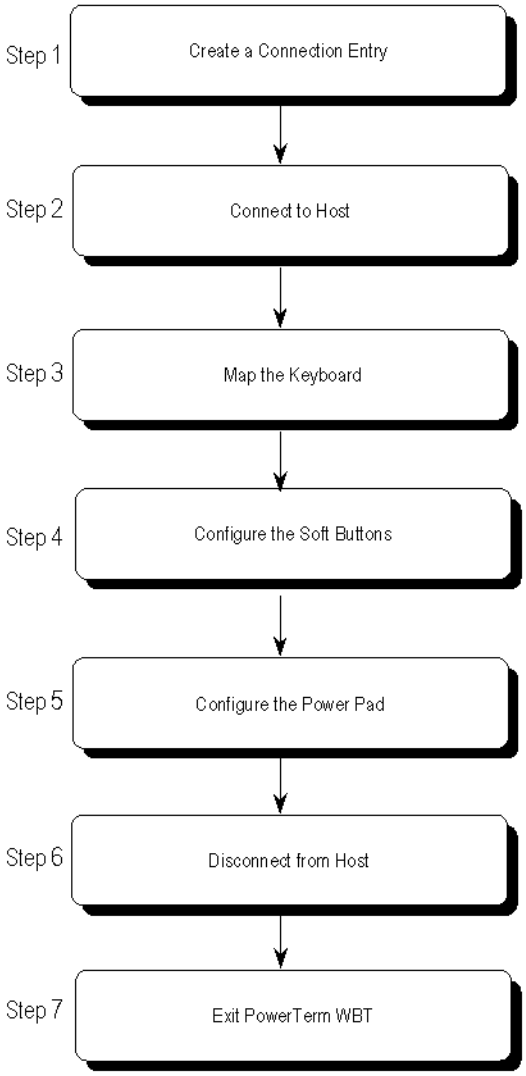
PowerTerm WBT provides the option to work with a single host or multiple hosts. You can create different setup configurations for working with each host to enable each user a customized work environment.

Working with a Single Host

When you launch PowerTerm WBT from the *Connection Manager*, it automatically uses the parameters in the setup configuration that you chose.

A Quick Guide Through PowerTerm WBT

The following workflow provides a quick guide for using PowerTerm WBT.



Each of the steps is explained on the pages that follow.


For a more detailed description of these steps, see *PowerTerm WBT Workflow* in *Chapter 3: Using PowerTerm WBT*.

Step 1: Select the Required Emulation

The Emulation properties page displays the terminal emulation types available with this version of PowerTerm WBT.

The emulation type that you select changes the tabs displayed in the Terminal Setup dialog box. Some emulation types change the look of the PowerTerm WBT desktop.

- To define settings for terminal emulation:

  Choose **Terminal** > **Setup**. The *Terminal Setup* dialog box is displayed.

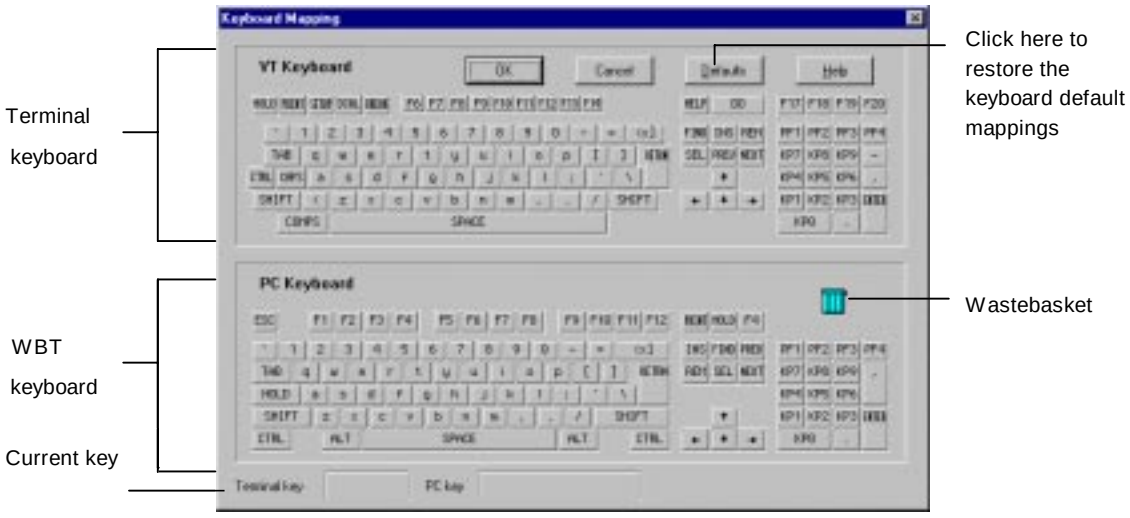
  First select the *Emulation* tab. Once you have selected the emulation type, you need to define settings for each tab in the *Terminal Setup* dialog box.

Step 2: Map the Keyboard

PowerTerm enables you to map WBT keys to host keys in order to emulate the host terminal keyboard. Keyboard mapping definitions are stored in the registry with the same name as the current terminal setup.

☞ **To view the default keyboard mapping:**

❶ From the *Options* menu, select the **Keyboard Map** option. The *Keyboard Mapping* dialog box is displayed:



❷ Slide the mouse pointer over the different keys. The bottom line of the dialog box shows you the corresponding WBT and terminal keys. For example, if you point to the "t" key of the VT Keyboard, you see that the corresponding WBT key is “T”.

☞ **To map a WBT key to a host key:**

In the *Keyboard Mapping* dialog box, drag a key from the upper terminal keyboard to a WBT key on the lower keyboard.

Click the <Shift> or <Control> keys on the terminal keyboard to display additional key functions. For example, if you click the <Shift> key, the alphabet keys on the terminal keyboard are displayed in uppercase. You can then map (drag) these keys to your WBT keyboard keys.

☞ **To assign a script command to a WBT key:**

❶ From the *Options* menu, select the **Keyboard Map** option. The *Keyboard Mapping* dialog box is displayed.

❷ Right-click on a key on the WBT keyboard that you want to assign a command. The *Function Button* dialog box is displayed.

Enter the script command description and click **OK**. The WBT key has now been assigned a script command.

Now that you have programmed the keyboard keys, you can configure the soft buttons as explained in Step 3.

Step 3: Configure the Soft Buttons

The twelve programmable buttons along the bottom of the PowerTerm WBT window are called soft buttons, as shown below:

You can rename the soft buttons and program them to execute customized scripts.

☞ **To program a soft button:**

Right-click on the soft button that you want to program.

Enter the function description (the new name that will appear on the button) and click **OK**. The *Function Button* dialog box is displayed with a field to enter a script command, or multiple script commands separated by semicolons.

Enter the script command to be run by this button. Click **OK**. The soft button is now displayed with its new name. Clicking on the soft button with the left mouse button will execute the newly defined script command.

Now that you have programmed the soft buttons, you can configure the Power Pad as explained in Step 4.

Step 4: Configure the Power Pad

The Power Pad is a floating key pad that contains buttons which can be programmed to execute customized PSL scripts. You can adjust the number of buttons displayed in the Power Pad and change their names. Power Pad buttons are named by default F1, F2, F3, and so on with a few default function names, such as Clear, Enter and Insert, for example, left-clicking on the F1 button is equivalent to sending an F1 command to the host. Changes made to the Power Pad will not affect keyboard mapping or the soft buttons.

☞ **To program the Power Pad:**

1. Choose **Options** menu > **Show Power Pad**.
2. Right-click on the Power Pad button that you want to program.
3. Enter the Power Pad button description (the new name that will appear on the Power Pad button) and click **OK**.

The *Power Pad Button* dialog box is displayed containing a field to enter a script command, or script commands separated by semicolons.

Enter the script command to be run by this Power Pad button, for example,

send <f13>, and click **OK**. The Power Pad button is now displayed with its new name.

Clicking on the Power Pad button with the left mouse button will execute the newly defined script commands.

☞ **To adjust the number of buttons in the Power Pad:**

You can display a maximum of 10 rows and 10 columns in the Power Pad. The default number of buttons is 9 rows and 4 columns.

1. Choose **Options** > **Power Pad Setup**.

2. Click on the dropdown box to select the number of rows or columns that you want the Power Pad to contain.

3. Click **OK**. The Power Pad is displayed with the number of rows and columns specified.

Now that you have programmed the Power Pad, you can connect to the host as explained in Step 5.

Step 5: Connect to a Host

Select **Connect** from the *Communication* menu to display the *Connect* window.

Before connecting to a host, you need to define communication parameters for the current session, or select a previously saved session from the sessions list.

To define communication parameters for a current session, select a session type and the session parameters.

Available session types differ according to the selected terminal emulation.

Terminal ID: Determines the ID returned by the emulation program to the host. Make sure you select an ID that the host application recognizes.

You can save session parameters by clicking the **Save As** button in the Connect window. Specify a session name and click OK. Saved sessions are displayed in the Open Session dialog box's Sessions List.

To select a session with previously defined connection parameters, click on the Session buttton in the Sessions List. The Open Session dialog box is displayed. Select the desired session and click **OK**.

Click the **Connect** button to connect to a host computer.

Step 6: Exit PowerTerm WBT

When exiting, PowerTerm WBT will either end the session automatically or prompt you with a confirmation message prior to closing the session.

To exit PowerTerm WBT, choose **File** > **Exit**.

If you have changed terminal settings, PowerTerm WBT displays a warning message asking if you want to update the terminal settings saved in the registry. The message will point to the name of the setup configuration currently loaded. Click **OK** to update the terminal settings, or **No** to cancel the latest changes and restore the default setup.

Chapter 2: The PowerTerm WBT Window

This chapter provides an overview of the PowerTerm WBT window and its components. The PowerTerm WBT window contains menu and toolbar options, which control the PowerTerm WBT functions.

The most important feature of the PowerTerm WBT window is its work area, which emulates a host terminal screen by displaying data entered on your terminal, and data received from the host.

☞ **This chapter describes the following topics:**

The PowerTerm WBT Window

Menu Bar

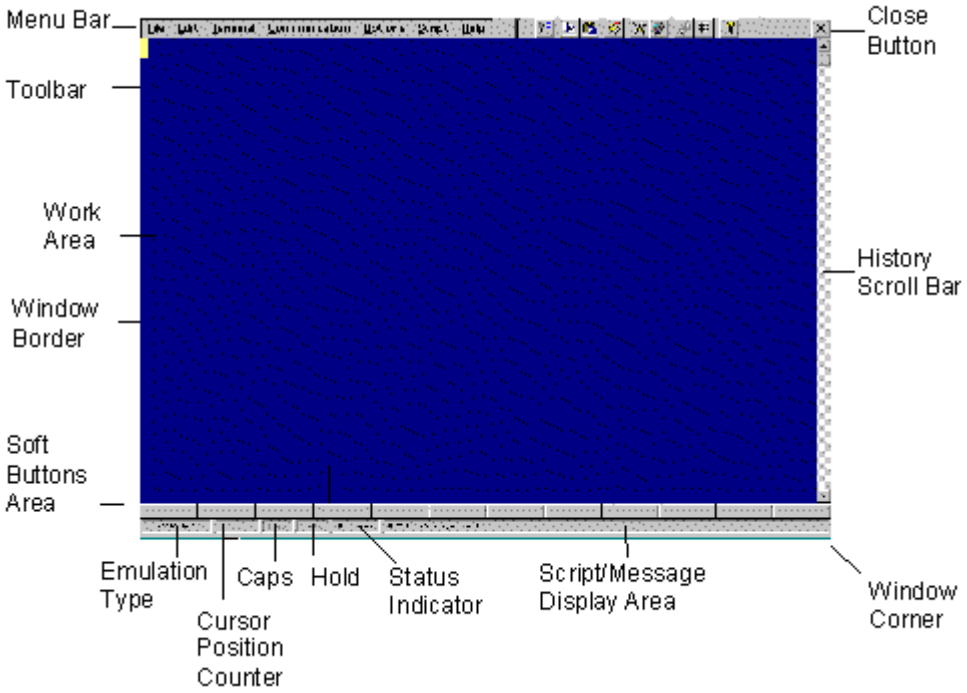
PowerTerm WBT Toolbar

Hot Keys

Manipulating Desktop Components

Selecting Text

The PowerTerm WBT Window



☞ **The PowerTerm WBT window consists of the following components:**

Menu Bar: Contains shortcut menus which enable the user to perform most PowerTerm WBT operations.

Toolbar: Contains tools which can be used as shortcuts to access frequently used menu commands.

Work Area: Displays the data entered on the PC terminal or received from the host. During an emulation session, this work area emulates a terminal display.

For IBM terminal types, the work area is displayed in black.

History Scroll Bar: Enables you to scroll up and down through the PowerTerm WBT window to view previously displayed data. This is available for non-IBM emulations only. The History Scroll Bar is displayed by default. If the History Scroll Bar is not displayed, select **Setup Command** from the *Terminal* menu to display it. Click the **Display** tab and select the **History Scroll Bar** checkbox.

Emulation Type: Displays the current terminal emulation type selected from the **Emulation** tab in the *Terminal Setup* dialog box.

Cursor Position Counter: Displays the current line and column position of the text cursor in the work area.

Autowrap Character Indicator: Indicates whether the keyboard is in autowrap character mode.

Caps: Indicates whether the keyboard is in caps lock mode.

Hold: Indicates whether the screen is in hold or frozen mode.

Status Indicator - On Line, Off Line: When communication is established, the status indicator reads **On Line**.
The color of the indicator is the same as when PowerTerm WBT is in **On Line** mode. For example, if the system was **On Line** when the printing request arrived, the printer will appear in red.

Soft Buttons Area: Contains a series of buttons that you can program to execute specific script commands. See the section *Programming Soft Buttons* for further information.

Script/Message Display Area: Displays system messages, or a script sequence as you type it in the work area.

Menu Bar

The PowerTerm WBT menu bar, shown below, displays the main PowerTerm WBT functions in dropdown menus.

The following is a brief description of each PowerTerm WBT menu and the functions that it can perform. For a description of each menu option, see *Chapter 5, Menu Reference*.

File Menu: Provides options to create, save and restore a terminal setup file.

Edit Menu: Provides options to select, clear and reverse text in the PowerTerm WBT window. The *Edit* menu also provides standard Windows editing commands (copy and paste).

Terminal Menu: Provides options to define terminal parameters, reset connection parameters (terminal and communication parameters), and set the system to be online or offline.

Communication Menu: Provides options to define and modify the communication (session) parameters, and to disconnect a PowerTerm WBT session. The *Communication* menu also provides file transfer options. You can select a modem, add customized modem definitions and edit the initialization string.

Options Menu: Provides options to view or hide the status bar, scroll bar and function buttons. In addition, it offers options to display and edit the keyboard mapping, and define the Power Pad display.

Script Menu: Provides options to record and run a script. The *Script* menu also enables you to open and save scripts.

Help Menu: Provides options for accessing the PowerTerm WBT online help and product information.

Menu Conventions

The following Windows conventions are used in PowerTerm WBT menus:

Grayed text: Indicates that the menu option is inactive or unavailable.

An Ellipsis (...): Indicates that more information is required to complete the command.

Working with Menus and Commands

You can select menus and commands by:

- Using a mouse.
- Using the keyboard.
- Typing a letter.

☞ **To select a menu item using the mouse:**

❶ Point to the name of the menu on the menu bar.

❷ Click the mouse button. The menu drops down.

❸ Slide the mouse over the command that you want to select and click.

After clicking the name of a menu or the menu bar, you can drag the mouse to the right, left, up or down, to move to other options.

☞ **To select a menu item using the keyboard:**

❶ Press the <Alt> key to access the menu bar. The far left menu is highlighted.

❷ Use the direction (arrow) keys to move the highlight bar to select a menu.

❸ Press the down arrow to open the menu.

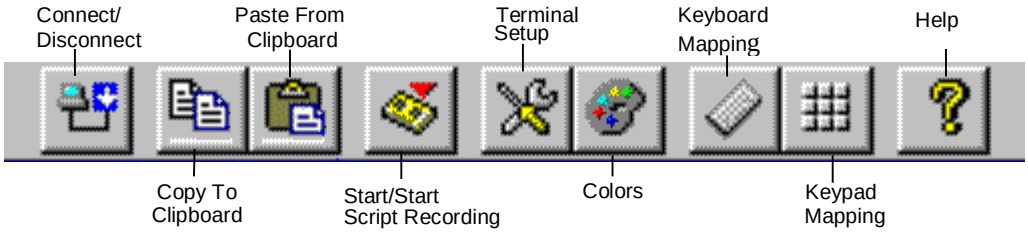
❹ Use the arrow keys to highlight the command that you want and press the <Enter> key.

☞ **To select a menu or menu item by typing a letter:**

All menus, menu items and commands contain an underlined character. You can select a menu by holding down the <Alt> key and then typing the underlined letter. For example, you can open the *File* menu by holding down the <Alt> key and typing the letter <F>. Once a menu is open, you can select an item by just typing its underlined character.

PowerTerm WBT Toolbar

The PowerTerm WBT Toolbar, shown below, contains tools (buttons) which provide shortcuts to frequently used menu options.



The following is a brief description of the tools in the PowerTerm WBT toolbar:

Connect/Disconnect: Enables you to define session communication parameters and connect to the host computer. Equivalent to *Communication*/**Connect**.

Copy To Clipboard: Copies the selected data displayed in the PowerTerm WBT work area to the Clipboard. Equivalent to *Edit*/**Copy**.

Paste From Clipboard: Pastes data from the Clipboard to the host application. Equivalent to *Edit*/**Paste**.

Terminal Setup: Displays the *Terminal Setup* dialog box in which you can define terminal setup parameters. Equivalent to *Terminal*/**Setup**.

Color Configuration: Displays the *Colors* dialog box in which you can define the color of data in the work area. Equivalent to *Terminal*/**Colors**.

Keyboard Mapping: Opens the *Keyboard Mapping Dialog* box in which you can map PC keys to host keys. Equivalent to *Options*/**Keyboard Map**.

Show/Hide Power Pad: Displays the Power Pad**.** Equivalent to *Options*/**Show Power Pad**.

Help: Displays documentation, product and contact information. Equivalent to *Help*/**About PowerTerm WBT**.

Hot Keys

Hot keys are keyboard keys that you can press instead of choosing menu commands. These hot keys refer to your standard PC keyboard keys, before they are mapped to terminal keys. Once hot keys are mapped, they lose their original function and reflect the newly mapped terminal key. For example, if you map <Alt F9> to the <Backspace> key on the terminal keyboard, it activates a script.

The following table lists the default PowerTerm WBT hot keys:

Alt F9	Activate script.
Ctrl + Alt F9	Start/stop recording script.
Alt F10	Select screen.
Alt F11	Clear screen.
Scroll Lock	Hold screen.
Pause	Change the cursor shape.
Ctrl Up Arrow	Scroll up one line.
Ctrl Down Arrow	Scroll down one line.

Manipulating Desktop Components

PowerTerm WBT enables you to customize the PowerTerm WBT window by hiding or displaying desktop components and changing the display colors for different text attributes.

☞ **To show/hide the soft buttons:**

From the *Options* menu, click **Show Buttons** to display the buttons.

You can click it again and hide the buttons.

☞ **To show/hide the status bar:**

From the *Options* menu, click **Show Status Bar** to display the status bar.

You can click it again and hide the status bar.

☞ **To show/hide the Power Pad:**

From the *Options* menu, click **Show Power Pad** to display the Power Pad.

You can click it again and hide the Power Pad.

☞ **To show/hide the history scroll bar:**

This option is only available for non-IBM emulations.

❶ From the *Terminal* menu, click **Setup**. The *Terminal Setup* dialog box is displayed.

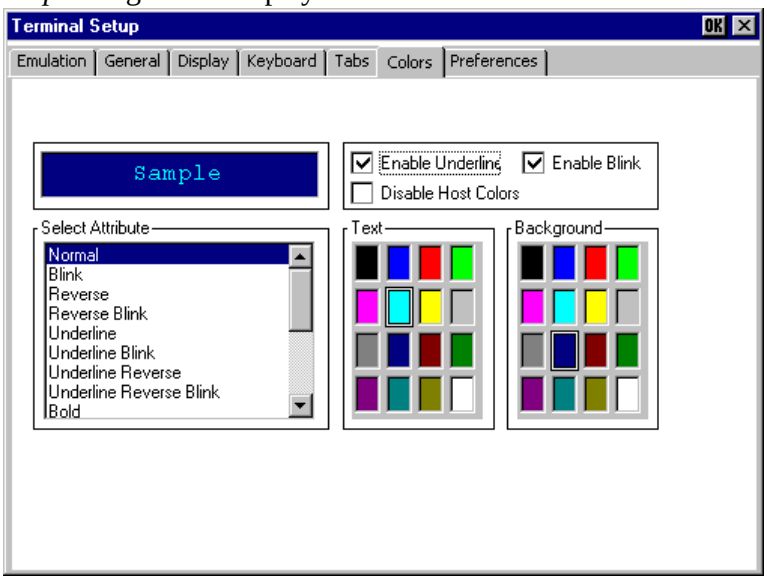
❷ Click the **Display** tab.

❸ Click the **History Scroll Bar** checkbox to select it. Click again to clear the selection.

❹ Click **OK** to close the *Terminal Setup* dialog box.
The PowerTerm WBT window is displayed again with or without the history scroll bar as selected.

☞ **To change the display color of the PowerTerm WBT window:**

❶ From the *Terminal* menu, select **Colors**. The *Colors* page of the *Terminal Setup* dialog box is displayed:



❷ Click the attribute for which you want to define foreground and background colors. Notice that the attributes change according to the emulation type you selected previously.

❸ In the **Text** area, click the color that you want to apply to the text (foreground) of the display.

❹ In the **Background** area, click the color that will apply to the background of the text.

In non-IBM emulations, the **Select Attribute** of the entire screen is generally **Normal**. The color for the **Normal** attribute determines the color of the entire work area.

The box above the **Select Attribute** parameter shows the result of your selections.

❺ Click **OK** to close the *Terminal Setup* dialog box and display the PowerTerm WBT window in the selected colors.

☞ **To disable/enable underline:**

If data is transmitted with the **Underline** attribute, you can disable the underline by clearing this parameter. You can select the parameter to enable underlined characters.

☞ **To disable/enable blink:**
If data is transmitted with the **Blink** attribute, you can disable blinking by clearing this parameter. You can select the parameter to enable blinking.

☞ **To disable/enable host colors:**
Select this parameter to disable the host color definitions and to work with your own (WBT) color scheme.

Selecting Text

The following are descriptions of specific text selection techniques that you may find useful in different emulations.

☞ **To select a word:**

In the work area, you can select text using the mouse. Clicking a word selects the word. <Ctrl> + clicking a word selects the word and any punctuation marks or other symbols, up to the first space that follows them.

☞ **To select a block:**

A block is any section of the work area.

In **VT** emulation, point to one corner of the block, hold down the <Ctrl> key and drag the mouse to the opposite corner of the block.

In **3270** and **5250** emulations, point to a line and drag the mouse to the last line you want to include in the selection.

☞ **To select full lines:**

Point to a line, hold down the <Shift> key and drag the mouse to the last line you want to include in the selection. Then, release both the <Shift> key and the mouse button.

☞ **To select a string:**

VT emulation: Point to the first character that you want to include in the selection. Drag the mouse to the last character that you want to include in the selection and release the mouse button.

5250 and **3270 emulations:** Hold down the <Ctrl> key and drag.

☞ **To select a menu entry:**

Double-clicking a word (**VT emulations only**) sends the word to the host followed by an <Enter> signal. Use this feature to select a menu entry. For example, if the emulation screen displays the menu of an application residing on the host, just click a menu entry to activate the program that the menu entry represents.

Chapter 3: Using PowerTerm WBT

This chapter provides step by step instructions for using PowerTerm WBT. It outlines the PowerTerm WBT workflow and provides a detailed explanation of each step.

☞ **This chapter consists of the following topics:**

Establishing a connection via the Connection Manager

☞ **To establish a connection:**

If you are more accustomed to working with sessions, think of connection as a session.

❶ Click on the **Configure** tab in *Connection Manager*.

❷ From the *Connection Manager* dialog box, click **Add**. *The New Connection* dialog box appears.

❸ Select **PowerTerm Terminal Emulator** from the list.

❹ Press **OK**.

❺ Select the desired session parameters:

Session Type

A description for each session type follows:

Session Type	Description
TELNET	Uses the Telnet protocol over TCP/IP for network communication. For this session type, you must specify the host computer name or the IP address in the Parameter's **Host Name** textbox. You can also specify the TELNET port number (default 23).
COM	Uses serial communication with the WBT's COM ports. For this type, you must define the baud rate, port number, parity, stop bits and flow control. Optionally, you can specify a phone (dial) number.
TN3270	TELNET for 3270. Select the Use TN3270E protocol box if you want to work with TELNET SNA extensions. You can also specify the LU name of the host (LU name or LU pool).
TN5250	TELNET for 5250.

Terminal

Type: Changes the currently supported emulation.

To change the emulation, select the required emulation from the dropdown list.

ID: Changes the ID returned by the emulation program to the host.

To change the ID, select the required ID from the dropdown list.

Host Name

Specifies a host to connect to. This can be an Internet address, an Internet node name, or a name that can be resolved by a Host file or a domain name server.

Terminal ID

Determines the ID returned by the emulation program to the host. Make sure you select an ID that the host application recognizes.

Terminal Name

Determines the name returned by the emulation program to the host.

LU Name

Specifies which LU to use for your connection (a specific LU name or the name of an LU pool).

Port Number

Specifies the host port or socket number that the session should use.

Setup Name

Specifies the name given to your setup configuration.

There are two options:

1) Create a new setup with the default Ericom settings.
2) Open an existing setup.

   There are two possibilities:

   a. Open up previously used setup.

b. Import setup from an FTP host.

Setup Replication

Setup Replication is a powerful utility for the administrator to configure tens, hundreds or thousands of WBT devices automatically. The user can import the setup from any host with the standard FTP server running on it.

Accessing the setup from the FTP host

FTP server should be up and running.

The administrator must provide to the user the following four details:

1. Name of the FTP host from where the setup will be copied.
2. User name of the pre-set FTP account.
3. Password of the FTP account.
4. Setup name.

The following configuration files are located in the home directory of the FTP account:

.ptk	Saves all modifications that were made to the keyboard mapping.
.ptp	Saves all modifications that were made to the Power Pad and function buttons.
.pts	Saves all modifications that were made to the work environment, e.g., color, fonts, column and rows.

Connection Name

Specifies the name given to a new connection that you defined.

❻ Type in the *Connection Name*.

❼ Press **OK**.

❽ Click on the **Connection** tab.

❾ Select the desired **Connection Name**.

❿ Click **Connect**.

Using a Setup File During a PowerTerm WBT Session

You can also open a terminal setup configuration while using PowerTerm WBT to run a session using predefined terminal setup and communication parameters. PowerTerm WBT provides one option to open a setup configuration:

- By selecting the **Open File** option from the *File* menu. The *Open File* dialog box is displayed in which you can select a setup configuration.

Setting Up your Work Environment

This section provides a description of the basic operations that may be performed to set up and optimize the PowerTerm WBT work environment for your usage.

You can also customize the PowerTerm WBT window to show or hide window components. These options are all described in the section *Manipulating Desktop Components* in *Chapter 2: The PowerTerm WBT Window.*

PowerTerm WBT enables you to emulate a host keyboard by assigning (mapping) WBT keys to host keys. Furthermore, it provides two features, the Power Pad and soft buttons, which enable you to automate commands.

PowerTerm WBT also enables you to save your keyboard and/or Power Pad settings in the registry and open them at a later date.

☞ **To set up the PowerTerm WBT work environment:**

Mapping the WBT Keyboard

Programming the Power Pad

Programming Soft Buttons

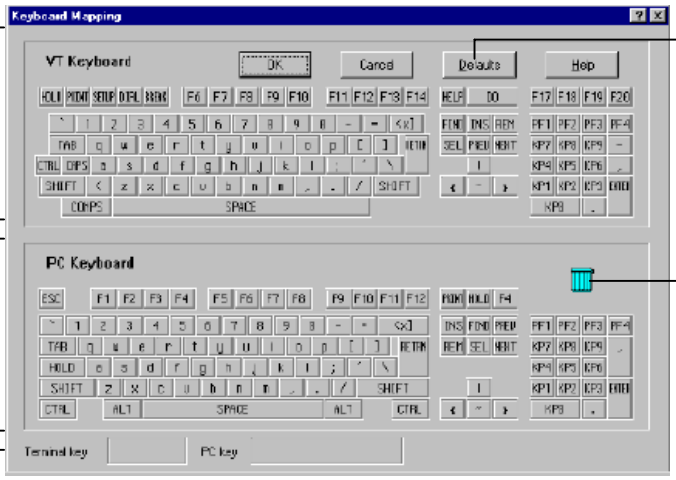
Mapping the WBT Keyboard

PowerTerm WBT enables you to map WBT keys to host keys in order to emulate the host terminal keyboard. Keyboard mapping definitions are stored in the registry with the same name as the current terminal setup configuration.

Changes made to the keyboard mapping will not affect the Power Pad or soft buttons.

To view the current keyboard mapping:

❶ From the *Options* menu, select the **Keyboard Map** option. The *Keyboard Mapping* dialog box is displayed:



❷ Slide the mouse pointer over the different keys. The bottom line of the dialog box shows you the corresponding WBT and terminal keys. For example, if you point to the "t" key of the VT Keyboard, you see that the corresponding WBT key is “T”.

☞ **To map a WBT key to a host key:**

In the *Keyboard Mapping* dialog box, drag a key from the upper terminal keyboard to a WBT key on the lower keyboard.

Click the <Shift> or <Control> keys on the terminal keyboard to display additional key functions. For example, if you click the <Shift> key, the alphabet keys on the terminal keyboard are displayed in uppercase. You can then map (drag) these keys to your WBT keyboard keys.

☞ **To assign a script command to a WBT key:**

❶ From the *Options* menu, select the **Keyboard Map** option. The *Keyboard Mapping* dialog box is displayed.

❷ Right-click on a key on the WBT keyboard that you want to assign a command. The *Function Button* dialog box is displayed.

❸ Enter the script command description and click **OK** to assign the script command to the WBT key.

☞ **To map combinations of keys that include Alt, Ctrl and Shift:**

Click the <**Alt**>, <**Ctrl**> or <**Shift**> key (or any combination) on your WBT keyboard.

You can map keys by following the procedure described on the previous page.

To view the mapped key, click the required <**Alt**>, <**Ctrl**> or <**Shift**> key (or combination of these keys), and then click the mapped key.

☞ **To cancel a keyboard key definition:**

In the *Keyboard Mapping* dialog box, drag to the wastebasket the WBT key definition that you want to cancel. This restores the default function to the WBT key.

☞ **To replace a WBT key with another WBT key:**

PowerTerm WBT enables you to transfer the function of a mapped WBT key to another WBT key. For example, you can drag the F6 key on the WBT keyboard to the spacebar giving the F6 function to the spacebar.

In the *Keyboard Mapping* dialog box, drag the required WBT key onto the WBT key that it will replace. This cancels the function of the original WBT key. To cancel the replacement, drag the replaced key back to its original position.

☞ **To copy a WBT key to another WBT key:**

PowerTerm WBT enables you to copy the function of one WBT key to another WBT key.

In the *Keyboard Mapping* dialog box, hold the Control key while you drag the WBT key, whose function you want to copy, to the required WBT key. Both keys now have the same function.

☞ **To restore the default keyboard mapping of all mapped keys:**

In the *Keyboard Mapping* dialog box, click the **Defaults** button.

Programming the Power Pad

The Power Pad is a floating key pad that contains buttons which can be programmed to execute customized PowerTerm WBT scripts. You can also change their names and adjust the number of buttons displayed in the Power Pad.

The Power Pad enables you to customize PowerTerm WBT, in addition to keyboard mapping and the soft buttons. Changes made to the Power Pad will not affect keyboard mapping or soft buttons.

Power Pad buttons are named by default F1, F2, F3, and so on with a few default function names, such as Clear, Enter and Insert. Left-clicking on the F1 button is equivalent to sending F1 to the host.

To Program the Power Pad:

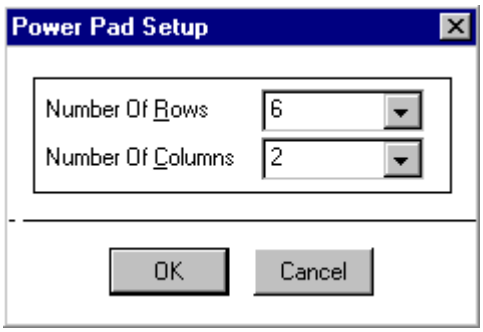
1. From the *Options* menu, select **Show Power Pad**. The Power Pad is displayed.
2. Right-click on the Power Pad button that you want to program. The *Power Pad Button* dialog box is displayed.
3. Enter the new Power Pad button description (the new name that will appear on the Power Pad button) in the **Button Description** field and click **OK**. The *Power Pad Button* dialog box is displayed containing a field to enter a script command or script commands separated by semicolons.
4. Enter the script command (or more than one script command separated by semicolons) to be run by this button in the **Script Command** field.

   Click **OK**. The Power Pad button is now displayed with its new name. Clicking on the Power Pad button with the left mouse button will execute the newly defined script commands. For example, sending <F13> to the host. For more information, see the section *Creating a Script* in *Chapter 4: Scripts*.

☞ To adjust the number of buttons in the Power Pad:

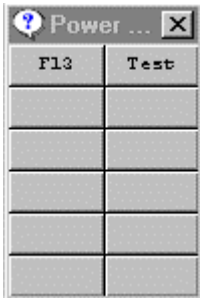
You can display a maximum of 10 rows and 10 columns in the Power Pad. The default number of buttons is 9 rows and 4 columns.

❶ From the *Options* menu, select **Power Pad Setup**. The *Power Pad Setup* dialog box is displayed:



❷ Click on the dropdown box to select the number of rows or columns that you want the Power Pad to contain.

❸ Click **OK**. The Power Pad is displayed with the number of rows and columns specified:



Programming Soft Buttons

Along the bottom of the PowerTerm WBT window are twelve programmable buttons. These are called *soft buttons*, shown below:

You can rename the soft buttons and program them to execute customized scripts. The soft button parameters are saved automatically in the terminal setup configuration.

Soft buttons are named by default from F1 to F12. Left clicking on the F1 button is equivalent to sending F1 to the host.

Soft buttons enable you to customize PowerTerm WBT, in addition to keyboard mapping and the Power Pad. Changes made to the soft buttons will not affect keyboard mapping or the Power Pad.

To program soft buttons:

1. Right-click on the soft button that you want to program. The *Function Button* dialog box is displayed.
2. Enter the new Power Pad button description (the new name that will appear on the Power Pad button) in the **Button Description** field and click **OK**. The *Function Button* dialog box is displayed containing a field to enter a script command or script commands separated by semicolons.
3. Enter the script command (or more than one script command separated by semicolons) to be run by this button in the **Script Command** field.

Defining Settings for Terminal Emulation (Terminal Settings)

PowerTerm WBT enables you to define the terminal settings for connecting to a host. Once you have defined terminal settings, you can save them as an entry in the registry.

The setup configuration and current communication parameters are saved in the registry.

The terminal settings provided by PowerTerm WBT are listed below. A description of each option and the functions it performs can be found on the pages that follow.

Emulation: displays supported terminal emulations and enables you to select a terminal type.

General: defines parameters for the terminal emulation type.

Display: defines display settings for the PowerTerm WBT window.

Keyboard: defines keyboard setup parameters.

Tabs: defines tab stops in the work area.

Colors: defines color settings for the PowerTerm WBT window.

Preferences: defines parameters that determine PowerTerm WBT behavior and automate processes.

The options listed above can be accessed by selecting the **Setup** option from the *Terminal* menu. Each option is displayed in the format of a properties page in the *Terminal Setup* dialog box.

The parameters that you define will only remain active for the current session unless you save them together with the terminal parameters in the registry.

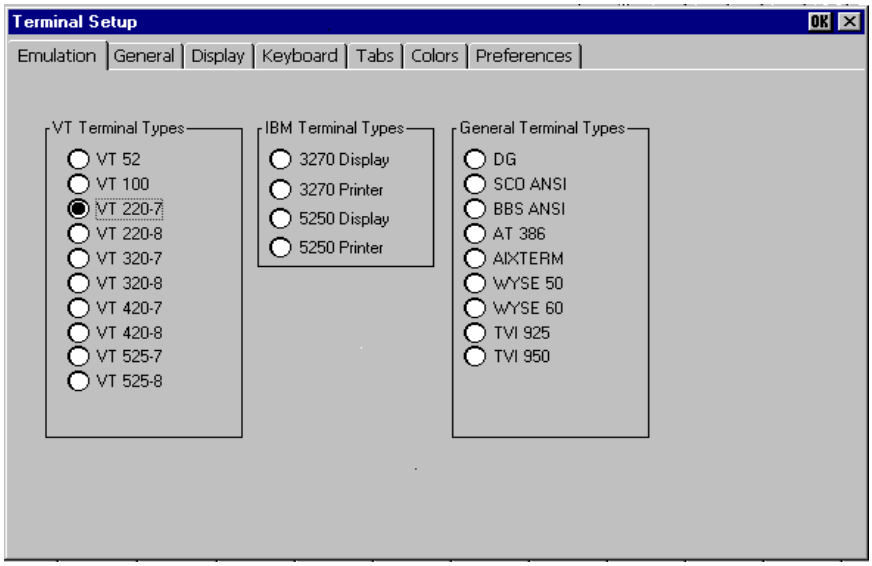
Emulation Properties Page

The *Emulation* properties page displays the emulation terminal types available WBT for selection with this version of PowerTerm.

The emulation type that you select changes the tabs displayed in the *Terminal Setup* dialog box. Some emulation types change the look of the PowerTerm WBT desktop. For example, on the 3270 and 5250 terminal types, the toolbar contains fewer options.

☞ **To define settings for terminal emulation:**

❶ From the *Terminal* menu, select the **Setup** option. The *Terminal Setup* dialog box is displayed.



❷ Select the **Emulation** tab. The *Emulation* properties page is displayed, as shown above.

❸ Once you have selected the emulation type, you need to define settings for each tab in the *Terminal Setup* dialog box. The remaining tabs in the *Terminal Setup* dialog box are described on the pages that follow.

If you select an IBM terminal type, the PowerTerm WBT window changes to black and the toolbar consists of fewer options.

The parameters that you define will only remain active for the current session unless you save them together with the terminal parameters in the registry.

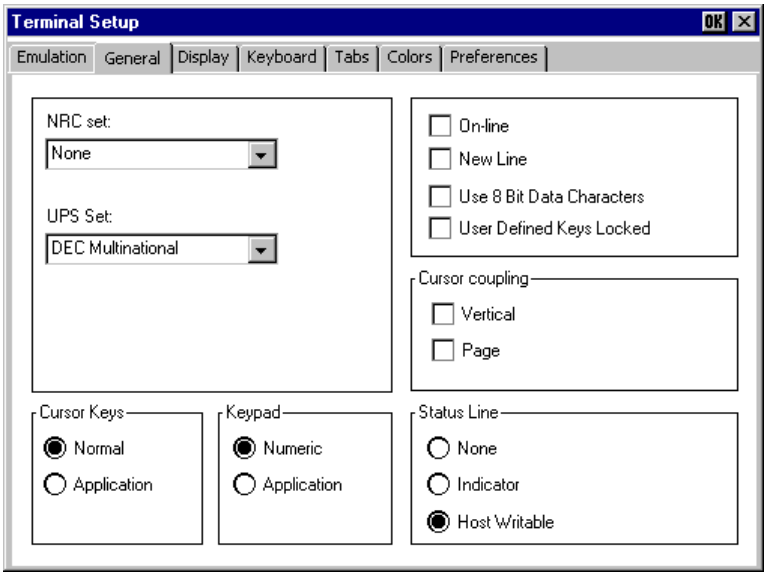
General Properties Page

The *General* properties page enables you to define parameters for the selected emulation type.

☞ **To define emulation parameters:**

❶ From the *Terminal* menu, select the **Setup** option. The *Terminal Setup* dialog box displays.

❷ Select the **General** tab. The *General* properties page is displayed:



❸ Select the general parameters that you require. These are described in detail on the following page.

❹ Continue to define the remaining tabs in the *Terminal Setup* dialog box, as described on the pages that follow.

The parameters that you define will only remain active for the current session unless you save them together with the terminal parameters in the registry.

The parameters displayed in the *General* properties page are described below:


The selected emulation will determine the parameters displayed.

NRC Set: Determines the communication and keyboard character set for 7-bit data only. You can either select **None** or one of the languages available.

UPS Set: Determines the communication and keyboard character set for 8-bit data only. Select one of the available languages.

Online: This parameter is equivalent to selecting the **On Line/Off Line** button on the PowerTerm WBT desktop.

New Line: This parameter determines whether the <Enter> key generates only a carriage return or a carriage return/line feed combination.

Use 8-Bit Data Characters: If the communicated data is in 8-bit character format, select this parameter. For 7-bit characters, clear this parameter. If this parameter is cleared, the 8th bit is truncated.

User Defined Keys Locked: This parameter determines whether applications on the host system can override your user-defined keys (UDKs) when you have defined a function key that conflicts with how the host wants to use this key. **Locked** prevents UDKs from being overridden. **Unlocked** allows them to be overridden. UDKs let you use a single key for multiple keystrokes. To program the 15 UDKs, 256 bytes are available. The key definitions are loaded sequentially (from F6 to F20), so that if you reach the 256-byte limit, more definitions cannot be loaded.

Cursor Keys: This parameter determines whether the four arrow keys generate **Normal** ANSI-standard control sequences for moving the cursor, or generate customized **Application** program functions.


The selected host application will usually determine the default option.

Keypad: Determines the effects of the numeric keypad at the right of your keyboard.

Numeric	Keypad keys insert numbers (For example, pressing the 7 on the numeric keypad is the same as typing a 7 on the keyboard).
Application	Keypad keys generate control sequences which can be used by some applications.

The selected host application will usually determine the default option.

Cursor coupling: This parameter causes the cursor to remain visible during page scrolling.

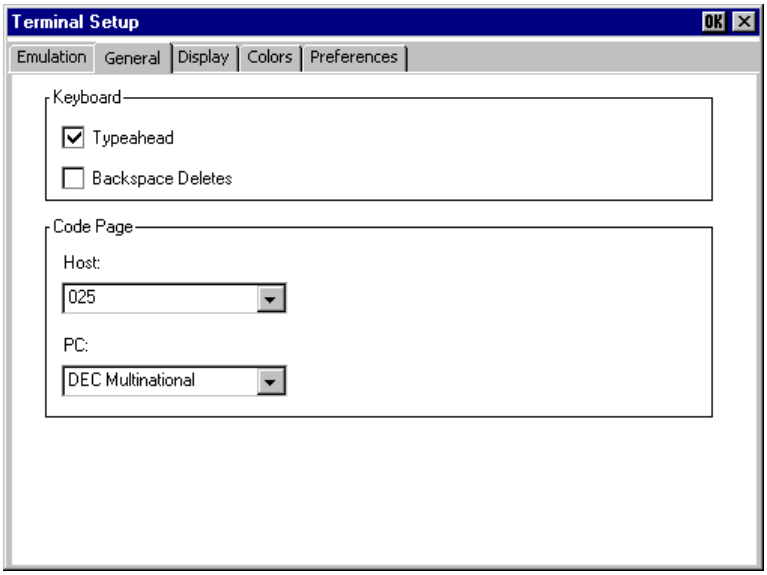
The selected host application will usually determine the default option.

Status Line: The **None** option displays an emulation screen without a status line. Select **Indicator** to display the status line. Select **Host Writable** to display the status line sent by the host.

The selected host application will usually determine the default option.

Setup for 3270 and 5250

This section describes the parameters that are unique to the 3270 and 5250 emulation types. Their *General* properties page is displayed:



Keyboard

Typeahead: Select this parameter if you want to be able to type data ahead (before the host responds).

Backspace Deletes: Select this parameter if you want to be able to delete characters by pressing the <Backspace> key.

Code Page

Host and PC: Enables you to specify the mode of a keyboard. This sends the correct keystrokes for a country or language's keyboard layout.

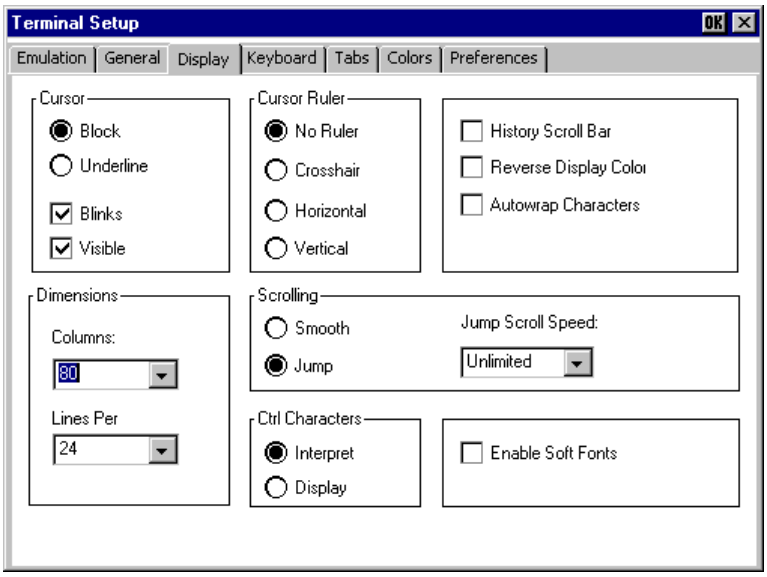
Display Properties Page

The *Display* properties page enables you to define parameters which determine the appearance, or display, of the PowerTerm WBT window.

For non-IBM emulations only.

To define display parameters:

1. From the *Terminal* menu, select the **Setup** option. The *Terminal Setup* dialog box is displayed.
2. Select the **Display** tab. The *Display* properties page is displayed:



3. Select the display parameters you require. These are described in detail on the following page.
4. Continue to define the remaining tabs in the *Terminal Setup* dialog box, as described in this chapter.

The parameters that you define will only remain active for the current session unless you save them together with the terminal parameters in the registry.

The parameters displayed in the *Display* properties page are described below:

General

Determines the following general Display parameters:

Reverse Display Colors	Reverses the text and background colors in the work area.
Autowrap Characters	Word wrapping occurs at the end of a line and the cursor moves to the next line.
History Scroll Bar	For non-IBM emulations, the vertical history scroll bar is displayed along the right edge of the PowerTerm WBT screen. This enables you to scroll through the data previously displayed on the screen. If the host transmits during scrolling, the display automatically scrolls back to its current position.

Cursor

Use these parameters to control the cursor display. Experiment with each parameter to view the cursor display options available.

Cursor Ruler

Use these parameters to display crosshair, vertical or horizontal lines as a cursor ruler.

Ctrl Characters

Click the **Display** option to actually display the control characters. The **Interpret** option displays normal text as affected by control characters.

Dimensions

Determines the number of characters per displayed line, and the number of lines to be displayed in the work area.

Characters are scaled according to the selected values. For example, if you select 132 Columns, PowerTerm WBT displays 132 (small) characters across a single screen line.

Scrolling

Determines the pace at which data is displayed in the work area as it arrives.

If you select **Jump**, you should determine the **Jump Scroll Speed** which is measured in number of line units. The higher the value, the faster the scrolling.

Select **Unlimited** in the **Jump Scroll Speed** area to display data without delaying communication, or **Page** to scroll data by full screens. The **Smooth** option is equivalent to a **Jump Scroll Speed** of 1.

Enable Soft Fonts: Enables you to work with VT soft fonts that are only available when working with a VT emulation. When VT soft fonts are enabled, fonts will be loaded from the host application.

3270 and 5250 Terminal Emulations

Alternate State

Columns, Rows and Enable: Select **Enable** to override the terminal alternate size. Type the required number of rows and columns.

Show Response Time: Select this parameter if you want to display the number of seconds that elapsed between the time data was sent to the host and the host response time.

Use 3270 New Code: Select this parameter if you want to use the 3270 New Code; otherwise, the old code will be used.

Power GUI: Displays data in a window with 3D look and feel.

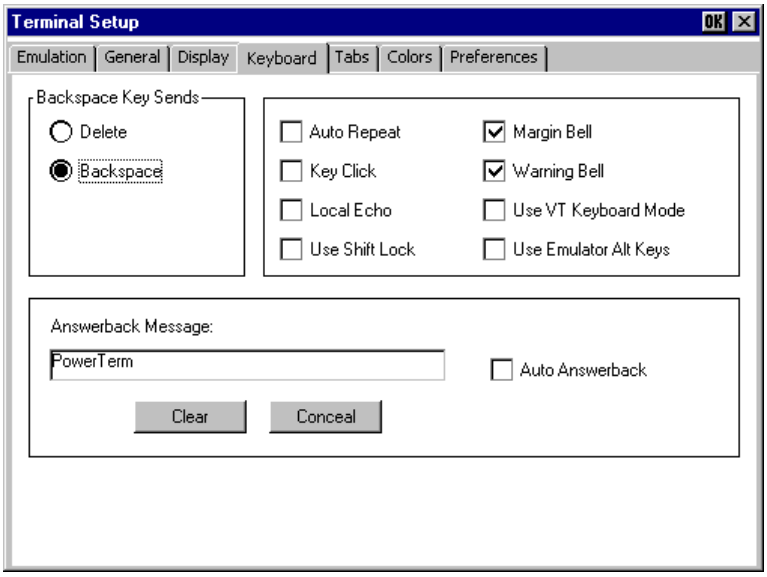
Keyboard Properties Page

The *Keyboard* properties page enables you to define keyboard parameters for your WBT.

☞ **To define keyboard parameters:**

❶ From the *Terminal* menu, select the **Setup** option. The *Terminal Setup* dialog box is displayed.

❷ Select the **Keyboard** tab. The *Keyboard* properties page is displayed:



❸ Select the keyboard parameters you require. These are described in detail on the following pages.

Backspace Key Sends: Determines what the <Backspace> key sends (a delete or an actual backspace).

The following options are available:

Auto Repeat	The repetitious display of the character whose key is being continuously pressed down.
Key Click	If you select this box, a click sound is issued when you press a key on the keyboard.
Local Echo	Determines whether keyboard input is displayed (echoed) on your screen. If *Local Echo* is selected, keyboard input is displayed even if the host system does not echo your input. If *Local Echo* is cleared, keyboard input is sent to the host system without being displayed on the screen (unless the host system echoes the characters).
Use Shift Lock	Simulates Shift Lock. When this parameter is selected, the entire keyboard moves to Shift Lock status. For example, if you type "a", the keyboard issues "A".
Margin Bell	Determines whether the terminal sounds a bell tone when the cursor reaches the right margin.
Warning Bell	Determines whether the terminal sounds a bell tone for operating errors, mail messages and so on.
Use VT Keyboard Mode	Transforms your keyboard to Digital VT keyboard mode. In this mode, the WBT keyboard operates as close to a VT keyboard as possible, and takes full advantage of LK450 Digital keyboards.
Use Emulator Alt Keys	Select this parameter to make an <Alt> key perform the operation assigned to it by the emulated environment.

Answerback Message: Enables you to specify an answerback message and how you want it displayed. Click the **Clear** button to delete the message. Click the **Conceal** button to hide the message (the message is not deleted). Click **Clear** to cancel the conceal command.

Auto Answerback: Determines whether the terminal automatically sends the message to the host system after you make the connection. This is useful if your answerback message is a command to the host system. For example, when you initially connect to an OpenVMS system, you may want to start the MAIL utility by sending an answerback message of MAIL^M. You can also send an answerback message by pressing <Ctrl>+<F5> when the VT keyboard mode is ON.

❹ Continue to define the remaining tabs in the *Terminal Setup* dialog box, as described on the pages that follow.

The parameters you define will only remain active for the current session unless you save them together with the terminal parameters in the registry.

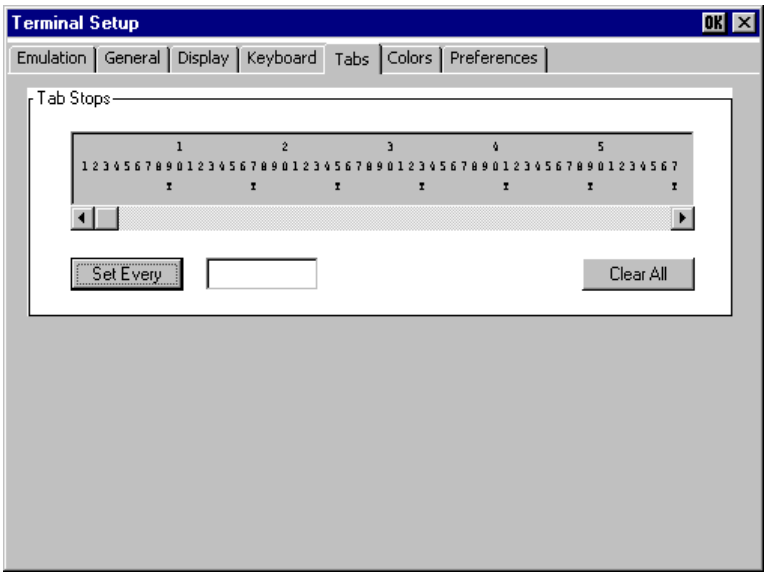
Tabs Properties Page

The *Tabs* properties page enables you to determine tab stops in the work area. Tabbed data received from the host will be laid out in the work area according to ruler settings defined with this option.

This option is only displayed for VT terminal types.

To define tab parameters:

1. From the *Terminal* menu, select the **Setup** option. The *Terminal Setup* dialog box is displayed.
2. Select the **Tabs** tab. The *Tabs* properties page is displayed:



Tab parameters and their functions are described below:

Tab Stops

Set Every: PowerTerm WBT enables you to set tab stops in the work area. Type a number and click the **Set Every** button. PowerTerm WBT will set a tab stop in increments of that number.

Alternatively, you can set tab stops manually by clicking anywhere you want within the ruler (Tab Stops) area.

Clear All: Clears all tab stops.

❸ Continue to define the remaining tabs in the *Terminal Setup* dialog box, as described on the pages that follow.


The parameters that you define will only remain active for the current session unless you save them together with the terminal parameters in the registry.

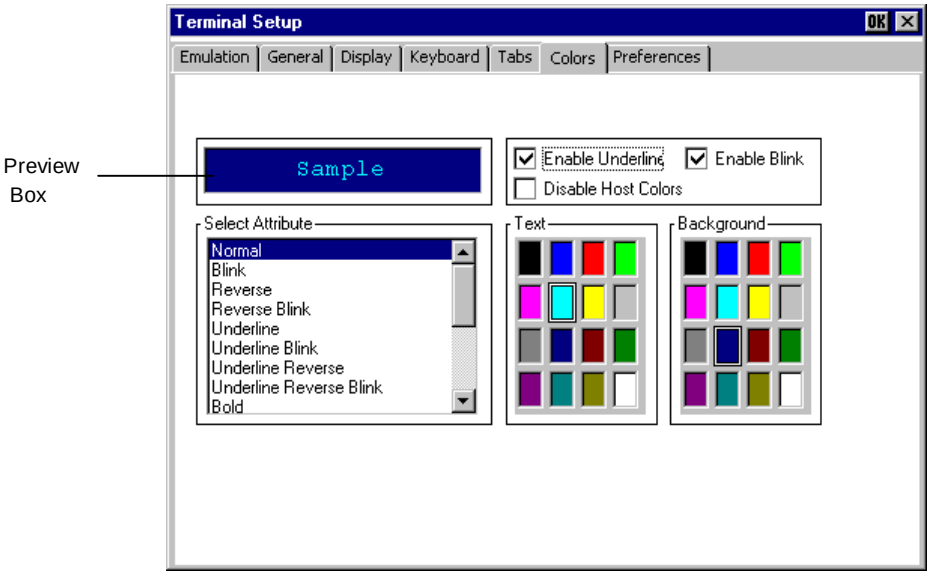
Colors Properties Page

The *Colors* properties page enables you to define the color of data displayed in the work area. Color definitions are stored together with the terminal parameters in the registry.

To define color parameters for data displayed in the work area:

❶ From the *Terminal* menu, select the **Setup** option. The *Terminal Setup* dialog box is displayed.

❷ Select the **Colors** tab. The *Colors* properties page is displayed:



❸ Select the parameters you require. These are described in detail on the pages that follow.

Preview Box: The box above the **Select Attribute** area shows the result of your selections. Experiment with various attributes until you see the result that you want, and then click **OK**.

Enable Underline: Select this parameter to enable underlined characters. If data is transmitted with the **Underline** attribute, you can disable the underline by clearing this parameter.

Enable Blink: Select the parameter to enable blinking. If data is transmitted with the **Blink** attribute, you can disable blinking by clearing this parameter.

Disable Host Colors: Select this parameter if you want to disable the host color definitions and to work with your own (WBT) color scheme.

Select Attribute: Click the attribute for which you want to define foreground and background colors. Notice that the attributes change according to the emulation type you selected in the *Emulation* properties page for non-IBM emulations. Generally, the attribute of the entire screen is **Normal**. The color for the **Normal** attribute determines the color of the entire work area.

Text: Click the color that will apply to the text (foreground) of the display.

Background: Click the color that will apply to the background of the text.

❹ Continue to define the remaining tabs in the *Terminal Setup* dialog box, as described on the pages that follow.

The parameters that you define will only remain active for the current session unless you save them together with the terminal parameters in the registry.

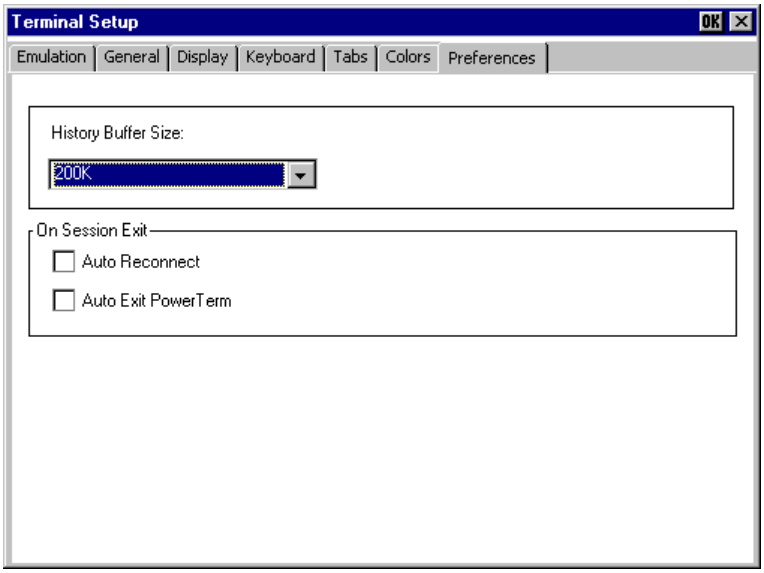
Preferences Properties Page

The *Preferences* properties page enables you to choose PowerTerm WBT behavior and automate processes. Your preferences will remain active until you change them.

☞ **To define PowerTerm WBT preferences:**

❶ From the *Terminal* menu, select the **Setup** option. The *Terminal Setup* dialog box is displayed.

❷ Select the **Preferences** tab. The *Preferences* properties page is displayed:



❸ Define the required preference parameters below.

History Buffer

This parameter specifies the size of the buffer in which data is stored, by selecting an option from the dropdown list.

On Session Exit

These parameters determine what to do when you exit a session. **Auto Reconnect** re-establishes communication. **Auto Exit PowerTerm** closes PowerTerm WBT altogether.

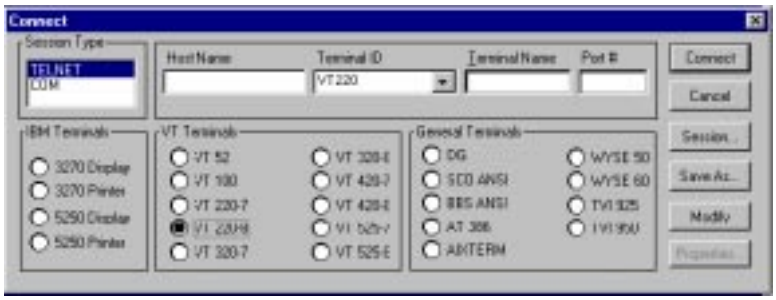
❹ Click **OK** to set the selected parameters and close the *Terminal Setup* dialog box.

The parameters that you define will only remain active for the current session unless you save them together with the terminal parameters in the registry.

Defining the Communication Settings

☞ **To define communication settings:**

❶ From the *Communication menu*, select **Connect**. The *Connection* dialog box is displayed:



Available session types differ according to the selected terminal emulation.

❷ Select a Terminal ID from the dropdown list.

❸ Click a session type. For each session type, PowerTerm WBT displays a set of session parameters on the right side of the dialog box (some types have identical parameters). For example, under a VT session, you will see TELNET.

Connect: Connects to the host according to the displayed session parameters.

Sessions List

To select a session with previously defined connection parameters, click on the **Session** button. The *Open Session* dialog box is displayed. Select the desired session and click **OK**.

❹ Click **Connect** once you have selected the required communication parameters. You can now connect to a host. For more information see *Connecting to a Host*.

☞ **To assign a device name to an AS/400 session:**

❶ In the **Host Name** field enter the name of the AS/400 host.

❷ In the **Device Name** field enter the device name for the emulation session (up to a maximum of 10 characters).

❸ Click **Connect**.

The AS/400 session begins and is assigned the device name specified above.

SCS Printing

☞ **To emulate a 3270 or 5250 printer device:**

1. Create a connection entry in the **Terminal Connection Manager**.
2. Attach a printer to the parallel port on your WBT device and turn it on.
3. Click on the **Configure** tab in the Terminal Connection Manager.
4. Click **Add**. The *New Connection* dialog box appears.

5. Select **Ericom PowerTerm Terminal Emulator** from the list.
6. Press **OK**. The *Connection Properties* dialog appears.
7. Select the 3270 Printer or 5250 Printer option.
8. Specify a device name/LU name.
9. Specify the remainder of the connection\session parameters (host name, connection name, etc.)
10. Press **OK**.
11. Click on the *Connections* tab in **Terminal Connection Manager**.
12. Either double-click the recently created connection entry or select it and click **Connect**.
13. You can now ensure that the device (that you specified in the Device Name/LU name field in the Connection Properties dialog box) is listed in the Printer column in the Work With Printer screen of your IBM host. The status of your device must be "Ready for Printing".

Saving the Terminal Setup File

Once both terminal and communication settings have been defined, you can save them to a setup configuration in the registry.

PowerTerm WBT asks you if you want to save setting changes to the currently loaded setup configuration. If you do not want to overwrite the parameters in the current setup configuration, save the settings under a different file name.

You can also save settings when you exit PowerTerm WBT. For more information, see *Exiting PowerTerm WBT*.

To save terminal settings to the current setup configuration:

From the *File* menu, select **Save Terminal Setup**. The current terminal settings are saved to the currently loaded terminal settings configuration.

This option overwrites parameters previously defined in the setup configuration.

☞ **To save a terminal setup file under a different name:**

❶ From the *File* menu, select **Save Terminal Setup As**. The S*ave File As* dialog box is displayed.

❷ Type in the name of the configuration in the **Setup Name** edit box .

❸ Click **OK**. The configuration will be saved with the specified setup name.

Opening a Setup Configuration from the Registry

Once you have saved a setup configuration in the registry, you can open it in PowerTerm WBT in order to connect to a host using the predefined terminal and communication parameters.

☞ **To open a setup configuration:**

❶ From the *File* menu, select **Open Terminal Setup**.

❷ Select the required setup name from the registry setup configuration list.

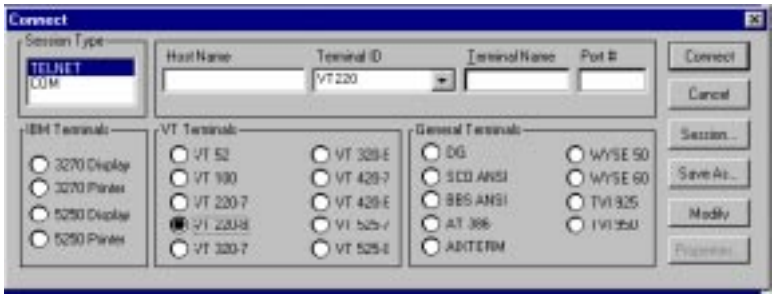
❸ Click **Open**. Parameters defined in the selected setup are now available.

Connecting to a Host

This step describes how to connect to a host once you have defined terminal and communication parameters.

☞ **To establish a connection:**

❶ From the *Communication* menu, select **Connect**. The *Connect* dialog box is displayed:



❷ Click **Connect**. This connects you to the host computer using the current communication (session) parameters.

Exiting PowerTerm WBT

You need to end a session before exiting the PowerTerm WBT application. PowerTerm WBT provides four options for the end of a session:

- **Automatic Closing**.
- **Optional Closing**.
- **User-Initiated Closing**.
- **User-Initiated Fast Exit**.

Automatic Closing

PowerTerm WBT enables you to close PowerTerm WBT automatically when you close a session.

☞ **To define parameters for closing a PowerTerm WBT session automatically:**

❶ From the *Terminal* menu, select **Setup**. The *Terminal Setup* dialog box is displayed.

❷ Select the **Preferences** tab.

❸ Click the **Auto Exit PowerTerm** box to select it.

❹ Click the **OK** button.

If you have modified terminal parameters during a session, a message displays asking if you want to save the setup configuration before closing.

To automatically reconnect a PowerTerm WBT session when you exit the current session, select the **Auto ReConnect** option in the *Terminate Setup* dialog box.

Optional Closing

For non-IBM emulations only - if you have not selected the **Auto Exit PowerTerm** option in the *Terminal Setup* dialog box (as described on the previous page), and the communication session has been terminated, PowerTerm WBT displays the following message: "Session closed (<exit code>). Press Enter to restart session."

<exit code> may have one of the following values:

- (zero). Communication ended successfully.
- A number other than 0. Communication aborted. The exit code points to the error that caused the problem.

Press **Enter** to re-establish communication based on the current terminal and communication parameters.

User-Initiated Closing

You can close a session at any time by selecting **Disconnect** from the *Communication* menu.

☞ **To exit PowerTerm WBT:**

From the *File* menu, select **Exit**.

If you have changed the terminal settings, PowerTerm WBT displays a warning message asking if you want to update the terminal settings configuration. The message will indicate the name of the terminal settings currently loaded (if you used the default). Click **OK** to update the terminal settings, or **No** to cancel the latest changes and restore the default terminal settings.

Chapter 4: Scripts

PowerTerm enables you to create scripts for automating tasks. Power Script Language is PowerTerm's own programming language.

This chapter provides an overview of script commands and programming conventions used in Power Script Language.

This chapter also describes how to create, run, save and activate scripts in PowerTerm WBT.

☞ **This chapter describes the following topics:**

Script Overview.

Power Script Language (PSL.

Using PowerTerm Scripts.

Script Overview

You can use scripts to automate PowerTerm WBT tasks. Scripts are written in Power Script Language (PSL) and are saved with a .PSL extension.

For example, you can create a script to login to execute a file,

display a message and so on. Scripts can be run during a PowerTerm WBT session.

PSL Types

☞ **PowerTerm commands can be grouped into six categories, which are described below:**

Simulation transmission to host commands: Enables you to communicate with the host. For example, the `<send>` command sends data to the host.

Standard programming commands: Enables you to use standard programming commands. For example, the `<exec>` command opens a program.

File handling commands: Enables you to work with files. For example, the `<read>` command reads from a file.

PowerTerm-specific commands: Enables you to activate specific PowerTerm WBT features. For example, the `<map>` command enables you to map a PC key to a host key.

Desktop interface commands: Enables you to manipulate components in the PowerTerm WBT window. For example, the `<menu hide>` command hides the PowerTerm WBT menu.

Power Script Language (PSL)

Power Script Language (PSL) is a special feature of PowerTerm which provides commands for creating scripts. These scripts can be used to automate tasks. For example, you can create a script to login to PowerTerm automatically. PSL is intended for users with programming skills.

☞ **The following topics are described in this section:**

PSL Syntax describes the syntax used to create PowerTerm script.

PSL Data Types describes common formats for data strings.

Variable Assignment describes the syntax used to assign variables.

Activating Script Files from the Host describes commands that activate a script file or script commands via special escape sequences.

PSL Syntax

A command consists of one or more fields separated by spaces or tabs. The first field is the name of a command, which may be either a built-in command or a procedure consisting of a sequence of PSL commands. New-line characters are used as command separators, and semicolons may be used to separate commands on the same line. Each PSL command returns either a string result, or an empty string.

PSL has four additional syntactic constructs:

- Curly braces **{}**
- Square brackets **[]**
- Dollar sign **$**
- Backslash \

PSL commands must be entered in lower case.

Curly Braces

Curly braces are used to group complex arguments. They allow you to nest one argument inside another. If the first character of an argument is an open brace, then the argument is not terminated by white space. Instead, it is terminated by the matching close brace. The argument passed to the command consists of everything between the braces, with the enclosing braces stripped off.

For example:

host = {vms unix {aix hp sun} aos}

The variable host will receive one argument:

"vms unix {aix hp sun} aos".

This particular command will set the variable host to the specified string.

If an argument is enclosed in braces, then none of the other substitutions described below is made on the argument. One of the most common uses of braces is to specify a PSL sub-program as an argument to a PSL command.

Square Brackets

Square brackets are used to invoke command substitution. If an open bracket appears in an argument, then everything from the open bracket up to the matching close bracket is treated as a command and executed recursively by PSL. The result of the command is then substituted into the argument in place of the bracketed string.

For example, the format command:

msg = [format {Data is %s bytes long} 99]

invokes print-like formatting (from the C language) and returns the string "Data is 99 bytes long", which is then assigned to the variable msg.

Dollar Sign

The dollar sign is used for variable substitution. If the dollar sign appears in an argument, then the following characters are treated as a variable name; and the contents of the variable are substituted into the argument in place of the dollar sign and name.

For example:

num = 99

msg = [format {Data is %s bytes long} $num]

The result is the same as the single command in the previous example.

The following are examples of common functions for the dollar sign in Power Script Language:

- **$P1** represents the variable of the parameter if P1 is the parameter.
- **$PC** counts the number of parameters in the command line.

Backslash

The backslash character may be used to insert special characters into arguments, such as curly braces or nonprinting characters.

Such special characters include the following:

`[ ] { } $ t b r m`

\xFF will send the hex code FF (where F can be any hex character: 0-9, A-F).

For example:

send \x1B\[m

This command will send the three characters: escape, [and m.

PSL Data Types

PSL uses only one type of data: strings. All commands, arguments to commands, results returned by commands and variable values are ASCII strings.

Although everything in PSL is a string, many commands expect their string arguments to have particular formats. There are three particularly common formats for strings:

- Lists
- Expressions
- Commands

A list is just a string containing one or more fields separated by white space, similar to a command. Curly braces may be used to enclose complex list elements. These complex list elements are often lists in their own right.

For example:

{vms unix {aix hp sun} aos}

This is a list with four elements, the third of which is a list with three elements.

PSL provides commands for a number of list-manipulation operations, such as creating lists, extracting elements and computing list lengths.

The second common form for a string is a numeric expression. PSL expressions have the same operators and rules of precedence as expressions in the C language.

The **expr** PSL command evaluates a string as an expression and returns the result (as a string, of course).

For example:

expr {($x < $y) || ($z != 0)}

elicits "1" if the numeric value of variable x is less than that of variable y, or if variable z is not zero; otherwise it returns "0". Several other commands, such as **if** and **for**, expect one or more of their arguments to be expressions.

The third common interpretation of strings is as commands (or sequences of commands). Arguments of this form are used in PSL commands that implement control structures.

For example:

```
if {$x < $y} {
swap = $x
x = $y
y = $swap
}
```

The **if** command receives two arguments here, each of which is delimited by curly braces. **If** is a built-in command that evaluates its first argument as an expression; if the result is non-zero, it executes its second argument as a PSL command. This particular command swaps the values of the variables x and y if x is less than y.

PSL also allows users to define command procedures written in the PSL language. The **proc** built-in command is used to create a PSL procedures (PSLproc).

For example:

```
proc factorial x {
if {$x == 1} {return 1}
return [expr {$x * [factorial [expr $x - 1]]}]
}
```

This PSL command defines a recursive factorial procedure. The **proc** command takes three arguments: a name for the new PSLproc, a list of variable names (in this case the list has only a single element, x), and a PSL command that comprises the body of the PSLproc. After this **proc** command has been executed, factorial may be invoked just like any other PSL command.

For example:

```
factorial 4
```

returns the string "24".

In addition to the commands already mentioned, PSL provides commands for manipulating strings (comparison, matching and printf/scanf-like C language operations), commands for manipulating files and file names. The built-in PSL commands provide a simple but complete programming language.

Variable Assignment

Syntax

```
varName = value
varName[index] = value
```

Variable assignment is as follows: the variable `varName` is located on the left side of the expression and the `value` you want to assign to the variable is located on the right.
For example: `B = 200`

Two types of variables: Scalar and Array

A variable containing a single value is a scalar variable and the majority of the time fits ones needs. Other times, it is convenient to assign more than one related value to a single variable. You then can create an array variable that can contain a series of values. Array variables and scalar variables are declared in the same way, except that the declaration of an array variable uses parentheses [ ] following the variable name.

A variable's scope is determined by where it is declared. When you declare a variable within a procedure, only code within that procedure can access or modify the value of that variable. It has local scope and is called a local variable. Differently, a global variable declared outside a procedure, is recognizable to all the procedures in your script. An exception to the rule governing local variables is when the global command has been invoked to declare `varName` as a global.

Activating Script Files from the Host

A host application may activate a script file or script commands via special escape sequences.

Escape Sequences for VT

Activating a script file called Script-Name:

ESCP$s**Script-Name**ESC \

An example activating the message.psl script:

ESCP$smessage.pslESC\

ESC is the ASCII 27 code.

Activating script commands called Script-Commands:

ESCP$t**Script-Commands**ESC \

An example activating the "message testing ; send end" commands:

ESCP$tmessage testing ; send endESC\

Escape Sequences for DG

Activating a script file called Script-Name:

ESCWs**Script-Name**000

ESC is the ASCII 30 code, 000 is the ASCII 0 code.

Activating script commands called Script-Commands:

ESCWtScript-Commands000

Using PowerTerm Scripts

☞ **PowerTerm provides the following script options:**

Recording a Script describes how to record a script in PowerTerm.

Running PowerTerm Scripts describes the various ways that a script can be launched.

Running a Specific Script describes how to run a recorded script in PowerTerm WBT to automate tasks.

Running Individual Script Commands describes how to run a specific script command.

Activating a Recorded Script describes how to activate a script recorded in memory.

Saving a Recorded Script describes how to save a script from memory to the registry.

Recording a Script

PowerTerm WBT enables you to create a script by recording all the actions that you perform in the PowerTerm WBT window. Actions can include selecting a menu option, typing an entry on the screen, making selections in a dialog box and so on.

☞ **To record a script:**

❶ From the *Script* menu, select **Start Script Recording** or click on the audio tape icon. The **Start Script Recording** option changes to **Stop Script Recording** while the audio tape icon appears pressed down.

❷ Perform the manual operations that you want to record. For example, select a menu option, enter parameters in a dialog box or type a password.

If you do not want to record certain operations, click **Pause Script Recording** on the *Script* menu which changes to **Continue Script Recording**. This will pause the script recording process. You can then perform operations that will not be included in the recording.

❸ To resume script recording, click **Continue Script Recording** from the *Script* menu.

❹ When you have performed all the operations to be stored in the script, select **Stop Script Recording** from the *Script* menu.

You can also save the script file that you created, so that you can run it at any time to repeat the operations. For more information see *Saving a Recorded Script*.

Running PowerTerm Scripts

PowerTerm WBT enables you to run scripts, upon startup or during a PowerTerm WBT session, to automate specific tasks.

During a PowerTerm Session

Using Soft Buttons

Soft buttons are named by default from F1 to F12. If you have assigned a script to F1, left-clicking on the F1 button is equivalent to sending the script to the host. For more information, see the section, *Programming Soft Buttons*.

Using the Power Pad

Power Pad buttons are named by default from F1, F2, F3 and so on with a few default function names, such as Clear, Enter and Insert. If you have assigned a script to the F1 button, left-clicking on the F1 button is equivalent to sending the script to the host. For more information, see the section *Programming the Power Pad*.

Using the Run Script Command

The Run Script command is a menu option which enables you to run a script created to automate tasks. For more information, see *Running a Specific Script*.

Upon Connecting to a Host

PowerTerm WBT enables you to specify the name of a script to be run after communication is established. The name of the script file needs to be specified in the **Script File** text box in the *Connect* Dialog box. For more information, see the section *Step 6: Connecting to a Host*.

To browse for a specific name of a PSL Script, press the button with three dots to the right of the Script File textbox.

Running a Specific Script

PowerTerm WBT enables you to run a script (.PSL) file to automate tasks. For example, you can create a script to log in to PowerTerm WBT automatically.

☞ **To run a script file:**

❶ From the *Script* menu, select **Run Script**. The *Run Script* dialog box is displayed. It lists all the scripts saved in the registry.

❷ Click **OK**. The selected script file is executed.

Running Individual Script Commands

PowerTerm WBT enables you to run individual script commands which you have created.

☞ **To run individual script commands:**

❶ From the *Script* menu, click **Script Command**. The *Script Command* dialog box is displayed.

❷ Type the name of the script command you wish to run.

❸ Click **OK**. The specified script command is executed.

Activating a Recorded Script

Once you have recorded a script in memory, you can run it.

☞ **To activate a recorded script:**

- From the *Script* menu, click **Activate Recorded Script** (<Alt> + <F9>). The script currently recorded in memory is now active.

Saving a Recorded Script

PowerTerm WBT enables you to save a script from memory to a specific file.

☞ **To save a recorded script:**

❶ From the *Script* menu, click **Save Recorded Script**. The *Record Script* dialog box is displayed.

❷ Enter a script name.

❸ Click **OK**. The script is saved with the specific script name.

Chapter 5: Menu Reference

This chapter describes each of the PowerTerm WBT menu bar options as shown below:

Use this chapter for reference only. See *Chapter 3: Using PowerTerm WBT* for a detailed explanation of each step involved in using PowerTerm WBT.

☞ **This chapter describes the following menus:**

File Menu.

Edit Menu.

Terminal Menu.

Communication Menu.

Options Menu.

Script Menu.

Help Menu.

File Menu

The *File* menu provides options to create, open and save a terminal setup configuration.

Open Terminal Setup

Displays the *Open Terminal Setup* dialog box with the list of existing terminal setups which enables you to select and open an existing setup configuration. For more information, see *Saving the Terminal Setup File,* in *Chapter 3: Using PowerTerm WBT*.

New Terminal Setup

Sets the default terminal settings.

Save Terminal Setup

Saves the currently opened setup file. Both terminal setup and communication parameters are saved to the current setup. For more information, see the section *Saving the Terminal Setup File,* in *Chapter 3: Using PowerTerm WBT*.

Save Terminal Setup As

Opens the *Save As* dialog box which enables you to save the current setup configuration under a different name.

Print Screen

Prints the contents of the work area.

Start/Stop Auto Print

Prints all the data displayed in the work area. This option changes to **Stop Printing** once the **Start Auto Print** function is activated. Select **Stop Printing** to stop printing the data displayed in the work area.

Exit

Enables you to exit from PowerTerm WBT.

Edit Menu

The *Edit* menu provides options to select, clear and reverse text in the PowerTerm WBT window and delete the contents of the history buffer. The *Edit* menu also provides standard Windows editing commands (copy and paste), in addition to commands that enable you to copy data to a file and copy data automatically to the clipboard.

Clear Screen

Captures the entire PowerTerm WBT screen and passes the data to the history buffer. An example of an application that issues clear screen commands is VMS Mail.

Copy

If the **Automatic Copy** option in the *Edit* menu is not active, use the **Edit/Copy** command to copy the marked text to the clipboard.

Paste

Pastes the clipboard contents into the work area.

Right-click (or select **Edit/Paste**) to send the host data stored in the clipboard. This operation is equivalent to actually typing the contents of the clipboard on the host screen.

Terminal Menu

The *Terminal* menu provides options to define and reset connection parameters, as well as to set the system to be online or offline.

Setup

Opens the *Terminal Setup* dialog box in which you can define settings for terminal emulation. This dialog box contains different tab pages which enable you to define all aspects of your terminal setup. For more information, see the section *Defining Settings for Terminal Emulation (Terminal Settings)* in *Chapter 3: Using PowerTerm WBT*.

Reset

Resets the VT terminal defaults. This command does not apply to PowerTerm WBT's exclusive terminal parameters (such as color).

Online

Sets the system to be online or offline.

Communication Menu

The *Communication* menu provides options to define and modify the communication (session) parameters, and to disconnect a communication session.

Connect

Displays the *Connect* dialog box which enables you to define session parameters and connect to a host.

Disconnect

Disconnects a communication session.

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Options Menu

The *Options* menu enables you to display and edit the keyboard mapping and define the Power Pad display.

Keyboard Map

Displays the *Keyboard Mapping* dialog box, which enables you to map your PC keys to host keys on the terminal keyboard.

Power Pad Setup

Displays the *Power Pad Setup* dialog box, which enables you to adjust the number of buttons contained in the Power Pad by specifying the number of rows and columns to be displayed.

Hide Buttons

Hides the soft buttons.

Hide Status Bar

Hides the status bar.

Hide Toolbar

Hides the toolbar.

Show Power Pad

Displays the floating Power Pad.

Script Menu

The *Script* menu provides options to record, edit and run a script.

Run Script

Displays the *Run Script* dialog box which enables you to select and run a script. For more information, see the section *Running PowerTerm Scripts* in *Chapter 4: Scripts*.

Script Command

Displays the *Script Command* dialog box which enables you to run individual script commands.

Start Script Recording

Writes a script automatically. After requesting **Start Script Recording**, the manual operations you perform in the emulation screen are recorded into a script file, until you choose the **Pause Script Recording** command.

Pause Script Recording

Displays the *Run Script* dialog box which enables you to select and run a script.

Activate Recorded Script

Activates the script currently recorded in memory. The script is saved in memory while PowerTerm WBT is active until it is saved to a specific file.

Save Recorded Script

Enables you to save a script from memory to a specific file. The script is saved in memory while PowerTerm WBT is active until it is saved to a specific file.

Help Menu

Contents

Displays the online help topics.

About PowerTerm WBT

Displays product and contact information.