Falcon® 4220

Windows®CE .NET Ruggedized PDA

Product Reference Guide

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Patents

This product may be covered by one or more of the following patents: 4593186 • 4758717 • 5130520 • 4460120.

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Preface
About this Guide

How to Use This Manual

This Product Reference Guide contains comprehensive user instructions for the PDA, software, dock, serial cable, and data transfer. This section provides an overview of the manual's contents and organization.

- "Document Overview" on page v.
- "Document Conventions" on page vi.
  - "PDA Keys" on page vii.
  - "Stylus Actions" on page vii.
  - "Mouse Actions" on page vii.
- "Registering Your Product" on page viii.

Document Overview

This document contains the following material:

- This Preface, "About this Guide" provides an overview of the contents for each chapter, and describes document style conventions.
- Chapter 1, "Batteries and Power", provides details on power conservation (suspend mode), resetting the PDA, checking the battery power, installing and recharging the battery pack, battery storage, disposal, and battery cautions and warnings. Battery chargers and docks are also covered.
- Chapter 2, "Software Applications", covers the user interface, entering data, using the soft input panel, flash memory, and context sensitive help. In addition, installing, selecting, using, and removing applications are covered, specifically the factory default Windows CE .NET applications, and specialized applications such as the Falcon Management Utility and the Quick ScanSet application.

- Chapter 3, “Configuring a PDA”, reviews the use of control panels to adjust the settings for touchscreen calibration, date and time, display backlight/contrast, volume/sounds, scanner, power, memory and many other custom settings.
- Chapter 4, “Networks, Communications, and Connections”, describes installing, setting up, and using Microsoft ActiveSync with your PDA to communicate with a host PC.
- Appendix A, “Technical Specifications”, provides a dimensional illustration, and the technical environmental, memory, touchscreen, and pinouts specifications for the PDA.
- Appendix E, “Maintenance, Troubleshooting, and Technical Support”, describes PDA maintenance, provides a troubleshooting table, and tells how to contact PSC for technical support.
- Appendix F, “Glossary”, is a glossary of terms used in this manual that are specific to the Falcon 4220 and Microsoft Windows®CE .NET.

Document Conventions

Formatting conventions are used throughout this guide to provide a consistent method for representing screen shots, command entries, and keyboard characters. This guide also provides special conventions for notes and cautions, information of high interest to the user.

Notes contain information necessary for properly diagnosing, repairing and operating the terminal.

The CAUTION symbol advises you of actions that could damage equipment or property.

A WARNING symbol calls attention to actions that could result in personal injury.

Keystrokes. Filenames, paths, field selections from a pull-down list, and data or keystrokes entered by the user are shown in this **`monospaced`** typeface.

Windows Controls. Windows controls including command bar sequences, prompts, dialog boxes, fields, pull-down lists, checkboxes and radio-buttons are printed in this **bold** typeface.

PDA Keys

Keys on the PDA are bracketed by “greater than” and “less than” characters (**< >**) to distinguish them from keys on the PC.

<ENTER> Key. To differentiate the **<ENTER>** key on the portable from the **Enter** key on the PC’s keyboard, portable keys are bracketed as shown: **<ENTER>**.

Stylus Actions

The Stylus actions apply only to the PDA. The next section describes nomenclature for using the mouse on the PC.

Single Tap or Select. Tap the display screen once with the stylus to activate a specific button or select an item from a pull-down list.

Double-Tap. Tap the stylus twice rapidly in the same location to open an application.

Tap and Hold. Tap and hold the stylus to view the context menu.

Refer to "Using the Stylus" on page 2-2 for more information on using the stylus with the PDA.

Mouse Actions

Applies to the software installation portions of this document using a PC; the PDA comes equipped with a stylus. Refer to "Stylus Actions" on page vii, and "Using the Stylus" on page 2-2 for more information.

Click or Select. Press and immediately release the left mouse button without moving the mouse. Clicking is used to select specific buttons on various forms and tables.

Double-Click. Click the left mouse button twice in rapid succession. Used to initiate an application.

Right Click. Press and hold the right mouse button without moving the mouse.

Select. Click and release the left mouse button to choose an item or items from a pull-down list.

Registering Your Product

PSC values your feedback. Please take a few moments and complete the Product Registration form located on the PSC website at www.psc.com or on the product CD that came with your product. Registering your products ensures that you will be informed of the latest product news, software updates and other future developments from PSC.

Chapter 1
Batteries and Power

Overview

Battery charging, installation, and information about the single-slot dock, battery charger and power cable are located in the *Quick Reference Guide*. This section contains the following topics:

- "Suspend Mode" starting on page 1-1
- "Batteries" starting on page 1-2
  - "Battery Warnings and Cautions" starting on page 1-2
  - "Battery Disposal" starting on page 1-4.

Suspend Mode

The PDA will go into a suspend or sleep mode when it is idle for a configurable period of time. The idle duration can be customized using the **Power** control panel (refer to "Schemes Tab" on page 3-9). Suspend mode works and looks just like you have turned the unit off. Press the **<Power>** key to suspend (put to sleep) the PDA. Press the **<Power>** key again for the PDA to resume its previous state.

Use the **Battery Power** control panel to set the idle duration and suspend mode initiation. This will save battery power when PDA is not in use. Refer to "Schemes Tab" starting on page 3-9 for more information.

Suspending

The following conditions will suspend (put the PDA to sleep):

- Press the **<Power>** key while the unit is on.
- The sleep timer expires, which indicates that there has been no use for a specified period of time.
- The battery pack is completely discharged.

Resuming

Use one of the following methods to resume (wake up the PDA):

- Press **<Power>** key to suspend or resume (wake up).
- Put the PDA into a dock.
- Press the **<Scan>** key to wake up the unit.

When a battery pack completely discharges while the unit is in suspend mode, the PDA remains suspended until the discharged battery condition is corrected.

Batteries

The battery pack in the PDA is a Lithium Ion battery pack 3.7V, 1800 mAh.

A sample battery label is illustrated at the right.

The power LED flashes blue to indicate a low battery state.

There is also a 2700 mAh high capacity battery available as an accessory. Refer to "Using a High Capacity Battery" on page C-6.

Battery Warnings and Cautions

Prior to using the PDA for the first time, you MUST charge the battery pack. The initial charging cycle for both the battery pack and back-up battery takes approximately thirteen (13) hours. Subsequent charging cycles take four (4) hours.

CAUTION

If you remove the battery pack or it completely discharges, there is a 2 hour window in which to insert a charged battery pack before the backup battery completely discharges. If your backup battery completely discharges, the contents of the RAM memory will be lost. If your backup battery is less than fully charged, there is proportionally smaller window of time available.

Use only the correct battery packs, charger, and dock supplied by a PSC dealer. The use of other battery supplies can damage the PDA and void your warranty. For the correct supplies for the PDA, please refer to the PSC Price Book on www.psc.com or contact your PSC reseller.

Lithium-ion Polymer battery packs can get hot, explode, ignite and/or cause serious injury if exposed to abusive situations. Follow the safety warnings listed below:

- **Do not place the battery pack in fire or heat the battery.**
- **Do not install the battery pack backwards so the polarity is reversed.**
- **Do not connect the positive terminal and negative terminal of the battery pack to each other with any metal object (such as wire).**
- **Do not carry or store battery pack together with metal objects.**
- **Do not pierce the battery pack with nails, strike the battery with a hammer, step on the battery or otherwise subject it to strong impacts or shocks.**
- **Do not solder directly onto the battery pack.**
- **Do not expose battery pack to liquids, or allow the battery contacts to get wet.**

WARNING

Do not disassemble or modify the battery pack. The battery pack contains safety and protection devices, which, if damaged, may cause the battery pack to generate heat, explode or ignite.

Do not discharge the battery pack using any device except for the specified device. When it is used in devices other than the specified device, the battery pack can be damaged or its life expectancy reduced. If the device causes an abnormal current to flow, it may cause the battery pack to become hot, explode or ignite and cause serious injury.

In the event the battery pack leaks and the fluid gets into one's eye, do not rub the eye. Rinse well with water and immediately seek medical care. If left untreated, the battery fluid could cause damage to the eye.

If you remove the battery pack or perform a a cold reset on the PDA, you will loose any data currently in RAM memory.

When you remove the battery pack, the unit automatically performs a cold reset. It is a good idea to store any important data in the resident DiskOnChip (Flash memory) for this reason. Refer to "Flash Memory" on page 2-11 for information on using and accessing Flash Memory.

Always charge the battery pack within the temperature range of 32°–113°F (0°–45°C).

CAUTION

Do not place the battery pack in microwave ovens, high-pressure containers or on induction cookware.

Immediately discontinue use of the battery pack if, while using, charging or storing the battery, it emits an unusual smell, feels hot, changes color or shape, or appears abnormal in any other way.

Do not place the battery pack in or near fire, on stoves or other high temperature locations. Do not place the battery pack in direct sunlight, or use or store the battery pack inside cars in hot weather. Doing so may cause the battery pack to generate heat, explode or ignite. Using the battery pack in this manner may also result in a loss of performance and a shortened life expectancy.

PSC recommends annual replacement of rechargeable battery packs to ensure maximum performance.

Battery Disposal

Replace the battery pack only with one supplied by a PSC reseller.

When the battery is worn out, insulate the battery contacts with adhesive tape or a similar material prior to disposal.

CAUTION

Recycle Lithium-Ion Batteries.

Do not throw Lithium-Ion Batteries in the trash.

Chapter 2
Software Applications

Overview

This section contains the following topics:

- "Inbox" starting on page 2-2.
- "Internet Explorer" starting on page 2-3.
- "Media Player" starting on page 2-4
- "Quick ScanSet Application" on page 2-5.
- "Rotating the Screen" on page 2-4.
- "WordPad" starting on page 2-6.
- "Installing Programs" on page 2-7.
  - "Using an Installation Wizard" on page 2-7.
  - "Installing Programs Manually" on page 2-7.
  - "Using File Explorer to Add to the Start Menu" on page 2-8.
  - "Using ActiveSync to Add to the Start Menu" on page 2-8.
- "Removing Programs" starting on page 2-8.
- "Firmware Update Utility" on page 2-9.
- "Restoring Falcon Firmware" on page 2-16.
- "AutoCAB" on page 2-16.
- "AutoCE" on page 2-18.

Inbox

The PDA comes with **Inbox** for Windows CE .NET installed from the factory. **Inbox** is a familiar Microsoft email interface. To set up **Inbox**:

1. Open **Inbox** by selecting **Start > Programs > Internet > Inbox**.
2. Select **Services > Options** from the command bar. Drag the dialog to show the right edge to configure email.
3. Select **Add...**
4. Select **Service Type** and enter in name of email service in the **Service Name** field.
5. Select the type of service.
6. Enter the server and user information in the **Mail Service Definition**.
7. Configure your inbox using the **Mail General Preferences** dialog.
8. Configure your mail retrieval settings using the **Mail Inbox Preferences**.
9. Press **OK** to complete the **Inbox** configuration.
10. Select **Services > Connect** from the command bar.
11. Select **Services > Send/Receive Mail** from the command bar to manually retrieve mail. Any pending email appears in the inbox after connecting.

Internet Explorer

The PDA comes with **Internet Explorer** for Windows CE .NET installed

1. Open **Internet Explorer** by selecting **Start > Programs > Internet Explorer**.
2. To set a default home page, navigate to the desired default web page.
3. Select **View > Internet Options** from the command bar.
4. Enter the desired URL in the **Start Page** field.
5. Press the **OK** button

Internet Explorer window with the **Status** bar and **View** menu.

Internet Explorer uses sliding menus for application and navigation control. Tap and drag the sliding menus to the left or right to see the hidden menu items and toolbars.

To achieve more screen real estate in Internet Explorer, you can hide the **Status** bar and **View** menu. From the top menubar, go to **View > Hide Toolbars**.

Once it is hidden, you must cold reset to access these features again. Refer to the *Quick Reference Guide* for information on the cold reset.

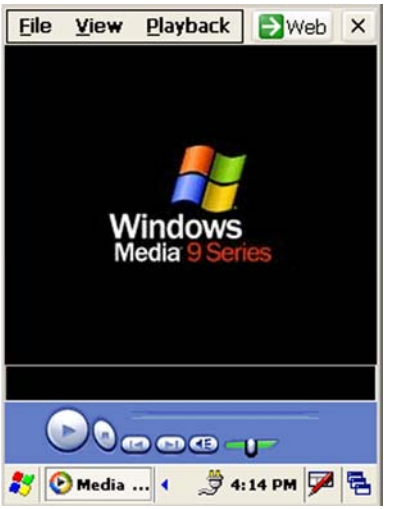
For more advanced control over the way Internet Explorer is displayed, refer to "Falcon® Desktop Utility for Windows®CE. NET", starting on page B-1

Internet Explorer window the **Status** bar and **View** menu hidden.

Media Player

The PDA comes with **Media Player** for Windows CE .NET installed.

1. Open **Media Player** by selecting **Start > Programs > Multimedia > Media Player** or selecting **Media Player** from the desktop.
2. Select **File > Open** to open a new media file.
3. Please refer to www.microsoft.com for additional information and help with your Microsoft Windows **Media Player.**



Rotating the Screen

You can rotate the screen 90 degrees to a Landscape orientation on the PDA.

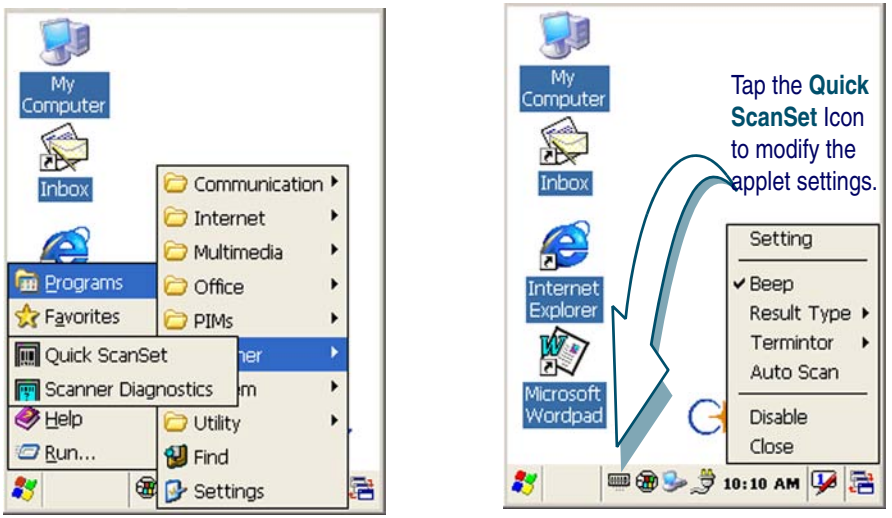
To rotate the screen. press the **<FN2>+<9>** keys simultaneously. The screen will rotate 90 degrees when this key combination is pressed in applications that support this feature.

Each time you press **<FN2>+<9>** keys simultaneously again, the screen rotates another 90 degrees clockwise. You must press **<FN2>+<9>** keys simultaneously four (4) times to return to the Portrait orientation.

Quick ScanSet Application

Go to **Start > Programs > Scanner > Quick ScanSet** to open the bar code scanning application.

Figure 2-1. Quick ScanSet Application



This application works in the background and has a **System Tray Icon** you can use to access it's features and functions. Select/tap the bar code icon to open the menu shown in Figure 2-1 on the right.

Refer to "Scanning Bar Codes" on page 2-13 for more information on using the bar code scanner. Refer to "Scanner Settings" on page 3-10 for information on modifying the default settings.

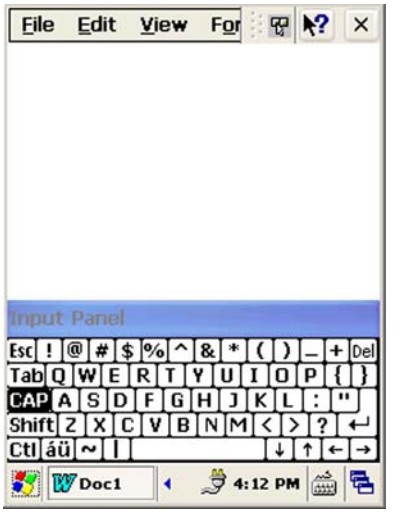
WordPad

To start **Wordpad**, select **Start > Programs > Microsoft WordPad**.

The PDA comes with **WordPad** for Windows CE .NET installed from the factory. The following text and document file types are compatible with **WordPad**:

- Text (**`*.txt`**)
- Word Document (**`*.doc`**)
- Rich Text File (**`*.rtf`**)
- WordPad (**`*.pwd`**)

When you transfer file types other than **`*.pwd`** to the Windows CE .NET device, it translates the files into a compressed Windows CE .NET file type.



Installing Programs

Programs pre-installed on the device are stored in ROM (read only memory). You cannot remove, or modify this software. You may add programs and data files to RAM (random access memory) or into DiskOnChip. Please follow the directions provided with the software to install it.

Using an Installation Wizard

If the file has 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 automatically.

Installing Programs Manually

If the file does not contain an installer, an error message indicates the program is valid but is designed for a different type of computer.

1. Install **`*.cab`**, **`*.exe`**, **`*.zip`**, **`setup.exe`** files, or other files designed for the device.
2. Windows CE .NET applications will also work on the device.

Start by downloading the program to your desktop computer (or insert the CD or disk that contains the program into your desktop computer).

1. Select **Start > Settings > Control Panel > System > General** on device. Make a note of the information in the **`Processor`** field.
2. Read the installation instructions, **`ReadMe`** files, or manual that comes with the program. Many programs provide installation instructions.

   If you cannot find installation instructions for the program in the **`ReadMe`** file or manual, use **ActiveSync Explorer** to copy the program file to the Program Files folder on your device.

   For more information on copying files using ActiveSync, refer to the ActiveSync online Help.
3. Connect your terminal and desktop computer.
4. Double-click the **`*.exe`** file.
5. Once the installation is complete, you double-tap the program icon from your desktop, or select **Programs > program icon** to select it.

Using File Explorer to Add to the Start Menu

1. Select **Start > Programs > File Explorer**, and select the folder where the program is stored.
2. Select **Cut** from the **Edit > Cut** from the command bar.
3. Open the **Programs** folder located in the **Windows** folder, select **Paste** from the pop-up menu.

The program appears on the menu.

Using ActiveSync to Add to the Start Menu

1. Use the Explorer in ActiveSync on your desktop computer to explore the files on your PDA and locate the program. For more information on using ActiveSync, refer to the ActiveSync online Help.
2. Right-click on the program, then select **Create Shortcut**.
3. Move the shortcut to the Programs folder in the Windows folder.

The shortcut appears on the menu.

Removing Programs

Only user installed programs can be removed.

1. To remove a program select **Start > Settings > Control Panel > Remove Programs**.
2. Select the program you wish to remove from the list and press remove.

Firmware Update Utility

The PDA is equipped with a field upgradeable firmware mechanism. Firmware updates for the PDA terminal are uploaded to PSC's website (www.psc.com). After you have downloaded the desired update, there are several ways you can update the firmware on the PDA.

- Use the Falcon Management Utility (FMU) if you have several terminals to update. Refer to the *FMU User's Guide* for more information.
- If FMU is not available or you have only a few terminals to update, use the Firmware Update Utility (FUU), described below, to install or update the firmware using an ActiveSync connection. Refer to "Installing & Setting Up Microsoft® ActiveSync" on page 4-1 for more information.

FUU can also be used to restore the firmware onto a terminal that has become corrupted, such as would happen if the terminal were powered down during an ActiveSync firmware update.

The following sections provide procedures for the retrieval and installation of the most current firmware image onto a PDA.

Retrieving a Firmware Image Update

The following instructions use Internet Explorer to retrieve the most current firmware image.

1. Launch Internet Explorer on your PC and navigate to www.psc.com
2. Navigate to the appropriate region of the world and select your language.
3. Select the "Service" category and navigate to "downloads".
4. Select the **product** (**`Falcon 4220`**), your desired **language**, and **material** (**`software updates`** - scroll to the bottom of the list).
5. Press the **GO!** button.
6. Select the desired software update from the generated list.
7. When the **File Download** dialog opens, select the **Save** button and navigate to the location where you want to save the firmware files. Create a new folder called **`FUU`** and press the **ENTER** button.

It's always a good idea to make a note of the location to which you save a downloaded file so you can locate it later.

8. Press the **OK** button to start copying the files to your local machine (or local network location).

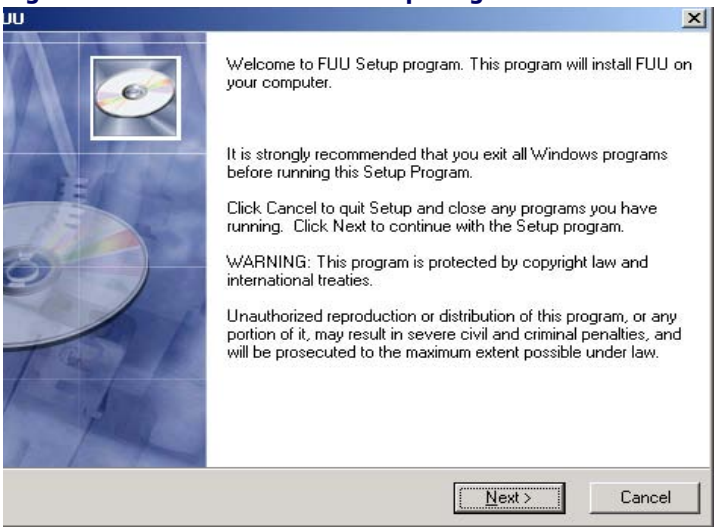
Installing FUU on the Host PC

The Firmware Update Utility (FUU), provides administrators with a field upgrade mechanism. You must have Microsoft® ActiveSync already loaded and running on the host PC to use FUU. Refer to "Installing & Setting Up Microsoft® ActiveSync" on page 4-1 for more information ActiveSync.

To install PSC's Falcon® Firmware Update Utility, complete the following steps on the PC:

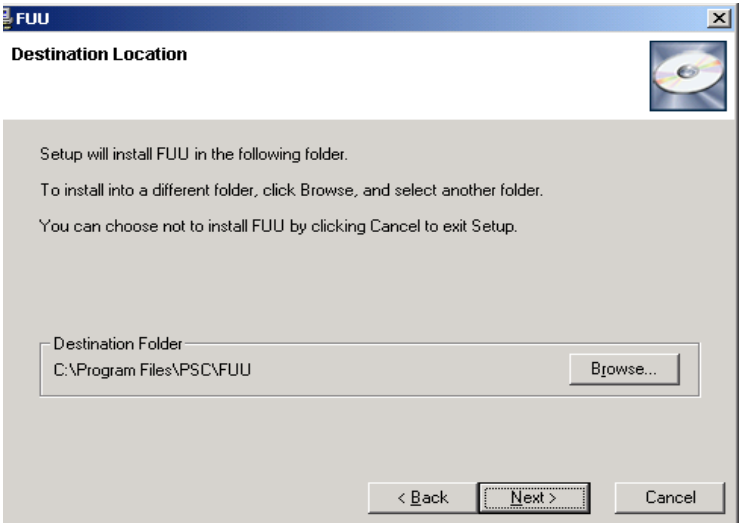
1. Go to the CD ROM shipped with your PDA or the PSC website at www.psc.com and download the most current version of the Firmware Update Utility.
2. Extract the **FUU_INSTALL.exe** file from the **FUU_Install.zip** file.
3. Navigate to the location on which you have extracted the **FUU_INSTALL.exe**
4. Double-click to open and run the **FUU_INSTALL.exe.**
5. The **Welcome to FUU Setup Program** screen opens.
   - Exit all Windows applications before running this setup.
   - Click **Cancel** to quit Setup and close any programs you have running.
   - Click **Next** to continue with the Setup program.

Figure 2-2. Welcome to FUU Setup Program



6. The **Destination Location** dialog asks you to confirm the installation location or choose a new location.

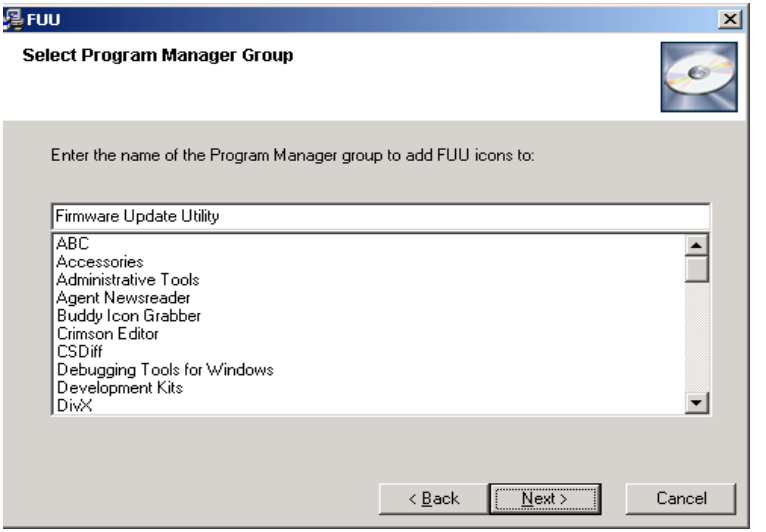
Figure 2-3. Destination Location Dialog



- To choose a new location, press the **Browse** button and navigate to the desired installation location.
- Press **Next** to continue the installation.

7. The **Select Program Manager Group** dialog opens.

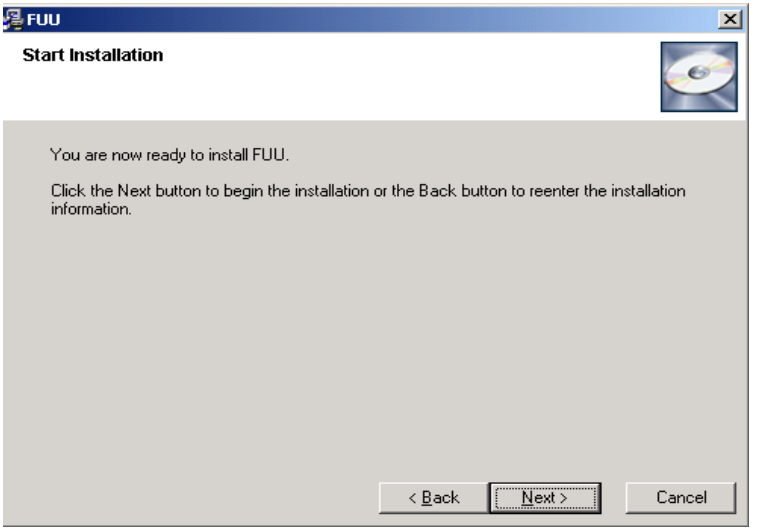
Figure 2-4. Select Program Manager Group Dialog



- Press **Next** to accept the default **Program Manager Group.**
- Or select a new group and press **Next**.

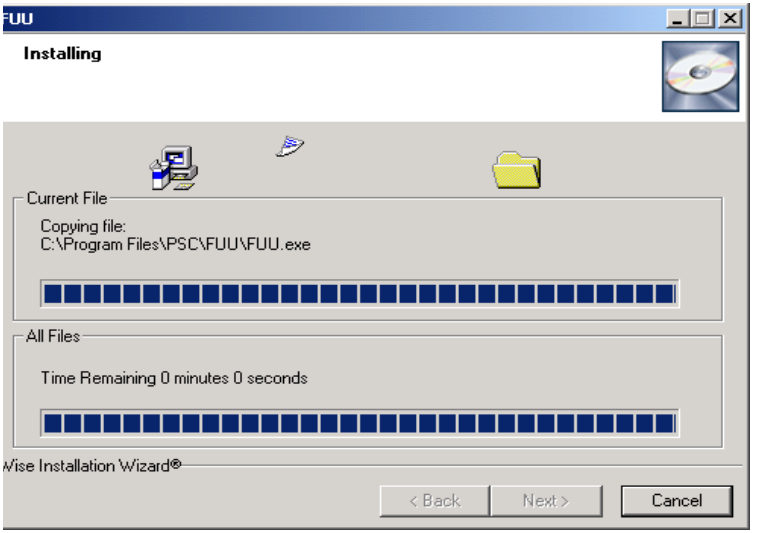
8. The **Start Installation** screen opens.
   Press **Next** to begin the installation.

Figure 2-5. Start Installation Dialog



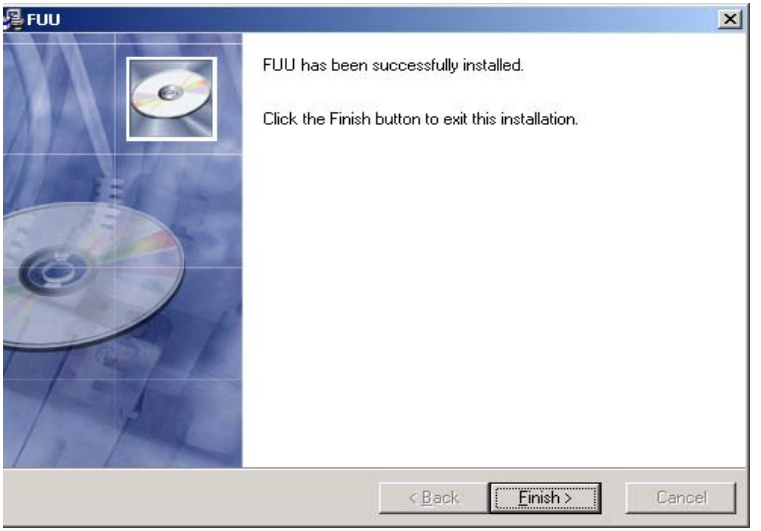
9. The **Installing** Dialog will open and close very quickly. You may not even see this screen.

Figure 2-6. Installing Dialog



10. Press **Finish** to exit the installation.

Figure 2-7. Installing Dialog



11. Congratulations! You have successfully installed FUU on the host PC.

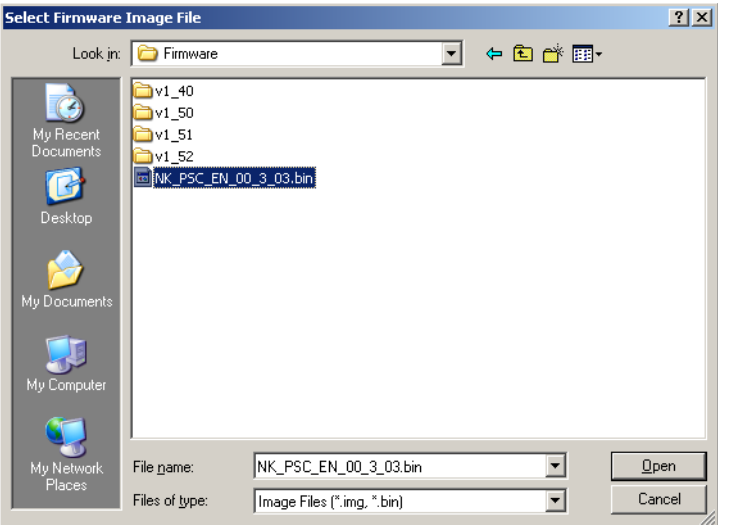
Updating Falcon Firmware

After copying the firmware image to the host PC and extracting the **FUU** utility, you can upgrade the firmware on your PDA.

The following steps require that you have already established an ActiveSync connection between the host computer and the PDA. To establish an ActiveSync connection with the Falcon, refer to "Installing & Setting Up Microsoft® ActiveSync" on page 4-1.

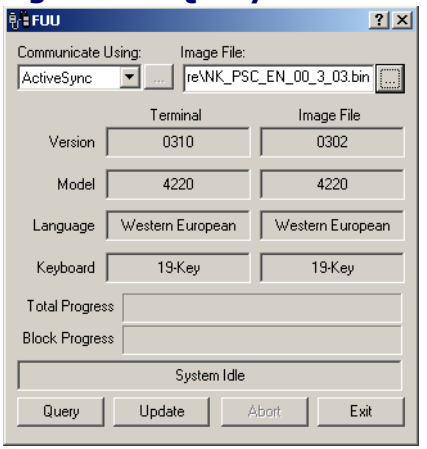
1. Go to **Start > Programs > Firmware Update Utility > FUU**.
2. Double-click on the **FUU.exe** file.
3. Verify that ActiveSync is selected from the **Communicate Using** pull-down list.
4. Click the **File Select (Browse...)** button and navigate to the file location.
5. Select the current ***.bin** file and press the **Open** button.

Figure 2-8. Select the.bin file



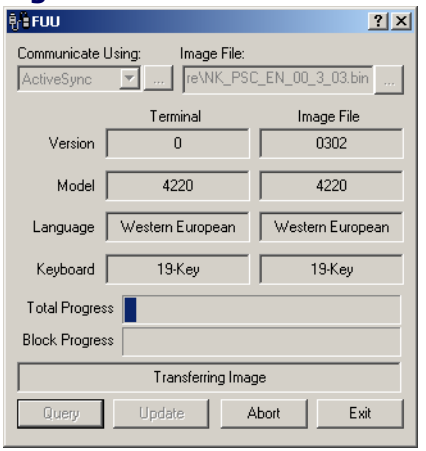
6. Verify that the PDA is turned on. Insert the Falcon into a powered dock connected to the host computer.
7. Press the **Query** button on the **FUU** utility on the host PC.

Figure 2-9. Query Terminal



8. Press the **Update** button on the **FUU** utility on the host PC.

Figure 2-10. Falcon Firmware Update Utility



9. The **FUU** will compare the selected firmware image with the firmware already loaded on the PDA. If the images are different, the **FUU** will proceed to update the firmware image on your terminal.

Please be patient during this procedure. The firmware image of the PDA can take several minutes to download.

10. After the firmware of your PDA has been updated, you must perform a warm reset on the Falcon (refer to the *Quick Reference Guide* for instructions on the reset method for your Falcon model.)

Restoring Falcon Firmware

If the firmware image on the Falcon 4220 becomes corrupted, the terminal will continue to display the PSC Falcon logo with an error message at the bottom of the screen. This can happen if the firmware update is aborted, as can happen during a power loss.

To reinstall the firmware, complete the following steps:

1. Obtain a 64MB compact flash card and format it for FAT-16 format using the Windows format routine on a PC.
2. Download the current **`nkupd.bin`** file from the PSC web site
3. Copy **`nkupd.bin`** to the compact flash card.
4. Insert the card into the Falcon 4220.
5. Cold reset the device. (Refer to the *Quick Reference Guide* for information on the cold reset procedure.)
6. Immediately after starting the cold reset, press and hold the down arrow.
7. Once the PDA displays a message at the bottom of the logo screen saying it is checking media, release the down arrow.
8. The unit will locate the firmware on the compact flash card and restore the image.
9. Once the restoration is complete, perform another cold reset on the device to load the new firmware.

AutoCAB

The **AutoCAB** program allows the PDA to automatically reinstall selected applications when the terminal is cold reset. When the Falcon is reset, the **AutoCAB** program runs automatically and determines if it is a warm or cold reset. If it is a warm reset, the program just exits.

If the terminal has been cold reset, the **AutoCAB** checks to see if there is a **DiskOnChip\CAB** directory on the terminal. If not, the program just exits. If the CAB directory is found, the program will step through the files in the directory, calling the Windows CAB file installer for each of the files. Once all of the CAB files have been installed, the program will exit.

As an example, assume you received an application program as a cab file named **INVENTORY.CAB**. If the cab file were to be copied to the Falcon and then double clicked, it will be installed and the cab file would be deleted. If the terminal were to be cold reset, the application would be lost, requiring the cab file to be downloaded and installed again. By copying the cab file to the **DiskOnChip\CAB** directory and allowing **AutoCAB** to run, the application is installed but the cab file is not removed. So if the terminal is cold reset, the current installation will be removed, but **AutoCAB** will automatically reinstall it.

AutoCE

The **AutoCE** program allows the user to create a list of applications to run when the PDA is reset. Each application may be designated to run only on a cold reset, or on both warm and cold reset. The applications run sequentially, allowing interdependencies to be handled.

To create the application list, use a text editor to build a file named **autoexec.ini**. This file should contain the fully qualified names of each application to run. Once the file is created, it should be copied into the **DiskOnChip** directory. Any line that begins with a space or a **#** will be treated as a comment and ignored by **AutoCE**. To designate an application to run only at cold boot, begin the line with an exclamation mark.

Please note that any application arguments containing spaces such as directory names must be bracketed by quotation marks.

The following sample **autoexec.ini** file shows the use of quotes around arguments, as well as an example of how to copy files.

```
cmd /C echo "Hello World" > "DiskOnChip\hello.txt"
cmd /C copy "DiskOnChip\hello.txt" "def.txt"
!cmd /C copy "DiskOnChip\hello.txt" "DiskOnChip\def.txt"
```

The first line will generate a file in the DiskOnChip directory named **hello.txt** whenever the terminal is reset. The second line will copy this file to the root directory as **def.txt**. The third line will only run when the terminal is cold reset, and will copy the **hello.txt** file to **def.txt** in the DiskOnChip.

The following sample file demonstrates the use of an application in the DiskOnChip.

```
#\DiskOnChip\echobox test comment
\DiskOnChip\echobox AutoCE Test 1
!\DiskOnChip\echobox AutoCE Test 3
\DiskOnChip\echobox AutoCE Test 2
```

The first line begins with a **#** and is treated as a comment. The second line will run the echobox command (sample application program) with 3 arguments whenever the terminal is reset. The third line will run echobox but only when the terminal is cold reset. The fourth line will again run the echobox command whenever the terminal is reset.

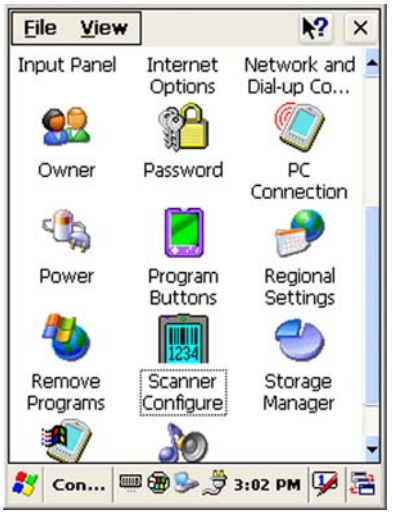
Chapter 3
Configuring a PDA

Customizing the Settings

To change the settings on your new PDA, select **Start > Settings > Control Panel** to view the Control Panels and settings you can modify.

This chapter contains the following topics:

- "Aligning the Touchscreen Display" on page 3-2
- "Date and Time" on page 3-3.
- "Display Configuration" on p. 3-4.
- "Input Panel Properties" on p. 3-5.
- "Internet Settings" on page 3-5.
- "Owner" starting on page 3-7.
- "Password" starting on page 3-7.
- "PC Connection" on page 3-8.
- "Power Configuration" on page 3-8.
- "Regional settings" on page 3-9.
- "Scanner Settings" on page 3-10.
- "Storage Properties" on page 3-13.
- "System Properties" on page 3-14.
- "Volume and Sounds" on page 3-16.
- "Falcon Management Utility" on page 3-17.



Control Panels

Other than the Quick ScanSet applet and FMU (Falcon Management Utility), the list of settings are standard Windows CE .NET settings. For more information on the Windows CE .NET operating system, please refer to Microsoft's website at http://www.microsoft.com/windows/embedded/ce.net/.

Aligning the Touchscreen Display

You might need to align the touch screen (i.e. when you notice that when you attempt to select one item with the stylus, another item is erroneously selected).

1. To align the touch screen, press **<FN2>+ <Enter>** to open the **align Screen** dialog as shown to the right
2. Carefully press and briefly hold stylus on the center of the target as the target moves around the screen.

For more information about using the stylus with the touch-sensitive display, refer to the following:

- "Using the Stylus" on page 2-2.
- "Soft Keypad/Input Panel" on page 2-9.

Date and Time

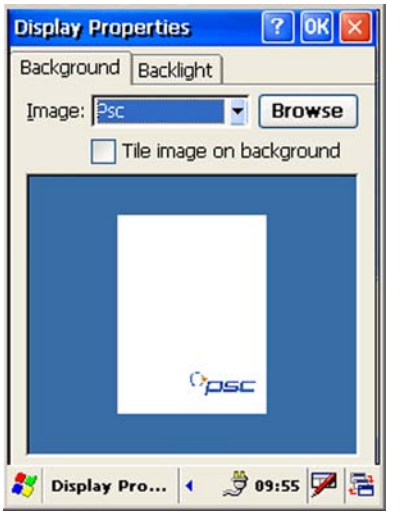
In the **Date/Time** options, you can change the year, month, date, time, time zone, or select automatic adjust for Daylight Savings Time. To set or change the date and time:

1. Select **Start > Settings > Control Panel > Date/Time**.
2. Select the month to open a pull-down list of months or press the arrow buttons on either side of the month to increase or decrease the month.
3. To change the year, select the year to open a numeric dial. Select the up arrow to increase the value; select the down arrow to decrease the value. Or you can type a new year value in the field.
4. To change the time, select the hour, minute, seconds, or AM/PM and select the up arrow to increase the value; select/tap the down arrow to decrease the value. You can also type a new time value in the field.
5. Select your correct time zone from the pull-down list.
6. To automatically adjust the clock for Daylight Savings Time, enable the checkbox at the bottom of the screen.
7. Select **Apply** to make save your changes [and make additional modifications] or select **OK** to exit the **Date/Time** settings.

Display Configuration

To modify the display and/or backlight of the PDA refer to the following:

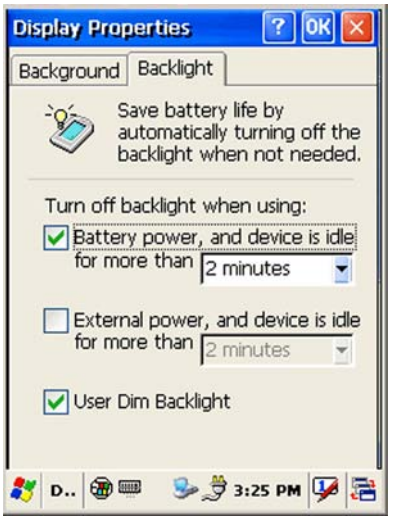
Background



To change the **Background** image:

1. The current file is located in the Windows directory with the PSC logo file named **PSC.bmp**.
2. Place a new image in the **Windows** directory. This file must be exactly 240 by 320 pixels.
3. Select **Start > Settings > Control Panel > Display.**
4. Select the new file name by using the **Browse** button.
5. To exit the **Background** settings, press **OK** from the control bar, or press the **<Enter>** key on the keypad.

Backlight



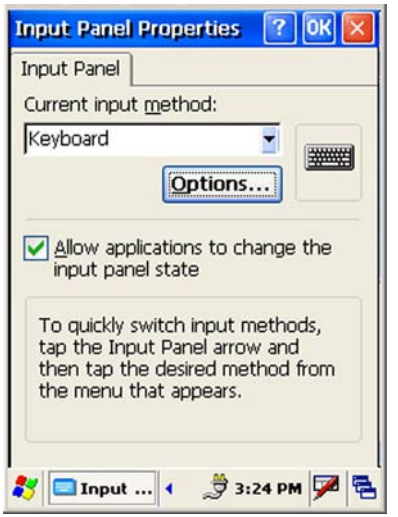
To change the **Backlight** default settings:

1. Select **Start > Settings > Control Panel > Display > Backlight** tab.
2. Select the **Backlight** tab.
3. Modify the backlight pull-down list settings to suit your requirements.
4. Tap/enable the **User Dim Backlight** checkbox to allow the user to adjust the backlight by using the **<FN2>** key with navigation key to increase or decrease the backlight.
5. To exit the **Backlight** settings, press **OK** from the control bar, or press the **<Enter>** key on the keypad.

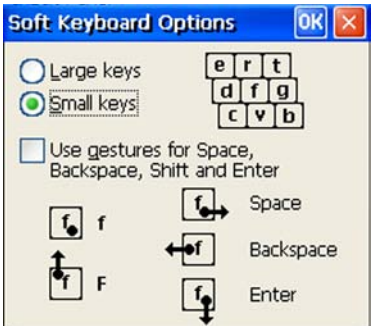
Input Panel Properties

To change the **Soft Input Panel** settings:

1. Select **Start > Settings > Control Panel > Input Panel**.
2. Change the desired settings.
3. To change the **Soft Keyboard Options**, tap the **Options** button.
4. Change the soft keyboard options as desired, selecting from:
   - Large or small keys.
   - Using gestures for space, backspace, shift, and enter.



5. To exit the **Soft Keyboard Options**, press **OK** on the control bar, or press the **<Enter>** key on the keypad.
6. To exit **Input Panel** settings, press **OK** from the control bar, or press the **<Enter>** key on the keypad.

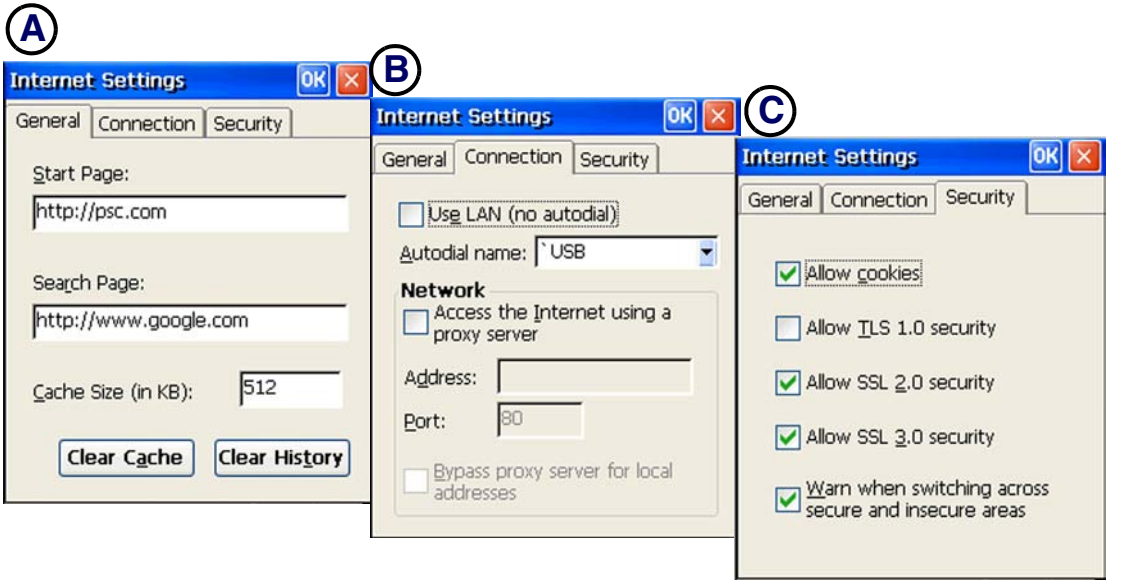


Internet Settings

To change the **Internet** default settings:

1. Select **Start > Settings > Control Panel > Internet Settings**.
2. On the **General** tab (refer to Figure 3-1A), type in the URL of the desired start page and the desired search engine. You can also change the **Cache Size**, clear the Cache, and Clear the History.
3. On the **Connection** tab (refer to Figure 3-1B) modify the network access settings as desired.

Figure 3-1. Internet Settings

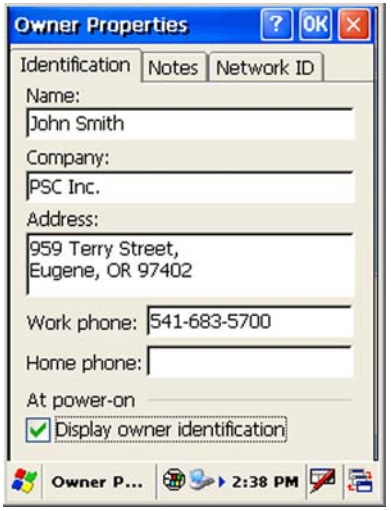


4. On the **Security** tab (refer to Figure 3-1C) modify the security settings as desired. You can enable any of the following by tapping the checkbox:
   - Allow cookies
   - Allow TLS 2.0 security
   - Allow SSL 2.0 security
   - Allow SSL 3.0 security
   - Warn when switching across secure and insecure areas.
5. To exit **Internet Settings**, press **OK** from the control bar, or press the **<Enter>** key on the keypad.

Owner

To change the **Owner** default settings:

1. Select **Start > Settings > Control Panel > Owner Properties**. The **Input Panel** opens to facilitate entering data.
2. Enter data using the input panel or the keypad on the PDA.
3. To exit the **Owner Properties** control panel, press **OK** from the control bar, or press the **<Enter>** key on the keypad.



For more information on using the **Network ID** tab, refer to "Setting up the Network ID" on page 4-6.

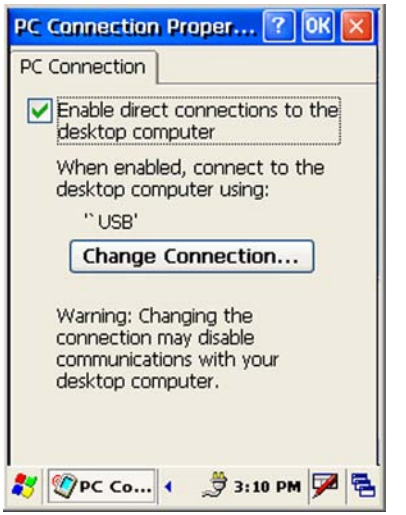
Password

To change the **Password** default settings:

1. Select **Start > Settings > Control Panel > Password Properties**.
2. Enter the desired password twice as indicated in the two fields.
3. Select to enable password protection at power-on and/or enabling password protection for the screen-saver.
4. To exit the **Password** control panel, press **OK** from the control bar, or press the **<Enter>** key on the keypad.

PC Connection

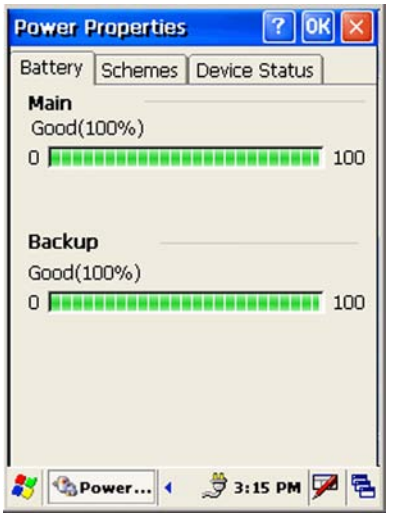
The **PC Connection** control panel determines how ActiveSync works with the PDA. To modify the default settings:



1. Select **Start > Settings > Control Panel > PC Connection**.
2. Select the first checkbox to enable direct connections to the desktop computer.
3. Tap the **Change Connection** button to modify the connection method from USB, IrDA, or Serial.
4. To exit the **Change Connection** dialog, press **OK** from the control bar, or press the **<Enter>** key on the keypad.
5. To exit the **PC Connection Properties** control panel, press **OK** from the control bar, or press the **<Enter>** key on the keypad.

Power Configuration

To adjust power management settings, select **Start > Settings > Control Panel > Power**. Use this control panel to check the charge on the battery or to change the **Power** settings.



Battery Tab

The **Battery** tab provides change level indicators for **Main battery**, and **Backup battery**.

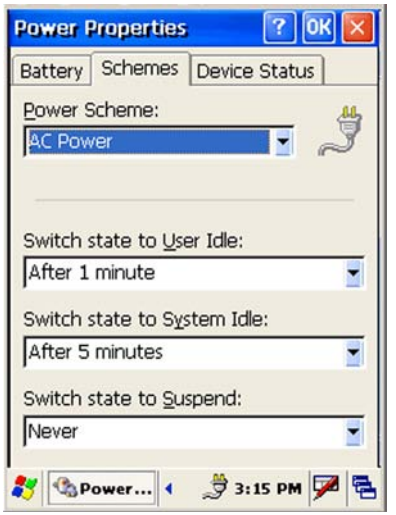
To exit, press **OK** from the command bar, or press the **<Enter>** key on the keypad.

Schemes Tab

The **Schemes** tab allows you to determine the **User Idle**, **System Idle**, and **Suspend mode** times when using either battery or AC power.

The Power Schemes are additive.

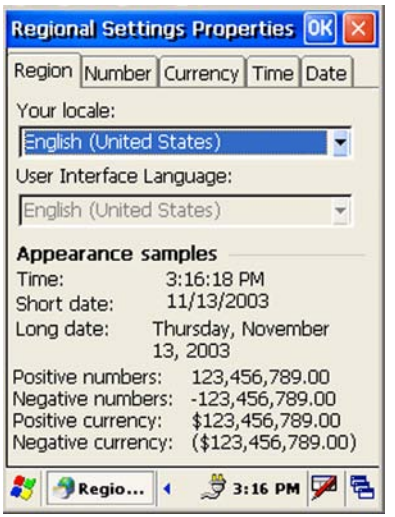
To exit, press **OK** from the command bar, or press the **<Enter>** key on the keypad.



Regional settings

To change the **Regional Settings** defaults:

1. Select **Start > Settings > Control Panel > Regional Settings**.
2. Select the desired language/location.
3. Review the **Appearance Samples** in the bottom half of the screen.
4. Select the tab at the top for any settings you wish to change. Options to modify include **Number**, **Currency**, **Time**, and **Date**.
5. The **Input Panel** may open to facilitate data input.



The options to modify does not include changing the language. The PDA will only display in English. Options to modify changes only the default appearance for Number, Currency, Time, and Date.

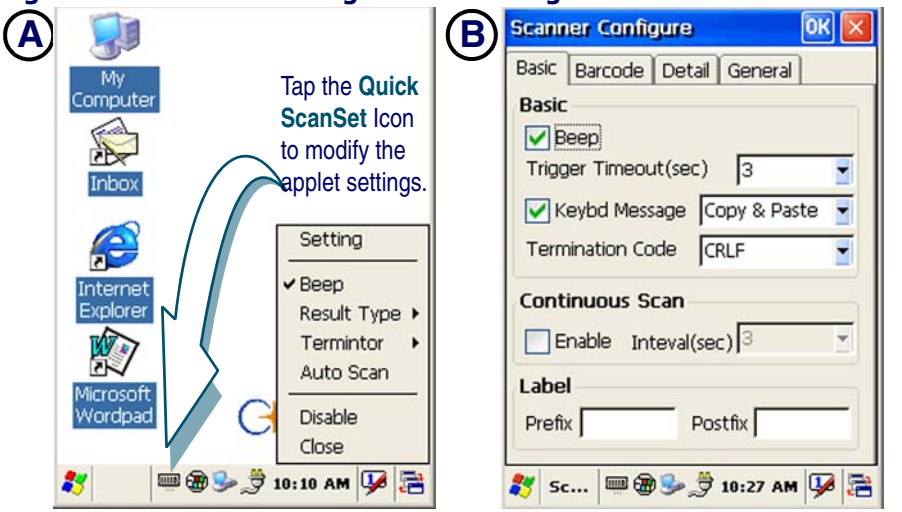
6. To exit **Regional Settings**, press **OK** from the control bar, or press the **<Enter>** key on the keypad.

Scanner Settings

To change the **Scanner Settings** and bar code symbologies, complete as follows:

1. Go to **Start > Programs > Scanner > Quick ScanSet** to open the bar code scanning application. The only indicator that the program is open is the bar code **System Tray** icon.
2. Select/tap the bar code icon in the **System Tray** to open the menu shown on the left in Figure 3-2A.
   - Select **Settings** to open the **Scanner Configure** applet.

Figure 3-2. Scanner Configuration Settings



- You can modify the settings either from the menu (Figure 3-2A) or by selecting **Setting > Basic** tab (Figure 3-2B). Complete as described in Table 3-1.

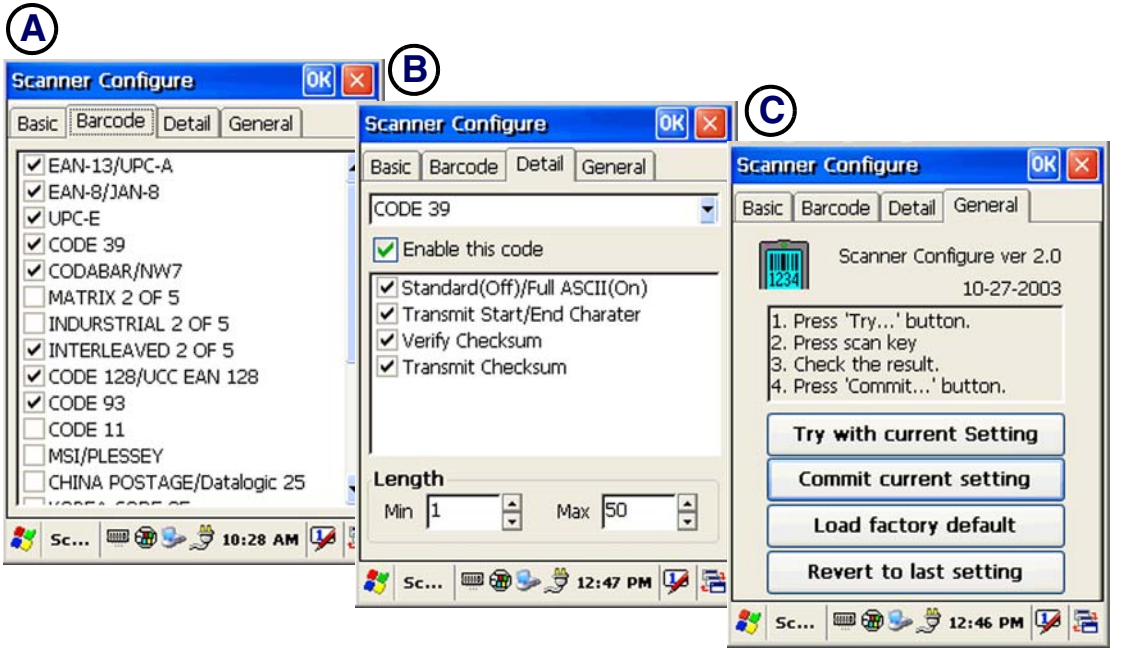
Table 3-1. Scanner Configuration Menu and Basic Tab

Section (Menu Item)	Field Name	Function/Operation
Basic	**Beep**	Tap/enable this checkbox to receive beep tone when scanning, or select from the menu.
	Trigger Timeout (sec.)	Select a trigger timeout duration (in seconds) from this pull-down list.

Section (Menu Item)	Field Name	Function/Operation
Keyboard Message (Result Type)		Select from **`copy & paste`** or **`Type writing`**. Select a method based upon the bar code scanning application you will use.
Termination Code (Terminator)		Select the desired termination code from the pull-down list.
Continuous Scan (Auto Scan)	**Enable**	Tap/enable this checkbox to receive beep tone when scanning, or select from the menu.
	Interval	Select a continuous scan duration (in seconds) from this pull-down list.
Label	**Prefix**	Type the desired label prefix in this text box.
	Suffix	Type the desired label suffix in this text box.

3. On the **Barcode** tab (Figure 3-3A), select the bar code symbologies you plan to scan from the list. Tap to enable/disable the desired symbologies.

Figure 3-3. Scanner Configuration Settings



4. On the **Detail** tab (Figure 3-3B), select the desired bar code symbology from the pull-down list and complete the fields as described in Table 3-2.

Table 3-2. Scanner Configuration Barcode Tab

Field Name	Function/Operation
Symbology list	Select the bar code symbology from this pull-down list.
Enable this Code	Tap/enable this checkbox to enable the selected bar code symbology.
Symbology features	Select the desired features you wish to enable for that specific bar code symbology.
Length	Set the minimum and maximum lengths from the pull-down lists. If the numbers are the same, acceptable bar codes will only be that length. Not all symbologies will have this option enabled.

5. On the **General** tab (Figure 3-3C), select from the options in Figure 3-2 to save or keep your settings.

Table 3-3. Scanner Configuration General Tab

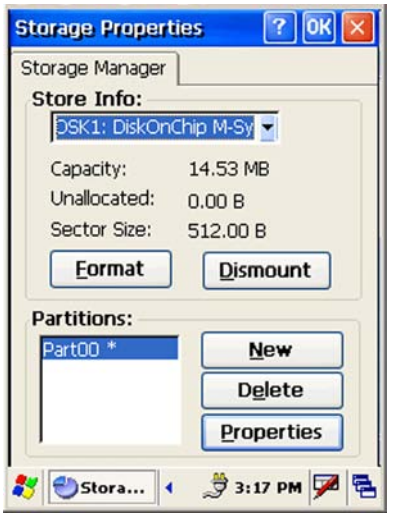
Button Name	Function/Operation
Try with Current Setting	This button is enabled only if you make changes to the current settings. 1. Tap the **Try with Current Setting** button. 2. Press the **<Scan>** key. 3. Check the result. 4. If you wish to keep the new current settings, select the **Commit Current Setting** button.
Commit Current Setting	After modifying the current settings, if you wish to keep them, select the **Commit Current Setting** button.
Load Factory Default	After modifying the current settings, if you wish to return to the factory defaults, tap the **Load Factory Default** button.
Revert to last setting	After modifying the current settings, if you wish to return to the previous settings, tap the **Revert to Last Setting** button.

6. To exit the **Scanner Configuration** applet, press **OK** from the control bar, or press the **<Enter>** key on the keypad.

Storage Properties

To change the **Storage Properties** control panel default settings:

Insert a compact flash (CF) or secure digital (SD) storage card into the unit (refer to "Installing Compact Flash Type Peripherals" starting on page C-2).



7. Select **Start > Settings > Control Panel > Storage Properties**.
8. From the **Store Info** pull-down list, select the desired storage device.
9. You can also format, dismount, and create partitions on storage devices using this control panel.
10. To save and exit the **Storage Properties** control panel, press **OK** from the control bar, or press the **<Enter>** key on the keypad.

CAUTION

Dismounting or formatting the DiskOnChip will erase all files and programs stored in Flash Memory.

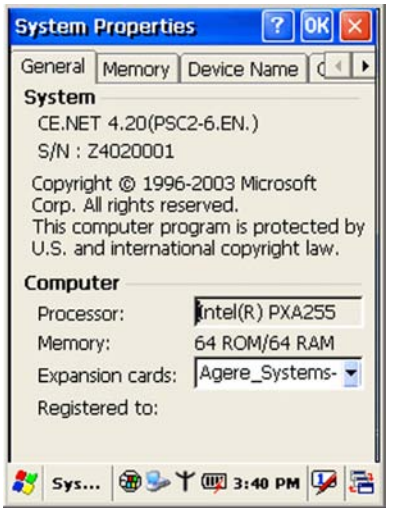
System Properties

Refer to the **System** control panel for information related to the system.

General Tab

Select **Start > Settings > Control Panel > System Properties > General** tab to determine the following information about your PDA:

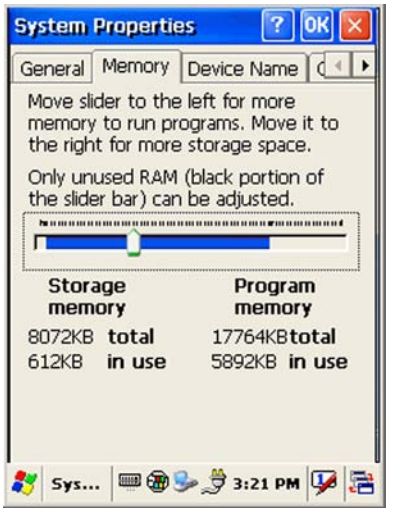
- Firmware version (in parens).
- Serial number (S/N).



Memory Allocation

Adjust the **Memory Allocation** with the following steps:

1. Select **Start > Settings > Control Panel > System Properties**.
2. Select the **Memory** tab.
3. Move the slider to adjust memory allocation. Default storage memory is normally set to about 8 MB with the remainder assigned to Program memory.
4. Press the **OK** button, or the **<Enter>** key on the Falcon.



Device Name

Your device uses this information to identify itself to other computers.

The **Input Panel** will open to facilitate data entry.

To close the **Device Name**, Press the **OK** button, or the **<Enter>** key on the Falcon.

Copyrights

Refer to this tab for specific copyright data. As a user, you are responsible to read this statement.

Volume and Sounds

The factory default for the **Volume** is **maximum**. You can adjust the volume to your environment and comfort. There are two ways to adjust the volume.

Using the <FN2> Key to Adjust the Volume

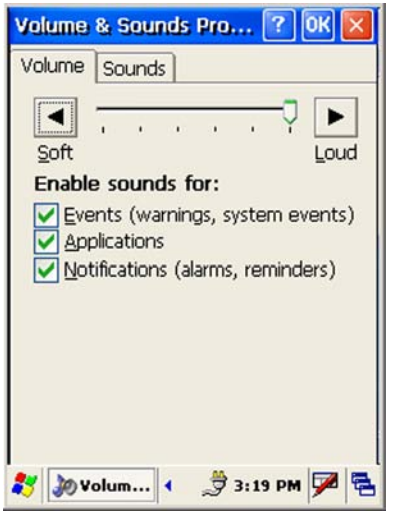
The first method is accomplished without accessing the **Volume & Sounds Properties** control panel and is described below:

1. Press the **<FN2>** key while simultaneously pressing on the **Up** or **Down** edge of the **Navigation** key.
2. Press the **Right** edge to increase volume and the **Left** edge to decrease volume.
3. Adjust as desired.
4. To mute the sound, press **<FN2>+<3>** simultaneously. Press these keys again simultaneously to toggle the sound on again.

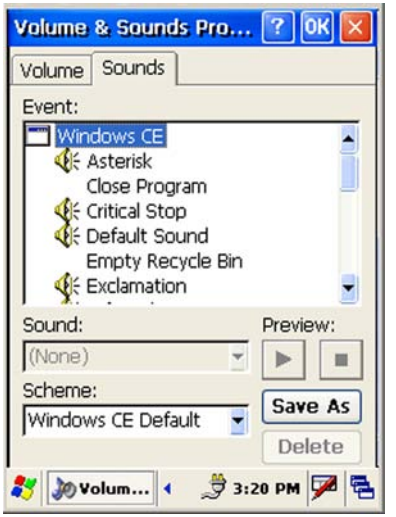
Using the Control Panel to Adjust Volume and Sounds

The second method uses the **Volume & Sounds Properties** control panel and is described below:

1. Select the **Start > Settings > Control Panel > Volume & Sounds Properties** to open the **Volume** settings.
2. Set the volume by adjusting the slider from **Soft** to **Loud**.
3. Enable the desired sounds for key clicks, screen taps, notifications, and applications.



4. Select the **Sounds** tab to choose from various wave (**`*.wav`**) files in the menu.
5. You can listen to the sound by selecting the **Preview** button.
6. Save your new sound scheme by selecting the **Save As** button and entering a name for your new Sound Scheme in the field. Delete a sound scheme by pressing the **Delete** button.
7. Press **OK** when finished modifying your volume and sounds properties.



Falcon Management Utility

The Falcon Management Utility (FMU) is the easiest method to use to configure multiple Falcons, especially if you have an enterprise-wide deployment. A copy of FMU is shipped with all Falcon Windows CE .NET units. For more information on installation and setup of FMU, refer to the *FMU Product Reference Guide* on the FMU CD.

NOTES

Chapter 4

Networks, Communications, and Connections

Overview

This section contains the following topics:

- "Installing & Setting Up Microsoft® ActiveSync" starting on page 4-1.
  - "Installing Microsoft® ActiveSync on the Host PC" starting on page 4-1.
  - "Using ActiveSync" starting on page 4-4.
- "Networking" starting on page 4-6.
  - "Setting up the Network ID" starting on page 4-6.
  - "Network Setup: Remote ActiveSync" starting on page 4-8.

Installing & Setting Up Microsoft® ActiveSync

This section provides instructions on setting up the Host PC so that the PC can communicate with the PDA and the dock.

The screen shots in the manual were taken and the procedures were written using Windows® XP. If you are using Windows® NT or Windows® 2000, appearance and procedures may be slightly different.

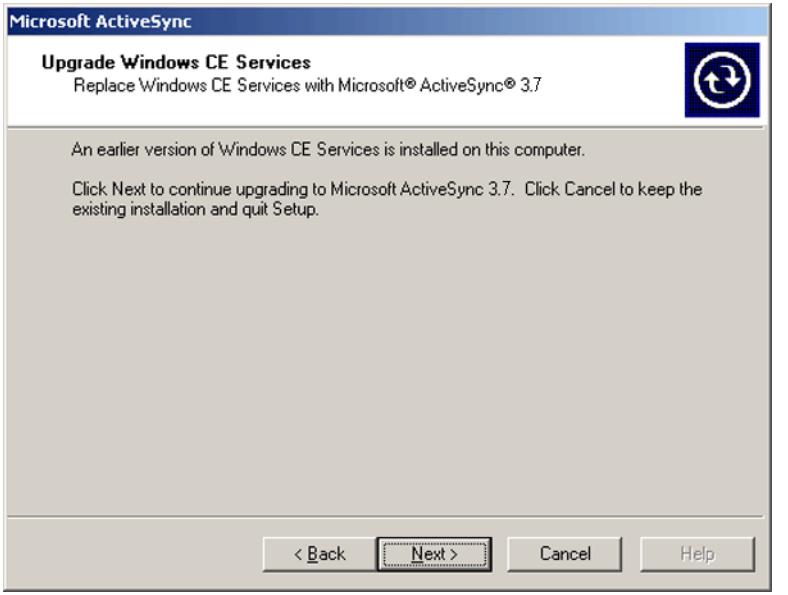
Installing Microsoft® ActiveSync on the Host PC

Microsoft® ActiveSync is a file transfer tool to synchronize the files on a PC with the files on your PDA. The Falcon comes from the factory with ActiveSync loaded. If you have ActiveSync already installed on your PC, make sure that you have v3.7 or higher.

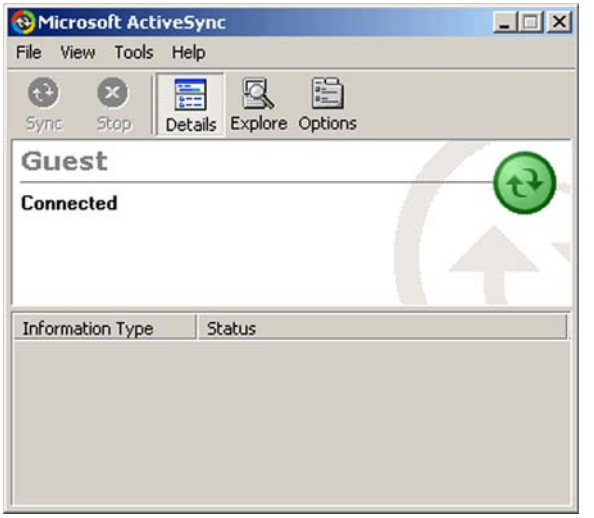
To install Microsoft® ActiveSync, complete the following steps on the PC:

1. Go to the Microsoft® Windows CE .NET website and download the most current version of ActiveSync: http://www.microsoft.com/mobile/pocketpc/downloads/.
2. Install the most current version of Microsoft® ActiveSync (v3.7 or higher) on the host PC (refer to Figure 4-1 on page 4-2).

Figure 4-1. Microsoft ActiveSync Installer

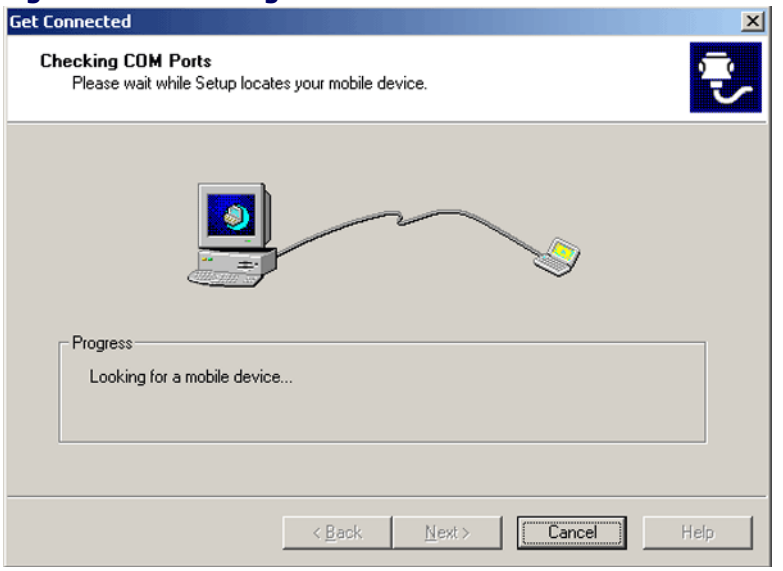


3. Click the **Next** button to continue the installation. Click **Cancel** to cancel the installation of ActiveSync.
4. Once ActiveSync is installed, it will attempt to connect to the Falcon; allow it to fail on the first attempt.
5. Reset your PC.
6. Open ActiveSync.



7. Select **File > Connection Settings** from ActiveSync's menu bar.

Figure 4-2. Checking COM Ports Window



8. Go to "Using ActiveSync" on page 4-4 to continue using ActiveSync.

Connecting PDA to Host PC

1. You can use either the USB/Serial (RS-232) dock or a USB/Serial (RS-232) cable to connect the PDA to the Host PC.
   - To use the dock, you must first insert the PDA into the slot, making sure that the unit is firmly seated in the dock.
   - To use the cable, connect the USB/Serial cable to the PDA.

It is very important to make sure that the Falcon is firmly seated in the dock to initiate ActiveSync communication with the Host PC.

2. Connect the USB/Serial dock or cable to the Host PC's serial port or USB port.
3. Connect the dock or PDA to the power adaptor and power source.

Using ActiveSync

Use ActiveSync to transfer and synchronize files between the PDA and the Host PC.

Setting up a Partnership

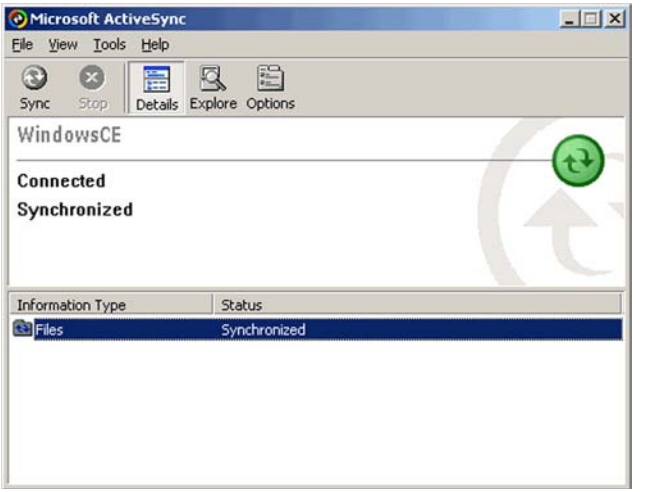
During the Microsoft ActiveSync installation, you were prompted to create a partnership with your mobile device. When you set up a partnership, you select synchronization and file conversion settings, which are contained in a file on your desktop computer. This file enables your desktop computer to recognize your device. Only devices that have a partnership with a desktop computer can synchronize information between the two computers.

Partnerships are stored in ActiveSync and have the same name as the corresponding device. Your desktop computer can set up partnerships with many different mobile devices, but a device can have partnerships with only two computers.

For more information on partnerships, please refer to your Microsoft ActiveSync documentation or help file.

Transferring Files

To transfer files, complete the following steps on the host PC:



1. Select **Start > Programs > Microsoft ActiveSync**.
2. Double-click on the **ActiveSync** icon in the **System Tool Tray**.
3. After you have established a connection with your PDA, tap the **Explore** button at the top of the **ActiveSync** window (or select **Explore** from the **File** menu).

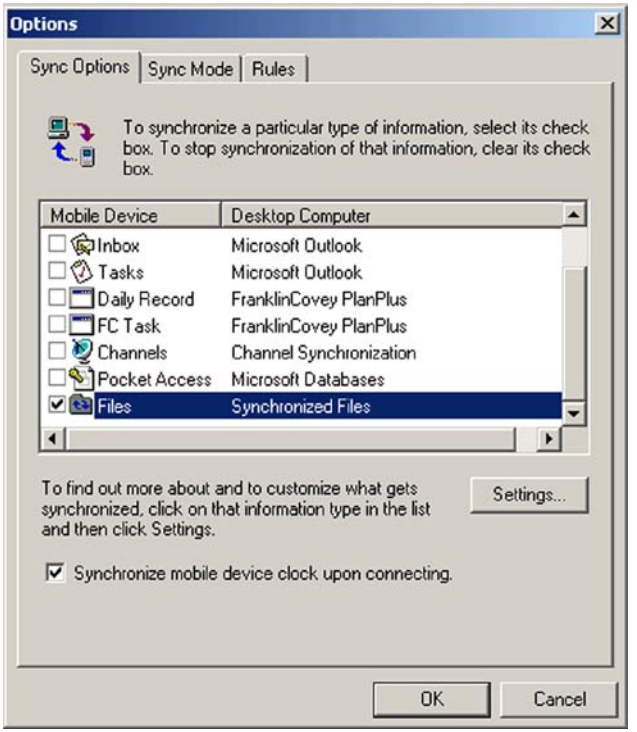
Figure 4-3. Exploring the Mobile Device

4. Navigate to the target directory on your portable and copy the desired file by using the **Copy/Paste** method or dragging and dropping the desired file(s) into the folder.

Depending on the file type, ActiveSync may convert the file into a format appropriate for the Windows CE .NET device.

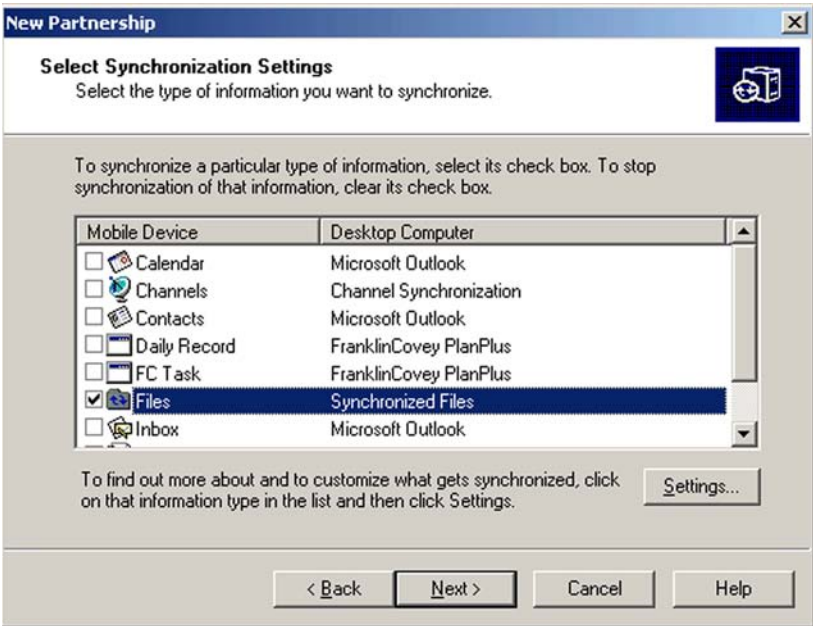
ActiveSync File Synchronization

ActiveSync file synchronization requires an ActiveSync partnership between the Falcon and the Host PC. Refer to "Setting up a Partnership", above.



1. Select the files in the synchronization configuration for the Falcon partnership.
2. Select **Tools > Options** from the ActiveSync command bar to configure the synchronization options.

Figure 4-4. Select Synchronization Settings



3. Place the file to be synchronized in the **Synchronization** folder created in your **My Documents** directory. Defaults to the desktop. During the ActiveSync connection, all files in the **Synchronization** folder will be synchronized to the **\My Documents** directory on the Falcon.

Networking

Setting up the Network ID

To set up your Network ID (configure the Windows user settings, such as the user name, password, and domain), complete the following steps on the PDA:

1. Go to **Start > Settings > Control Panel > Owner**.
2. Select the **Network ID** tab on the **Owner Properties** dialog box.
3. Enter your **User Name**, **Password**, and **Domain** on the **Network ID** tab.
4. Select **OK** from the command bar to save your network ID information.

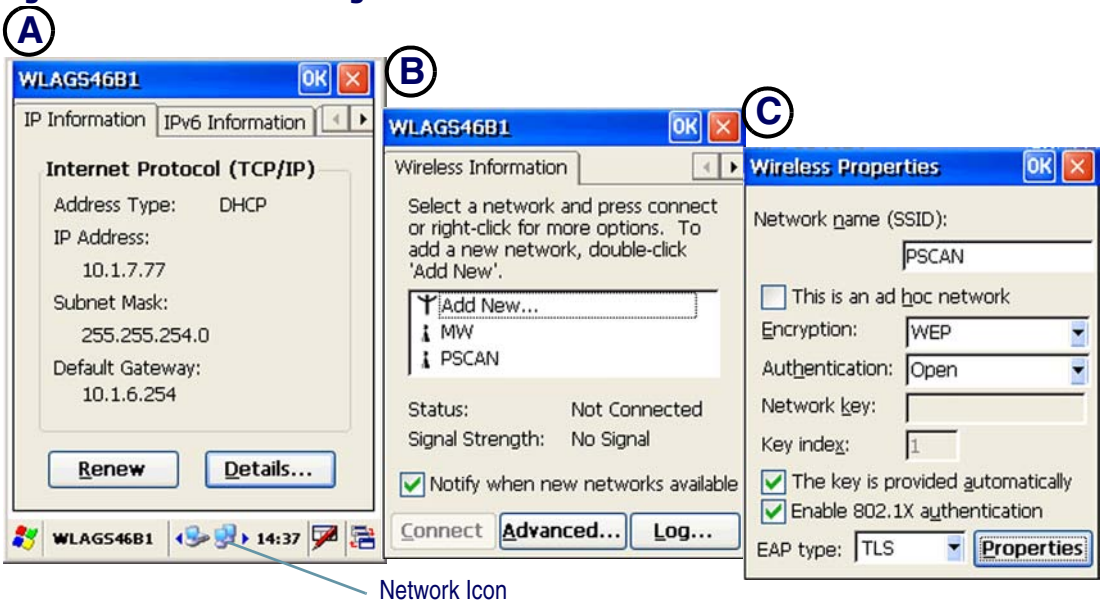
Access basic network connection information by double-tapping on the **Network** icon in the system tray. Tap **Details** to show more information.

Network and Dialup Connections

RF Configuration Parameters

Use this utility to set different profile combinations and designate the current profile for the wireless RF card.

Figure 4-5. Wireless Configuration



To set the RF configuration parameters, complete the following steps:

1. To open the **Wireless Properties**, tap the **Network** icon in the system tray or select a hotkey. (Refer to Figure 4-5A.)
2. Select the network you wish to access and press **Connect**, or tap for more options. (Refer to Figure 4-5B.)
3. To add a new network, double-tap **Add New**. (Refer to Figure 4-5B.)
4. Press **OK** from the control bar, or press the **<Enter>** key on the keypad.

CAUTION

Do not attempt to troubleshoot a network using this control panel.

Network Setup: Remote ActiveSync

An ActiveSync Partnership must be established between the PDA and the desired host prior to using Remote ActiveSync. Refer to "Setting up a Partnership" starting on page 4-4 for more information.

To execute **Remote ActiveSync**, complete the following steps:

1. Go to **Start > Settings > Network ActiveSync**.
2. Verify that **`Network Configuration`** is selected from the **Method to Connect** pull-down list.
3. Select the target host that you wish to ActiveSync with from the **Connect To** pull-down list.
4. Press the **Connect** button.
5. A network **ActiveSync** connection will be established.

Network functions and operations work the same when using the dock.

Appendix A
Technical Specifications

Overview

All specifications are subject to change without prior notification.

This section contains the following topics:

- "Decoding Capabilities (Symbologies)" on page A-1.
- "Dock" on page A-1.
- "Mechanical Specifications" on page A-2
- "System Specifications" starting on page A-3.
- "Optical Specifications" on page A-4.
- "Environmental Specifications" starting on page A-4.
- "Safety and Regulatory Specifications" on page A-5.

Decoding Capabilities (Symbologies)

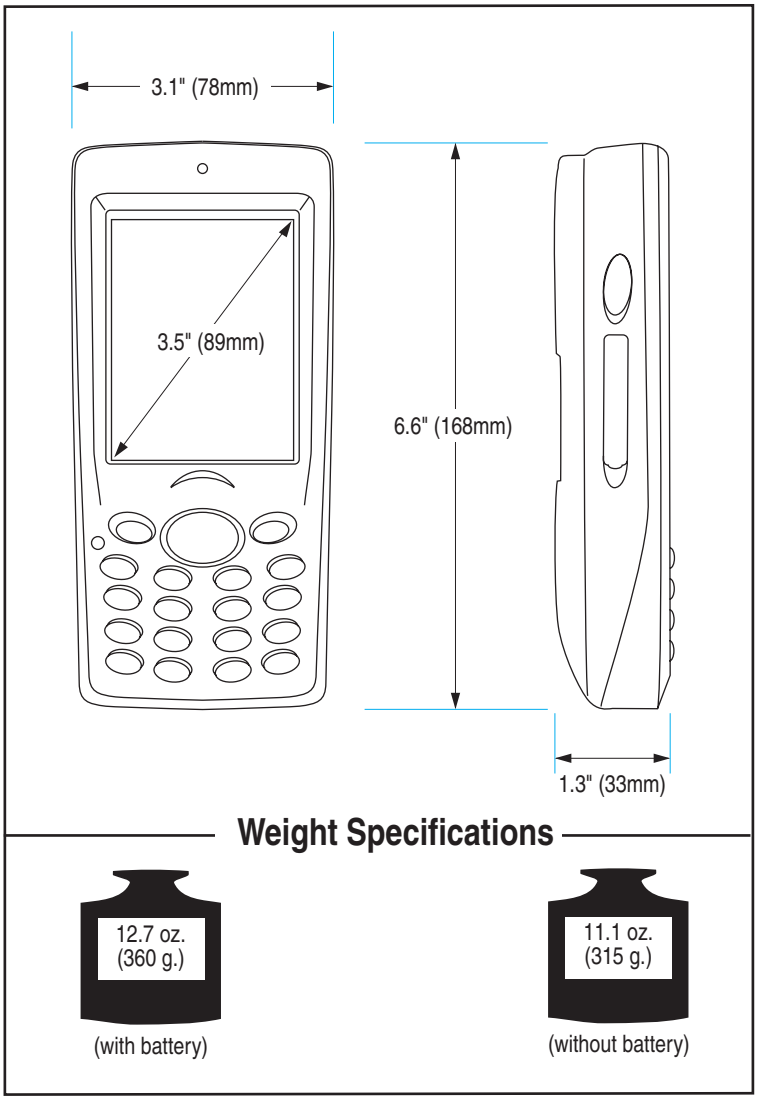
Code 4	Code 11	Code 32/Italian Pharmacy
Code 39	Code 93	Code 128/UCC EAN 128
Codabar/NW7	China Postage/Datalogic 25	EAN-8 Convert to EAN -13
EAN-8/JAN-8	EAN-13/UPC-A	IATA-25
Industrial 2 of 5	Interleaved 2 of 5	ISBN
Korea Code 35	Matrix 2 of 5	MSI/Plessey
UPC-E	UPC-E Convert to UPC-A	UPC-EAN Add-on 2/5

Dock

Spare battery charging slot	Standard RS-232 communication
1800 mAh Battery - Fast Charge (3-4 hours maximum)	2700 mAh Battery (High Capacity)- Fast Charge (5-6 hours maximum)
USB host and client interface	Ethernet module ready (optional)

Mechanical Specifications

Figure A-1. Dimensional Illustration



Display	3.5" / 8.9 cm 240 x 320 graphic, transflective TFT, 256,000 colors, Sunlight readable (for outdoor use)
Keypad	17 plus 4-way navigation
Construction	Industrial, high-strength poly-carbonate/ ABS-blend plastic

System Specifications

Operating System	Windows® CE .NET version 4.2 >
Microprocessor	Intel® XScale™ PXA255
Memory	
Flash ROM	64 MB total memory (includes memory used for firmware and software.)
Communication Ports	
Infrared	One IrDA 1.2 compliant port
Serial	RS-232 via optional cable or dock
USB	Supports USB v1.1 both host and client (dock and terminal)
I/O Slots	
One SD card slot	
One Compact Flash Type II slot (3.3V)	
Audio	
One mono speaker	
2.5mm DIA stereo earphone jack with microphone input (headset)	
Power Options	
1800mAh Lithium-Ion-Polymer removable/rechargeable battery pack.	
Optional high-capacity 2700mAh battery pack	
25mAh rechargeable backup battery pack (Holds system data at least 2 hours without main battery pack; not field replaceable).	
AC adapter with 110 -240 Vac, 50 - 60Hz	
Support for Xscale application modes including: Turbo Mode, Normal Mode, Idle Mode, Sleep Mode	
Peripheral power - On/Off controllable via software	
Radio Support	802.11b compatible
System Support	
VT100/220, HP700/92, IBM 3270 & 5250 via Wavelink TE®	
Browser support via Microsoft® Internet Explorer	
Wireless software distribution and terminal configuration via Falcon Management Utility (FMU) TCP/IP Communications	
Development Environments	
Many standard Windows CE development tools	
(Embedded Visual C++, Visual C#, Visual Basic .NET, Personal Java 1.1)	
Java Virtual Machine (JVM)	
Falcon® CE Developers Toolkit	

Optical Specifications

Laser Scanner

Light source	Laser: 650nm VLD
Scan rate	39 scans/second nominal
Indicators	
One triple-color LED for ALARM notification (Red) Charger indicator (Green/Blue).	
One dual-color LED for scanner indicator.	
Ambient light immunity	
Artificial light	450 ft.-candles /4,844 lux
Sunlight	10,000 ft.-candles /107,639 lux

Linear Imager

Light source	617nm visible LED
Scan rate	36 scans/second nominal
Indicators	
One triple-color LED for ALARM notification (Red) Charger indicator (Green/Blue).	
One dual-color LED for scanner indicator.	
Ambient light immunity	0 to 100,000 lux

Environmental Specifications

Operating Temperature	14° to 122° F / -10° to 50° C
Storage Temperature	-4° to 140° F / -20° to 60° C
Humidity	5 to 95% (non-condensing)
Shock/Drop	multiple 4.0 ft./1.2m drops to concrete
Sealing (Water and Dust)	IEC 529 rating IP54
Vibration	Exceeds MIL STD 810F
ESD	15KV air and 8KV contact

Safety and Regulatory Specifications

Electrical	VL 60950, CSA 60950, EN 60950
Emissions	FCC Part 15 B & C, R&TTE, CISPR 22
Laser Scanner classification	CDRH Class II (CAUTION: Laser Radiation—do not stare into beam); IEC 60825 Class 2.
Linear Imager classification	Class 1 LED product.

NOTES

Appendix B: Falcon® Desktop Utility for Windows®CE. NET

Overview

Falcon® Desktop Utility (FDU) allows PSC Falcon® Windows® administrators to configure Falcon Windows®CE .NET PDAs to control individual user access. This includes:

- Preventing users from changing Falcon OS settings.
- Defining keys to access specific functionality/programs.
- Application Selector to replace desktop with a selection of authorized applications.
- Internet Explorer access restriction, configuration and customized recovery mechanisms.

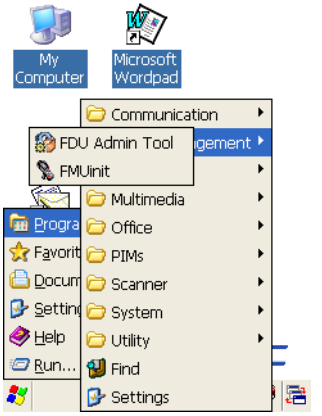
This section covers the following information:

- "Falcon Desktop Utility" on page B-2
  - "Administrative Options (Admin Tab)" on page B-3.
  - "Setting Hot Keys (HKeys Tab)" on page B-5.
  - "Internet Explorer Configuration (IE Tab)" on page B-7.
  - "Modifying Windows Controls (Win Tab)" on page B-9.
- "Application Selector (AppSelect Tab)" on page B-10

Falcon Desktop Utility

To open the **FDU** for the first time, from the **Start** menu, select **Programs > Falcon Management > FDU Admin Tool**.

Figure B-1. Accessing FDU from the Start Menu



These options are available from all screens:

Figure B-2. Options Available on all Screens

Command	Description
OK	Tap the **OK** button to apply the settings and modifications you have made in the FDU tabs. **OK** saves every modification.
X	Tap the **X** button to cancel the settings and modifications you have made in the FDU tabs. **X** cancels all modifications you have made in **FDU**.

Administrative Options (Admin Tab)

When you open the Falcon® Desktop Utility (**FDU**) the **Admin** tab will open.

Figure B-3. Setting a Password/Admin Tab Fields

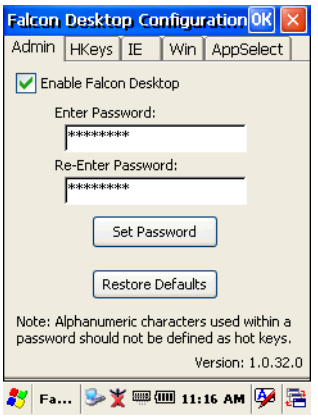


Table B-1. Setting a Password/ Admin Tab Fields

Command	Description
Enable Falcon Desktop	Select/tap this checkbox to activate the **FDU** functions such as Hot Key assignments, IE Restrictions, Windows Settings, and the authorized application menu.
Enter Password	Enter a password in the text box. This allows the user to specify a password when this utility is launched. By default there is no password. A password can consist of all standard keyboard characters.
Re-Enter Password	Carefully re-enter the password in the second text box.
Set Password	Select/tap the **Set Password** button to enable the password. To change or remove the password, enter a new value, re-enter the new value, and select/tap the **Set Password** button.
Restore Defaults	Select/tap the **Restore Defaults** button to reset the default values of all the functions on all the tabs. After you select this option, you will receive a prompt to verify this selection.

Setting a Password

To set a password:

1. Enter a password in the text box. This allows the user to specify a password when this utility is launched. By default there is no password already set.
2. Re-enter the password in the second text box.
3. Select/tap **Set Password** to enable the password.
4. Select/tap **OK** close the **Set Password Confirmation** dialog.

You must select/tap the Set Password button prior to exiting FDU in order to store and activate your new password. It is not necessary to select Enable Falcon Desktop.

CAUTION

If you select/tap the Restore Defaults button it will remove all custom settings and restore all the factory default settings, except a previously set password.

Changing a Password

To change to a new password:

1. Enter a new value in the **Enter Password** checkbox.
2. Re-enter the new value in the **Re-enter Password** checkbox.
3. Select/tap the **Set Password** button.

Removing a Password

To remove a password:

1. Enter blanks in both **Password** fields.
2. Select/tap the **Set Password** button.

Password Request Dialog Box

Once the password is set, the next time you open the **Falcon Desktop Utility**, the **FDU Password** dialog box opens.

This dialog box will not open if no password was defined.

Figure B-4. Enter Password

Table B-2. Enter Password Dialog

Command	Description
Enter Password	Enter your password using the keypad, or using the stylus on the soft input panel (**SIP**) in the text box.
OK	Select/tap the **OK** button to accept the password.
X	Select/tap the **X** button to cancel the request to start the **FDU**.

Complete the **FDU Config** dialog:

1. Type in your password using either the keypad on the unit, or using the stylus on the soft input panel (**SIP**).
   If you enter an incorrect password, the system will prompt you to input the correct one.
2. Select/tap **OK** to verify the password. Or tap **X** to cancel.

Setting Hot Keys (HKeys Tab)

You can use Hot Keys to associate specific keys, such as **<F1>-<F10>**, with specific applications. You can also create a new **Hot Key** combinationsSelect the **HKeys** tab to access these options.

Not available on Falcon 4220 units. The New and Delete options for Hot Keys are only available on the Falcon Windows CE .NET 44xx Series units.

For example, you could set **<F2>** to launch a sample application like:

\Windows\pword.exe.

Figure B-5. HotKeys Tab

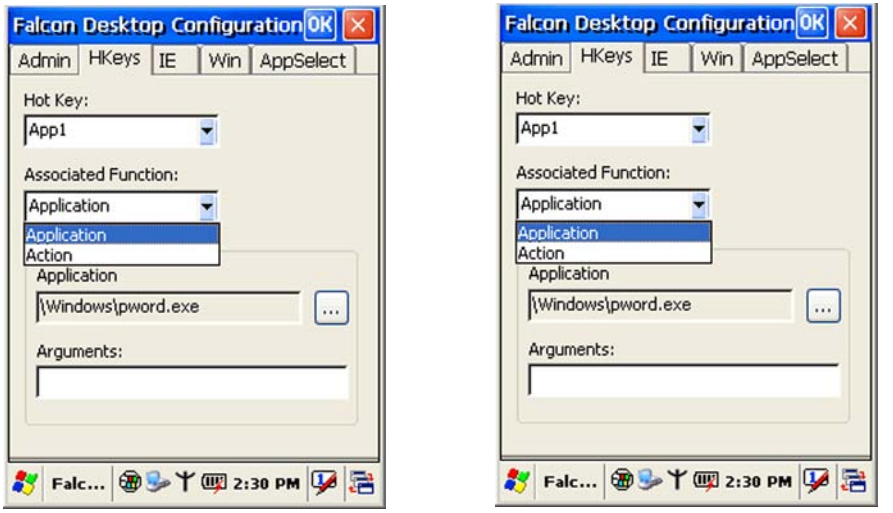


Table B-3. Hotkeys Tab Fields

Command	Description
Hot Key	This pull-down list displays the available function keys to define. Select the desired one from the list.
New	Not available on Falcon 4220 units.
Delete	Not available on Falcon 4220 units.
Associated Function	This pull-down list displays the available functions. Select either **Application** or **Action**.
Application	Displays path to the selected application.
Browse button	Select/tap the ... button to browse for application files. You can associate an executable program with the specified **Hot Key**.
Arguments	Type the command-line arguments that are needed for the specified application. This option is only available when **Application** is selected in the **Associated Function** pull-down list.
Action	Specify an action to associate with a **Hot Key**. This list includes: **SIP**, **toggle Taskbar**, **FDU Admin**, and **Application Switcher**. This option is only available when **Action** is selected in the **Associated Function** pull-down list.

The **<App4>** key is initially assigned to **FDU** Admin. If you wish to assign this key to a different function, you must first select an unassigned hotkey and assign it to the Action - **FDU** Admin. You can then go back and reassign the **FKey** to something else.

Table B-4. Hotkeys Available

Falcon 4220	
App1 - App4	IE
Audio	Left
Calibrate	Paste
Copy	Rec
Delete	Right
Down	Up
Home	Windows

The administrator is responsible for verifying that these keys don't override existing functions.

Internet Explorer Configuration (IE Tab)

Tap the **IE** (Internet Explorer) tab to access the **IE Configuration** option. Use the **IE Error Redirection** option to provide customized recovery from common **IE** errors. When an error occurs, the browser can redirect access to a specified error page with instructions on how to recover from the problem.

Figure B-6. IE Configuration Tab / IE Window Features

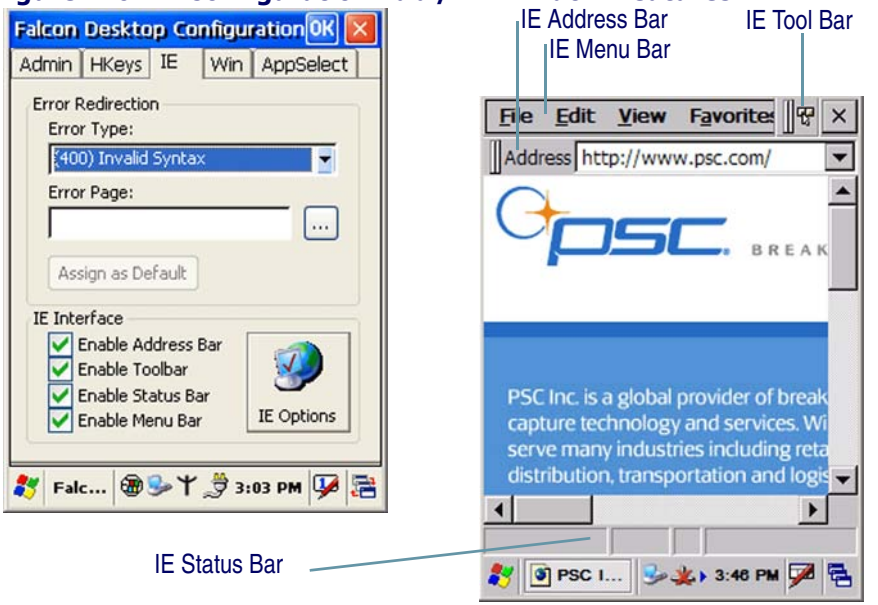


Table B-5. IE Tab Fields

Command	Description
Error Type	The **Error Types** pull-down list displays available **IE Error Types**:
	(400) Invalid Syntax, (403) Request Forbidden, (404) Object Not Found, (406) No Response Format, (410) Page Doesn't Exist, (500) Internal Server Error, (501) Server Can't Do That, Generic Error, Server Is Busy, Couldn't Find Server, URL Syntax Error, Request Cancelled, Not Available Offline
Error Page	Edit this textbox to associate a website or html file with the specified error.
Browse Button	Select/tap ... to browse for files.
Assign as Default	Select/tap this button to set a specified error page as the default. A confirmation dialog opens to ask if the default error page applies to all errors.
Show Address Bar	Select/tap this check box to show the **IE** address bar.
Show Tool Bar	Select/tap this check box to show the **IE** toolbar.
Show Status Bar	Select/tap this check box to show the **IE** status bar.

Command	Description
Show Menu Bar	Select/tap this check box to show the **IE** menu bar.

Internet Options

Press the **Internet Options** button on the **IE** tab to open the Windows CE .NET **Internet Options** control panel. Customize these settings as necessary.

The Internet Options control panel applet is part of the Microsoft® Windows® CE .NET operating system.

For more information on the Windows CE .NET operating system, please refer to the Microsoft website at http://www.microsoft.com/windows/embedded/ce.net/.

CAUTION

The FDU allows you to cancel prior to applying your changes. However, any settings modified in the Internet Options control panel applet through the FDU interface will be applied even if you later cancel the your modifications in the FDU.

Modifying Windows Controls (Win Tab)

Select/tap the **Win** (Windows Controls) tab to access the **Windows Controls** option. Use Windows controls to allow or restrict access to Windows system functions.

Figure B-7. WindowsCE .NET Desktop and Win Tab

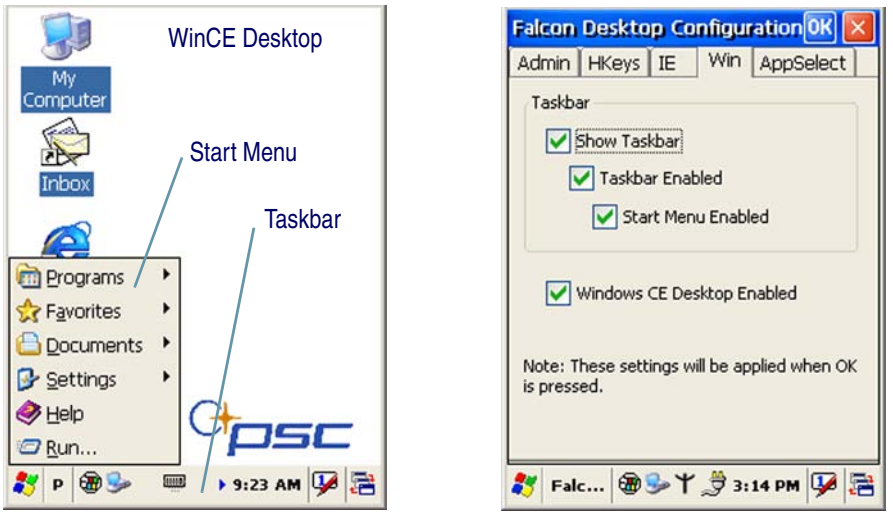


Table B-6. Win Tab Fields

Command	Description
Show Taskbar	Select/tap **Show Taskbar** to specify that the taskbar is shown or hidden.
Taskbar Enabled	Select/tap **Taskbar Enabled** to specify whether the taskbar is accessible. This option is only available when the **Show Taskbar** is checked.
Start Menu Enabled	Select/tap **Start Menu Enabled** to specify whether the **Start** menu is accessible or not. This option is only available when both **Show Taskbar** and **Task Bar Enabled** are checked.
Windows CE Desktop Enabled	Select/tap **Windows CE Destktop Enabled** to specify that the desktop icons are accessible or not.

You can disable normal Windows functions such as the desktop and taskbar, leaving nothing but a blank workspace. This allows applications to be run on the full screen and prevents users from accidental or unauthorized use of the taskbar, Internet Explorer, and any other resident applications.

Application Selector (AppSelect Tab)

Use the **Application Selector** function to edit, add, or delete applications for the application selector.

Figure B-8. AppSelect Tab

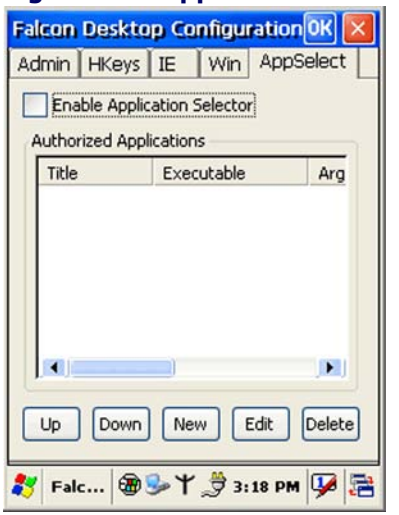


Table B-7. AppSelect Tab Fields

Command	Description
Enable Application Selector	Select/tap **Enable Application Selector** to enable/disabled the application selector. When this is enabled, the **Application Selector** replaces the desktop and allows only authorized use of applications.
Authorized Applications	This is a list of applications that the user may access.
New	Select/tap the **New** button to create a new application entry.
Edit	Select/tap the **Edit** button to edit the selected entry.
Delete	Select/tap the **Delete** button to delete the selected entry.
Up/Down	Select/tap the **Up/Down** buttons to move an entry up or down in the listview.

Applications with the **Run Application at Start** option enabled will start automatically when the **Application Selector** starts up.

Add Application

The **Add Application** dialog opens when you press either the **New** button or the **Edit** button.

Figure B-9. Add Application Dialog

Table B-8. Add Application Dialog

Command	Description
Application Title	Type the name of the application in this textbox in the way you wish it to appear for the user.
Executable	Displays the path for the executable file which you want to run.
Browse Button	Select/tap ... to browse for the desired executable file. The results of this search are placed in the **Executable** textbox.
Arguments	Type any command line arguments to be used when an application is executed.
Icon File	Displays the path/link to the desired icon file.
Browse Button	Select/tap ... to browse for the desired icon file. The results of this search are placed in the **Icon File** textbox.
Run Program on Startup	Select/tap this box to force this application to auto start when the Application Selector starts up. Applications will be started in the order listed in the authorized application list.

Command	Description
Delay	Enter a delay duration in seconds in the combo box. This option delays auto start of application(s) to allow drivers to load prior to starting applications
OK	Select/tap the **OK** button to add/save changes.
X	Select/tap the **X** button to cancel the creation of this entry.

From the **Add Application** dialog, the administrator can configure and/or add/change an a new application entry in the list.

Application Selector

The administrator can choose for the user to have access to the desktop or not. The Application Selector can replace the desktop and limit the user to the specified list of applications.

Figure B-10. Application Selector

The user can select/tap the desired application.

The administrator can customize this list as shown in Application Selector (AppSelect Tab) on page 10.

Application Switcher User Interface

The application switcher provides the same functionality as the standard windows Alt+Tab function. This allows the user to cycle through the various open applications.

The <ESC> key can be used to close the Application Switcher.

The application switcher is activated via an assigned **Action** key specified in the **Hot Key** tab. (Refer to Setting Hot Keys (HKeys Tab) on page 5.) When the assigned **Hot Key** is pressed, the dialog shown to the right will be displayed.

During this time, the user can press the arrow keys or the assigned **Hot Key** to select the application they wish to switch to. When the **Enter/Return** key is pressed or when an application is tapped with the stylus, the highlighted application will open and the application switcher will close.

Appendix C
Accessories & Peripherals

Overview

This appendix covers the following accessories and peripherals:

- "Using the Car Charger/Adapter" on page C-1.
- "Installing Compact Flash Type Peripherals" on page C-2.
- "Using the Earphones / Microphone" on page C-4.
- "Installing the Handstrap" on page C-5.
- "Using a High Capacity Battery" on page C-6.
- "Holster" on page C-7.
- "Using SD Memory Card" on page C-9.
- "Using the USB / Serial Connection" on page C-10.

Customize your PDA with the many peripherals, data storage devices, battery packs and other accessories available for the Falcon 4220.

Using the Battery Charger

Refer to the *Falcon 4220 Quick Reference Guide* for more information on the Battery Chargers.

Using the Car Charger/Adapter

One of the Accessories available for the PDA is a car adapter/charger. Insert the small end of the adapter into the PDA and the larger end into your vehicle's power source (cigarette lighter-type socket).

Table C-1. Car Adapter Electrical Specifications

Parameters	Test Conditions	Min.	Max	Unit of Measure
Input Voltage	Off Load	10	30	V

Parameters	Test Conditions	Min.	Max	Unit of Measure
Input Current	Vin = 12V, Off Load Quiescent Current	10	-	mA
	Vin = 12/33, RL = 2.5	0.8 (30V)	1.2 (10.8V)	A
Inrush Current	Vin = 10.8~33V		3	A
Input Voltage Surge (Fuse Protected)	30V < Vin ≤ 40V	-	-	-
Output Voltage	Vin = 12V, RL = 2.5	4.75	5.25	V
Output Current	Vin = 12V, RL = 2.5	0	2	A

Figure C-1. Car Adapter

Installing Compact Flash Type Peripherals

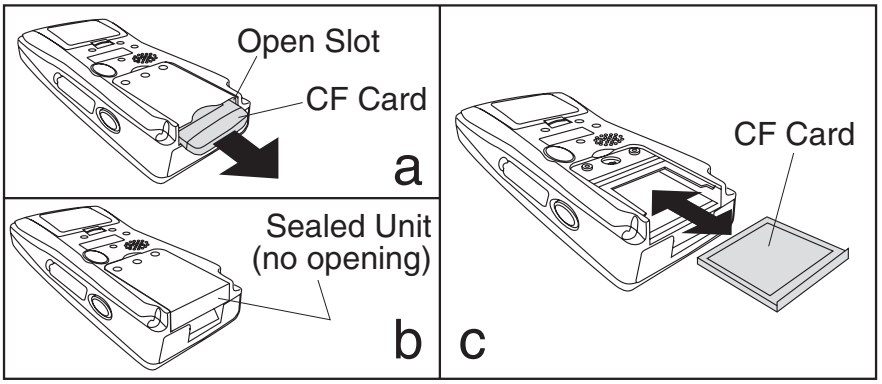
CAUTION

If you use the CF cover with the open slot, the unit is no longer rated at IP54 standard and is not safe for industrial use where moisture and dust are present.

Because the handstrap plate will cover the opening, the handstrap cannot be used with the open CF (compact flash card) cover.

To install a Compact Flash (CF) Type II peripheral, follow these steps:

Figure C-2. Compact Flash Type II Memory Card



1. Remove the handstrap plate or the handle accessory if there is one on the PDA. Refer to "Installing the Handstrap" on page C-5 and the Handle Accessory Installation Instructions included on the product CD for more information.
2. Remove the screws from the CF cover by using a small Phillips head screwdriver. Remove the CF cover plate.
3. Insert a CF card, making sure it is correctly oriented. Do not force it. Refer to Figure C-2C.
4. Replace the CF cover.

You will no longer be able to use the handstrap with a CF type peripheral requiring an open cover.

- For most CF cards, use the closed top cover. Using this cover maintains the IP54 Industrial seal rating. Refer to Figure C-2B.
- For CF modules with external antennas, etc., use the CF cover with the open slot at the top. Refer to Figure C-2A.

Using the Docks

Refer to the *Falcon 4220 Quick Reference Guide* and the *Falcon 4220 Dock Instruction Sheet* for more information on the Falcon 4220 Single- and Quad-Slot docks.

Using the Earphones / Microphone

To use the Earphones/Microphone cord, connect it to the port along the top left edge of the PDA.

Figure C-3. Earphones/Microphone Device

The Falcon 4220 supports stereo sound. The earphone/microphone is similar to one you receive with a cellular phone or other portable media device. There will be a **Voice Record** feature in a future release of this product.

Ethernet Port

CAUTION

When ever you use the Ethernet Adapter, you must wait a minimum of 60 seconds before removing the Falcon from the dock. If you do not, the unit will lock up and you must perform a warm reset. (Refer to the *Quick Reference Guide* for instructions on warm resetting the Falcon.)

You can also connect the device via the dock to the Host PC via an Ethernet Port. You must install the Ethernet adapter on the dock first. The Ethernet Port is “plug and play” once the Ethernet adapter is installed. Please refer to the instruction sheet that comes with your Ethernet Port for instructions on Installation.

Installing the Handstrap

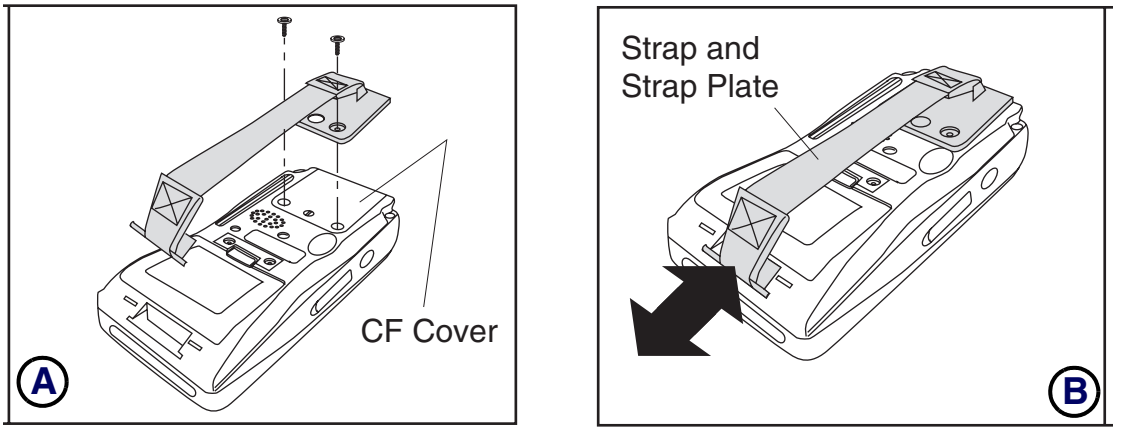
To use the PDA for extended periods of time, install the handstrap for increased comfort and usability. To install the handstrap, you must have the standard CF cover installed.

Because the handstrap plate will cover the opening, the handstrap cannot be used with the open CF (compact flash card) cover.

Complete the following steps:

1. Turn the PDA face-down on a clean, dry surface. Ensure that power is OFF.
2. Use a small Phillips head screwdriver to remove the two screws securing the CF cover to the PDA. Align the strap plate with the CF cover. (Refer to Figure C-4A.)

Figure C-4. Installing the Handstrap



3. Reinstall the screws to secure the both the CF Cover and the strap plate into place.
4. Pull the plastic tab down as shown in Figure C-4B to insert the strap into the strap recess at the bottom of the unit.

The procedure for installing the Strap Plate and the Strap is complete.

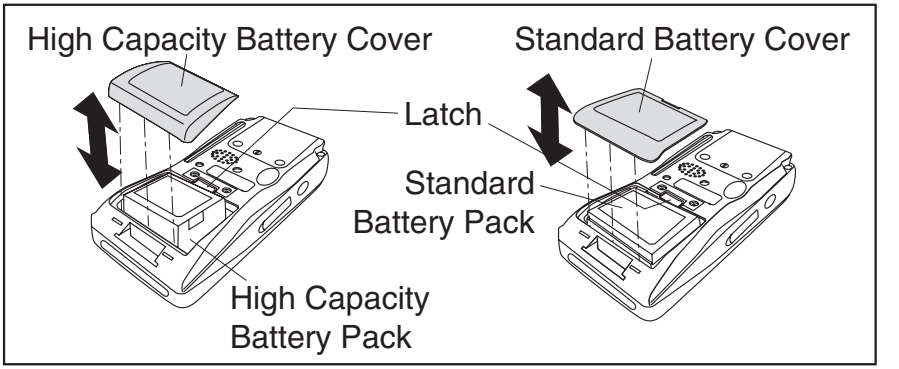
Installing the Handle

Refer to the Instruction Sheet that comes with the handle for complete instructions on installation. Refer to the Product CD for an electronic copy.

Using a High Capacity Battery

There is also an optional high capacity battery available. This battery is rated at 2700mAh. This battery upgrade kit comes with a high capacity battery cover as shown below.

Figure C-5. Optional High Capacity Battery and Battery Cover

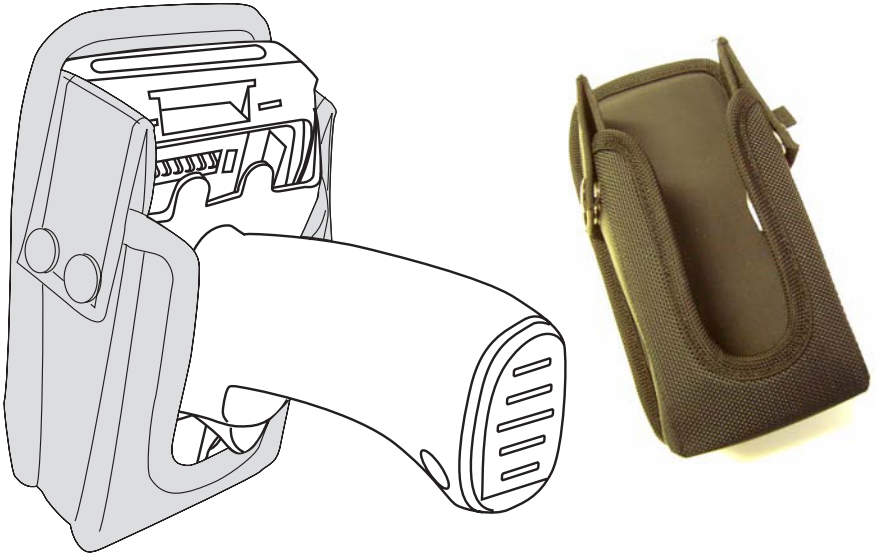


The High Capacity battery takes about 50% longer to charge in the PDA with the power adapter, in the PDA the dock, in the dock's spare battery slot, or the battery charger. Please refer to the *Quick Reference Guide* for a table showing battery charging methods, durations, and LED indicators.

Holster

There is a heavy duty nylon holster available as an accessory for the both the handled and non-handled versions of the Falcon PDA. It features a belt mount (clip on both sides for left or right mount) and is shown in Figure C-6.

Figure C-6. Holster



Using the IrDA Port

Use the IrDA Port to synchronize data transmission with a desktop computer, portable printer, or another handheld device with an IrDA port. To use the IR port, position the IR port of both devices towards each other.

Remove the protective shipping overlay from the IrDA port of both devices (if applicable).

Figure C-7. Using the IrDA Port

IR connections are very sensitive to distance and angle, so it is best to aim and position the IR ports as close as possible to each other.

In order to receive or send data, both devices must use the same software from which the data is being beamed.

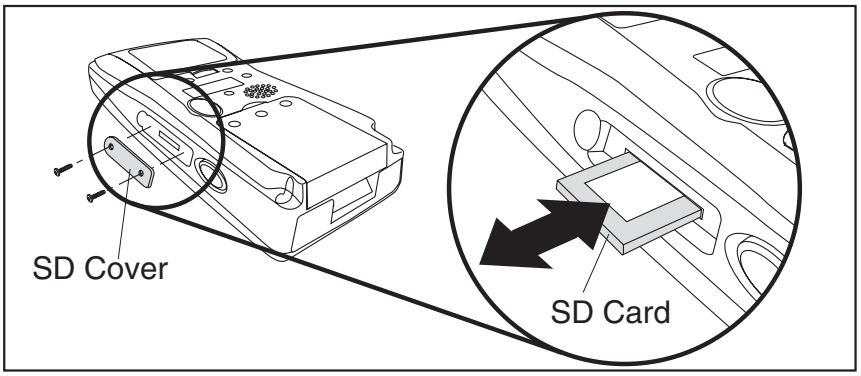
Using SD Memory Card

Secure Digital memory cards come in various data storage sizes.

To use a Secure Digital (SD) type card, complete the following steps:

1. Remove the SD cover located along the left side of the unit by removing the two screws with a Phillips head screw-driver.

Figure C-8. Secure Digital Card



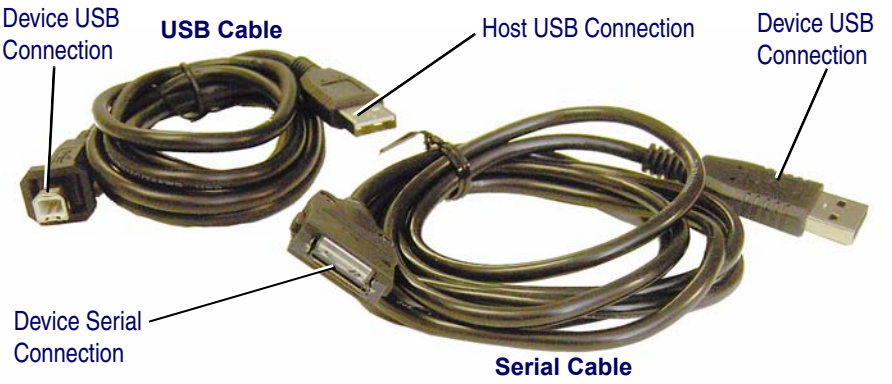
2. Make sure that the SD card is oriented correctly with the small notch on the top left, and insert it into the SD card slot.
3. Replace the SD cover and screws securely.

To remove the card, remove the cover and press the exposed edge of the card to release it.

Using the USB / Serial Connection

Use either a USB or serial connection cable to synchronize your data transmission with a Host PC. Use the appropriate connection for the system you are using.

Figure C-9. Serial and USB Data Synchronization Cables



You must install Microsoft ActiveSync v3.7 or higher on the Host PC prior to synchronizing data.

For more information on data synchronization using Microsoft ActiveSync, refer to "Connecting PDA to Host PC" on page 4-3 and Microsoft's website.

Appendix D
Cable & Connector Configurations

Introduction

The following pages contain pinout information, enabling you to create standard interface cables for use in interconnecting the Falcon to power and/or peripheral devices.

Falcon Termination USB Host Cable

Table D-1 lists the Pin number and signal for the Falcon USB Host cable.

Table D-1. USB Cable, Host End

Falcon Termination, USB Host Cable		
Pin#	**Signal**	**Notes**
1	USB_H_5V	
2	USB_A_D-	
3	USB_A_D+	
4	USB-GND	Connected
5	USB-GND	

Falcon Termination USB and Serial Cables

Table D-2 lists the Pin number and signal for Falcon (client) end of the 22 pin Port, Serial or USB cable.

Table D-2. 22-Pin Port for the USB and Serial Cable,

Falcon Termination USB & Serial Cable		
Pin#	**Signal**	**Notes**
1	DC_IN	5V Input from Adapter
2	DC_IN	5V Input from Adapter
3	DC_IN	5V Input from Adapter
4	GND	
5	DSR	RS232 signal
6	RXD	RS232 signal
7	CTS	RS232 signal
8	GND	
9	DCD	RS232 signal
10	RTS	RS232 signal
11	TXD	RS232 signal
12	DTR	RS232 signal
13	USB_H_5	
14	F_RING	RS232 signal
15	GND	
16	USB_B_D- (USB Client)	
17	USB_B_D+ (USB Client)	
18	GND	
19	HOT SYNC	Input, Sync signal for USB client, active high
20	USB_C_5V	
21	GND	
22	V+3.3	3.3 Volt power

All Pins Must be Connected

All Pins must be Connected

No Connection

PC Termination Serial Cable

Table D-3 lists the Pin number and signal for PC end of the Serial cable for the Falcon.

Table D-3. Serial Cable, PC End

PC Termination (DB9-Female), Serial Cable	
Pin#	**Signal**
1	DTR
2	RXD
3	TXD
4	DCD
5	GND
6	DSR
7	CTS
8	RTS
9	N/A

NOTES

Appendix E
Maintenance, Troubleshooting, and Technical Support

Overview

This section contains the following topics:

- "Maintaining the PDA" on page E-1.
- "Troubleshooting" on page E-2.
- "Technical Support" on page E-5.

Maintaining the PDA

With normal use, the PDA, Dock, 4-Slot Dock and 4-slot battery charger require no maintenance. For trouble-free service, observe the following tips when using the Falcon:

- To prolong its life and avoid problems, keep the Falcon and its dock clean. Use a clean, soft cloth dampened with a mild, dilute cleanser.
- If you need to clean the display, clean it with a lens cloth or other soft cloth dampened with a mild, dilute cleaning solution.

Never use a pen, pencil, or other sharp object on the Falcon's display/touch screen. Use only the supplied stylus or plastic-tipped pens intended for use with a touch-sensitive screen.

CAUTION

Do not immerse the PDA, docks, or battery chargers in liquid.

Do not use abrasive paper/cloth or abrasive/corrosive cleaners to clean the unit.

Use the stylus on the <Reset> button; never use a paper clip Refer to the *Quick Reference Guide* for information on the cold reset procedure. Using a paper clip or other sharp object can puncture the key, disabling the reset function, rupturing the industrial seal, and voiding your warranty.

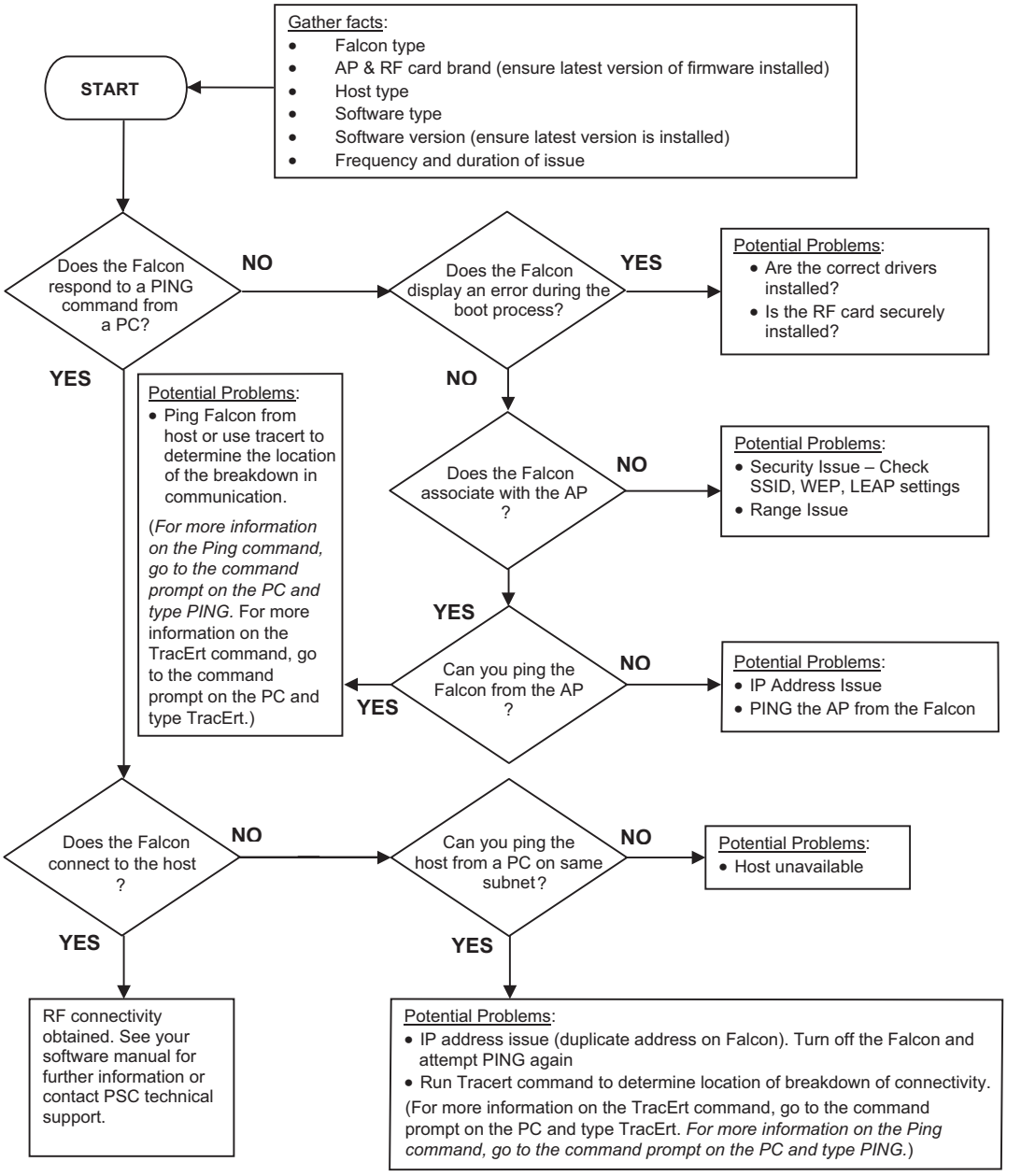
Troubleshooting

Table E-1. Troubleshooting Problems, Causes, and Solutions

Problem	Possible Cause	Solution
The PDA does not turn on.	The battery pack is not charged.	Charge or replace the battery pack in the PDA.
	The battery pack not installed properly.	Ensure the battery pack is installed properly.
	System crash.	Perform a cold reset. Refer to the *Quick Reference Guide* for information on the reset procedure.
Rechargeable battery pack did not charge.	Battery cycle life has expired.	Replace the battery pack. If the PDA still does not operate, try a warm reset, then a cold reset; Refer to the *Quick Reference Guide* for information on the reset procedure.
	The Falcon is not firmly seated in the dock.	Make sure that the Falcon is firmly seated in the dock. If it is not firmly seated, battery charging will NOT be initiated.
	The PDA was removed from the dock while battery was charging.	Insert the PDA in dock and begin charging. The initial charge of the battery pack and backup battery takes thirteen (13) hours. Subsequent charging cycles take (4) hours. If both the battery pack and the backup battery are allowed to discharge completely, you must recharge both batteries for thirteen (13) hours.
Characters are not visible on the display.	The PDA is not powered on.	Press the <**Power**> key.
	The ambient room light is not sufficient to see the display.	Turn the backlight off or on using the <**Power/Backlight**> key as a toggle. Refer to the "Power/Backlight Key" starting on page 1-8.
During data communication, no data was transmitted, or transmitted data was incomplete.	Terminal removed from dock or unplugged from host PC during communications.	Replace the terminal in the dock, or replace the serial cable, and retransmit.
	Falcon is not firmly seated in the dock.	Make sure that the Falcon is firmly seated in the dock. If it is not firmly seated, communication with the Host PC will NOT be initiated.
	Incorrect cable configuration.	See your System Administrator.
	Communication software was incorrectly installed or configured.	Perform setup as described in "Transferring Files" on page 4-4.

Problem	Possible Cause	Solution
The PDA turns itself off.	The PDA has gone into suspend mode and is inactive.	The PDA turns off (suspends) after a period of inactivity. To resume, press the **<Power>** key. (refer to "Suspend Mode" on page 1-1. You can set duration from one to 30 minutes. Refer to "Power Configuration" on page 3-8 to modify the default settings.
The PDA does not accept scanned input.	The **Quick ScanSet** application has not been started.	Go to **Start > Programs > Scanner > Quick ScanSet** to open the bar code scanning application. Refer to "Quick ScanSet Application" on page 2-5 for more information on using this application.
	Protective covering not removed on units equipped with a laser scanner.	Remove the protective covering.
	Scanner is not correctly positioned to read the bar code.	If the bar code scan fails, adjust the reading angle or distance. Make sure that the scanner beam scans across all bars of the bar code. Refer to Figure 2-8 on page 2-13. Aim the scan beam at the center of the bar code. • Position the device close to bar code when scanning small bar codes. • Position it at a distance when scanning larger bar codes.
	Unreadable bar code.	Be sure the symbol is not defaced.
		Ensure that the unit is programmed to read that symbology.
	Distance between exit window and bar code is incorrect.	Be sure you are within proper scanning range and scan line is perpendicular and crosses all bars.
	The PDA is not programmed to generate a beep.	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.
	Battery is low.	If the scanner stops emitting a scanner beam when you press the trigger, check your battery level. **Note: If the scanner is still not reading symbols, contact your PSC reseller.**

RF Connectivity Troubleshooting



Technical Support

PSC Website Support

The PSC website (www.psc.com) is the complete source for technical support and information for PSC products. The site offers the PSC TekForum, product support, product registration, warranty information, product manuals, product tech notes, software updates, demos, and instructions for returning products for repair.

PSC TekForum Knowledgebase

Search for information on the TekForum Knowlegembase by clicking on the **Services** pull-down menu on the PSC website, after navigating to your language. Browse the TekForum to find answers to your questions about common technical issues. Register with TekForum to submit a question to the PSC Technical Support Staff Receive a solution to your question posted on TekForum within two business days.

Reseller Technical Support

An excellent source for technical assistance and information is an authorized PSC reseller. A reseller is acquainted with specific types of businesses, application software, and computer systems and can provide individualized assistance.

Telephone Technical Support

If you do not have internet or email access, you may contact PSC technical support at (541) 349-8281.

NOTES

Appendix F
Glossary

Many definitions for this Glossary were taken directly from the Microsoft Developer's Network website at http://msdn.microsoft.com/library/default.asp.

4-way rocker key Refer to navigation key.

active notification The state of a user notification from the time the user is notified until the user handles the event.

active window The window in which a user is currently working or directing input. An active window is typically on top of the Z order and is distinguished by the color of its title bar.

ActiveSync Microsoft Windows Communication application that synchronizes a Windows CE .NET device with a Microsoft Windows-based host PC. ActiveSync can use RS-232, IrDA, USB, and Wireless networks.

AutoCAB The AutoCAB program allows the PDA to automatically reinstall selected applications when the terminal is cold reset. When the Falcon is reset, the AutoCAB program runs automatically and determines if it is a warm or cold reset.

AutoCE The AutoCE program allows the user to create a list of applications to run when the PDA is reset. Each application may be designated to run only on a cold reset, or on both warm and cold resets. The applications run sequentially, allowing interdependencies to be handled.

calibration You might need to recalibrate the touch screen. One way to know that the touch screen needs to be recalibrated is that you will notice that when you attempt to select one item with the stylus, another item is erroneously selected.

command band A rebar control with a fixed band at the top that contains a toolbar with a **Close** (X) button, an **OK** button, and optionally a **Help** (?) button in the upper right corner.

command bar A control window that can contain buttons, combo boxes, and menu bars. Windows CE–based applications can use a command bar rather than a separate menubar and toolbar to efficiently use available screen space.

Compact Flash (CF) card	Compact Flash® is a very small removable mass storage device. Compact Flash cards are designed with flash technology, a non-volatile storage solution that does not require a battery to retain data indefinitely. CF™ cards consume only five percent of the power required by small disk drives. CF cards weigh a half ounce and are the size of a matchbook. CF cards are available as modems, Ethernet, serial, digital phone cards, scanners, BlueTooth wireless, 802.11b WiFi LAN, etc.
control	A standardized part of the window that can be manipulated by the user to perform an action or display information. The most common controls are buttons that allow the user to select options and scroll bars that allow the user to move through a document or position text in a window.
context sensitive help	Tap the "**?**" button to open a help dialog about the specific windows application you are using. Context sensitive help can tell where you are in a program and can provide assistance with the specific problems you might be having.
control panel	Control Panels are several different applets that allow you to configure PDA device to meet your specific requires. There are control panels for scanning, keyboard, display, etc. Access the control panels at the Start menu: **Start > Settings > Control Panel.**
device manager	A tool to track all loaded device drivers and their interfaces. It issues notification of the appearance, disappearance of device interfaces, loads and tracks drivers by reading and writing registry values, and unloads drivers when their devices are no longer needed.
device partnership	A registry key on a Windows CE .NET device that a desktop computer uses to identify the device when it is connected. The key defines values for synchronization, file conversions, and backup and restore information, which enable multiple Windows CE .NET devices to connect to the same desktop computer. A device partnership is created the first time you connect a Windows CE .NET device to a host PC.
DiskOnChip	Persistent flash memory management system. Data in the DiskOnChip is retained when a battery pack is fully discharged. The backup battery must be charged to retain flash memory.
embedded	Broadly, software code or commands built into a device, as opposed to software that is added. In a narrower sense, code that is typically stored in ROM and dedicated to either controlling a device or providing a specific functionality.
FAST	Part of PSC's Falcon Management Utility (FMU) application for the Falcon that updates the operating system and applications automatically from a server using the wireless network system.
firmware	Operating System on the PDA.
Falcon Management Utility (FMU)	A PSC Windows-based management application for managing the configuration settings and updating the operating system and applications automatically from a server using the wireless network system on the PDA.

Firmware Update Utility (FUU)	A PSC Windows-based field upgradeable firmware mechanism. Use the Firmware Update Utility (FUU), described starting on page 2-9, to install or update the firmware using an ActiveSync connection.
gripper bar	A gripper bar is a tall, thin rectangle with a dark stripe running through it that appears on a rebar or a command band control. By touching and dragging a gripper bar with a stylus, a user can reposition a rebar or command bar. Gripper bars are especially useful for bringing off-screen rebar or command bar controls into view.
host PC system	PC using the Microsoft Windows operating system and Falcon Management Utility (FMU) and/or ActiveSync in a device partnership with the PDA
IrDA	A communications protocol using an Infrared device to communicate with the Host PC.
Infrared Data Association	The industry organization of computer, component, and telecommunications vendors who have established the standards for infrared communication between computers and peripheral devices such as printers. Windows CE .NET supports the IrDA standard through the Winsock API. Windows CE–based applications that communicate over serial cables using the Winsock API communicate over IrDA-compliant infrared links with only minimal reprogramming.
input method (IM)	A component that allows the user to input text using a touch screen.
input panel	Refer to soft input panel (SIP).
LEAP	Lightweight Extensible Agent Platform. The LEAP project addresses the need for open infrastructures and services to support dynamic, mobile enterprises. Project LEAP developed an agent platform that is lightweight, executable on small devices such as PDAs and phones; extensible, in size and functionality; operating system agnostic; mobile team management application enabling, supporting wired and wireless communications and FIPA compliant.
MIB (Management Information Base)	A Management Information Base (MIB) is a file that defines a set of SNMP (Simple Network Management Protocol) variables, their types and usage. There are a number of standard MIBs available, depending on the information being managed. The MIB is used by the management tools to allow them to better support the configuration values provided on the terminals, such as scanner controls and terminal type information.
mounted file system	A file system located on a removable medium, such as a PC Card storage device. The operating system loads, or mounts, the file system when the medium is inserted into the device. It unloads, or unmounts, the file system when the medium is removed or when the user issues a command to do so.
navigation key	A large navigation button (4-way rocker key) on the keypad with 4 arrows: pointing up, down, left, and right that allows the user to move the cursor or highlighted text entry during menu selection. Press and release one edge of the key to move the display screen one line or one character in the direction of the arrow.

Network ID	Here used to mean that you should configure the Windows user settings, such as the user name, password, and domain name. Microsoft's definition includes some wireless network IDs as equivalent to SSIDs.
non-persistent state	A non-persistent state affects only the next keypress. FN state is a non-persistent state.
object store	The persistent storage that Windows CE makes available to applications. For example, Windows CE reserves part of its available RAM for the operating system and uses the rest for the object store. This data can be stored in files, registry entries, or Windows CE databases.
PING	Protocol that sends a message to another computer and waits for acknowledgment, often used to check if another computer on a network is reachable.
portable data assistant (PDA)	A handheld Windows-based (Pocket-PC or Windows CE) computer that can be synchronized with a host PC to share files and data. Sometimes contains an infrared device to beam information to another unit.
portable data terminal (PDT)	An industrial strength handheld computer with a keypad, navigation keys, and a bar code scanner used in inventory, retail, and warehouse activities to collect data and upload it to a host PC.
persistent state	A state which is maintained after releasing a key. Alpha mode is a persistent mode. Also called a "sticky" state. A persistent state must be turned off by pressing the key again.
program memory	Memory that is used for stack and heap storage for both system and nonsystem applications. Nonsystem applications are taken from storage memory, uncompressed, and loaded into program memory for execution.
RF card	A small card shaped device installed in a PDA that allows wireless connection and communication with a network.
RAM (random access memory)	You can add applications and data files to RAM or into Flash memory via the DiskOnChip. While flash memory is persistent (as long as the backup battery is charged), RAM is not and will be cleared when you remove or replace the battery. As you can only suspend the device, the only way to turn it fully off is to remove the battery or to perform a hard reset.
ROM (read only memory)	The operating system (Windows CE .NET) and applications are pre-installed on ROM and cannot be removed or modified. These applications are persistent.
rebar	A command bar with a gripper bar.
remote access server (RAS)	A feature that connects a device to a host computer. Windows CE can connect to a remote access server using direct serial, infrared, and dial-up connections. Windows CE supports the standard Microsoft Win32 RAS functions; however, it allows only one connection at a time. RAS functions can be implemented for direct serial connections or dial-up modem connections.

RTC	Real Time Clock on the PC.
Secure Digital (SD) Memory Card	SD Memory Cards are small, non-volatile, solid-state devices, that provide high storage capacity (32 MB, 64 MB, 128 MB, and 256 MB), fast data transfer, and security.
shortcut menu	A menu that is displayed for a selected object. The menu contains commands that are contextually relevant to the selection.
SNMP (Simple Network Management Protocol)	SNMP is the standard protocol for managing devices on a network. Simple Network Management Protocol (SNMP) is a standardized protocol for network management services using a client/server model. The network management program (client) issues queries and commands to the remote device
soft input panel (SIP)	Click on the **Keyboard** icon in the system tray to open the **SIP**. Use this virtual QWERTY keyboard like you would a computer's keypad to enter alpha numeric and symbols in the current application.
splash screen	An initial screen displayed by software, usually containing a logo, version information, author credits, or a copyright notice.
SSID	The SSID (Service set identifier) is a network name; it is a name that identifies a wireless network. The SSID differentiates one WLAN from another, so all access points and all devices attempting to connect to a specific WLAN must use the same SSID. Devices must provide a unique SSID. Because an SSID can be sniffed in plain text from a packet it does not supply any security to the network.
start button	The start button opens the Start menu. The Start menu contains a list of the resident applications, applets, and utilities viable to the user.
status bar	An area that displays state information for the content in the window, typically placed at the bottom of a window.
status icons	A graphic representation of the status of a feature or function.
stylus	The stylus is the equivalent of a mouse on the PDA. Use the stylus on a touch-sensitive display. Only a plastic tipped stylus should be used on a touch-sensitive display. Use the stylus to navigate the touchscreen display, select characters in the soft input panel (SIP), select applications from the desktop or system tray, select tabs, fields and text within applications and dialog boxes.
suspend mode	The PDA will go into a suspend or sleep mode when it is idle for a period of time. Suspend mode works and looks just like you have turned the unit off. Press the **<Power>** key to suspend (put to sleep) the PDA. Press the **<Power>** key again for the PDA to resume its previous state.

Symbology	A symbology is a protocol for arranging the bars and spaces that make up a particular kind of bar code. A bar code is made up of numbers, letters, and computer-recognized characters that can be represented in a combination of bars and spaces. There is not one standard bar code; there are currently over 400 barcode symbologies that serve different uses, industries, or geographic needs.
system tray	An area of the display screen located at the bottom, within the Task bar that displays status icons and symbols.
system tray keyboard Indicators	The System Tray Keyboard Indicators are located at the bottom of the display in the task bar and contain status icons and symbols indicating open features and active applets.
task bar	The Task bar at the bottom of the screen displays the start button icon, an icon for the active program, an icon for the current character, the current time, and system icons for utilities loaded in memory, including the keyboard icon, which opens and closes the soft input panel (SIP).
Tracert	Trace Route. A utility/command to determine TCP/IP packet routing.
touchscreen display	A graphical computer interface display screen that allows the user to enter and select items with a stylus.
Uniform Resource Locator (URL)	The address of a resource on the Internet. URL syntax is in the form *protocol://host/localinfo*, where *protocol* specifies the means of returning the object, such as HTTP or FTP. *Host* specifies the remote location where the object resides and *localinfo* is a string, often a file name, passed to the protocol handler at the remote location. *Also called* a Uniform Resource Identifier.
USB	Universal Serial Bus is a protocol for connecting PCs with peripheral devices, including PDTs, PDAs, cameras, printers, mice, scanners, etc.
WEP	Short for Wired Equivalent Privacy, a security protocol for wireless local area networks (WLANs) defined in the 802.11b standard. WEP is designed to provide the same level of security as that of a wired LAN. WEP aims to provide security by encrypting data over radio waves so that it is protected as it is transmitted from one end point to another.
Windows CE .NET	As per Microsoft, Windows CE .NET, the successor to Windows CE 3.0, combines an advanced real-time embedded operating system with the most powerful tools for rapidly creating the next generation of smart, connected, and small-footprint devices.

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