

# **RuggedReader**

## **Getting Started Guide**



### **Contents**

<b>Welcome .....</b>	<b>1</b>
<b>Device Hardware .....</b>	<b>2</b>
<b>Setting up your RuggedReader .....</b>	<b>3</b>
<b>Working with your RuggedReader .....</b>	<b>5</b>
<b>Connecting to your PC .....</b>	<b>13</b>
<b>Microsoft Pocket Outlook .....</b>	<b>17</b>
<b>Companion Programs .....</b>	<b>18</b>
<b>Caring for your RuggedReader .....</b>	<b>20</b>
<b>Hardware Specifications .....</b>	<b>21</b>
<b>Safe Use of your RuggedReader .....</b>	<b>22</b>
<b>Troubleshooting RuggedReader .....</b>	<b>23</b>
<b>Regulatory Information .....</b>	<b>29</b>
<b>Declaration of Conformity .....</b>	<b>29</b>
<b>Reference Materials .....</b>	<b>31</b>

### **Welcome**

Congratulations on purchasing the RuggedReader™ handheld computer with Microsoft® Windows Mobile™ 2003 software for Pocket PCs. The immersible and shock-resistant design of the RuggedReader allows you to work in harsh outdoor environments. You can run your Pocket PC applications in blazing heat, subzero cold, driving rain, dusty job sites—anywhere you could never take a handheld before.

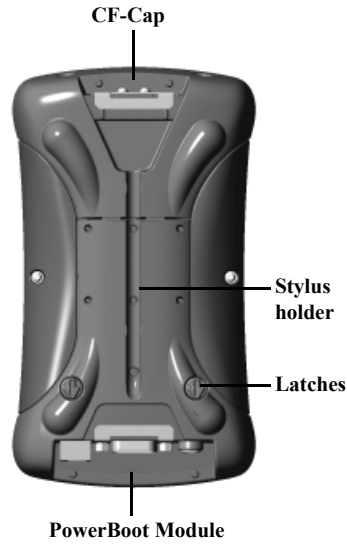
# Device Hardware

## Front Panel

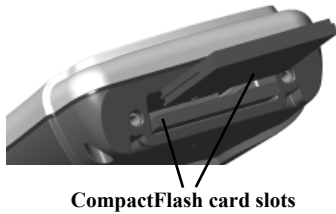


\* Assignable application buttons; see Settings.

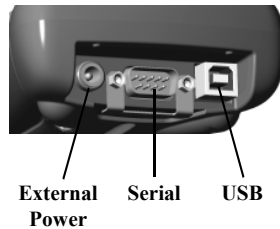
## Back Panel



## Top View- without Cap



## Bottom View



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

# Setting up your RuggedReader

## 1. Attach the PowerBoot

The PowerBoot Module™ for your RuggedReader is shipped unattached. To attach the PowerBoot, turn the latches counter-clockwise until they are parallel to the stylus holder, with the arrows pointing towards the communication ports located at the bottom of the PowerBoot.



Firmly slide the PowerBoot onto the main unit as shown. Pressure should be applied downward and forward as the PowerBoot is positioned.

Use the stylus to lock the PowerBoot latches, by turning them clockwise one half turn until they are pointed away from the communication ports.

## 2. Attach the hand strap

To connect the hand strap to your RuggedReader, hold the hand strap clip at a 45 degree angle and push the clip onto the RuggedReader bracket. Repeat the process with the other end of the hand strap.



## 3. Charge your RuggedReader

Connect the AC adapter to the external power port on your RuggedReader. Charge for at least 12 hours before using. For best results, turn the RuggedReader off while charging.



Battery life varies greatly depending on the application and environment. At moderate or high temperatures with no display light, usage over 30 hours is possible. In typical use, with default display light setting and two CompactFlash<sup>®</sup> memory cards installed, you can expect 15 to 20 hours of battery life. At cold temperatures (-20C or less) with heavy use of display light and/or non-memory CompactFlash cards (e.g. wireless LAN), battery life may be only a few hours.

The keys to extended battery life are managing the display light, keeping the batteries warm in cold environments, and using CompactFlash cards that use power conservatively.

#### 4. Align the touch screen

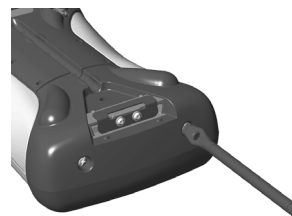
When the RuggedReader first turns on (or after a hard reset), the touch screen will require calibration. Tap the screen to set it up. Using a stylus, tap the targets firmly and accurately at each location until the screen is aligned.

#### 5. Turning your RuggedReader on and off

One of the most convenient features of the RuggedReader 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 RuggedReader by pressing the power button.

#### 6. Using the CF Expansion Slots

To use the CompactFlash expansion slots, you must first remove the CF-Cap<sup>™</sup>. 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 RuggedReader. Replace the CF-Cap and tighten the screws to reseal.



**Note:** Be sure to reattach the CF-Cap when you are finished. The RuggedReader 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 RuggedReader

## Using the Stylus

The touch screen on your RuggedReader 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 equivalent to clicking an item with the mouse on your PC.

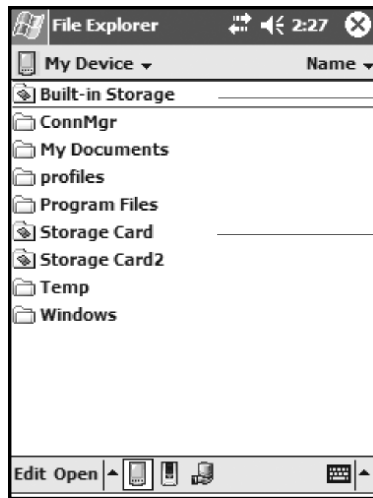
**Touch and hold:** When you touch and hold, a circle of red dots appears around the stylus to indicate that a pop-up menu will soon appear. Touching and holding is equivalent to right-clicking your PC mouse button.

**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.

## RuggedReader Memory

The RuggedReader has built-in non-volatile, Nand flash storage. The content of this storage is retained no matter what happens to battery power or other environmental conditions. You should keep your data and programs in this storage area. Built-in storage is 64 MB. Approximately 16 MB of this storage is used by the Pocket PC operating system. The balance is available for your use. There is also 64 MB of volatile RAM; about 58 MB is available to run programs and to store temporary data.

If you need additional memory, third-party CompactFlash memory cards can be used with your RuggedReader. They work the same way as built-in storage except that they are removable. The picture on the next page shows how these different kinds of memory appear within File Explorer (Start / Programs / File Explorer). The non-volatile built-in storage is at the top of the list.



**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 these folders in File Explorer.

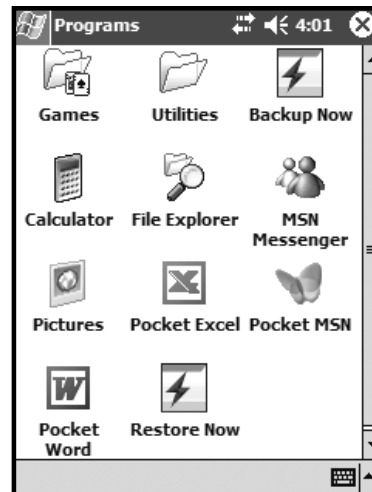
**RAM:** All other files and folders displayed by File Explorer are stored in RAM and will need to be backed up.

Some data and some programs do not give you the option of keeping them in built-in storage. Your Pocket Outlook data and CompactFlash card drivers are two examples of this type of information. Should you experience a hard reset, this data will be lost. To prevent this type of loss you should frequently use the built-in backup software to back up all of this information to built-in storage.

## Backup and Restore

Run Backup Now (Start / Programs / Backup Now).

This easy-to-use program takes all information that might be lost during a hard reset and stores it safely in built-in storage in a folder called System in a file called backupimg. When the RuggedReader goes through a hard reset, it automatically checks for the presence of this file and gives you an opportunity to restore the most recent backup.



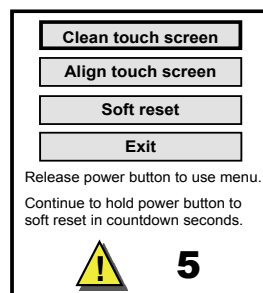
The Pocket Backup program can be configured to give you a great deal of flexibility for both backup and restore including scheduled backups. You can find it in the Utilities folder of the Start / Programs area.

## Power Button Features

The power button turns the RuggedReader on and off and can perform a number of additional useful tasks.

**Turn Backlight on/off --** Hold down the power button for about 1 second to manually toggle the backlight state. Note: Manually turning the backlight off disables auto turn on with screen taps or button presses until the backlight is manually turned back on or the RuggedReader is turned off and back on.

**Power Menu --** Hold down the power button for about 3 seconds to bring up a screen with a menu and a countdown in progress. Continuing to hold the power button will cause a soft reset when the countdown reaches zero. Releasing the power button allows access to this menu. Tap an option or press power again to exit.



**Clean touch screen** - Disables the touch screen.

After cleaning, press enter to enable touch screen and exit.

**Align touch screen** - Use a stylus to align the touch screen.

**Soft reset** - See the description below.

**Exit** - Takes you back to the previous screen.

**Soft Reset --** A soft reset is comparable to rebooting your PC, which stops all running programs. It is occasionally used when installing new software.

To perform a soft reset, use the power menu or hold the power button down for about eight to ten seconds. (The power menu may or may not appear.)


**Hard Reset --** A hard reset should be avoided if at all possible. It should only be used if a soft reset fails to resolve an issue. Some software programs store database information in RAM which would be erased during a hard reset. So it is strongly recommended that you back up your data before you perform a hard reset. See Backup and Restore.

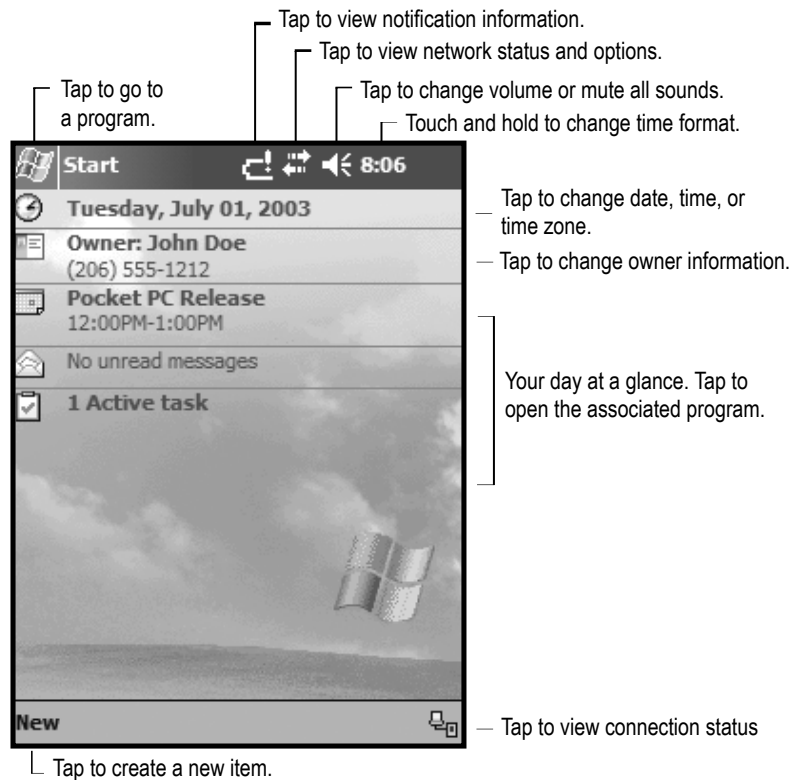
To perform a hard reset, hold down the power button and application button 1 (Start Menu) at the same time for about eight to ten seconds. (The power menu may or may not appear.) When the message “**Booting - - - ->**” appears in the display, release the buttons. If a backup has been performed, the RuggedReader will prompt to restore.

## 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.

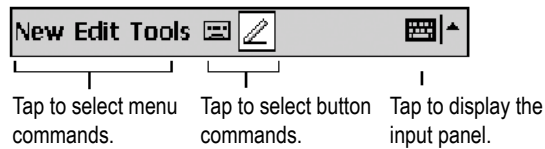
At the top of the screen are status icons. Tap an icon to view details or change options. (These icons appear at the top of every screen on your RuggedReader, and not only the Today screen.)

When you turn on your RuggedReader for the first time each day (or after four hours of inactivity), the Today screen displays. You can also view it by tapping  and then Today.




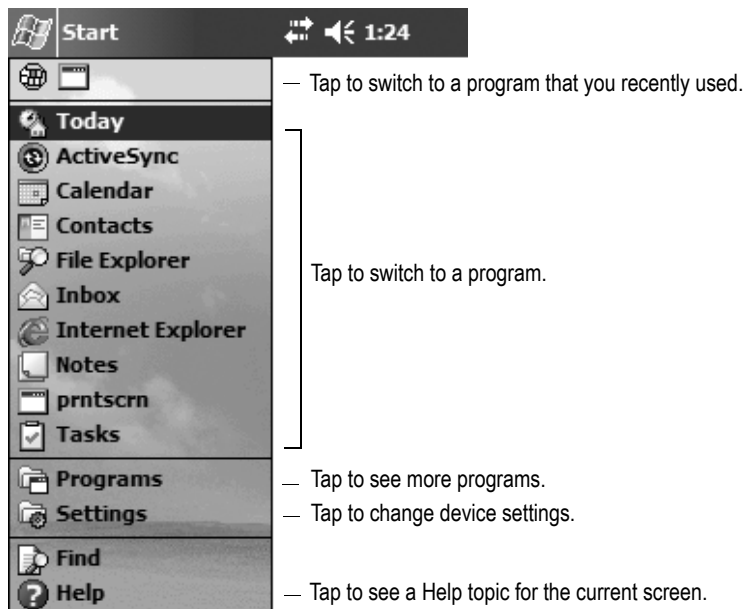
## The Command Bar

At the bottom of the screen is the command bar. You can use its menus and buttons to perform tasks in programs. Depending upon which program you are using, the buttons may vary from those depicted.



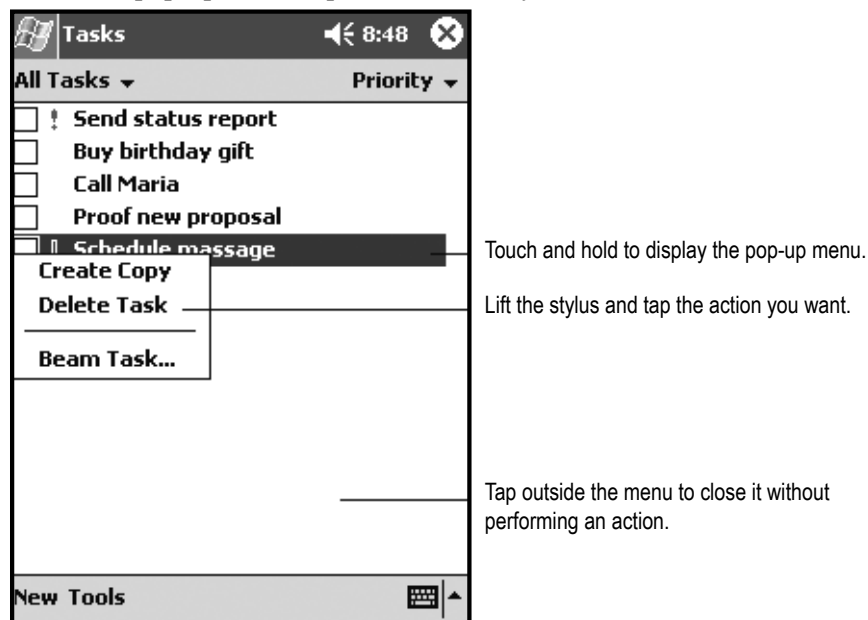
## The Start Menu

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



## Pop-up Menu

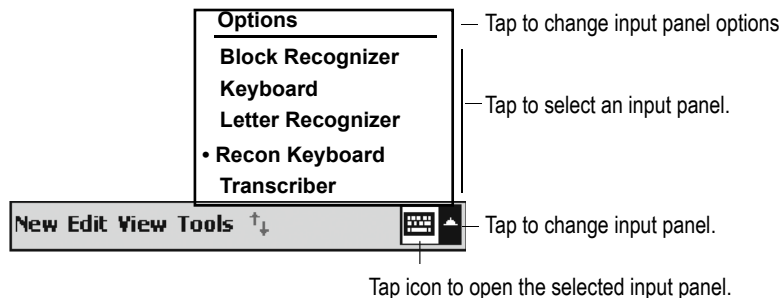
You can use pop-up menus to quickly select an action for an item. To access a pop-up menu, tap and hold the stylus on an item name.



## Text Input Panels

Use the input panel to enter information in any program on your RuggedReader. You can type using the standard Keyboard or the Recon Keyboard. You can write using Block Recognizer, Letter Recognizer, or Transcriber. The characters appear as typed text on the screen. Select the input panel that is 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.



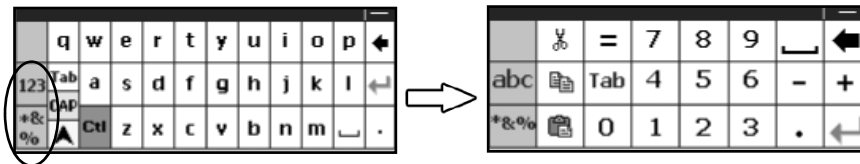
When you tap in a text entry area, such as a text box or notes page, the currently selected input panel activates as shown in the example below.



Tap a text box to edit the text using the current input panel. In this example, the keyboard is selected.

To enter characters, tap on the Keyboard input panel.


The Recon Keyboard has larger keys than the standard keyboard.



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

The Block Recognizer and Letter Recognizer input panels render individual characters that you write as “typed.” The Transcriber input panel converts handwritten words and symbols into typed characters. Tap Start / Help (?) for more information and demonstrations on these input panels.

## Settings on your RuggedReader

Tap , then tap Settings. You can tap any of the icons on the Personal, System, or Connections tabs to customize the RuggedReader settings to your own preferences.

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

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

Here are a few settings on the RuggedReader that are worth noting.

## Application Buttons

Tap the Personal tab at the bottom. Tap on the Buttons icon. The four application buttons can be reassigned to your favorite programs.

## Input

Tap the Personal tab at the bottom. Tap on the Input icon. You can change settings related to input panels, such as Block Recognizer, Keyboard, Letter Recognizer, Recon Keyboard, and Transcriber.

## Backlight

Tap the System tab at the bottom. Tap on the Backlight icon. Choose the settings in the Battery Power, External Power, and Brightness tabs as needed for your use of the RuggedReader. (The display backlight has significant impact on battery life.) Tap “OK” to exit.

## Memory

Closing Programs still leaves them running in the background. If you need more resources to run your programs, tap the System tab at the bottom. Tap on the Memory icon and tap the Running Programs tab at the bottom. You can stop the individual programs or tap Stop All to free memory.

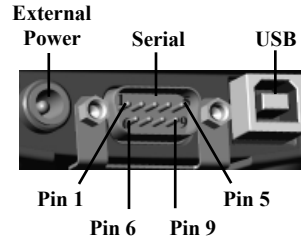
## Power

Tap the System tab at the bottom. Tap on the Power icon to view the approximate battery power remaining. Tap the Advanced tab and choose the settings that work best for you. Tap “OK” to exit.

## Connecting to your PC

### I/O ports

The RuggedReader supports connections to other devices via USB and 9-pin serial ports. USB connections to your PC require an A-B USB cable (included with the RuggedReader). USB is faster, more reliable and does not have baud rates or com ports to select. Serial connections require a 9-pin null-modem serial cable (not included).



You may also increase your connectivity options through using RuggedReader-compatible CompactFlash cards.

### ActiveSync

Using Microsoft® ActiveSync®, you can synchronize information and copy files between your desktop or laptop computer and your RuggedReader. ActiveSync compares the data on your RuggedReader with the data on your PC, then updates all locations with the most recent information.

ActiveSync is already installed on your RuggedReader. Before connecting your RuggedReader to your 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.

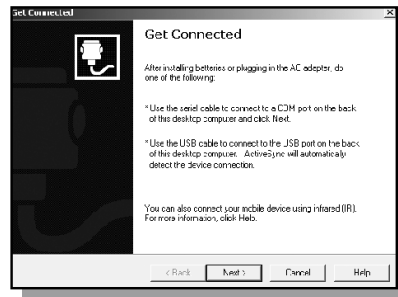
You can also download the most current version of PC ActiveSync at: <http://www.microsoft.com/mobile/pocketpc/downloads/>. The installation instructions for ActiveSync may vary if you use a version other than the version originally shipped on the Recon Companion CD.

#### *Setting Up ActiveSync*

DO NOT connect your RuggedReader until the installation is complete.

When installing ActiveSync on the PC, you will see the screen “Set Up Microsoft ActiveSync 3.7. Click Next. A screen will appear asking what folder to install to. We recommend using the default setting. Click Next.

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



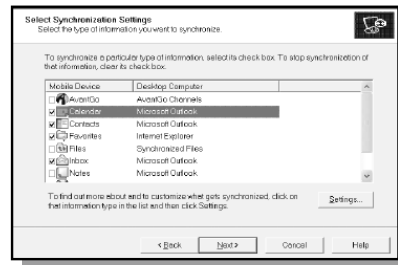
There are two types of ActiveSync connections. The table below summarizes the advantages and disadvantages of each choice. The Standard Partnership synchronizes data and is recommended for ease of connection. Click Next.



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

*Standard Partnership* only - Choose to synchronize your Rugged Reader with your PC. Click Next. You can have up to two partnerships or have a partnership only with this computer. Enter a unique name for your RuggedReader and click 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. Click next.



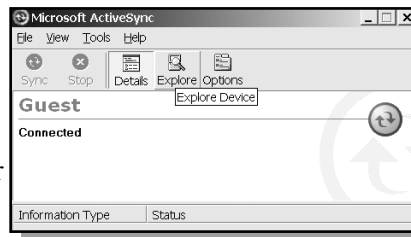
### ***Running ActiveSync***

Start ActiveSync on your PC. Connect the RuggedReader 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 click 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 RuggedReader, which now looks and acts like the Windows Explorer on your PC.



### ***Disconnecting ActiveSync***

To avoid connection problems, disconnect ActiveSync on the RuggedReader by tapping the ActiveSync connection icon in the lower right corner of the Today Screen before removing the cable from either the PC or the RuggedReader.



Tap “Disconnect” and then remove the cable.

For additional information on using ActiveSync, visit the Microsoft website and search for articles on ActiveSync. For information specific to the use of ActiveSync with RuggedReader, see the Troubleshooting section of this manual.

## Additional Connectivity

The RuggedReader supports several kinds of connections in addition to direct ActiveSync connections to a PC. Note that you will need to purchase third party accessories (such as CompactFlash modems or Bluetooth cards) in order to implement these connections:

- **Modem** -- The RuggedReader 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 RuggedReader 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 RuggedReader. Bluetooth is used for wireless communication over distances of up to 10 meters. Typical Bluetooth applications include sending files to a PC or another RuggedReader, or communicating with a printer or cell phone.
- **Wireless LAN** -- Pocket PC-compatible Wireless LAN (or 802.11) CompactFlash cards can be used with RuggedReader. 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 RuggedReader 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 RuggedReader. These connections allow the RuggedReader 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 RuggedReader does not expose file shares and cannot be browsed by PCs on the network.

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

## Installing additional software on your RuggedReader




The RuggedReader 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 RuggedReader is connected with ActiveSync. If prompted by the installation wizard, perform a soft reset to complete the installation.

**Note:** For best results, 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 RuggedReader, 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 RuggedReader 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 RuggedReader and the PC.

## Companion Programs

Your RuggedReader 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 RuggedReader 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 <b>View</b> menu.</p> <ul style="list-style-type: none"> <li>• <b>Typing.</b> Using the input panel, enter typed text into the document.</li> <li>• <b>Writing.</b> Use your stylus to write directly on the screen. Lines are displayed as a guide.</li> <li>• <b>Drawing.</b> Use your stylus to draw directly on the screen. A drawing box appears, indicating a single object.</li> </ul>

	Pocket Word (continued)	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 RuggedReader, or when you open an e-mail message with an attached Word file on your RuggedReader. 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. For more information, see ActiveSync Help on the PC.
	Calculator	<p>Tap the Calculator buttons to enter numbers and perform calculations. To clear the current calculation, tap <b>C</b>. To clear the displayed number, tap <b>CE</b>. 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 <b>M</b> will appear in the box. To add the displayed number to the number that's already in memory, tap <b>M+</b>. To display the number in memory, tap <b>MR</b>. To clear memory, tap <b>MC</b>.</p>
	MSN Messenger	MSN Messenger on your RuggedReader 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.
	Pocket Internet Explorer	You can use Pocket Internet explorer to view Web pages on your RuggedReader 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.

# Caring for your RuggedReader

## Changing the PowerBoot Module

You can purchase additional PowerBoot Modules. Before removing the PowerBoot, back up your RuggedReader to built-in storage. Built-in storage is not affected by a hard reset. In the rare event that you experience a hard reset while changing the PowerBoot, you will easily be able to restore the state of your RuggedReader from this fresh backup. See RuggedReader Memory and Backup and Restore.

With the RuggedReader turned off, you will have at least 30 seconds to change the PowerBoot without danger of a hard reset.

1. Before changing the PowerBoot, back up your RuggedReader to built-in storage using the preinstalled backup program.
2. **Turn off** the RuggedReader.
3. Remove the hand strap .
4. To unlock the PowerBoot latches, turn them counter-clockwise until the arrows point towards the I/O ports. Ensure the latches on your new PowerBoot are also in the unlocked position.
5. Remove the PowerBoot using both thumbs to push on the PowerBoot as the arrows indicate.
6. Quickly (within 30 seconds) slide the new PowerBoot onto the RuggedReader. Lock the latches and replace the hand strap.



## Cleaning the RuggedReader

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

## Water

The RuggedReader is designed to withstand accidental immersion. To maintain the water resistant seal, it is important to ensure that the screws on the CF-Cap are tightened 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.

## Shock

The RuggedReader 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 it or crack it. The RuggedReader should not be dropped unnecessarily.

## Care of the touch screen

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

## Applying screen protectors

Use the screen protectors included with the RuggedReader to keep the touch screen clean and protected. To apply a screen protector, first clean the display thoroughly. Peel the backing from the screen protector. Align the edge, then drop the remainder onto the display. Use a credit card, if necessary, to squeegee the air from underneath the screen protector.

## Temperature Range

Although the RuggedReader is designed to be rugged, do not leave it in direct sunlight or a parked vehicle in the sunlight for extended periods.

<i>Operating temperature</i>	-22°F to +140°F (-30C to +60C)
<i>Storage temperature<sup>1</sup></i>	-40°F to +158°F (-40C to +70C)

## Hardware Specifications

Features	RuggedReader Series
<i>Operating System</i>	Microsoft Pocket PC 2003
<i>Processor</i>	200 MHz or 400 MHz XScale
<i>Memory</i>	64 MB SDRAM
<i>Storage</i>	64 MB non-volatile Flash
<i>Display</i>	1/4 VGA color TFT with LED frontlight
<i>Batteries</i>	NiMH rechargeable pack
<i>I/O</i>	9-pin D-shell RS232 serial, USB, charging port

<sup>1</sup> Storing the PowerBoot in long-term temperatures above 35C (95°F) may shorten battery life.

# Safe Use of your RuggedReader

## Repair

Please do not attempt to dismantle the unit 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.

## Obtaining an additional PowerBoot Module

Replacement PowerBoot Modules are available. See the contact details listed on the last page of this manual.

## 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 RuggedReader contains no mercury or cadmium.

## AC adapter safety

- Use only AC adapters intended for the RuggedReader. Using any other external power source can damage your product and may void your 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 adapters are designed for **indoor use only**. Avoid using the AC adapter in wet, outdoor areas.
- Unplug the AC adapter from power when not in use.
- Do not short the output connector.

# Troubleshooting RuggedReader

## A – Pocket-Situ and connections

**Problem:** The RuggedReader display does not come on when the power button is pressed.

**Solution 1:** Make sure the PowerBoot is connected and locked in position. The arrows on the PowerBoot locking tabs should point towards the bottom of the unit when installing or removing the PowerBoot. After the PowerBoot has been attached to the RuggedReader, rotate the locking tabs so that they point towards the top of the unit.

**Solution 2:** Charge the battery. If the battery is totally dead it should be charged for several hours. If the battery does not seem to be charging, remove the PowerBoot from the RuggedReader and charge it while detached.

**Problem:** There is no shortcut to Pocket-Situ on the RuggedReader Start Menu.

**Solution:** If Pocket-Situ is installed, it can be launched as follows: Tap on the Start menu, select File Explorer, navigate to the Built-in Storage folder (usually under “My Device”), select the Pocket-Situ folder, and tap on Pocket-Situ 4.

To create a shortcut on the Start Menu:

1. Use File Explorer to navigate to the folder called Built-in Storage.
2. Open the Pocket-Situ folder. Tap and hold on the Pocket-Situ4 icon and select “Copy” from the resulting pop-up menu.
3. In the File Explorer, open the Windows folder and select Start Menu. Tap and hold on a clear space at the bottom of the Start Menu. Select “Paste Shortcut” from the resulting pop-up menu.

**Problem:** Pocket-Situ cannot be found anywhere on the RuggedReader. There is no shortcut on the Start Menu, and there is no Pocket-Situ folder in Built-in Storage.

**Solution:** Pocket-Situ has been deleted from the RuggedReader or

was never installed. Follow the installation instruction guide (separate sheet)

**Problem:** When Pocket-Situ is launched, the Connection Wizard appears.

**Solution:** Select “Direct connection” and “One” device on the first screen of the Connection Wizard, and then tap **Next**. On the second screen, select COM1 as the port and tap **Next**. COM1 is the only valid communication port on the RuggedReader. On the third screen, select 19200 as the baud rate. This rate is ideal for most applications. If you are using very long cables and find communications with an instrument to be slow, then you may need to drop the baud rate to 9600. On the final screen, name the connection anything that you wish (or simply accept the default name given) and tap **Finish**. You will use this one connection setting regardless of the number of individual dataloggers to which you will be connecting, so there is not need to create multiple connection settings. After completing the Connection Wizard, the new connection setting will appear in the navigation tree at the top of the screen. Close Pocket-Situ by first highlighting the Home level in the Navigation Tree, then tapping **Exit** at the bottom of the screen. This will save the connection setting for future use and will eliminate the need to go through the Connection Wizard again.

**Problem:** No device is found.

**Solution 1:** Verify that the connection settings are correct as listed above. To edit the connection settings, highlight the connection line in the Navigation tree and tap **Edit** at the bottom of the screen.

**Solution 2:** Verify that the instrument communication cable or ComIT is firmly attached to the serial port connector on the bottom of the RuggedReader.

**Solution 3:** Check the instrument batteries, elastomer, and Bulgin pins as referenced in the Operator’s Manual for your In-Situ instrument.

**Problem:** Communications with an instrument is automatically initiated and/or Profiler automatically comes up whenever Pocket-Situ is launched and this is not desirable to the user.

**Solution:** In Pocket-Situ, highlight the Home level of the navigation

tree and tap **Setup** at the bottom of the screen. Tap the Settings tab and un-check the top box labeled “Start application in Profiler mode.”

**Problem:** When launching the Profiler, Pocket-Situ no longer asks for a data file name.

**Solution:** Highlight the Home level of the navigation tree and tap **Setup** at the bottom of the screen. Tap the Settings tab and check the box labeled “Re-Enable ‘Don’t ask again’ dialogs.”

## **B – Operating system**

**Problem:** The RuggedReader locks up, is non-responsive, or otherwise does something unexpected.

**Solution:** The operating system on the RuggedReader may need to be reset. Refer to page 7 above for information on a “Soft Reset” and a “Hard Reset.” A hard reset should be avoided if possible as it will erase any information in RAM, including the Start Menu shortcut to Pocket-Situ 4. Pocket-Situ itself and all associated files (including data files) are stored in a non-volatile portion of memory called Built-in Storage and will survive a hard reset, but the Start Menu shortcut will need to be restored. See page 23 above.

**Problem:** Multiple instruments are being used and Pocket-Situ locks up when changing from one to another.

**Solution:** Pocket-Situ and the RuggedReader must be told when you are changing from one instrument to another, and the first connection must be properly resolved. Highlight the connection setting line in the navigation tree and tap **Drop** at the bottom of the screen before detaching any instrument cables. This will properly terminate the connection to the first instrument and reset the communication port, making it ready to accept communications with the next instrument. Similarly, highlight the Home level of the navigation tree and tap **Exit** whenever you are finished using Pocket-Situ and wish to close the software.

**Problem:** How does one view the battery charge status on the RuggedReader?

**Solution:** Tap the Start menu, and then select Settings > System Tab > Power.

## **C – Transferring data from the RuggedReader to a desktop PC**

**Problem:** Win-Situ on the desktop PC does not connect to the RuggedReader.

**Solution:** Win-Situ does not communicate directly with the RuggedReader. Communications between the two computers is handled by Microsoft ActiveSync, a companion program to the Microsoft WindowsCE operating system. Microsoft ActiveSync was supplied on a CD in the original RuggedReader packaging. It may also be downloaded from the Microsoft website at [www.microsoft.com](http://www.microsoft.com).

**Problem:** A connection cannot be established between the RuggedReader and PC through Microsoft ActiveSync.

**Solution:** The default setting is for the RuggedReader to communicate through Microsoft ActiveSync using a USB (Universal Serial Bus) connection. The USB driver for the RuggedReader must be installed at a specific time during the initial ActiveSync installation. **DO NOT** connect the RuggedReader USB cable to your PC until instructed to do so during the Microsoft ActiveSync installation process. Doing so may result in communication problems with Microsoft ActiveSync and the need to re-install the software, as well as remove the driver for the RuggedReader from the PC's operating system (Start > Settings > Control Panel > Add/Remove Hardware).

**Windows 95 and Windows NT do not support USB.** If using a PC with either of these operating systems, you will need to connect using the 9-pin serial communication ports on each computer. An optional serial communications cable will be required. If the serial COM ports will be used, the PC connection setting on the RuggedReader must be changed. Tap the Start menu, and then ActiveSync. In the ActiveSync screen, tap the Tools menu at the bottom and select **Options**. On the next screen, tap the **Options** button. A new screen will appear that defines the connection to be used for ActiveSync. Check the box

“Enable PC Sync Using This Connection:” then change the connection type in the drop-down box from “USB Default” to “19200 Default” and tap OK in the upper right hand corner of the screen. Tap OK again, then exit out of the ActiveSync screen by tapping the “X” in the upper right hand corner.

Note that both Pocket-Situ on the RuggedReader and Win-Situ on the PC will use the same serial COM ports to communicate with instruments as Microsoft ActiveSync will be trying to use to communicate between the two computers. Before attempting serial port communications in Microsoft ActiveSync make certain that you drop any active connections with instruments (highlight the connection line in the Navigation Tree and tap **Drop**) and close both Pocket-Situ (highlight the Home level in the Navigation Tree and tap **Exit**) on the RuggedReader and Win-Situ on the PC.

**Problem:** How are data files transferred between the RuggedReader and PC?

**Solution:** All data files extracted from dataloggers using the RuggedReader are stored by default in the Pocket-Situ Data folder. All data files for Win-Situ on the PC will be stored in a parallel Win-Situ Data folder on that computer. To transfer data files between the two computers, first establish a connection between them using Microsoft ActiveSync. With a connection established, click on the Explore button at the top of the ActiveSync window on the PC. This will bring up a File Explorer window that will allow navigation through the RuggedReader’s memory from the desktop PC. Navigate to My Pocket PC > Built-in Storage > PocketSitu > Data to access data files. Data files created using the LowFlow wizard will be located within the LowFlow sub-directory within the Data folder. Highlight the data files of interest and copy them. Go to the desktop of the PC and double-click on the My Computer icon. Navigate to C:\Win-Situ\Data and paste the copied files into this directory. If you are pasting LowFlow data files, they should be pasted into the LowFlow sub-directory of the Data folder.

Data files are in a compressed binary format that only Win-Situ and Pocket-Situ can read. These files must be opened through Win-Situ or Pocket-Situ, and cannot be opened by double-clicking on them in the File Explorer. Launch Win-Situ to view data files on the PC. Any files that are in the Win-Situ Data folder will be accessible through the

Data Folder section of the Navigation Tree on the left side of the screen (or the Flow Sense line of the Navigation Tree for LowFlow files). Win-Situ organizes these data files first by instrument type, then by individual instrument serial number. If you wish to open a data file that is on your PC in a location other than the Win-Situ data folder, select “Open BIN File...” from the Win-Situ file menu and browse to the file. A data file can be exported to a spreadsheet (Excel, etc.) by selecting “Export to Excel...” from the Win-Situ File menu while the data file is being viewed in text format. See the Win-Situ manual for further details.

## 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 adapters 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.

## Reference Materials

### **Rugged Reader support (In-Situ Inc.)**

email: [support@In-Situ.com](mailto:support@In-Situ.com)

phone: 800.446.7488

[www.in-situ.com](http://www.in-situ.com)

### **ActiveSync:**

[www.microsoft.com/mobile/pocketpc/downloads](http://www.microsoft.com/mobile/pocketpc/downloads)

### **Windows Mobile:**

[www.microsoft.com/windowsmobile/default.mspx](http://www.microsoft.com/windowsmobile/default.mspx)

### **Accessories:**

You can expand the RuggedReader handheld computer's capabilities by purchasing accessories. Please reference the In-Situ website or contact your sales representative for more information.

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