MC9000
TelnetCE Client User's Guide

WLTNCE-9000-20040219-02

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Chapter 1: Introduction

This document provides information about installing, configuring, and using the Wavelink TelnetCE Client for Symbol MC9000 Windows CE devices.

This section provides the following information:

- Document assumptions
- Document conventions
- An overview of the TelnetCE Client

Document Assumptions

This document assumes that the reader has the following:

- Familiarity with Symbol MC9000 mobile devices and the Microsoft Windows CE operating system.
- Knowledge of wireless networks and wireless networking protocols.
- Knowledge of TCP/IP, including IP addressing, subnet masks, routing, BootP/DHCP, WINS, and DNS.
- Knowledge of Telnet services and terminal emulation, including IBM 5250/3270, HP, and VT100/220.

Document Conventions

The following section contains information about text-formatting conventions in this manual.

Table 1-1 lists the conventions that are used in this manual.

Convention	Description
`courier new`	Any time you interact directly with text-based user interface options, such as a button, or type specific information into an text box, such as a file pathname, that option appears in the `Courier New` text style. This text style is also used for keys that you press, filenames, directory locations, and status information. For example: Press `ENTER`. Click `OK`.
bold	Any time this document refers to a labelled user interface option, such as descriptions of the choices in a dialog box, that option appears in the **Bold** text style. Examples: Enable the **DHCP** checkbox. Access the TelnetCE Client **Session** menu.
italics	Italicized text is used to indicate the name of a window or dialog box. For example: The *Update Utility* dialog box. The *Profile Manager* dialog box.

Table 1-1: *Text-Formatting Conventions*

If you have questions about the terminology in this document, see *Glossary* on page 183.

About the TelnetCE Client

This section provides an overview of the TelnetCE Client.

TelnetCE Client Overview

The TelnetCE Client is a Windows CE-based application that facilitates IBM 5250/3270, VT 100/220, and HP Telnet emulation.

The TelnetCE Client comes pre-installed on Symbol MC9000 mobile devices.

Currently, you can create and manage configurations for the TelnetCE Client using one of the following methods:

- Manual configuration (at the mobile device)
- The TelnetCE Client configuration utility (which uses Microsoft ActiveSync)

TelnetCE Client Components

You can modify the following TelnetCE Client components:

- Host profiles
- Emulation parameters
- Localization

Host Profiles

A host profile contains all of the information that a mobile device needs to connect to a particular host, including the IP address of the host, the TCP port number on which the host is listening for Telnet requests, the emulation type, and login information.

Host profiles provide an easy way for users at a mobile device to establish a connection with a host without having to remember the parameters that are required to establish the session.

Emulation Parameters

The configuration utility allows you to configure the emulation parameters for Telnet sessions. For example, you can change the way the virtual screen displays on the mobile device, the type and size of font that is used, and the type of printer to which the mobile device may be connected.

You can configure global and per-host emulation parameters.

Global emulation parameters apply to terminal emulation with hosts for which you have not configured a per-host profile.

Configuring per-host emulation parameters allows you to specify the emulation parameters for terminal emulation sessions with a particular host.

Localization

Localization allows you to deploy language profiles with the TelnetCE Client. The language profile that you deploy with the TelnetCE Client determines the language in which the TelnetCE Client interface displays.

TelnetCE Client

The TelnetCE Client provides the following functionality:

- Use host profiles to initiate Telnet sessions with hosts.
- Engage in up to four simultaneous Telnet sessions.
- Configure Wavelink licensing (authorization).
- Configure new host profiles.
- View and modify certain global and per-host emulation parameters.
- View version information.

Chapter 2: Installation

This section contains the following information:

- Installation requirements for the TelnetCE Client
- Installing the TelnetCE Client.

NOTE The TelnetCE Client is pre-installed on Symbol MC9000 mobile devices. However, if you want to create configurations that you can download to the mobile device through a Microsoft ActiveSync connection, you must install the TelnetCE Client installation utility. The installation process documented in this section (see *Installing the TelnetCE Client Installation Utility* on page 6) allows you to deploy newer versions of the TelnetCE Client to the MC9000 mobile device.

Using Microsoft ActiveSync to Install the TelnetCE Client

This section provides information about using Microsoft ActiveSync to install the TelnetCE Client.

The Microsoft ActiveSync installation method pushes the TelnetCE Client application from a host system to the mobile device via a serial connection.

Installation Requirements

This section contains information about the host system requirements and the CE device requirements for the TelnetCE Client.

The host system requires the following:

- Microsoft Windows 9x/ME/NT/XP
- Microsoft ActiveSync 3.6 (or better)
- RS232 serial port
- 10 MB hard disk space (for installation utility)

The CE device on which you want to install the TelnetCE Client requires the following:

- 1.5 MB Flash memory

You will also need the following equipment to perform the installation:

- MC9000 serial/charging cable (also called the ActiveSync cable)

Installation Overview

The following tasks are required to install the TelnetCE Client to a mobile device:

1. Obtain the TelnetCE Client installation executable (`wltn_s90_ce30_8b_4in1_4xxxx.exe`).
2. Use the TelnetCE Client installation executable to install the TelnetCE Client installation utility on the host system.
3. Create a Microsoft ActiveSync partnership between the host system and the mobile device.
4. Use the TelnetCE Client installation utility to download the TelnetCE Client to the mobile device over the Microsoft ActiveSync connection.

Installing the TelnetCE Client Installation Utility

This section provides detailed instructions for installing the TelnetCE Client installation utility on the host system.

The TelnetCE Client installation executable file (`wltn_s90_ce30_8b_4in1_4xxxx.exe`) installs the TelnetCE Client installation utility on the host system. You use the installation utility to install the TelnetCE Client to mobile devices over a Microsoft ActiveSync connection between the host system and the mobile device.

To install the TelnetCE Client installation utility on the host system:

1. Obtain the TelnetCE Client installation excutable (`wltn_s90_ce30_8b_4in1_4xxxx.exe`) from the Wavelink Corporation Web site.

NOTE You can obtain the TelnetCE Client installation executable at www.wavelink.com/downloads. You will need to register with Wavelink Corporation before you will be able to download any of the products. Use the menus to navigate to the emulator section of the Web site and select to download the Microsoft ActiveSync installation for your mobile device type.

2 From the host machine, launch `wltn_s90_ce30_8b_4in1_4xxxx.exe`.

The TelnetCE Client setup wizard launches and the *Welcome* dialog box appears.

3 Click `Next`.

The *Choose Destination Location* dialog box appears, as shown in Figure 2-1.

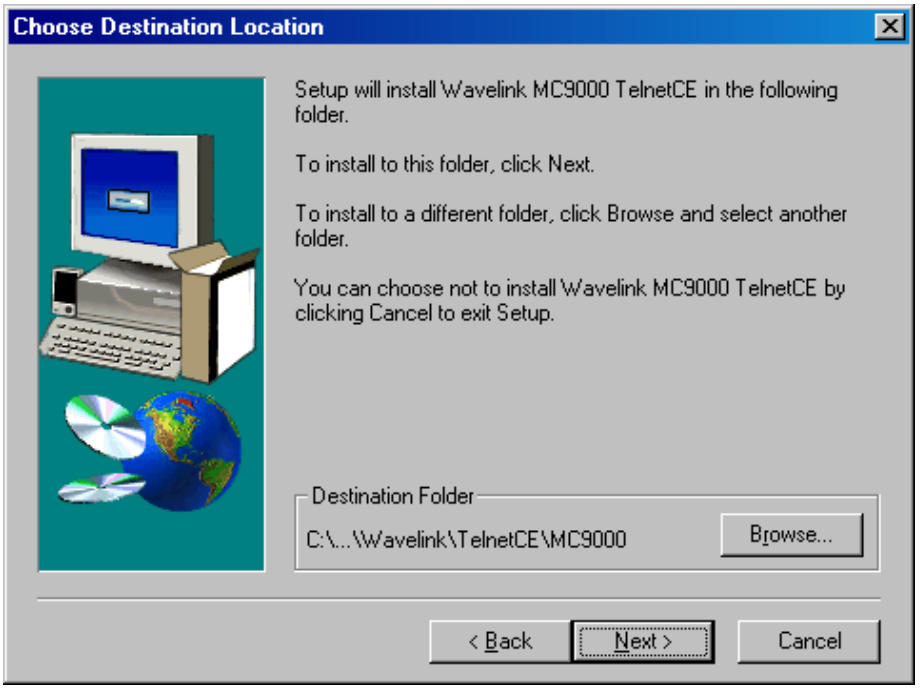

Figure 2-1. *Choose Destination Location Dialog Box*

4 Accept the default destination folder or use the `Browse...` button to select a different destination folder.

NOTE The destination folder is the location on the host system where the files for the TelnetCE Client installation utility are installed.

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5 Click `Next`.

The *Select Program Folder* dialog box appears, as shown in Figure 2-2.

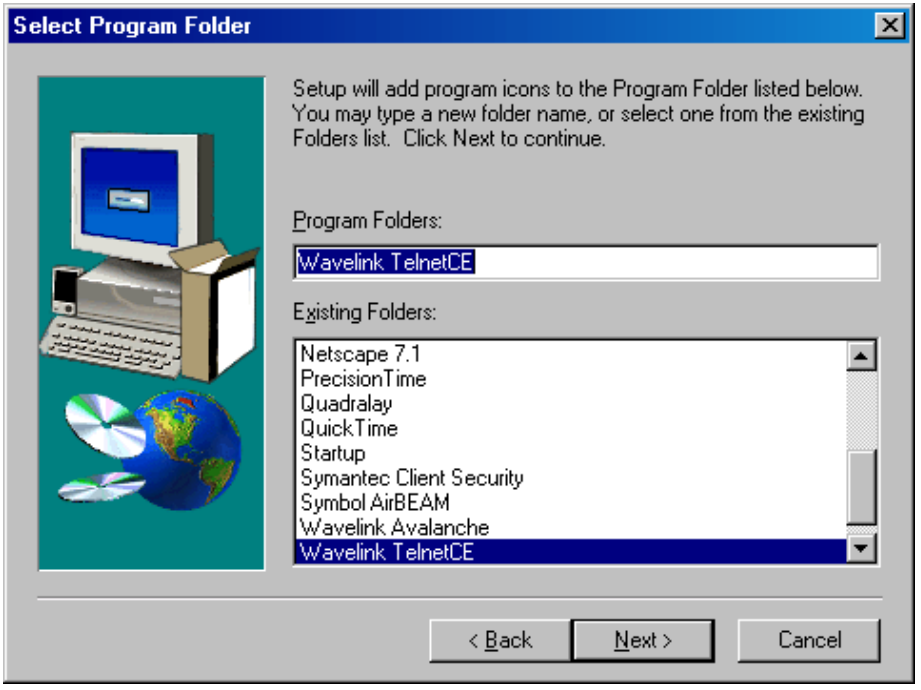

Figure 2-2. *Select Program Folder Dialog Box*

6 Accept the default Program Folders name, select a different Programs folder, or type a new folder name.

NOTE The Program Folder name is the name of the folder in which the TelnetCE Client installation utility will be located in the Programs group of the Windows **Start** menu on the host system.

7 Click `Next`.

The Wavelink MC9000 TelnetCE setup wizard displays the progress of the installation of the TelnetCE Client installation application on the host system.

After the installation is complete, you are prompted to place an icon for the TelnetCE Client installation utility on the desktop.

8 Select whether to create a shortcut icon to the TelnetCE Client installation utility on the desktop:

- Click `Yes` to create a shortcut on the desktop.
- Click `No` to prevent the installation wizard from creating a shortcut on the desktop.

Figure 2-3 shows the shortcut icon.

Figure 2-3. *TelnetCE Client Installation Utility Shortcut Icon*

After the installation is complete, the *Setup Complete* dialog box appears.

9 If you want to immediately launch the TelnetCE Client installation utility, enable the **Launch Wavelink MC9000 TelnetCE** check box.

10 Click `Finish` to close the MC9000 TelnetCE setup wizard.

NOTE Once you have installed the TelnetCE Client installation application on the host system, you will be able to install the TelnetCE Client to mobile devices through Microsoft ActiveSync.

Installing the TelnetCE Client

After you have installed the TelnetCE Client installation utility on the host system, use the installation utility to download the TelnetCE Client application to the mobile device over a Microsoft ActiveSync connection.

You can also use the TelnetCE Client installation utility to download configurations to to the mobile device, including host profiles, host-specific and global emulation parameters, and localization. For more information about configuring the TelnetCE Client and downloading configurations to the mobile device, see *Chapter 3: Configuration* on page 15.

To download the TelnetCE Client to the mobile device:

1 Ensure that you have an active Microsoft ActiveSync connection between the host system and the mobile device.

NOTE For more information about creating a Microsoft ActiveSync partnership between a host system and a mobile device, see *Appendix A: Using Microsoft ActiveSync* on page 69.

2 On the host system, launch the TelnetCE Client installation utility.

The *Wavelink TelnetCE Configuration - MC9000* dialog box appears, as shown in Figure 2-4.

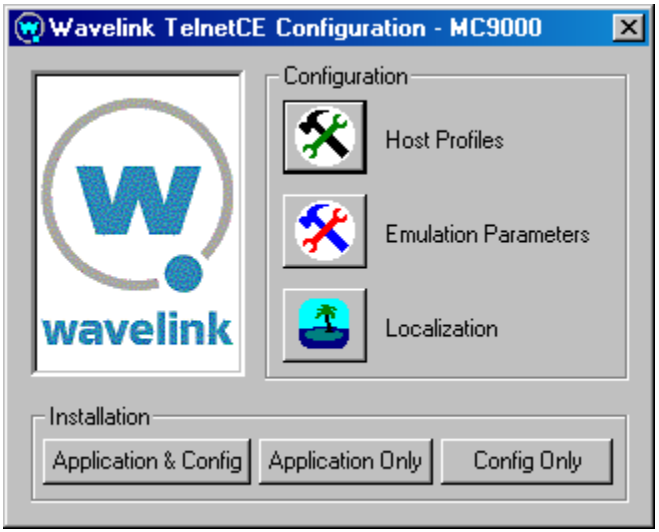

Figure 2-4. *Wavelink TelnetCE Configuration - MC9000 Dialog Box*

3 In the *Wavelink TelnetCE Configuration - MC9000MC9000* dialog box, click `Application Only`.

The Add/Remove Programs application launches, and the *Installing Applications* dialog box appears, as shown in Figure 2-5.

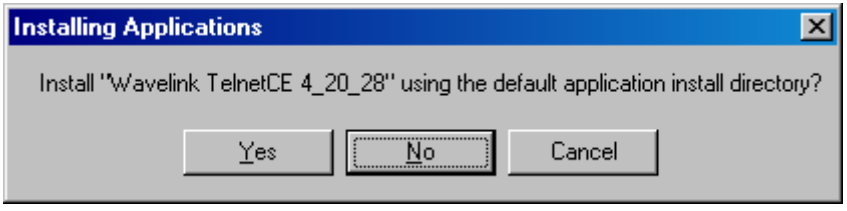

Figure 2-5. *Installing Applications Dialog Box*

4 Click `Yes`.

The *Installing Applications* dialog box displays the progress of the installation of the TelnetCE Client and its associated files to the mobile device. After the TelnetCE Client files are deployed to the mobile device, the *Application Downloading Complete* dialog box appears.

After the files are deployed, the *Installing Wavelink TelnetCE* dialog box appears on the mobile device and shows the progress of the application installation. The *Installing Wavelink TelnetCE* dialog box automatically closes after the installation process is complete.

The *Application Downloading Complete* dialog box, shown in Figure 2-6, appears on the host system.

Figure 2-6. *Application Downloading Complete Dialog Box*

5 Click `OK` to close the *Application Download Complete* dialog box.

NOTE You have now installed the TelnetCE Client application on the mobile device. The TelnetCE Client is loaded with the default configuration, which does not include any host profiles. For information about using the TelnetCE Client installation utility to create and download TelnetCE Client configurations to the mobile device, see *Chapter 3: Configuration* on page 15.

Double-click the **Terminal Emulators** icon, shown in Figure 2-7, in the shell screen of the mobile device to launch the TelnetCE Client.

Figure 2-7. *TelnetCE Client Shortcut*

NOTE You can access the list of installed programs on the mobile device by selecting Programs from the WindowsCE **Start** menu.

6 On the host system, click `OK` to close the *Application Downloading Complete* dialog box.

7 Close the *Wavelink TelnetCE Configuration - MC9000* dialog box.

NOTE You have now installed the TelnetCE Client on the mobile device. The TelnetCE Client retains its previous configuration (host profiles and local and per-host emulation parameters). For more information about modifying and downloading configurations to the mobile device, see *Chapter 3: Configuration* on page 15.

Uninstalling the TelnetCE Client

This section provides the following information:

- Uninstalling the TelnetCE Client
- Uninstalling the TelnetCE Client installation utility

Uninstalling the TelnetCE Client

The TelnetCE Client is pre-installed on the MC9000. Wavelink Corporation recommends that you talk to your Symbol representative, if you want to remove the TelnetCE Client from the mobile device.

Uninstalling the TelnetCE Client Installation Utility

If you will not be using the TelnetCE Client installation utility, you can remove the application from the host system.

To remove the TelnetCE Client installation utility from the host system:

1 From the Windows **Start** menu on the host system, select `Settings > Control Panel`.

2 In Control Panel, double-click `Add/Remove Programs`.

The *Add/Remove Programs* window appears.

3 From the list of programs that are currently installed on the host system, select Wavelink TelnetCE - MC9000, as shown in Figure 2-8.

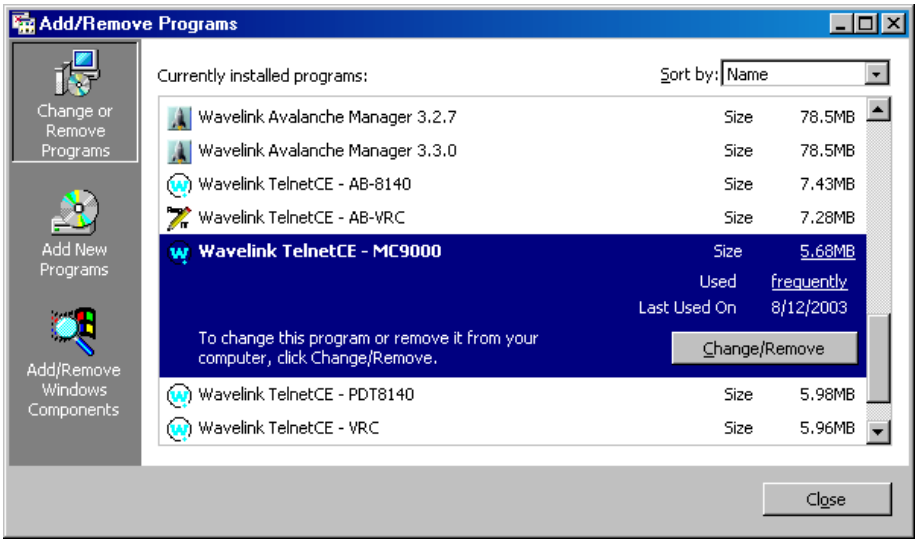

Figure 2-8. *Removing the TelnetCE Client Installation Utility*

4 Click `Change/Remove`.

5 Click `Yes`.

The *Remove Programs From Your Computer* dialog box appears and displays the status and results of the uninstall process.

6 Click `OK` to close the *Remove Programs From Your Computer* dialog box.

7 Close the *Add/Remove Programs* window.

Chapter 3: Configuration

This section covers the following topics:

- Configuring TelnetCE Client host profiles.
- Configuring TelnetCE Client global and per-host emulation parameters.
- Configuring TelnetCE Client localization.
- Downloading configurations to the mobile device.

Configuring Host Profiles

This section provides the following information:

- An overview of host profiles and configuring host profiles.
- Accessing the *Host Profiles* dialog box.
- Configuring host profiles.

About Host Profiles

The TelnetCE Client allows you to configure host profiles for mobile devices.

Host profiles provide a method to specify the parameters of a Telnet connection from a mobile device to a host. For example, a host profile allows you to specify the IP address of a host and the TCP port number on which the host listens for Telnet connections from clients.

You configure host profiles in the *Host Profiles* dialog box, which you can access through the TelnetCE Client installation utility. You can manually configure host profiles at the mobile device. Manually configuring the TelnetCE Client is covered in *Manually Modifying Host Profiles* on page 47.

Host Profile Configuration Overview

The following tasks outline the process of configuring host profiles for the TelnetCE Client:

1 Access the *Host Profiles* dialog box.

2 Add, modify, or remove host profiles and save the changes.

3 Download the configuration to mobile devices.

When you save the host profiles that you have configured, the application that you are using creates a configuration file that contains the parameters and settings of the host profile.

The download process downloads the configuration file to the mobile device. The new configuration file overwrites the existing configuration file on the mobile device.

Accessing Host Profiles

The following section explains how to access the *Host Profiles* dialog box, where you can add, modify, or delete host profile configurations that you can then download to the mobile device through Microsoft ActiveSync.

To configure host profiles from the TelnetCE Client installation utility:

1 On the host system, launch the TelnetCE Client installation utility (Wavelink MC9000 TelnetCE).

The *Wavelink TelnetCE Configuration - MC9000* dialog box appears, as shown in Figure 3-1.

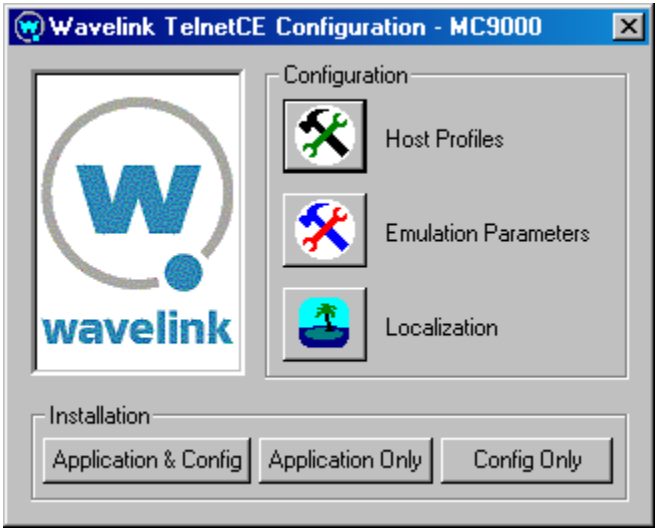

Figure 3-1. *Wavelink TelnetCE Configuration - MC9000 Dialog Box*

2 Click the **Host Profiles** button icon.

The *Host Profiles* dialog box appears, as shown in Figure 3-2.

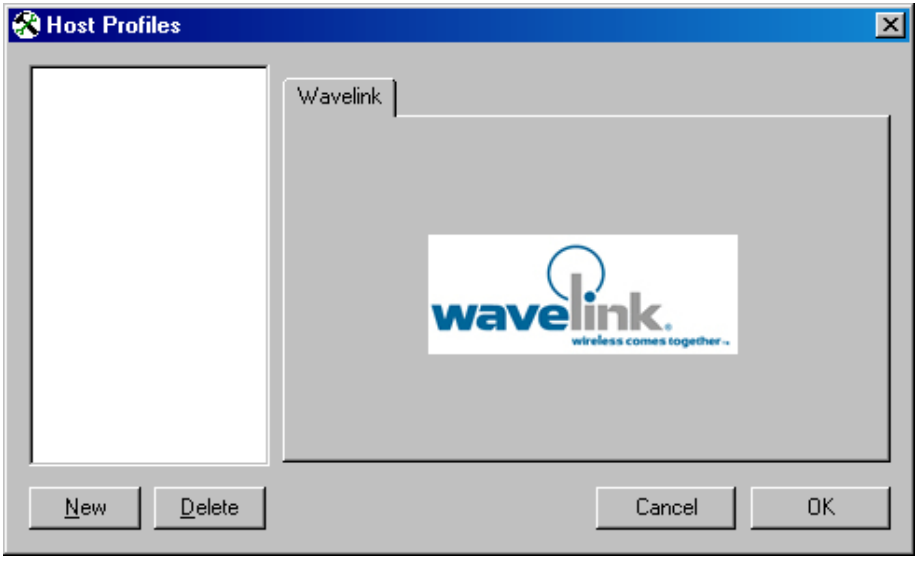

Figure 3-2. *Host Profiles Dialog Box*

3 Use the *Host Profiles* dialog box to add, modify, or remove host profiles.

NOTE For more information about using the Host Profiles dialog box, see *Configuring Host Profiles* on page 18.

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4 After you have configured the host profiles that you want to download to the mobile device, click `OK`.

The host profiles are saved and the *Host Profiles* dialog box closes.

5 Download the new configuration to the mobile device using Microsoft ActiveSync.

NOTE For more information on downloading configurations with Microsoft ActiveSync, see *Downloading Configurations* on page 36.

Configuring Host Profiles

This section provides information on the following tasks:

- Creating a host profile.
- Modifying a host profile.
- Removing a host profile.

Creating Host Profiles

You can use the *Host Profiles* dialog box to create new host profiles for the TelnetCE Client.

To create a host profile:

1 Access the *Host Profiles* dialog box.

2 In the *Host Profiles* dialog box, click `New`.

The *Host Profiles* dialog box displays tabs with parameters that allow you to configure the settings for the host profile.

The name of the host profile appears in the left pane of the *Host Profiles* dialog box.

3 Configure the settings for the host profile.

NOTE For information about the parameters in the tabs of the *Host Profiles* dialog box, see *Host Profile Settings* on page 19.

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4 After you have configured the settings for the new host profile, click `OK` to save the configuration.

NOTE You can configure several host profiles before you click `OK`. TelnetCE will maintain the settings. If you click `Cancel`, the dialog box closes and the configurations that you have made are lost.

Modifying Host Profiles

You can use the *Host Profiles* dialog box to modify existing host profiles.

To modify an existing host profile:

1 Access the *Host Profiles* dialog box.

2 In the left pane of the *Host Profiles* dialog box, select the host profile that you want to modify.

The *Host Profiles* dialog box displays tabs that contain the settings for the host profile.

3 Use the tabs in the *Host Profiles* dialog box to modify the host profile.

NOTE For more information about the parameters in the tabs of the *Host Profiles* dialog box, see *Host Profile Settings* on page 19.

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4 After you have modified the host profile, click `OK` to save the new configuration.

Removing Host Profiles

You can use the *Host Profiles* dialog box to remove host profiles from the configuration.

To remove a host profile:

1 Access the *Host Profiles* dialog box.

2 In the left pane of the *Host Profiles* dialog box, select the host profile that you want to remove.

3 Click `Remove`.

4 Click `OK`.

The new configuration is saved and the *Host Profiles* dialog box closes.

Host Profile Settings

This section explains the options in the tabs of the *Host Profiles* dialog box.

Host Settings

Figure 3-3 shows the Host tab in the *Host Profiles* dialog box.

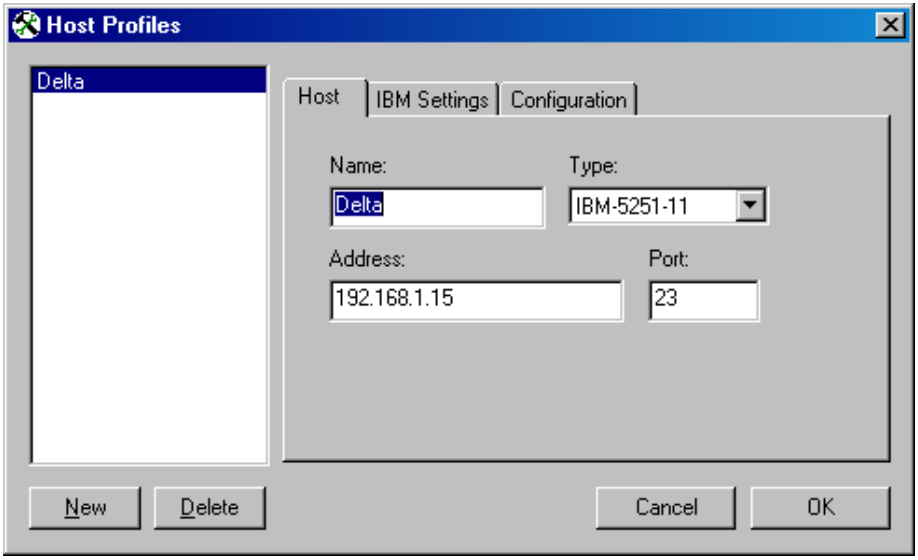

Figure 3-3. *Host Profiles Host Tab*

The following list describes the options in the Host tab:

Name Specifies the name of the host profile.

Type Determines the type of emulation used to connect to the host. (The type of emulation that you select determines the tabs that appear in the *Host Profiles* dialog box for that host profile.)

Address Specifies the IP address of the host.

Port Specifies the TCP port number on which the host listens for Telnet connections from clients.

IBM Settings

Figure 3-4 shows the IBM Settings tab in the *Host Profiles* dialog box. (The IBM Settings tab only appears if you have selected IBM-based emulation from the **Type** menu list in the Host tab.)

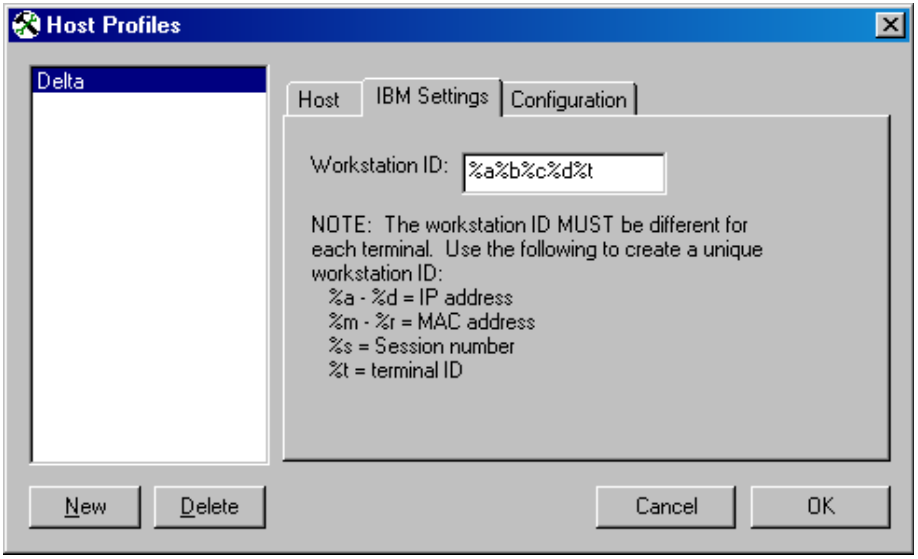

Figure 3-4. *Host Profiles IBM Settings Tab*

The following list explains the options in the IBM Settings tab:

Workstation ID

Specifies an identifier for the client. You can use the following variables to provide a unique identifier for the client:

- **%a - %d.** Captures octets of the IP address of the mobile device (%a captures the first octet, %d caputres the last octet). For example, %a%b%c%d would capture all four octets of the IP address of the mobile unit..
- **%m - %r.** Captures octets of the MAC address of the mobile device (%m captures the first octet, %r captures all six octets). For example, %m%n%o%p%q%r would capture all six octets of hardware address of the mobile unit.
- **%s.** Captures the session number.
- **%t.** Captures the terminal ID of the the device.

VT Settings

Figure 3-5 shows the VT Settings tab in the *Host Profiles* dialog box. (The VT Settings tab only appears if you have selected VT-type emulation from the **Type** menu list in the Host tab.)

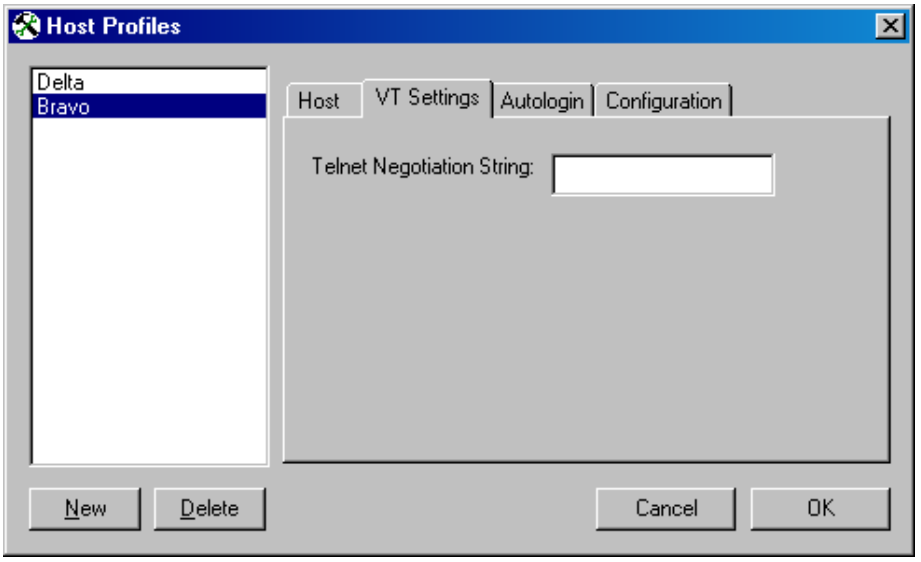

Figure 3-5. *Host Profiles VT Settings*

The following list describes the options in the VT Settings tab:

Telnet Negotiation String — Specifies the Telnet negotiation string the client should send to the host to establish a session.

Autologin Settings

Figure 3-6 shows the Autologin tab in the Host Profiles dialog box. (The Autologin only appears if you have selected VT-type emulation from the **Type** menu list in the Host tab of the *Host Profiles* dialog box.

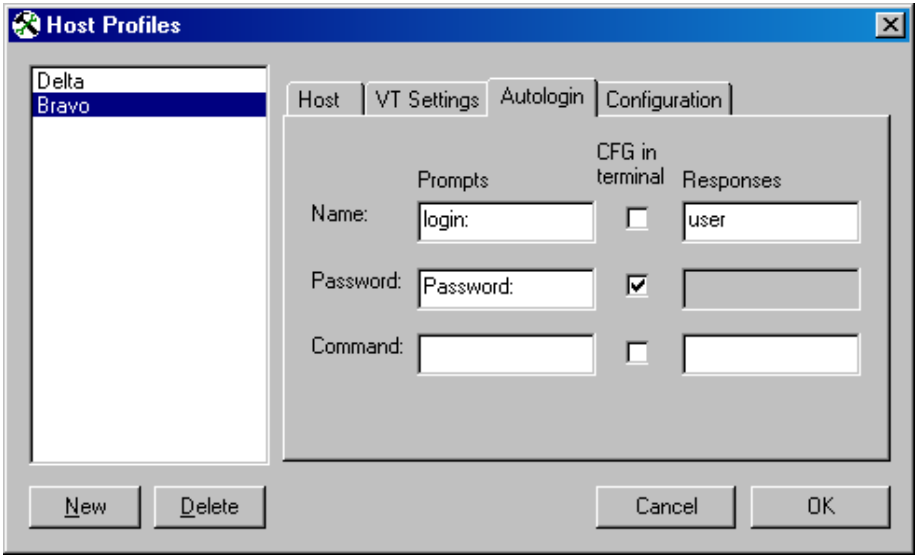

Figure 3-6. *Host Profiles Autologin Tab*

The following list describes the parameters in the Autologin tab:

Name (Prompts) Specifies the host-side Telnet login prompt.

Name (Responses) Specifies the response to the login prompt that the client should send to the host.

Password (Prompts) Specifies the host-side password prompt.

Password (Responses) Specifies the response to the password prompt that the client should send to the host.

Command (Prompts) Specifies the command prompt at the host.

Command (Responses) Specifies the response to the command prompt that the client should send to the host.

CFG in terminal Enables or disables the option to allow the user at the terminal to configure the corresponding response.

Configuration Settings

Figure 3-7 shows the Configuration tab in the *Host Profiles* dialog box.

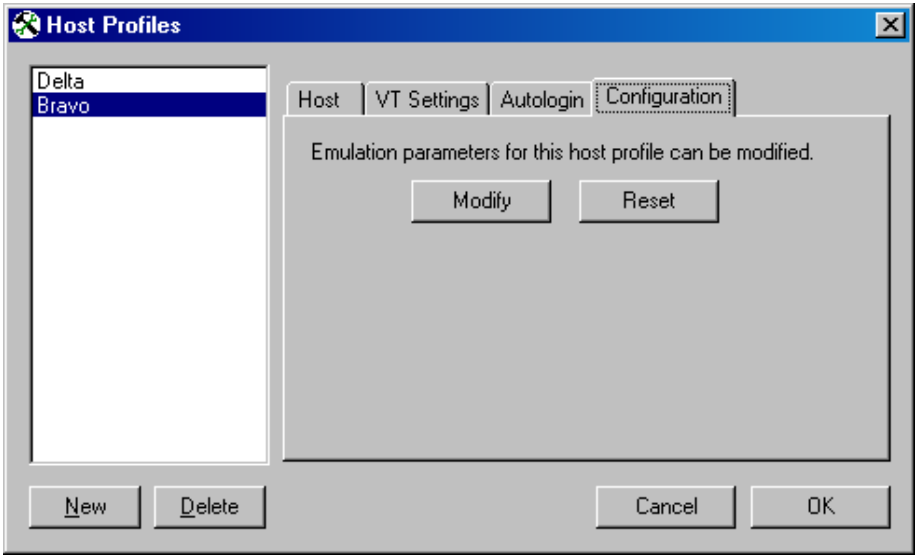

Figure 3-7. *Host Profiles Configuration Tab*

The following list describes the options in the Configuration tab:

Modify — Opens the Configuration Manager, where you can configure per-host emulation parameters for the host profile. For more information about emulation parameters and the Configuration Manager, see *Configuring Emulation Parameters* on page 24.

Reset — Restores the emulation parameters for the host profile to their default settings.

Manually Configuring Host Profiles

Users at the mobile device can access host profile configurations through the TelnetCE Client. For more information about configuring host profiles at the mobile device, see *Manually Modifying Host Profiles* on page 47.

Configuring Emulation Parameters

This section provides information about the following:

- Global and per-host emulation parameters.

- Using the TelnetCE Client installation utility to configure global and per-host emulation parameters.
- Using the Configuration Manager.

About Emulation Parameters

The TelnetCE Client allows you to configure the emulation parameters for host connections.

You make changes to emulation parameters with the Configuration Manager utility, which provides an organized list of the emulation parameters that you can modify.

Emulation parameters are divided into two groups:

- **Per-host.** Per-host emulation parameters apply only to a specific host profile on the client. You can access the emulation parameters for a specific host profile through the *Host Profiles* dialog box.
- **Global.** Global emulation parameters apply to all of the host profiles with which you have configured a client. Per-host emulation parameter configurations pre-empt global emulation parameter configurations.

The following tasks outline the process of configuring emulation parameters:

1. Access the Configuration Manager.
2. Use the Configuration Manager to modify emulation parameters and save the configuration.
3. Download the configuration to the mobile device.

The Configuration Manager generates a configuration file that contains global and per-host emulation parameter settings.

When you download the configuration file to the mobile device, any existing configuration file is overwritten.

Accessing the Configuration Manager

This section contains information about using the TelnetCE Client installation utility to access the Configuration Manager to modify global or per-host configuration parameters for the TelnetCE Client.

Accessing the Configuration Manager for Global Settings

You can access the global emulation parameters through the TelnetCE Client installation utility.

To access global emulation parameters throug the TelnetCE Client installation utility:

1 On the host system, launch the TelnetCE Client installation utility (Wavelink MC9000 TelnetCE).

The *Wavelink TelnetCE Configuration - MC9000* dialog box appears, as shown in Figure 3-8.

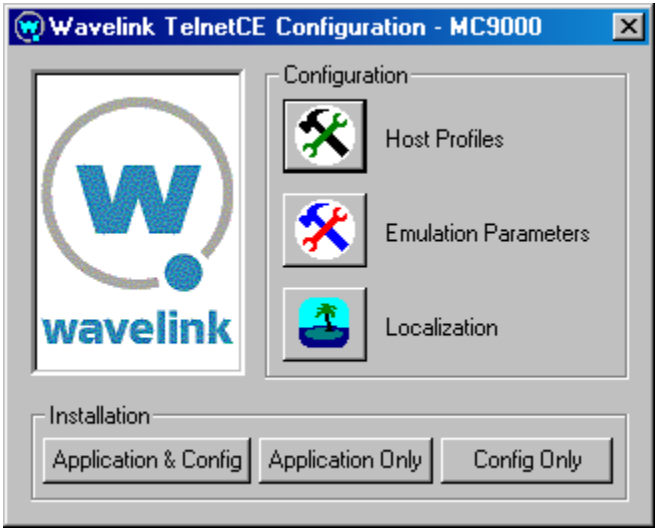

Figure 3-8. *Wavelink TelnetCE Configuration - MC9000 Dialog Box*

2 Click the **Emulation Parameters** button icon.

The Configuration Manager appears.

3 Use the Configuration Manager to configure the global emulation parameters.

NOTE For information on using the Configuration Manager, see *Using the Configuration Manager* on page 28.

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4 After you configure the emulation parameters, click the **Save** icon to save the configuration to the host.

5 Close the Configuration Manager.

6 Use the TelnetCE Client installation utility and Microsoft ActiveSync to download configurations to the mobile device.

NOTE For information about using Microsoft ActiveSync to download the configuration to the mobile device, see *Downloading Configurations* on page 36.

Accessing the Configuration Manager for Per-Host Settings

You can use the TelnetCE Client installation utility to access the Configuration Manager and modify per-host emulation parameters.

To access and modify per-host emulation parameters from the TelnetCE Client installation utility:

1 On the host system, launch the TelnetCE Client installation utility (Wavelink MC9000 TelnetCE).

The Wavelink *TelnetCE Configuration - MC9000* dialog box appears.

2 Click the Host Profiles button.

The *Host Profiles* dialog box appears.

3 In the left pane of the *Host Profiles* dialog box, select the host profile with the emulation parameters that you want to modify.

The *Host Profiles* dialog box displays the parameters of the host profile.

4 Select the Configuration tab.

5 Click `Modify`.

The Configuration Manager appears.

6 Use the Configuration Manager to configure the emulation parameters that will be applied to the host profile that you previously selected.

NOTE For information about using Configuration Manager, see *Using the Configuration Manager* on page 28.

7 After you have modified the emulation parameters in the Configuration Manager, click the **Save** icon to save the configuration to the host system.

8 Close the Configuration Manager.

9 In the *Host Profiles* dialog box, click `OK`.

10 Use the TelnetCE Client installation utility and Microsoft ActiveSync to download the configuration to the mobile device.

NOTE For information about using Microsoft ActiveSync to download configurations to the mobile device, see *Downloading Configurations* on page 36.

Using the Configuration Manager

The Configuration Manager is the utility that allows you to modify global and per-host emulation parameters.

Figure 3-9 shows the Configuration Manager.

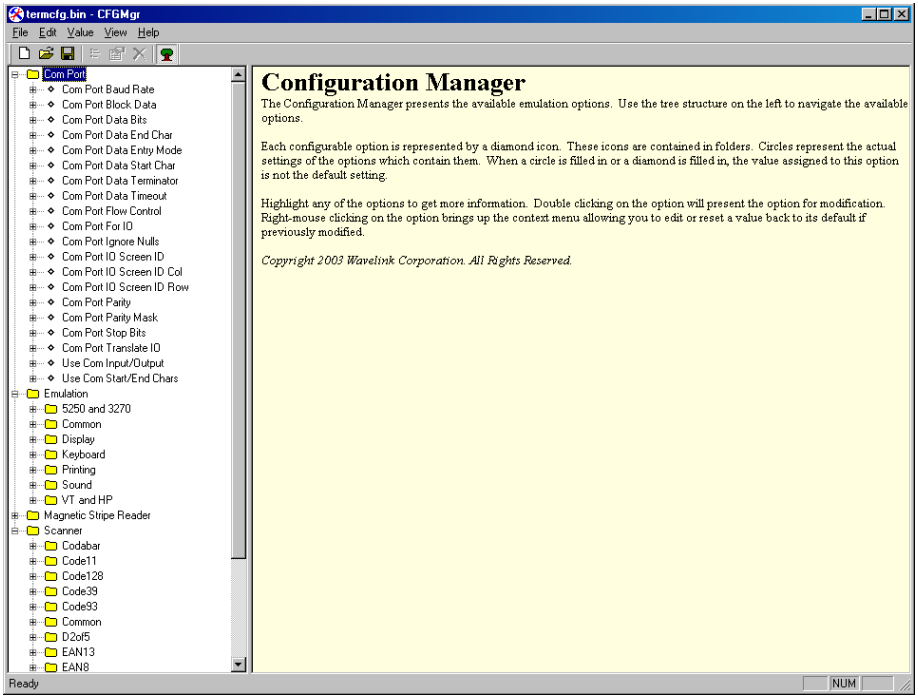

Figure 3-9. *Configuration Manager*

The left pane of the Configuration Manager displays the emulation parameters that you can modify. The emulation parameters are grouped by category.

When you select a parameter in the left pane, information about the parameter displays in the right pane, as shown in Figure 3-10.

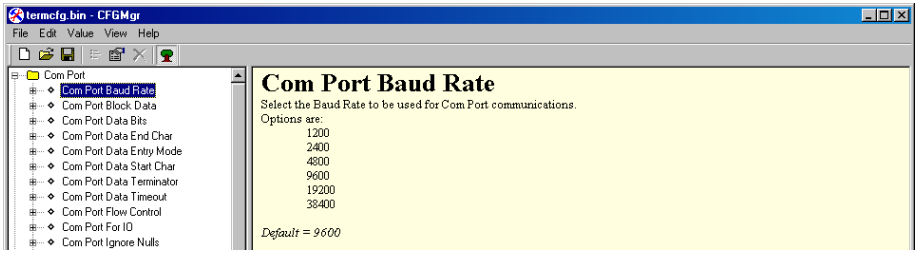

Figure 3-10. *Emulation Parameter Information*

Emulation Parameters

Modifiable emulation parameters are grouped by category in the left pane of the Configuration Manager.

The following list describes the different categories:

COM	Parameters in this category configure the function of the COM port on mobile devices.
Emulation	Parameters in this category configure terminal emulation functions on mobile devices.
Magnetic Stripe Reader	Parameters in this category configure the function of magnetic stripe readers on mobile devices.
Scanner	Parameters in this category configure the function of bar code scanners on mobile devices.

Appendix C: Emulation Parameters on page 97 contains detailed information about each of the modifiable parameters in the Configuration Manager.

Modifying Emulation Parameters

Determine the emulation parameters that you want to modify and use the Configuration Manager to make modifications.

To modify an emulation parameter:

1. Access the Configuration Manager.
2. In the left pane of the Configuration Manager, locate the parameter that you want to modify.
3. Double-click the emulation parameter or right-click the emulation parameter and choose `Edit` from the menu list.

   A dialog box appears that allows you to modify the parameter configuration, as shown in Figure 3-11.

Figure 3-11. *Modifying an Emulation Parameter*

4 Use the dialog box to configure the parameter.

5 After you have configured the parameter, click `OK` to keep the setting.

Click `Cancel` or the Close button to cancel any changes you have made.

6 In the Configuration Manager, click the **Save** icon, as shown in Figure 3-12.

Figure 3-12. *Configuration Manager Save Icon*

The configuration changes are saved to the host system.

7 Close the Configuration Manager and download the new configuration to clients.

Using the Find Function

Use the Find function of the Configuration Manager to locate parameters or information by supplying a partial or full string that the Configuration Manager can use to locate the parameter or information that you want to find.

To use the find function:

1 From the Configuration Manager **Edit** menu, select `Find`, as shown in Figure 3-13.

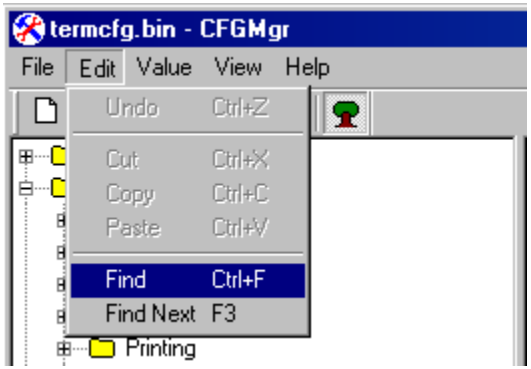

Figure 3-13. *Selecting the Find Function*

The *Find* dialog box appears.

2 Input the partial or full string for the parameter or information that you want to find, as shown in Figure 3-14.

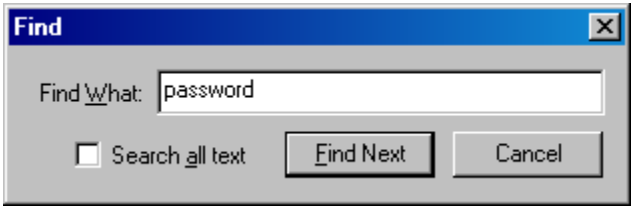

Figure 3-14. *Inputting a String to Find*

3 Enable the **Search all text** checkbox to search not only the parameters, but also the help files.

4 Click `Find Next` to begin the search.

Continue to click `Find Next` until you locate the parameter or information for which you are searching.

Achieving Desired Display Size

You may need to modify certain emulation parameters to achieve the display size (the number of character rows and columns) that you need.

One of the best ways to achieve the desired display settings on the new device is to modify the following parameters until you achieve the desired result:

- Font type
- Font size (pt.)
- Scroll bars
- Font clipping

Table 3-1 provides some examples of parameters and the display sizes that result.

Font	Font Size	Scroll Bars	Clipping	Display Result Rows X Columns
Tahoma	8	Yes	None	20 x 24
Tahoma	10	Yes	Right:2*	16 x 22
New Courier	8	Yes	None	20 x 32
New Courier	10	No	None	16 x 28
* Capital W's are clipped (cut short)				

Table 3-1: *Modifying Parameters to Achieve Desired Display Size*

Configuring Localization

This section provides information about the localization capabilities and configuring localization for the TelnetCE Client.

About Localization

Localization allows you to install language files to a mobile device that cause the TelnetCE Client interface to display in a particular language.

The TelnetCE Client offers the following languages:

- English (United States)
- English (United Kingdom)
- French (European)
- French (Canadian)
- Swiss
- Swedish
- Spanish
- Norwegian
- Japanese Katakana
- Italian

- German
- Dutch
- Finnish
- Danish

NOTE Wavelink Corporation does not provide most language message files. You must install the appropriate language message files on the mobile unit before the TelnetCE Client can provide the localization that you require.

Configuring Localization

Localization is configured through the *Localize* dialog box, which you can access through the TelnetCE Client installation utility.

The following is a list of the tasks for configuring and installing localization:

1 Access the *Localize* dialog box.

2 Select the desired language and save the configuration.

3 Download the configuration to clients.

The configuration is saved to a file that is downloaded to the mobile device. The new configuration file overwrites existing configuration files on the mobile device.

You can use the TelnetCE Client installation utility (Wavelink MC9000 TelnetCE) to configure localization.

To configure localization with the TelnetCE Client installation utility:

1 On the host system, launch Wavelink MC9000 TelnetCE.

The *Wavelink TelnetCE Configuration - MC9000* dialog box appears, as shown in Figure 3-15.

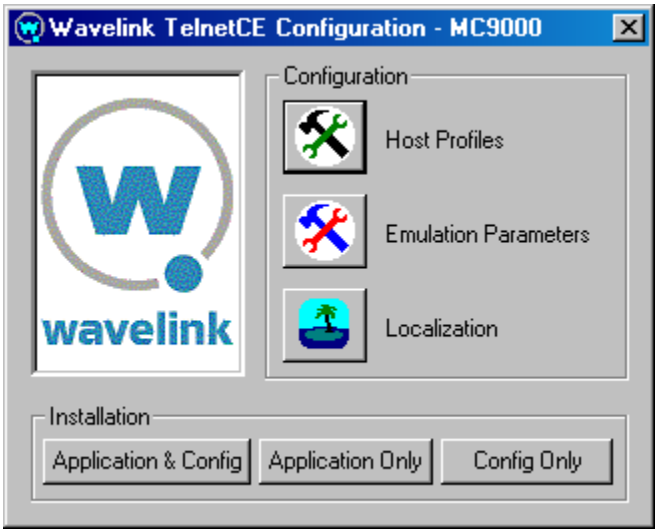

Figure 3-15. *Wavelink TelnetCE Configuration - MC9000 Dialog Box*

2 Click the **Localization** button icon.

The *Localize* dialog box appears.

3 Select the language profile that you want to install on the client, as shown in Figure 3-16.

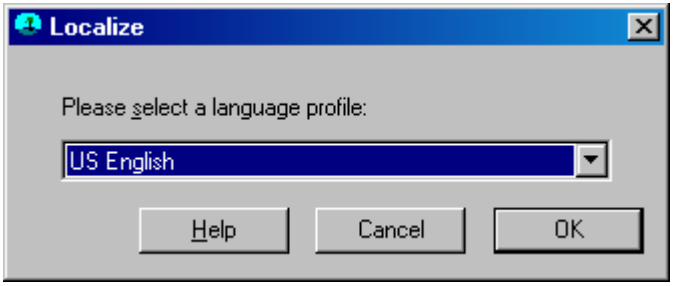

Figure 3-16. *Selecting the Language Profile*

4 Click `OK`.

The configuration is saved to the host system and the *Localize* dialog box closes.

5 Use the installation utility and Microsoft ActiveSync to download the new configuration to the mobile device.

NOTE For more information about using Microsoft ActiveSync to download configurations to mobile devices, see the next section.

Downloading Configurations

This section provides information about using the TelnetCE Client installation utility and a Microsoft ActiveSync connection to download configurations to mobile devices.

To download configurations to mobile devices:

1 Connect the host system to the mobile device with the correct type of serial cable.

2 Ensure that you have an active Microsoft ActiveSync connection between the host system and the mobile device.

NOTE For information about creating a Microsoft ActiveSync partnership between a host system and a mobile device, see *Appendix A: Using Microsoft ActiveSync* on page 69.

3 On the host system, launch the TelnetCE Client installation program (Wavelink MC9000 TelnetCE).

The *Wavelink TelnetCE Configuration - MC9000* dialog box appears.

4 Click `Config Only`.

The *TelnetCE Install* dialog box appears and displays the progress of the installation.

After the installation is complete, a new *Wavelink TelnetCE Configuration - MC9000* dialog box appears, as shown in Figure 3-17.

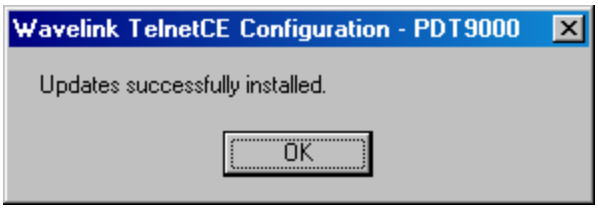

Figure 3-17. *Configuration Install Successful*

5 Click `OK` to close the dialog box.

6 Close the *Wavelink TelnetCE Configuration - MC9000* dialog box.

Downloading the Application and the Configuration

The **Application & Configuration** button in the *Wavelink TelnetCE Configuration - MC9000* dialog box downloads the TelnetCE Client application and the configuration file to the mobile device.

To avoid errors that might occur, you should wait until the application is installed on the mobile device before you authorize the download of the configuration to the mobile device.

To download the application and the configuration:

1 Connect the host system to the mobile device with the correct serial cable.

2 Ensure that you have an active Microsoft ActiveSync connection between the host sytem and the mobile device.

3 On the host system, launch the TelnetCE Client installation utility (Wavelink MC9000 TelnetCE).

The *Wavelink TelnetCE Configuration - MC9000* dialog box appears.

4 Use the buttons in the Configuration sections of the dialog box to configure the TelnetCE Client.

5 After you have created the configuration for the TelnetCE Client, click `Application & Config`.

The Add/Remove Programs application launches and the *Installing Applications* dialog box appears.

6 Click `Yes`.

The TelnetCE Client is downloaded to the mobile device. The *Installing Applications* dialog box shows the progress of the download. When the download is complete, the *Application Downloading Complete* dialog box appears.

After the TelnetCE Client is downloaded, the application is installed on the mobile device.

Wait until the installation of the TelnetCE Client on the mobile device is complete before you perform the next step.

7 In the *Application Downloading Complete* dialog box that appears on the host system, click `OK`.

The configuration is downloaded to the mobile device.

After the configuration is downloaded, the *Wavelink TelnetCE Configuration - MC9000* dialog box appears and indicates that the update is successful, as shown in Figure 3-18.

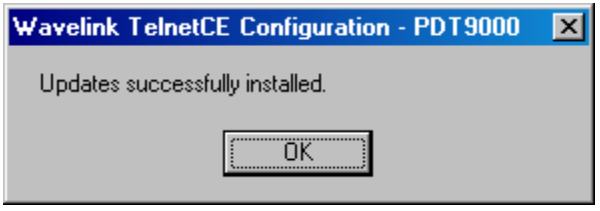

Figure 3-18. *Configuration Install Successful*

8 Click `OK` to close the *Wavelink TelnetCE Configuration - MC9000* dialog box.

Chapter 4: Using the TelnetCE Client

This section covers the following topics:

- TelnetCE Client authorization
- Using the TelnetCE Client.
- Manually configuring the TelnetCE Client, including host profiles and emulation parameters.

Authorizing Clients

The TelnetCE Client comes pre-installed and fully authorized (licensed) on Symbol MC9000 mobile devices. Authorization allows you to engage in up to four simultaneous Telnet sessions with host servers.

Because the TelnetCE Client is already fully authorized, the `Authorization` option in the **TelnetCE Options** menu of the TelnetCE Client is unavailable for you to select, and you will not be able to configure authorization parameters for the TelnetCE Client.

Using and Configuring the TelnetCE Client

This section contains information about the following:

- Launching the TelnetCE Client.
- Connecting to a host.
- Disconnecting from a Telnet session.
- Exiting the TelnetCE Client.
- Accessing and using the virtual keyboards.
- Manually modifying host profiles.
- Manually modifying emulation parameters.
- Using the TelnetCE Client menus.

- Working with multiple Telnet sessions.

Launching the TelnetCE Client

You can launch the TelnetCE Client from the shell screen (which is the default screen) of the MC9000 device.

To launch the TelnetCE Client:

1 In the shell screen of the mobile device, double-click the **Terminal Emulators** icon.

Figure 4-1 shows the icon.

Figure 4-1. *TelnetCE Client Icon*

The TelnetCE Client launches and displays the default screen, shown in Figure 4-2.

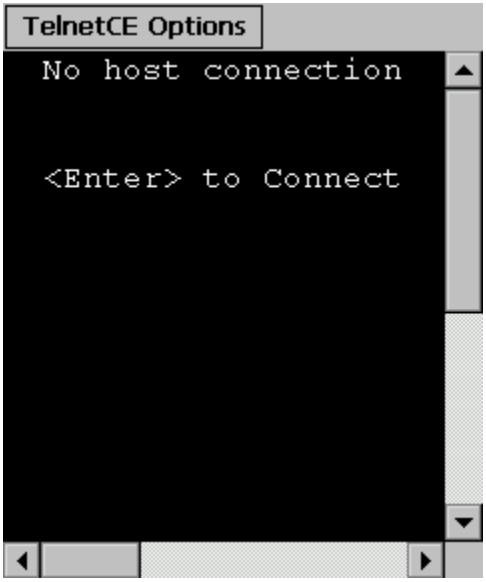

Figure 4-2. *TelnetCE Client Default Screen*

Connecting to Hosts

Once you have launched the TelnetCE Client, you can connect to host systems. You must have a host profile that specifies the parameters of the Telnet session before you can connect to a host system.

1 On the mobile device, launch the TelnetCE Client.

The TelnetCE Client launches and displays the default screen.

2 Press the `Enter` key.

The *Select Host* dialog box appears, as shown in Figure 4-3.

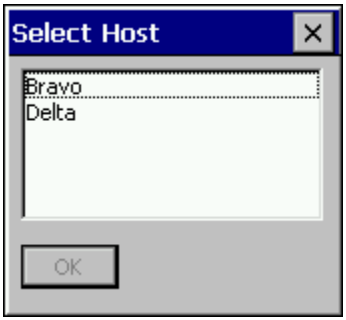

Figure 4-3. *Select Host Dialog Box*

NOTE If you have configured only one host profile for the TelnetCE Client, the *Select Host* dialog box does not appear and the client immediately attempts to connect to the host for which the single host profile is configured.

3 In the *Select Host* dialog box, select the host to which you want to connect.

4 Click `OK`.

The TelnetCE Client attempts to establish a Telnet session with the host.

Disconnecting a Telnet Session

At any point during a Telnet session, you can disconnect from the session by accessing the **TelnetCE Options** menu.

To disconnect from a Telnet session:

1 Access the TelnetCE Client **Term** menu.

2 Select `Disconnect Session [#]-[name]`, where:

- `#` is the session number and
- `name` is the name of the host profile

Figure 4-4 provides an example.

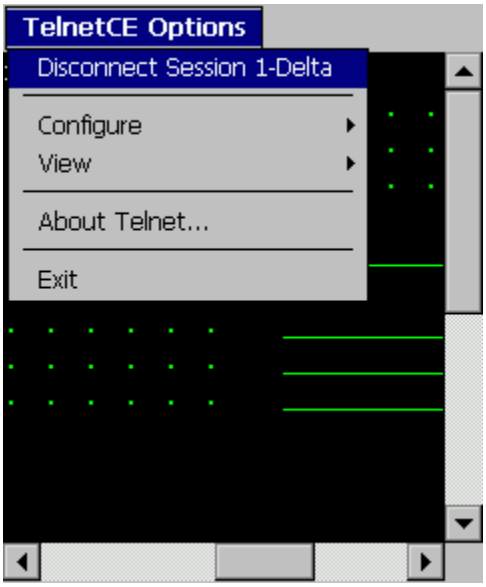

Figure 4-4. *Disconnecting from a Session*

When you make the selection, the session that you select is terminated.

Exiting the TelnetCE Client

You can exit and close the TelnetCE Client from the **TelnetCE Options** menu.

To exit and close the TelnetCE Client:

1 Access the TelnetCE Client **TelnetCE Options** menu.

2 Select `Exit`, as shown in Figure 4-5.

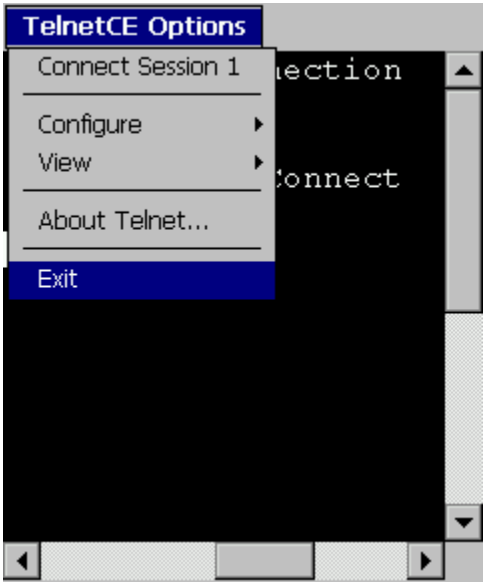

Figure 4-5. *Exiting the TelnetCE Client*

The TelnetCE Client closes, and any active host connections are terminated.

Accessing and Using the Virtual Keyboards

The TelnetCE Client includes the following two virtual keyboards, which allow you to click the keys that you want to use during a Telnet session rather than using the external keyboard on the mobile device:

- Emulation
- Numeric

Viewing the Emulation Keyboard

You can view the emulation keyboard, which is specific to the type of emulation for the active Telnet session.

To access the virtual emulation keyboard:

1 Access the **TelnetCE Options** menu.

2 Select `View > Emulation Keyboard`, as shown in Figure 4-6.

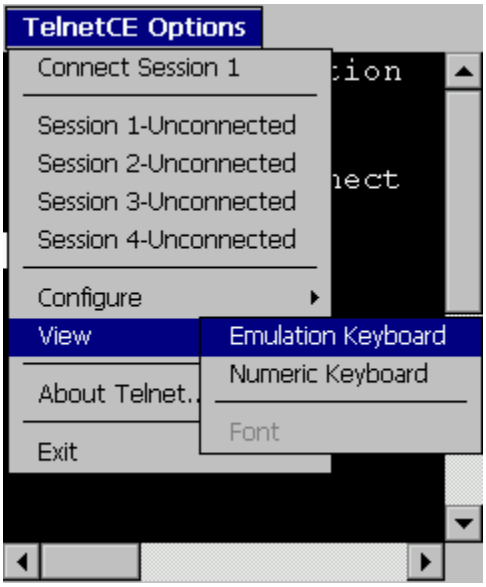

Figure 4-6. *Selecting to Display the Virtual Emulation Keyboard*

The TelnetCE Client displays the virtual emulation keyboard for the active session.

NOTE Virtual keyboards are different for each type of emulation. A limited version of the virtual emulation keyboard appears when the TelnetCE Client is not engaged in any active sessions.

Figure 4-7 shows the 5250 emulation virtual keyboard.

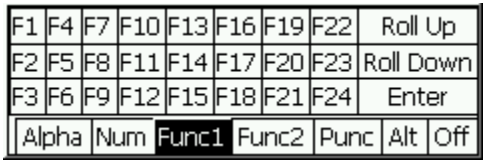

Figure 4-7. *5250 Virtual Emulation Keyboard*

To turn off the virtual emulation keyboard:

1 Access the **TelnetCE Options** menu.

2 Select `View > Emulation Keyboard`.

NOTE Alternatively, you can click the `Off` button on the virtual emulation keyboard.

Viewing the Numeric Keyboard

You can access the virtual numeric keyboard from the **TelnetCE Options** menu.

To access the virtual numeric keyboard:

1 Access the **TelnetCE Options** menu.

2 Select `View > Numeric Keyboard`, as shown in Figure 4-8.

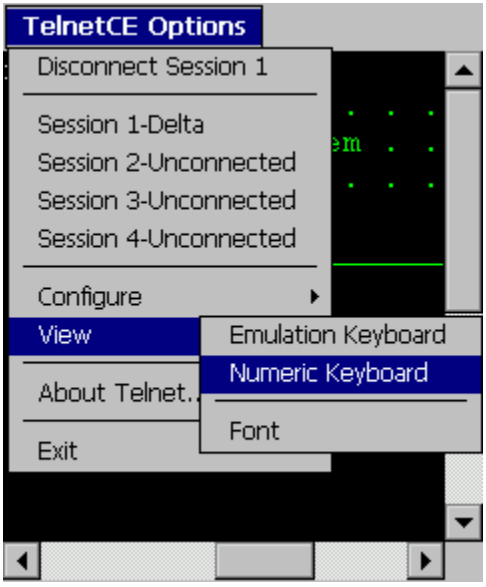

Figure 4-8. *Selecting to View the Virtual Numeric Keyboard*

The virtual numeric keyboard, as shown in Figure 4-9, appears in the lower part of the TelnetCE Client window.

Figure 4-9. *TelnetCE Client Virtual Numeric Keyboard*

Using the Virtual Keyboards

The following is a list of notes about using the virtual emulation keyboard:

- Click `Alpha` to access the alphabetical keyboard.
- Click `NUM` to access the numeric keyboard.
- Click `Func1` to access the Function and Roll Up/Down keys.
- Click `Func2` to access the Dup, Clear, Print, and similar keys.
- Click `Punc` to access punctuation characters.
- Click `Alt` to access alternate keystrokes, such as TermConfig and Prog Info.

See *Appendix B: Keyboard Maps* on page 77 for external and virtual keyboard maps for VT, HP, and 3270/5250 emulation.

Manually Modifying Host Profiles

Although it is not recommended, you can modify host profiles from the TelnetCE Client. (Wavelink Corporation recommends that you make modifications to host profiles through the TelnetCE Client installation utility.)

To manually modify a host profile:

1 Access the **TelnetCE Options** menu.

2 Select `Configure > Host Profiles`, as shown in Figure 4-10.

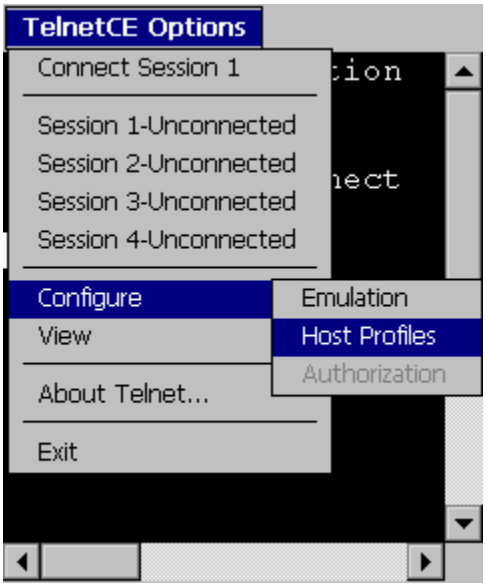

Figure 4-10. *Selecting to Configure Host Profiles*

The *Input Password* dialog box appears.

NOTE If you have not configured an RF Config Password, the *Input Password* dialog box does not appear. Instead, the *Edit Host Profile* dialog box appears. Skip steps 3 and 4.

---

3 Type the password.

NOTE The password to access host profiles is set in the Emulation > Common > RF Config Password parameter of the Configuration Manager. The default password is "system. See *Using the Configuration Manager* on page 28 for information about using the Configuration" Manager.

---

4 Click OK.

The *Edit Host Profile* dialog box appears, as shown in Figure 4-11.

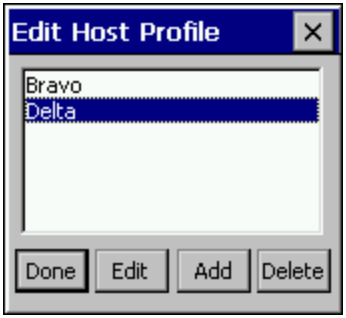

Figure 4-11. *Edit Host Profile Dialog Box*

5 Select one of the following options:

- Select the host profile that you want to modify, then click `Edit` to make modifications to the host profile that you have selected.
- Click `Add` to create a new host profile.
- Select a host profile, then click `Delete` to remove the host profile that you have selected.

If you have selected to add or edit a host profile, the *Edit Host Profile* dialog box appears, as shown in Figure 4-12.

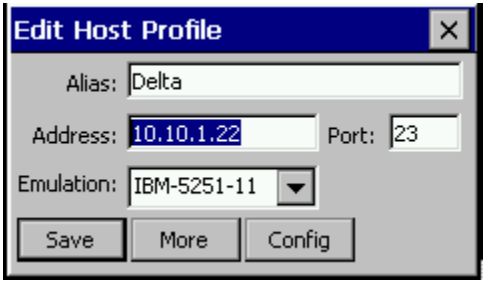

Figure 4-12. *Editing a Host Profile*

6 Use the *Edit Host Profile* dialog box to configure the parameters of the host profile.

See the list below for information on the different parameters in the *Edit Host Profile* dialog box.

7 After you have configured the host profile, click `Save`.

8 Close the *Edit Host Profile* dialog box.

The options that appear in the *Edit Host Profile* dialog box are as follows.

Alias	The name for the host profile.
Address	Specifies the IP address of the host.
Port	Specifies the TCP port on which the host accepts Telnet requests.
Emulation	Specifies the type of emulation for the host profile.
Save	Saves the changes you have made to the configuration of the host profile.
More	Opens the *More Options* dialog box, which allows you to configure options that are specific to the type of emulation for which you have configured the host profile.
Config	Provides access to the emulation parameters for the host profile. For more information about modifying emulation parameters from the TelnetCE Client, see *Manually Modifying Emulation Parameters* on page 50.

Manually Modifying Emulation Parameters

Although it is not recommended, you can manually modify the emulation parameters for a specific host profile. (Wavelink Corporation recommends that you use the TelnetCE Client installation utility to make changes to the emulation parameters.) You can modify emulation parameters during a session or when you are disconnected from any sessions.

NOTE If you want to modify global emulation parameters, you will have to use the TelnetCE Client installation utility. You cannot modify global emulation parameters for the TelnetCE Client at the mobile device.

To modify the emulation parameters for a host profile:

1 Access the **TelnetCE Options** menu.

2 Select `Configure > Emulation`, as shown in Figure 4-13.

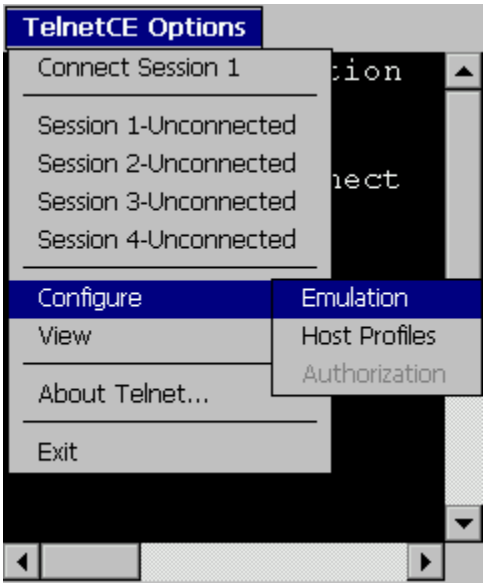

Figure 4-13. *Selecting to Configure Emulation Parameters*

the *Input Password* dialog box appears and prompts you for the Term Config Password.

NOTE If you have removed the Term Config Password, then the *Input Password* dialog box does not appear. Instead, the *Select Host* profile dialog box appears. You can skip steps 3 and 4.

---

3 Type the Term Config Password.

NOTE The Term Config Password is configured in the Emulation > Common < Term Config Password parameter of the Configuration Manager. The default Term Config Password is “config”. For more information about using the Configuration Manager, see *Using the Configuration Manager* on page 28.

---

4 Click `OK`.

The *Select Host* dialog box appears, as shown in Figure 4-14.

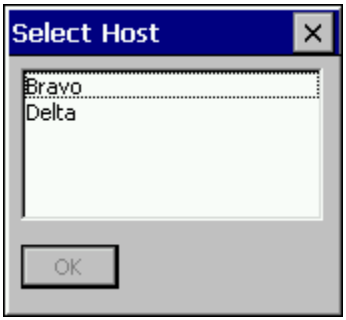

Figure 4-14. *Select Host Dialog Box*

NOTE If you have configured only one host profile for the TelnetCE Client, then the *Settings* dialog box for the host profile appears and you can skip steps 5 and 6.

5 Select the host profile that you want to configure.

6 Click `OK`.

The *Settings* dialog box for the host profile appears, as shown in Figure 4-15.

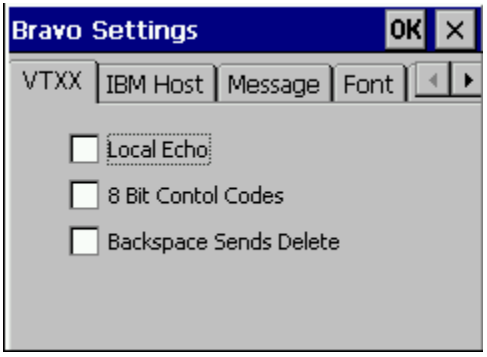

Figure 4-15. *Settings Dialog Box for Host Profile*

7 Use the tabs in the *Settings* dialog box to configure the emulation parameters for the host profile.

For information on the parameters in the different tabs of the *Settings* dialog box, see *Emulation Parameters* on page 53.

8 After you have configured the emulation parameters in the *Settings* dialog box, click `OK` to apply the changes and close the *Settings* dialog box.

Emulation Parameters

Figure 4-16 shows the VTXX tab of the *Settings* dialog box.

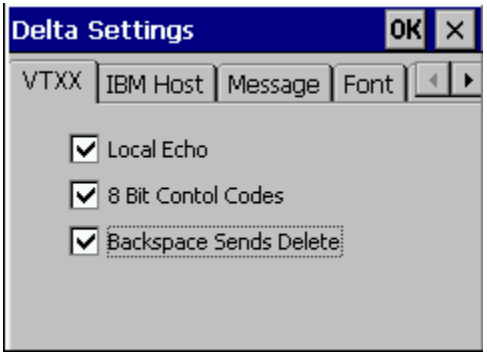

Figure 4-16. *Settings Dialog Box VTXX Tab*

The following list describes the options in the VTXX tab:

Local Echo (VT Only) Indicates whether the TelnetCE Client echoes characters on the screen that it received from a VTXX host. Enable this checkbox to echo characters.

8 Bit Control Codes (VT Only) Indicates whether to use 8-bit ANSI control codes for VTXX emulation.

Backspace Sends Delete (VT Only) Indicates whether a Delete control character is sent to the host when a user at the client presses the `Backspace` key.

Figure 4-17 shows the IBM Host tab of the *Settings* dialog box.

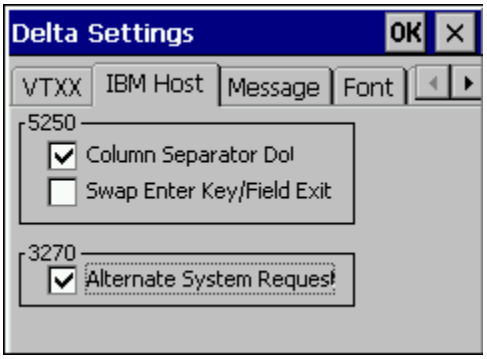

Figure 4-17. *Settings Dialog Box IBM Host Tab*

The following list describes the options in the IBM Host tab:

5250 - Column Separator Do (5250 only) Instructs the TelnetCE Client to display a period or vertical line between each character when the host system uses a special column format mode.

5250 - Swap Enter Key/ Field Exit Key (5250 only) Maps the `Enter` key to the `Field Exit` key and the `Clear` key to the `Enter` key.

3270 - Alternate System Request (3270 only) Encodes 3720 system requests as requests instead of default interrupt processes.

Figure 4-18 shows the Message tab of the *Settings* dialog box.

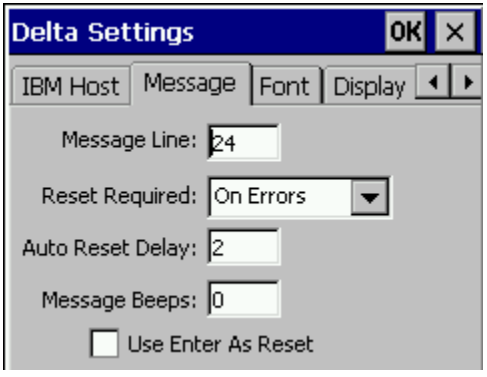

Figure 4-18. *Settings Dialog Box Message Tab*

The following list describes the options in the Message tab.

Message Line (5250/3270 only)
Specifies the line from the host screen that the TelnetCE Client reads to display as the message line. The TelnetCE Client displays the message line each time its contents change. When the contents of the message line are not valid, the line appears in reverse video at the top of the display.

Possible values are 0 - 24. Use a value of 0 to prevent the display message.

Reset Required (5250/3270 only)
Indicates the situations that require the user to press the `Reset` key.

On All messages: Requires a reset on screens that display information on line 24 (the bottom display line).
On Errors: Requires a reset on screens that have an error indicator.
Never: Never requires the user to use a reset, but automatically performs a reset when an error indicator is detected.

Auto Reset Delay (5250/3270 only)
Specifies the amount of time (in seconds) to wait before sending a reset to the host when the Reset Required parameter is set to Never.

Possible values are 0 - 5. Use 0 to indicate no wait.

Message Beeps (5250/3270 only)
Specifies the number of additional beeps that occur on the mobile device when the TelnetCE Client receives a system message.

Use Enter as Reset
Enable this checkbox if you want the `Enter` key on the mobile device to function as the `Reset` key when the mobile device is in an error state.

Figure 4-19 shows the Font tab of the *Settings* dialog box.

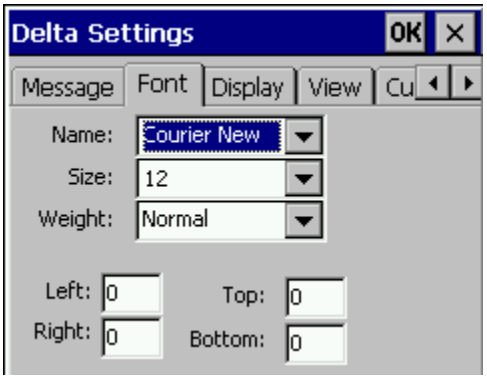

Figure 4-19. *Settings Dialog Box Font Tab*

The following list describes the options in the Font tab.

Name Specifies the font that the TelnetCE Client uses for emulation.

Size Specifies the point size of the characters the TelnetCE Client uses for emulation.

Weight Specifies the weight of the characters the TelnetCE Client uses for emulation.

Left Specifies the amount of white space (in font points) to crop from the left of the font.

Right Specifies the amount of white space (in font points) to crop from the right of the font.

Top Specifies the amount of white space (in font points) to clip from the top of the font.

Bottom Specifies the amount of white space (in font points) to clip from the bottom of the font.

Figure 4-20 shows the Display tab in the *Settings* dialog box.

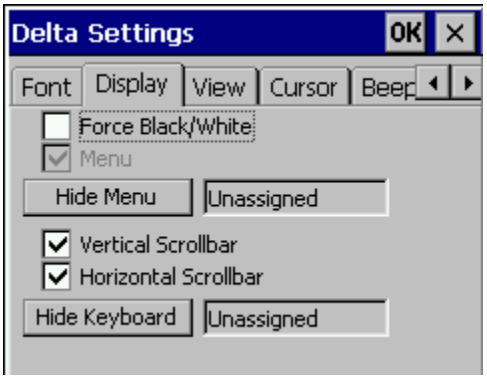

Figure 4-20. *Settings Dialog Box Display Tab*

The following list describes the options in the Display tab.

Force Black/White — Indicates whether the TelnetCE Client is forced to use a black-and-white display (white background, black text) for emulation.

Menu — Indicates whether the TelnetCE Client displays the TelnetCE Client menu during a Telnet session.

Hide Menu — Allows you to specify a command to hide the TelnetCE Client menu.

Vertical Scrollbar — Indicates whether the TelnetCE Client shows the vertical scrollbar.

Horizontal Scrollbar — Indicates whether the TelnetCE Client shows the horizontal scrollbar.

Hide Keyboard — Allows you to specify a command to hide the TelnetCE Client virtual keyboard.

Figure 4-21 shows the View tab of the *Settings* dialog box.

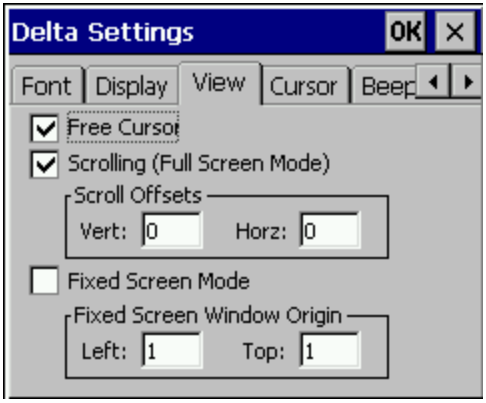

Figure 4-21. *Settings Dialog Box View Tab*

The following list describes the options in the View tab.

Free Cursor — Indicates whether the user is allowed to move the cursor into "protected" areas of the screen. Disable this checkbox to prevent the user from entering protected areas.

Scrolling (Full Screen Mode) — Enables or disables "view mode" on the TelnetCE Client, which allows the user to scroll around the virtual display.

Scroll Offsets - Vert — Specifies the number of columns that the vertical display moves when the cursor crosses the vertical edge of the screen.

Possible values are 0 - 80. Use the value 0 to indicate the current display size.

Scroll Offsets - Horz — Specifies the number of rows that the virtual display moves when the cursor crosses the horizontal edge of the screen.

Possible values are 0 - 24. Use the value 0 to indicate the current display size.

Fixed Screen Mode

Indicates whether the TelnetCE Client fixes the display on the mobile device to a specific position in the virtual display. When you enable this checkbox, the same portion of the virtual display appears on the display screen without regard to the location of the cursor.

You must also specify the position with the **Fixed Screen Window Origin** group box.

Fixed Screen Window Origin - Left

Specifies the virtual screen column where the display screen of the mobile device is fixed.

Possible values are 1 - 79.

Fixed Screen Window Origin - Top

Specifies the virtual screen row where the display screen of the mobile device is fixed.

Possible values are 1 - 24.

Figure 4-22 shows the Cursor tab of the *Settings* dialog box.

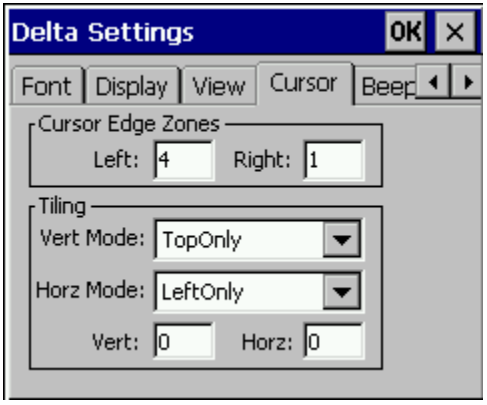

Figure 4-22. *Settings Dialog Box Cursor Tab*

The following list describes the options in the Cursor tab.

Cursor Edge Zones - Left

Specifies the left border of the cursor zone in the virtual display. When the cursor moves outside of the border, the TelnetCE Client repositions the screen over the virtual display, centering the cursor on the display screen of the mobile device.

Possible values are 1 - 10.

Cursor Edge Zones - Right

Specifies the right border of the cursor zone in the virtual display. When the cursor moves outside of the border, the TelnetCE Client repositions the screen over the virtual display, centering the cursor on the display screen of the mobile device.

Tiling - Vert Mode

Determines how the TelnetCE Client handles vertical tiling. The options include:

None: The TelnetCE Client repositions the screen around the cursor.
TopOnly: The TelnetCE Client repositions the screen in the uppermost row of tiles.
All: The TelnetCE Client always tiles vertically.

Tiling - Horz Mode

Determines how the TelnetCE Client handles horizontal tiling. The options include:

None: The TelnetCE Client positions the screen around the cursor.
LeftOnly: The TelnetCE Client positions the screen around the leftmost column of tiles.
All: The TelnetCE Client always tiles horizontally.

Tiling - Vert Specifies the height of the logical screen in “tiles” for tiling mode.

Possible values are 0 to the screen height. Use the value 0 to specify the height of the current display.

Tiling - Horz Specifies the width of the logical screen in “tiles” for tiling mode.

Possible values are 0 to the screen width. Use the value 0 to specify the width of the current display.

Figure 4-23 shows the Beeps tab of the *Settings* dialog box.

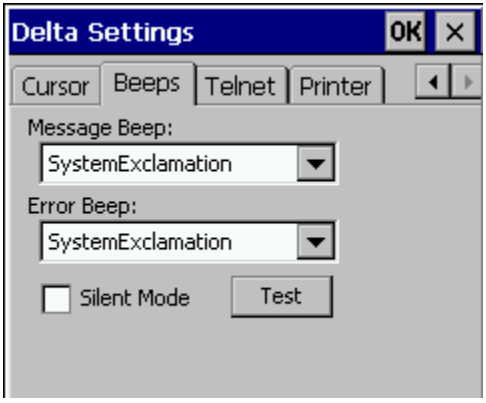

Figure 4-23. *Settings Dialog Box Beeps Tab*

The following list describes the options in the Beeps tab.

Message Beep Specifies the sound that the mobile device plays when it receives a message from the host.

Error Beep Specifies the sound that the mobile device plays when it receives an error message from the host.

Silent Mode Indicates whether to disable sounds for the TelnetCE Client.

Test Tests the Message Beep and Error Beep sounds that you have selected.

Figure 4-24 shows the Telnet tab of the *Settings* dialog box.

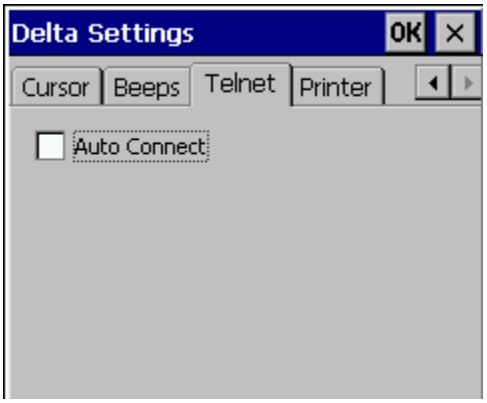

Figure 4-24. *Settings Dialog Box Telnet Tab*

The following list describes the options in the Telnet tab.

Auto Connect Indicates whether the TelnetCE Client automatically attempts to reconnect to a host after the host system closes a session.

Figure 4-25 shows the Printer tab of the *Settings* dialog box.

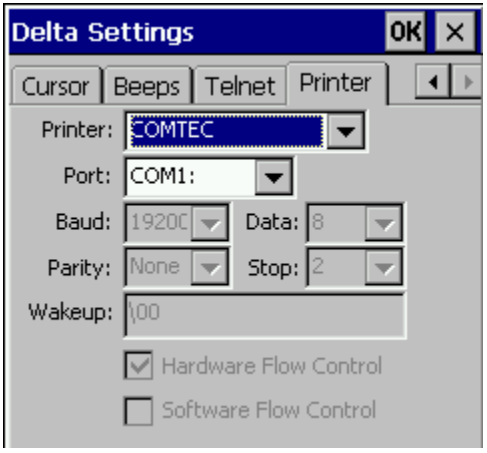

Figure 4-25. *Settings Dialog Box Printer Tab*

The following list describes the options of the Printer tab.

Printer — Specifies the type of printer that is connected to the mobile device. If you select `UserDefined`, you will need to specify the parameters (baud rate, parity, data, etc.) for the connection to the printer.

Port — Specifies the COM port on the mobile device to which the printer is connected.

Baud (User Defined Only) — Specifies the baud rate for the connection to the printer.

Parity (User Defined Only) — Specifies the parity type for the connection to the printer.

Data (User Defined Only) — Specifies the data bits for the connection to the printer.

Stop (User Defined Only) — Specifies the stop bits for the connection to the printer.

Wakeup (User Defined Only) — Specifies the printer-specific value that is used to wake up a printer.

Hardware Flow Control (User Defined Only) — Indicates whether the printer connection uses hardware flow control.

Software Flow Control (User Defined Only) — Indicates whether the printer connection uses software flow control.

Working with Multiple Sessions

This section covers the following:

- Initiating multiple sessions
- Switching between active sessions
- Disconnecting a session

The TelnetCE Client supports up to four simultaneous sessions. The default configuration for the TelnetCE Client, however, only allows one active session.

NOTE To configure the TelnetCE Client to support more than one simultaneous sessions (up to four), access the Configuration Manager and modify the Emulation > Common > Number of Sessions parameter. For more information about creating and downloading configurations to mobile devices, see *Chapter 3: Configuration* on page 15.

Initiating a New Session

If the TelnetCE Client on the mobile device is configured to support multiple sessions, you can initiate a new session with the same host or with a different host.

To initiate a new session:

1 Access the **TelnetCE Options** menu.

2 Select the next unconnected session in the menu list, as shown in Figure 4-26.

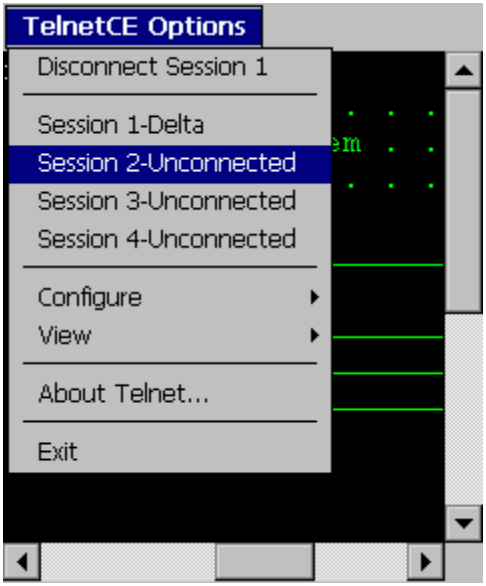

Figure 4-26. *Selecting to Initiate a New Session*

The TelnetCE Client displays the default screen, as shown in Figure 4-27.

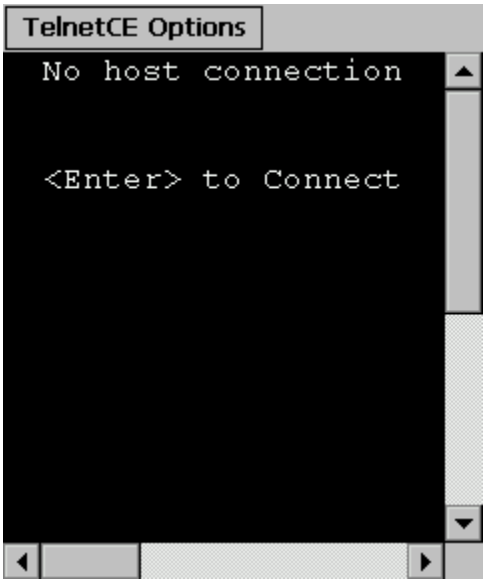

Figure 4-27. *TelnetCE Client Default Screen*

3 Press `Enter`.

The *Select Host* dialog box appears.

4 In the *Select Host* dialog box, select the host to which you want to establish a new session.

5 Click `OK`.

The new host connection is established.

Switching Between Active Sections

You can use the **TelnetCE Options** menu to switch between the active Telnet sessions.

To switch to a different active session:

1 Access the **TelnetCE Options** menu.

2 From the list of active sessions, select the session that you want to view, as shown in Figure 4-28.

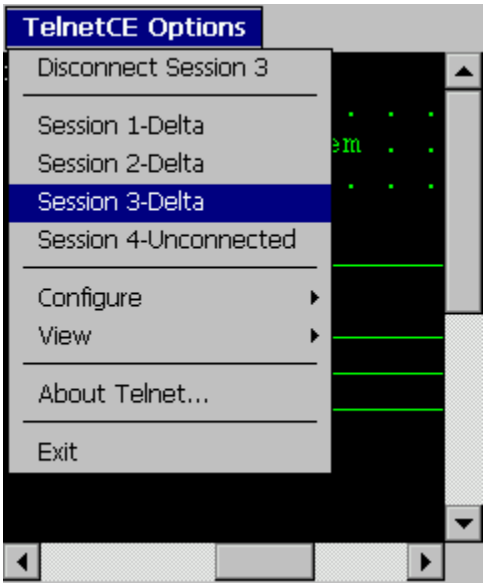

Figure 4-28. *Selecting to View a Different Active Session*

The TelnetCE Client displays the session that you selected from the **TelnetCE Options** menu.

Disconnecting an Active Session

You must be viewing a session to disconnect from the session.

To disconnect from an active session:

1 Access the **TelnetCE Options** menu.

2 From the list of connected sessions, select the connection from which you want to disconnect.

The TelnetCE Client displays the session.

3 Access the **TelnetCE Options** menu.

4 Select `Disconnect Session`, as shown in Figure 4-29.

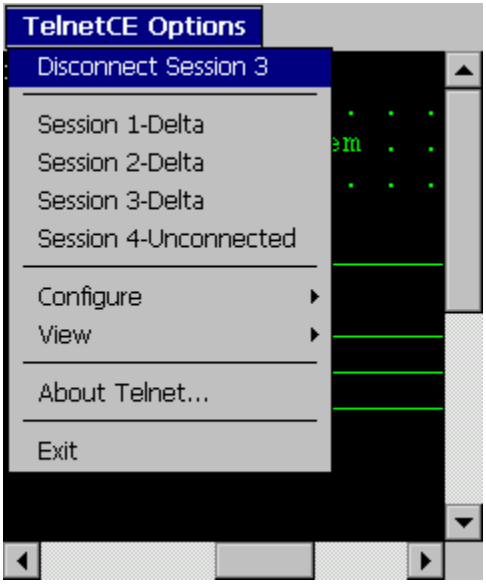

Figure 4-29. *Disconnecting from a Session*

The session ends, and the TelnetCE Client displays the default screen.

Using the TelnetCE Client Menu

This section describes the options in the **TelnetCE Options** menu of the TelnetCE Client.

The following list provides a description of each of the options in the **TelnetCE Options** menu.

Connect Session	Allows you to establish a connection with a host.
Disconnect Session	Disconnects the session.
Session	Allows you to view the session that you select.
Configure > Emulation	Allows you to manually configure emulation parameters for a specific host profile.
Configure > Host Profiles	Allows you to manually configure host profiles for the TelnetCE Client.

Configure > Authorization	Option unavailable. (The TelnetCE Client comes fully licensed on MC9000 mobile devices.)
View > Emulation Keyboard	Displays the virtual emulation keyboard.
View > Numeric Keyboard	Displays the numeric keyboard.
View > Fonts	Allows you to modify the font parameters for a specific host profile.
About TelnetCE...	Displays information about the TelnetCE Client application, the Symbol device, and the radio card on the mobile device.
Exit	Terminates the TelnetCE Client. All active Telnet sessions are also terminated.

Appendix A: Using Microsoft ActiveSync

This section provides information about creating Microsoft ActiveSync connections between host systems and mobile devices.

Before you can deploy a new version of the TelnetCE Client or configuration files for the TelnetCE Client to mobile devices, you must establish a Microsoft ActiveSync connection (partnership) between the host system (which runs the TelnetCE Client installation utility) and the mobile device.

Before you create a Microsoft ActiveSync partnership, ensure that you have the following:

- The appropriate serial cable for connecting the host system and the mobile device
- Microsoft ActiveSync 3.6 (or better) installed on the host system

Creating a partnership involves the following tasks:

1. Configuring the COM port on the mobile device with the correct protocol.
2. Free the COM port on the host system.
3. Create the partnership with the mobile device.

Selecting the Correct COM Port Protocol

The COM port on the mobile device must be configured to use the correct protocol. If you are having trouble establishing a Microsoft ActiveSync partnership with the mobile device, ensure that the COM port on the mobile device is using the correct protocol.

To configure the COM port protocol on the mobile device:

1. In the shell screen of the mobile device, double-click the **Ctl Panel** icon, which is shown in Figure A-1.

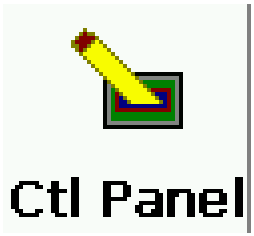

Figure A-1. *Ctl Panel Icon*

The Ctl Panel appears.

2 Locate and select **Com Settings...** in the Ctl Panel, as shown in Figure A-2.

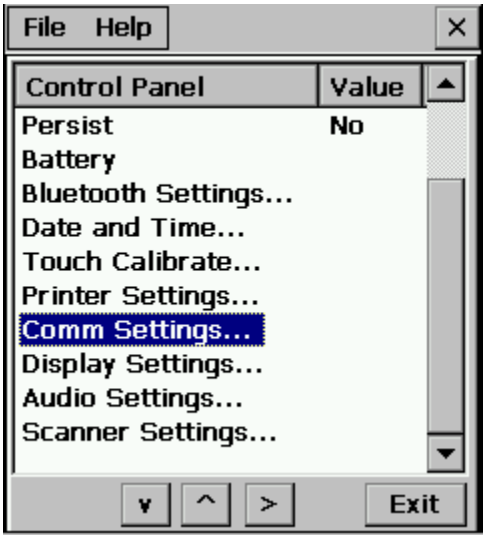

Figure A-2. *Com Settings in the Ctl Panel*

3 Double-click **Comm Settings...**.

The Ctl Panel displays the parameters for the communication port on the mobile device.

4 Double-click **Port** until it the correct value for communications (`Serial1 @ 115200`) with the mobile device is selected, as shown in Figure A-3.

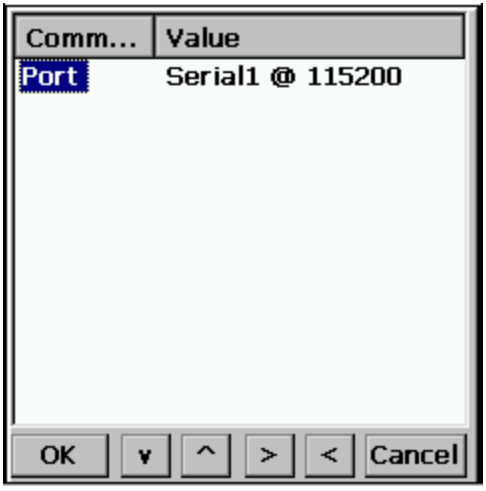

Figure A-3. *Selecting the COM Port Settings*

5 Click `OK`.

6 Access the Ctl Panel **File** menu.

7 Select `Exit`.

The Ctl Panel closes.

Freeing a COM Port

Applications, including Microsoft ActiveSync, contend for "ownership" or exclusive use of the COM ports on the host system. Before you attempt to create a partnership, ensure that no other applications are using the COM port through which you will establish the partnership with the mobile device.

For example, if you have installed Avalanche Manager on the host system and have used the Manager to perform serial updates on the mobile device, then the Manager may have exclusive control of the COM ports on the host system. To free the COM port, access the Services service on the host system and stop the Wavelink Avalanche Manager service.

Creating a Partnership

Before you can install the Enabler on the mobile device, you must create a Microsoft ActiveSync partnership between the host system and the mobile device.

To create a partnership:

1 On the host system, launch Microsoft ActiveSync.

2 Connect the host system to the mobile device with the correct serial cable.

The *New Partnership* dialog box appears, as shown in Figure A-4.

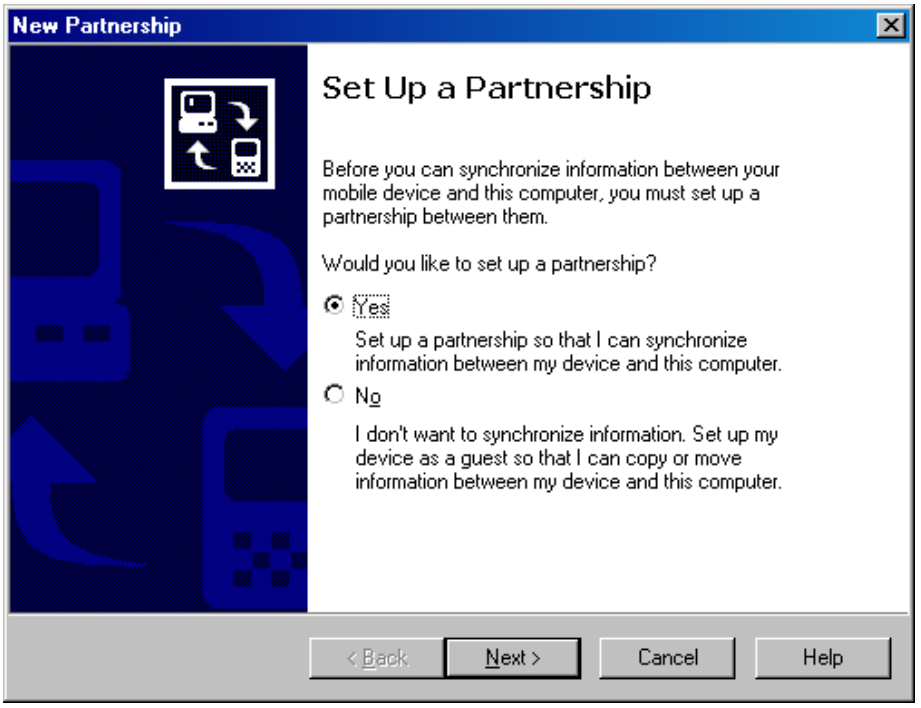

Figure A-4. *New Partnership Dialog Box*

3 Select the **Standard partnership** option button.

4 Click `Next`.

The *New Partnership* dialog box asks you to specify the number of partnerships, as shown in Figure A-5.

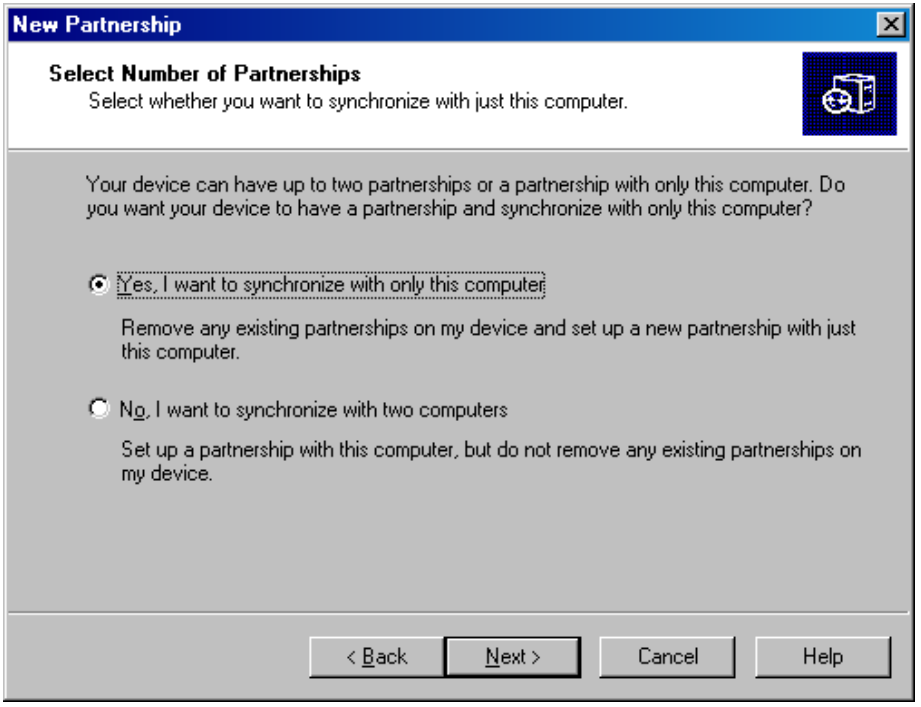

Figure A-5. *Select the Number of Partnerships*

5 In the *New Partnership* dialog box, determine the number of partnerships the mobile device will have:

- If you want the mobile device to establish a partnership only with the host system to which it is currently connected, then select the **Yes, I want to synchronize with only this computer** option button
- If you want the mobile device to establish or retain a partnership with another host system, then select the **No, I want to synchronize with two computers** option button.

6 Click `Next`.

The *New Partnership* dialog box asks you to specify the synchronization settings, as shown in Figure A-6.

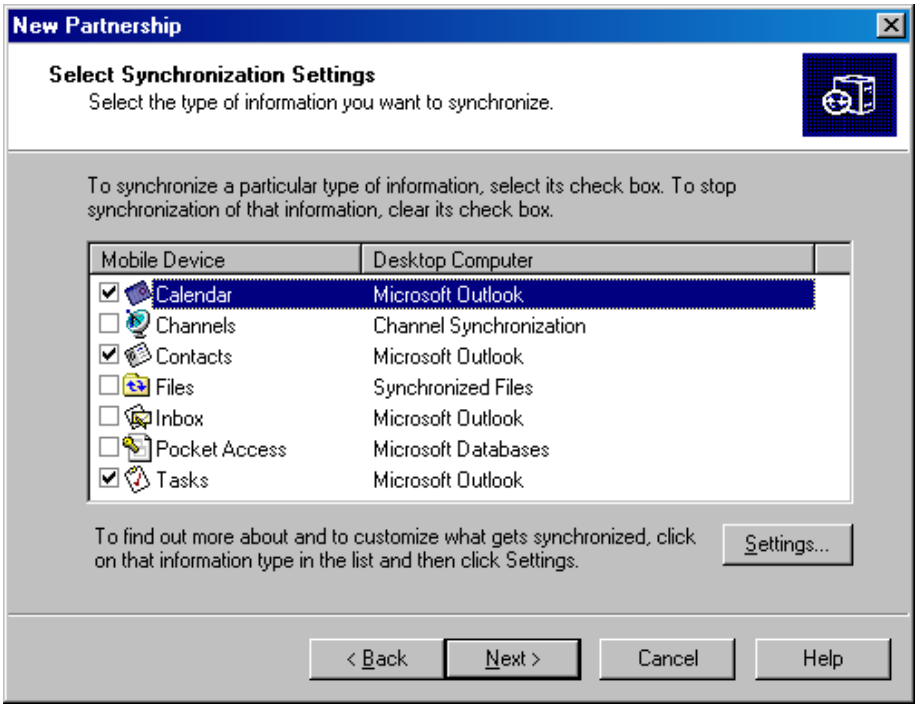

Figure A-6. *Select the Synchronization Settings*

7 Disable all of the check boxes in the *New Partnership* dialog box.

8 Click `Next`.

The *Setup Complete* dialog box appears.

9 Click `Finish`.

Microsoft ActiveSync indicates that you are connected to the mobile device, as shown in Figure A-7.

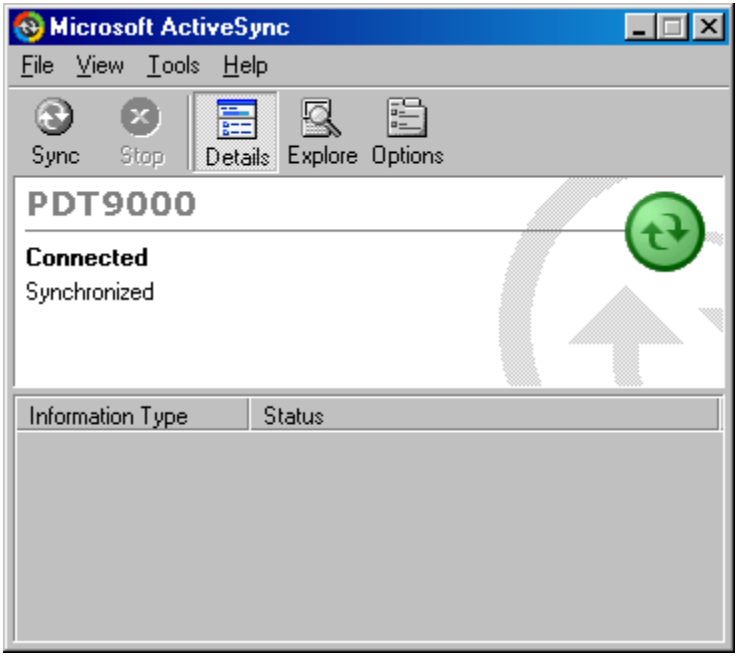

Figure A-7. *Microsoft ActiveSync Connected to Mobile Device*

Appendix C: Emulation Parameters

This section contains information about the TelnetCE Client emulation parameters that you can modify using Configuration Manager, including descriptions and possible values for each parameter.

This section is divided into the following sub-sections:

- COM port parameters
- 5250/3270 Emulation parameters
- Emulation parameters, including common, display, keyboard, sound, and printing
- VT and HP Emulation parameters
- Magnetic Stripe Reader parameters
- Scanner parameters

COM Port Parameters

Use the COM port parameters in Configuration Manager to modify the settings for the COM port of the mobile device.

The following list describes the COM port parameters that appear in Configuration Manager:

Com Port Baud Rate The baud rate of the COM port on the mobile device.

Possible values: 1200
2400
4800
9600
19200
38400

Default value: 9600

Com Port Block Data Specifies whether data should be held until the Com Port Data Timeout is reached before adding the block of data to the keyboard buffer.

Possible values: Yes
No

Default value: No

Com Port Data Bits The number of data bits that the COM port on the mobile device uses.

Possible values: 7
8

Default value: 8

Com Port Data End Char Select the end character that indicates that data preceding this character (and following the start character) should be entered into the keyboard buffer.

Possible values: 0 - 255

Default value: 3

Com Port Data Entry Mode

Specifies how data sent through the COM port on the mobile device is entered. If you select "keyboard", each byte is entered as if it came through the keyboard. For 5250 emulation, there is an option to tag a field with an identifier in combination with setting the entry mode to Com Entry Field. With both of these set, data is only entered into the field with the data identifier and is follwed with a field exit.

Possible values: keyboard
Com Entry Field

Default value: keyboard

Com Port Data Start Char

Specifies the start character to indicate that the data that follows this character should be entered into the keyboard buffer.

Possible values: 0 - 255 (decimal value)
0 - FF (hex value)
one alpha character

Default value: 2

Com Port Data Terminator

Specifies the data terminator. You should only add the terminator when using the start/end character to block the data or when the Com Port Data Block is set to "Yes". To add a terminator, enter the four hex-digit scan code of the key to be added after the COM data is entered. To find the scan code of the desired key, use the diagnostics menu and select "Keyboard Test". Make sure you are connected to the host with the desired emulation type, since the key values actually change for the emulation type. Press the desired key to display the key's scan code.

Example value: 3B00 (for F1)

Default value: -

Com Port Data Timeout

Specifies the amount of time (in milliseconds) that the terminal should wait for the next character form the COM port, before the mobile device either descards the data it has received so far (if you are using start and stop characters) or sending the data to the host (if you are blocking data).

Possible values: 0 - 3000 (milliseconds)

Default: 50

Com Port Flow Control

Specifies the type of flow control the COM port on the mobile device uses.

Possible values: Software
Hardware
None

Default value: None

Com Port for IO

The COM port on the mobile device that is used for input/output (IO).

Possible values: 1
2

Default value: 1

Com Port IO Screen ID (5250/3270 Only)

Specifies the screen identifier for the block data sent out of the COM port. The identifier needs to be found at the row and columns spcified in the Com Port IO Screen Row and Com Port IO Screen ID Col parameters. The data is followed by a colon and a second instance of the screen identifier.

For example: OUTCOM:EXAMPLE:OUTCOM

Possible values: Up to 10 alpha-numeric characters

Default value: OUTCOM

Com Port IO Screen ID Col (5250/3270 Only)

Specifies the column on the display screen where the Com Port IO Screen ID will be found.

Possible values: 1 - 80

Default value: 1

Com Port IO Screen ID Row (5250/3270 Only)

Specifies the row on the display screen where the Com Port IO Screen ID will be found.

Possible values: 1 - 24

Default value: 3

Com Port Parity

Select the parity that the COM port on the mobile device uses.

Possible values: None
Odd
Even
Space
Mark

Default value: None

Com Port Parity Mask

Specifies the mark for the COM port parity. A mask can be applied to each bye received through the COM port. Setting the mask to FF will prevent the data from being modified.

Possible values: 0 - 255 (decimal)
0 - FF (hex)

Default value: FF

Com Port Stop Bits

Specifies the number of stop bits the COM port on the mobile device uses.

Possible values: 1
2

Default value: 1

Com Port Translate IO

Indicates whether data passing through the COM port is translated from a two-digit hex value to a single byte that contains the value of the two hex digits. If you select "Yes", data received from the COM port will also be translated from a single value to a two-digit hex value before it enter through the keyboard buffer.

Possible values: Yes
No

Default value: No

Use Com Input/Output

Specifies whether the COM port can be used for data input/output. Selecting "auto" enables the COM port for data entry when the terminal is in a cradle or attached to a charger.

Possible values: Yes
No
Auto

Default value: No

Use Com Start/End Characters

Specifies whether start and end characters are used. Only data between the start and end characters will be entered into the keyboard buffer.

Possible values: Yes
No

Default value: No

Emulation - 3270 Parameters

Use the 3270 emulation parameters in Configuration Manager to configure parameters that are specific to 3270-type emulation.

The following list describes the 3270 emulation parameters that you can modify with Configuration Manager:

Clear Field On Scans Specifies whether the mobile device erases the contnents of the current entry field before filling it with scanned data.

Possible values: Yes
No

Default value: Yes

Tab on Scans Specifies whether the mobile device uses a tab after each scan.

Possible values: Yes
No

Default value: No

Underscore 3270 Fields Specifies whether entry fields are delineated with an underscore.

Possible values: Yes
No

Default value: No

Use Alt 3270 System Request

Specifies whether TN3270 System Requests are coded as Test-Requests. (By default, TN3270 System Requests are coded as Interrupt-Processes.)

Possible values: Yes
No

Default value: No

Use LXE Coop Rules

Specifies whether emulation allows the 3270 entry field to be an auto-send field (available as an LXE cooperative programming rule). 3270 emulation does not natively support this option.

Possible values: Yes
No

Default value: No

Emulation - 5250 Parameters

Use the 5250 emulation parameters in Configuration Manager to set parameters that are related to 5250-type emulation.

The following list describes the 5250 parameters that you can modify with Configuration Manager:

Enter Key Swapped

Specifies whether the ENTER key works as the AS400 Enter key and the Field Exit key is moved to the previous Enter key location. By default, the Enter key on mobile devices is set up as the Field Exit key.

Possible values: Yes
No

Default value: No

Scan In Fields Only

Specifies whether the scanner stays even when the cursor is not on an input field. Note that this will affect the scanning of AID keys when the curosr is not on an input field.

Possible values: Enable
Disable

Default value: Disable

Emulation - 5250 and 3270 - Common

Use the common 5250 and 3270 emulation parameters in Configuration Manager to set parameters that are common to 5250- and 3270-type emulation.

The following list describes the common 5250/3270 emulation parameters that you can modify with Configuration Manager:

Auto Reset Dealy

Specifies the number of seconds to wait before the mobile device sends a reset to the host when the Reset Required parameter (see below) is set to Never.

Possible values: 0 - 5 (seconds)

Default value: 2

Disable Data IDs

Specifies whether to disable data identifiers. (You may want to disable data identifiers for emulation types that have screens that are not designed for use with data identifiers, but may mistakenly process them as such.

Possible values: Yes
No

Default value: No

Display Truncate Message

Specifies whether to display a message that lets the user at the mobile device know that the bar code has been truncated. (You only need to enable this value if you have set the Oversize Scanning parameters to "Truncate".)

Possible values: Yes
No

Default value: Yes

Enable Free Cursor

Specifies whether the user is allowed to enter "free cursor" mode, which lets the user move to protected areas of the screen. Unless you are certain that none of the host screens have a use for this feature, set the parameter to "Yes".

Possible values: Yes
No

Default value: Yes

Host Message Line

Specifies the screen row that contains the host messages. (Set the value to "0" to have the mobile device ignore host messages.)

Possible values: 0 - 24

Default value : 24

Oversize Scanning

Specifies how scanned data that is longer than the entry field is managed.

Possible values:

Do Not Allow
Split (between multiple entry fields)
Truncate (to match the length of the field)

Default value:

Do Not Allow

Print End Identifier

Specifies the identifier for the print end.

Possible values: Up to 20 alpha-numeric characters

Default value: PRN

Print Escape Character

Specifies an escape character that is used to embed special valuses within a print screen.

Possible values:

0 - 255 (decimal)
0 - FF (hex)
one alpha-numeric character

Default value:

5C (hex), 92 (decimal), or \(character)

Print Identifier Column Specifies the location (column) of the print start identifier.

Possible values: 1 - 80

Default value: 1

Print Identifier Row Specifies the location (row) of the print start identifier.

Possible values: 1 - 24

Default value: 3

Print Start Identifier Specifies the identifier for the print start.

Possible values: Up to 20 alpha-numeric characters

Default value: PRN:

Reset Required Specifies when a reset is required. The reset occurs after the number of seconds specified in the Auto Reset Delay parameter.

Possible values: On Errors
Never
On All Messages

Default value: On Errors

Retry Workstation ID Specifies whether to append a letter (starting with A) to the end of a workstation ID that is already in use on the host.

Possible values: Yes
No

Default value: No

Tab on Scans

Specifies whether the mobile device moves to the next field after a scan.

Possible values: Yes
No

Default value: Yes

Use Enter as Reset

Specifies whether the Enter key can be configured to alos work as the Reset key when the mobile device is in an error state.

Possible values: Yes
No

Default value: No

Emulation - Common

Use the common emulation parameters in Configuration Manager to modify parameters that are common to all types of emulation (VT, HP, and 5250/3270).

The following list contains descriptions of the common emulation parameters that Configuration Manager allows you to modify:

Auto Connect Session

Specifies whether the mobile device attempts to reconnect after a connection has closed.

Possible values: Yes
No

Default value: No

Caps Lock

Specifies the initial keyboard mode. If you specify "Default", the keyboard will default to the default mode for the emulation type. 5250/3270 emulation defaults to Caps Lock On. VT/HP emulation defaults to Caps Lock Off.

Possible values: On
Off

Default value: Default

Key Macros (Spectrum 24 only)

Specifies a key macro so that a key sequence is ramped to perform a function other than its default function. A scan code is produced when pressing a key sequence on the mobile device. The macro feature involves changing the meaning of a key's scan code to represent another scan code, a sequence of text, or a combination of scan codes and text.

Use the following syntax for the parameter:

```
CODE:[key sequence | \CODE] [..]
```

Note: Scan codes are not recursive when used in a definition.

Example:

```
0008:\0020 (backspace become space)
0020:\0008 (space becomes backsapce)
```

License Server Address

Specifies the host name or the IP address of a license server. The mobile device will attempt to contact the license server and obtain a license when you attempt to connect to a host.

Possible values: IP address or host name

Default value: -

Number of Sessions

Specifies the number of concurrent Telnet sessions the mobile device can support. (NCU versions support only 1 session.)

Possible values: 1 - 4

Default value: 1

Program Exit Key

Specifies the scan code (in hex) to exit the program. If you specify "Default", then there is no key to exit the program.

Possible values: Four-digit hex value

Default value: -

Program Exit Password

Specifies the password the user must supply when the Program Exit Key is pressed. If you leave this parameter blank, the value "default" is displayed and no password is required.

Possible values: Up to 10 alpha-numeric characters

Default value: Default

Proxy ARP (11 Mbps mobile units only)

Specifies if the mobile device uses proxy ARP, which allows an AP to answer ARP request for mobile devices. This option is only for 11 Mbps modile units with version 2.24-09 (or newer) of the radio driver.

Possible values: Enable
Disable

Default value: Disable

RF Config Password

Specifies the password the user at the mobile device must supply to access and modify the RF parameters of the mobile device.

Possible values: Up to 20 alpha-numeric characters

Default value: System

Signature ID Column (5250/3270 Only)

Specifies the location (column) of the signature capture identifier.

Possible values: 0 - 79 (zero-based)
Default

Default value: Default (disables signature capture)

Signature ID Row

Specifies the location (row) of the signature capture identifier.

Possible values: 0 - 23 (zero-based)
Default

Default value: Default (disables signature capture)

Signature Identifier

Specifies the data to identify a signature capture.

Possible values: any string

Default value: -

Sleep Timeout

Specifies the amount of time (in minutes) the mobile device remains idle before it enters sleep mode to preserve batter power. Use the value "0" to keep the mobile device on until the user turns it off.

Possible values: 0 - 255 (minutes)

Default value: 2

TCP Keep Alive

Specifies whether the mobile device periodically pings the host to which it is connected.

Possible values: Enable
Disable

Default value: Enable

Term Config Password

Specifies the password that the user at the mobile device must supply to access and modify emulation parameters and host profiles.

Possible values: Up to 20 alpha-numeric characters

Default value: Config

Use Timing Mark Heartbeat

Specifies whether the mobile device sends a timing mark to the host to verify if the session is still active.

Possible values: Yes
No

Default value: Yes

Emulation - Display

Use the emulation display parameters in Configuration Manager to modify display parameters on the mobile device.

The following list contains a description of the emulation display parameters that Configuration Manager allows you to modify:

Backlight Time

Specifies the amount of time (in seconds) the backlight remains on after the user at the mobile device presses a key. Specify "0" to turn off the backlight.

Possible values: 0 - 99 (seconds)

Default value: 5

Cursor Column Offset

Specifies the position on the display screen where the cursor will be located when the screen is reposition. This value is ignored if the mobile device is operating in fixed or tile mode. If you set this parameter to "Default", then the cursor column is positioned five-eighths of the way from the left edge of the display screen.

Possible values: 0 to 1 less than the screen width
Default

Default value: -

Cursor Row Offset

Specifies the position on the disply screen wher ethe cursor will be located when the screen is reposition. If the mobile device is operating in fixed or tile mode, the value in this parameter is ignored. If the value is set to "Default", then the cursor row is positioned three-fourths of the way down the screen.

Possible values: 0 to 1 less than the screen height
Default

Default value: -

Cursor Type (1x40/3x40/6x40/4040/5040 mobile units only)

Select the type of cursor the mobile device displays.

Possible values: Default
None
Underline
Block
Software
Alternating

Default value: Default

Double High Font

Specifies whether the display font on the mobile device is in double-high mode.

Possible values: Yes
No

Default value: No

Double Wide Font

Specifies whether the display font on the mobile device is in double-wide mode.

Possible values: Yes
No

Default value: No

Emulation Font Name

Specifies the font the mobile device uses for emulation.

Possible values: any font name

Default value: Standard

Enable Scrolling

Specifies whether the user at the mobile device is allowed to enter view mode to scroll around the virtual display. You should set this parameter to "Yes" unless all applications on the mobile device are written to keep display data within the area around the entry fields.

Possible values: Yes
No

Default value: Yes

Fixed Screen Left Edge

If you have enabled Fixed Screen Mode on the mobile device, this parameter specifies the left-edge column of the fixed screen.

Possible values: 1 - 80

Default value: 1

Fixed Screen Mode

Specifies whether Fixed Screen Mode is enabled. When you enable Fixed Screen Mode, the same portion of the display screen is shown without regard to where the cursor is on the virtual display screen. Users will not be able to see entry fields that are beyond the fixed display area.

Possible values: Enable
Disable

Default value: Disable

Fixed Screen Top Edge

If you have enabled Fixed Screen Mode, this parameter specifies the top row of the fixed screen.

Possible values: 1 - 24

Default value: 1

Font Type (Spt 1740 only)

The font type for emulation on the Spt 1740.

Possible values: Default
System
Emualtion

Default value: Default

Horizontal Scroll

If you have enabled View Mode, this parameter specifies the number of characters to move (scroll horizontally). The default value, "Displaysize", is the current screen size. See Tiling for more information.

Possible values: 3 - 80
DisplaySize

Default value: DisplaySize

Left Edge Cursor Zone

Specifies how close the cursor can get ot the left edge of the screen before the screen is scrolled. The value is the number of characters. When the cursor advances outside of the specified cursor zone on the display of the mobile device, the display is reposition over the full-screen display so that the cursor is placed near the center of the display screen.

Possible values: 1 - 10

Default value: 4

Preferred Offset Left Edge

Specifies the column of the Preferred Screen Offset.

Possible values: 1 - 80

Default value: 1

Preferred Offset Top Edge

Specifies the row of the Preferred Screen Offset.

Possible values: 1 - 24

Default value: 1

Preferred Screen Offset

Indicates whether to reposition the physical display to the location specified in the Preferred Offset Top Edge and Preferred Offset Left Edge parameters whenever the cursor is located in the preferred offset.

Possible values: Enable
Disable

Default value: Disable

Right Edge Cursor Zone Specifies how close the cursor can get to the right edge of the screen before the screen is scrolled. The value is in character positions. When the cursor advances outside the specified cursor zone on the diplay of the mobile device, the display is reposition over the full-screen display so that the cursor is near the center of the display screen.

Possible values: 1 - 10

Default value: 1

System Font Specifies the system font on the mobile device.

Possible values: any font name

Default value: Standard

Tiling Height Specifies the height of the display tile of a mobile device. If the height is greater than the display height on the mobile device, then this parameter will default back to the actual display height of the mobile device (DisplaySize).

Possible values: 1 - 24
DisplaySize

Default value: DisplaySize

Tiling Horizontal

Specifies the type of horizontal tiling the mobile device uses. Tiling refers to dividing the logical display into adjacent blocks thata re referred to as tiles. When a screen is displayed, the physical display is located directly over the tile that contains the cursor. In areas of of the screen that are not tiled, the physical display will be roughly centered around the cursor, without regard to boundaries between tiles. Tiling is configured separately for horizontal and vertical components of the display.

Possible values: None (centered around cursor)
Left Only (centered on leftmost column)
All (always tile horizontally)

Default value: Left Only

Tiling Vertical

Specifies the type of vertical tiling the mobile device uses. See Tiling Horizontal for information about Tiling.

Possible values: None (positioned around cursor)
TopOnly (positioned at uppermost row)
All (always tile vertically)

Default value: TopOnly

Tiling Width

Specifies the width of a mobile device display tile.

Possible values: 1 - 24
DisplaySize

Default value: DisplaySize

Vertical Scroll

Specifies the number of rows to move when the in screen mode.

Possible values: 3 - 24
DisplaySize

Default value: DisplaySize

Viewing Contrast

Specifies the viewing contrast for the mobile device. If you specify "Default", then the most common setting for the mobile device is selected.

Possible values: 1 - 31 (for 7000-series devices)
0 - 7 (for other devices)

Note: The lowest setting is the lightest.

Default value: Default

WinCE Font Clip Botton (WinCE Only)

Specifies how much of the white space (in font points) should be cropped from the bottom of the font.

Possible values: any number of font points

Default value: 0

WinCE Font Clip Left (WinCE Only)

Specifies how much of the white space (in font points) should be cropped from the left of the font.

Possible values: any number of font points

Default value: 0

WinCE Font Clip Right (WinCE Only)

Specifies how much of the white space (in font points) should be cropped from the right of the font.

Possible values: any number of font points

Default value: 0

WinCE Font Clip Top (WinCE Only)

Specifies how much of the white space (in font points) should be cropped from the top of the font.

Possible values: any number of font points

Default value: 0

WinCE Font Name (WinCE Only)

Specifies the font name WinCE OS-based mobile devices use for emulation. The font that you specify must be installed on the mobile device.

Possible values: Any font name
Default

Default value: Default

WinCE Font Size (WinCE Only)

Specifies the font size (in pts) of the font that WinCE OS-based mobile devices use for emulation.

Possible values: 6 - 72

Default value: 12

WinCE Font Weight (WinCE Only)

Specifies the weight of the font that WinCE OS-based mobile devices use for emulation.

Possible values: Thin
Light
Normal
Medium
Heavy
Bold

Default value: Normal

WinCE Force Black and White (WinCE Only)

Specifies whether to force black-and-white-only display (white background, black text) for emulation on WinCE OS-based mobile devices.

Possible values: Yes
No

Default value: No

WinCE Hide Horizontal Scroll Bar (WinCE Only)

Specifies whether to hide the horizontal scrollbar in the TelnetCE Client on WinCE OS-based mobile devices.

Possible values: Yes
No

Default value: No

WinCE Hide Menu (WinCE Only)

Specifies whether to hide the TelnetCE Client menu menu on WinCE OS-based mobile devices.

Possible values: Yes
No

Default value: No

WinCE Hide Start Menu (WinCE Only)

Specifies whether to hide the Windows Start menu on WinCE OS-based mobile devices.

Possible values: Yes
No

Default value: No

WinCE Hide Vertical Scroll Bar (WinCE Only)

Specifies whether to hide the vertical scrollbar in the TelnetCE Client on WinCE OS-based mobile devices.

Possible values: Yes
No

Default value: No

WinCE Menu Toggle Key (WinCE Only)

Specifies the key that shows/hides the Windows Start menu on WinCE OS-based mobile devices. Use the hex value of the key.

Example: 0x79 (F10 key)

Possible values: any hex value

Default value: -

Emulation - Keyboard

Use the emulation keyboard parameters in Configuration Manager to set the keyboard functions on the mobile device.

The following list describes the keyboard parameters that you can modify with Configuration Manager:

Alpha Keyboard Name (5250 Only / Virtual Keyboard Only)

You only need to configure this parameter if you have specified "Yes" in the Shift Keyboard To Field Type parameter. This parameter specifies the name of the keyboard that should become active when the cursor enters an alpha-only field.

Possible values: any keyboard name

Default value: CapsLock

App Key 1

Specifies the function of the first application key on the mobile device.

Possible values: PRINT
HELP
HOME
ATTENTION
ROLLUP
ROLLDOWN
CLEAR
ENTER
FIELDEXIT
RESET
F1 - F24
SPT_UP_KEY
SPT_DOWN_KEY
SPT_FUNCTION_kEY
SPT_KEY_UNASSIGNED
SPT_SEND_KEY

Default value: SPT_FUNCTION_KEY

App Key 2

Specifies the function of the second application key on the mobile device.

Possible values: PRINT
HELP
HOME
ATTENTION
ROLLUP
ROLLDOWN
CLEAR
ENTER
FIELDEXIT
RESET
F1 - F24
SPT_UP_KEY
SPT_DOWN_KEY
SPT_FUNCTION_kEY
SPT_KEY_UNASSIGNED
SPT_SEND_KEY

Default value: SPT_KEY_UNASSIGNED

App Key 3

Specifies the function of the third application key on the mobile device.

Possible values: PRINT
HELP
HOME
ATTENTION
ROLLUP
ROLLDOWN
CLEAR
ENTER
FIELDEXIT
RESET
F1 - F24
SPT_UP_KEY
SPT_DOWN_KEY
SPT_FUNCTION_kEY
SPT_KEY_UNASSIGNED
SPT_SEND_KEY

Default value: RESET

App Key 4

Specifies the function of the fourth application key on the mobile device.

Possible values: PRINT
HELP
HOME
ATTENTION
ROLLUP
ROLLDOWN
CLEAR
ENTER
FIELDEXIT
RESET
F1 - F24
SPT_UP_KEY
SPT_DOWN_KEY
SPT_FUNCTION_kEY
SPT_KEY_UNASSIGNED
SPT_SEND_KEY

Default value: SPT_SEND_KEY

Comma Period Swapped

Specifies whether the period key is swapped with the comma key. (In some countries, commas are used more often than periods.)

Possible values: Yes
No

Default value: No

Keyboard Identifier Column (5250/3270 Virtual Keyboard Only)

Specifies the location (column) of the string on the host to indicate that a virtual keyboard command follows.

Possible values: 1 - 80 (column number)

Default value: 1

Keyboard Identifier Row (5250/3270 Virtual Keybaord Only)

Specifies the location (row) of the string on the host to indicate that a virtual keyboard command follows.

Possible values: 1 - 24 (row number)

Default value: 3

Keyboard Identifier String

Specifies the string on the host to indicate that a virtual keyboard command follows.

Possible values: up to 10 alpha-numeric characters

Default value: KBD

Numeric Keyboard Name

You only need to configure this parameter if you have specified "Yes" in the Shift Keyboard to Field Type parameter. This parameter specifies the keyboard that becomes active when the cursor enters a numeric-only field.

Possible values: any keyboard name

Default value: NUM

Permanent Keyboard Name (SPT 1740 Only)

Specifies the name of the keyboard that will always be displayed. (The keyboard will not be displayed if another keyboard is viewable.)

Possible vlaues: any keyboard name

Default value: -

Shift Keyboard To Field Type (5250/3270 Virtual Keyboard Only)

Specifies whether the keyboard state should be modified to match the new field that is being entered (alpha or numeric).

Possible values: Yes
No

Default value: Yes

SPT Calc Key (SPT Only)

Specifies the configuration of the SPT CALC hardware key.

Possible values: SPT_CALC_KEY
SPT_DOWN_KEY
SPT_UP_KEY
SPT_KEY_UNASSIGNED
SPT_FUNCTION_KEY
SPT_SEND_KEY
RESET
FIELDEXIT
F1 - F24
ROLLDOWN
ROLLUP
ATTENTION
HELP
HOME
CLEAR
PRINT
ENTER

Default value: SPT_CALC_KEY

SPT Down Key (SPT Only)

Specifies the configuration of the SPT DOWN hardware key.

Possible values: SPT_CALC_KEY
SPT_DOWN_KEY
SPT_UP_KEY
SPT_KEY_UNASSIGNED
SPT_FUNCTION_KEY
SPT_SEND_KEY
RESET
FIELDEXIT
F1 - F24
ROLLDOWN
ROLLUP
ATTENTION
HELP
HOME
CLEAR
PRINT
ENTER

Default value: SPT_DOWN_KEY

SPT Find Key (SPT Only)

Specifies the configuration of the SPT FIND hardware key.

Possible values: SPT_FIND_KEY
SPT_CALC_KEY
SPT_DOWN_KEY
SPT_UP_KEY
SPT_KEY_UNASSIGNED
SPT_FUNCTION_KEY
SPT_SEND_KEY
RESET
FIELDEXIT
F1 - F24
ROLLDOWN
ROLLUP
ATTENTION
HELP
HOME
CLEAR
PRINT
ENTER

Default value: SPT_FIND_KEY

SPT Up Key (SPT Only)

Specifies the configuration of the SPT UP hardware key.

Possible values: SPT_CALC_KEY
SPT_DOWN_KEY
SPT_UP_KEY
SPT_KEY_UNASSIGNED
SPT_FUNCTION_KEY
SPT_SEND_KEY
RESET
FIELDEXIT
F1 - F24
ROLLDOWN
ROLLUP
ATTENTION
HELP
hOME
CLEAR
PRINT
ENTER

Default value: SPT_UP_KEY

Startup Keybaord (WinCE Only)

Specifies which keyboard you want to appear when the TelnetCE Client launches on WinCE OS-based mobile devices.

Possible values: Numeric
Emulation
None

Default value: None

Sticky Keys (WinCE Only)

Specifies whether multi-key sequences can be performed one key at a time on WinCE OS-based mobile devices.

Possible values: Yes
No

Default value: Yes

WinCE Keyboard Toggle Key (WinCE Only)

Specifies the key that allows users at WinCE mobile devices to toggle between showing and hiding the popup keyboard. The key must be a Windows hex value. You can also preface the hex code with a modifier:

- Use <A> to speciify the Alt key.
- Use <C> to specify the Ctrl key.
- Use <S> to specify the Shift key.

Example: <A><0x79> specifies [Alt] <F10>.

Default value: -

WSS1000 Help Key (WSS1010/1040 Only)

Specifies the configuration of the Help key on WSS1010/1040 mobile devices.

Possible values: F1 - F24
Attn
Clear
Enter
Field Exit
Help
Home
Print
Reset
Roll-down
Roll-up

Default value: F1

WSS1000 Menu Key (WSS1010/1040 Only)

Specifies the configuration of the Menu key on WSS1010/1040 mobile devices.

Possible values: F1 - F24
Attn
Clear
Enter
Field Exit
Help
Home
Print
Reset
Roll-down
Roll-up

Default value: F3

Emulation - Printing

Use the emulation printing parameters in Configuration Manager to set printing on the mobile device.

The following list describes the printing parameters that Configuration Manager allows you to modify:

Print Nulls to Spaces (5250/3270 Only)

Specifies whether nulls are converted to and displayed as spaces. (Some applications display nulls instead of spaces.)

Possible values: Yes
No

Default value: No

Print Wakeup (WinCE Only)

Specifies the string that WinCE OS-based mobile devices should send to wake up the printer. Data should be in hex format inclosed in '< >' or '( )'.

Example: <00> <00> sends two nulls to the printer.

Default value: -

Printer Baud Rate (WinCE Only)

Specifies the baud rate of the COM port that connects the WinCE OS-based mobile device to the printer.

Possible values: 1200
2400
4800
9600
14400
19200
38400
57600
115200

Default value: 9600

Printer Data Bits (WinCE Only)

Specifies the data bits used by the COM port that connects the WinCE OS-based mobile device to the printer.

Possible values: 7
8

Default value: 8

Printer Flow Control (WinCE Only)

Specifies the type of flow control used by the COM port that connects the WinCE OS-based mobile device to the printer.

Possible values: Hardware
Software (XON/XOFF)
None

Default value: None

Printer Parity (WinCE Only)

Specifies the type of parity used by the COM port that connects the WinCE mobile device to the printer.

Possible values: Even
Odd
Mark
Space
None

Default value: None

Printer Port (WinCE Only)

Specifies the COM port that connects the WinCE mobile device to the printer.

Possible values: COM1
COM2
COM7

Default value: COM1

Printer Protocol

Specifies the printer protocol to send data to the printer.

Possible values: Normal (serial)
TCPIP (IP printing)

Default value: Normal

Printer Stop Bits (WinCE Only)

Specifies the stop bits used by the COM port that connects the WinCE mobile device to the printer.

Possible values: 1
2

Default value: 1

Printer Type

Specifies the type of printer that is connected to the mobile device.

Possible values: PS1000
PS1001
PS104
Line Printer (generic line printer)
Dumb (no line monitoring)
Comtec
Pathfinder
Rascal
Renegade
Cotec PS
Code Courier
Comtec RF
UserDefined

Default value: PS1000

Printer Option

Specifies whether a reprint prompt is displayed after a barcode is printed.

Possible values: Yes
No

Default value: Yes

RF Printer Retries (Comtec RF Printers Only)

Specifies the number of RF retries for the Comtec RF printer.

Possible values: 1 - 5

Default value: 3

Emulation - Sound

Use the emulation sound parameters in Configuration Manager to configure the TelnetCE Client sounds on the mobile device.

The following list describes the sound parameters that you can modify with Configuration Manager:

Beep Delay

Specifies the amount of time (in milliseconds) between additional message beeps.

Possible values: 0 - 1000 (milliseconds)

Default value: 75

Beep Duration

Specifies the duration (in milliseconds) of beeps on the mobile device.

Possible values: 0 - 1000 (milliseconds)

Default value: 100

Beep Tone

Specifies the tone (in Hz) of beeps on the mobile device.

Possible values: 0 - 1000 (Hz)

Default value: 1000

Beeper Volume

Specifies the volume of the the beeper on the mobile device.

Possible values: High
Low

Default value: High

Beeps with Message

Specifies the number of additional beeps when a message is displayed on the message line.

Possible values: 0 - 9

Default value: 0

External Beeper

Specifies whether to offer support for the optional external beeper.

Possible values: Yes
No

Default value: No

Incoming Screen Beep (5250/3270 Only)

Specifies whether a beep sounds when a new screen arrives from the host.

Possible values: Enable
Disable

Default value: Enable

Keyclicks

Specifies whether the mobile device beeps when a user at the mobile device presses a key.

Possible values: Yes
No

Default value: No

Silent Mode

Specifies whether the mobile device should operate in silent mode. When the mobile device is in silent mode, it does not beep.

Possible values: Yes
No

Default value: No

WinCE Error Beep (WinCE Only)

Specifies the sound WinCE mobile devices play when they receive an error message. The sound must be a WAV file (.wav file extension) that is installed on the mobile device.

Possible values: WAV file name

Default value: -

WinCE Message Beep (WinCE Only)

Specifies the sound WinCE mobile devices play when they receive a message. The sound must be a WAV file that is installed on the mobile device.

Possible values: WAV file name

Default value: -

Emulation - VT and HP - Common

Use the common VT and HP parameters in the Configuration Manager to modify emulation parameters that are common to VT- and HP-type emulation.

The following list describes the common VT and HP parameters that you can modify with the Configuration Manager:

Alternate Escape Character

Define the alternate Esc character to look for when parsing escape sequences.

Possible values: Up to three alpha-numeric characters

Default value: 1B

Auto-login

Currently unavailable. Configure auto-login in host profiles.

Break Key

Specifies whether the Break key interrupts the connection btetween the mobile device and the host.

Possible values: Enable
Disable

Default value: Disable

Disable Scanner

Specifies whether the scanner on mobile devices is disabled after scans.

Possible values: Never
Always
Only 1D
Only 2d

Default value: Never

External Beeper on Error Beep

Specifies whether to use the external beeper for error beeps.

Possible values: Yes
No

Default value: No

Handle Telxon Sequences

Specifies whether to support Telxon escape sequences that hte host sends to mobile devices.

Possible values: Yes
No

Default value: No

Local Echo

Specifies whether mobile devices use local echoes to reflect data that it sends to the host.

Possible values: On
Off

Default value: Off

Map Underline

Specifies whether the underline attribute is displayed as reverse video on mobile devices. Mobile devices do not display the underline attribute.

Possible values: Yes
No

Default value: No

Remove ISO IDs

Specifies whether to remove ISO data IDs from the beginning of bar codes.

Possible values: Yes
No

Default value: No

Scan Terminator

Specifies the scan terminator that is added after all scanned data. Precede hex values for letters with a backslash (for example, \0D).

Possible values: Up to 10 alpha-numeric characters

Default value: \0D

Use FEDEX Escape Sequence

Specifies whether the FEDEX escape sequences are enabled.

Possible values: Yes
No

Default value: No

VT New Answer Back

Specifies the New Answer Back string the mobile device displays when it receives an ENQ from the host. The New Answer Back option supports the following variables:

- %m - %r (MAC address octets)
- %a - %d (IP address octets)
- %s (session number)
- %t (Terminal ID)

Default value: -

VTHP Rport Pen Position (SPT 1740 Only)

Specifies whether to send a custom escape sequence to report the row and the column where the stylus touched the screen on the mobile device. The escape sequence is sent as ES%r,cR, where r is the row and c is the column.

Possible values: Yes
No

Default value: No

VTHP Report Screen Size (SPT 1740 Only)

Specifies whether to send a custom escape sequence to report the physical screen size of the mobile device. The escape sequence is sent as ESC%r,cZ, where r is the number of rows and c is the number of columns.

Possible values: Yes
No

Default value: No

Warning Bells

Specifies whether the mobile device beeps when the host sends a warning bell.

Possible values: Yes
No

Default value: Yes

Emulation - VT and HP - HP

Use the HP emulation parameters in the Configuration Manager to set emulation parameters that are specific to HP-type emulation.

The following list describes the HP-related parameters that the Configuration Manager allows you to modify:

Auto Send

Specifies whether the mobile device automatically sends scanned data after the last entry field is scanned.

Possible values: Enable
Disable

Default value: Disable

Message Line

If you are using a message line, specify a line for the message.

Possible values: 0 - 24 (0 for no message line)

Default value: 0

Emulation - VT and HP - VT

Use the VT emulation parameters in the Configuration Manager to set emulation parameters that are specific to VT-type emulation

The following list describes the VT-related parameters that the Configuration Manager allows you to modify:

Backspace Key

Specifies the character that is send by the Backspace key.

Possible values: 08 (Backspace)
7F (Delete)

Default value: 08

Control Codes

Specifies the bit size of the control codes that the TelnetCE Client sends to the host.

Possible values: 7
8

Default value: 7

VT Copy Screen Text

Allow screen text at a given row, column, and length to be copied to a new row and column. The format of the parameter is Original Row, Original Column, New Row, New Column, Length.

Possible values: 1 - 24 (row)
1 - 80 (column)
1-80 (length)

Default value: -

VT Line Mode

Specifies whether the TelnetCE Client simulates a line mode-like behavor. Use this feature for hosts that do not support true line mode.

Possible values: On
Off

Default value: Off

VT Line Mode Clear Key

Specifies the Clear key for line mode. Use the scan code for the desired key.

Possible values: scan code

Default value: 001B

Magnetic Stripe Reader

Use the magnetic stripe reader parameters in the Configuration Manager to configure the behavior of the magnetic stripe reader on the mobile device.

The following list describes the magnetic stripe reader parameters that you can modify with the Configuration Manager:

Enable MSR

Specifies whether to enable the magnetic stripe reader function on the mobile device. (Disabling the magnetic stripe reader function minimizes CPU usage.)

Possible values: Yes
No

Default value: No

MSR Beep Success

Specifies whether the mobile device beeps after each successful read.

Possible values: Yes
No

Default vlaue: Yes

MSR Enable Read Key (5250/3270 Only)

Specifies the key that enables the magnetic stripe reader on the mobile device.

Possible values: Attn
Clear
Enter
Field Exit
Help
Home
Print
Reset
Roll-Up
Roll-Down
F1 - F24

Default value: Print

MSR Read Wait Time (5250/3270 Only)

Specifies the time (in seconds) for the magnetic stripe reader to wait for a card to be swiped after the magnetic stripe reader is enabled.

Possible values: 0 - 255

Default value: 10

MSR Track Selection

Specifies the tracks to be read.

Possible values: Any tracks
All Tracks
Track 1 only
Track 2 only
Tracks 1 & 2
Track 3 only
Tracks 1 & 3
Tracks 2 & 3

Default value: Tracks 1 & 2

Scanner - Codabar

Use the Codabar scanner emulation parameters in Configuration Manager to configure the way the TelnetCE Client handles Codabar scan codes.

The following list describes the Codabar scanner parameters that Configuration Manager allows you to modify:

Codabar Add Postamble String (Spectrum 24 Only)

Specifies the string to be added to the end of Codabar barcode data.

Possible values: Up to 20 alpha-numeric characters

Default value: -

Codabar Add Preamble String

Specifies the string to be added to the beginning of Codabar barcode data.

Possible values: Up to 20 alpha-numeric characters.

Default value: -

Codabar CLSI

Specifies whether the 14-character Codabar symbol is reformatted to remove the start and stop characters from Codabar barcode scans.

Possible values: Yes
No

Default value: No

Codabar Maxlength

Specifies the maximum length (in characters) for Codabar scans.

Possible values: 0 - 60

Default value: 0

Codabar Minlength

Specifies the minimum length (in characters) for Codabar scans.

Possible values: 0 - 30

Default value: 0

Codabar NOTIS

Specifies whether to remove the start and stop characters from Codabar scans.

Possible values: Yes
No

Default value: No

Codabar Redundancy

Specifies whether Codabar redundancy is enabled. (Rendundancy requires the mobile device to decode a barcode from two separate scans. The two scans occur with a single activation of the scanner trigger.)

Possible values: Yes
No

Default value: No

Codabar Scans Strip End Specify the number of characters to strip from the end of Codabar bar scans.

Possible values: 0 - 255

Default value: 0

Codabar Scans Strip Start Specify the number of characters to strip from the beginning of Codabar bar scans.

Possible values: 0 - 255

Default value: 0

Symbology Codabar Specifies whether the Codabar symbology is enabled on the mobile device.

Possible values: Enable
Disable

Default value: Disable

Scanner - Code11

Use the Code11 scanner emulation parameters in Configuration Manager to configure the way the TelnetCE Client handles Code11 scan codes.

The following list describes the Code11 parameters that Configuration Manager allows you to modify:

Code11 Add Postamble String Specifies the string to be added to the end of Code11 barcode data.

Possible values: Up to 20 alpha-numeric characters

Default value: -

Code11 Add Preamble String Specifies the string to be added to the beginning of Code11 barcode data.

Possible values: Up to 20 alpha-numeric characters

Default value: -

Code11 CD

Specifies the number of check-digits read with Code11 barcodes. This does not include the number of check digits in the Code11 length specification, even if the application receives a report on the number. (This option is not available on the SPT 1740).

Possible values: 0 - 3

Default value: 1

Code11 Maxlenght

Specifies the maximum length of Code11 barcodes.

Possible values: 0 - 60

Default value: 0

Code11 Minlength

Specifies the minimum length of Code11 barcodes.

Possible values: 0 - 30

Default value: 0

Code11 Redundancy

Specifies whether Code11 redundancy is enabled. (Redundancy requires the mobile device to decode a barcode from two separate scans. The two scans occur with a single activation of the scanner trigger.)

Possible values: Yes
No

Default value: No

Code11 Return CD

Specifies whether the Code11 check-digit is returned as part of the scanned data. This field has no effect on Code11 length specification; the length specification only accounts for data characters. (This feature is unavailable on the SPT 1740.)

Possible values: Yes
No

Default value: No

Code11 Scans Strip End Specifies the number of characters to strip from the end of a Code11 barcode.

Possible values: 0 - 255

Default value: 0

Code11 Scans Strip Start Specifies the number of characters to strip from the beginning of a Code11 barcode.

Possible values: 0 - 255

Default value: 0

Symbology Code11 Specifies whether Code11 symbology is enabled on the the mobile device.

Possible values: Enable
Disable

Default value: Enable

Scanner - Code128

Use the Code128 scanner emulation parameters in Configuration Manager to configure the way the TelnetCE Client handles Code 128 scan codes.

The following list describes the Code128 scanner parameters that you can modify with Configuration Manager:

Code128 Add Postamble String Specifies the string to be added to the end of Code128 barcode data.

Possible values: Up to 20 alpha-numeric characters

Default value: -

Code128 Add Preamble String Specifies the string to be added to the beginning of Code128 barcode data.

Possible values: Up to 20 alpha-numeric characters

Default value: -

Code128 Maxlength

Specifies the maximum length for a Code128 barcode.

Possible values: 0 - 60

Default value: 0

Code128 Minlength

Specifies the minimum length for a Code128 barcode.

Possible values: 0 - 30

Default value: 0

Code128 Redundancy

Specifies whether Code128 redundancy is enabled. (Redundancy requires the mobile device to decode a barcode from two separate scans. Two scans occur with a single activation of the scanner trigger.)

Possible values: Yes
No

Default value: No

Code128 Scans Strip End

Specifies the number of characters to strip from the end of a Code128 barcode scan.

Possible values: 0 - 255

Default value: 0

Code128 Scans Strip Start

Specifies the number of characters to strip from the beginning of a Code128 barcode scan.

Possible values: 0 - 255

Default value: 0

Symbology Code 128

Specifies whether Code128 symbology is enabled on the mobile device.

Possible values: Enable
Disable

Default value: Enable

Scanner - Code39

Use the Code39 scanner emulation parameters in Configuration Manager to configure the way the TelnetCE Client handles Code39 scan codes.

The following list describes the Code39 scanner parameters that Configuration Manager allows you to modify:

Code39 Add Postamble String

Specifies the string to be added to the end of Code39 barcode data.

Possible values: Up to 20 alpha-numeric characters

Default value: -

Code39 Add Preamble String

Specifies the string to be added to the beginning of Code39 barcode data.

Possible values: Up to 20 alpha-numeric characters.

Default value: -

Code39 CD

Specifies whether a Code39 check-digit is returned as part of the scanned data.

Possible values: Yes
No

Default value: No

Code39 Full ASCII

Specifies whether Code39 barcodes are processed to allow the full representation of the ASCII character set.

Possible values: Yes
No

Default value: No

Code39 Maxlength

Specifies the maximum length of Code39 barcodes.

Possible values: 0 - 60

Default value: 0

Code39 Minlength Specifies the minimum length of Code39 barcodes.

Possible values: 0 - 30

Default value: 0

Code39 Redundancy Specifies whether Code39 redundancy is enabled. (Redundancy requires the mobile device to decode a barcode from two separate scans. The two scans occur with a single activation of the scanner trigger.)

Possible values: Yes
No

Default value: No

Code39 Scans Strip End Specifies the number of characters to strip from the end of a Code39 barcode scan.

Possible values: 0 - 255

Default value: 0

Code39 Scans Strip Start Specifies the number of characters to strip from the beginning of a Code39 barcode scan.

Possible values: 0 - 255

Default value: 0

Symbology Code39 Specifies whether Code39 symbology is enabled.

Possible values: Enable
Disable

Default value: Enable

Scaner - Code93

Use the scanner Code93 emulation parameters in Configuration Manager to configure the way the TelnetCE Client handles Code 93 scan codes.

The following list describes the Code93 parameters that Configuration Manager allows you to modify:

Code93 Add Postamble String
Specifies the string to add to the end of Code93 barcode scans.

Possible values: Up to 20 alpha-numeric characters

Default value: -

Code93 Add Preamble String
Specifies the string to add to the beginning of Code93 barcode scans.

Possible values: Up to 20 alpha-numeric characters

Default value: -

Code93 Maxlength
Specifies the maximum length for Code93 barcodes.

Possible values: 0 - 60

Default value: 0

Code93 Minlength
Specifies the minimum length for Code93 barcodes.

Possible values: 0 - 30

Default value: 0

Code93 Redundancy
Specifies whether Code93 redundancy is enabled. (Redundancy requries a mobile device to decode a barcode from two separate scans. The two scans occur with a single activation of the scanner trigger.)

Possible values: Yes
No

Default value: No

Code93 Scans Strip End (Spectrum 24 Only)
Specifies the number of characters to strip from the beginning of Code93 barcodes.

Possible values: 0 - 255

Default value: 0

Code93 Scans Strip Start (Spectrum 24 Only)

Specifies the number of characters to strip from the end of Code93 barcodes.

Possible values: 0 - 255

Default value: 0

Symbology Code93

Specifies whether Code93 symbology is enabled on the mobile device.

Possible values: Enable
Disable

Default value: Enable

Scanner - Common

Use the common scanner emulation parameters in the Configuration Manager to set the way the TelnetCE Client handles all types of scanned data.

The following list describes the common scaner emulation parameters that the Configuration Manager allows you to modify:

Add Scan Identifer

Specifies whether to add a scan identifier to all scanned data. The identifier is used to indicate scanned data to a host. (If you enable this parameter, you must specify the scan identifier in the Scan Identifier parameter.)

Possible values: Yes
No

Default value: No

All Scan Strip Start

specifies the number of characters that are stripped from the beginning of all barcodes.

Possible values: 0 - 20

Default value: 0

All Scan Strip End

Specifies the number of characters that are stripped from the end of all barcodes.

Possible values: 0 - 20

Default value: 0

Allow Scan Ahead

Specifies whether a user can scan ahead while the host is processing data from the previous scan. If you do not enable this parameter, the scanner is disabled while the host process the data from the previous scan.

Possible values: Yes
No

Default value: No

Auto Send Scans

Specifies whether the mobile device automatically sends data to the host after a barcode scan.

Possible values: Yes
No
Last Only (if data is scanned into last field)

Default value: No

Bidir Redundancy

Specifies whether bi-directional redundancy is enabled. If bi-directional redundancy is enabled, then two decodes of the barcode in opposite laser sweep directors are required. (The default setting allows two decodes of the barcode in the same sweep direction.)

Possible values: Yes
No

Default value: No

Green Scan LED On-Time

Specifies the amount of time (in milliseconds) the green LED light remains on after the mobile device completes a scan.

Possible values: 0 - 10000 (milliseconds)

Default value: 3000

Remove Barcode Header

Specifies a string. If the beginning characters of a barcode scan match the specified string, the string is removed from the barcode. If you specify a string, then the Scan Identifier, Scans Strip Start, Scans Strip End, and Preamble String are ignored. (The default setting will not not remove any header.)

Possible values: any string

Default value: -

Scan Escape Code (5250/3270 Only)

Specifies the scan escape code that is used to identify aid keys (for example, F1, F10, or Enter) that are scanned. Input the hex value of the character.

Possible values: hex value of a character

Default value: 1B

Scan Handler

Specifies commands that provide special processing of scanned data. You can specify scans to do any of the following:

- Strip data from the start/end of a barcode
- Replace selected twxt within a barcode
- Append/prepend data to the barcode
- Translate data within a barcode

Use the following syntax:

```
symbology(length)[command]
```

Use the following letters in the `symbology` parameter to specify a symbology:

A = any
B = UPCE0
C = UPC1
D = UPCA
E = MSI
F = EAN8
G = EAN 13
H = Codabar
I = Code3of9
J = D2of5
K = i2of5
L = Code11
M = Code93
N = Code128
O = PDF417
P = D2of5 IATA
Q = UCC/EAN128

Scan Handler

Specifies the `(length)` parameter as one of the following:

- The minimum and maximum length formatted as `[min-max]`, where min is the minimum length and max is the maximum length.
- A specific value to match a specific length.
- 0 to match any length.

For the `[command]` parameters, specify any of the following single-character codes followed by any variables that are specific to that code:

- `[S(loc)(char)]` to strip characters from the barcode, where:
  - (loc) is the location, either S (start of barcode) or E (end of barcode)
  - (char) variable is the number of characters to strip

  Example: `Q(16)[SS1]` strips off the first character of UCC/EAN128 barcodes of length 16.
- `[R(char)(repl)]` to replace characters in the barcode, where:
  - (char) is the character to replace
  - (repl) is the replacement character

NOTE You may specify the character directly, or you may specify the two-digit hex value for the character.

Example: `A(9-12)[R29]` replaces all 2s with 9s in any barcode of lengths between 9 and 12.

Scan Handler

`[A(app)]` appends data to the end of the barcode, where:

- (app) is the data to append (between 1 and 8 bytes)

NOTE The data may include two-digit hex values. You must preface each hex value with a backslash (\).

Example: `A(0)[A123]` appends 123 to the end of all barcodes.

- `[P(pre)]` to add data to the beginning of a barcode (prepend), where:
  - `(pre)` is the value to prepend (between 1 and 8 bytes)

NOTE The data may include two-digit hex values. You must preface each hex value with a backslash.

Example: `A(0)[P123]` prepends 123 to all barcodes.

Scan Handler

- `[X(trans);(repl)]` to translate barcode data (between 1 and 8 bytes), where:
  - `(trans)` is the data to translate
  - `(repl)` is the replacement data

NOTE The data may include two-digit hex values. You must preface each hex value with a backslash.

Example: A(0)[X123;ABC] translates all occurrences of 123 to ABC in all types of barcodes.

- `[C(char);(loc);(siz)]` to cut barcode data (1 to 8 characters) based on a starting character, where:
  - `(char)` is the search string (1 to 8 characters)
  - `(loc)` is the start location of the search (in characters)
  - `(siz)` is the size (in characters)

NOTE The data may include two-digit hex values. You must preface hex values with a backslash.

Example: A(0)[C00;3;18] coverts to 18 characters starting with the third in scan when the barcode starts with 00.

Scan Identifier

Specifies a scan identifier. The scan identifier is placed in front of all scanned data to indicate scanned data to the host. You can use two-digit hex values to specify a value. Preface hex values with a backslash. (You must set the Add Scan Identifier parameters to "Yes" for the Scan Identifier parameter to be valid.)

Possible values: any string

Default value: -

Scanner Angle

Specifies the type of scanner angle for the scanner on the mobile device.

Possible values: Narrow
Wide

Default value: Narrow

Scanner Type

Specifies the type fo scanner on the mobile device.

Possible values: LRT
Laser Only
Contact with Pulse
Contact without Pulse
Auto with Pulse
Auto without Pulse
Wand Simulator
Dual Trigger
Single Trigger
Liberty

Default value: - (automatically selects the type for the current standard on the mobile device)

STLR Scan Timeout

Specifies the timeout (in seconds) for single-position trigger long-range scanners. these are primarily for 6840LR mobile devices.

Possible values: 0 - 255 (seconds)

Default value: 3

Symbology Supps

Specifies whether the scanner reads supplemental barcodes with UCPC and EAN barcodes.

Possible values: Enable
Disable

Default value: Disable

Transmit Code ID Char

Specifies whether a prefix symbology code is added to scanned data that is returned to the application . The ASCII characters represent the following symbologies:

A = UPD, UPCE0, UPCE1, EAN8, EAN13
B = Code39
C = Codabar
D = Code128
E = Code 93
F = I2of5
G = D2of5
H = Code11
J = MSI
K = UCCEAN128

Possible values: Yes
No

Default value: No

UPC EAN Linear

Specifies whether the decoder must decode all label blocks in the same sweep.

Note: UPC labels are divided into left and right blocks (manufacturer and item numbers). Setting this parameter to "No" allows the decoder to combine a block from a partially decoded UPC label with a block decoded in an earlier scan. Setting this parameter to "Yes" forces the decoder to decode all label blocks in the same sweep, which is the preferred method when scanning multiple labels with potentially interchangeable blocks in the laser field.

Possible values: Yes
No

Default value: No

UPC EAN Security

Specifies the level of the decode algorithm for UPC and EAN barcodes. This parameter prevents incorrect decodes by aiding in decoding poor labels. The lower the level, the less stringent but more aggressive the decoding. Higher secuirty levels provide greater protection against incorrect decodes.

Possible values: 0 - 3

Default value: 0

UPC EAN Supp 2

Specifies whether to allow decodes of barcodes with two supplemental characters. (This feature is not available on the SPT 1740.)

Possible values: Yes
No

Default value: No

UPC EAN Supp 5

Specifies whether to allow decodes of barcodes with five supplemental characters. (This feature is not available on the SPT 1740.)

Possible values: Yes
No

Default value: No

UPC EAN Supp Mode

Specifies the method by which supplemental barcodes are handled.

Possible values:

NoSupps (ignore supp barcodes)
OnlySuppLabels (verifies that the UPC labels has an attached supp barcode that matches the enabled lengths)
SuppsOptional (reports if the decoder determines there is a supp of any length)

NOTE With the OnlySuppsLabel method, two-character and five-character supplemental barcodes are valid if you set the UPC EAN Supp 2 and UPC EAN Supp 5 parameters to "Yes".

Default value: NoSupps

UP C EAN Supp Retry

Specifies the number of times the barcode whould be read if checking for a supplemental barcode. (If labels with or without supplements are returned to the application, this option determines how many times the decoder attempts to decode the UPC label before it registers that there are no supplements.)

Possible values: 2 - 10

Default value: 5

Use Scanner As Keyboard Wedge

Specifies whether the program can use scanned data as keybaord data. This will bypass all special handling that is performed on data.

Possible values: Enable
Disable

Default value: Disable

WS1000 Blink Mode (WSS1010/1040 Only)

Specifies the duty cycle for blink mode on scanners for WSS1010/1040 mobile devicees. The duty mode percentage specifies the percentage of time the scan pulses when the scan is active. Higher percentages improve scanning aggressiveness (the speed at which the scan is acquired), while lower duty cycles improve the battery life on scanners that are always active.

Possible values: 100% Duty Cycle
75% Duty Cycle
67% Duty Cycle
50% Duty Cycle
40% Duty Cycle
33% Duty Cycle
29% Duty Cycle
25% Duty Cycle

Default value: 100% Duty Cycle

Scanner - D2of5

Use the scanner D2of5 emulation parameters in Configuration Manager to configure the way the TelnetCE Client handles D2of5 scan codes.

The following list describes the D2of5 parameters that you can modify with Configuration Manager:

D2of5 Add P{ostamble String

Specifies the string to be added to the end of D2of5 barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

D2of5 Add Preamable String

specify the string to be added to the beginning of D2of5 barcode data.

Possible values: up to 20 alpha-numeric characters.

Default value: -

D2of5 Maxlength

Specifies the maximum length for a D2of5 barcode. (Use 0 to represent any length.)

Possible values: 0 - 60

Default value: 0

D2of5 Minlength

Specifies the minimum length for a D2of5 barcode. (Use 0 to represent any length.)

Possible values: 0 - 60

Default value: 0

D2of5 Redundancy

Specifies whether D2of5 redundancy is enabled. (Redundancy requires the mobile device to decode a barcode from two separate scans. The two scans occur with a single activation of the scanner trigger.)

Possible values: Yes
No

Default value: No

D2of5 Scans Strip End (Spetrum 24 Only)

Specifies the number of characters to strip from the end of D2of5 barcodes.

Possible values: 0 - 255

Default value: 0

D2of5 Scans Strip Start (Spectrum 24 Only)

Specifies the number of characters to strip from the beginning of D2of5 barcodes.

Possible values: 0 - 255

Default value: 0

Symbology D2of5

Specifies whether D2of5 symbology is enabled on the mobile device.

Possible values: Enable
Disable

Default value: Enable

Scanner - EAN13

Use the scanner EAN13 emulation parameters in Configuration Manager to configure the way the TelnetCE Client handles EAN 13 scan codes.

The following list describes the EAN13 parameters that you can modify with Configuration Manager:

Convert EAN13 to ISBN Specifies whether EAN13 codes are converted to ISBN codes.

Possible values: Yes
No

Default value: No

EAN13 Add Postamble String Specifies the string to be added to the end of EAN13 barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

EAN13 Add Preamble String Specifies the string to be added to the beginning of EAN13 barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

EAN13 Maxlength Specifies the maximum length for an EAN13 barcode. (Use 0 to represent any length.)

Possible values: 0 - 60

Default value: 12

EAN13 Minlength Specifies the minimum length for an EAN13 barcode. (Use 0 to represent any length.)

Possible values: 0 - 30

Default value: 12

EAN13 Scans Strip End (Spectrum 24 Only) Specifies the number of characters to strip from the end of an EAN13 barcode.

Possible values: 0 - 255

Default value: 0

EAN13 Scans Strip Start (Spectrum 24 Only) Specifies the number of characters to strip from the beginning of an EAN13 barcode.

Possible values: 0 - 255

Default value: 0

Hyphenate ISBN Specifies whether the output ISBN code is hyphenated. (You must also enable the Convert EAN13 to ISBN parameter.)

Possible values: Yes
No

Default value: No

Symbology EAN13 Specifies whether EAN13 symbology is enabled on the mobile device.

Possible values: Enable
Disable

Default value: Enable

Scanner - EAN8

Use the scanner EAN8 parameters in Configuration Manager to configure the way the TelnetCE Client handles EAN8 scan codes.

The following list describes the EAN8 parameters that Configuration Manager allows you to modify:

EAN8 Add Postamble String

Specifies the string to be added to the end of EAN8 barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

EAN8 Add Preamble String

Specifies the string to be added to the beginning of EAN8 barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

EAN8 Convert

Specifies whether EAN8 barcodes are converted to EAN13. The conversion increases the EAN8 label to 13 characters by adding 0s. (This parameter is automatically enabled when you place EAN13 and EAN8 labels into the same input field.)

Possible values: Yes
No

Default value: No

EAN8 Maxlength

Specifies the maximum length for an EAN barcode. (Use 0 to represent any length.)

Possible values: 0 - 60

Default value: 8

EAN Minlength

Specifies the minimum length for an EAN8 barcodes. (Use 0 to represent any length.)

Possible values: 0 - 30

Default value: 8

EAN8 Scans Strip End (Spectrum 24 Only)

Specifies the number of characters to strip from the end of an EAN8 barcode.

Possible values: 0 - 255

Default value: 0

EAN8 Scans Strip Start (Spectrum 24 Only)

Specifies the number of characters to strip from the beginning of an EAN8 barcode.

Possible values: 0 - 255

Default value: 0

Symbology EAN8

Specifies whether EAN8 symbology is enabled on the mobile device.

Possible values: Enable
Disable

Default value: Enable

Scanner - I2of5

Use the I2of5 emulation parameters in Configuration Manager to configure the way the TelnetCE Client handles I2of5 scan codes.

The following list describes the I2of5 parameters that Configuration Manager allows you to modify:

I2of5 Add Postamble String

Specifies the string to be added to the end of I2of5 barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

I2of5 Add Preamble String

Specifies the string to be added to the beginning of I2of5 barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

I2of5 Maxlength

Specifies the maximum lenght of an I2of5 barcode. (Use 0 to indicate any length.)

Possible values: 0 - 60

Default value: 0

I2of5 Minlength

Specifies the minimum length of an I2of5 barcode. (Use 0 to indicate any length.)

Possible values: 0 - 30

Default value: 0

I2of5 Redundancy

Specifies whether I2of5 redundancy is enabled. (Redundancy requires the mobile device to decode a barcode from two separate scans. The two scans occur with a single activation of the scanner trigger.)

Possible values: Yes
No

Default value: No

I2of5 Scans Strip End

Specifies the number of characters to strip from the end of I2of5 barcodes.

Possible values: 0 - 255

Default value: 0

I2of5 Scans Strip Start

Specifies the number of characters to strip from the beginning of I2of5 barcodes.

Possible values: 0 - 255

Default value: 0

Symbology I2of5

Specifies whether I2of5 symbology is enabled on mobile devices.

Possible values: Enable
Disable

Default value: Enable

Scanner - MSI

Use the MSI emulation parameters in Configuration Manager to configure the way the TelnetCE Client handles MSI scan codes.

The following list describes the MSI parameters that Configuration Manager allows you to modify:

MSI Add Postamble String

Specifies the stirng to be added to the end of MSI barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

MSI Add Preamble String

Specifies the string to be added to the end of MSI barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

MSI CD

Specifies the number of check digits scanned. MSI code has 1 or 2 check digits. Do not include the number of check digits in the MSI length specification, even if they are reported back to the application.

Possible values: 1
2

Default value: 1

MSI Maxlength

Specifies the maximum length for an MSI barcode. (Use 0 to represent any length.)

Possible values: 0 - 60

Default value: 55

MSI Minlength

Specifies the minimum length for an MSI barcode. (Use 0 to represent any length.)

Possible values: 0 - 30

Default value: 4

MSI Redundancy

Specifies whether MSI redundancy is enabled. (Redundancy requires the mobile device to decode a barcode from two separate scans. The two scans occur with a single activation of the scanner trigger.)

Possible vaules: Yes
No

Default value: No

MSI Return CD

Specifies whether MISI check digit is returned as part of the scanned data.

Possible values: Yes
No

Default value: No

MSI Scans Strip End (Spectrum 24 Only)

Specifies the number of characters to strip from the end of an MSI barcode.

Possible values: 0 - 255

Default value: 0

MSI Scans Strip Start (Spectrum 24 Only)

Specifies the number of characters to strip from the beginning of an MSI barcode.

Possible values: 0 - 255

Default value: 0

Symbology MSI

Specifies whether MSI symbology is enabled on the mobile device.

Possible values: Enable
Disable

Default value: Enable

Scanner - PDF417

Use the PDF417 scanner parameters in Configuration Manager to specify the way that the TelnetCE Client handles PDF417 scan codes.

The following list describes the PDF417 parameters that Configuration Manager allows you to modify:

Symbology PDF417 (WinCE 8146 Only)

Specifies whether PDF417 symbology is enabled on the mobile device.

Possible values: Enable
Disable

Default value: Enable

Scanner - UCC128

Use the UCC128 scanner parameters in Configuration Manager to specify the way that the TelnetCE Client handles UCC128 scan codes.

The following list describes the UCC128 parameters that you can specify with Configuration Manager:

UCC/EAN 128 Add Postamble String

Specifies the string to be added to the end of UCC/EAN128 barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

UCC/EAN 128 Add Preamble String

Specifies the string to be added to the beginning of UCC/EAN128 barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

UCC/EAN 128 Scans Strip End

Specifies the number of characters to strip from the end of UCC/EAN128 barcode scans.

Possible values: 0 - 255

Default value: 0

UCC/EAN 128 Scans Strip Start

Specifies the number of characters to strip from the start of UCC/EAN128 barcode scans.

Possible values: 0 - 255

Default value: 0

Scanner - UPCA

Use the UPCA emulation parameters in Configuration Manager to specify the way that the TelnetCE Client handles UPCA scan codes.

The following list describes the UPCA parameters that you can specify in Configuration Manager:

Symbology UPCA

Specifies whether UPCA symbology is enabled on mobile devices.

Possible values: Enable
Disable

Default value: Enable

UPCA Add Postamble String

Specifies the string to be added to the end of UPCA barcodes.

Possible values: Up to 20 alpha-numeric characters

Default value: -

UPCA Add Preamble String

Specifies the string to be added to the beginning of UPCA barcodes.

Possible values: Up to 20 alpha-numeric characters

Default value: -

UPCA Maxlength

Specifies the maximum length of a UPCA barcode. (Use 0 to indicate that any length is acceptable.)

Possible values: 0 - 60

Default value: 12

UPCA Minlength

Specifies the minimum length of a UPCA barcode. (Use 0 to specify no minimum length.)

Possible values: 0 - 30

Default value: 12

UPCA Preamble

Specifies whether the preamble (first) character is returned to the application iwth the scanned data of a UPCA barcode.

Possible values: Yes
No

Default value: Yes

UPCA Return CD

Specifies whether the check digit is returned as part of the scanned data of a UPCA barcode.

Possible values: Yes
No

Default value: Yes

UPCA Scans Strip End (Spectrum 24 Only)

Specifies the number of characters to strip from the end of a UPCA barcode.

Possible values: 0 - 255

Default value: 0

UPCA Scans Strip Start (Spectrum 24 Only)

Specifies the number of characters to strip from the beginning of a UPCA barcode.

Possible values: 0 - 255

Default value: 0

Scanner - UPCE0

Use the UPCE0 scanner emulation parameters in Configuration Manager to specify the way the TelnetCE Client handles UPCE0 scan codes.

The following list describes the UPCE0 parameters that Configuration Manager allows you to modify:

Symbology UPCE0

Specifies whether UPCE0 symoblogy is enabled on mobile devices.

Possible values: Enable
Disable

Default value: Enable

UPCE0 Add Postamble String

Specifies the string to be added to the end of UPCE0 barcodes.

Possible values: up to 20 alpha-numeric characters

Default value: -

UPCE0 Add Preamble String

Specifies the string to be added to the beginning of UPCE0 barcodes.

Possible values: up to 20 alpha-numeric characters

Default value: -

UPCE0 Convert

Specifies whether the six-character UPCE0 label is converted to the equivalent 12-character UPCA label.

Possible values: Yes
No

Default value: No

UPCE0 Maxlength

Specifies the maximum lenght for a UPCE0 barcode. (Use 0 to indicate that any length is acceptable.)

Possible values: 0 - 60

Default value: 6

UPCE0 Minlength

Specifies the minimum length for a UPCE0 barcode. (Use 0 to indicate that nay minimum length is acceptable.)

Possible values: 0 - 30

Default value: 6

UPCE0 Preamble

Specifies whether the preamble (first) character returns to the application with the data of a UPCE0 barcode scan.

Possible values: Yes
No

Default value: No

UPCE0 Return CD

Specifies whether the verified check digit is returned to the application as part of the UPCE0 barcode data.

Possible values: Yes
No

Default value: No

UPCE0 Scans Strip End (Spectrum 24 Only)

Specifies the number of characters to strip from the end of a UPCE0 barcode.

Possible values: 0 - 255

Default value: 0

UPCE0 Scans Strip Start (Spectrum 24 Only)

Specifies the number of characters to strip from the beginning of a UPCE0 barcode.

Possible values: 0 - 255

Default value: 0

Scanner - UPCE1

Use the UPCE1 scanner emulation parameters in Configuration Manager to specify the way that the TelnetCE Client handles UPCE1 scan codes.

The following list explains the UPCE1 parameters that Configuration Manager allows you to modify:

Symbology UPCE1

Specifies whether UPCE1 symbology is enabled on the mobile device.

Possible values: Enable
Disable

Default value: Enable

UPCE1 Add Postamble String

Specifies the string to be added to the end of UPCE1 barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

UPCE1 Add Preamble String

Specifies the string to be added to the beginning of UPCE1 barcode data.

Possible values: up to 20 alpha-numeric characters

Default value: -

UPCE1 Convert

Specifies whether to expand the six-character UPCE1 lable to the equivalent 12-character UPCA label.

Possible values: Yes
No

Default value: No

UPCE1 Maxlength

Specifies the maximum length for a UPCE1 barcode. (Use 0 to indicate that any length is acceptable.)

Possible values: 0 - 60

Default value: 6

UPCE1 Minlength

Specifies the minimum length for a UPCE1 barcode. (Use 0 to indicate no minimum length.)

Possible values: 0 - 30

Default value: 6

UPCE1 Preamble

Specifies whether the UPC preamble (first) character is returned to the application as part of the scanned data of the UPCE1 barcode.

Possible values: Yes
No

Default value: No

UPCE1 Return CD

Specifies whether the UPC check digit is returned to the application as part of the scanned data of the UPCE1 barcode.

Possible values: Yes
No

Default value: No

UPCE1 Scans Strip End (Spectrum 24 Only)

Specifies the number of characters to strip from the end of a UPCE1 barcode.

Possible values: 0 - 255

Default value: 0

UPCE1 Scans Strip Start (Spectrum 24 Only)

Specifies the number of characters to strip from the start of a UPCE1 barcode.

Possible values: 0 - 255

Default value: 0

Appendix B: Keyboard Maps

This section provides the following keyboard maps:

- 53-key MC9000 boot procedures
- 53-key MC9000 5250/3270 emulation keybaord maps
- 53-key MC9000 VT emulation keyboard maps
- TelnetCE Client virtual keyboard maps

MC9000 Boot Procedures

This section provides external keyboard maps for boot procedures for 53-key MC9000 devices.

53-Key MC9000 Boot Procedures

Table B-1 describes boot procedures for 53-key MC9000 devices.

Boot Type	Procedure
Warm Boot	Press and hold Power key for 7 seconds.
Cold Boot	Press and hold Power key for 20 seconds.

Table B-1: *53-Key MC9000 Boot Procedures*

5250/3270 Emulation Keyboard Maps

This section contains external and virtual keyboard maps for 5250/3270 emulation on 53-key MC9000 devices.

53-Key MC9000 5250/3270 External Keyboard Emulation Local Terminal Functions

Table B-2 shows local terminal function key sequences for the external keyboard of 53-key MC9000 devices.

Local Function	Key Sequence
Program Information	<Func> <Ctrl> <P>
Diagnostics	<Func> <Ctrl> <D>
Keyclicks On/Off	<Func> <Ctrl> <K>
Quiet Mode On/Off	<Func> <Ctrl> <Q>
Terminal Configuration	<Func> <Ctrl> <C>
Host Profiles	<Func> <Ctrl> <R>
Message Recall	<Func> <Ctrl> <M>
Free Cursor Mode	<Func> <Ctrl> <F>
Close Session	<Func> <Ctrl> <T>
Previous Session	<Upper Left Button>
Next Session	<Upper Right Button>
Caps Lock	<Func> <Shift>
View Mode On/Off	<Func> <Ctrl> <Z>
Scroll Left	<Ctrl> <Left>
Sroll Right	<Ctrl> <Right>
Scroll Up	<Ctrl> <Up>
Scroll Down	<Ctrl> <Down>
Display Backlight On/Off	<Func> <Z>
Keypad Backlight On/Off	<Func> <X>

Table B-2: *53-Key MC9000 External Keyboard 5250/3270 Local Terminal Functions*

53-Key MC9000 External Keyboard 5250 Emulation Keys

Table B-3 shows external keyboard key sequences for 5250 emulation keys on 53-key MC9000 devices.

5250 Key	Key Sequence	5250 Key	Key Sequence
Attention	<Ctrl> <A>	F1	<Func> <1>
Backspace	<Bksp>	F2	<Func> <2>

Table B-3: *53-Key MC9000 External Keyboard 5250 Emulation Keys*

5250 Key	Key Sequence	5250 Key	Key Sequence
Back Tab	<Shift> <Func> <Space>	F3	<Func> <3>
Clear	<Alt> <Shift> <1>	F4	<Func> <4>
Delete	<Func> <Bksp>	F5	<Func> <5>
Dup	<Shift> <Func> <4>	F6	<Func> <6>
Enter	<Ctrl> <Ent>	F7	<Func> <7>
Erase Input	<Ctrl> <E>	F8	<Func> <8>
Field Exit	<Ent>	F9	<Func> <9>
Field Minus	<Func> <*>	F10	<Func> <0>
Help	<Ctrl> <G>	F11	<Shift> <1>
Home	<Shift> <Func> <5>	F12	<Shift> <2>
Insert	<Shift> <Func> <8>	F13	<Shift> <3>
Print	<Ctrl> <P>	F14	<Shift> <4>
Reset	<Esc>	F15	<Shift> <5>
Roll Up	<Shift> <Func> <6>	F16	<Shift> <6>
Roll Down	<Shift> <Func> <7>	F17	<Shift> <7>
System Request	<Ctrl> <S>	F18	<Shift> <8>
Tab	<Func> <Space>	F19	<Shift> <9>
Left Arrow	<Left Arrow>	F20	<Shift> <0>
Right Arrow	<Right Arrow>	F21	<Ctrl> <1>
Up Arrow	<Up Arrow>	F22	<Ctrl> <2>
Down Arrow	<Down Arrow>	F23	<Ctrl> <3>
		F24	<Ctrl> <4>

Table B-3: *53-Key MC9000 External Keyboard 5250 Emulation Keys*

53-Key MC9000 External Keyboard 3270 Emulation Keys

Table B-4 shows external keyboard 3270 emulation keys for 53-key MC9000 devices.

3270 Key	Key Sequence	3270 Key	Key Sequence
Attention	<Ctrl> <A>	F1	<Func> <1>
Backspace	<Bksp>	F2	<Func> <2>
Back Tab	<Shift> <Func> <Space>	F3	<Func> <3>
Clear	<Esc>	F4	<Func> <4>

Table B-4: *53-Key MC9000 External Keyboard 3270 Emulation Keys*

3270 Key	Key Sequence	3270 Key	Key Sequence
Clear EOF	<Ctrl> <O>	F5	<Func> <5>
Delete	<Func> <Bksp>	F6	<Func> <6>
Dup	<Shift> <Func> <4>	F7	<Func> <7>
Enter	<Enter>	F8	<Func> <8>
Erase Input	<Ctrl> <E>	F9	<Func> <9>
Field Mark	<Ctrl> <F>	F10	<Func> <0>
Home	<Shift> <Func> <5>	F11	<Shift> <1>
Insert	<Shift> <Func> <8>	F12	<Shift> <2>
New Line	<Ctrl> <N>	F13	<Shift> <3>
Reset	<Func> <.>	F14	<Shift> <4>
System Request	<Ctrl> <S>	F15	<Shift> <5>
Tab	<Func> <Space>	F16	<Shift> <6>
Left Arrow	<Left Arrow>	F17	<Shift> <7>
Right Arrow	<Right Arrow>	F18	<Shift> <8>
Up Arrow	<Up Arrow>	F19	<Shift> <9>
Down Arrow	<Down Arrow>	F20	<Shift> <0>
PA1	<Shift> <Func> <1>	F21	<Ctrl> <1>
PA2	<Shift> <Func> <2>	F22	<Ctrl> <2>
PA3	<Shift> <Func> <3>	F23	<Ctrl> <3>
		F24	<Ctrl> <4>

Table B-4: *53-Key MC9000 External Keyboard 3270 Emulation Keys*

53-Key MC9000 External Keyboard 5250/3270 Emulation Character Map

Table B-5 shows external keyboard key sequences for 5250/3270 emulation characters on 53-key MC9000 devices.

Character	Key Sequence	Character	Key Sequence
^@	<Ctrl> <Upper Left>	@	<Func> <Ctrl> <B>
^A	<Ctrl> <A>	A	<Shift> <A>
^B	<Ctrl> <B>	B	<Shift> <B>
^C	<Ctrl> <C>	C	<Shift> <C>
^D	<Ctrl> <D>	D	<Shift> <D>
^E	<Ctrl> <E>	E	<Shift> <E>

Table B-5: *53-Key MC9000 External Keyboard 5250/3270 Character Map*

Character	Key Sequence	Character	Key Sequence
^F	<Ctrl> <F>	F	<Shift> <F>
^G	<Ctrl> <G>	G	<Shift> <G>
^H	<Ctrl> <H>	H	<Shift> <H>
^I	<Ctrl> <I>	I	<Shift> <I>
^J	<Ctrl> <J>	J	<Shift> <J>
^K	<Ctrl> <K>	K	<Shift> <K>
^L	<Ctrl> <L>	L	<Shift> <L>
^M	<Ctrl> <M>	M	<Shift> <M>
^N	<Ctrl> <N>	N	<Shift> <N>
^O	<Ctrl> <O>	O	<Shift> <O>
^P	<Ctrl> <P>	P	<Shift> <P>
^Q	<Ctrl> <Q>	Q	<Shift> <Q>
^R	<Ctrl> <R>	R	<Shift> <R>
^S	<Ctrl> <S>	S	<Shift> <S>
^T	<Ctrl> <T>	T	<Shift> <T>
^U	<Ctrl> <U>	U	<Shift> <U>
^V	<Ctrl> <V>	V	<Shift> <V>
^W	<Ctrl> <W>	W	<Shift> <W>
^X	<Ctrl> <X>	X	<Shift> <X>
^Y	<Ctrl> <Y>	Y	<Shift> <Y>
^Z	<Ctrl> <Z>	Z	<Shift> <Z>
ESC	<ESC>	[	<Func> <E>
^\	<Ctrl> <Bksp>	\	<Func> <G>
^]	<Ctrl> <.>	]	<Func> <F>
^^	<Ctrl> <*>	^	<Func> <Ctrl> <E>
^_	<Ctrl> <Space>	_	<Shift> <Func> <N>
SPACE	<Space>	‘	<Func> <J>
!	<Ctrl> <5>	a	<A>
“	<Shift> <Func> <C>	b	<B>
#	<Ctrl> <6>	c	<C>
$	<Ctrl> <7>	d	<D>
%	<Ctrl> <8>	e	<E>
&	<Ctrl> <9>	f	<F>
‘	<Func> <C>	g	<G>

Table B-5: *53-Key MC9000 External Keyboard 5250/3270 Character Map*

Character	Key Sequence	Character	Key Sequence
(	<Ctrl> <0>	h	<H>
)	<Func> <Ctrl> <A>	i	<I>
*	<*>	j	<J>
+	<Func> <S>	k	<K>
,	<Func> <A>	l	<L>
-	<Func> <T>	m	<M>
.	<.>	n	<N>
/	<Func> <V>	o	<O>
0	<0>	p	<P>
1	<1>	q	<Q>
2	<2>	r	<R>
3	<3>	s	<S>
4	<4>	t	<T>
5	<5>	u	<U>
6	<6>	v	<V>
7	<7>	w	<W>
8	<8>	x	<X>
9	<9>	y	<Y>
:	<Shift> <Func> <R>	z	<Z>
;	<Func> <R>	{	<Shift> <Func> <E>
<	<Shift> <Func> <A>	|	<Shift> <Func> <G>
=	<Func> <W>	}	<Shift> <Func> <F>
>	<Shift> <Func> <B>	~	<Shift> <Func> <J>
?	<Func> <Ctrl> <G>		

Table B-5: *53-Key MC9000 External Keyboard 5250/3270 Character Map*

Virtual Keyboard 5250/3270 Emulation Local Terminal Functions

Table B-6 shows the TelnetCE Client virtual keyboard local terminal functions for 5250/3270-type emulation.

Local Function	Key Sequence
Program Information	[Alt] <Prog Info>
Diagnostics	[Alt] <Diags>
Keyclicks On/Off	[Alt] <KeyClks>
Quiet Mode On/Off	[Alt] <Quiet>
Terminal Configuration	[Alt] <TermConfig>
Message Recall	[Alt] <Recall Msg>
Free Cursor Mode	[Alt] <FreeCur>
Close Session	[Alt] <Close>
Previous Session	[Alt] <Prev Sess>
Next Session	[Alt] <Next Sess>
Caps Lock	[Alt] <CAPS>
View Mode On/Off	N/A
Scroll Left	Scroll Bars
Scroll Right	Scroll Bars
Scroll Up	Scroll Bars
Scroll Down	Scroll Bars

Table B-6: *TelnetCE Client Virtual Keyboard 5250/3270 Emulation Local Terminal Functions*

Virtual Keyboard 5250 Emulation Keys

Table B-7 shows TelnetCE Client virtual keyboard key sequences for 5250 emulation.

5250 Key	Key Sequence	5250 Key	Key Sequence
Attention	[Func2] <Att>	F1	[Func1] <F1>
Backspace	[Alph] <Left Arrow>	F2	[Func1] <F2>
Back Tab	[Alpha] [SHFT] <|<->	F3	[Func1] <F3>
Clear	[Func2] <Clear>	F4	[Func1] <F4>
Delete	[Func2] <Delete>	F5	[Func1] <F5>

Table B-7: *TelnetCE Client Virtual Keyboard 5250 Emulation Keys*

5250 Key	Key Sequence	5250 Key	Key Sequence
Dup	[Func2] <Dup>	F6	[Func1] <F6>
Enter	[Func2] <Enter>	F7	[Func1] <F7>
Erase Input	[Func2] <ErInp>	F8	[Func1] <F8>
Field Exit	[Alpha] <Field Exit>	F9	[Func1] <F9>
Field Minus	[Alph] [SHFT] <FldMinus>	F10	[Func1] <F10>
Help	[Func2] <Help>	F11	[Func1] <F11>
Home	[Func2] <Home>	F12	[Func1] <F12>
Insert	[Func2] <Insert>	F13	[Func1] <F13>
Print	[Func2] <Print>	F14	[Func1] <F14>
Reset	[Func2] <Reset>	F15	[Func1] <F15>
Roll Up	[Func2] <Roll Up>	F16	[Func1] <F16>
Roll Down	[Func2] <Roll Down>	F17	[Func1] <F17>
System Request	[Func2] <SysRq>	F18	[Func1] <F18>
Tab	[Alpha] <Tab>	F19	[Func1] <F19>
Left Arrow	[Num] <Left>	F20	[Func1] <F20>
Right Arrow	[Num] <Right>	F21	[Func1] <F21>
Up Arrow	[Num] <Up>	F22	[Func1] <F22>
Down Arrow	[Num] <Down>	F23	[Func1] <F23>
		F24	[Func1] <F24>

Table B-7: *TelnetCE Client Virtual Keyboard 5250 Emulation Keys*

Virtual Keyboard 3270 Emulation Keys

Table B-8 shows virtual keyboard key sequences for 3270 emulation.

3270 Key	Key Sequence	3270 Key	Key Sequence
Attention	[Func2] <Attn>	F1	[Func1] <F1>
Backspace	[Alpha] <Back Arrow>	F2	[Func1] <F2>
Back Tab	[Alpha] <SHFT> <|<->	F3	[Func1] <F3>
Clear	[Func2] <Clear>	F4	[Func1] <F4>
Clear EOF	[Func2] <ErEOF>	F5	[Func1] <F5>
Delete	[Func2] <Delete>	F6	[Func1] <F6>

Table B-8: *TelnetCE Client Virtual Keyboard 3270 Emulation Keys*

3270 Key	Key Sequence	3270 Key	Key Sequence
Dup	[Func2] <Dup>	F7	[Func1] <F7>
Enter	[Func2] <Enter>	F8	[Func1] <F8>
Erase Input	[Func2] <ErInp>	F9	[Func1] <F9>
Field Mark	[Func2] <FldMrk>	F10	[Func1] <F10>
Home	[Func2] <Home>	F11	[Func1] <F11>
Insert	[Func2] <Insert>	F12	[Func1] <F12>
Reset	[Func2] <Reset>	F13	[Func1] <F13>
System Request	[Func2] <SysRq>	F14	[Func1] <F14>
Tab	[Alph] <Tab>	F15	[Func1] <F15>
Left Arrow	[Num] <Left>	F16	[Func1] <F16>
Right Arrow	[Num] <Right>	F17	[Func1] <F17>
Up Arrow	[Num] <Up>	F18	[Func1] <F18>
Down Arrow	[Num] <Down>	F19	[Func1] <F19>
PA1	[Func2] <PA1>	F20	[Func1] <F20>
PA2	[Func2] <PA2>	F21	[Func1] <F21>
PA3	[Func2] <PA3>	F22	[Func1] <F22>
		F23	[Func1] <F23>
		F24	[Func1] <F24>

Table B-8: *TelnetCE Client Virtual Keyboard 3270 Emulation Keys*

Virtual Keyboard 5250/3270 Emulation Character Map

Table B-9 shows the TelnetCE Client virtual keyboard character map for 5250/3270 emulation.

Character	Key Sequence	Character	Key Sequence
Space	[Alpha] <Space>	P	[Alpha] [SHFT] <P>
!	[Punc] <!>	Q	[Alpha] [SHFT] <Q>
“	[Punc] <“>	R	[Alpha] [SHFT] <R>
#	[Punc] <#>	S	[Alpha] [SHFT] <S>
$	[Punc] <$>	T	[Alpha] [SHFT] <T>
%	[Punc] <%>	U	[Alpha] [SHFT] <U>
&	[Punc] <&>	V	[Alpha] [SHFT] <V>
‘	[Punc] <‘>	W	[Alpha] [SHFT] <W>
(	[Punc] <(>	X	[Alpha] [SHFT] <X>

Table B-9: *TelnetCE Client Virtual Keyboard 5250/3270 Emulation Character Map*

Character	Key Sequence	Character	Key Sequence
)	[Punc] <)>	Y	[Alpha] [SHFT] <Y>
*	[Punc] <*>	Z	[Alpha] [SHFT] <Z>
+	[Punc] <+>	[	[Punc] <[>
,	[Punc] <,>	\	[Punc] <\>
-	[Punc] <->	]	[Punc] <]>
.	[Punc] <x>	^	[Punc] <^>
/	[Punc] </>	_	[Punc] <_>
0	[Num] <0>	‘	[Punc] <‘>
1	[Num] <1>	a	[Alpha] <a>
2	[Num] <2>	b	[Alpha] <b>
3	[Num] <3>	c	[Alpha] <c>
4	[Num] <4>	d	[Alpha] <d>
5	[Num] <5>	e	[Alpha] <e>
6	[Num] <6>	f	[Alpha] <f>
7	[Num] <7>	g	[Alpha] <g>
8	[Num] <8>	h	[Alpha] <h>
9	[Num] <9>	i	[Alpha] <i>
:	[Punc] <:>	j	[Alpha] <j>
;	[Punc] <;>	k	[Alpha] <k>
<	[Punc] <<>	l	[Alpha] <l>
=	[Punc] <=>	m	[Alpha] <m>
>	[Punc] <>>	n	[Alpha] <n>
?	[Punc] <?>	o	[Alpha] <o>
@	[Punc] <@>	p	[Alpha] <p>
A	[Alpha] [SHFT] <A>	q	[Alpha] <q>
B	[Alpha] [SHFT] <B>	r	[Alpha] <r>
C	[Alpha] [SHFT] <C>	s	[Alpha] <s>
D	[Alpha] [SHFT] <D>	t	[Alpha] <t>
E	[Alpha] [SHFT] <E>	u	[Alpha] <u>
F	[Alpha] [SHFT] <F>	v	[Alpha] <v>
G	[Alpha] [SHFT] <G>	w	[Alpha] <w>
H	[Alpha] [SHFT] <H>	x	[Alpha] <x>
I	[Alpha] [SHFT] <I>	y	[Alpha] <y>
J	[Alpha] [SHFT] <J>	z	[Alpha] <z>

Table B-9: *TelnetCE Client Virtual Keyboard 5250/3270 Emulation Character Map*

Character	Key Sequence	Character	Key Sequence
K	[Alpha] [SHFT] <K>	{	[Punc] <{>
L	[Alpha] [SHFT] <L>	|	[Punc] <|>
M	[Alpha] [SHFT] <M>	}	[Punc] <}>
N	[Alpha] [SHFT] <N>	~	[Punc] <~>
O	[Alpha] [SHFT] <O>		

Table B-9: *TelnetCE Client Virtual Keyboard 5250/3270 Emulation Character Map*

VT Emulation Keyboard Maps

This section contains virtual and external keyboard maps for VT emulation on 53-key MC9000 devices.

53-Key MC9000 External Keyboard VT Emulation Local Terminal Functions

Table B-10 shows VT emulation key sequences for local terminal functions using the external keyboard of 53-key MC9000 devices.

Local Function	Key Sequence
Program Information	<Func> <Ctrl> <P>
Keyclicks On/Off	<Func> <Ctrl> <D>
Quiet Mode	<Func> <Ctrl> <K>
Terminal Configuration	<Func> <Ctrl> <Q>
Host Configuration	<Func> <Ctrl> <C>
VT Terminal Setup	<Func> <Ctrl> <R>
Close Session	<Func> <Ctrl> <T>
Previous Session	<Func> <Ctrl> <Shift> <1>
Next Session	<Func> <Ctrl> <Shift> <3>
Caps Loc	<Func> <Shift>
View Mode On/Off	<Func> <Ctrl> <Z>
Scroll Left	<Ctrl> <Left>
Scroll Right	<Ctrl> <Right>
Scroll Up	<Ctrl> <Up>
Scroll Down	<Ctrl> <Down>

Table B-10: *53-Key MC9000 External Keyboard VT Emulation Local Terminal Functions*

Local Function	Key Sequence
Display Backlight On/Off	<Func> <Z>
Keypad Backlight On/Off	<Func> <X>

Table B-10: *53-Key MC9000 External Keyboard VT Emulation Local Terminal Functions*

53-Key MC9000 External Keyboard VT-100 Emulation Keys

Table B-11 shows VT-100 emulation keys for the external keyboard on 53-key MC9000 devices.

VT-100 Key	Key Sequences	VT-100 Key	Key Sequence
Return	<Return>	Enter	<Return>
Backspace	<Bksp>	Backspace (Delete)	<Bksp>
Tab	<Func> <Space>	Back Tab	<Shift> <Func> <Space>
Up Arrow	<Up Arrow>	Down Arrow	<Down Arrow>
Left Arrow	<Left Arrow>	Right Arrow	<Up Arrow>
ESC	<Esc>	PF1	<Func> <1>
BS	<Bksp>	PF2	<Func> <2>
LF	<Ctrl> <J>	PF3	<Func> <3>
Hard Terminal Reset	<Func> <Ctrl> <H>	PF4	<Func> <4>

Table B-11: *53-Key MC9000 External Keyboard VT-100 Emulation Keyss*

53-Key MC9000 External Keyboard VT-220 Emulation Keys

Table B-12 shows VT-220 emulation key sequences for the external keyboard on MC9000 devices.

VT-220 Key	Key Sequence	VT-220 Key	Key Sequence
Return	<Return>	Enter	<Return>
Backspace	<Bksp>	Backspace (Delete)	<Ctrl> <Bksp>
Tab	<Func> <Space>	Back Tab	<Shift> <Func> <Space>
Up Arrow	<Up Arrow>	Down Arrow	<Down Arrow>
Left Arrow	<Left Arrow>	Right Arrow	<Right Arrow>
Hard Terminal Reset	<Func> <Ctrl> <H>	Soft Terminal Reset	Func> <Ctrl> <S>
Find	<Shift> <Func> <5>	Select	<Func> <Ctrl> <Shift> <5>

Table B-12: *53-Key MC9000 External Keyboard VT-220 Emulation Keys*

VT-220 Key	Key Sequence	VT-220 Key	Key Sequence
Insert Here	<Shift> <Func> <8>	Remove	<Func> <Ctrl> <Shift> <7>
Prev Screen	<Func> <Ctrl> <Shift> <4>	Next Screen	<Func> <Ctrl> <Shift> <6>
PF1	<Func> <1>	F11	<Shift> <1>
PF2	<Func> <2>	F12	<Shift> <2>
PF3	<Func> <3>	F13	<Shift> <3>
PF4	<Func> <4>	F14	<Shift> <4>
BREAK*	<Func> <5>	F15//Help	<Shift> <5>
F6	<Func> <6>	F16/Do	<Shift> <6>
F7	<Func> <7>	F17	<Shift> <7>
F8	<Func> <8>	F18	<Shift> <8>
F9	<Func> <9>	F19	<Shift> <9>
F10	<Func> <0>	F20	<Shift> <0>
* currently unavailable			

Table B-12: *53-Key MC9000 External Keyboard VT-220 Emulation Keys*

53-Key MC9000 External Keyboard VT Character Map

Table B-13 shows VT character key sequences for the external keyboard on 53-key MC9000 devices.

Character	Key Sequence	Character	Key Sequence
^@	<Ctrl> <Upper Left>	@	<Func> <Ctrl> <B>
^A	<Ctrl> <A>	A	<Shift> <A>
^B	<Ctrl> <B>	B	<Shift> <B>
^C	<Ctrl> <C>	C	<Shift> <C>
^D	<Ctrl> <D>	D	<Shift> <D>
^E	<Ctrl> <E>	E	<Shift> <E>
^F	<Ctrl> <F>	F	<Shift> <F>
^G	<Ctrl> <G>	G	<Shift> <G>
^H	<Ctrl> <H>	H	<Shift> <H>
^I	<Ctrl> <I>	I	<Shift> <I>
^J	<Ctrl> <J>	J	<Shift> <J>
^K	<Ctrl> <K>	K	<Shift> <K>
^L	<Ctrl> <L>	L	<Shift> <L>

Table B-13: *53-Key MC9000 External Keyboard VT Character Map*

Character	Key Sequence	Character	Key Sequence
^M	<Ctrl> <M>	M	<Shift> <M>
^N	<Ctrl> <N>	N	<Shift> <N>
^O	<Ctrl> <O>	O	<Shift> <O>
^P	<Ctrl> <P>	P	<Shift> <P>
^Q	<Ctrl> <Q>	Q	<Shift> <Q>
^R	<Ctrl> <R>	R	<Shift> <R>
^S	<Ctrl> <S>	S	<Shift> <S>
^T	<Ctrl> <T>	T	<Shift> <T>
^U	<Ctrl> <U>	U	<Shift> <U>
^V	<Ctrl> <V>	V	<Shift> <V>
^W	<Ctrl> <W>	W	<Shift> <W>
^X	<Ctrl> <X>	X	<Shift> <X>
^Y	<Ctrl> <Y>	Y	<Shift> <Y>
^Z	<Ctrl> <Z>	Z	<Shift> <Z>
ESC	<ESC>	[	<Func> <E>
^\	<Ctrl> <Bksp>	\	<Func> <G>
^]	<Ctrl> <.>	]	<Func> <F>
^^	<Ctrl> <*>	^	<Func> <Ctrl> <E>
^_	<Ctrl> <Space>	_	<Shift> <Func> <N>
SPACE	<Space>	‘	<Func> <J>
!	<Ctrl> <5>	a	<A>
“	<Shift> <Func> <C>	b	<B>
#	<Ctrl> <6>	c	<C>
$	<Ctrl> <7>	d	<D>
%	<Ctrl> <8>	e	<E>
&	<Ctrl> <9>	f	<F>
‘	<Func> <C>	g	<G>
(	<Ctrl> <0>	h	<H>
)	<Func> <Ctrl> <A>	i	<I>
*	<*>	j	<J>
+	<Func> <S>	k	<K>
,	<Func> <A>	l	<L>
-	<Func> <T>	m	<M>
.	<.>	n	<N>

Table B-13: *53-Key MC9000 External Keyboard VT Character Map*

Character	Key Sequence	Character	Key Sequence
/	<Func> <V>	o	<O>
0	<0>	p	<P>
1	<1>	q	<Q>
2	<2>	r	<R>
3	<3>	s	<S>
4	<4>	t	<T>
5	<5>	u	<U>
6	<6>	v	<V>
7	<7>	w	<W>
8	<8>	x	<X>
9	<9>	y	<Y>
:	<Shift> <Func> <R>	z	<Z>
;	<Func> <R>	{	<Shift> <Func> <E>
<	<Shift> <Func> <A>	|	<Shift> <Func> <G>
=	<Func> <W>	}	<Shift> <Func> <F>
>	<Shift> <Func> <B>	~	<Shift> <Func> <J>
?	<Func> <Ctrl> <G>		

Table B-13: *53-Key MC9000 External Keyboard VT Character Map*

Virtual Keyboard VT Emulation Local Terminal Functions

Table B-14 shows TelnetCE Client virtual keyboard key sequences for VT emulation local terminal functions.

Local Function	Key Sequence
Prgoram Information	[Cfg] <Prog Info>
Keyclicks On/Off	[Cfg] <KeyClks>
Quiet Mode	[Cfg] <Quiet>
Terminal Configuration	[Cfg] <TermConfig>
Terminal Diagnostic	[Cfg] <Diags>
VT Terminal Setup	[Cfg] <VTHP Cfg>
Host Configuration	[Cfg] <HostConfig>
Previous Session	[Cfg] <Prev Sess>
Next Session	[Cfg] <Next Sess>
Caps Lock	[Cfg] <Caps>

Table B-14: *Virtual Keyboard VT Emulation Local Terminal Functions*

Local Function	Key Sequence
Close Session	[Cfg] <Close>
Scroll Left	<Scroll Bars>
Scroll Right	<Scroll Bars>
Scroll Up	<Scroll Bars>
Scroll Down	<Scroll Bars>

Table B-14: *Virtual Keyboard VT Emulation Local Terminal Functions*

Virtual Keyboard VT-100 Emulation Keys

Table B-15 shows TelnetCE Client virtual keyboard key sequences for VT-100 emulation

VT-100 Key	Key Sequence	VT-100 Key	Key Sequence
Return	[Alpha] <Enter>	Enter	[Alpha] <Enter>
Backspace	[Alpha] <Back Arrow>	Backspace (Delete)	[Alpha] [Alt] <Del>
Tab	[Alpha] <Tab>	Back Tab	[Alpha] [Shift] <|<->
Up Arrow	[Alpha] <Up>	Down Arrow	[Alpha] <Down>
Left Arrow	[Alpha] <Left>	Right Arrow	[Alpha] <Right>
ESC	[Func] <Esc>	PF1	[Func] <F1>
BS	[Alpha] <Back Arrow>	PF2	[Func] <F2>
LF	[Alpha] [Ctrl] <Enter>	PF3	[Func] <F3>
Hard Terminal Reset	N/A	PF4	[Func] <F4>

Table B-15: *TelnetCE Client Virtual Keyboard VT-100 Emulation Keys*

Virtual Keyboard VT-220 Emulation Keys

Table B-16 shows TelnetCE Client virtual keyboard key sequences for VT-220 emulation.

VT-220 Key	Key Sequence	VT-220 Key	Key Sequence
Return	[Alpha] <Enter>	Enter	[Alpha] <Enter>
Backspace	[Alpha] [Ctrl] <Back Arrow>	Backspace (Delete)	[Alpha] [Alt] <Del>

Table B-16: *TelnetCE Client Virtual Keyboard VT-220 Emulation Keys*

VT-220 Key	Key Sequence	VT-220 Key	Key Sequence
Tab	[Alpha] <Tab>	Back Tab	[Alpha] [SHFT] <|<->
Up Arrow	[Alpha] <Up>	Down Arrow	[Alpha] <Down>
Left Arrow	[Alpha] <Left>	Right Arrow	[Alpha] <Right>
Hard Terminal Reset	N/A	Soft Terminal Reset	N/A
Find	[Func} <Find>	Select	[Func] <Sel>
Insert Here	[Num] <Ins>	Remove	[Num] <Rem>
Prev Screen	[Cfg] <Prev Sess>	Next Screen	[Cfg] <Next Sess>
PF1	[Func] <F1>	F11	[Func] [SHFT} <F11>
PF2	[Func] <F2>	F12	[Func] [SHFT} <F12>
PF3	[Func] <F3>	F13	[Func] [SHFT} <F33>
PF4	[Func] <F4>	F14	[Func] [SHFT} <F14>
BREAK*	N/A	F15//Help	[Func] [SHFT} <F15>
F6	[Func] <F6>	F16/Do	[Func] [SHFT} <F16>
F7	[Func] <F7>	F17	[Func] [SHFT} <F17>
F8	[Func] <F8>	F18	[Func] [SHFT} <F18>
F9	[Func] <F9>	F19	[Func] [SHFT} <F19>
F10	[Func] <F10>	F20	[Func] [SHFT} <F20>

Table B-16: *TelnetCE Client Virtual Keyboard VT-220 Emulation Keys*

Virtual Keyboard VT Emulation Character Map

Table B-17 shows the TelnetCE Client virtual keyboard character map for VT emulation.

Character	Key Sequence	Character	Key Sequence
^@	[Alpha] [Ctrl] <@>	@	[Punc] <@>
^A	[Alpha] [Ctrl] <A>	A	[Alpha] [SHFT] <A>

Table B-17: *TelnetCE Client Virtual Keyboard VT Emulation Character Map*

Character	Key Sequence	Character	Key Sequence
^B	[Alpha] [Ctrl] <B>	B	[Alpha] [SHFT] <B>
^C	[Alpha] [Ctrl] <C>	C	[Alpha] [SHFT] <C>
^D	[Alpha] [Ctrl] <D>	D	[Alpha] [SHFT] <D>
^E	[Alpha] [Ctrl] <E>	E	[Alpha] [SHFT] <E>
^F	[Alpha] [Ctrl] <F>	F	[Alpha] [SHFT] <F>
^G	[Alpha] [Ctrl] <G>	G	[Alpha] [SHFT] <G>
^H	[Alpha] [Ctrl] <H>	H	[Alpha] [SHFT] <H>
^I	[Alpha] [Ctrl] <I>	I	[Alpha] [SHFT] <I>
^J	[Alpha] [Ctrl] <J>	J	[Alpha] [SHFT] <J>
^K	[Alpha] [Ctrl] <K>	K	[Alpha] [SHFT] <K>
^L	[Alpha] [Ctrl] <L>	L	[Alpha] [SHFT] <L>
^M	[Alpha] [Ctrl] <M>	M	[Alpha] [SHFT] <M>
^N	[Alpha] [Ctrl] <N>	N	[Alpha] [SHFT] <N>
^O	[Alpha] [Ctrl] <O>	O	[Alpha] [SHFT] <O>
^P	[Alpha] [Ctrl] <P>	P	[Alpha] [SHFT] <P>
^Q	[Alpha] [Ctrl] <Q>	Q	[Alpha] [SHFT] <Q>
^R	[Alpha] [Ctrl] <R>	R	[Alpha] [SHFT] <R>
^S	[Alpha] [Ctrl] <S>	S	[Alpha] [SHFT] <S>
^T	[Alpha] [Ctrl] <T>	T	[Alpha] [SHFT] <T>
^U	[Alpha] [Ctrl] <U>	U	[Alpha] [SHFT] <U>
^V	[Alpha] [Ctrl] <V>	V	[Alpha] [SHFT] <V>
^W	[Alpha] [Ctrl] <W>	W	[Alpha] [SHFT] <W>
^X	[Alpha] [Ctrl] <X>	X	[Alpha] [SHFT] <X>
^Y	[Alpha] [Ctrl] <Y>	Y	[Alpha][SHFT] <Y>
^Z	[Alpha] [Ctrl] <Z>	Z	[Alpha] [SHFT] <Z>
ESC	[Alpha] [Ctrl] <Esc>	[	[Punc] <[>
^\	[Alpha] [Ctrl] <\>	\	[Punc] <\>
^]	[Alpha] [Ctrl] <]>	]	[Punc] <]>
^^	[Alpha] [Ctrl] <^>	^	[Punc] <^>
^_	[Alpha] [Ctrl] <_>	_	[Punc] <_>
SPACE	[Alpha] <Space>	‘	[Punc] <‘>
!	[Punc] <!>	a	[Alpha] <a>
“	[Punc] <“>	b	[Alpha] <b>
#	[Punc] <#>	c	[Alpha] <c>

Table B-17: *TelnetCE Client Virtual Keyboard VT Emulation Character Map*

Character	Key Sequence	Character	Key Sequence
$	[Punc] <$>	d	[Alpha] <d>
%	[Punc] <%>	e	[Alpha] <e>
&	[Punc] <&>	f	[Alpha] <f>
‘	[Punc] <‘>	g	[Alpha] <g>
(	[Punc] <(>	h	[Alpha] <h>
)	[Punc] <)>	i	[Alpha] <i>
*	[Punc] <*>	j	[Alpha] <j>
+	[Punc] <+>	k	[Alpha] <k>
,	[Punc] <,>	l	[Alpha] <l>
-	[Punc] <->	m	[Alpha] <m>
.	[Punc] <.>	n	[Alpha] <n>
/	[Punc] </>	o	[Alpha] <o>
0	[Num] <0>	p	[Alpha] <p>
1	[Num] <1>	q	[Alpha] <q>
2	[Num] <2>	r	[Alpha] <r>
3	[Num] <3>	s	[Alpha] <s>
4	[Num] <4>	t	[Alpha] <t>
5	[Num] <5>	u	[Alpha] <u>
6	[Num] <6>	v	[Alpha] <v>
7	[Num] <7>	w	[Alpha] <w>
8	[Num] <8>	x	[Alpha] <x>
9	[Num] <9>	y	[Alpha] <y>
:	[Punc] <:>	z	[Alpha] <z>
;	[Punc] <;>	{	[Punc] <{>
<	[Punc] <<>	|	[Punc] <|>
=	[Punc] <=>	}	[Punc] <}>
>	[Punc] <>>	~	[Punc] <~>
?	[Punc] <?>		

Table B-17: *TelnetCE Client Virtual Keyboard VT Emulation Character Map*

Glossary

802.11/a/b The IEEE standards for wireless Ethernet. 802.11 provides for wireless networking speeds up to 2 Mbps at 2.4 GHz. 802.11b provides wireless networking speeds up to 11 Mbps at 2.4 GHz. 802.11a provides wireless networking speeds up to 54 Mbps at 5 GHz.

access point A device that acts as a bridge between wireless LANs and wired LANs.

ad hoc mode A mode of operation in wireless networks wherein wireless devices communicate directly with each other without the use of an access point. Also sometimes refered to as peer-to-peer mode or an independent basic service set (IBSS).

Agent In the context of Avalanche Manager, an Avalanche Agent. See *Avalanche Agent*.

AP Access Point. See *Access Point*.

automatic WEP A dynamic implementation of WEP keys, wherein the key used on the wireless network changes periodically. Clients must synchronize their WEP key use with the AP.

Avalanche Agent An Avalanche Manager Agent. A software component that provides the core functionality of Avalanche Manager. The Agent facilitates communication with Avalanche clients.

Avalanche Client A mobile device with an installed Avalanche Enabler, which allows the client to communicate with an Avalanche Agent and to be configured and managed through Avalanche Manager.

Avalanche Enabler A software component that is installed on mobile devices which allows you to configure and manage the device through Avalanche Manager. The Enabler faciliates communication between the mobile device and an Agent.

Avalanche Management Console	The GUI that allows you to interact with and configure Avalanche Agents.
Avalanche Manager	Wavelink Corporation's management application that allows you to configure and manage mobile devices throughout your network infrastructure.
Avalanche Monitor	A component of the Avalanche Enabler that communicates with the Avalanche Agent and, at certain times, checks for available updates.
Avalanche Update Utility	A component fo the Avalanche Enabler that provides most of the functionality. You can use the Avalanche Update Utility to configure the network parameters of the mobile device, view the progress of a download, and/or install updates that have been downloaded to the client.
Avalanche Software Package	A specially bundled piece of software, for example a firmware update to a radio card or a commonly used application, that you can download to a client through Avalanche Manager.
Avalanche Update	A download (or modification) that is available to a client through Avalanche Manager. Examples of updates include software packages and network profiles. The deletion of orphaned packages from a client through Avalanche Manager is another type of update.
BOOTP	Bootstrap Protocol. A protocol that allows clients to automatically obtain IP parameters from a BOOTP server. Precursor to DHCP.
BSS	Basic Service Set. A term used to describe an access point and associated wireless devices that are connected to a wired LAN.
client	In the context of Avalanche Manager, an Avalanche client. See *Avalanche Client*. In the context of the TNCE Client, a mobile device that connects via the TNCE Client to a host system.

DHCP Dynamic Host Configuration Protocol. An IP service that allows DHCP clients to automatically obtain IP parameters from a DHCP server.

DNS Domain Name System. A service that provides host name-to-IP address mapping.

Emulation Parameters A feature of the TNCE Client that allows you to pre-configure and install terminal emulation-related functions to a mobile device.

Emulation Parameters, global Terminal emulation-related functions that apply to all host profiles that are configured on a mobile device.

Emulation Parameters, host specific Terminal emulation-related functions that apply to only a specific host profile that is configured on a mobile device.

Enabler In the context of Avalanche Manager, an Avalanche Enabler. See *Avalanche Enabler*.

Enabler Configuration Utility A software package that allows you to configure the various Avalanche Windows Enabler settings on a client from the Avalanche Management Console.

ESS ID Extended Service Set ID. The identifier of an extended service set for devices that are participating in an infrastructure mode wireless LAN.

FTP File Transfer Protocol. A TCP-based service that provides connection-oriented file transfers.

FTP Server A host system that provides FTP services. Users are required to log into the FTP service to gain access to files that can be downloaded from the server.

gateway A device on a local network through which data to other networks is routed. Also called a router.

GUI Graphical User Interface

host A server or workstation that hosts a specific software or network service.

host profile	A service of the TNCE Client that allows you to install pre-configured host information (such as IP address and Telnet service TCP port) on mobile devices.
IBSS	Independent Basic Service Set. See *ad hoc mode*.
ICMP	Internet Control Messaging Protocol. Part of the TCP/IP protocol suite that provides services for testing IP network connections.
infrastructure mode	A wireless network configuration wherein devices communicate with each other through an access point.
IP address	Internet Protocol address. A virtual address that uniquely identifies a network connection.
LAN	Local Area Network
lease	A DHCP lease. The parameters surrounding the IP address a client has obtained from a DHCP server.
localization	A service of the TNCE Client that allows you to configure the TNCE Client to display in a specific language.
MAC address	Media Access Controller address. The hard-coded layer-2 address of a network connection which consists of a 12-digit hexadecimal number. The first 6 hexadecimal characters idenfity the manufacturer. The last 6 hexadecimal numbers are unique for each network device produced by the manufacturer. The MAC address is also sometimes called the hardware address.
management console	In the context of Avalanche Manager, the Avalanche Management Console. See *Avalanche Management Console*.
MB	Megabytes
Mbps	Megabits / Second
mobile device	A wireless device or a PC with a wireless network connection.

mobile unit A wireless device or a PC with a wireless network connection.

net mask See *subnet mask*.

network profile A set of pre-configured network parameters (ESS ID, IP address, and so forth) that can be downloaded to a client through Avalanche Manager.

orphaned package A software package that has been deployed to a client through Avalanche Manager, but has been disabled or is not recognized by the Agent. You must orphan a software package before you can use Avalanche Manager to delete it from the client.

PDT 8100 A Windows CE-based Symbol mobile device.

ping An IP service that is used to test IP connectivity. Part of the ICMP service.

RAM Random Access Memory. Volatile memory in a computer system.

RF Radio Frequency. Usually used in the context of a type of network connection.

router See *gateway*.

selection criteria A feature of Avalanche Manager that allows you to configure a set of filters that target specific mobile devices on the network. You can filter by MAC address, IP address, device type, operating system, and so forth. Selection criteria are used to target specific mobile devices on the network for Avalanche Updates.

silent install A feature of the Avalanche Enabler that allows for the installation of software packages on clients without the consent of the user at the client.

silent mode A feature of the Avalanche Enabler that allows the Avalanche Monitor to run in the background on the client in a manner that is transparent to the user at the client.

software package In the context of Avalanche Manager, an Avalanche software package. See *Avalanche Software Package*.

SSID Service Set Identifier. A unique name, up to 32 characters long, that is used to identify a wireless LAN. THe SSID is attached to wireless packets and acts as a password to connect to a specific BSS or ESS.

static WEP Static (or manual) implementation of WEP keys. When the administrator of the network changes the WEP key, users must manually select the correct key.

subnet A logical network wherein each client is participating on the same IP network.

subnet mask A type of filter that allows IP clients to determine which part of their IP address defines the network and which part defines the host.

Symbol AirBEAM An application developed by Symbol that, among other services, provides for the download of software to mobile devices. Symbol AirBEAM uses FTP or TFTP to download software packages to mobile devices, and thus requires an active FTP server on the network. Downloading software packages to mobile devices through Symbol AirBEAM also requires the AirBEAM Package Builder utility.

TCP/IP Transmission Control Protocol/Internet Protocol. A suite of protocols that provides virtual addressing, connection-oriented and connectionless communication, and a number of other network services and utilities.

Telnet A TCP/IP utility used for terminal emulation, which allows a client to connect and interact with a remote host system.

TFTP Trivial File Transfer Protocol. A UDP-based service that provides connectionless file transfers.

TelnetCE Client Wavelink Corporation application that provides client-side terminal emulation services for Microsoft Windows CE-based mobile devices.

update In the context of Avalanche Manager, an Avalanche update. See *Avalanche Update*.

VRC 7900/8900 A Symbol vehicle-mounted mobile device that runs on the Microsoft Windows CE operating system.

WEP Wired Equivalent Privacy. An encryption standard for wireless networks that provides the equivalent security of a wired connection for wireless transmissions.

Windows CE A Microsoft Windows-based operating system for mobile devices.

Windows Enabler An Avalanche Enabler that is designed for Microsoft Windows 9x/ME/NT/2000/XP systems with installed 802.11b wireless cards.

WINS Windows Internet Naming Service. A service that provides Windows Name-to-IP address mapping.

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