



SPECTRA PRECISION®
RECON® DATA COLLECTOR



GETTING STARTED GUIDE



This is the September 2005 release of the Spectra Precision Recon Data Collector Getting Started Guide, Part Number 57179-00. The Spectra Precision Recon operating system is based on the Microsoft® Windows Mobile™ software for Pocket PC.

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Additional information on Windows Mobile products is available from: www.microsoft.com/windowsmobile/default.mspx.

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Welcome

Congratulations on purchasing the Recon™ handheld computer with Microsoft Windows Mobile™ 2003 software for Pocket PCs. The immersible and shock-resistant design of the Recon allows you to work in harsh outdoor environments. You can operate your Recon in blazing heat, subzero cold, driving rain and dusty job sites -- places you previously could not use a handheld computer.

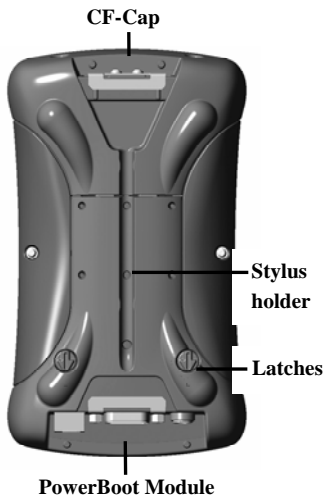
Device Hardware

Front Panel

Removable CF-Cap covers two CompactFlash card slots

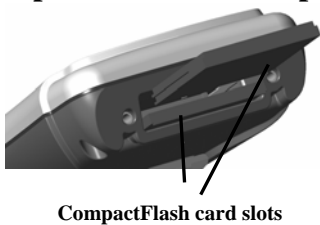


Back Panel

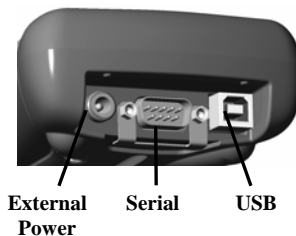


*Assignable application buttons; see Settings

Top View- without Cap



Bottom View



Note: Be sure to read the warranty and safety information in the manual prior to using your Recon.

Setting up your Recon

1. Attach the PowerBoot Module

The PowerBoot Module™ is detached from the Recon for shipment. To attach the PowerBoot, turn the latches counter-clockwise until arrows point downward towards the I/O ports on the PowerBoot. While applying pressure down and forward on the PowerBoot, firmly slide it onto the main unit as shown.



Using a screwdriver or the flat head of the stylus, lock the PowerBoot latches by turning them clockwise one half turn until the arrows on the latches point away from the I/O ports.

2. Attach the hand strap

Hold the hand strap clip at a 45-degree angle and push the clip onto the Recon bracket. Repeat the process with the other end of the hand strap.



3. Charge your Recon

Connect the AC adapter to the external power port on the Recon. Charge the PowerBoot for at least 12 hours. For faster charging, turn the Recon off while charging the Power Boot Module.



4. Align the touch screen

When the Recon first powers on (or after a hard reset), the touch screen may require alignment. A series of targets are displayed in sequence on the screen. Use the stylus to tap the targets firmly and accurately to align the touch screen.

5. Turning your Recon on and off

One of the most convenient features of the Recon is “instant on”. There is no waiting for it to start up or shut down. To start working immediately, press the power button. (“Instant on” does not occur on the first boot up.) When you have finished working, turn off your Recon by pressing the power button.

6. Using the CF Expansion Slots

To use the CompactFlash expansion slots, you must first remove the CF-Cap™. To do this, unscrew the two screws on the top of the CF-Cap. Slide the cap off the main unit. Gently insert a CompactFlash card or device into one of the two CF slots. **Do not force the card into the slot.** Cards must be inserted with the face toward the display side of the Recon. Replace the CF-Cap and tighten the screws until they are firmly snug.



Note: Be sure to reattach the CF-Cap when you are finished. The Recon is NOT sealed when the cap is off. Water damage caused by improper installation of the cap is not covered by warranty.

Working with your Recon

Using the Stylus

The touch screen on your Recon works like a mouse on a PC. Use the stylus to navigate and select objects on the screen.

Tap: Tap the screen with the stylus to select or open an item. Tapping is the equivalent to clicking an item with the mouse on your PC.

Touch and hold: When you touch the screen and hold on it, a circle of red dots will appear around the stylus to indicate that a pop-up menu will soon appear. Touching and holding is equivalent to right-clicking your PC mouse button.

Drag: Hold the stylus on the screen and drag across the screen to select text and images. Drag in a list to select multiple items.

Recon PowerBoot Module

Battery Life: The number of hours of battery life that you will attain is dependent upon the application and operating environment. The Recon PowerBoot Module contains a generous 3800 mAh of battery power which typically translates to approximately 15 hours of battery life. Using the Recon in moderate or high temperatures with default backlight settings and low power CompactFlash cards will allow for maximum battery life.

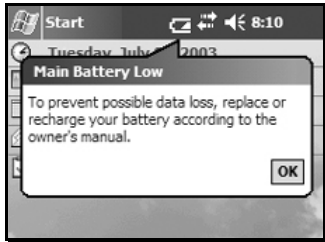
Cold temperatures, heavy use of the display light, and the use of high power consumption CompactFlash[®] cards (such as GPS or 802.11) will all significantly reduce the battery life. These factors can reduce battery life by up to 30% individually. When combined, battery life can be reduced to significantly less than 10 hours.

Tips for extending battery life:

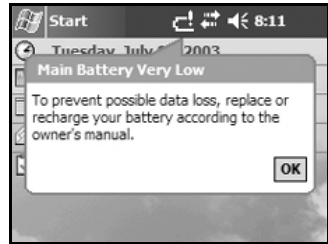
- Use the backlight only when necessary. To modify backlight settings tap on Settings / System / Backlight to minimize the amount of time the backlight stays on when the unit is idle.
- Use the most energy efficient CompactFlash cards that are available for your application and use them only when necessary to perform the desired task.
- When working in cold temperatures, keep the Recon as warm as possible. If feasible, keep the Recon inside your coat or in a vehicle when not in use.

Low Battery Warnings: The Recon provides two different warnings when the battery life is getting low:

Low Battery Warning



Critical Battery Warning



The **Main Battery Low** warning indicates that you should recharge your battery at the next convenient opportunity. You will have approximately 1 hour or less of battery life remaining depending on usage.

The **Main Battery Very Low** warning means you that you have approximately 30 minutes or less before the Recon will turn itself off. It is recommended that you save your work immediately and turn the Recon off.

Note: The accuracy of the battery warnings will vary depending upon temperature, power consumption, applications and age of the battery. Experimentation with your particular situation will give you a better feel for how the warnings correspond to remaining battery life.

Changing the PowerBoot: The PowerBoot Module is designed to be swapped quickly while in the field. If your current PowerBoot Module runs low on power, you can replace it in seconds and continue with your work. (This assumes that you have purchased additional PowerBoot Modules.)

When turned off, the Recon saves enough power to allow battery exchanges without triggering a hard reset of the unit *providing you can swap in the new PowerBoot Module in 30 seconds or less*. After 30 seconds, the Recon will perform a hard reset when the replacement PowerBoot Module is reattached. All data not backed up onto flash memory will be lost. Therefore, *we strongly recommend that you perform a backup before swapping the PowerBoot Module*. See the section “Backup and Restore” on page 9 for more information about backing up data to memory.

To exchange PowerBoot Modules, perform the following steps:

1. Back up your data to built-in storage using the pre-installed backup program. (See page 9)
2. Press the power button and turn the Recon **OFF**.
3. Remove the hand strap from the Power Boot Module.
4. Use a screwdriver or the flat head of the stylus to unlock the PowerBoot latches. Turn the latches counter-clockwise until the arrows point down towards the I/O ports.
5. Remove the PowerBoot Module by using your thumbs to push and slide the module down and away from the Recon, as shown in the illustration.
6. Ensure that the latches on the new PowerBoot Module are unlocked (the arrows pointing towards the I/O ports). Quickly slide the new PowerBoot Module onto the Recon. (Remember that you have only 30 seconds to perform this step.)
7. Lock the latches on the new PowerBoot Module by turning them clockwise until the arrows on the latches point 180° away from the I/O ports.
8. Replace the hand strap.



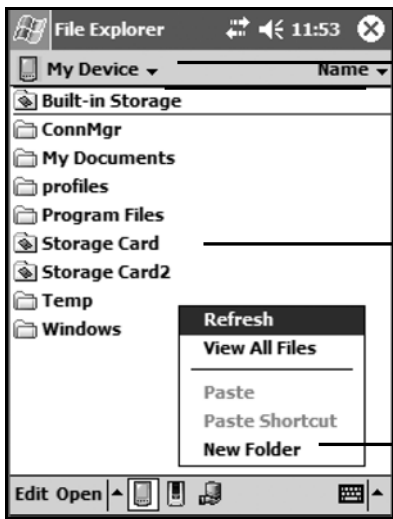
Recon Memory

The Recon has two kinds of memory (Flash memory and RAM memory) that store programs and data.

Flash memory is permanent storage memory; the contents of flash memory are unaffected if the battery is removed or discharged. Because of its stability we recommend that users store data and programs in the flash memory. Depending upon the configuration of your Recon, either 64 MB or 128 MB of built-in flash storage will be available. Approximately 16 MB of this amount is used by the Pocket PC operating systems and the remaining memory is available for your use. Third-party CompactFlash memory cards can be used to increase the amount of available flash memory. CompactFlash memory cards work the same as built-in flash, except they are removable.

RAM memory is volatile memory. This means that the contents will be lost if the battery is disconnected or discharged. RAM memory is used to run programs and is often used as the initial storage area for data. The Recon has 64 MB of RAM memory, of which about 58 MB are available to run programs and to store data. To save RAM memory contents into flash memory, use the pre-installed backup program. See the next section "Backup and Restore" for more details about backing up data to memory. Any data in RAM that is not stored to flash will be lost if the battery is removed or discharged. **We strongly recommend regularly saving your data.**

The picture below shows the different kinds of memory as they appear within Microsoft File Explorer (Start / File Explorer). The non-volatile built-in flash storage is at the top of the list.



Tap with stylus to change folders.

Built-in Storage: The contents are found in this folder in File Explorer.

Storage Cards: If CompactFlash memory cards are present, the contents are found in this folder within File Explorer.

RAM: All other files and folders displayed by File Explorer are stored in RAM and will need to be backed up.

Tap and hold to create a new folder.

Backup and Restore

Many programs must reside in RAM in order to run, and collected data is generally stored in RAM memory. As previously mentioned, RAM memory is volatile and all data and programs residing in RAM will be lost if the battery is disconnected during use or is completely discharged. To prevent data loss, we have pre-installed Sprite Backup™, a user friendly backup utility that transfers data in RAM to the built-in flash memory.

To run a backup, tap on Start / Programs / Sprite Backup. Once the program loads, tap on the 'Backup Now' button. The backup process will begin immediately, and will play a chime and display an 'Operation Complete' message when finished. When this occurs, tap the 'OK' button. This will bring up a message box stating that the operation has completed. Tap on 'OK' to soft reset the Recon. Your backup is now complete.

We recommend that you run a backup often to reduce the risk of data loss due to an unforeseen hard reset. Sprite Backup offers scheduling of automatic backups as an advanced feature. To set up automatic backup with Sprite Backup tap on Start / Programs / Sprite Backup. Then, in the lower left corner, tap on Options / Switch to Advanced Mode. Next, access the scheduling page by tapping on Options / Scheduled Backup. Here you can set single, daily, or weekly automatic backups to run at a particular time. Select the desired frequency and the backup time and tap “OK” to set the schedule.

Note: Backups can only be scheduled at a maximum frequency of once per day. To prevent data loss in a work intensive environment Sprite Backups should be performed manually at least every 2 hours throughout the work day.

If you experience a hard reset for any reason, you can easily restore your data from your last backup. After a hard reset the Recon will automatically prompt you to restore the system to your last saved configuration. To run restore manually, tap Start / Programs / Sprite Backup / Restore Now. Once the restore is complete, you will be prompted to do a soft reset. After the reset, the Recon is restored to its pre-hard reset state.

Power Button Features

The power button turns the Recon on and off as well as a number of additional functions.

Turn backlight on/off: Hold down the power button for approximately 1 second to toggle the backlight on or off. (When switched “off”, the settings that turn on the backlight when a button is pressed or when the screen is tapped become disabled.)

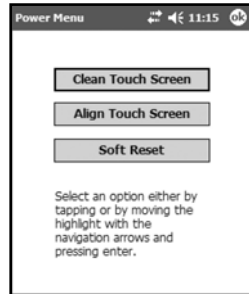
Power Menu: Hold down the power button for about 3 seconds to display a countdown counter. Continuing to press the power button will cause a soft reset when the countdown reaches zero. If you

release the power button while the countdown is proceeding, you access the Power Menu. Tap an option or press “OK” to exit.

Clean touch screen - Disables the touch screen for cleaning. Press the enter button to re-enable the touch screen.

Align touch screen - A series of targets are displayed. Use a stylus to tap each target in sequence in order to align the touch screen.

Soft reset - This resets the Recon hardware but does not clear the contents of RAM. This feature is occasionally used when installing new software.



Hard reset: The contents of RAM are cleared during a hard reset. It is strongly recommended that you back up your data before performing a hard reset. Refer to the “Backup and Restore” section on page 10 for additional information on backing up data to memory.

Note: A hard reset should be used only if a soft reset fails to resolve an issue.

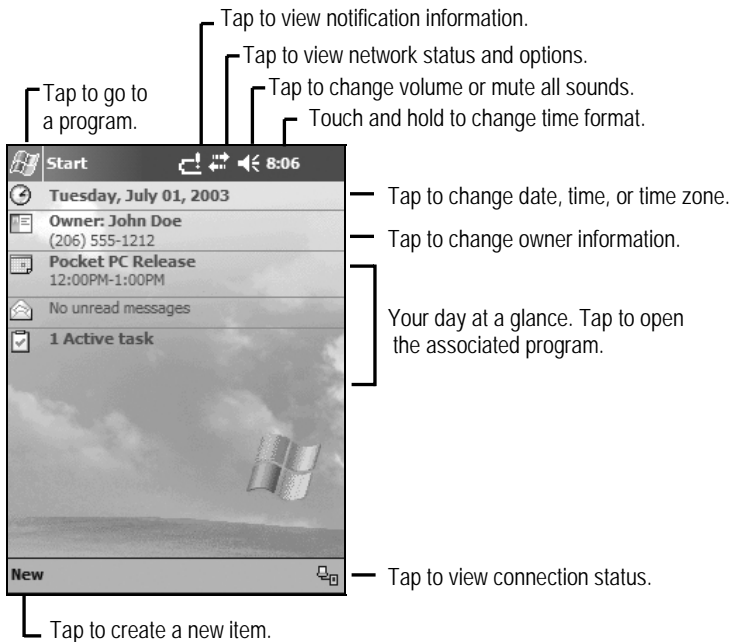
To perform a hard reset, press the **Power** and the **Start Menu** buttons simultaneously for eight to ten seconds. The reset menu will appear with a countdown warning. Continue to hold both buttons down. When the message “Booting - - - >” appears, release both buttons. If a backup was previously performed the Recon will prompt you to restore the most recent backup after the rebooting process has completed.

The Today Screen

When you turn on your Recon for the first time each day (or after four hours of inactivity), the Today screen is displayed. This screen can also be viewed at any time by tapping Start / Today.

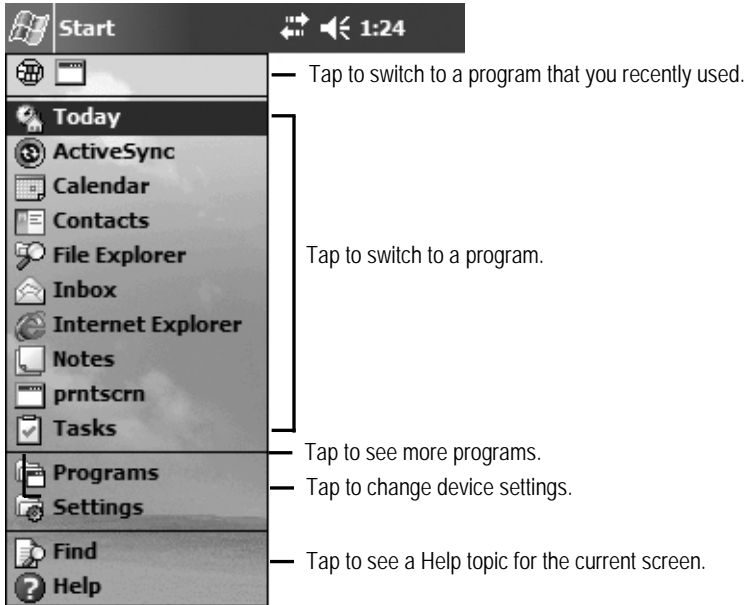
At the top of the screen are status icons. Tap an icon to view details or change options. (These icons appear at the top of every screen on your Recon, and not only the Today screen.)

The center of the Today screen provides information that you need for the day. Tap an item to view or edit details.



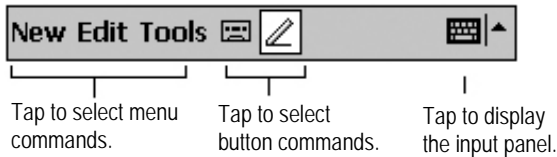
The Start Menu

From the Start Menu, you can select programs, settings, and help topics. To display the Start Menu, from the top of any screen, tap Start.



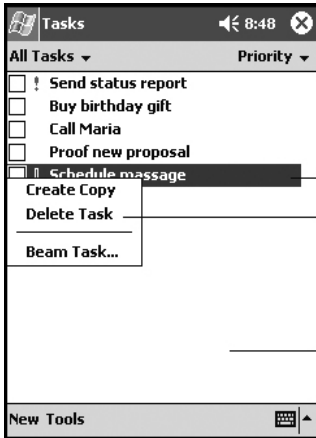
The Command Bar

At the bottom of the Windows screen is the Command Bar. Command Bar menus and buttons can be used to perform various tasks within programs. The buttons may vary from those depicted depending upon the program in operation.



Pop-up Menus

You can use pop-up menus to quickly select an action for an item. To access a pop-up menu, tap and hold the stylus on an item name.



Touch and hold to display the pop-up menu.

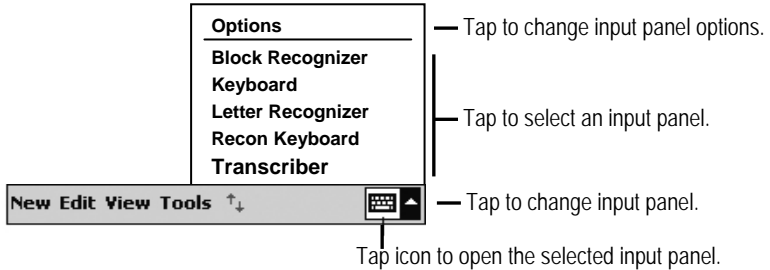
Lift the stylus and tap the action you want.

Tap outside the menu to close it without performing an action.

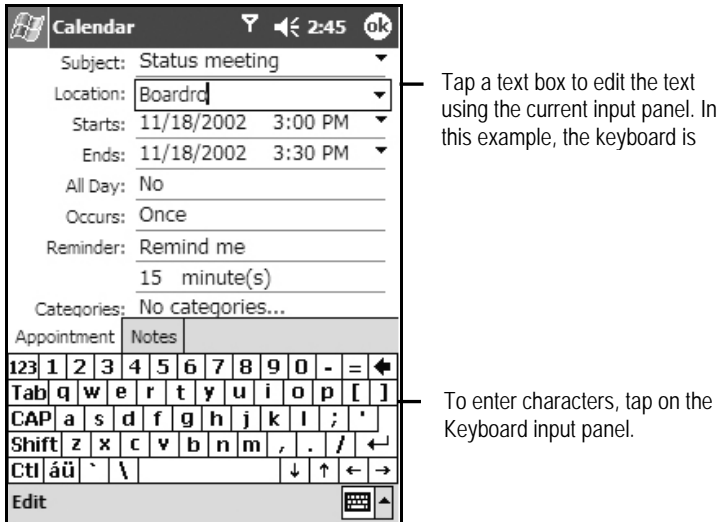
Text Input Panels

Use the input panel to enter information in any program on your Recon. You can input typed data by using the standard Keyboard or the Recon Keyboard. Additional input interfaces are Block Recognizer, Letter Recognizer, or Transcriber. The characters entered appear as typed text on the screen. Select the input panel that is the easiest for you to use.

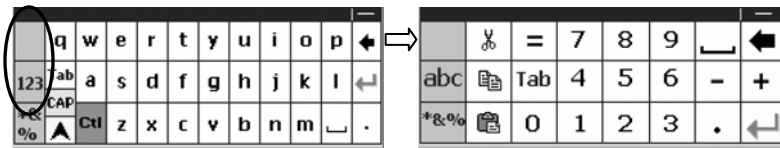
To change input panels, tap the arrow next to the Input Panel icon and then tap the input panel that you want.



When you tap in a required text entry area, the currently selected input panel activates as shown in the example below.




The Recon Keyboard has larger keys than the standard keyboard.




Tapping on the “123” or “*&%”, identified in the circle above, provides additional characters.

More information on Text Input

The Recon Help System provides more information on Block Recognizer, Letter Recognizer and Transcriber. Examples that show proper stylus strokes, to create each alphabetic character, are provided.

Block and Letter Recognizer help: Tap on Start / Notes. Tap the  in the bottom right corner of the screen to select either the Block or Letter Recognizer. Next, tap (?) near the bottom right corner to see the help screen for Block Recognizer and Letter Recognizer. Tap the Demo tab to learn how to make stylus strokes for each alphabet character.

Transcriber help: tap (Start / Notes). Tap the  in the bottom right corner to select Transcriber. Tap the Help tab to see a screen of Transcriber help topics.

Settings on your Recon

Tap on Start / Settings. Here you can tap any of the icons on the Personal, System, or Connections tabs to customize the Recon settings to your own preferences. Tap “OK” to exit the settings. The following are some of the settings on the Recon that are worth noting.

Buttons

Tap on Personal / Buttons. The Buttons setting allows you to assign the keypad buttons to your favorite programs. By default, these are preset to common applications such as e-mail and calendar. Re-assign them by selecting the desired program from the pull down list.

Input

Tap on Personal / Input. You can change settings related to character input, such as Block Recognizer, Keyboard, Letter Recognizer, Recon Keyboard, and Transcriber.

Backlight

Tap on System / Backlight. Choose the settings in the Battery Power, External Power, and Brightness tabs as needed for your use of the Recon. (The display backlight has significant impact on battery life.)

Memory

Tap on System / Memory. Closing programs still leaves them resident in RAM. As more programs are started, available RAM decreases. If RAM resources become low, you can stop programs and remove them from RAM. To stop a program, tap the Running Programs tab at the bottom. You can stop individual programs or tap Stop All.

Power

Tap on System / Power. This screen allows you to view the approximate battery power remaining. Note: both the main battery and backup battery levels are shown, but the backup battery is not

present in Recon. Tap the Advanced tab and choose the settings for automatic turn off.

The following features appear in the Recon Pocket PC user interface, but are non-functional due to the special rugged design of the Recon:

- * Recording/Microphone functions are not available.
- * Beam/Infrared communications are not available.
- * Backup battery is not available.

Today

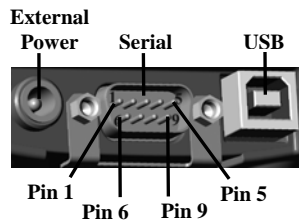
Tap on Personal / Today. This screen allows you to customize the Today screen. Choosing the “High Contrast” theme may improve display viewing ability while working outdoors.

Connecting to your PC

I/O ports

The Recon has both USB and 9-pin serial ports. Connections via USB to a PC require an A-B USB cable (included with Recon). Serial connections require a 9-pin null-modem serial cable (not included).

Recon-compatible CompactFlash card accessories will also increase your connectivity options.



ActiveSync

Using Microsoft® ActiveSync®, you can synchronize information and copy files between your computer and Recon. ActiveSync compares the data on your Recon with the data on the PC and then updates Recon and/or the PC with the most recent information.

ActiveSync is pre-installed on your Recon. Before connecting your Recon to the PC, install ActiveSync on your PC from the Recon Pocket PC Companion CD.

Note: If you don't have Microsoft® Outlook® 98 or later installed on your PC, please install Microsoft® Outlook® 2002 from the Companion CD. Even if you have Outlook 98 or Outlook 2000 installed, you are encouraged to upgrade. Microsoft recommends that users choosing to install Outlook 2002 from this CD do so before installing ActiveSync.

You can also download the most current version of PC ActiveSync at: www.microsoft.com/windowsmobile/default.mspx. The installation instructions for ActiveSync may vary if you use a version other than the version originally shipped on the Recon Companion CD.

Setting Up ActiveSync

DO NOT connect your Recon until the installation is complete.

When installing ActiveSync on the PC, you will see the screen “Set Up Microsoft ActiveSync.” Tap on “Next.” A screen will appear asking what folder to install to. We recommend using the default setting. Tap on “Next.”

The “Get Connected” dialog box will automatically appear on the PC. Connect the Recon to your PC using USB. Tap “Next”.



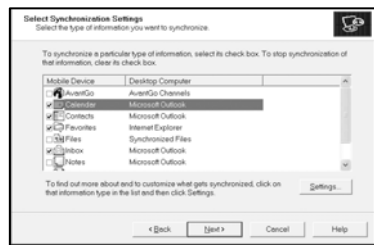
There are two types of ActiveSync connections. The table below summarizes the advantages and disadvantages of each choice. The Standard Partnership synchronizes data and is recommended for ease of connection. Tap “Next”.



Connection	Advantages	Disadvantages
<i>Standard Partnership</i>	<p>Information is synchronized. Subsequent connections are automatic.</p> <p>More options for file sharing.</p> <p>Once a partnership is established, you can connect to your PC via wired or wireless LAN.</p> <p>Your Recon's clock gets set to match your PC's clock.</p>	<p>More questions to answer on initial connection.</p> <p>If the clock on your PC has the wrong time, the Recon clock will also display the wrong time.</p> <p>Partnership will be deleted when the Recon is hard reset, unless a backup has been run.</p>
<i>Guest Partnership</i>	<p>Use to manually move and copy files.</p> <p>Safer because synchronization cannot adversely impact data either on your Recon or your PC.</p> <p>For use on borrowed or shared PCs.</p>	<p>Slower subsequent connections (one more step per connection that requests for partnership).</p> <p>LAN connection is not possible.</p>

Standard Partnership only - Tap “Next”, to synchronize your Recon with your PC. You can have up to two partnerships or have a partnership only with this computer. Enter a unique name for your Recon and tap “Next”.

Select the type of information you want to synchronize. To customize settings for each program, click on the information type and click on settings then Tap “Next” to continue.



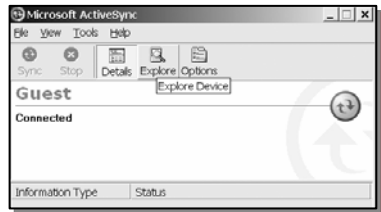
Running ActiveSync

Start ActiveSync on your PC. Connect the Recon with the USB cable and wait while ActiveSync automatically establishes a connection. (This may require several seconds.)

Standard Partnership - ActiveSync will automatically synchronize the settings chosen. To change those settings, go to ActiveSync on the PC and select Tools / Options.

Guest Partnership - ActiveSync will ask you each time if you want the Standard or Guest Partnership.

Click on the Explore icon on the PC to view the file structure on the Recon, which now looks and acts like the Windows Explorer on your PC.



Disconnecting ActiveSync

Before removing the USB Cable from the Recon or the PC, disconnect the ActiveSync program on the Recon to avoid connection problems.

Tap on the ActiveSync icon in the lower right corner of the Today Screen. Then tap “Disconnect” then remove the USB cable.



For additional information on using ActiveSync, visit the Microsoft web site and search for articles on ActiveSync. For information specific to the use of ActiveSync with Recon, see the web site listed under reference materials on the last page of this manual.

Additional Connectivity

The Recon supports several kinds of connections in addition to direct ActiveSync connections to a PC.

You will need to purchase third party accessories (such as CompactFlash modems or Bluetooth cards) in order to implement these connections:

- **Modem** -- The Recon supports dial-up connections to an Internet Service Provider and sending and receiving e-mail with file attachments. (You will need to purchase a modem and cable or a CompactFlash modem.)
- **Web-enabled Cell Phones** -- The Recon can connect to the Internet via web-enabled cell phones that are compatible with Pocket PC devices. Refer to your phone service provider for more information on establishing Internet connections via your cell phone.
- **Bluetooth** -- Pocket PC-compatible Bluetooth CompactFlash cards are supported by the Recon. Bluetooth is used for wireless communication over distances of up to 10 meters. Typical Bluetooth applications include sending files to a PC or another Recon, or communicating with a printer or cell phone.
- **Wireless LAN** -- Pocket PC-compatible Wireless LAN (or 802.11) CompactFlash cards can be used with Recon. These cards allow you to maintain a wireless connection to the LAN and the Internet while within range of an 802.11 network.
- **VPN** -- The Recon includes support for VPN (Virtual Private Network) connections. Used together with a connection to the Internet, a VPN connection allows you to browse network files from a remote site and also supports remote synchronization with your PC via ActiveSync. Note that the network you access must be configured to allow VPN connections.

- **Ethernet** -- Pocket PC-compatible Ethernet CompactFlash cards can be used with Recon. These connections allow the Recon to connect to a LAN and browse network file shares. You can also use ActiveSync over an Ethernet connection to synchronize with your PC. Note that the Recon does not expose file shares and cannot be browsed by PCs on the network.

For more information on creating these connections, see the web site listed under reference materials on the last page of this manual.

Installing additional software on your Recon






The Recon can run third-party software designed for Microsoft Windows Mobile 2003 Pocket PC devices.

Most third-party software is installed by running a setup program on the PC while the Recon is connected with ActiveSync. If prompted by the installation wizard, perform a soft reset to complete the installation.

Note: Follow the setup instructions that came with your software.



Microsoft Pocket Outlook




Microsoft Pocket Outlook includes Calendar, Contacts, Inbox, Notes and Tasks. Open the program and then tap Start / Help (?) for instructions on using the various programs. To synchronize information on your PC with your Recon, see the information on using ActiveSync.

	Calendar	Use Calendar to schedule appointments, including meetings and other events. You can check your appointments in one of several views (Day, Week, Month, and Agenda) and set the Calendar to remind you of appointments with a sound or other method. Tap the Today icon to view the current date.
	Contacts	Use Contacts to maintain a list of both business and personal information so that you can easily find the information you're looking for, whether you're at home or on the road.
	Inbox	You can send and receive e-mail by synchronizing with your PC, or by connecting to a POP3 or IMAP4 mail server. You need to set up e-mail accounts for each method that you use except for ActiveSync, which is set up by default. The ActiveSync folder on the Recon is used to store messages that you send and receive through Synchronization with a PC. Account names appear as folders in the folder list in the Inbox message list.
	Notes	Notes helps you quickly capture your ideas, notes, and thoughts. You can create a note using written and typed text and drawings. You can also share your notes with others through e-mail and synchronization with your PC.
	Tasks	Use Tasks to keep track of things you need to do. You can use categories to help organize tasks and set reminders for them. If you use Outlook on your PC, you can synchronize tasks between the Recon and the PC.

Companion Programs

Your Recon comes with the following programs installed. Open the program and then tap Start / Help (?) for instructions on using the various programs.

	Pocket Excel	<p>You can use Pocket Excel much the same way you use Excel on your PC. Use split panes to view different parts of a worksheet at the same time. You can also use freeze panes to keep row and column labels or other data visible as you scroll through a sheet.</p> <p>Excel files (.xls) and templates (.xlt) created in Excel version 5.0/95 or later on the PC are converted to Pocket Excel workbook (.pxl) or template (.pxt) files when they are synchronized or copied to the Recon or when you open an e-mail message with an Excel file as an attachment. Pocket Excel workbooks are converted to Excel workbooks when they're synchronized or copied to the PC. During conversion, some formatting attributes may be changed or lost. For more information, see ActiveSync Help on the PC.</p>
	Pocket Word	<p>You can enter information by working in different modes, which you select from the View menu.</p> <ul style="list-style-type: none">• Typing. Using the input panel, enter typed text into the document.• Writing. Use your stylus to write directly on the screen. Lines are displayed as a guide.• Drawing. Use your stylus to draw directly on the screen. A drawing box appears, indicating a single object. Word documents (.doc) and templates (.dot) created in Word 6.0 or later on the PC are converted to Pocket Word documents (.psw) and templates (.psw) when they're synchronized or copied from the PC to your Recon, or when you open an e-mail message with an attached Word file on your Recon. Pocket Word documents are converted to Word documents when they're synchronized or copied back to the PC. During conversion, some formatting attributes may be changed or lost.

	<p>Calculator</p>	<p>Tap the Calculator buttons to enter numbers and perform calculations. To clear the current calculation, tap C. To clear the displayed number, tap CE. To clear the last digit entered in a multi-digit entry, tap the arrow to the right of the entry box.</p> <p>To store a number, tap the box to the left of the entry box. An M will appear in the box. To add the displayed number to the number that's already in memory, tap M+. To display the number in memory, tap MR. To clear memory, tap MC.</p>
	<p>MSN Messenger</p>	<p>MSN Messenger on your Recon provides the same chat environment as MSN Messenger on your PC. You need a Microsoft Passport account or Microsoft exchange e-mail account that your employer provides.</p>
	<p>Pocket Internet Explorer</p>	<p>You can use Pocket Internet explorer to view Web pages on your Recon in two ways: by downloading pages through synchronization or by connecting to the internet. While browsing, you can also download new files and programs to your device from the Internet. Favorites are stored in the Mobile Favorites subfolder of Favorites in Internet Explorer on the PC. This folder was created when you selected the Favorites information type for synchronization in ActiveSync on your PC. Favorites must be stored in this folder to be synchronized.</p>

Caring for your Recon

Cleaning the Recon

Clean the Recon with a soft cloth dampened with water or a diluted mild detergent. **Do not put the Recon in the dishwasher.**

Shock

The Recon is designed to resist damage for drops up to 122 cm (4 ft). However, you should protect the display from impact, pressure,

or abrasive substances that can scratch or crack it. The Recon should not be dropped unnecessarily.

Care of the touch screen

Use only the included stylus or other devices specifically designed for use with touch screens. The use of ballpoint pens, sticks, nails or other sharp objects for touch screen operation will scratch and/or damage the unit.

Keep the touch screen clean by gently wiping the display using a soft cloth dampened with clean water or glass cleaner. **Do not apply any cleaner directly to the display. Do not use any abrasive cleaners.**

Use the screen protectors included with the Recon to keep the touch screen clean and protected. To apply a screen protector first clean the display thoroughly with diluted alcohol (5% or less drug store alcohol). Peel the backing from the screen protector. Align the edge, and then drop the remainder onto the display. Use a credit card, if necessary, to squeegee the air from underneath the screen protector.

It is highly recommended that screen protectors be replaced every 3 months or sooner to prevent damage to the display.

Case Vent Hole

The Recon uses a GoreTex membrane at the vent hole to equalize the atmospheric pressure within the Recon and to prevent dust, water, etc. from entering.

This vent **must** remain clear of any obstruction. Damage to the touchscreen will occur if the vent is covered. Covering the vent with stickers and labels may void the warranty.



Environmental Considerations

Recon's rugged design allows you to run your Pocket PC applications in harsh outdoor environments. Here are some considerations that will help you get the most out of your Recon when working in very wet, hot or cold conditions.

Water

Recon is designed to withstand accidental immersion. To maintain Recon's water resistant seal, it is important to ensure that the screws on the CF-Cap are tightened until they are hand tight, after replacing CompactFlash cards. Removal of the back case torx screws, or failure to tighten the CF-Cap screws could cause leakage, and will void your warranty.

Because the PowerBoot Module is designed to easily disconnect from the unit, water can occasionally find its way onto the metal contacts between the battery and the unit. After working in very wet conditions remove the battery and check the contacts for moisture. If moisture is present, dry the contacts on the Recon and the battery with a tissue, paper towel or clean rag before storing the unit overnight or longer.

Temperature Range

Recon can be used at temperatures from -22°F to +140° F (-30C to +60C). Recon can be stored at temperatures from -40°F to +158°F (-40C to +70C). Although Recon is designed to be rugged, do not leave it in direct sunlight or a parked vehicle in the sunlight for extended periods.

Batteries perform best at room temperatures. The Recon battery pack also has a very stable capacity as temperature rises above the human comfort level. However, cold temperatures cause battery life to drop. Battery life reduction will also depend upon other usage conditions, including backlight status, CPU load, temperature and whether power consuming CompactFlash devices (such as Bluetooth or 802.11) are present. Under very cold conditions (-

22°F / -30C), you can expect your battery life to be shortened by anywhere from 30 to 70 percent.

If you anticipate working under very cold conditions, consider carrying a spare well-charged battery. Recon is designed to make battery replacement a simple process. Anything that you can do to keep Recon and the spare battery warm (for instance, keeping it in a pocket under your coat) will improve your battery performance. Interestingly, at extremely cold temperatures (-22°F or -30C), using the backlight has a slight warming effect and can actually increase battery life.

At moderate temperatures, you can expect your battery to last about 500 charge/discharge cycles before its performance noticeably declines. Long-term storage at very warm temperatures (over 95°F / 35C) will accelerate this aging process and should be avoided. Do not charge the battery if the ambient temperature is below 32° F/ (0C) or above 95° F (35C).

Safe Use of your Recon

Repair

Please do not attempt to dismantle the Recon for repair. There are no user-serviceable parts inside. For service, please use the contact details listed on the last page of this manual or your local dealer for assistance.

Battery safety

- To reduce the risk of fire or burns, do not disassemble, mutilate, or puncture the PowerBoot Module. There are no user-serviceable parts inside.
- Handle a damaged or leaking battery with extreme care. If the electrolyte comes in contact with your skin, wash the exposed area with soap and water. If it comes in contact with the eye, flush the eye with water for 15 minutes and seek medical attention.
- Do not expose the PowerBoot Module to storage temperatures above 35C (95°F) for extended periods.

- Do not charge the PowerBoot Module if the ambient temperature exceeds 35C (95°F) or is below 0C (32°F).
- Contact your local waste disposal provider regarding the disposal or recycling of the PowerBoot Module.

Environmental Hazards

The Recon contains no mercury or cadmium.

AC adapter safety

- Use only AC adaptors intended for the Recon. Other external power sources may damage your product and will void the warranty.
 - Make certain that the input voltage on the adapter matches the voltage in your location.
 - Make certain that the adapter has prongs compatible with your outlets.
- AC adaptors are designed for **indoor use only**. Avoid using the AC adaptor in wet areas.
- Unplug the AC adaptor from power when not in use.
- Do not short the output connector.

Troubleshooting

I connected my Recon to external power and nothing happened. Is something wrong with my battery?

Probably not. If a Recon battery is dead, sometimes it will take a while for Recon to respond when external power is applied. Allow up to an hour after AC power is first applied to see whether Recon spontaneously boots to Windows – and then leave Recon on charge for the full 12-hour charge period. Sometimes pressing the power button after Recon has been on charge for several minutes is sufficient to restore it to working order – but still leave Recon on charge for the full charge period. For best results, turn Recon off while charging.

I am worried that my battery isn't performing as well as it should. Is there any way that I can test it to see whether it's okay?

The Recon operating system includes a power logging utility to help evaluate battery performance. Charge the battery for the full 12-hour period, configure Recon to never go to sleep (Start \ Settings \ System \ Power \ Advanced, and uncheck the box under “On battery power”), then tap “OK”. Use File Explorer to browse for and launch \windows\reconbatlog.exe. This utility creates a file (\Built-in Storage\System\pwrlog.txt), which records the battery voltage at one-minute intervals. Disconnect external power and allow the program to run until the battery dies. Reapply AC power and soft reset Recon to close the power logging utility. Copy pwrlog.txt to the PC, and then open it in any text editor. Check the time of the first and last entry in the file to determine how many hours elapsed before the battery died. If the backlight is off during the rundown and there are no power-consuming CompactFlash devices running (such as Bluetooth or 802.11), a healthy battery will last 35 hours or longer at room temperature.

I am seeing a low battery warning after only using Recon for a few hours.

Confirm that your Recon is running a newer firmware version (4.2.5 or higher). Tap on Start > Settings > System > System Information to check your firmware version. The battery gauge in older firmware is very conservative, and sometimes warns the user that the battery is getting low many hours before the battery dies. Current Recon firmware can be downloaded from the Web site. Recon firmware can be upgraded by the user; there is no need to return the Recon for service.

Confirm that the Recon battery is being charged for at least 12 hours. Be aware that certain usage conditions (cold temperature; use of certain kinds of CompactFlash cards; and heavy use of the display light) will have a significant impact on battery life.

It is critically important that my battery doesn't fail during a job. Do you have any suggestions?

Consider carrying a well-charged spare battery to the field (you can charge a Recon battery even if it is not attached to a Recon). Recon

is designed so that battery replacement can be easily performed in the field.

My Recon won't communicate with my PC over an ActiveSync USB connection.

Make sure that there aren't any open applications on Recon, which may be interfering with communication. One way to immediately close all open applications is to perform a soft reset (See the section on Power Button Features).

Tap on Start \ ActiveSync \ Tools \ Options \ Options, and make sure that "Enable PC sync using this connection" is checked and that "USB Default" is selected from the dropdown list.

Try disabling any personal firewall software, which is running on your PC. Firewalls may block TCP/IP from opening ports, which are required by ActiveSync.

Do not connect Recon to your USB port until after you install ActiveSync and the Get Connected wizard prompts you to do so. If you prematurely connect Recon to your PC, your USB drivers may get into a confused state and ActiveSync will not connect. If you suspect that something like this has happened, then uninstall ActiveSync, reboot your PC, and reinstall ActiveSync.

Confirm that the cable is securely connected at both ends. If Recon is connected to USB via a hub, try connecting Recon directly to the PC.

Open the Device Manager on the PC and confirm that USB is present, enabled (no red X on its icon), and is not experiencing resource conflicts (no exclamation point on its icon).

My Recon has lost software and/or CompactFlash drivers (for instance, Bluetooth).

Review the information under "Backup and Restore" (page 9). It is important that you perform a system backup (Start > Programs >

Sprite Backup > Backup Now) after installing software or drivers on Recon. Failure to do this will result in losing software or drivers if Recon is hard reset or loses power.

My Recon is locking up when I try to use Bluetooth (or other CompactFlash device).

When Recon is turned on or reset, it takes several seconds for CompactFlash drivers to be reloaded. If you attempt to access a CompactFlash device or memory card too soon, you may experience lockups or other erratic behavior. Soft reset Recon, and wait at least 5 seconds after the reset before working with a CompactFlash card.

I am having intermittent problems with serial or USB communication.

Dirt, debris or oxidation on the contacts can interfere with the connection between the PowerBoot module and the unit, resulting in intermittent serial or USB communication problems as well as battery power problems. Use rubbing alcohol and a Q-tip or similar tool to clean the contacts on both the battery and Recon, taking care not to exacerbate the problem by leaving Q-tip fibers behind. Be sure to thoroughly dry both the battery and the unit before re-attaching the PowerBoot module to Recon.

I am trying to connect my Recon to the Internet using a web-enabled cell phone, but it refuses to connect.

Confirm that your phone, cable, and login are okay by attempting to connect from a desktop or laptop PC.

If your cellular provider is also providing you with Internet access, contact your provider for information about how to connect a Windows Mobile device. Typically, the provider may require certain modem initialization strings or APN (Access Point Name) strings. If you try to establish the same connection from a PC, typically you install software from the cellular provider, which handles this configuration automatically.

If your ISP is separate from your cellular phone provider, then simply dialing the ISP from your phone should be sufficient. You will use the username and password you usually use with this ISP. Reduce your connection baud rate to 9600 or contact your cellular provider for specifics.

Is there anything I can do to make the display more viewable?

The default backlight brightness is set to about 65% of the maximum brightness. Tap on Start \ Settings \ System \ Backlight \ Brightness, and adjust the slider to increase display brightness; however, doing this will reduce battery life.

Change the Today screen settings. Tap on Personal \ Today and choose the “High Contrast” theme. This may improve display viewing ability while working outdoors.

Confirm that you have one – and only one! – screen protector in place.

Regulatory Information

U.S.A.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is used in a commercial or residential environment. This equipment generates, uses and can radiate radio frequency energy and, if not used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment is subject to the following two conditions:

- (1) The device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation

Canada

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications. Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

Declaration of Conformity

Europe

According to ISO / IEC Guide 22 and EN 450 14

Manufacturer's Name: Tripod Data Systems, Inc.
Manufacturer's Address: 345 SW Avery Ave.
Corvallis, OR 97333 USA

Declares, under our sole responsibility, that the product:

Product Name: Field Data Collector
Model Number: Recon
Product Options: ALL

conforms to the following Product Specifications:

Safety: EN 60950: 1992 +A1, A2, A3, A4, A11
EMC: EN 55022: 1994 +A1, A2: 1997 EN 55022: 1998 +A1:2000
EN 61000-3-2, 1995+A1+A2: 1998
EN 61000-3-2:2000 EN 61000-3-3:1995
EN 61000-3-3:1995+A1:2001 CFR 47, Part 15, Subpart B
EN 55024:1998** EN 55024:1998+A1:2001**

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC, amended by 93/68/EEC and the EMC Directive 89/336/EEC, amended by 93/68/EEC. In addition to meeting the above EMC requirements during system test, the AC Adapter provided with this product has been certified to IEC 60950 +A1, A2, A3, A4, A11.

* Product has less than 20-Watts active input power.

** Product is battery powered.

Corvallis, OR USA

CAUTION:

Only approved accessories may be used with this equipment. In general, all cables must be high quality, shielded, correctly terminated, and normally restricted to two meters in length. AC adaptors approved for this product employ special provisions to avoid radio interference and should not be altered or substituted.

Unapproved modifications or operations beyond or in conflict with these instructions for use may void authorization by the authorities to operate the equipment.

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PN 57179-00



Made in U.S.A.



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