



PPT 2700 Series Terminal



Product Reference Guide



***PPT 2700 Series Terminal
Product Reference Guide***

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Revision A

September 2000



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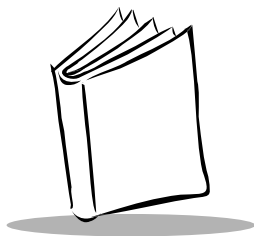
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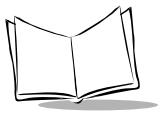
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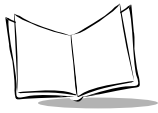
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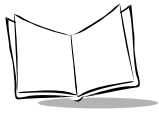
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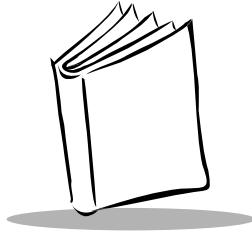
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About This Guide

Introduction

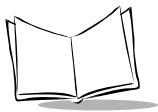
The *PPT 2700 Series Product Reference Guide* provides information about the PPT 2700 Series terminal and its accessories. The PPT 2700 Series includes the following variations of the terminal:

- ◆ PPT 2700: batch
- ◆ PPT 274x: Spectrum24 radio
- ◆ PPT 273x: Wide Area Network (WAN) terminals (GSM and CDPD).

Chapter Descriptions

Topics covered in this guide are as follows:

- ◆ *Chapter 1, Getting Started* explains the physical buttons and controls on your PPT 2700 terminal, how to install and charge the batteries, start your PPT 2700 terminal for the first time, and attach the handstrap.
- ◆ *Chapter 2, Operating the PPT 2700* explains how to use your terminal, including instructions for powering on and resetting the terminal, entering information, scanning, and using the stylus.
- ◆ *Chapter 3, Customizing Your PPT 2700* explains how to adjust settings on the terminal, and add and delete programs.
- ◆ *Chapter 4, Communications* explains how to use Microsoft® ActiveSync™ for communications between the terminal and host PC.
- ◆ *Chapter 5, Applications* describes how to use the Calendar, Contacts, Tasks, Notes and Inbox applications.



- ◆ *Chapter 6, Pocket Internet Explorer* explains how to set up favorite links and channels, and browse the web on your terminal.
- ◆ *Chapter 7, Connections* describes how to connect the terminal to your network and e-mail server, and transfer information via infrared.
- ◆ *Chapter 8, Spectrum24 Network Configuration* describes NICTT and Spectrum24 Settings Control Panel Applet, the utilities that monitor and configure the Spectrum24 wireless connection.
- ◆ *Chapter 9, Software Installation on Development PC* provides instructions for installing the Software Developer's Kit on your host PC.
- ◆ *Chapter 10, Configuring the Terminal* describes how to install and use the Terminal Configuration Manager (TCM) and Initial Program Loader (IPL).
- ◆ *Chapter 11, Maintenance and Troubleshooting* provides information to help you take proper care of your PPT 2700 terminal and solve problems that may come up.
- ◆ *Appendix A, Demo Program* provides an overview of the PPT 2700 demo program applications, such as scanning, setup, diagnostic utilities, and file management.
- ◆ *Appendix B, Character Recognizer* details how to write letters on your terminal so they are correctly translated into text.
- ◆ *Appendix C, Technical Specifications* includes a table listing the technical specifications for the terminal.

Notational Conventions

This document uses these conventions:

- ◆ “terminal” or “PPT 2700” refers to any model of PPT 2700.
- ◆ “User” refers to anyone using an application on the PPT 2700.
- ◆ “You” refers to the End User, System Administrator or Technical Support person using this manual as a reference to install, configure, operate, maintain and troubleshoot the PPT 2700.
- ◆ Italics are used to highlight specific items in the general text, and to identify chapters and sections in this and related documents. It also identifies names of dialog boxes and tabs within dialog boxes.
- ◆ Bullets (◆) indicate:
 - ◆ lists of alternatives or action items.
 - ◆ lists of required steps that are not necessarily sequential.

- ◆ Numbered lists indicate a set of sequential steps, i.e., those that describe step-by-step procedures.

Related Documents

The following documents provide more information on your PPT 2700 terminal.

- ◆ *PPT 2700 Quick Reference Guide*, p/n 70-38705-xx.
- ◆ *CRD 2700-1000S Cradle Quick Reference Guide*, p/n 70-38707-xx.
- ◆ *Symbol Software Developer's Kit (SDK) for the PPT 2700 Pocket PC*, available at www.symbol.com/pocketpc/downloads.

Service Information

If you have a problem with the PPT 2700 equipment, contact the Symbol Support Center. If your problem cannot be resolved over the phone, you may need to return your equipment for servicing. If that is necessary, you will be given special directions.

Note: *Symbol Technologies is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty. If the original shipping container has not been kept, contact Symbol to have another sent to you.*

Symbol Support Centers

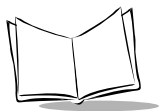
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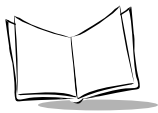
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Customer accepts full responsibility for its software and data including the appropriate backup thereof. Repair or replacement of a product during warranty will not extend the original warranty term.

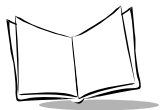
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General

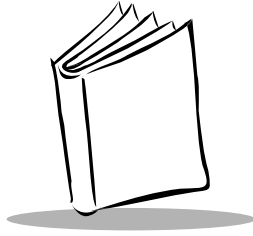
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PPT 2700 Series Product Reference Guide



Chapter 1

Getting Started

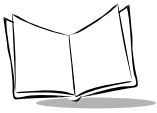
Introduction

This chapter explains the physical buttons and controls on your PPT 2700 terminal, how to install and charge the batteries, attach the handstrap, and start your PPT 2700 terminal for the first time.

Unpacking the Terminal

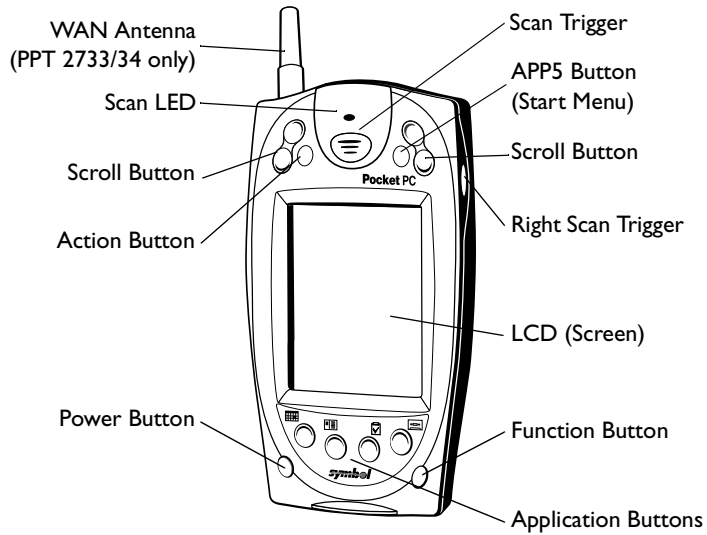
Carefully remove all protective material from around the terminal and save the shipping container for later storage and shipping.

Verify that you received all equipment listed on the packing slip and inspect the equipment for damage. If you are missing any equipment or if you find any damaged equipment, contact the Symbol Technologies Support Center immediately. See [page xi](#) for contact information.



Parts of the PPT 2700

Front View



Left View

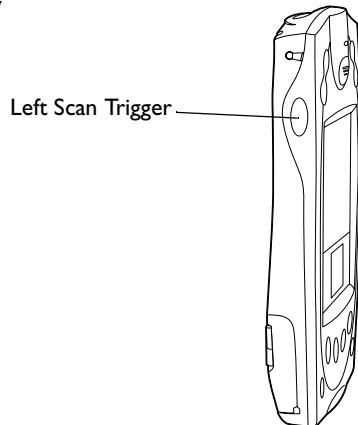


Figure I-1. Parts of the PPT 2700

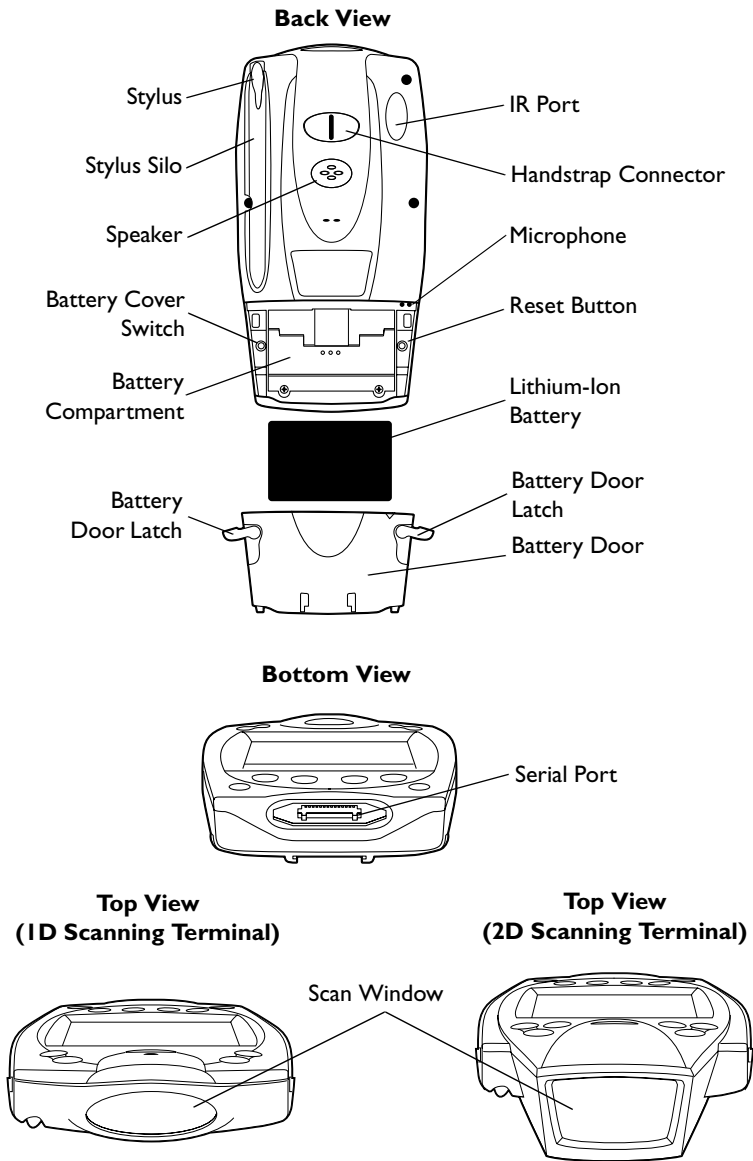
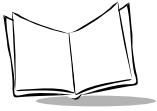


Figure I-1. Parts of the PPT 2700 (continued)



Installing Batteries

Before using your PPT 2700, install a lithium-ion battery. The battery fits behind the battery door on the back of the PPT 2700.

To install the battery in your PPT 2700:

1. Open the latches on the battery cover and lift the battery cover away from the PPT 2700.

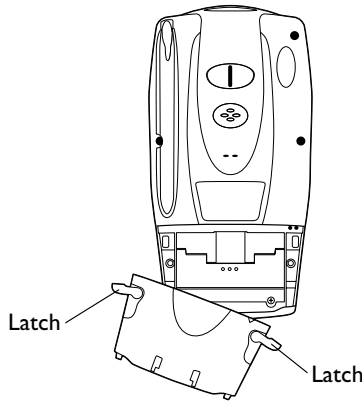


Figure I-2. Removing the Battery Cover

2. Insert the lithium-ion battery in the battery compartment with the battery tether positioned properly (as shown below), making sure the battery snaps into place.

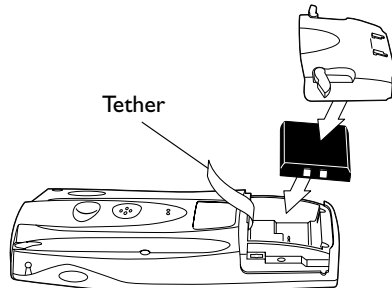


Figure I-3. Inserting the Battery

3. Replace the battery cover and press down firmly on the cover while re-securing the latches.

Note: *Be careful to position the battery latches completely open while securing the battery cover on the terminal.*

Charge the battery in the terminal for approximately 2 1/2 hours before initial use.

Charging the Battery

Before using your terminal for the first time, charge the battery. Also, when battery voltage is low, a warning message appears indicating the battery needs to be charged. You can charge the battery using either the CRD 2700 cradle or the Synchronization Cable.

Your terminal is equipped with a memory backup battery which automatically charges from the fully-charged lithium-ion battery. This backup battery retains data in memory when the terminal's battery is removed, and takes several hours to charge when you first use your terminal.

Note: *If you remove your lithium-ion battery before the backup battery is fully charged, data may be lost. For this reason, DO NOT remove the battery within the first ten hours of use.*

Using the Cradle to Charge the Battery

To charge the terminal's battery using the CRD 2700 cradle:

1. Connect the power supply to the power port on the back of the cradle, and the other end of the power supply to a wall outlet.

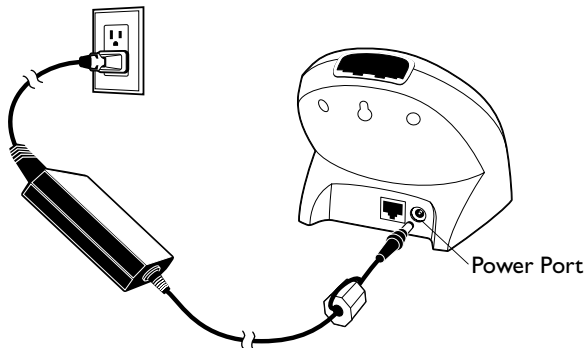
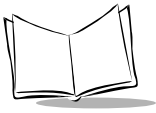


Figure I-4. Connecting the Power Supply



2. Connect the cradle to your computer by plugging the serial cable into the serial port on the back of the cradle, and the other end of the cable into the serial port on your computer.

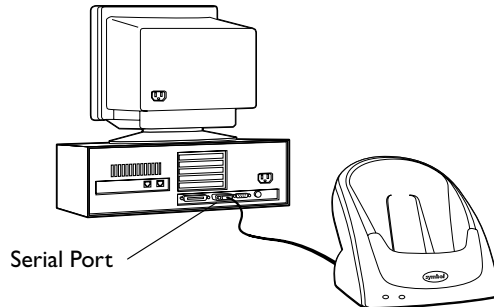


Figure I-5. Connecting the Cradle to the Host Computer

3. Insert the PPT 2700 terminal in the cradle.

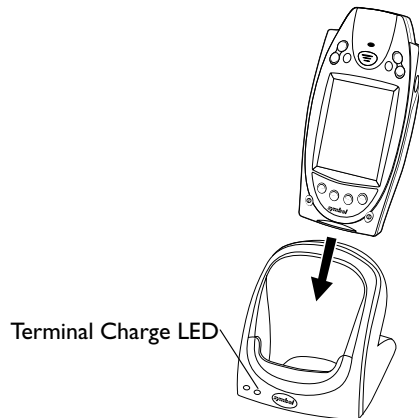


Figure I-6. Inserting the Terminal in the Cradle

4. The Terminal Charge LED turns red to indicate charging, then green when the battery is fully charged.

Note: *If the cradle is not connected to the host computer via serial cable, the Terminal Charge LED shuts off when the battery is fully charged.*

The terminal's battery is fully charged after approximately 2 1/2 hours.

Note: *If the battery in the terminal is low, the Terminal Charge LED may flicker or turn yellow during an ActiveSync operation. The LED returns to red when the operation is complete.*

Charging Spare Batteries

To charge a spare battery, insert the battery in the spare battery charging slot in the back of the cradle, oriented so the contacts are facing down and towards the back of the cradle. Press the battery down into the slot until firmly seated.

The Spare Battery Charge LED turns red to indicate charging, then green when the battery is fully charged. The battery is fully charged after approximately 2 1/2 hours.

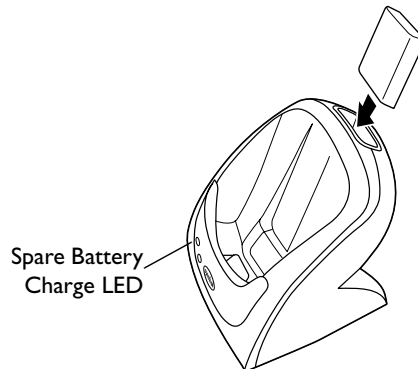
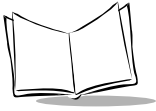


Figure I-7. Charging the Spare Battery



Using the Synchronization Cable to Charge the Battery

To charge the terminal's battery using the optional Synchronization Cable:

1. Insert the cable into the bottom of the terminal.

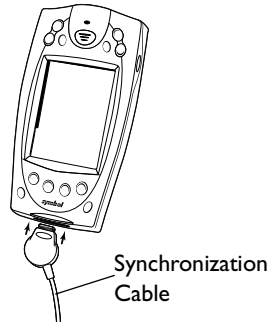


Figure I-8. Inserting the Cable in the Terminal

2. Plug the power cable into a wall outlet and plug the other end into the battery charging receptacle on the side of the Synchronization Cable.

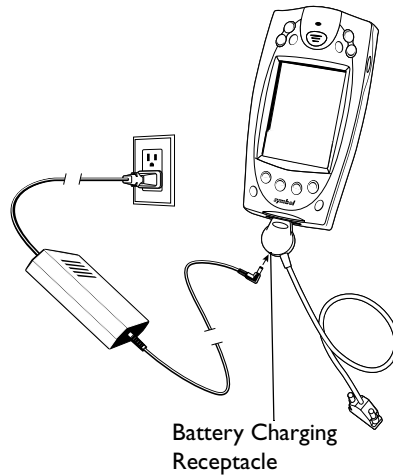


Figure I-9. Connecting the Power Cable

Attaching the Handstrap

The PPT 2700 has an optional handstrap which increases comfort when holding the terminal for extended periods of time. To attach the handstrap to the back of the terminal:

1. Thread the round metal piece through the metal handstrap connector on the back of the terminal.
2. Slide the flat metal piece into the handstrap connection on the bottom of the terminal.

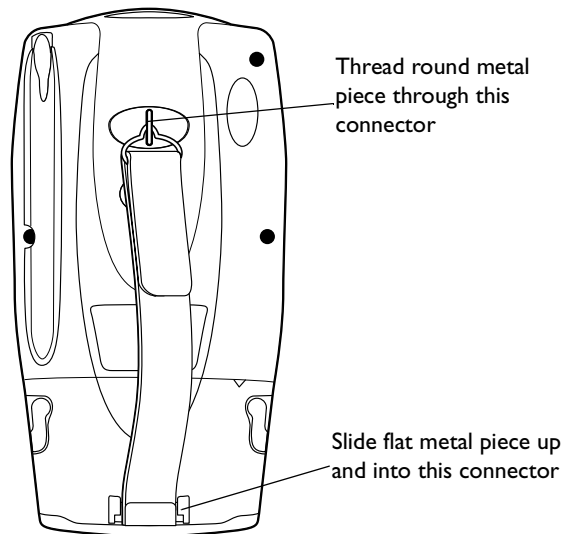


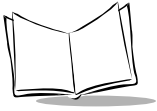
Figure I-10. Attaching the Handstrap

3. Adjust the velcro strap to fit your hand.

Attaching the Wrist Strap

An optional wrist strap is available from Symbol which helps prevent damage to the terminal if you drop it. To attach the wrist strap:

1. Thread the elastic band on the wrist strap through the metal handstrap connector on the back of the terminal.



2. Slip the strap through the elastic band on the other side of the connector, and pull it through to secure the strap to the connector.

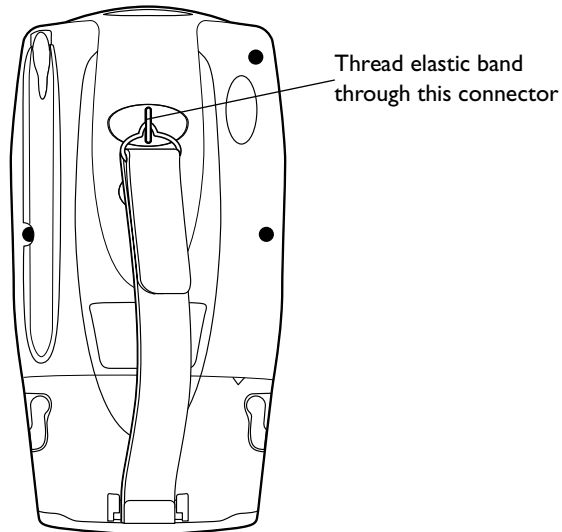


Figure I-11. Attaching the Wriststrap

3. Slide your hand through the strap.

Starting the PPT 2700

After installing and charging the battery, start the terminal by pressing the red power button. If the terminal does not power on, reset it. See [Performing a Cold Boot](#) on page 2-13.

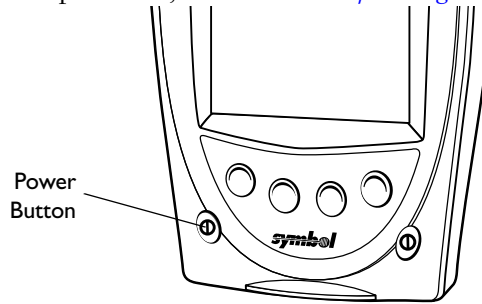


Figure I-12. Power Button

As the terminal initializes its unique Flash File system, the Symbol splash screen displays for about a minute. When the Welcome screen appears, tap anywhere on the screen to continue to the Align screen.

Aligning the Screen

To align your PPT 2700 so the cursor on the touch screen aligns with the tip of your stylus:

1. If necessary, adjust the contrast on the PPT 2700 so the screen is clear and readable. See [Controlling the Contrast/Backlight](#) on page 2-1 for instructions.
2. Remove the stylus from its storage silo on the back of the PPT 2700.
3. Tap the center of each target that appears on the screen with the tip of the stylus.

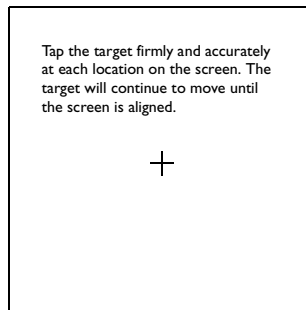
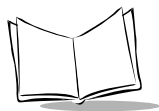


Figure I-13. Tapping the Target



- Follow the directions on the screen which lead you through a simple exercise illustrating how to use the stylus and pop-up menu.

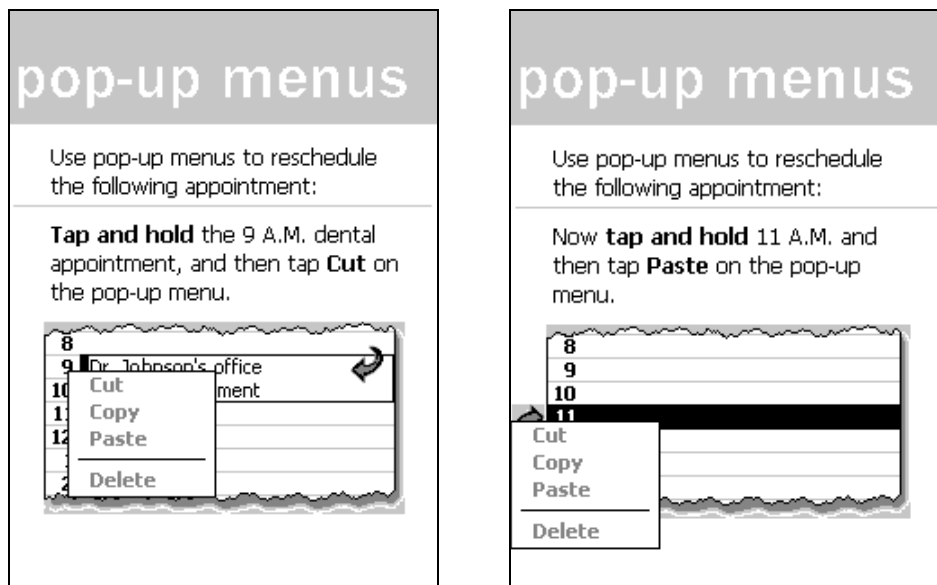


Figure I-14. Using Pop-up Menus

5. Use the drop-down menus to set your city and time zone, and tap Next.

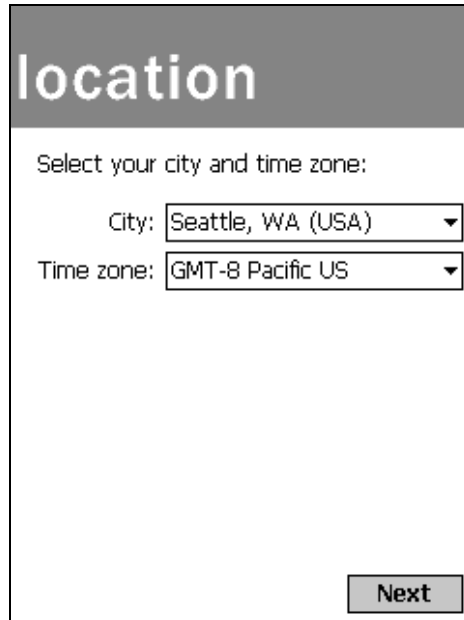


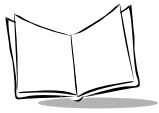
Figure I-15. Setting City and Time Zone on the PPT 2700

Note: *These initial setup screens appear each time you perform a hard reset.*

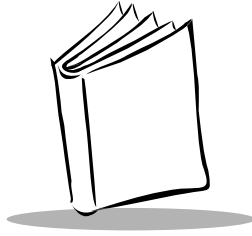
Setting Up Your Terminal

Refer to the following chapters for setting up your terminal:

- ♦ For customizing the settings on your PPT 2700, see [Chapter 3, Customizing Your PPT 2700](#).
- ♦ To configure your PPT 274X for Spectrum24, see [Chapter 8, Spectrum24 Network Configuration](#).
- ♦ To install development software on your development PC, see [Chapter 9, Software Installation on Development PC](#).
- ♦ To configure your terminal using the Terminal Configuration Manager, see [Chapter 10, Configuring the Terminal](#).



PPT 2700 Series Product Reference Guide



Chapter 2

Operating the PPT 2700

Introduction

This chapter provides basic instructions for using and navigating your PPT 2700 terminal.

Using the Power Button

Press the power button on the lower left-hand side of the terminal to turn the PPT 2700 on and off.

Controlling the Contrast/Backlight

The Function button allows you to adjust the contrast of the screen and control the backlight.

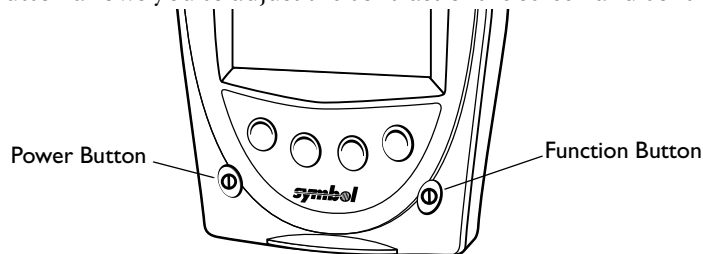
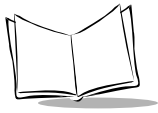


Figure 2-1. Power and Function Buttons

To adjust the contrast:

1. Press and hold the Function button.



2. Press the “up” scroll button at the top of the terminal to darken the screen, or the “down” scroll button to lighten the screen.

To turn the backlight on or off:

1. Press and hold the Function button.
2. Press any Application button.

Using the Stylus

Your PPT 2700 has a stylus for selecting items and entering information. The stylus functions as a mouse.

- ♦ **Tap:** Touch the screen once with the stylus to open items and select options.
- ♦ **Drag:** Hold the stylus on the screen and drag across the screen to select text and images. Drag in a list to select multiple items.
- ♦ **Tap-and-hold:** Tap and hold the stylus on an item to see a list of actions available for that item. On the pop-up menu that appears, tap the action you want to perform.

Today Screen

When you turn on your terminal for the first time each day (or after 4 hours of inactivity), the Today screen appears. You can also display it by tapping , then Today. On the Today screen, you can see important information for the day.

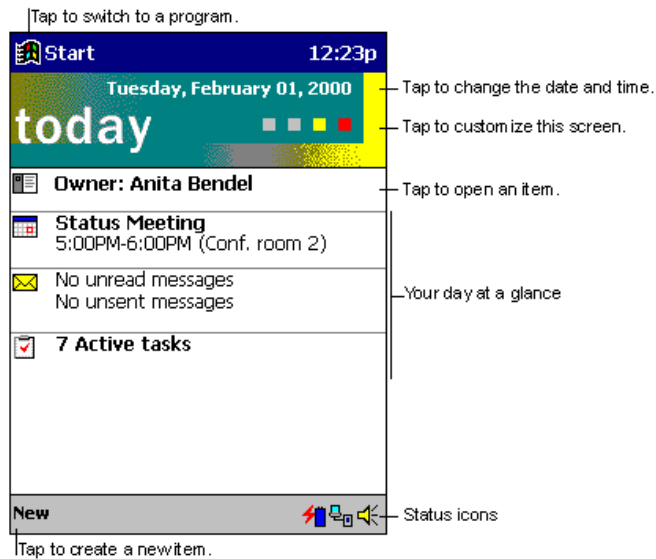


Figure 2-2. Today Screen

You may see the following status icons on the command bar located at the bottom of the screen:

Table 2-1. Status Icons

Icon	Meaning
	Turns all sounds on and off.
	Backup battery is low.
	Backup battery is very low.
	Main batteries are charging.
	Main batteries are low.

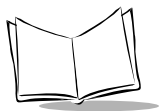


Table 2-1. Status Icons (continued)

Icon	Meaning
	Main batteries are very low.
	External (AC) power source is connected.
	Dial-up connection is active.
	Direct connection is active.

Selecting Programs

To select a program, tap , Programs, then the program name. (To select which programs appear on this menu, see [Adjusting Settings](#) on page 3-1.)

Note: Some programs have abbreviated labels for check boxes and drop-down menus. To see the full label, hold the stylus on the label. Drag the stylus off the label so that the command is not carried out.

[Table 2-2](#) lists the default programs you can access by pressing an application button on the front of the terminal. The icons on the buttons identify the programs they access.

Table 2-2. Program icons

Icon	Button	Program	Description
	App 1	Calendar	Keep track of your appointments and create meeting requests.
	App 2	Contacts	Keep track of your friends and colleagues.
	App 3	Tasks	Keep track of your tasks.
	App 4	Notes	Create handwritten or typed notes, drawings, and recordings.

You can assign a different application to each application button. See [Chapter 3, Customizing Your PPT 2700](#).

Using the Navigation Bar and Command Bar

The navigation bar at the top of the screen displays the active program and current time, and allows you to select programs and close screens.

Use the command bar at the bottom of the screen to perform tasks in programs. The command bar includes menu names, buttons, and the input panel button. To create a new item in the current program, tap **New**. To see the name of a button, tap and hold the stylus on the button. Drag the stylus off the button so that the command is not carried out.

Using Pop-up Menus

With pop-up menus, you can quickly choose an action for an item. For example, use the pop-up menu in the contact list to delete a contact, make a copy of a contact, or send an e-mail message to a contact. The actions in the pop-up menu vary from program to program.

To access a pop-up menu, hold the stylus on the item you want to perform the action on. When the menu appears, lift the stylus, and tap the action to perform, or tap outside the menu to close it without performing an action.

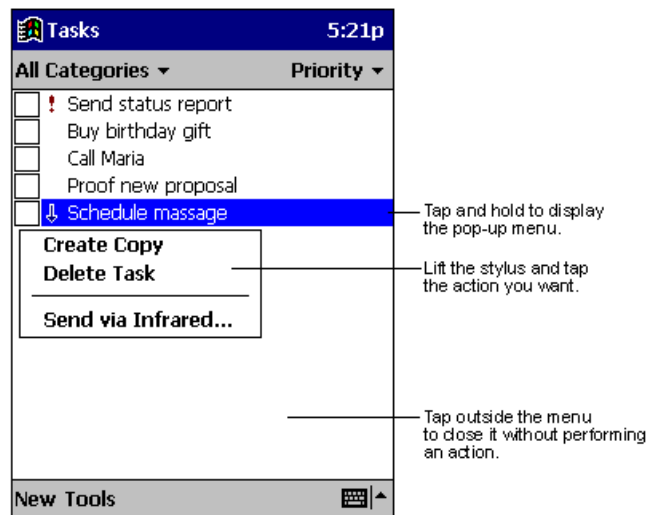
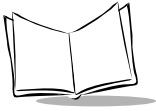


Figure 2-3. Pop-up Menu



Entering Information

To enter information, you may:

- ♦ Use the input panel to enter typed text, either using the soft keyboard or Character Recognizer.
- ♦ Write directly on the screen.
- ♦ Draw pictures on the screen.
- ♦ Use ActiveSync to synchronize or copy information from your desktop computer to your terminal. For more information on ActiveSync, see [Chapter 4, Communications](#) or ActiveSync Help on your desktop computer.

Typing Using the Input Panel

Use the input panel to enter information in any program. You can either type using the soft keyboard or write using Character Recognizer. In either case, the characters appear as typed text on the screen.

To show or hide the input panel, tap the **Input Panel** button. Tap the arrow next to this button to see your choices.

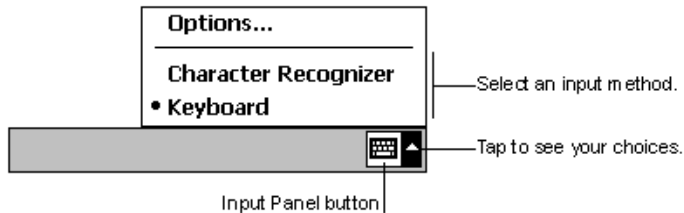


Figure 2-4. Input Panel Button

When you use the input panel, your terminal anticipates the word you are typing or writing and displays it above the input panel. When you tap the displayed word, it is inserted into your text at the insertion point. The more you use your terminal, the more words it learns to anticipate.

To change word suggestion options, such as the number of words suggested at one time, tap , **Settings**, **Personal** tab, **Input**, then the **Word Completion** tab.

To type with the soft keyboard:

1. Tap the arrow next to the **Input Panel** button, then **Keyboard**.

2. On the soft keyboard that is displayed, tap the keys with your stylus.

To use Character Recognizer:

1. Tap the arrow next to the **Input Panel** button, then **Character Recognizer**.
2. Write a letter in the box.

When you write a letter, it is converted to typed text that appears on the screen. For instructions on using Character Recognizer, see [Appendix B, Character Recognizer](#).

Selecting Text

To edit or format typed text, select it by dragging the stylus across the text. Cut, copy, and/or paste text by holding the selected words then tapping an editing command on the pop-up menu, or by tapping the command on the Edit menu.

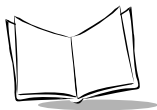
Writing on the Screen

In any program that accepts writing, such as the Notes program and the Notes tab in Calendar, Contacts, and Tasks, you can use your stylus to write directly on the screen.

To write on the screen, tap the Pen button to switch to writing mode. Lines appear on the screen to help you write.



Figure 2-5. Writing on the Screen



Note: *Some programs that accept writing do not have the Pen button. See the documentation for that program to find out how to switch to writing mode.*

Selecting Writing

To select writing to edit or format:

1. Tap and hold the stylus next to the text you want to select until the insertion point appears.
2. Drag the stylus across the text.

If you accidentally write on the screen, tap **Tools**, then **Undo** and try again. You can also select text by tapping the Pen button to deselect it, then dragging the stylus across the screen.

You can cut, copy, and paste written text in the same way you work with typed text: tap and hold the selected words, then tap the command from the pop-up menu, or select the command from the Edit menu.

Drawing on the Screen

Drawing on the screen is similar to writing on the screen. To create a drawing, cross three ruled lines on your first stroke. A drawing box appears. Subsequent strokes in or touching the drawing box become part of the drawing. Drawings that do not cross three ruled lines are treated as writing.

Note: *To change the zoom level, tap **Tools**, then a zoom level.*

Selecting a Drawing

To select a drawing to edit or format, tap and hold the stylus on the drawing until the selection handle appears.

To select multiple drawings, deselect the Pen button, then drag to select the drawings you want.

To cut, copy, and paste drawings, tap and hold the selected drawing, then tap an editing command on the pop-up menu, or tap the command on the Edit menu. To resize a drawing, deselect the Pen button and drag a selection handle.

Recording a Message

You may record a message to capture thoughts, reminders, and phone numbers. In Calendar, Tasks, and Contacts, you can include a recording in the **Notes** tab. In the Notes program, you can either create a stand-alone recording or include a recording in a written note. If you want to include the recording in a note, open the note first.

To create a recording:

1. Tap the tape icon to display the voice bar.
2. Hold the terminal's microphone near your mouth or other source of sound.
3. Tap the Record button. A beep sounds, instructing you to begin recording.
4. Make your recording.
5. When you are finished, tap the Stop button. Two beeps sound. The new recording appears in the note list or as an embedded icon.

To play a recording, tap it in the list or tap its icon in the note.

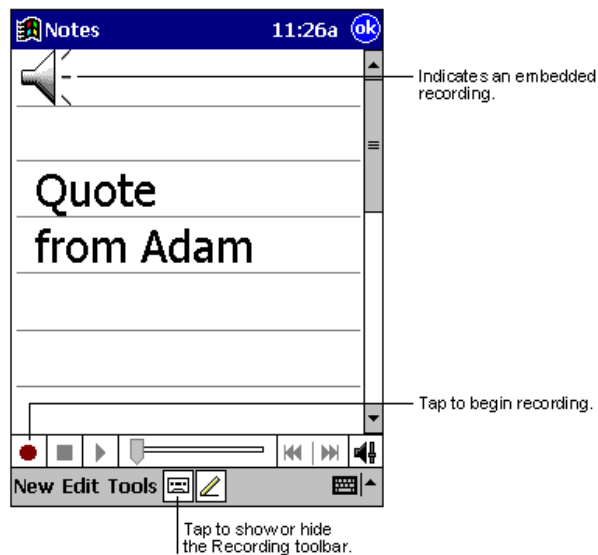
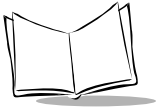


Figure 2-6. Recording Screen



Finding Information

The Find feature locates information. On the  menu, tap **Find**. Enter the text you want to find, select a data type, then tap **Go**.

To find information taking up storage space on your terminal, select **Larger than 64 KB** in **Type**.

You can also use the File Explorer to find files and organize them into folders. On the  menu, tap **Programs**, then **File Explorer**.

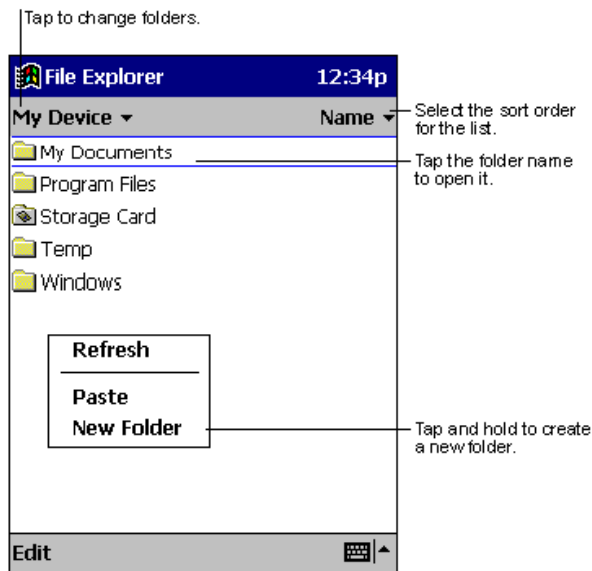


Figure 2-7. File Explorer

Note: To move files in File Explorer, tap and hold the item, then tap **Cut** or **Copy** and **Paste** on the pop-up menu.

Scanning

The PPT 2700 has an integrated scanner which allows you to collect data by scanning 1 or 2 dimensional bar codes. See [Appendix A, Demo Program](#) for a sample scanning application.

To scan bar codes with the PPT 2700:

1. Aim the scan window at the bar code.
2. Press either the right, left, or center scan trigger. Make sure the red scan beam covers the entire bar code. The green scan LED lights and a beep sounds to indicate a successful decode.

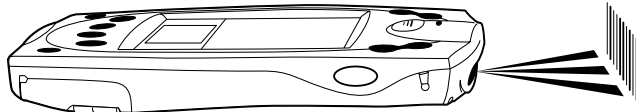


Figure 2-8. Scanning

Scanning PDF417 Bar Codes

The 2D scanning PPT 2700 terminal supports PDF417 bar code scanning. The raster pattern has multiple scanning rows to accommodate the PDF417 symbol's multiple rows.

1. Point the scanner at the bar code and press the trigger.
2. Center the aiming pattern (a spot or slab raster, as programmed) on the bar code.
3. As the raster pattern spreads, keep the pattern in the same horizontal plane as the bar code.

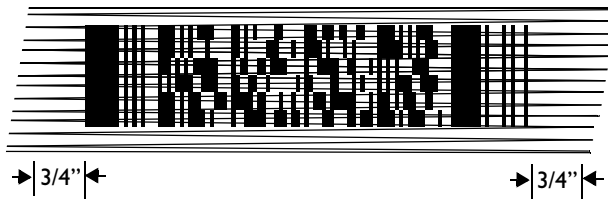
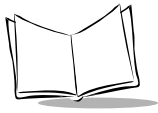


Figure 2-9. Raster Pattern

4. The terminal indicates a successful scan by changing the LED from red to green, beeping one or more times, and/or displaying the bar code data on the screen.



“Tall” PDF Bar Codes

If the PDF417 symbol is “tall,” the vertical scan pattern may not be high enough to cover it.

In this case, try a slow “up and down” scanning motion. With the raster pattern open, move the terminal slowly down toward the bottom of the symbol, keeping the beam horizontal to the rows, then slowly back up toward the top.

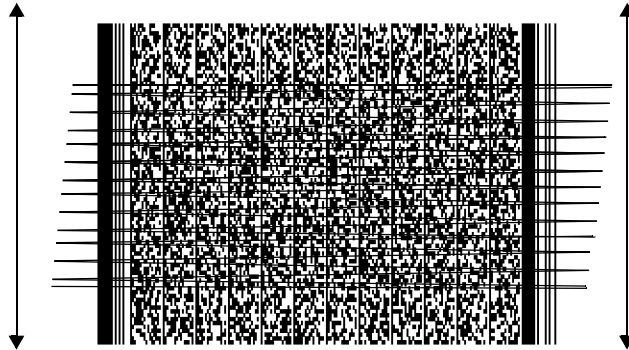


Figure 2-10. Scanning Tall PDF Bar Code

The scan beam does not have to be *perfectly* parallel with the top and bottom of the symbol (up to a 4° tilt will work).

Resetting Your PPT 2700 Terminal

If your PPT 2700 terminal stops responding to input from buttons or the screen, you must reset it by performing a warm or cold boot.

Performing a Warm Boot

A warm boot restarts the terminal and saves all stored records and entries.

Caution

Files that remain open during a warm boot may not be retained.

To perform a warm boot, hold down both the up and down scroll buttons, then press the App 4 button.

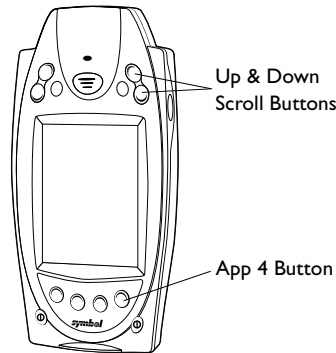


Figure 2-1. Warm Boot Buttons

Performing a Cold Boot

A cold boot also restarts your PPT 2700 terminal, but erases all stored records and entries. *Therefore, never perform a cold boot unless a warm boot does not solve your problem.*

Note: *You can restore any data previously synchronized with your computer during the next ActiveSync operation.*

To perform a cold boot:

1. Remove the battery cover.
2. While holding down the Function button, use the tip of the stylus (or similar object *without* a sharp tip) to gently press the reset button.

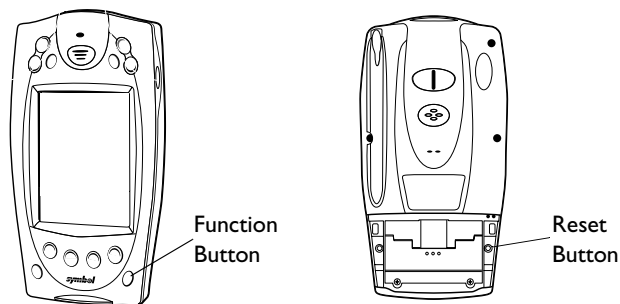
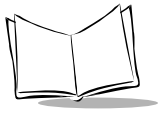
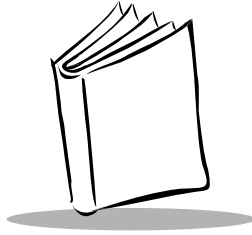


Figure 2-2. Cold Boot Buttons



3. Replace the battery cover and press the Power button.
4. As the terminal initializes its unique Flash File system, the Symbol splash screen displays for about a minute.
5. See [Aligning the Screen](#) on page 1-11 to perform an initial setup of the terminal.

Note: *With a cold boot, the current date and time, formats, preferences, and other settings are restored to their factory default settings.*



Chapter 3

Customizing Your PPT 2700

Introduction

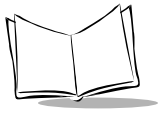
This chapter provides basic instructions for customizing your terminal by adjusting settings and installing additional software.

Adjusting Settings

To view available options for your terminal settings, tap , **Settings**, then the **Personal** or **System** tab at the bottom of the screen.

You might want to adjust the following:

- ♦ **Clock:** change the time or set alarms
- ♦ **Buttons:** assign applications to the application hardware buttons
- ♦ **Menus:** customize what appears on the  menu and enable a pop-up menu from the **New** button
- ♦ **Owner Information:** enter your contact information
- ♦ **Password:** limit access to your terminal
- ♦ **Power:** maximize battery life
- ♦ **Today:** customize the information displayed on the Today screen.



Adding and Removing Programs

Programs pre-installed on your terminal are stored in ROM (read-only memory). You cannot remove, modify, or accidentally lose this software. You may add programs and data files to RAM (random access memory).

In addition to the RAM-based storage standard on Windows CE terminals, the PPT 2700 is also equipped with a non-volatile Flash-based storage area which can store data (partitions) that can not be corrupted by a cold boot. This Flash area is divided into two categories: Flash File System (FFS) Partitions and Non-FFS Partitions.

FFS Partitions

The PPT 2700 terminal includes three FFS partitions. These partitions appear to the terminal as a hard drive that the OS file system can write files to and read files from. Data is retained even if power is removed.

The three FFS Partitions appear as three separate folders in the Windows CE file system and are as follows:

- ♦ **Platform:** The Platform FFS Partition contains Symbol-supplied programs and Dynamic Link Libraries (DLLs). This FFS is configured to include DLLs that control system operation. Since these drivers are required for basic terminal operation, only experienced users should modify the content of this partition.
- ♦ **Application:** The Application FFS Partition is used to store application programs needed to operate the terminal. This partition includes the Symbol demo program, which can be overwritten with your own program.
- ♦ **Data:** The Data FFS Partition is optional and if present contains user data files generated by your custom programs. The default PPT 2700 image does not contain a Data FFS partition.

Working with FFS Partitions

Because the FFS partitions appear as folders under the Windows CE file system, they can be written to and read like any other folder. For example, an application program can write data to a file located in the Application folder just as it would to the Windows folder. However, the file in the Application folder is in non-volatile storage and is not lost on a cold boot (e.g., when power is removed for a long period of time).

Standard tools such as ActiveSync can be used to copy files to and from the FFS partitions. They appear as the “Application,” “Platform,” and “Data” folders to the ActiveSync

explorer. This is useful when installing applications on the PPT 2700. Applications stored in the Application folder are retained even when the terminal is cold booted, just as the PPT 2700 Demo program is retained in memory.

Windows CE expects certain files to be in the Windows folder, residing in volatile storage. Windows CE maintains the System Registry in volatile storage. There are two device drivers included in the Windows CE image to assist developers in configuring the terminal following a cold boot: **RegMerge** and **CopyFile**.

Regmerge

Regmerge merges registry entries with the System registry at Boot time. During a cold boot **RegMerge** looks for files with a .REG extension on the FFS partition and merges these with the system Registry. The default application partition shipped with the PPT 2700 includes the following example from the file **application.reg**:

```
[HKEY_CURRENT_USER\Software\Symbol\Launcher\Default\Programs\Prog2]
"Name" = "\\Application\ScanSamp2.exe"
"Description" = "Scanner"
"Command" = ""
```

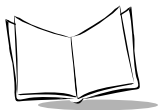
CopyFile

CopyFile copies files from one folder to another on a cold boot. Files can be copied from a non-volatile partition (Application or Platform) to the Windows or other volatile partition during a cold re-boot. During a cold boot **CopyFile** looks for files with a .CPY extension on the FFS partition. These files are text files containing the source and destination for the desired files to be copied separated by ">". The following example from the file **application.cpy** is contained on the default application partition shipped with the PPT 2700.

```
;shortcut for the blt.exe
\application\PPT 2700 Demo.lnk > \windows\start menu\PPT 2700 Demo.lnk
\application\Scout Help.lnk > \windows\help\Scout Help.lnk
\application\ScoutSync.htm > \windows\ScoutSync.htm
```

Non-FFS Partitions

Non-FFS Partitions include additional software and data pre-loaded on your terminal that can be upgraded. Unlike FFS Partitions, these partitions are not visible when the operating system is running. They also contain system information. Non-FFS Partitions include the following:



- ♦ **Windows CE:** the complete Windows CE operating system is stored on Flash devices. If necessary, the entire OS image may be downloaded to the terminal using files provided by Symbol. The current OS partition on the terminal is included as part of the TCM installation package. Any upgrades must be obtained from Symbol. This partition is mandatory for the PPT 2700.
- ♦ **Splash Screen:** a Device Independent Bitmap (DIB) smaller than 16 Kb, displayed as the terminal cold-boots. You may download a customized screen to display (see [Creating a Splash Screen](#) on page 10-18).
- ♦ **IPL (Initial Program Loader):** This program interfaces with the host computer and allows you to download via serial cable or cradle any or all of the partitions listed above, as well as updated versions of IPL. Use caution downloading updated IPL versions; incorrect downloading of an IPL causes permanent damage to your terminal. IPL is mandatory for the PPT 2700.

Downloading Partitions to the Terminal

TCM is used to specify a hex destination file for each partition and download each file to the terminal. This download requires a program loader stored on the terminal. The terminal comes with a program loading utility, Initial Program Loader (IPL), stored in the terminal's write-protected flash. See [Chapter 10, Configuring the Terminal](#) for details on using IPL and TCM to download partitions to the PPT 2700.

Adding Programs

Install the appropriate software on your desktop computer before installing it on your terminal.

1. Tap , then **Settings**. On the **System** tab, tap **About**. In the **Version** tab, note the information in **Processor**.
2. Download the program to your desktop computer (or insert the CD or disk that contains the program into your desktop computer). You may see a single *.exe file, a *.zip file, a Setup.exe file, or several versions of files for different device types and processors. Be sure to select the program designed for the Pocket PC and the PPT 2700 processor type.
3. Read any installation instructions, Read Me files, or documentation that comes with the program. Many programs provide special installation instructions.
4. Connect your terminal and desktop computer.
5. Double-click the *.exe file.

If the file is an installer, the installation wizard begins. Follow the directions on the screen. Once the software is installed on your desktop computer, the installer transfers the software to your terminal.

If the file is not an installer, an error message states that the program is valid but it is designed for a different type of computer. Move this file to your terminal. If you cannot find installation instructions for the program in the Read Me file or documentation, use ActiveSync Explore to copy the program file to the Program Files folder on your terminal. For more information on copying files using ActiveSync, see ActiveSync Help.

When installation is complete, tap , Programs, then the program icon to select it.

Adding a Program to the Start Menu

Tap , Settings, Menus, the Start Menu tab, then the check box for the program.

If you do not see the program listed, either use File Explorer to move the program to the Start Menu folder or use ActiveSync on the desktop computer to create a shortcut to the program and place the shortcut in the Start Menu folder.

Using File Explorer to Add to the Start Menu

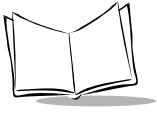
1. Tap , Programs, File Explorer, and locate the program (tap the folder list, labeled My Documents by default, then My Device to list all folders on the terminal).
2. Tap and hold the program and tap Cut on the pop-up menu.
3. Open the Start Menu folder located in the Windows folder, tap and hold a blank area of the window, and tap Paste on the pop-up menu. The program appears on the  menu.

For more information on using File Explorer, see [Finding Information](#) on page 2-10.

Using ActiveSync to Add to the Start Menu

1. Use the Explorer in ActiveSync on your desktop computer to explore your terminal's files and locate the program.
2. Right-click the program, then click Create Shortcut.
3. Move the shortcut to the Start Menu folder in the Windows folder. The shortcut appears on the  menu.

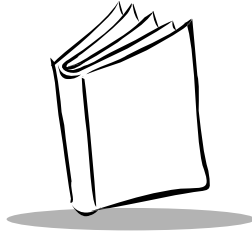
For more information, see ActiveSync Help.



Removing Programs

To remove a program, tap , then **Settings**. On the **System** tab, tap **Remove Programs**.

If the program does not appear in the list of installed programs, use File Explorer on your terminal to locate the program, tap and hold the program, then tap **Delete** on the pop-up menu.



Chapter 4

Communications

Introduction

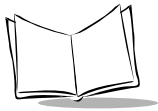
The CRD 2700 Cradle serves as an essential data communications device, enabling you to synchronize the information on your PPT 2700 terminal and the ActiveSync® software on your desktop computer. With customized or third party software, it can also be used to synchronize your PPT 2700 terminal with corporate databases and other host computers. Setting up the CRD 2700 cradle involves installing the ActiveSync software to enable synchronization, and connecting your cradle to your computer.

Installing ActiveSync Software

Using ActiveSync technology, you can synchronize the information on your PPT 2700 terminal with the information on your computer. Changes you make on your terminal or desktop computer appear in both places after you synchronize.

With ActiveSync software you can:

- ◆ Work with your terminal applications on your computer. ActiveSync duplicates applications on your PPT 2700 terminal (such as Calendar and Contacts) so you can view, enter and modify any data stored on your PPT 2700 terminal.
- ◆ Back up the data stored on your PPT 2700 terminal. Synchronization is a one-step procedure that ensures your data is always safe and up-to-date.
- ◆ Copy (rather than synchronize) files between your terminal and computer.
- ◆ Control when synchronization occurs by selecting a synchronization mode, e.g., you may synchronize continually while the terminal is in the cradle, or only when you select the synchronize command.



- ♦ Select the types of information to synchronize, and control how much data is synchronized.

Performing an ActiveSync for the First Time

The first time you synchronize your data, you need to enter user information on both the PPT 2700 terminal and desktop computer. Once you enter this information and synchronize, you don't need to enter this information again.

Note: *You must perform your first ActiveSync operation with a local, direct connection, rather than using a modem.*

Performing ActiveSync using the Synchronization Cable

To perform an ActiveSync operation for the first time using the synchronization cable:

1. After installing the ActiveSync software, restart your desktop computer.
2. Insert the cable into the bottom of the terminal.

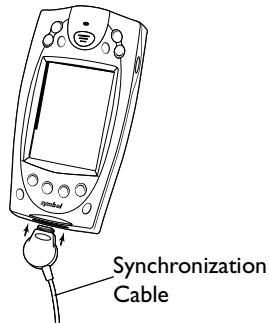


Figure 4-1. Inserting the Cable in the Terminal

3. Connect the other end of the cable to the serial communications port on your computer.

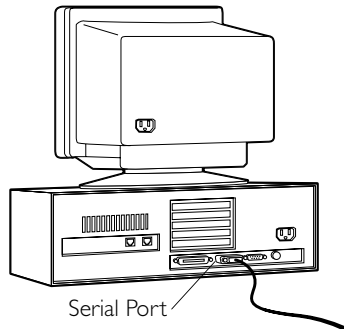


Figure 4-2. Connecting the Synchronization Cable to the Computer

Note: *The synchronization cable requires a dedicated port. It cannot share a port with an internal modem or other device. If you are unsure about the location of the serial port on your computer, refer to the user's manual supplied with the computer.*

4. On the desktop computer, enter a name for your PPT 2700 terminal and click the Next button. Follow the instructions on the screen to set up a partnership that allows synchronization of information between the two computers. Items to be synchronized may be customized, and you may select to synchronize automatically upon connect.

Note: *Every PPT 2700 terminal should have a unique name. Never try to synchronize more than one PPT 2700 terminal to the same user name.*

Performing ActiveSync using the Cradle

To perform an ActiveSync operation for the first time using the cradle:

1. After installing the ActiveSync software, restart your desktop computer.
2. Connect your CRD 2700 cradle to your computer by plugging the cable from the cradle into the serial communications port on your computer.

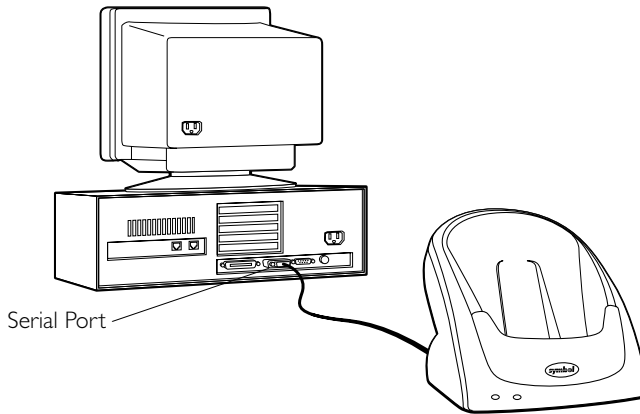
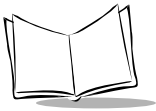


Figure 4-3. Connecting the Cradle to the Computer

Note: *The CRD 2700 cable requires a dedicated port. It cannot share a port with an internal modem or other device. If you are unsure about the location of the serial port on your computer, refer to the user's manual supplied with the computer.*

3. Turn on the PPT 2700 terminal and slide it into the cradle.

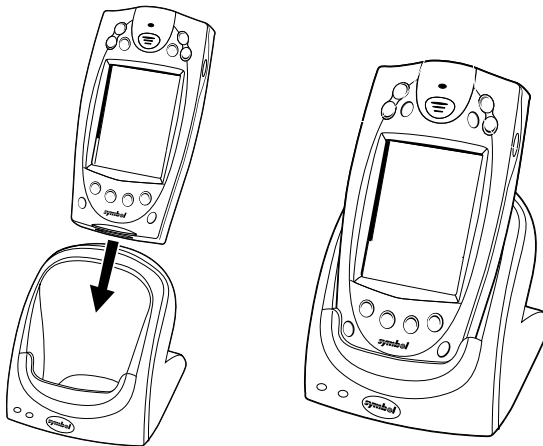


Figure 4-4. Inserting the Terminal in the Cradle

The curved edge on the bottom of the PPT 2700 terminal should align smoothly with the cradle when it is inserted properly.

4. On the desktop computer, enter a name for your PPT 2700 terminal and click the **Next** button. Follow the instructions on the screen to set up a partnership that allows synchronization of information between the two computers. Items to be synchronized may be customized, and you may select to synchronize continuously as information changes, upon connection, or manually by clicking the Sync button on the toolbar of your desktop computer.

Note: *Every PPT 2700 terminal should have a unique name. Never try to synchronize more than one PPT 2700 terminal to the same user name.*

Performing Subsequent ActiveSync Operations

After you complete the first ActiveSync operation, you just need to place the terminal in the connected cradle or connect the synchronization cable and synchronization occurs automatically.

Performing a Remote ActiveSync

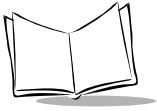
You can also sync your PPT 2700 remotely using a modem. See *Creating a Modem Connection to a Network* on page 7-4 to set up your terminal for a modem ActiveSync.

Before leaving your desktop computer, prepare the computer for a remote ActiveSync:

1. Start ActiveSync on your desktop computer.
2. On the **File** menu, select **Connection Settings**.
3. Select **Allow network (Ethernet) and Remote Access Service (RAS) server connection with this desktop computer**.
4. Leave your computer on and logged on.

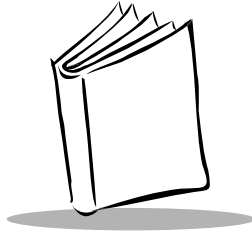
To remotely sync your PPT 2700 terminal with your desktop computer:

1. Insert the terminal in the modem cradle, or attach the MDM3000 Modem Module. If using the cradle, set the Sync Select switch on the back of the cradle to the Modem position.
2. On the PPT 2700, select , **Programs, Connections**.
3. Tap your connection icon.



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4. Enter your user name, domain, and password, and tap **Connect**.



Chapter 5

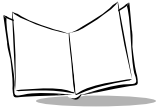
Applications

Introduction

Your PPT 2700 terminal includes Calendar, Contacts, Tasks, Inbox, and Notes applications. You can use these programs individually or together. For example, e-mail addresses stored in Contacts can be used to address e-mail messages in Inbox.

Using ActiveSync, you can synchronize information in these applications between your desktop computer and your terminal. Each time you synchronize, ActiveSync compares the changes you made on your terminal and desktop computer and updates both with the latest information. For information on using ActiveSync, see [Chapter 4, Communications](#), and ActiveSync Help on the desktop computer.

You can switch to any of these programs by tapping them on the  menu.



Calendar

Use Calendar to schedule appointments such as meetings. You can view your appointments in different ways (Agenda, Day, Week, Month, and Year) and easily change views using the View menu.

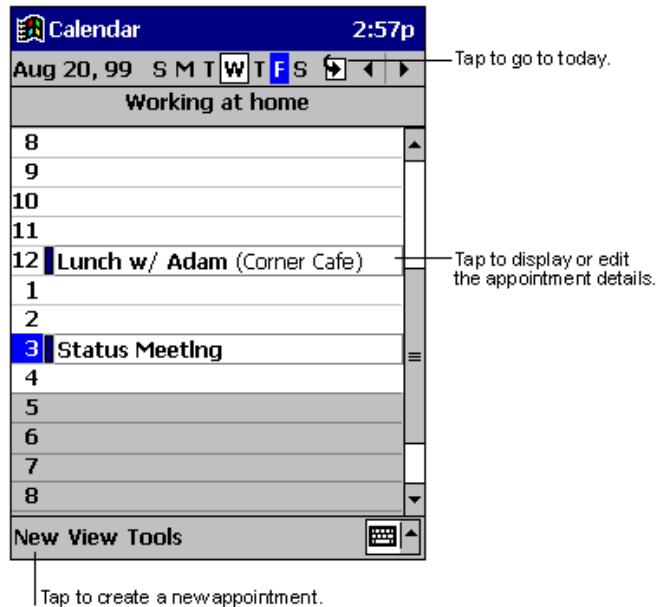


Figure 5-1. Calendar Application

Note: You can customize the Calendar display, such as changing the first day of the week, by tapping **Options** on the **Tools** menu.

Creating Appointments

To create an appointment:

1. To select Calendar, press the App1 button or select Calendar from the  menu.
2. If you are in Day or Week view, tap the desired date and time for the appointment.

3. Tap New.

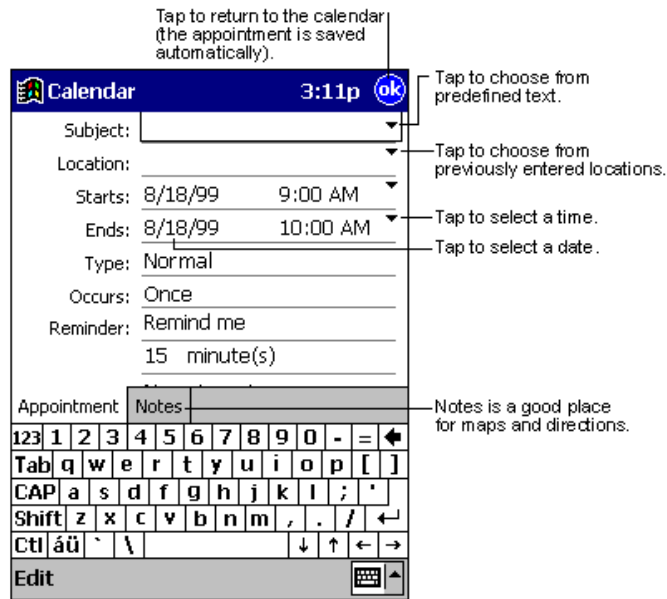
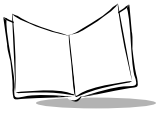


Figure 5-2. Entering an Appointment

4. Using the input panel, enter the subject and a location. Tap first to select the field.
5. If needed, tap the date and time to change them.
6. Enter other desired information. Hide the input panel to see all available fields.
7. To add notes, tap the **Notes** tab. You can enter text, draw, or create a recording. For more information on creating notes, see [Notes](#) on page 5-10.
8. When finished, tap **OK** to return to the calendar.

Note: If you select **Remind me** in an appointment, your terminal notifies you according to the options set in , *Settings, Personal tab, Sounds & Reminders*.



Using the Summary Screen

When you tap an appointment in Calendar, a summary screen displays. Tap the top of the summary screen to change the appointment.

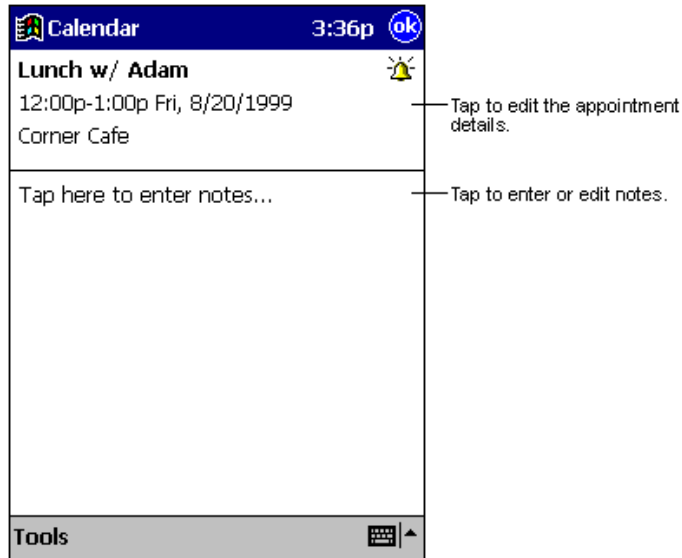


Figure 5-3. Appointment Summary Screen

Creating Meeting Requests

You can use Calendar to set up meetings with users of Outlook 2000. The meeting notice is created automatically and sent either when you synchronize Inbox or when you connect to your e-mail server. Indicate how you want meeting requests sent by tapping **Tools**, then **Options**. If you send and receive e-mail messages through ActiveSync, select **ActiveSync**.

To schedule a meeting:

1. Create an appointment.
2. In the appointment details, hide the input panel, then tap **Attendees**.
3. From the list of e-mail addresses you've entered in Contacts, select the meeting attendees.

The meeting notice is created and placed in the Outbox folder. For more information on sending and receiving meeting requests, see Calendar Help and Inbox Help on your terminal.

Contacts

Contacts maintains a list of associates and friends so that you can easily locate information at home or on the road. Using the infrared (IR) port, you can share Contacts information with other terminal users.

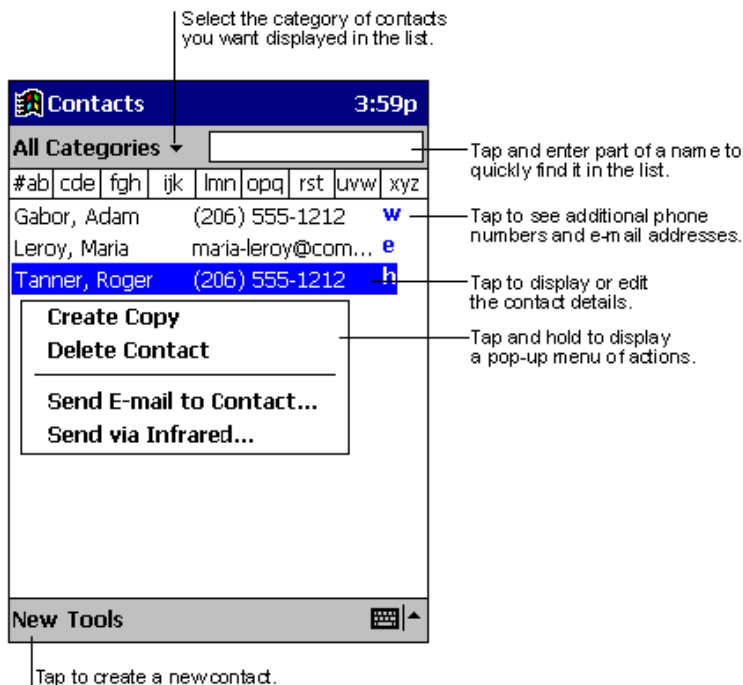
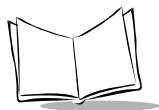


Figure 5-4. Contact Application

Note: To change the way information is listed, tap *Tools*, then *Options*.



To create a contact:

1. Tap New.

Tap to return to the contact list (the contact is saved automatically).

Contacts 3:01p OK

Name:

Job title:

Department:

Company:

Work tel:

Work2 tel:

Home tel:

Home2 tel:

Mobile tel:

Details Notes

123 1 2 3 4 5 6 7 8 9 0 - = <

Tab q w e r t y u i o p []

CAP a s d f g h j k l ; ' <

Shift z x c v b n m , . / <

Ctl á ü ` \ < > < >

Edit

Scroll to see more fields.

Notes is a good place for maps and directions.

Figure 5-5. Creating a Contact

2. Using the input panel, enter a name and other contact information. Scroll down to see all fields.
3. To assign the contact to a category, scroll to and tap **Categories**. Select a category from the list. In the contact list, you can display contacts by category.
4. To add notes, tap the **Notes** tab. You can enter text, draw, or create a recording. For more information on creating notes, see [Notes](#) on page 5-10.
5. When finished, tap **OK** to return to the contact list.

Using the Summary Screen

When you tap a contact in the contact list, a summary screen displays.

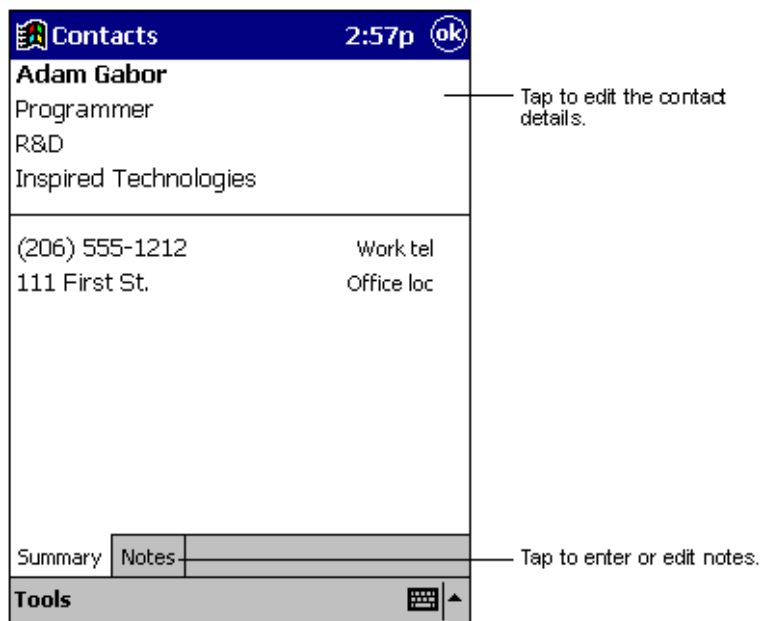
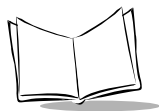


Figure 5-6. Contacts Summary Screen



Tasks

Use Tasks to keep a “to do” list. In the task list, overdue tasks display in bold.

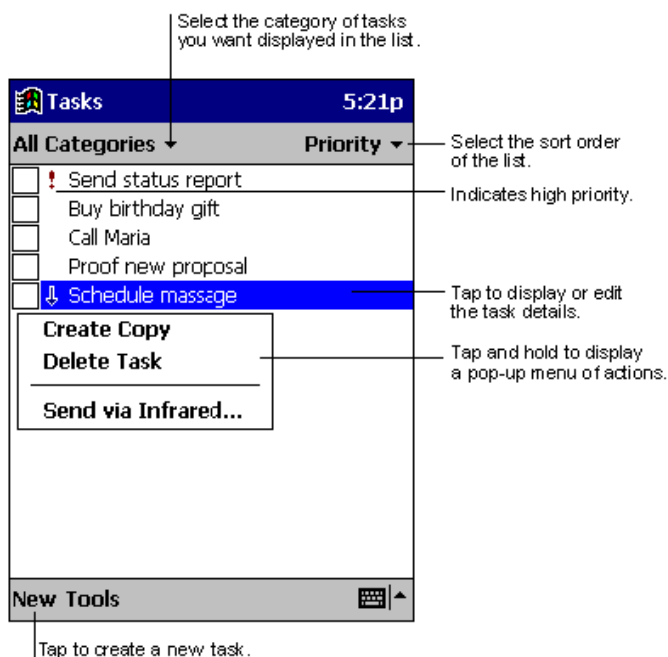


Figure 5-7. Task Application

Note: To change the way information displays in the list, tap *Tools*, then *Options*.

To create a task:

1. Tap New.

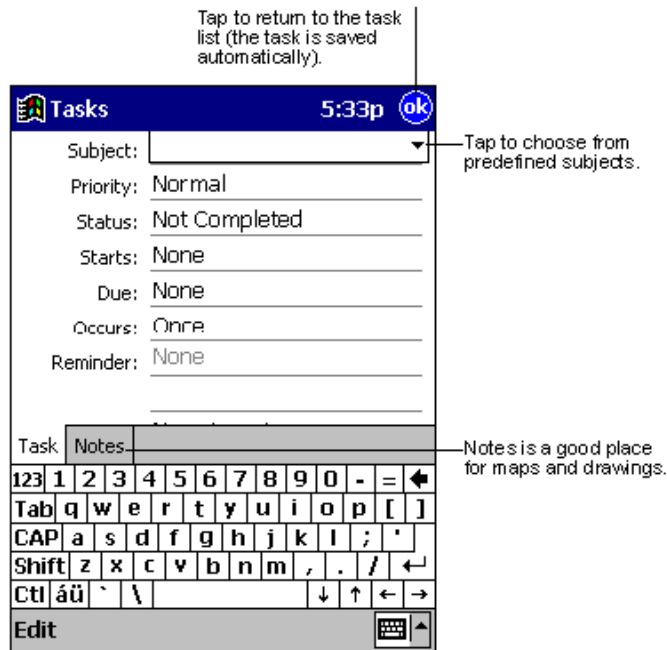
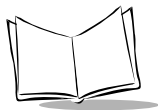


Figure 5-8. Creating a Task

2. Using the input panel, enter a description.
3. You can enter a start date and due date or enter other information by first tapping the field. If the input panel is open, hide it to see all available fields.
4. To assign the task to a category, tap **Categories** and select a category from the list. In the task list, you can display tasks by category.
5. To add notes, tap the **Notes** tab. You can enter text, draw, or create a recording. For more information on creating notes, see [Notes](#) on page 5-10.
6. Tap **OK** to return to the task list.

Note: To create a task with only a subject, tap **Entry Bar** on the Tools menu. Then tap **Tap here** to add a new task and enter your task information.



Using the Summary Screen

When you tap a task in the task list, a summary screen displays.

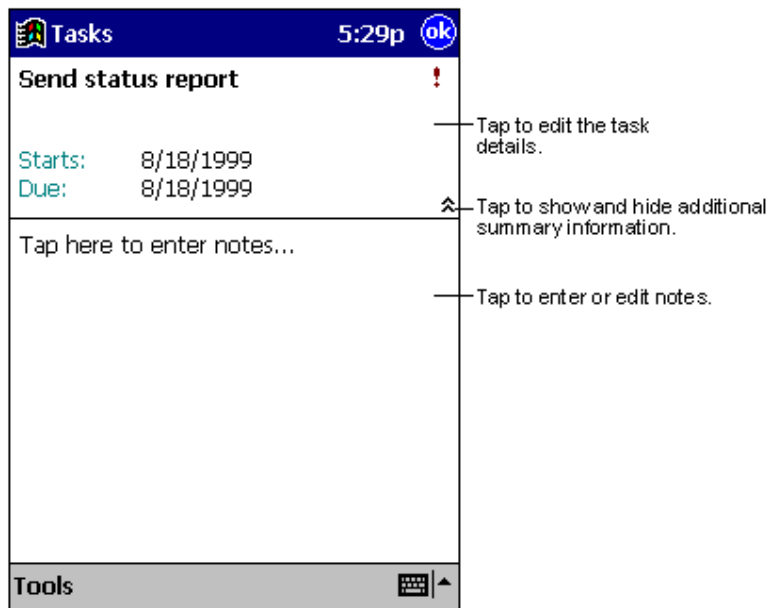


Figure 5-9. Task Summary Screen

Notes

Capture thoughts, reminders, ideas, drawings, and phone numbers with Notes. You can create a written note or a recording. You can also include a recording in a note. If a note is

open when you create the recording, it is included in the note as an icon. If the note list is displayed, it is created as a stand-alone recording.

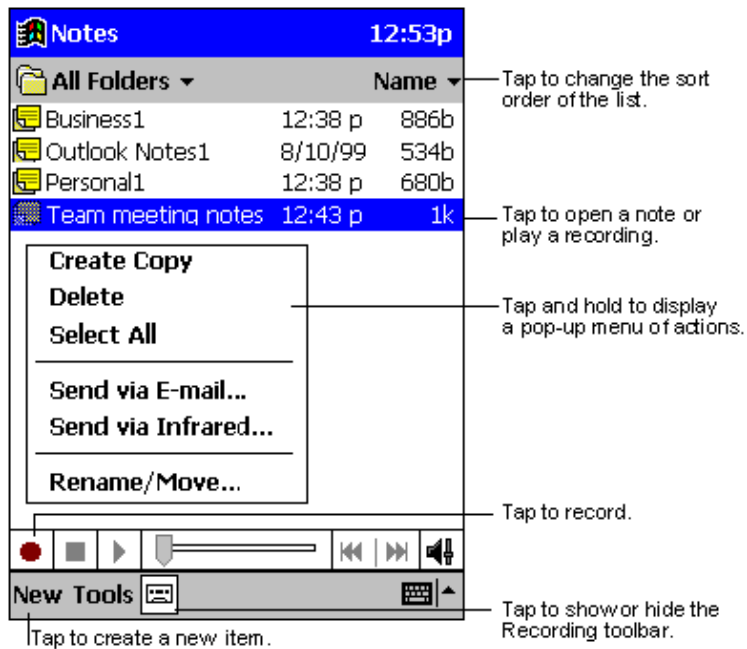
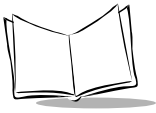


Figure 5-10. Notes Application

To create a note:

1. Tap New.



2. Create your note by writing, drawing, typing, and recording. For more information about using the input panel, writing and drawing on the screen, and creating recordings, see [Chapter 2, Operating the PPT 2700](#).

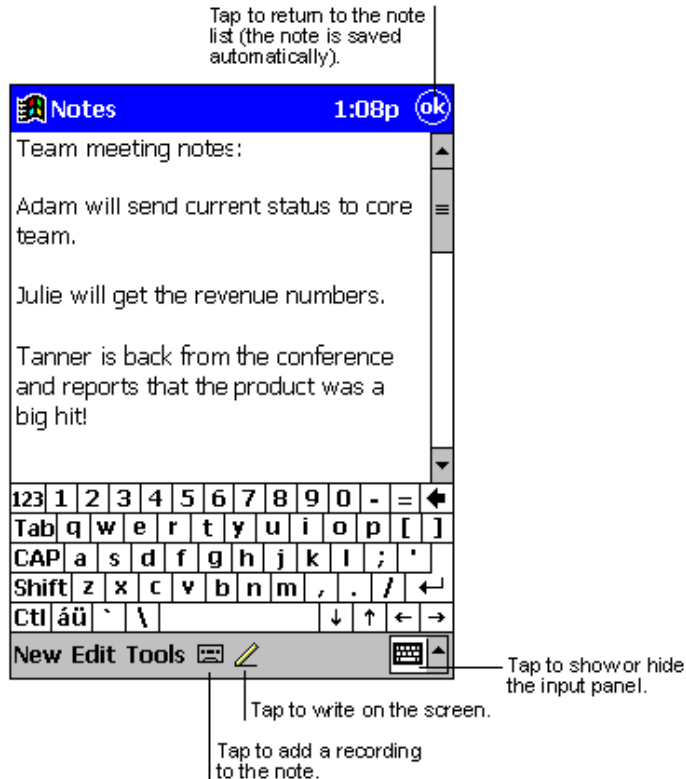


Figure 5-11. Creating a Note

Inbox

Use Inbox to send and receive e-mail messages in the following ways:

- ◆ Synchronize e-mail messages with Microsoft Exchange or Outlook 2000 on your desktop computer.
- ◆ Send and receive e-mail messages by connecting directly to an e-mail server through an Internet service provider (ISP) or a network.

Synchronizing E-mail Messages

To synchronize e-mail messages, first enable Inbox synchronization in ActiveSync options. For information on enabling Inbox synchronization, see ActiveSync Help on the desktop computer.

During synchronization:

- ♦ E-mail messages are copied from the Inbox folder of Exchange or Outlook 2000 on your desktop computer to the Inbox folder on your terminal. The e-mail messages on the two computers are linked, so when you delete an e-mail message on your terminal, it's also deleted from your desktop computer the next time you synchronize.
- ♦ E-mail messages in the Outbox folder on your terminal are transferred to Exchange or Outlook 2000, then sent from those programs.

Note: *You can also synchronize e-mail messages with your desktop computer from a remote location. For more information, see [Chapter 7, Connections](#).*

Connecting Directly to an E-mail Server

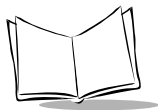
You can also send and receive e-mail messages by connecting to an e-mail server using a modem or network card connected to your terminal. You'll need to set up a remote connection to a network or an ISP, and a connection to your e-mail server. For more information, see [Chapter 7, Connections](#).

When you connect to the e-mail server, new messages are downloaded to the terminal Inbox folder, messages in the terminal Outbox folder are sent, and messages that were deleted on the e-mail server are removed from the terminal Inbox.

Messages that you receive directly from an e-mail server are linked to your e-mail server rather than your desktop computer. When you delete a message on your terminal, it's also deleted from the e-mail server the next time you connect.

You can work online or offline. When working online, you read and respond to messages while connected to the e-mail server. Messages are sent as soon as you tap **Send**, which saves space on your terminal.

When working offline, once you've downloaded new message headers or partial messages, you can disconnect from the e-mail server, then decide which messages to download



completely. The next time you connect, Inbox downloads the complete messages you've marked for retrieval and sends the messages you've composed.

Using the Message List

Messages you receive display in the message list. By default, the most recently received messages are listed first.

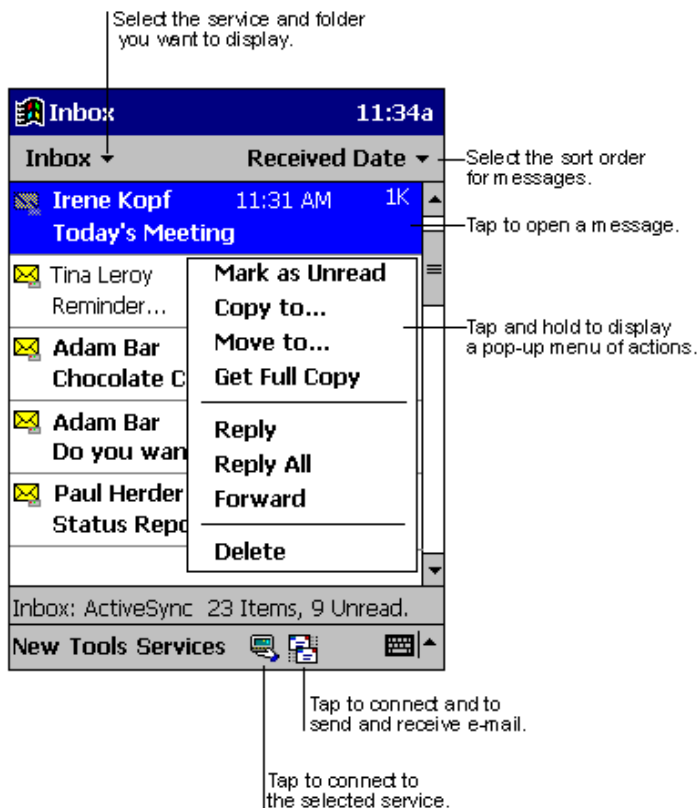


Figure 5-12. Inbox Application

When you receive a message, tap it in the list to open it. Unread messages display in bold.

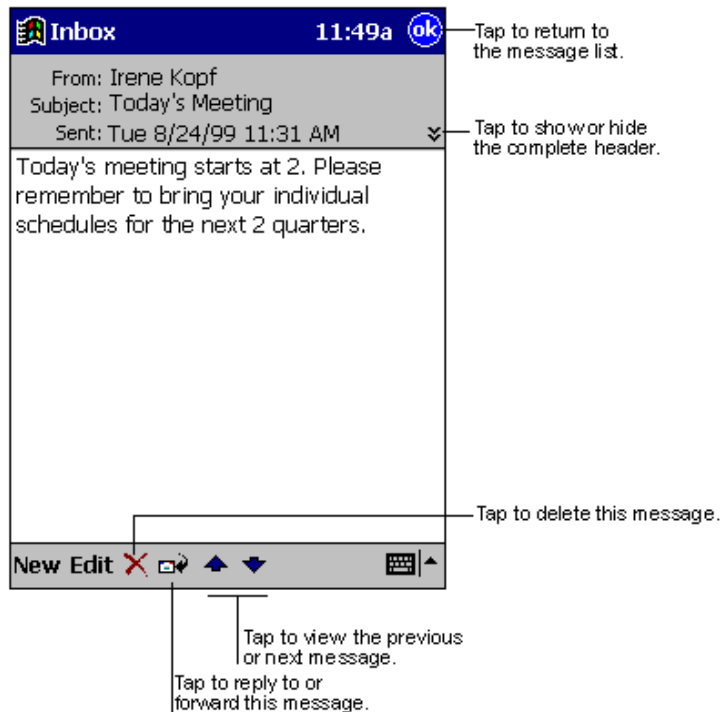
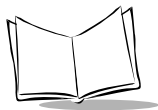


Figure 5-13. Viewing a Message

When you connect to your e-mail server or synchronize with your desktop computer, Inbox downloads only the first 100 lines of each new message by default. No e-mail attachments are downloaded. The original messages remain on the e-mail server or your desktop computer.

You can mark the messages that you want to retrieve completely the next time you synchronize or connect to your e-mail server. In the message list, tap and hold the message you want to retrieve. On the pop-up menu, tap **Get Full Copy**. The icons in the Inbox message list indicates message status.

You must download a full message before you can view its attachments. Attachments appear as icons in a window pane at the bottom of the message. Tapping an attachment icon opens the attachment if it was fully downloaded or marks it for download the next time you synchronize or connect to your e-mail server.



You specify your downloading preferences when you set up the service or select your synchronization options. You can change them at any time:

- ♦ Change options for Inbox synchronization using ActiveSync options. For more information, see ActiveSync Help.
- ♦ Change options for direct e-mail server connections in Inbox on your terminal. Tap Tools, then Options. On the Service tab, tap the service you want to change.

Creating E-mail Messages

To create an e-mail message:

1. Tap New.
2. Enter an e-mail address in To, or select a name from the contact list by tapping the Address Book button. All e-mail addresses entered in the e-mail fields in Contacts appear in the Address Book.

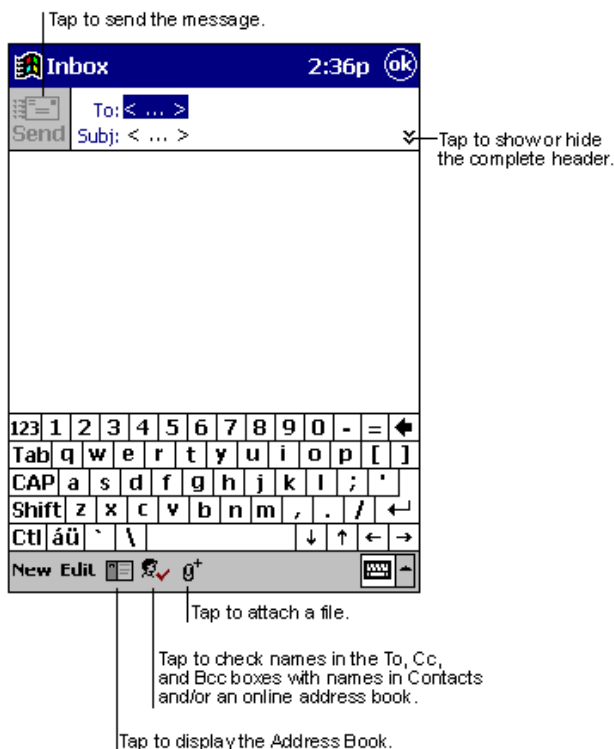


Figure 5-14. Creating a Message

3. Compose your message. Tap **Send** when you're finished.

The message is placed in the Outbox folder on your terminal and is delivered in one of two ways:

- ♦ It is transferred to the Outbox folder in Exchange or Outlook 2000 on your desktop computer and sent the next time you synchronize.
- ♦ It is transferred to your e-mail server the next time you connect. In Inbox, make sure the appropriate service is selected on the Services menu. Then tap the **Connect** button (or **Connect** on the **Services** menu).

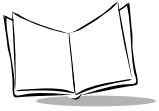
Managing E-mail Messages and Folders

By default, messages are displayed in one of four folders for each service you've created: Inbox, Deleted (local), Outbox, and Sent. The Deleted folder contains messages that have been deleted on the terminal. The behavior of the Deleted and Sent folders depends on the options you selected. In the message list, tap **Tools**, then **Options**. On the **Message** tab, select your options.

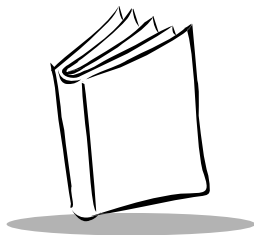
To organize messages into additional folders, tap **Tools**, then **New Folder** to create new folders. To move or copy a message to another folder, in the message list, tap and hold the message, then tap **Move to** or **Copy to** on the pop-up menu.

Folder Behavior with ActiveSync and Direct Connection to Server

If you move e-mail messages into a folder you create, the link is broken between these e-mail messages and their copies on the desktop computer. When you synchronize, the e-mail messages in the folder you created are not synchronized. These e-mail messages missing from the terminal Inbox folder are deleted from the Inbox folder on the desktop computer so that both Inbox folders match. This prevents you from getting duplicate copies of an e-mail message, and you can only access the e-mail messages you move out of Inbox from the terminal.



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Chapter 6

Pocket Internet Explorer

Introduction

With Pocket Internet Explorer, you can view Web pages in the following ways:

- ♦ During synchronization with your desktop computer, download your favorite links, mobile favorites, and mobile channels stored in the Mobile Favorites subfolder in Internet Explorer on the desktop computer.
- ♦ Connect to an Internet service provider (ISP) or network and browse the Web. First create the connection (see [Chapter 7, Connections](#)).

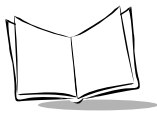
To select Pocket Internet Explorer, tap  , then Internet Explorer.

Mobile Favorites

Items stored in the Mobile Favorites subfolder in the Favorites folder in Internet Explorer on your desktop computer are synchronized with your terminal. This folder was created automatically when you installed ActiveSync.

Favorite Links

Synchronization updates the list of favorite links both in the Mobile Favorites folder on your desktop computer and in Pocket Internet Explorer on your terminal. Unless you mark the favorite link as a mobile favorite, only the link is downloaded to your terminal; you must connect to your ISP or network to view the content. For more information on synchronization, see ActiveSync Help on the desktop computer.



Creating Mobile Favorites

If you are using Microsoft Internet Explorer 5 on your desktop computer, you can download mobile favorites. (You can install Microsoft Internet Explorer 5 from the Extras folder on the ActiveSync CD.) Synchronizing mobile favorites downloads Web content to your terminal so you can view Web pages while disconnected from your ISP and desktop computer.

Use the Internet Explorer 5 plug-in installed with ActiveSync to create mobile favorites:

1. In Internet Explorer 5 on your desktop computer, click **Tools**, then **Create Mobile Favorite**.
2. To change the link name, enter a new name in the **Name** box.
3. If desired, select a desired update schedule in **Update**.
4. Click **OK**. Internet Explorer downloads the latest version of the Web page to your desktop computer.
5. To download the pages linked to the mobile favorite you just created, in Internet Explorer on the desktop computer, right-click the mobile favorite, then click **Properties**. On the **Download** tab, specify the number of links deep you want to download. To conserve terminal memory, only go one level deep.
6. Synchronize your terminal and desktop computer. Mobile favorites stored in the Mobile Favorites folder in Internet Explorer 5 are downloaded to your terminal.

If you did not specify an update schedule in step 3, you must manually download content to keep the information updated on your desktop computer and terminal. Before synchronizing, in Internet Explorer on your desktop computer, click **Tools**, then **Synchronize**. Note the last time content was downloaded to the desktop computer; if necessary, manually download content.

You can add a button to the Internet Explorer toolbar for creating mobile favorites. In Internet Explorer 5 on your desktop computer, click **View**, **Toolbars**, then **Customize**.

Saving Memory on your Terminal

Mobile favorites take up storage memory on your terminal. To minimize the amount of memory used:

- ♦ In the settings for the Favorites information type in ActiveSync options, turn off pictures and sounds or stop some mobile favorites from downloading. For more information, see ActiveSync Help.

- ♦ Limit the number of downloaded linked pages. In Internet Explorer on the desktop computer, right-click the mobile favorite you want to change, then select **Properties**. On the **Download** tab, specify 0 or 1 for the number of linked pages to download.

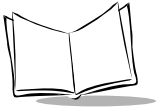
Channels

Channels are Web sites designed for offline viewing on your terminal. You can use mobile channels on your PPT 2700.

Using Mobile Channels

Mobile channels are sites you subscribe to on your desktop computer. They are stored in the Channels subfolder in the Mobile Favorites folder in Internet Explorer 4.0 or later and are downloaded to your terminal during synchronization.

To see a list of mobile channels you can subscribe to at no fee, visit the Windows CE Mobile Channel List Web page (<http://www.microsoft.com/windowsce/channels>). Click the **Add Mobile Channel** button and select **Make available offline** to download the channel to your desktop computer. The mobile channel is transferred to your terminal when you synchronize.



Using Pocket Internet Explorer

With Pocket Internet Explorer, you can browse mobile favorites and channels downloaded to your terminal without connecting to the Internet. You can also connect to the Internet through an ISP or a network connection and browse the Web.

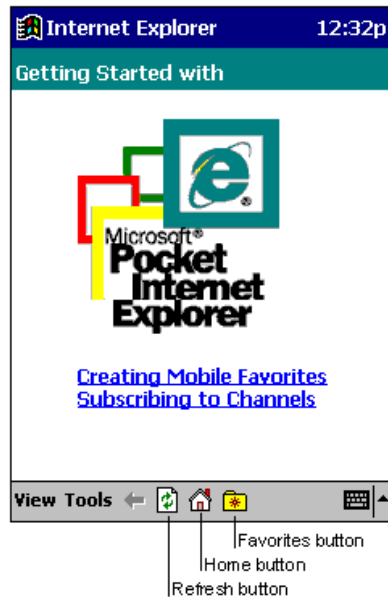


Figure 6-1. Pocket Internet Explorer

To view mobile favorites and channels, tap the **Favorites** button to display your list of favorites, then tap the mobile favorite or channel you want to view.

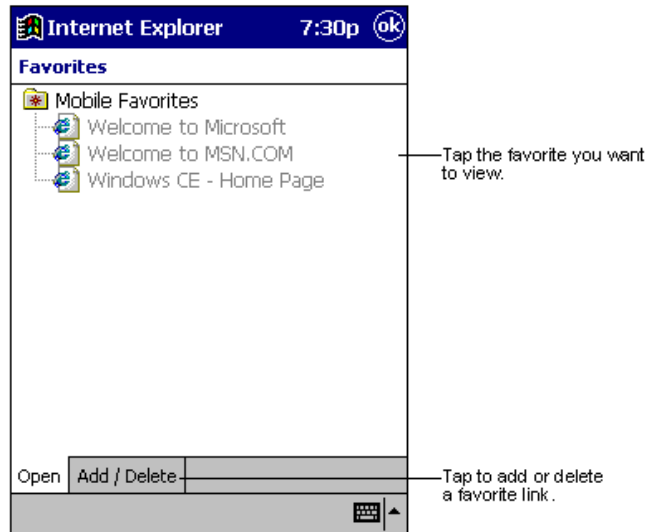


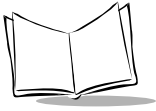
Figure 6-2. Mobile Favorites

You'll see the page that was downloaded the last time you synchronized with your desktop computer. If the page is not on your terminal, the favorite is dimmed. Synchronize with your desktop computer again to download the page to your terminal, or connect to the Internet to view the page.

Browsing the Web

1. Connect to the Internet or your network in one of the following ways:
 - ♦ Using Connections, as described in [Chapter 7](#). Then select Pocket Internet Explorer from the  menu.
 - ♦ In Pocket Internet Explorer. To select a service or type of connection, tap **Tools**, then **Options**. Tap the **Connections** tab and select the connection type. Then, when you want to connect to the selected service, tap **Tools**, then **Connect**.

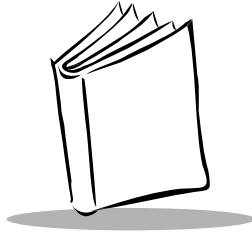
Note: *Pocket Internet Explorer can automatically connect to the Internet when you attempt to access a page not stored on your terminal.*



*Specify a connection in the **Connection** tab in **Options**, then select **Access remote content automatically**.*

2. Once connected, go to a specific Web page in one of the following ways:
 - ♦ Tap the **Favorites** button, then tap the favorite you want to view.
 - ♦ Tap **View**, then **Address Bar**. In the address bar at the top of the screen, enter the Web address and tap **Go**. Tap the arrow to choose from previously entered addresses.
3. To end the connection, tap **Tools**, then **Disconnect**.

Note: *To add a favorite link while using the terminal, go to the Web page you want to add, tap the **Favorites** button, tap the **Add/Delete** tab, tap the **Add** button, and enter a name for the favorite link.*



Chapter 7

Connections

Introduction

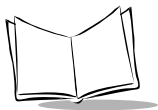
Your terminal can exchange information with other Windows-powered devices using its infrared (IR) port. In addition to using a cradle, cable, or IR port to connect your terminal to your desktop computer, you can also:

- ♦ Connect to your Internet service provider (ISP) to send and receive e-mail messages using Inbox and view Web pages using Pocket Internet Explorer. See [Connecting to an ISP](#) on page 7-2. The communication software for creating an ISP connection is already installed on your terminal. Your service provider provides software needed to install other services, such as paging and fax services.
- ♦ Connect to the network at your office to send and receive e-mail messages using Inbox, view Web pages using Pocket Internet Explorer, and synchronize with your desktop computer. See [Connecting to Your Network](#) on page 7-4.
- ♦ Connect to your desktop computer to synchronize remotely. See ActiveSync Help on your desktop computer or Connections Help on your terminal.

Transferring Items Using Infrared

Using infrared (IR), you can send and receive information, such as contacts and appointments, between two Windows-powered devices.

To send information:



1. Open the program where you created the item you want to send and locate the item in the list. To send more than one item, drag the stylus across the items you want to send.
2. Align the IR ports so that they are unobstructed and within a close range.
3. Tap and hold the item, and tap **Send via Infrared** on the pop-up menu.

Note: *You can also send items, but not folders, from File Explorer. Tap and hold the item, then tap **Send via Infrared** on the pop-up menu.*

To receive information:

1. Align the IR ports so that they are unobstructed and within a close range.
2. Tap , Programs, then **Infrared Receive**.

Note: *You can also receive items from Tasks, Contacts, Calendar, and Notes by tapping Tools, then **Receive via Infrared** in list view.*

Connecting to an ISP

Create a modem connection to connect to your ISP. Once connected, you can send and receive e-mail messages and view Web pages.

To create a modem connection to an ISP, use the modem cradle or snap-on modem. See the *Quick Reference Guide* for each device for connection information.

1. Get the ISP dial-up access telephone number, user name, password, and TCP/IP settings from your ISP. Some ISPs require information in front of the user name, such as MSN/username.
2. Tap , then Settings. On the Connections tab, tap Modem.

3. Tap New connection.

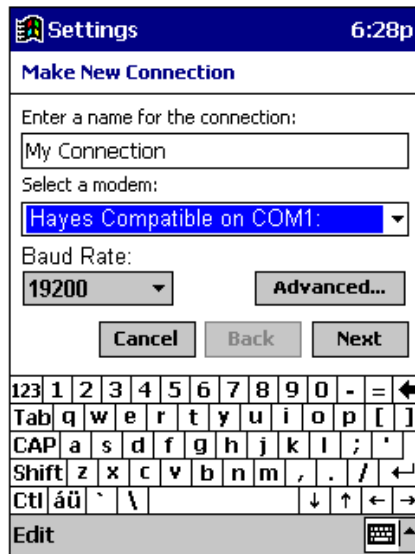
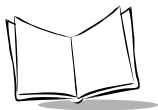


Figure 7-1. Creating a Modem Connection

4. Enter a name for the connection.
5. In the **Select a modem** list, select Hayes Compatible on COM1.
6. You should not need to change any settings in **Advanced**. Most ISPs now use a server-assigned address. If the ISP you are connecting to does not use a server-assigned address, tap **Advanced**, then the TCP/IP tab and enter the address. When finished, tap **OK**, then **Next**.
7. Enter the access phone number and tap **Next**.
8. Select other desired options, and tap **Finish**.
9. On the **Dialing** tab, specify your current location and phone type (most phone lines are tone). These settings apply to all connections you create. Tap **OK** to return to **Settings**.

After you create the connection, it appears in , **Programs, Connections**. To start the connection, remove your terminal from the cradle, tap the connection icon, enter your user name and password, and tap **Connect**. Once connected, you can:



- ♦ Send and receive e-mail messages using Inbox. You first must provide the information it needs to communicate with the e-mail server. For instructions, see [Connecting Directly to an E-mail Server](#) on page 7-6.
- ♦ Visit Web pages using Pocket Internet Explorer. For more information, see [Chapter 6, Pocket Internet Explorer](#).

To change connection settings, return to Modem Settings. Tap the Modem link at the bottom of the **Connections** folder. To return to the **Connections** folder, tap the Connections link.

Connecting to Your Network

If you have access to a network, you can send e-mail messages, view intranet pages, synchronize your terminal, and possibly access the Internet. You can connect to your network in one of the following ways:

- ♦ Create a modem connection using an RAS account. Your network administrator must first set up an RAS account for you.
- ♦ Via Spectrum24. See Chapter 8, *Spectrum24 Network Configuration*.

Creating a Modem Connection to a Network

To create a modem connection, use the modem cradle or snap-on modem. See the *Quick Reference Guide* for each device for connection information.

1. Obtain the dial-up access telephone number, user name, password, domain name, and TCP/IP settings from your network administrator.
2. Tap , then **Settings**. On the **Connections** tab, tap **Modem**.

3. Tap New connection.

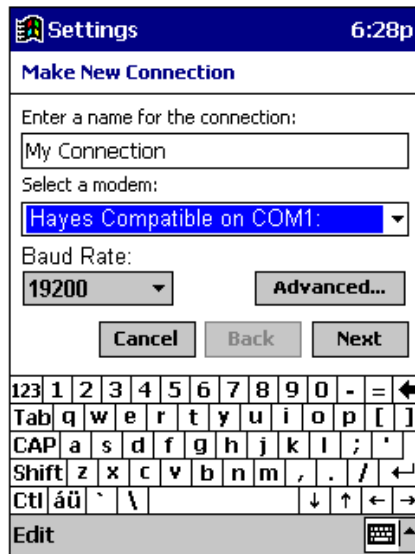
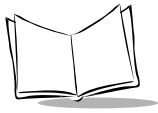


Figure 7-2. Creating a Modem Connection

4. Enter a name for the connection.
5. Select Hayes Compatible on COM1.
6. You should not need to change any settings in **Advanced**. Most servers use a server-assigned address. If not, tap **Advanced**, then the **TCP/IP** tab and enter the address. When finished, tap **OK**, then **Next**.
7. Enter the access phone number, and tap **Next**.
8. Select other desired options, and tap **Finish**.
9. On the **Dialing** tab, specify your current location and phone type (most phone lines are tone). These settings apply to all connections you create. Tap **OK** to return to **Settings**.

When you have created the connection, it appears in , **Programs**, **Connections**. To start the connection, remove your terminal from the cradle, tap the connection icon, enter your user name, domain, and password, and tap **Connect**. Once connected, you can:

- ♦ Send and receive e-mail messages using Inbox. Before you can use Inbox, provide the information it needs to communicate with the e-mail server. See [Connecting Directly to an E-mail Server](#) on page 7-6.



- ♦ Visit Internet or intranet Web pages using Pocket Internet Explorer. You may need to set up a proxy server to visit Internet Web pages. For more information on setting up a proxy server, see Pocket Internet Explorer Help on the terminal.
- ♦ Synchronize. For more information, see ActiveSync Help on the desktop computer.

Disconnecting

If you started the connection from a program such as Inbox or Pocket Internet Explorer, disconnect from that program first. Tap , then **Today**. Tap  or  at the bottom of the screen, then **Disconnect**. To end a network connection, remove the card from your terminal.

Connecting Directly to an E-mail Server

You can set up a connection to an e-mail server to send and receive e-mail messages using a modem or network connection and Inbox on your terminal.

Note: *The ISP or network must use a POP3 e-mail server and an SMTP gateway.*

Inbox does not currently support connecting with proprietary e-mail protocols, such as AOL and MSN™. However, you can still access the Internet through these services. There may be third-party programs available to enable you to send and receive e-mail messages through proprietary protocols.

You can use multiple e-mail services to receive your messages. For each e-mail service you intend to use, first set up and name the e-mail service. If you use the same service to connect to different mailboxes, set up and name each mailbox connection.

Setting Up an E-mail Service

1. In Inbox on your terminal, tap Services, then New Service.

Figure 7-3. Setting Up E-mail Service

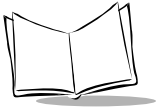
2. Select POP3 as the service type, name the service, and tap **Next**. Ask your ISP or network administrator which service type to select.
3. If you have already created a connection, select it from the **Connection** list. If you have not, select **Create new connection** and follow the steps in the wizard. When you return to this screen at the end of the wizard, select the connection you created from the **Connection** list.

Follow the directions on the screen. For an explanation of a screen, tap **Start**, then **Help**. When finished, tap **Services**, then **Connect** to connect to your e-mail server. For more information on using the Inbox program, see [Inbox](#) on page 5-12.

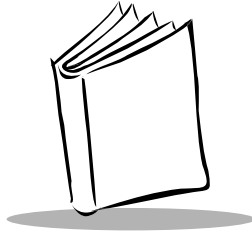
Getting Help Connecting

See the following for more connection information:

- ♦ [Inbox](#) on page 5-12



- ♦ Online Help on the terminal. Tap , then **Help**. Tap **View, All Installed Help**, then **Inbox** or **Connections**.
- ♦ ActiveSync Help on the desktop computer. In ActiveSync, click **Microsoft ActiveSync Help** on the Help menu.
- ♦ *[Troubleshooting](#)* on page 11-2.



Chapter 8

Spectrum24 Network Configuration

Introduction

The PPT 274X terminal supports two utilities that configure and monitor the Spectrum24 connection. The Network Interface Card Task Tray (NICTT) utility checks the status of Symbol Spectrum24 WLAN adapter operating within a Spectrum24 wireless network. The Spectrum24 Settings Control Panel Applet utility configures the Spectrum24 adapter.

NICTT

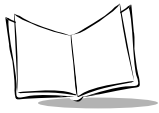
NICTT provides signal, transmission quality and power management status for the Spectrum24 network connection. The NICTT taskbar tray icons convey signal strength and service quality information. NICTT property pages allow you to view driver and firmware revision data and view terminal transmission and signal quality.

NICTT Task Tray

To display the NICTT icon at the top of the **Start** menu:

1. Tap **Start** to display the Start menu.
2. Tap **Programs**.
3. Tap **NICTT**.

The NICTT task tray icon appears at the top of the **Start** menu, and indicates terminal signal strength as follows.



Icon	Status
	Excellent signal strength
	Very good signal strength
	Good signal strength
	Fair signal strength
	Poor signal strength
	Out-of-network range (not associated)
	Adapter not found

Tap the icon above to display NICTT properties.

Spectrum24 Settings Control Panel Applet

The Spectrum24 Settings Control Panel Applet allows you to view and edit Spectrum24 terminal settings.

Configuring the PPT 2740/2742 (1 and 2 MBit radio)

Using NICTT on the PPT 2740/2742

The NICTT property pages contain a variety of wireless network and service quality information. Select help for a detailed explanation within each NICTT property page.

General Property Page

Before the PPT 2740/2742 can be used, it must be properly configured with the correct ESS ID. The ESS ID identifies the radio network and is used to differentiate between different radio networks. All PPT 2740/2742 terminals on the same network must be set up with the same ESS ID Code. The ESS ID on the terminal is the same as that of the access points in your facility.

The *General* page displays driver firmware and revision information, and allows you to change the ESSID or NetId depending on the NIC 802.11 or Spring firmware.

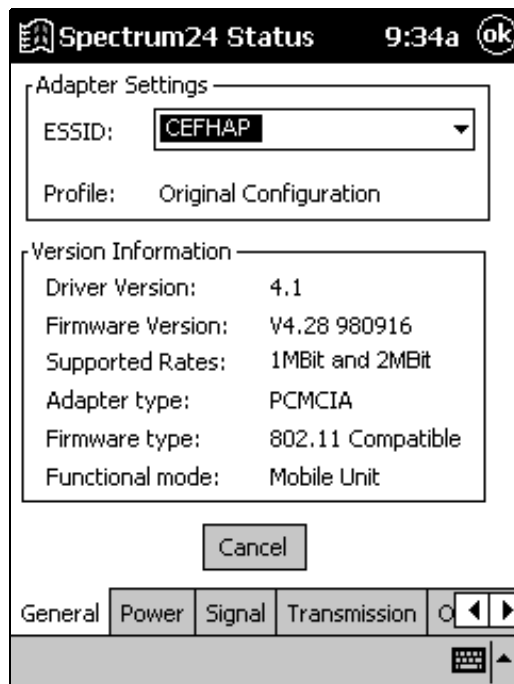
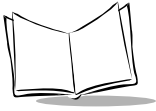


Figure 8-1. General Properties Page



Note: A PC Card adapter installation displays PCMCIA as the Adapter Type.

Power Mode Property Page

The Spectrum24 WLAN adapter Power Mode management properties allows automatic or manual setting of the adapter power management mode from Continuous Access Mode (CAM) to Power Save Polling (PSP) mode and controls the adapter Beacon Algorithm. Do NOT select the **Switch mode based on power source** option.

CAM mode is not a valid operating mode for the PPT 2740/2742, and should only be used for short duration testing. AC power supplies power to the battery charger only.

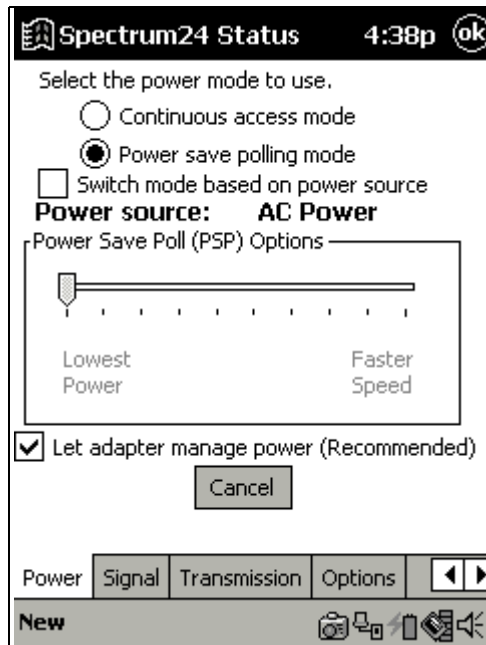


Figure 8-2. Power Property Page

Signal Strength Property Page

The *Signal* page displays a real-time graph of the signal quality being received by the adapter, and displays a description of the signal quality.

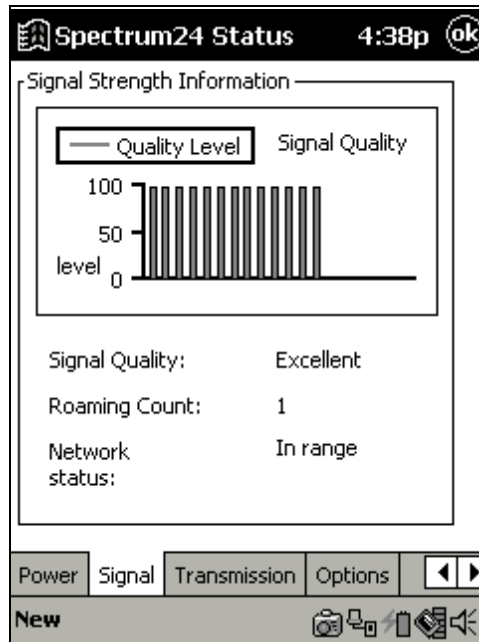
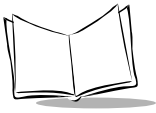


Figure 8-3. Signal Property Page



Transmission Quality Property Page

The *Transmission* page displays a real-time graph as a series of ICMP ping tests initiated by the user. The transmission quality test does not run all the time because it consumes network bandwidth.

The transmission quality test also displays a description of the transmission quality.

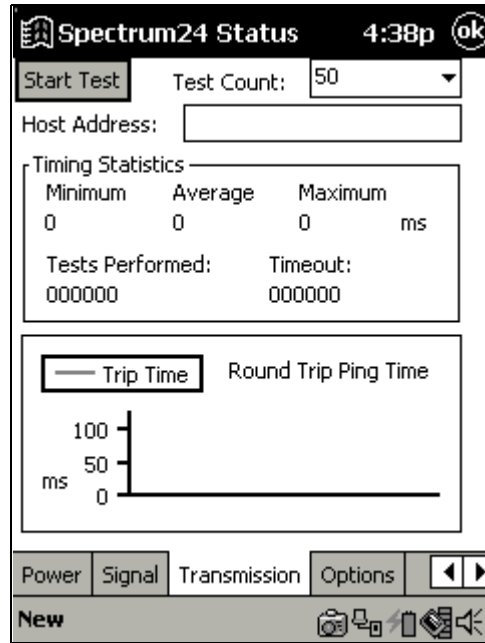


Figure 8-4. Transmission Property Page

Note: Load and configure the TCP/IP protocol before running the Transmission Quality test.

Options Property Page

The *Options* page controls system sounds and whether specified settings are temporary.

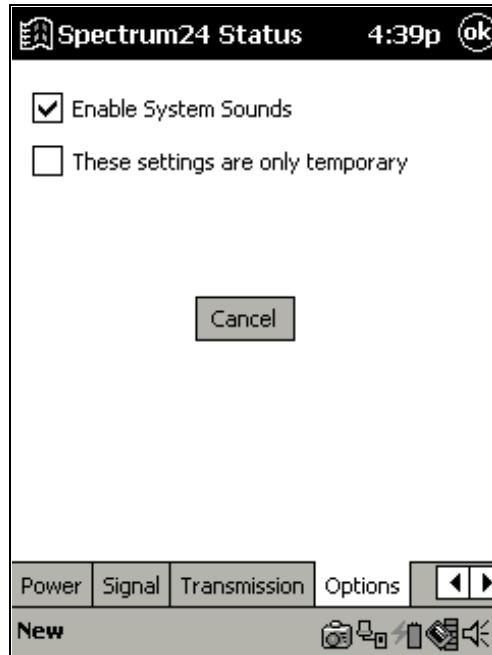


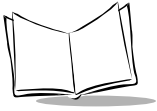
Figure 8-5. Options Property Page

Enable System Sounds

You can enable or disable NICTT system sounds. NICTT uses standard wav-table sounds supplied by the Windows operating system. NICTT plays a wav file when it detects the PPT 2740/2742 roaming between Spectrum24 APs, and also during a transmission test.

Temporary Settings

Check *These settings are only temporary* to use temporary values only until the computer system reboots. When not checked, any value entered in NICTT is saved and used even after the system is rebooted.



Using Spectrum24 Settings Control Panel Applet for the PPT 2740/2742

The Spectrum24 Settings Control Panel Applet allows you to view and edit Spectrum24 terminal settings. On the Start menu, select **Settings**, the **System** tab, then **Spectrum24 Settings**. The *Spectrum24 WLAN Easy Setup* dialog box appears. This dialog box allows you to set a new 802.11 ESSID or Spring NetId.

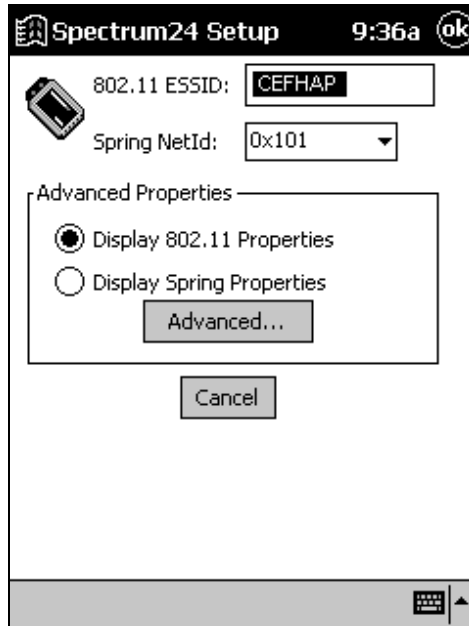


Figure 8-6. Easy Setup Dialog Box

Selecting the Advanced button allows you to view or edit 802.11 and Spring parameters using the *Spectrum24 WLAN Advanced Properties* dialog box.

Mobile Unit Properties

Spectrum24 Setup 9:38a **ok**

802.11 Mobile Unit Settings

ESSID:

RTS Threshold:

☐ International Roaming

Preferred BSS ID

Mandatory BSS ID

Power Management

Power Mode:

Beacon Algorithm:

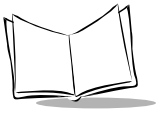
Minimum: Maximum:

Cancel

Mobile Unit **WLAN Adapter**

Figure 8-7. Mobile Unit Property Page

The *Mobile Unit* page configures NIC ESSID or NetId (depending on the 802.11 or Spring firmware in the terminal), Power Management, Request To Send (RTS) Threshold, Preferred BSS ID, and Mandatory BSS ID values. These values control how the terminal associates and consumes power in the MU mode. The *Spring Mobile Unit* page is similar to the 802.11.



To use the Power Management settings in the Spectrum24 Settings Control Panel Applet, disable Power Mode Management capabilities in NICTT as follows:

1. In NICTT select the *Power* tab.

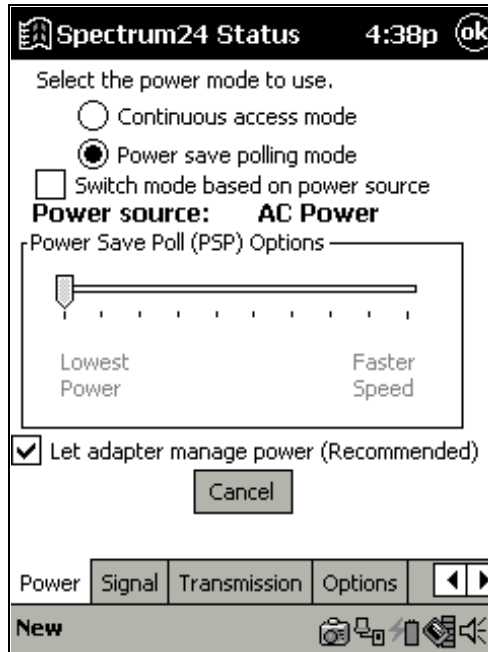


Figure 8-8. Power Property Page

2. If checked, uncheck *Switch power mode based on power source*.
3. Select *Power save polling mode*.
4. Uncheck *Let adapter manage power* (recommended).
5. Select the *General* tab.
6. Uncheck *These settings are only temporary*.
7. Tap OK.
8. Reboot the terminal.

WLAN Adapter Settings

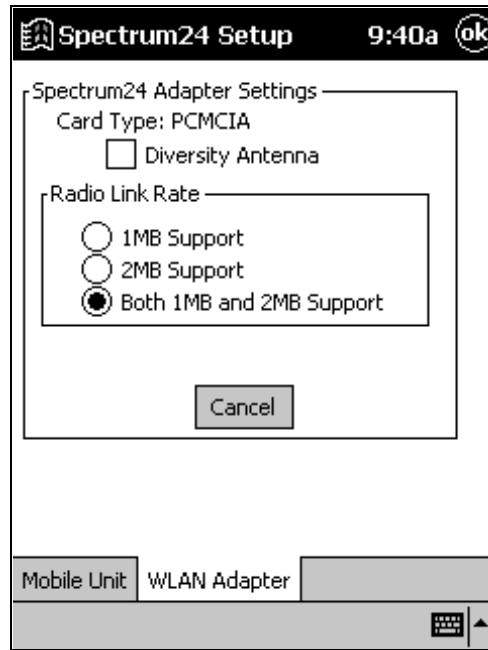
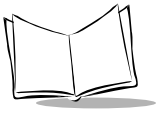


Figure 8-9. WLAN Adapter Property Page

On the *WLAN Adapter* page, the Card Type (the only visible field), interrupt Number, IO Port Address and Memory Base Address are automatically selected in a Plug and Play environment and are not visible (unless a PC Card is installed). Select the Radio Link Rate here along with the antenna options.



Configuring the PPT 2746 (11 MBit radio)

Using NICTT on the PPT 2746

The NICTT property pages contain a variety of wireless network and service quality information.

General Property Page

The *General* page on the Spectrum24 Status screen allows you to set the operational mode and ESSID.

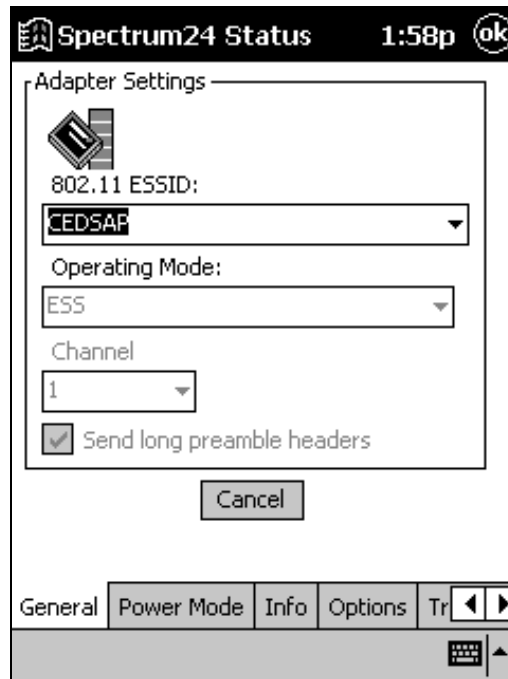


Figure 8-10. General Properties Page

Note: The operating mode and ESS ID set in NICTT override those settings in NICInfo and NCPA.

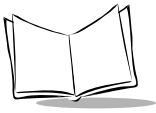
Use the Operating Mode pull-down menu to select one of the following options:

- ♦ **ESS (802.11 Station)** enables the terminal to transmit and receive data with an access point. Data rate is based on transmit retries. This is the default.
- ♦ **IBSS (802.11 Ad Hoc)** enables terminals to form their own local network where they can communicate peer-to-peer without access points. Use IBSS to create networks within established cells. Terminals take turns generating beacons and handling probe responses. The terminal starting the IBSS network (i.e., the first terminal transmitting a beacon) sets the channel number.

If you select IBSS, the **Signal** tab (on the far right) turns into the **Peers** tab. Select **Peers** to view the BSS ID or MAC address of other terminals in the network, their operating mode (PSP or CAM), transmit rate, supported data rate, and the length of time each terminal has been out of the IBSS network. Select **Refresh** to update the **Peers** page to the latest network performance and membership data.

- ♦ Select **Pseudo IBSS (Proprietary Ad Hoc)** for the highest throughput in an IBSS network for terminal testing. Pseudo IBSS does not support PSP terminals and does not use beacons or authentication. Select the channel for the network from the Channel drop-down menu. Each terminal must be on the same channel. If you select Pseudo IBSS, the **Signal** and **Peers** tabs are no longer available. Pseudo IBSS is not recommended as a normal operational mode or for terminals operating on battery power.

Enter a 32-character (maximum) string NIC ESS ID (802.11 Extended Service Set Identifier) in the **ESSID** field to identify the wireless network. The ESS ID assigned to the terminal must match the ESS ID of the access point.



Power Mode Property Page

The Power Mode management properties allows automatic or manual setting of the adapter power management mode.

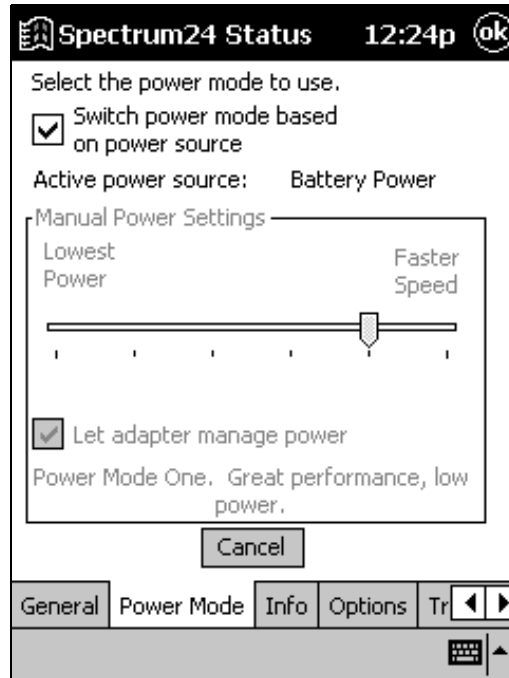


Figure 8-11. Power Property Page

- ♦ Select **Continuous Access Mode (CAM)** or **Power Save Polling (PSP)** mode. CAM yields the best performance but uses the most power. This mode is recommended for systems using AC power. PSP saves power, so is recommended for systems running on battery power.
- ♦ Use the sliding scale in the **Manual Power Settings** field to set a PSP performance index (1 to 5) suited to the intended operation of the terminal. The selected PSP setting is described below the sliding scale.
- ♦ Check the **Switch power mode based on power source** checkbox to automatically transition the system from PSP mode when on battery power to CAM when on AC power. Clear this checkbox to prevent NICTT from transitioning from PSP to CAM when AC power is detected.

- ♦ Check the **Let adapter manage power** checkbox to let the adapter select a low power mode. Clear this checkbox to enable the power slider and set the power levels.

Info Property Page

Use the *Info* page to view version and operating mode information.

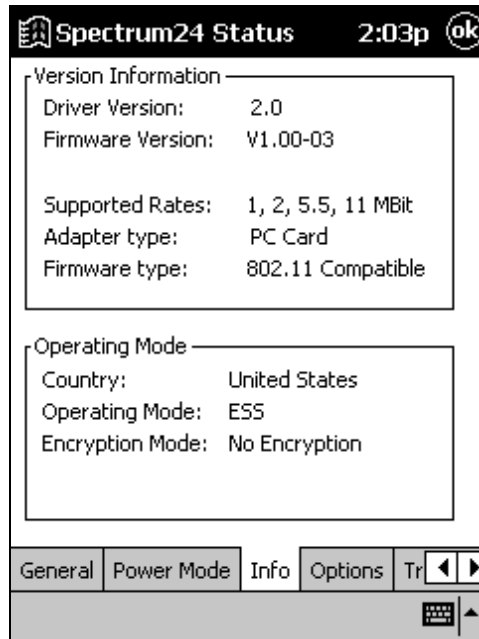
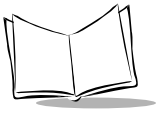


Figure 8-12. Info Property Page

The **Version Information** field displays driver version, adapter firmware version, supported data rates, adapter type and firmware type. Use this information to determine if upgrading NIC firmware could result in better performance.

The **Operating Mode** field displays the terminal's operating country, operating mode (ESS, IBSS Ad Hoc or Pseudo Ad Hoc), and Encryption mode.

Note: *The operating mode set in NICTT overrides the operating mode settings made in NCPA and NICInfo.*



Options Property Page

The *Options* page controls system sounds and whether specified settings are temporary.

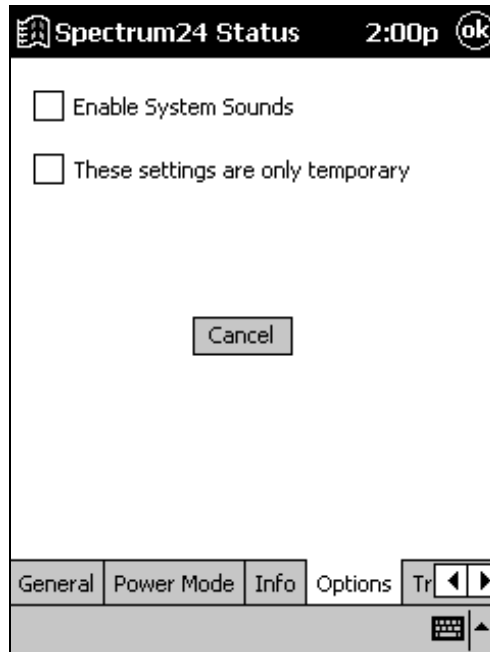


Figure 8-13. Options Property Page

Enable System Sounds

You can enable or disable NICTT system sounds. NICTT uses standard wav-table sounds supplied by the Windows operating system. NICTT plays a wav file when it detects the PPT 2746 roaming between APs, and also when it pings a host computer.

You may change NICTT wave files using the Windows Control Panel Sounds applet. There are two entries for NICTT: Spectrum24 NICTT Ping and Spectrum24 NICTT Roam. Select a wave file in the **Sounds** window for the audible response tone. The standard wave files shipped with NICTT have the following format:

SSxxxxn.wav

Where **xxxx** is either ping or roam and **n** is the identity of the file.

Temporary Settings

Check *These settings are only temporary* to use temporary values only until the computer system reboots. When not checked, any value entered in NICTT is saved and used even after the system is rebooted.

Transmission Quality Property Page

The *Transmission* page tests transmission quality from the client computer to a networked computer.

Spectrum24 Status 2:00p

Test

Host Address:

Timing Statistics

Minimum	Average	Maximum	
0	0	0	ms

Tests Performed: 0 Timeout 0

11 MBit

Round Trip Ping Time

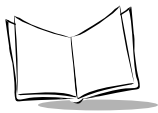
100
50
0
ms

Info Options **Transmission** Signal

Figure 8-14. Transmission Property Page

To test transmission quality, send an ICMP ping packet across the network to a selected address or host name. Configure the following parameters to conduct a transmission test:

1. Enter an IP address in the **Host Address** field as a dotted string (122.78.3.141) or as a host name. Domain Name Server (DNS) services are required to use host names, or an error message displays indicating the host name could not be found. The TCP/IP protocol must also be installed.



2. Select the number of times to run the test from the **Test** pull-down menu.
3. Select the **Start Test** button to begin the test. Each ping displays the round-trip time for the ICMP ping to complete. The minimum, maximum, and average values display as results. A real-time graph indicates the round-trip time of each packet.

Signal Strength Property Page

The *Signal* page displays signal transmission quality from the terminal to the associated access point. Signal quality indicates how clearly the terminal can hear the associated access point.

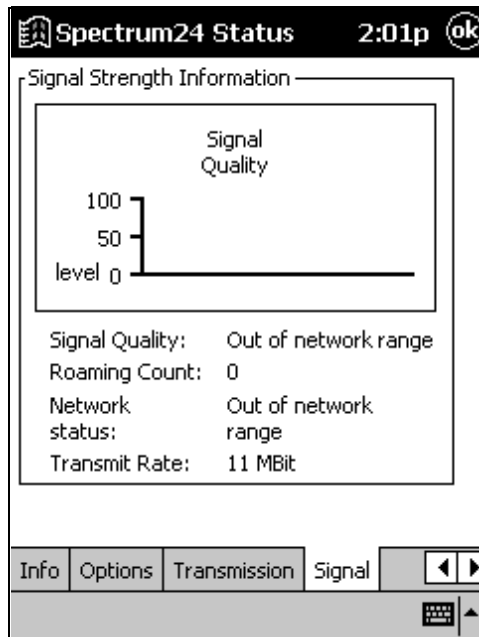


Figure 8-15. Signal Property Page

Note: This tab does not display if IBSS or Pseudo IBSS are selected as the operating mode from the General property page.

The **Signal** Property Page displays the following information:

- ♦ A graph displays signal quality from 0 to 100 percent. The terminal continuously looks for a stronger signal from a different access point on the network, and roams to that access point if the quality of the radio signal drops below an acceptable level.
- ♦ The bottom of the **Signal** page displays the current signal quality, the number of times the terminal has roamed, the current data rate, and the network in-range status.

Using Spectrum24 Settings Control Panel Applet for PPT 2746

The Spectrum24 Settings Control Panel Applet allows you to view and edit Spectrum24 NIC settings. During initial installation, the HR WLAN Setup screen appears. This allows you to set the ESSID and finish the installation.

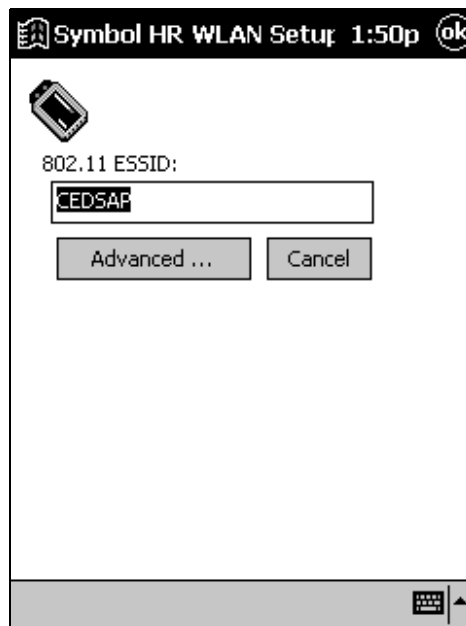
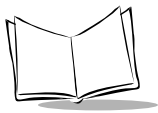


Figure 8-16. WLAN Setup Screen

Enter an ESSID (802.11 Extended Service Set Identifier) matching the access point ESSID to enable the terminal to communicate with the access point. This value is a unique 32-character (maximum) string that identifies the wireless local area network. If the ESSID is unknown, ask the IS department for assistance.



Advanced Settings

Only system administrators should modify the advanced settings. Select the **Advanced** button to view and edit the **Advanced** property pages and create a password for these pages. The Advanced property pages control all aspects of the terminal, including Mobile Unit settings, Power settings, Encryption settings, and WLAN Adapter hardware settings.

Mobile Unit Properties

Symbol HR WLAN Setup 1:51p (ok)

Operating Mode:
ESS

802.11 ESSID:
CED5AP

Mandatory AP address:
: : : : :

☒ Send Long Preamble Headers

The Wireless LAN adapter can function in several different operating modes. Select the operating mode and enter the ESSID for your operating mode.

Cancel

Mobile Unit Power Encryption WLAN A ◀ ▶

Figure 8-17. Mobile Unit Property Page

The **Mobile Unit** page in the **Advanced Properties** window configures the terminal's operating mode and ESS ID. Selecting an operating mode in NICTT disables the operating mode selected in NCPA.

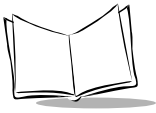
Use the **Operating Mode** pull-down menu to select one of the following operating modes for the terminal:

- ♦ **ESS (802.11 Station)** allows the terminal to transmit and receive data with an access point. The data rate is based on the number of transmit retries. This is the default.

- ♦ **IBSS (802.11 Ad Hoc)** enables terminals to form their own local network where they can communicate peer-to-peer without access points. Use IBSS to create networks within established cells. Terminals take turns generating beacons and handling probe responses. The terminal starting the IBSS network (i.e., the first terminal transmitting a beacon) determines the channel number and data rate used within the network.
- ♦ Select **Pseudo IBSS (Proprietary Ad Hoc)** for the highest throughput in an IBSS network for terminal testing. Pseudo IBSS does not support PSP terminals and does not use beacons or authentication. Each terminal must be on the same channel. If you select this option, the **Signal** and **Peers** tabs are no longer available. Pseudo IBSS is not recommended as a normal operational mode or for terminals operating on battery power.

Enter a 32-character (maximum) case-sensitive string NIC ESS ID (802.11 Extended Service Set Identifier) in the **ESSID** field to identify the wireless network. The ESS ID assigned must match the ESS ID of the access point. This value can also be set during Easy Installation.

The **Mandatory AP address** is the IEEE MAC address of the access point (AP) where the adapter associates. The adapter only associates to this access point when communicating on the network.



Power Properties

Select the **Power** tab in the Advanced Properties window to display the Power Settings property page. Use the Power property page to control terminal power consumption.

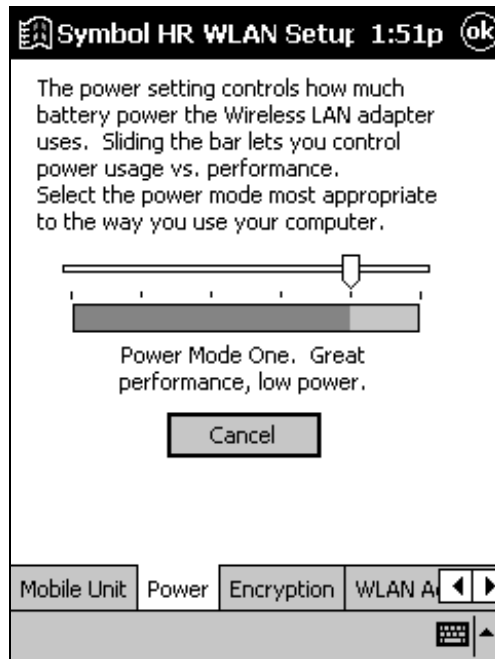


Figure 8-18. Power Property Page

There are two power consumption modes: Continuous Access Mode and Power Save Poll mode. CAM yields the best performance but uses the most power. CAM is the preferred mode for systems running on AC power. PSP saves significant amounts of power over CAM. PSP is the preferred mode for systems running on battery power.

Set the slider to the far right to retain CAM or set the slider to a PSP performance index (1 to 5). Each mode is described underneath the sliding scale.

Note: You must disable the Power Management capabilities in NICTT to use the settings in the NCPA Power property page.

Encryption

Select the **Encryption** tab in the Advanced Properties window to view the Encryption property page.

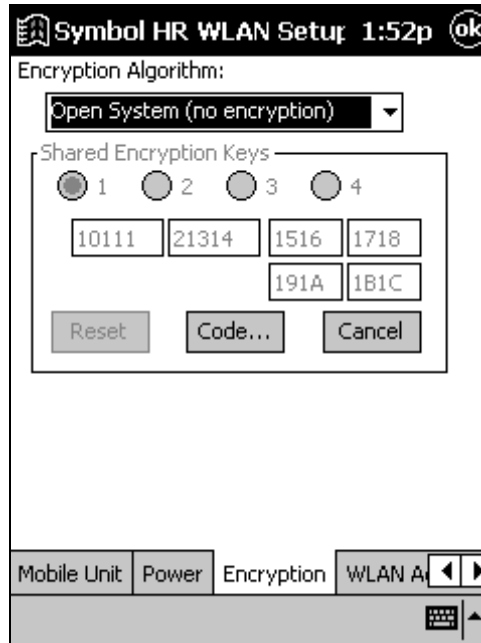
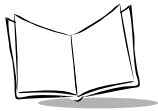


Figure 8-19. Encryption Property Page

Encryption is an efficient method of preventing data theft and improving data security in a wireless environment. Use the Encryption property page to configure WLAN adapter data packet Encryption settings.

Choose one of the following Encryption options from the **Encryption Algorithm** pull-down menu:

- ♦ Use the **Open Systems** option as a default setting when no data packet Encryption is needed over the network. Selecting Open Systems provides no security for the data being transmitted over the network. Select **OK** to enable Open System Encryption.
- ♦ Select **40-bit Encryption** and enter a 10 Hex digit password by spreading the 10 Hex digits between the two password fields provided for each Encryption key. Select **OK** to save and implement the password for the Encryption keys.



- ♦ **128-bit Encryption** is subject to export restrictions. An access code is required if 128-bit Encryption is selected and an export restrictions dialog box displays. Contact Symbol Technologies at 1-800-653-5350 for information on acquiring an access code.

If an access code is required, select the **Access Code** button to display the **Enable 128-bit Encryption** dialog box. Enter the access code in the 3 fields and select **OK**. The Access Code button disappears and the access code is stored.

Once 128-bit Encryption is enabled, select 128-bit Encryption from the Encryption Algorithm pull-down menu and enter a 26 Hex digit password by spreading the 26 Hex digits across the six password fields provided for each Encryption key. The 128-bit Encryption option provides the highest level of security. Select **OK** to save and implement the password for the Encryption keys.

WLAN Adapter Settings

Select the **WLAN Adapter** tab within the Advanced Properties window to view the WLAN Adapter property page. Use this page to configure hardware and radio settings and set an optional password for user access to the four advanced property pages.

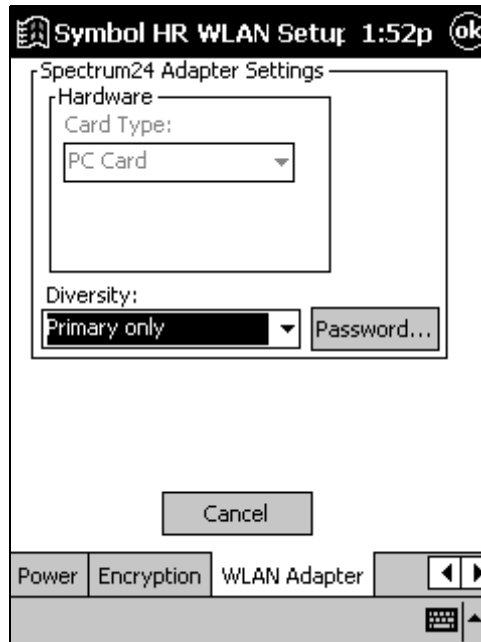
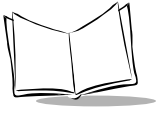


Figure 8-20. WLAN Adapter Property Page

To create a password, select the **Password** button. Enter a case-sensitive password (10 characters maximum) in the password field and select **OK**. This enables the Advanced property pages password dialog box which appears when Advanced is selected from the Easy Setup window.

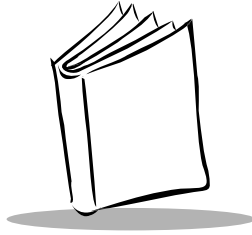
To disable the password dialog box, enter the current password and leave the two new passwords fields blank. Select **OK**. To change the password, enter the current password and type a new password in the two new password fields. Select **OK**.

Select **Secondary Antenna** in the **Diversity** drop-down menu if you have a dual antenna on your WLAN adapter card. This can improve communication in highly reflective environments. Select **Primary only** if you do not have a dual antenna WLAN adapter card or



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a secondary antenna. Using diversity without dual antennas can cause poor wireless network performance.



Chapter 9

Software Installation on Development PC

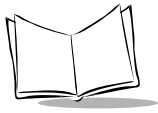
Introduction

To develop applications to run on the PPT 2700, the *Symbol Software Developer's Kit (SDK) for the PPT 2700 Pocket PC* is available. This SDK contains PPT 2700-specific software not available in the standard Microsoft Windows CE Platform SDK.

The minimum system configuration required to install the SDK is:

- ♦ IBM-compatible PC with Pentium 150 MHz processor or higher
- ♦ Windows®98 second edition, or Windows® NT operating system version 4.0 with Service Pack 5 or later, or Microsoft Windows 2000 operating system
- ♦ 24MB RAM for Windows 98, 32 MB RAM for Windows NT
- ♦ 100MB available hard disk space
- ♦ CD-ROM drive
- ♦ One available serial port
- ♦ Mouse.

Also, be sure the drive you are installing to accepts long filenames (larger than the 8.3 filename convention).



Before You Install the SDK

Before you install the Symbol SDK, install the following tools:

- ♦ Microsoft eMbedded Visual Tools 3.0.
- ♦ Windows CE Platform SDK for Pocket PC.
- ♦ Microsoft ActiveSync.

Symbol SDK for the PPT 2700

The SDK installation program loads the required Windows CE components on the development PC used to create the image files (via Terminal Configuration Manager) for download to the terminal.

The Symbol SDK includes:

- ♦ Symbol-provided files
- ♦ Printer drivers
- ♦ TCM scripts
- ♦ Sample code
- ♦ This Product Reference Guide.

Installing the SDK on the Development PC

The Symbol SDK installs through Windows in the directory C:\SYMBOL WINDOWS CE SDK, and also installs files in the Windows CE Tools directory (generated by the CE Tool Kit).

Installing the SDK

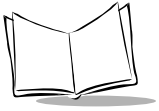
Install the SDK from the Symbol website **www.symbol.com**. Follow the installation prompts.

Note: *To ensure the best operation of the SDK, do not change the base path set up in the installation.*

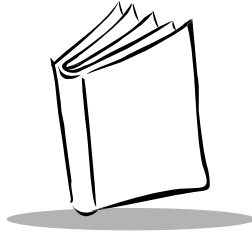
Once installation of the SDK is complete, use eMbedded Visual C++ or eMbedded Visual Basic to view the active Windows CE configuration, Microsoft Pocket PC, and display the directory in which the SDK is installed.

Installing Other Development Software

Developing applications for the PPT 2700 may require installing other development software such as application development environments on the development PC. Follow the installation instructions provided with this software.



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Chapter 10

Configuring the Terminal

Introduction

This chapter describes the Terminal Configuration Manager (TCM), and how it is used to specify and load files into the flash memory of the PPT 2700 using the terminal's Initial Program Loader (IPL).

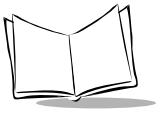
In TCM, you create a *script* that contains the information (commands to copy files) for building the image. TCM works with directory windows which display the directory structure of your script and the source directories, files, and scripts from which you pull components. You can open multiple scripts, drag and drop items from a drive/directory to the script, rename and delete files in the script, etc. Upon building the image, TCM adds all the files, directories, and scripts referenced in the script to the image.

The SDK includes a number of standard scripts and demos/samples for you to use as a base for creating your own scripts. These scripts can be found in the SYMSDK\SCRIPTS directory.

Note: *Before you create a script to build a hex image, identify the files required (system files, drivers, applications, etc.) and locate the files' source directories to make the script building process easier.*

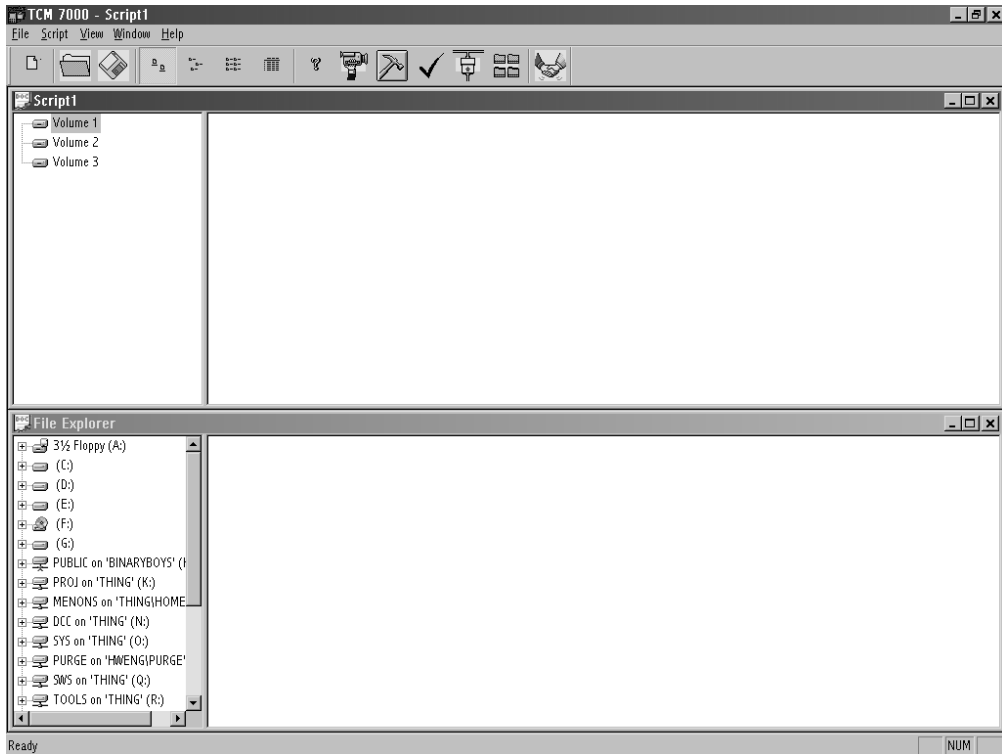
The required processes for building a hex image in TCM include:

- ♦ Starting TCM
- ♦ Creating or modifying a script
- ♦ Building the hex image
- ♦ Sending the hex image.



Starting Terminal Configuration Manager

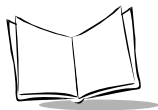
To start TCM, double click on the TCM icon in the SYMSDK group. The following screen appears, displaying two directory windows; Script1 and File Explorer. Each directory window is split; the left half (or *pane*) of the window displays the directory tree for the current drive, and the right half displays the directory contents for the current drive.



The following table lists the components of the TCM start-up screen.

TCM Screen Components

Component	Description		
Script Window	Associated with a script file containing the information to create a Flash Disk image. This window is the <i>target</i> window, or the primary TCM window in which you can create a script or change a script file's contents by copying, deleting, and renaming files and directories. More than one script window can be open at a time. The Script Window consists of two panes, the Directory Tree Pane on the left and the Directory Contents Pane on the right. Subordinate directories and files of each volume are listed in the Directory Contents Pane.		
File Explorer	A <i>read-only source</i> window for files and/or directories to include in the script being built.		
Tool Bar	Contains the tools, illustrated below, for taking action on a script.		
		Create a new script file.	 Check script for existing files.
		Open a script file.	 Select the hex image to load.
		Save a script file.	 Tile windows.
		View script properties.	 Build and send the hex image to the terminal.
		Build a script.	



Defining Script Properties

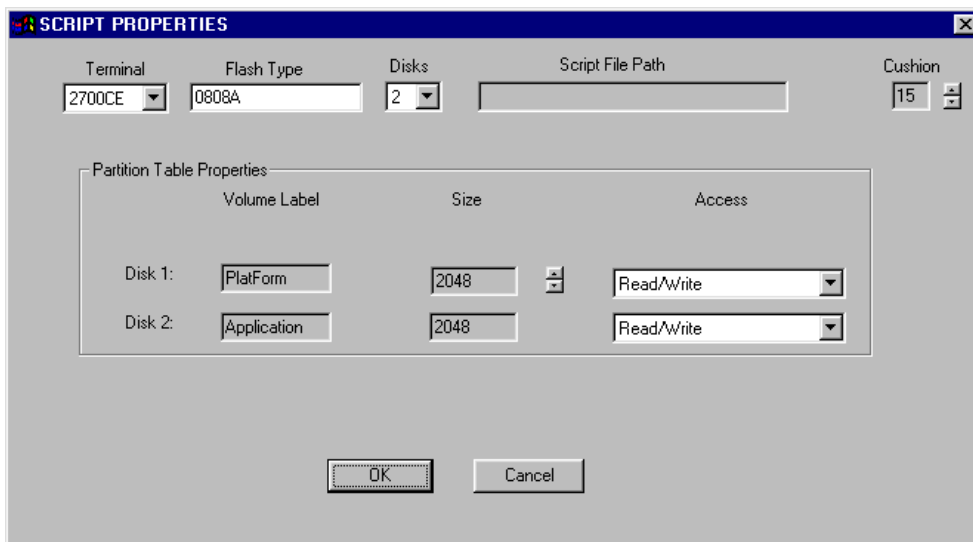
Before a script is created, the script properties must be defined. This defines the type of terminal, type of flash type, number of disks being created, and the memory configuration of each disk volume.

To define the script properties:

1. With TCM open, click on the Script Window to make it the active window.
2. Under the script menu, select the Properties option.

OR

Click on  from the tool bar. The Script Properties window displays.



The **SCRIPT PROPERTIES** dialog box is shown. It contains the following fields and controls:

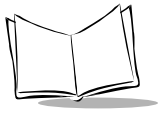
- Terminal:** A pull-down menu with "2700CE" selected.
- Flash Type:** A text field containing "0808A".
- Disks:** A pull-down menu with "2" selected.
- Script File Path:** An empty text field.
- Cushion:** A numeric field with "15" and up/down arrows.
- Partition Table Properties:** A section containing a table with columns "Volume Label", "Size", and "Access".

	Volume Label	Size	Access
Disk 1:	PlatForm	2048	Read/Write
Disk 2:	Application	2048	Read/Write
- Buttons:** "OK" and "Cancel" buttons at the bottom.

3. Under the Terminal pull-down menu, select 2700CE.
4. In the Flash Type field, select 0808A Flash Type.
5. Under the Disks pull-down menu, select the number of disk volumes to be created.

Note: *The options available under the disks pull-down menu changes depending on the flash type. Some flash types only have one option for the number of disk volumes, others have two options.*

6. If you have selected three volumes under the disk pull-down menu, you have the option to change the memory configuration of the second and third volumes. To do so, click on the up or down arrow for either of the volumes, until the memory configuration of each is set to the desired value. You will notice that as you change the values for one of the volumes, the other volume is automatically changed accordingly.
7. For each disk volume, determine the Read/Write access option.
8. The Script File Path displays the path of the selected script file.
9. Select a Cushion percentage from the Cushion pull-down menu to specify the percent of flash reserved for cushion. Choosing a higher number reduces disk storage space, but also increases write performance on fragmented disks or disks becoming full. To speed the writing process, select as high a number as your storage needs permit (up to 25%).



Creating the Script for the Hex Image

On start-up, TCM displays the screen shown on page [10-2](#), with the Script1 window and File Explorer window pointing to the SYMSDK\SCRIPTS directory and the SDK7X00 directory. The Script1 Window directory pane displays three volumes: Volume1, Volume2, and Volume3. Depending on the type of flash chip you have, the number of volumes may change. Files can be added to each of the volumes.

- ◆ Create a new script file or open an existing script
- ◆ Drag and drop existing files and directories to that script
- ◆ Set the script parameters
- ◆ Save the script
- ◆ Review and modify the script.

Each process is described in the sections that follow.

Open a New or Existing Script

Scripts are created in the Script Window.

To open a new script:

- ◆ Choose New from the File Menu, OR
- ◆ Click on  from the tool bar.

To open an existing script (e.g., a standard script provided in the SDK):

- ◆ Choose Open from the File Menu and select the script file name, OR
- ◆ Click on  from the toolbar and select the script file name, OR
- ◆ Double click on an existing script in the Script Browser window.

Note: *If you open and make changes to an existing script, saving the changes writes over the existing script. If you wish to use an original or Symbol-supplied standard script as a base and save the changes in a new script, use Save As instead of Save after making the changes.*

Copy Components to the Script

Copy *files or directories* to the script being generated:

1. Click on the File Explorer Window to make it the active window.
2. Click on the source directory in the Directory Tree Pane. TCM displays the directory contents in the Contents Pane.
3. Click on the file(s) and/or directory in File Explorer.

Note: *Optionally, use the standard Windows Shift+Left-click and Control+Left-click features to select multiple files and directories.*

4. Drag and drop the selected file(s) and/or directory from File Explorer to the target directory in the Script Window.

OR

Click on the target directory and select the File Explorer Copy icon from the toolbar.

Save the Script

To save the changes to a new script:

1. From the File menu, choose Save As.

OR

On the toolbar, click on  .

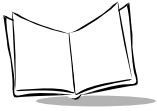
2. Enter the path and filename. TCM appends a .TCM extension to the script.
3. Choose the OK button.

Note: *If you save an untitled script, TCM by default saves the script to the directory that the Script Browser is pointing to.*

To save changes to an existing script:

- ♦ From the File menu, choose Save, OR

- ♦ On the toolbar, click  .



Note: *If you open and make changes to an existing script, saving the changes writes over the existing script.*

If you wish to use an original or Symbol-supplied standard script as a base and save the changes in a new script, use Save As instead of Save after making the changes.

Building the Image

As part of the build, TCM performs a check on the script which verifies that all files referenced in the script exist. If the image is bootable, TCM verifies that the boot files are available.

Note: *Performing a check is more important for previously existing scripts to ensure that files referenced in the script are still in the designated locations.*

To check a script:

1. In the Script Window, select the script.
2. Save the script, if not already saved.
3. From the Script Menu, choose Check.

OR

On the toolbar, choose  .

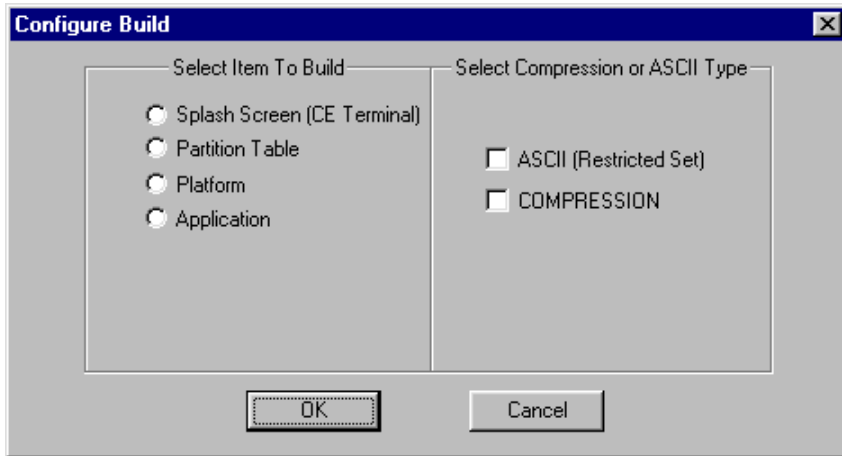
4. TCM verifies that files referenced in the script exist on available drives and lists an error message in the Errors found box for any missing files.
5. Choose the OK button to exit.

To build a script:

1. In the Script Window, select the script to be built.
2. From the Script menu, select Build.

OR

On the toolbar, choose . The Configure Build window appears.

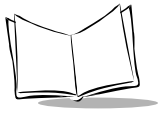


3. Select whether to build the partition table, or one volume.
4. Select ASCII format for your hex image, or Compression, which reduces the size of most hex images in order to speed downloading. Click OK.
5. TCM performs a check. If the script is has no errors, TCM proceeds with the build.

If the Build Fails

If the build fails, TCM displays a message indicating which file(s) are missing.

If the total amount of flash required by the script exceeds the image size, a TCM error results. To correct this, reduce the number of files in the volume, or make the disk non-bootable. Refer to [Defining Script Properties](#) on page 10-4 for more information on setting the image size appropriately.



Sending the Hex Image

Once the hex file is built, you are ready to download it to the terminal. A Hex image download requires both TCM and a program loader stored on the terminal. The terminal comes with a program loading utility, Initial Program Loader (IPL), stored in the terminal's write-protected flash. To run IPL, the terminal must be inserted in a cradle or connected to a host PC by direct serial connection.

Saving the Script

If you made changes to the script since last saving it, save the script again.

Connect The Terminal and Development PC

To send the hex file to the terminal, first link the terminal and development PC by one of the following devices:

- ♦ Direct serial link
- ♦ Cradle (refer to [Chapter 1, Getting Started](#) for more information on setting up the cradle).

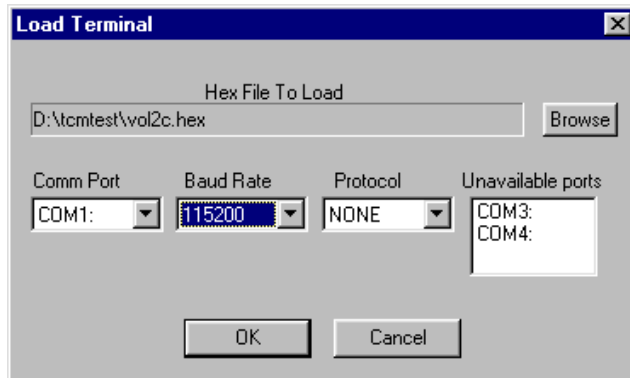
Begin the Send in TCM

In TCM on the PC:

1. Select the script.
2. From the file menu, choose Load Terminal.

OR

On the toolbar, choose  . The Load Terminal screen displays.

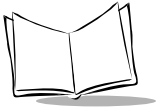


3. If the correct hex file is not displayed in the Hex File to Load field, click on the browse button and navigate to the correct hex file to be downloaded.
4. Click on the Comm Port pull-down menu and select the COM port being used. Ports already in use display in the Unavailable Ports field.
5. Click on the Baud Rate pull-down menu and select the appropriate baud rate. Your options are 2400, 4800, 9600, 19200, 38400, 57600, 115200.
6. On the Protocol pull-down menu, select None.

Setting Up IPL to Receive the File

To set up IPL on the terminal to receive the files being downloaded via TCM:

1. Cold boot the terminal by pressing the reset button inside the battery compartment while holding down the Function button.
2. Press and hold the App1 and App4 buttons. While holding down these buttons, press and hold the battery door switch inside the battery compartment (on the left). This all must occur within 3 seconds after resetting the terminal.



3. Continue to hold these buttons, including the battery door switch, until the IPL Baud Rate menu displays:

```
IPL VER X.XX
IPL Key Sequence

-> 115,200
   57,600
   38,400
   19,200
   9600
   Auto Baud

Press Up/Down to
select Baud Rate

Action to Continue
```

If necessary, adjust the contrast by holding down the Function button and pressing the up scroll button to darken the screen, or the down scroll button to lighten the screen.

4. The version number on the top of the screen identifies the version of IPL you are using. After the version number one of the following messages appears, indicating why IPL was invoked:
 - ♦ IPL Key Sequence: IPL key sequence was pressed.
 - ♦ Partition Table not found: indicates no partition table was found.
 - ♦ Partition Table Checksum Error: indicates a checksum error was detected in the partition table.

Use the up and down scroll buttons on the terminal to scroll to the appropriate baud rate, then press the Action button to accept the selected baud rate. If no selection is made within 10 seconds, the baud rate 115,200 is automatically selected.

5. IPL displays the Main Menu which lists the partitions/applications that can be downloaded.

```
IPL Ver X.XX
IPL Key Sequence

Windows CE
Platform
Application
Data
Splash Screen
IPL
Partition Table
Auto Select

Press Up/Down to
select partition

Press Action to
begin download
```

6. Use the up and down scroll buttons to select the partition to be received, then press the Action button, or select Auto Select to download several partitions in sequence.

Note: *Auto Select is the default, and will be selected if no other selection is made within 10 seconds.*

7. The following screen displays:

```
IPL VER X.XX

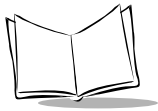
Partition Name

Waiting for Data
at Baud Rate XXX,XXX

Press Action to
return to Main Menu
```

Partition Name reflects the selection made on the Main Menu, and *Baud Rate XXX,XXX* displays the selection chosen from the baud rate menu.

This screen continues to display until the first character of the image to be



downloaded is received from the host. While this screen is displayed, pressing the Action button returns IPL to the Main Menu screen.

8. Insert the terminal in a cradle, or connect it to a host PC with a serial cable.
9. Return to the host PC, and press the OK button on the *Load Terminal* dialog box.
10. As soon as the first character of data is received, IPL displays the receiving screen:

IPL VER X.XX

Partition Name
Downloading Data

Processing XXXXX KB
of YYYYY KB image

Note: *If the Pre-erase Attribute bit is set on the partition being downloaded, the message “Pre-Erasing Flash” also appears.*

This screen indicates that the area selected in the Main Menu screen is currently downloading, and displays until an entire image is received, or until an error is detected. As more data is received, the Receiving Screen is updated to reflect the current status.

To process the data, IPL must receive, erase, and write the entire image. With the exception of the disk images, IPL receives the entire image before starting the erase, and completes the erase before starting to write. With disk images, IPL multiplexes all three operations as data is received.

11. When the entire image is received, IPL indicates that the download is complete.

IPL VER X.XX

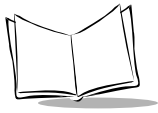
Partition Name
Download Complete

Press Action to
return to Main Menu

Cold Boot Exits IPL

If Auto Select was selected on the Main Menu, the text “Auto Select Enabled” appears in place of “Cold Boot Exits IPL.”

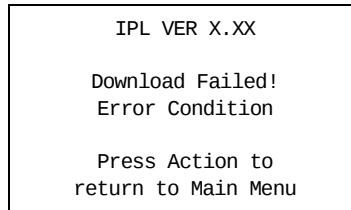
12. If Auto Select was selected on the Main Menu, IPL immediately returns to the Waiting for Data Screen to wait for the next image. If any other selection was made on the Main Menu, IPL stays at the success screen until you press Action. Once the screen is acknowledged, IPL returns to the Main Menu to wait for a new selection.
13. When all partitions are downloaded successfully, cold boot the terminal by pressing the reset button inside the battery compartment while holding down the Function button.
14. Close TCM on the host PC by selecting Exit from the File Menu.



Error Messages

IPL Error Detection

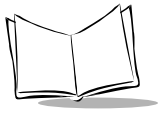
While receiving data, IPL performs many checks on the data to ensure that the data is received correctly. If an error is detected, IPL immediately aborts the download, and reports the error on an error screen:



This screen displays until you press Action. Once the screen is acknowledged, IPL returns to the Main Menu screen to wait for a new selection.

The cause of the error displays under the Download Failed! indication. The errors that can be reported, and the probable cause of the error, are as follows:

Invalid Image	This error occurs if another record is received before the Header Record. Ensure the Header Record is the first record downloaded.
Partition Not Defined	The destination code is part of the Header record and is used as an index into the partition table. The partition table entry located at this index contains partition information for the data downloaded. If the AutoSelect option is selected, a check is made to ensure that valid partition information exists in the partition table at this index. The check verifies that the Area Name and Sector Size are both non-zero. If not, this error occurs.
Wrong Partition	If a specific partition is selected from the partition list, and the destination code of the Header record downloaded does not match the index of that partition, this error occurs.
Image Too Big	The size of the image is also part of the Header record. If the data to be written exceeds the size of the partition as indicated in the partition table, this error occurs.
Incorrect Byte Count	Image data is processed until the End Of File (EOF - Record Type 01) record is received. This error occurs if IPL detects that the number of bytes received does not equal the number of bytes sent.
Unable to Verify Partition Data	If the Receive and Verify bit is set for that partition, the data is verified, the flash sector erased, and the data written to the flash part. If this data can not be verified, this error occurs.
Transmission Errors	The following error messages may appear if an error occurs during transmission: Checksum Error occurs if an invalid checksum is detected in the record. Invalid Record occurs if a record is not defined in the Symbol Hex File Format. Connection Lost occurs if one of the handshaking lines is de-asserted during download. Address Out of Sequence occurs if the address of the data received is not sequential.



TCM Error Messages

TCM validates the cells in your partition table when the Execute button is pressed. Cells highlighted in red contain an error. Partition loading is disabled until all errors are corrected. Following are errors that TCM may encounter, and possible solutions.

Error - Partition Size	The size of a partition must be an integral multiple of the FFSSectorSizeInBytes specified by the .ini file. When the user enters a partition size, TCM rounds up to the next highest integral multiple of the sector size and displays this value in the partition table grid. This error check is made upon value entry, independent of the Execute button.
Error - Image Larger than Partition	If the required size of the binary image file is larger than the associated partition size, the Partition Size cell in the partition grid turns red to highlight the error. The Required Size cell indicates the actual size required.
Error - Total size of all FFS Partition	If the total memory allocated to the 3 FFS partitions is greater than the total Flash Memory on the terminal, the Used FFS Memory display box turns red. Decrease the size of one or more of the partitions, then recheck the configuration using the Execute button.
Error - Source/Destination Path Verification	If the directory paths specified by the Source and Destination cells do not exist, the cell containing the non-existent path turns red to highlight the error.

Creating a Splash Screen

To generate a custom splash screen, use Microsoft Visual Studio, Microsoft Visual C++ version 6.0. Select Insert, Resource. Next, select Bitmap, New.

To create the screen:

1. Create a 4-color bitmap with dimensions of BX x BY where:
 - ♦ BX is less than or equal to 240 pixels
 - ♦ BY is less than or equal to 320 pixels
 - ♦ The bitmap is less than 240 by 320 pixels
 - ♦ 4 colors must be selected
 - ♦ The total bitmap size must be less than or equal to 16384 (16K).

Generally, the bitmap file size should be less than or equal to 16384 bytes (16K).

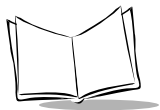
2. To change the bitmap properties, double-click on the bottom-right corner of the bitmap when the cursor appears as a double arrow. The Bitmap Properties dialog box displays.
3. Select Width (<240), Height (<320) and Colors (4).
4. Select 4 colors so that 2 bits are used for each pixel of data in the bitmap file.
5. Select a new file name.
6. Select Image from the toolbar. Select Flip Vertical to invert the image.

If other tools are used, be sure to create the bitmap with the size less than or equal to 16K and with 4 colors.

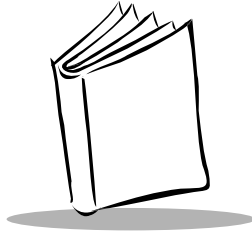
Loading the Splash Screen via TCM

To load the bitmap:

1. Click TCMMain.exe in the TCM directory.
2. Connect the PPT 2700 to the PC and invoke IPL to prepare the terminal to receive the splash screen download.
3. In the partition table, double-click on the Source column entry box for Splash Screen. The Specify Source dialog box appears. Select the bitmap file.
4. Double-click on the Destination column entry box for Splash Screen.
5. Select Create Image in the Hex Image file dialog box.
6. After the image is created, select Load.
7. Close TCM.



PPT 2700 Series Product Reference Guide



Chapter 11

Maintenance and Troubleshooting

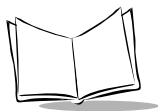
Introduction

This chapter includes instructions on cleaning and storing your terminal, and provides troubleshooting solutions for potential problems during terminal operating.

Maintaining the PPT 2700

For trouble-free service, observe the following tips when using your PPT 2700:

- ♦ Take care not to scratch the screen of your PPT 2700. When working with your PPT 2700, use the supplied stylus or plastic-tipped pens intended for use with a touch-sensitive screen. Never use an actual pen or pencil or other sharp object on the surface of the PPT 2700 screen.
- ♦ Although your PPT 2700 is water and dust resistant, do not expose it to rain or moisture for an extended period of time. In general, treat your PPT 2700 as you would a pocket calculator or other small electronic instrument.
- ♦ The touch-sensitive screen of your PPT 2700 contains glass. Take care not to drop your PPT 2700 or subject it to strong impact.
- ♦ Protect your PPT 2700 from temperature extremes. Do not leave it on the dashboard of a car on a hot day, and keep it away from heat sources.
- ♦ Do not store or use your PPT 2700 in any location that is extremely dusty, damp or wet.
- ♦ Use a soft lens cloth to clean your PPT 2700. If the surface of the PPT 2700 screen becomes soiled, clean it with a soft cloth moistened with a diluted window-cleaning solution.



Troubleshooting

Table 11-1. Troubleshooting

Problem	Possible Solution
PPT 2700 terminal does not turn on.	Adjust the contrast control. Make sure batteries are installed properly. Replace the batteries. If your PPT 2700 terminal still does not operate, try a soft reset; see Resetting Your PPT 2700 Terminal on page 2-12.
PPT 2700 does not emit sound.	Check the System Volume slider in the Sounds & Reminders properties dialog box (under Start/Settings) to make sure the volume is not turned down.
PPT 2700 turns itself off.	Your PPT 2700 terminal is designed to turn itself off after a period of inactivity. This period can be set from one to five minutes, in one-minute intervals. Check the Power dialog box (in the System tab under Start/Settings), and change the setting if you need a longer delay before the automatic shutoff feature activates.
PPT 2700 stops responding to screen input.	Perform a soft reset. See Resetting Your PPT 2700 Terminal on page 2-12.
PPT 2700 responds inaccurately to stylus taps.	Align the screen. Choose Align Screen from the System tab under Start/Settings , or hold down the Function button and press the Action button.
PPT 2700 doesn't recognize my handwriting.	For your PPT 2700 to recognize handwriting input with the stylus, characters must be written a certain way. See Appendix B, Character Recognizer for information about how to write character strokes. Make the character strokes in the lower character entry area on the screen — not on the display part of the screen. Make sure you are writing lower-case letters in the left-hand side, numbers in the right-hand side, and upper-case letters in the center of the writing area.
Tapping the screen buttons or icons does not activate the corresponding feature.	Align the screen. Choose Align Screen from the System tab under Start/Settings , or hold down the Function button and press the Action button.

Table 11-1. Troubleshooting (Continued)

Problem	Possible Solution
A message appears stating that your PPT 2700 terminal memory is full.	Delete unused memos and records. If necessary, you can save these records on your computer. If you are copying files to your terminal, adjust the memory allocation. Select Start, then Settings, and select the System tab. Tap Memory and adjust the slider. Remove programs you no longer use. Select Start, then Settings, and select the System tab. Tap Remove Programs, select the unused program and tap Remove.
PPT 2700 is not communicating with the host PC.	Ensure the PPT 2700 is connected to the host PC via serial cable, or is placed in a cradle connected to the host PC. Confirm that the PPT 2700 and host PC are communicating at the same baud rate. Consult ActiveSync Help on your host PC.
Beamed data does not transmit.	Confirm that the PPT 2700 terminals are 5" apart, and that the path between the two devices is clear of obstacles. Adjust the room lighting or move to a different location.
When receiving beamed data an out of memory message appears.	Your PPT 2700 terminal requires at least twice the amount of memory available as the data you are receiving. For example, if you are receiving a 30K application, you must have at least 60K free.
Your PPT 2700 does not accept scan input.	Verify that the terminal is loaded with a scanning application. See your System Administrator. Check to be sure the bar code symbol is not defaced. Be sure you are within proper scanning range. Be sure the terminal is programmed to accept the type of bar code you are scanning. If you are expecting a beep on a good decode and don't hear one, check that the application is set to generate a beep on good decode. If the PPT 2700 stops emitting a laser beam when you press the trigger, check your battery level. When the battery is low, the scanner shuts off before the terminal notifies you of the low battery condition.

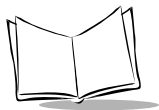
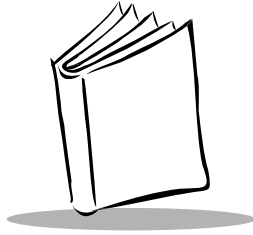


Table 11-1. Troubleshooting (Continued)

Problem	Possible Solution
Your PPT 2700 is not dialing out.	Remove the terminal from the cradle. The modem will not work if the terminal is actively connected to the desktop computer. Ensure the modem is connected to the terminal and the telephone jack. Ensure Hayes Compatible Modem on COM1 is selected. Select Start, then Settings, and select the Connections tab. Tap Modem, select your connection and tap Next twice. Make sure Wait for dial tone before dialing is selected.
Your PPT 2700 is dialing but not connecting.	Ensure the network you are calling supports Point-to-Point Protocol (PPP) Ask your networking administrator. Ensure the location is correct. Select Start, then Settings, and select the Connections tab. Tap Modem. On the Dialing tab, check Location. Tap Dialing Patterns to make sure the correct numbers are being dialed. Verify you are dialing the right number. Select Start, then Settings, and select the Connections tab. Tap Modem. Tap the connection, then Next and check the phone number. Disable call waiting. Select Start, then Settings, and select the Connections tab. Tap Modem. On the Dialing tab, select Disable call waiting, and enter the disable code obtained from your telephone company.

Note: *If, after performing these checks, the terminal is still not reading symbols, contact your distributor or Symbol Technologies.*



Appendix A

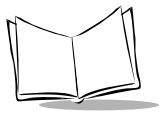
Demo Program

Introduction

A button-launch demo program illustrates how to use some of the terminal's many applications. If the demo program is not already on your PPT 2700 (check the Start menu), you may download the program from the *Symbol Software Developer's Kit (SDK) for the PPT 2700 Pocket PC*. See [Chapter 3, Customizing Your PPT 2700](#) for instructions on adding programs to your terminal.

The following options are available on the Button Launcher Task, and are described in this chapter.

- ◆ Setup: accesses the Control Panel, NICTT, and Diagnostics.
- ◆ Scanner: sample scanning application.
- ◆ File Explorer: File management utility.
- ◆ MSR Sample: sample Magstripe reader application.
- ◆ CE Apps: accesses standard Windows CE applications.



To initiate the demo program, select **PPT 2700 Demo** from the **Start** menu. The initial demo program dialog box appears.

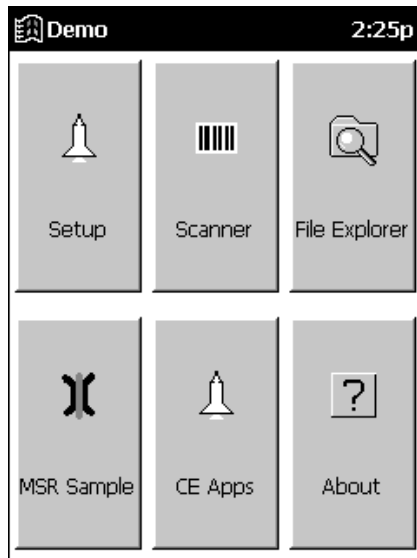


Figure A-1. Main Dialog Box

Setup

Select the **Setup** button to display the following dialog box:

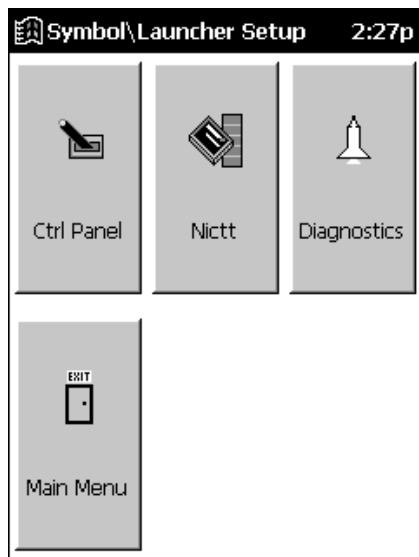
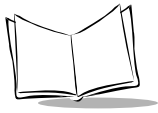


Figure A-2. Symbol Setup Dialog Box



Control Panel

Select **CtlPanel** to display the *Control Panel Test Program* dialog box. This dialog box provides a convenient way to view and set terminal settings, such as scanner parameters, display settings, audio settings, printer settings, setting date and time, and aligning the touch screen. It also serves as a sample code on many of the Symbol-specific CAPI calls.

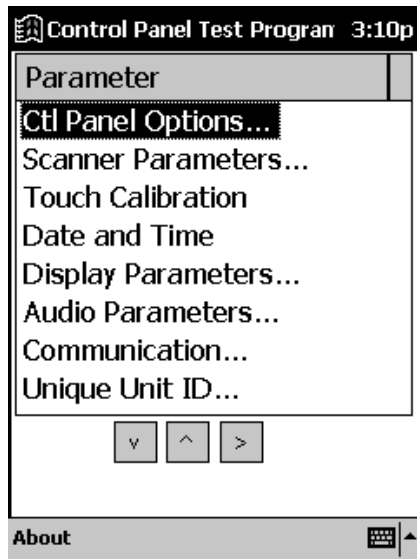


Figure A-3. Control Panel Test Program Dialog Box

NICTT

For information on NICTT, the Spectrum24 configurator, see [Chapter 8, Spectrum24 Network Configuration](#).

Diagnostics

Select **Diagnostics** to display the following dialog box:

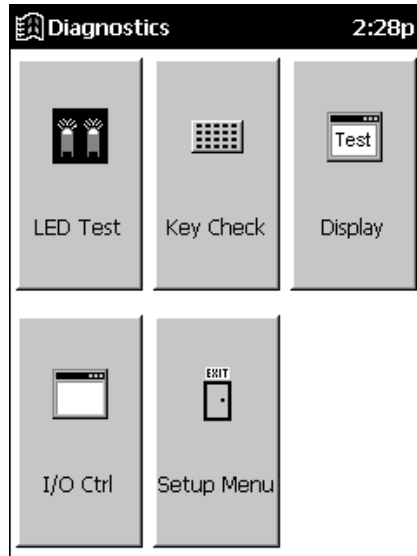


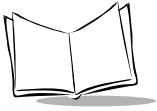
Figure A-4. Diagnostics Dialog Box

This dialog box provides testing to ensure various aspects of the terminal are functioning correctly. The following options are available:

- ◆ LED Test tests the green decode LED-on and LED cycle to ensure it is functioning properly. This option also allows you to view the state of the LED (on or off).
- ◆ Key Check identifies each button on the terminal (except the Scan buttons) when each button is pressed.
- ◆ Display tests the pixels on the screen.
- ◆ I/O Ctrl tests the external power supply, and gets and sets the VCC state.
- ◆ Setup Menu returns to the *Setup* dialog box.

Main Menu

This option returns you to the demo's Main Menu.



Scanner

The sample scanning application enables the terminal's scanner, and allows the user to change scan parameters, and displays scanned data.

Scan Sample 2 2:29p

Data: 1H900633

Type: 0x37

Src: SCN1:CODE 3 OF 9

Time: 14:29:37

Soft Trigger View Data

PARAMS CODES

About

Figure A-5. Scan Sample Dialog Box

Scanning Data Fields

After a bar code is scanned, the following data appears in the dialog box:

- ◆ *Data* displays the data encoded in the scanned bar code.
- ◆ *Type* indicates the hex type scanned.
- ◆ *SRC* indicates the scanner being used, and the bar code type scanned (e.g., Code 128).
- ◆ *Time* displays the time the bar code was scanned.

Scanning Options

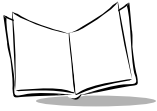
The following options are available in the Scan dialog box:

- ◆ *Soft Trigger* provides an alternative to the trigger buttons on the terminal.
- ◆ *View Data* displays the bar code content in a separate screen.
- ◆ *Params* is used to change scanning parameter options, such as:
 - ◆ beep time (length of decode beep)
 - ◆ beeper frequency (tone)
 - ◆ LED-on time (length of time LED remains on upon decode)
 - ◆ Code ID (AIM, Symbol)
 - ◆ Wav File (sound of decode beep).
- ◆ *Codes* selects the code types the terminal is able to decode, and sets the options for each code type.
- ◆ *Exit* closes the Scan dialog box.

File Explorer

File Explorer is a file browser utility that provides similar Windows Explorer-like functionality on Symbol CE terminals. File Explorer allows the user to browse, cut, copy, paste, and delete files as well as execute the program. It also provides file transfer capability via the IrDA port.

You can also access File Explorer by selecting Programs under the **Start** menu.



MSR Sample

This selection provides a sample MSR application.



Please Wait for MSR3000 to open



Figure A-6. MSR Sample Dialog Box

CE Apps

Select CE Apps button on the main menu to access the following standard Windows CE applications:

- ◆ Voice Recorder
- ◆ Calculator
- ◆ Solitaire
- ◆ Calendar.

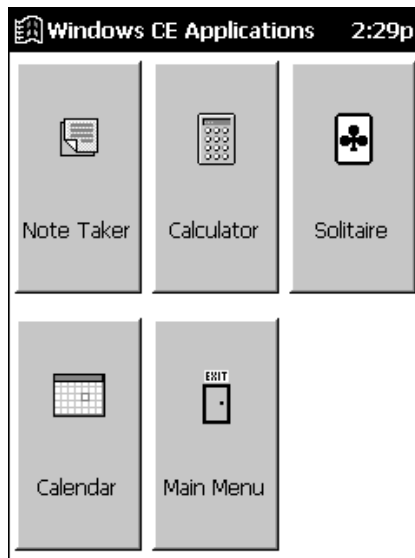
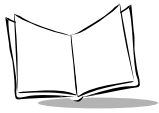


Figure A-7. CE Apps Dialog Box

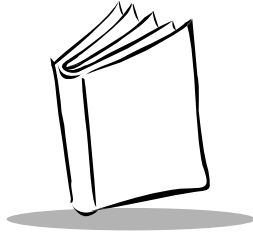
See [Chapter 5, Applications](#) for information on these applications.

About

Select the **About** button on the demo program to view information about the demo program.



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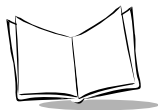


Appendix B

Character Recognizer

Using Character Recognizer, you can write characters directly on your terminal screen with your stylus. These characters are translated into typed text. Use Character Recognizer to enter text, for example, to write a note or to fill in fields in a dialog box.

The default writing mode for Character Recognizer is lowercase (Jot-compatible) mode. [Figure B-2 on page B-3](#) provides examples of how to write characters in lowercase mode. To use uppercase (Graffiti-compatible) mode, tap **Uppercase Mode** in **Options** on the input method menu. Whether a letter appears in uppercase or lowercase when it is converted to typed text depends on where in the input panel you write it, not on the mode selected.



The Character Recognizer input panel is divided into three writing areas. Letters written in the left area (labeled ABC) creates uppercase letters, and letters written in the middle area (labeled abc) creates lowercase letters. Use the right area (labeled 123) for writing numbers, symbols, special characters, and punctuation.

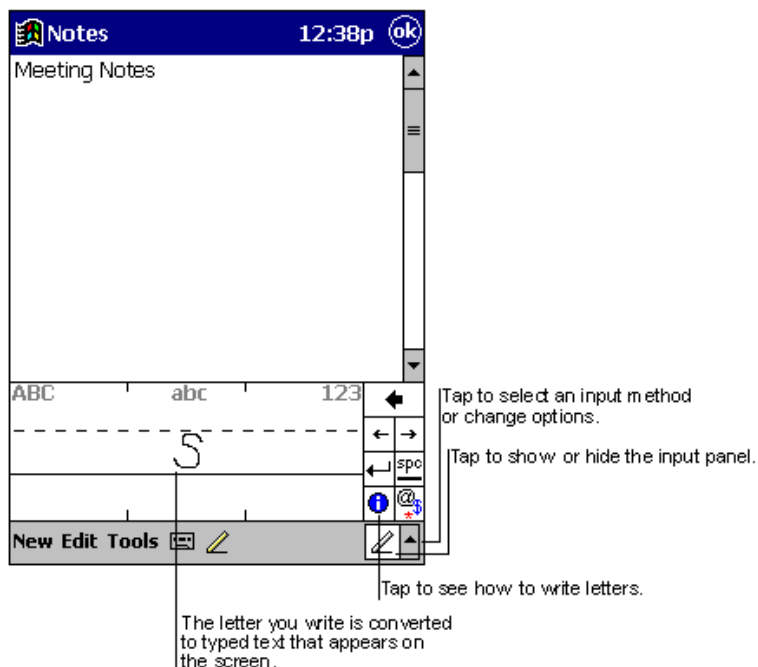


Figure B-1. Using Character Recognizer

The following chart illustrates some of the characters you can write in lowercase mode (the dot on each character is the starting point for writing). Note that although you write a letter in lowercase, the case of the text displayed depends on where you write the letter. For example, if you write a lowercase "a" in the ABC area, an uppercase "A" displays on the screen.

Letter Area					Number/Punctuation Area				
A	a	a			N	n			
B	b	b			O	o			
C	c				P	p			
D	d				Q	q			
E	e				R	r			
F	f				S	s			
G	g				T	t	7	7	7
H	h				U	u			
I	i				V	v			
J	j				W	w			
K	k	k	k	α	X	x	x		
L	l	l	l		Y	y	y		
M	m				Z	z			

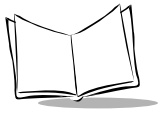
0	0				)	)			
1	1				+	+			
2	2	2			*	x	∞		
3	3				/				
4	4	4	4	4	\				
5	5	5	5		?	?	?		
6	6				!	!			
7	7				@	@			
8	8				&	&			
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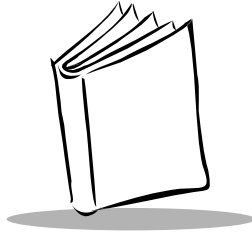
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Figure B-2. Character Chart

For more information on using Character Recognizer and for demos of all characters, tap  on the Character Recognizer input panel.



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Appendix C

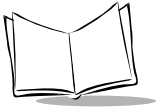
Technical Specifications

Environment

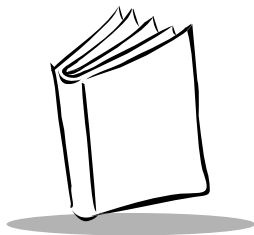
Table C-1 summarizes the PPT 2700's intended operating environment.

Table C-1. PPT 2700 Operating Environment

Operating Temperature	-20° C to 50° C (-4° F to 122° F)
Storage Temperature	-25° C to 50° C (-13° F to 122° F)
Humidity	5% to 90% non-condensing
Electrostatic Discharge (ESD)	8 kVdc air; 4 kVdc contact
Drop to Concrete	1.2 meters (4 feet)
Sealing	IP54 (windblown rain and dust)
Decode Distance	3" - 10.5" (7.6 cm - 26.7 cm)
Size	1-D Scanning Terminal: 7"L x 3.625"W x 1"H (177.8mm x 92mm x 25.4mm) 2-D Scanning Terminal: 7.625"L x 3.625"W x 1"D (grip area) x 1.5"D (scanner bay) (193.7mm x 92mm x 25.4mm x 38.1mm)
Weight (including battery)	1-D Scanning Terminal: 10.3 oz / 288 gm (batch); 11.8 oz / 330 gm (wireless) 2-D Scanning Terminal: 13.8 oz / 391 gm (batch); 15.3 oz / 434 gm (wireless)



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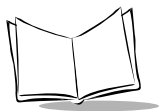
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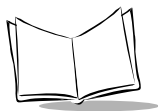
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