In-Situ Inc.

RuggedReader®

OPERATOR'S MANUAL

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October 2007

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In-Situ Inc.

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1 INTRODUCTION

The ultra-rugged RuggedReader®—rock solid and field ready in the most extreme environments—is your reliable field companion. Designed for Windows Mobile® 5.0, your RuggedReader features a wide variety of application software choices, including Win-Situ® Mobile, control software for In-Situ's Level TROLL® and Aqua TROLL®, and Pocket-Situ 4 for In-Situ's MP TROLL® 9500, miniTROLL®, and MP TROLL® 9000.

WINDOWS MOBILE® 5.0

The Windows Mobile 5.0 operating system, designed for mobile devices, provides familiar Microsoft programs like Outlook® Mobile. Many Windows applications are compatible with Windows Mobile. You can use Windows Mobile to access Word, Excel®, and PowerPoint® files on your mobile device, or you can use Windows Mobile to access your e-mail messages and contacts from your Microsoft Outlook account.

More information about Windows Mobile 5.0 can be found at http://www.Microsoft.com/windowsmobile/5/default.mspx.

HOW TO USE THIS MANUAL

This operator's manual is designed as both a start-up guide and a permanent reference for the RuggedReader's features and applications.

Section 1: Introduction to the RuggedReader® and to In-Situ Inc. — Anatomy of the RuggedReader — Accessories — Warranty — Instrument Repair & Return Recommendations

Section 2: Getting Started — Installing & charging the battery pack — Installing Microsoft ActiveSync®

Section 3: Using the Hardware — Buttons — Power — Stylus — Touchscreen — CF and SD cards

Section 4: A quick overview of basic software operations in the Windows Mobile operating system

Section 5: Using ActiveSync®

Section 6: Using In-Situ Software — Win-Situ Mobile — Pocket-Situ 4 — TDG Logger — Transferring data files from the RuggedReader to a desktop computer

Section 7: Care and Maintenance of the RuggedReader

Conventions

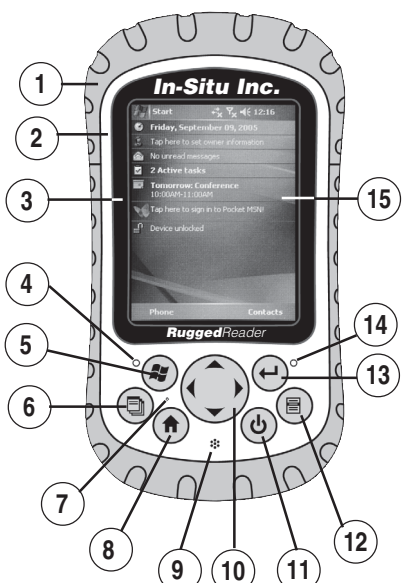
Throughout this operator's manual you will see the following symbols:

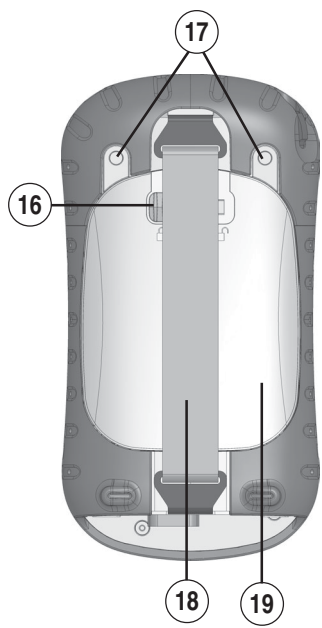
The check mark highlights a tip about a convenient feature of the RuggedReader or its software

The exclamation point calls your attention to a requirement or important action that should not be overlooked

THE ANATOMY OF THE RUGGEDREADER

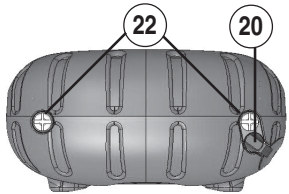
1 Elastomer overmold
2 Magnesium case front
3 Display bezel
4 Charge LED (page 31)
5 Start menu button (page 20)
6 Applications Manager button (page 20)
7 Microphone
8 Home button (page 20)
9 Speaker
10 Four-way directional button (page 20)
11 Power button (pages 22-23)
12 Context menu button (page 20)
13 Enter button (page 20)
14 Notification LED (p. 31)
15 Touchscreen/display (pages 29-30)
16 Battery door latch
17 Accessory attachment points
18 Hand strap
19 Battery door



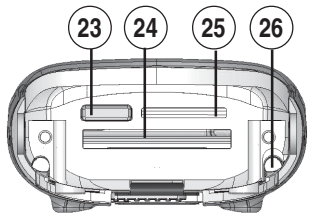


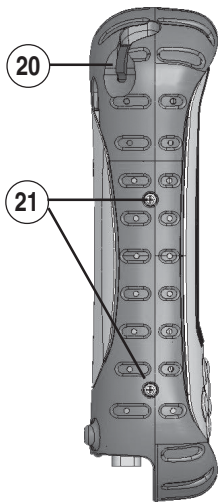
20 Stylus
21 Main screws (do not remove)
22 Top cap screws (captive) (page 32)
23 Slot for future accessory
24 Compact Flash card slot (page 32)
25 Secure Digital I/O card slot (page 32)
26 Stylus slot
27 USB Client (mini B)
28 12V DC jack
29 9-pin serial port
30 USB Host (mini A)
31 Cable routing channel

Top view with top cap

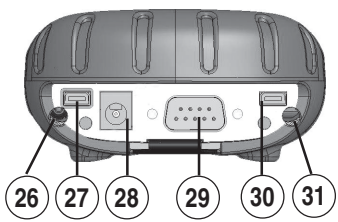


Top view without top cap





Communications module



WHAT WE PROVIDE

Accessories:

- Battery
- Stylus
- USB communications cable
- End User License Agreement (EULA)
- Wall charger & 4 plugs
- 12V auto adapter
- Dashboard accessory pad
- Screen Protectors (2)

Installed In-Situ software:

- Win-Situ Mobile, for use with the Level TROLL and Aqua TROLL
- Pocket-Situ 4, for use with the miniTROLL, Multi-Parameter TROLL 9500, and Multi-Parameter TROLL 9000
- TDG Logger, for use with the T506 Total Dissolved Gas probe

Reference Tools:

- A quick start guide
- Getting Started CD from Microsoft (installs ActiveSync®)
- In-Situ Software/Resource CD (includes user's guide)

Accessories

Accessory / Replacement Part	Catalog No.
12V Auto Charger Adapter	55410
Lithium-Ion Battery Pack	55420
USB Communication Cable	55430
Hand Strap	55440
Stylus	55460
Screen Protectors (2)	55470
CF Card, 512 MB	55480
CF Card, Bluetooth	55490
Dashboard Accessory Pad	59250

HOW TO CONTACT US

Technical Support:	800 446 7488
	Toll-free 24 hours a day in the U.S. and Canada
Address:	In-Situ Inc. 221 East Lincoln Ave. Fort Collins, CO 80524 USA
Phone:	970 498 1500
Fax:	970 498 1598
Internet:	www.in-situ.com
e-mail:	support@in-situ.com

WARNING: *Do not attempt to service the device yourself. This action voids the warranty.*

TIP: *To locate your device's serial number, tap Start > Settings > System tab > System Config.*

To Obtain Repair Service (U.S.)

If you suspect that your RuggedReader is malfunctioning and repair is required, you can help assure efficient servicing by following these guidelines:

1. Call or e-mail In-Situ Technical Support (support@in-situ.com). Have the product model and serial number handy.

   To locate the device serial number and other identification information:
   a. Tap Start > Settings.
   b. In the Settings window, tap the System tab.
   c. Scroll down and tap System Config.

2. Be prepared to describe the problem, including how the RuggedReader was being used and conditions noted at the time of the malfunction.
3. If Tech Support determines that service is needed, they will ask that your company pre-approve a specified dollar amount for repair charges. When the pre-approval is received, Tech Support will assign an RMA (Return Material Authorization) number.

TIP: *Please keep your RMA number for future reference.*

4. Carefully pack your RuggedReader in its original shipping box, if possible.
5. Mark the RMA number clearly on the outside of the box with a marker or label.
6. Send the package, shipping prepaid, to

   In-Situ Inc.
   ATTN: Repairs
   221 East Lincoln Ave.
   Fort Collins, CO 80524

The warranty does not cover damage during transit. In-Situ recommends the customer insure all shipments. Warranty repairs will be shipped back prepaid.

Outside the U.S.

Contact your international In-Situ distributor for repair and service information.

In-Situ Inc.

2 GETTING STARTED

TIP: If you used the Quick Start guide to set up your RuggedReader, you completed Steps 1-5.

This chapter repeats the installation instructions in the RuggedReader Quick Start guide. If you used the Quick Start guide to set up your RuggedReader, you completed Steps 1-5.

STEP 1: INSTALL THE BATTERY PACK

1. Slowly unhook and lift up the bottom latch of the hand strap. CAUTION: Do not let the hand strap hook hit the display.

2. Press on the battery door and slide the latch to the right to unlock it.

3. Remove the battery door.

4. Insert the battery pack so battery contacts match up.

5. Insert the tabs on the bottom of the battery door into the case slots. Make sure the door latch is all the way to the right and properly aligned. Then close the battery door.

6. Press firmly on the battery door and slide the latch to the left to lock it.
7. Reattach the hand strap.

STEP 2: CHARGE THE BATTERY PACK

1. Mount the plug onto the wall charger (if it is not already assembled).
2. Plug the wall charger into an outlet.
3. Plug the other end of the wall charger into the DC jack on the RuggedReader. The device turns on after a few seconds, and a flashing red light appears to signal the device is charging.

TIP: Note: After a few minutes the device suspends, and the flashing red LED turns off, but the device keeps charging.

4. Charging the RuggedReader for 4.5 hours charges it up to 95%. Let the device charge for 6 hours to get a full charge.

STEP 3: CALIBRATE THE TOUCHSCREEN

When you first power your RuggedReader, or after a device reset, you will be prompted to calibrate the touchscreen. Using the stylus, follow the instructions on the screen.

To protect the touchscreen, we recommend that you apply a screen protector. See Protecting the Touchscreen in Section 3.

STEP 4: INSTALL ActiveSync® ON A DESKTOP COMPUTER

Windows Mobile 5.0 requires that you use ActiveSync 4.1 or greater. The Getting Started CD installs ActiveSync 4.1 on your desktop computer.

1. Insert the Getting Started CD into your desktop computer.

   The CD runs automatically.

   The options presented will differ depending on whether ActiveSync is currently installed on your computer.

2. Follow the directions on the screen to install the latest version of ActiveSync on your desktop computer.

Install ActiveSync **before** *attaching the USB cable to the desktop PC or to the RuggedReader.*

STEP 5: CREATE AN ActiveSync CONNECTION

Install ActiveSync on your desktop computer before creating a connection.

1. Plug USB Client end (mini B) of the USB communications cable into your RuggedReader when instructed by ActiveSync.

USB Client (mini B)

2. Plug the USB Host end (full size A) of the USB communications cable into your desktop computer.
3. Establish an ActiveSync partnership by following the instructions on the desktop computer screen.

TIP: *ActiveSync may refer to the device "cradle" On the RuggedReader, this means to plug in the mini B end of the USB cable.*

Tips for Your First ActiveSync Connection

- To use In-Situ's RuggedReader software, we recommend you set up a "Guest" connection in ActiveSync.

  To connect as a "Guest," just click Cancel on the first page of the Sync Setup wizard. ActiveSync then recognizes your device as a Guest.

  Setting up as a Guest creates a temporary relationship with a desktop computer. Each time the device connects to the desktop, you need to set it up as a Guest by clicking Cancel at the first screen of the Sync Setup Wizard.

TIP: Multiple RuggedReaders will not synchronize with ActiveSync on the same desktop computer. To connect multiple devices to your desktop computer, connect each as a guest.

- Synchronization of Pocket-Situ 4 or Win-Situ Mobile (Pocket-Situ 5) data files is handled by an In-Situ utility called "Win-Situ® Sync," which automates the transfer of data files from your RuggedReader to the Win-Situ working directory on your desktop PC. Even with a full synchronization partnership these files are not synchronized automatically by ActiveSync. For information on these In-Situ programs, see Section 6.

- The alternative to a Guest connection is a full synchronization partnership. You can set up Contacts, Calendar, E-mail, Tasks, etc. to automatically synchronize whenever ActiveSync makes a connection. Notes do not synchronize, and Files synchronize one way—from the desktop computer to the RuggedReader.

CAUTION: When setting up a full synchronization partnership, be sure to leave the "Files" option unchecked in the Sync Setup Wizard. A file in the synchronization folder on the desktop computer can overwrite a file of the same name on the RuggedReader.

THE NEXT STEP

You are now ready to use your RuggedReader.

- To find out about hardware features—buttons, touchscreen, stylus—continue to Section 3
- For Windows Mobile software features, go to Section 4
- For details on Microsoft ActiveSync, check out Section 5
- To start using In-Situ's RuggedReader applications to talk to your In-Situ devices, turn to Section 6

3 USING THE HARDWARE

This chapter describes the hardware components of the RuggedReader:

- Buttons
- Power Management: suspending, powering off, and resetting the RuggedReader
- Stylus
- Touchscreen
- LEDs signals
- Peripheral Devices (CF and SD cards, USB drives)

BUTTONS

The following chart shows the names and functions of each button on the keypad.

Button	Name	Function
	Start menu button	Provides a menu of applications
	Applications Manager button	Lets you switch between or close running applications; allows you to view memory allocations
	Home button	Returns you to the Today screen
	Context menu button	Displays the context menu related to the item selected (similar to a right-click on a desktop computer)
	Enter button	Enters the selected soft key or option
	Power button	Turns the RuggedReader on and off, resets, suspends (see more details in the Power button section)
	Four-way directional button	Allows you to navigate

Customizing Button Functions

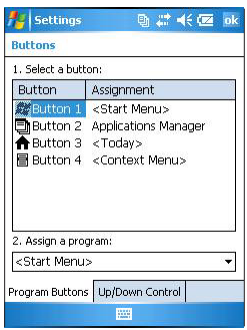
Each button performs a specific function. You can customize the function of the following four buttons to open programs or perform shortcuts:

- Start menu button (Button 1)
- Applications Manager button (Button 2)
- Home button (Button 3)
- Context menu button (Button 4)

TIP: The functions assigned to the Enter button, power button, and Four-way directional button cannot be customized.

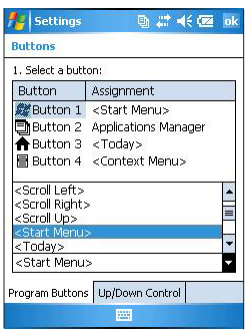
To reassign a program or shortcut to a button:

1. Tap Start > Settings > Personal tab > Buttons. A list of buttons and their current assignments is displayed on the Program Buttons tab.



2. Tap the button you want to reassign.

3. In the Assign a program box, tap the program or shortcut you want to assign to the button.



4. Tap OK.

POWER

The power button allows you to power on, suspend, power off, and reset the device. A series of keypad actions lets you restore factory defaults to the registry or to the whole device. Below are instructions for each action.

Suspending

Suspending the RuggedReader is different from powering it off:

- Suspending the device puts it to sleep, and when it is turned back on, the device remembers where it was. Some battery power is used.
- Powering off the device closes all programs and turns off all of the power. No battery power is used.

We recommend suspending your device if you want to resume your task or if you plan to use the device on a daily basis.

1. To suspend your device, press the power button briefly and release.
2. To resume the device from suspend mode, press the power button again.

TIP: *If the device suspends while it is charging, the flashing red light disappears. However, the device continues to charge.*

TIP: *The RuggedReader suspends automatically after a specified period of time with no activity. To change this automatic timeout, tap Start > Settings > System tab > Power > Advanced tab.*

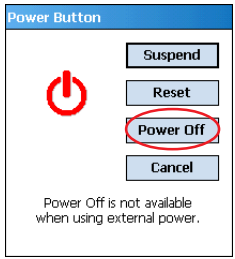
Powering Off

Powering off ends all programs and removes power from all system components except for the real-time clock. Unlike suspend mode, the device resets when it is powered on again.

To preserve battery power, we recommend you power off the device if it will be left unused for two weeks or longer.

To power off the RuggedReader:

TIP: *The device cannot be powered off while it is plugged into the wall charger.*



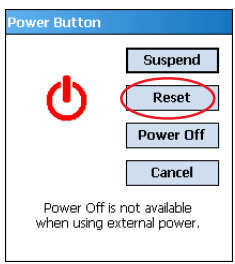
1. Save your open files and close any running programs.
2. Press ⏻ until the power button menu appears.
3. Tap Power Off.

   The keypad backlight stays on for a few seconds after the device shuts off. Until the keypad backlight turns off, the device cannot be powered on again.

To power on your RuggedReader, hold down ⏻ until the green notification light appears. Introductory splash screens will be displayed, then the Today screen. This process takes about a minute.

Resetting the Device (Soft Reset)

Some programs require you to reset your device during installation. Follow the steps below to reset the RuggedReader:



1. Save open files and close any running programs.
2. Press ⏻ until the power button menu appears.
3. Choose Reset.

If your device is locked up, you can reset it without the power button menu. Just press the power button for 10 seconds or until the screen goes dark. After a few seconds, the device turns on again.

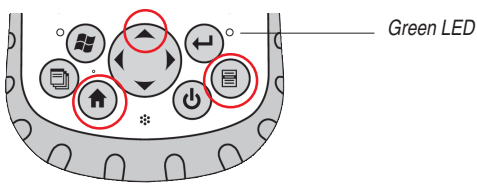
Restoring Factory Defaults (Hard Reset)

WARNING: Restoring the device to its original factory state will permanently erase data saved on the device, software installed by In-Situ Inc. (Win-Situ Mobile, Pocket-Situ 4, TDG Logger), any software you installed, and any changes you made to the device, including settings changes.

Follow the steps below to restore the hard drive, settings, and icons to their original factory state on your device. WARNING! Restoring the device to its original factory state will permanently erase data saved on the device, any software you installed, and any changes you made to the device, including settings changes.

To restore the device to its original factory state, follow these steps:

1. Reset the device from the power button menu or by holding down the power button until the display goes dark.
2. When the green LED light appears on the front of the RuggedReader, simultaneously press and hold the following buttons for several seconds: the Home button, the up arrow on the Four-way directional button, and the Context menu button.



3. Hold the buttons until the RuggedReader splash screen appears and then disappears. Factory settings are restored automatically.

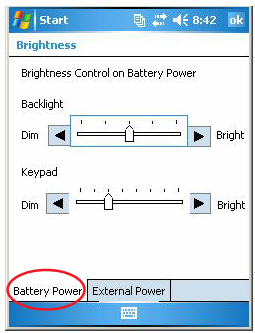
Conserving Power

The RuggedReader has several settings that let you save battery power.

Backlight

To dim or turn off the display and keypad backlights:

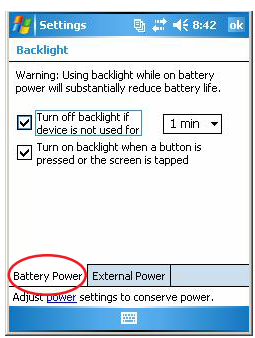
1. Tap Start > Settings > System tab > Brightness.
2. Select the Battery Power tab.
3. Drag the backlight slider slightly to the left to dim the backlight, or all the way to the left to turn it off. If the backlight does not turn off completely, tap on the arrow to the left of the Backlight slider.
4. Tap OK.



Adjusting the Backlight Timer

By default, the display and keypad backlights turn off after one minute of inactivity. You can adjust the time when the backlight turns off:

1. Tap Start > Settings > System tab > Backlight.
2. Select the Battery Power tab.
3. Set the options as you want them.
4. Tap OK.

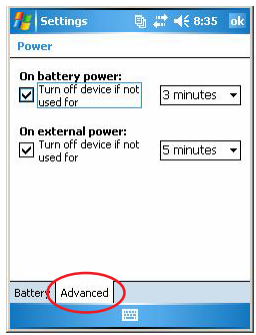


Automatic Suspend

By default, the RuggedReader will suspend automatically after three minutes of inactivity when on battery power.

To adjust the time when the device suspends, follow these steps:

1. Tap Start > Settings > System tab > Power.
2. Select the Advanced tab.
3. Adjust the device timeout as desired.
4. Tap OK.



TIP: *To resume the device from suspend at any time, press*

THE STYLUS

Like the left button on a desktop computer mouse, the stylus is a tool that lets you select items and enter data. Like the right button, the stylus lets you perform shortcuts like cutting and pasting. Instructions for these tasks are listed in the chart below.

The stylus is stored in an open slot at the top of the device. A hole in the end allows you to attach a lanyard.

To do this . . .	Follow these steps
Select an item	Tap once
Enter data	See Entering Information on the following page
Open an item or file	Tap the item or file
Open a context menu for an item	Tap and hold the item. The context menu appears.
Cut or copy	1. Tap and hold 2. Select Cut or Copy from the context menu
Paste	1. Tap and hold the area where you want to paste 2. Select Paste from the context menu
Drag and drop	1. Tap the item(s) 2. Drag the item(s) to the destination 3. Lift up the stylus
Select multiple items	Drag the stylus over the items

Entering Information

You have several options for entering information into your RuggedReader using the stylus.

On-screen Keyboard utility (the default input method)

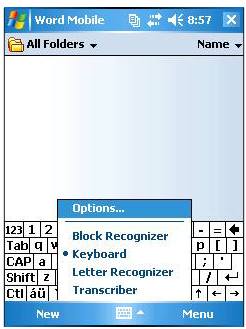
Letter Recognizer—recognizes character strokes and gestures

Block Recognizer—recognizes letters from single strokes

Transcriber—recognizes cursive, print, or mixed handwriting

When you are ready to enter text, you can switch from the default input method (keyboard) by following these steps:

1. On the bottom center of the screen, tap the arrow next to the input method icon . If the arrow is not displayed, tap the input method icon, then tap the arrow.
2. The input method menu appears, as shown here. Tap the input method you want from the list of options.
3. Using the selected input method, enter your text.



TIP: For more details about each input method, go to Start > Settings > Input and choose the input method from the Input window.

THE TOUCHSCREEN

Protecting the Touchscreen

The touchscreen is sealed to protect your device against water and dust. Protect your touchscreen from impact, pressure, or abrasive substances that could damage it. To further protect the touchscreen, apply one of the adhesive screen protectors that came with your RuggedReader. We recommend that you apply a new screen protector every 30 days. Extra screen protectors are available from In-Situ Inc. (catalog no. 55470).

To apply a screen protector, follow these steps:

1. Make sure the RuggedReader screen is free of oils and dirt. You can wipe it with a microfiber cloth.
2. Peel back the paper liner from the screen protector, exposing approximately one inch.
3. Align bottom corners of the screen protector with the RuggedReader screen, sticky side down.

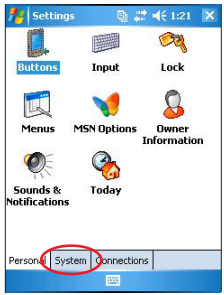
4. Smooth the screen protector while peeling back the liner, working out air bubbles as you go. Continue smoothing until the paper liner is removed.

TIP: *Some air bubbles may still be visible, but they fade away in a short time. You can use a credit card to gently push out any excess air.*

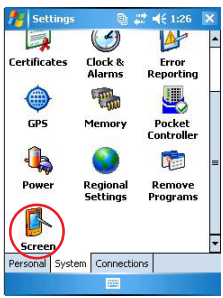
Calibrating the Touchscreen

If the touchscreen is not responding accurately to stylus taps, try calibrating it manually:

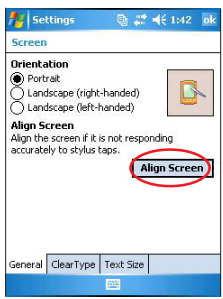
1. Tap Start > Settings > System tab.



2. Scroll down and tap on the Screen icon.



3. In the Screen Settings window, select the Align screen button.
4. Follow the directions on the display to calibrate the touchscreen.
5. After you calibrate the touchscreen, the Screen window appears again. Click OK to exit the screen.



LED SIGNALS

The RuggedReader signals events and processes using LEDs.

Charge LED (Red)

This red light appears to the left of the Start menu button on the keypad.

Flashing : battery is currently charging
Solid : wall charger is connected but battery is fully charged

When the device is suspended or powered off, the charge LED does not appear.

Notification LED (Green)

The green LED is located to the right of the Enter button on the keypad. It appears briefly when you power on the unit after the device is reset or restored to factory defaults.

USING PERIPHERAL DEVICES

The RuggedReader accepts several peripheral devices.

- The USB Host (mini A) accepts devices like USB flash drives and keyboards.
- The Compact Flash (CF) and Secure Digital (SD) card slots accept memory cards and SDIO cards, such as GPS, modem, and Bluetooth cards.

TIP: To be compatible with Windows Mobile 5.0, some USB serial devices require drivers. Refer to your USB device's manual or contact the manufacturer to determine compatibility.

USB Devices

To install a USB device, plug the mini end of a USB communications cable into the USB Host (labeled A on your device). You may need to use a USB mini-to-full size adapter.

USB Host (mini A)

Removing the Top Cap

CAUTION: *When the top cap is removed, the RuggedReader is not sealed. Avoid exposing the device to moisture when the top cap is removed.*

The removable top cap protects the RuggedReader and storage cards. To remove the top cap:

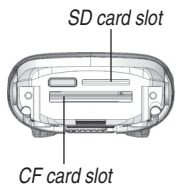
1. Remove the stylus.
2. Unscrew the top screws until you can slide the top cap off. The screws remain attached to the top cap.
3. Pull off the top cap.

TIP: *After removing a card, wait at least 6 seconds before inserting the same or another card. The RuggedReader needs this time to properly identify and use the newly inserted card. If a card is reinserted too quickly, the device may need to reset. To minimize this problem, close all programs before changing or reinserting a card.*

Installing a CF or SD Card

Remove the top cap as above and insert the card. The system should automatically detect and use the card. If the card is not recognized, try the following:

- Install an appropriate driver.
- Consult the user's guide that came with the card.



Reattaching the Top Cap

1. Make sure the hand strap is attached to its top latch.
2. Place the top cap over the case. Be sure the tabs are slotted into the sides of the case.
3. Use a screwdriver to turn the screws until they are firmly in place.

CAUTION: *Tighten the top cap screws firmly after you replace the top cap. Failure to replace the top cap properly may void your warranty.*

Note: Once the top cap rests against the magnesium case front, the screws become harder to turn. Apply an extra ¼ to ½ turn to properly seal the top cap.

Working with Files on a Peripheral Device

You can run programs located on a peripheral device, copy files from a peripheral device onto your RuggedReader, and back up files from the RuggedReader onto a peripheral device. Use File Explorer to find, run, open, and copy these files as you would other files on the RuggedReader. See Exploring Files in Section 4.

Tip: To access a CF or SD card in File Explorer, be sure to go all the way to the top (My Device) level:

1. Tap Start > Programs > File Explorer.
2. If My Device does not already appear as the current directory, tap on the arrow next to the directory that appears, then select My Device from the drop-down menu.

File Explorer at My Device Level

If a CF or SD storage card is installed, it appears at the top (My Device) level

4 BASIC OPERATIONS

This section covers things you need to know to perform everyday tasks on your RuggedReader.

THE TODAY SCREEN

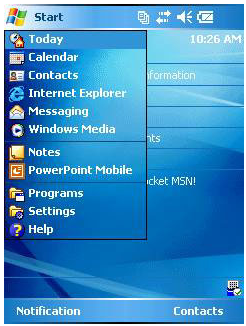
The Today screen is the default screen you see when your device powers on. From the Today screen you can view or select

- Today's date
- Owner information
- Messages
- Tasks
- Upcoming appointments

The Today screen allows you to lock or unlock your device. Locking the device disables your screen for easy cleaning.

- To lock the device, simply tap on the words "Device unlocked."
- To unlock the device, tap on the word "Unlock" on the two screens that appear.

THE START MENU



TIP: To access the Start menu, tap the Start menu icon Start *in the top left corner of the screen, or press the Start menu button on the keypad.*

The Start menu is the main access point to all programs, files, and settings in Windows Mobile. A description of each Start menu option follows.

- **Today.** The default RuggedReader display
- **Calendar.** Appointments and events
- **Contacts.** Contact information for your colleagues
- **Field PC Tutorial.** Describes basic procedures (e.g., replacing batteries) for easy reference
- **Microsoft Internet Explorer.** Internet browser
- **Messaging.** This e-mail client allows you to send and receive e-mail from Microsoft Outlook using ActiveSync on your desktop computer. With a direct Internet connection, you can adjust Messaging to send e-mail directly from the RuggedReader
- **Windows Media Player.** Plays audio and video files
- **Running programs.** If a program is running, it is listed on the Start menu. For example, in the picture above, Notes and PowerPoint Mobile are running. Tap on the program name to open the application
- **Programs.** Opens the Programs menu window, where you can view and access installed programs. To run a program, tap on it. For a list of the Programs installed on your RuggedReader, see Appendix C
- **Settings.** Displays three settings tabs: Personal, System, and Connections. For the location of specific settings, see the table in Appendix C. To change your settings, tap on the setting you want to change, adjust the setting controls, tap OK

- **Help.** Windows Mobile help is context-sensitive—the help screen information is directly related to what you are doing on the device. For some programs, you can open the program first, then tap Start > Help

STATUS ICONS

Status icons on the top line show the status of operations.

Icon	Name	Function
	Charge indicator, or	Shows device is charging
	Battery capacity	Tap to view remaining power
	Speaker	Tap to control volume
	Applications Manager	Tap to switch or close programs
	ActiveSync Connection	Shows connection status

For an additional list of icons and functions, Tap Start > Help, select *Overview of the Today screen*, tap *What do those status icons indicate?*

SOFT KEYS

These context-sensitive keys appear as words, buttons, or tabs on the menu bar. Tap on these keys to perform actions or open menus. Here you see soft keys on the Today screen.

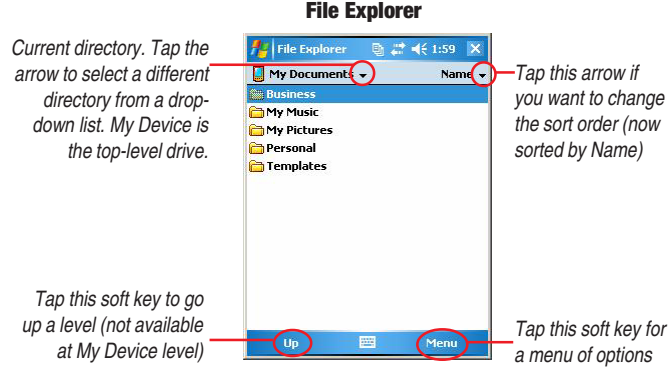
EXPLORING FILES

Use File Explorer to explore files stored on the RuggedReader or on a peripheral device:

1. Tap Start > Programs > File Explorer. File Explorer launches.
2. The current directory appears on the top line. To browse a different directory, do one of the following:
   - Tap the arrow next to the directory name, select the one you want from the drop-down list, or
   - Tap the "Up" soft key to go up a level.

   My Device is the top-level directory on the RuggedReader (the device drive) and allows you to explore all files, including those stored on a properly installed CF or SD card.
3. Navigate the file directory by tapping on the folders and files you want.

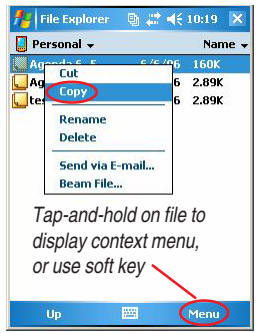
File Explorer

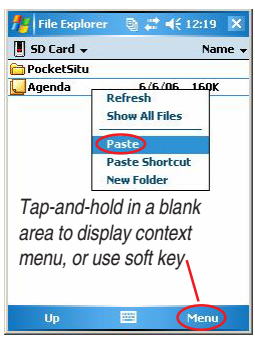


Working with Files

Locate the file you want in File Explorer, as described on the previous page.

- To run a program, tap it once.
- To manipulate a file—copy, cut, delete, rename—do one of the following:
  - Use the "right-click" context menu: hold the stylus on a file until a pop-up menu appears, then tap the action you want, or
  - Use the "Menu" soft key: select the file, tap the "Menu" soft key at the bottom of the screen, tap Edit, tap an action.
- To manipulate multiple files, drag the stylus over the files. Once selected, use the context menu or the "Menu" soft key to choose an option.
- To paste a copied file or files, first navigate to the destination folder (My Device, CF card, SD card, My Documents, etc.). Then do one of the following:
  - Tap and hold the stylus on the white space below the existing files until the pop-up menu appears, select Paste, or
  - Tap the folder, tap the "Menu" soft key, tap Edit > Paste.





CLOSING RUNNING PROGRAMS

TIP: Tapping on the X in the top right corner of a program only minimizes the program; it continues to run in the background.

To free memory and allow the device to run faster, close programs that are not being used:

1. Tap on the Applications Manager icon at the top of the screen or press the Applications Manager button.
2. Select the program you want to close.
3. Tap Stop. Or close all running programs by tapping Stop All.

SWITCHING BETWEEN RUNNING PROGRAMS

1. Tap on the Applications Manager icon or press the Applications Manager button.
2. Select the program you want to switch to.
3. Tap Activate. The program comes to the forefront.

ROTATING THE SCREEN

The RuggedReader can show information in portrait or landscape view. To change the orientation:

1. Select Start > Settings > System tab > Screen.
2. Choose from three screen orientations:
   Portrait,
   Landscape (right-handed), or
   Landscape (left-handed).

   The buttons automatically adjust for the screen orientation.

BACKING UP DATA

Your RuggedReader's non-volatile flash memory is designed to protect your data. However, it is still a good idea to back up your work regularly by saving information to a desktop computer or to a Compact Flash (CF) or Secure Digital (SD) card.

Backing up to a Desktop Computer

Use ActiveSync on the desktop computer. Follow the steps in Section 5 under the heading Transferring Files To & From the RuggedReader.

TIP: *Use Win-Situ Sync to copy TROLL data files from the RuggedReader. See details in Section 6.*

Backing up to a CF or SD card

Use File Explorer on the RuggedReader. See the steps earlier in this section.

5 USING ActiveSync®

The Getting Started section of this manual explained how to create an ActiveSync connection between your RuggedReader and your desktop computer. This section describes these ActiveSync tasks:

- Reconnecting
- Exploring the RuggedReader from a desktop computer
- Transferring files to and from the RuggedReader

TIP: *Microsoft ActiveSync version 4.1 or later is required to connect to the RuggedReader. This is supplied on the Getting Started CD. See installation instructions in Section 2 of this manual.*

RE-ESTABLISHING A CONNECTION

To re-establish an ActiveSync connection, follow these steps:

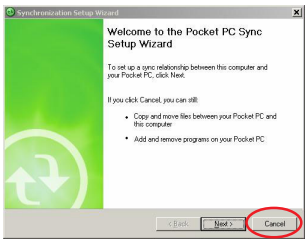
1. If you plan to charge the RuggedReader while it is connected in ActiveSync, plug the wall charger into the RuggedReader now.
2. Plug the USB Client end (mini B) of the USB communications cable into your RuggedReader.
3. Plug the USB Host end (full size A) into your desktop computer.
4. ActiveSync automatically detects the device.

USB Client (mini B)

TIP: If your device has trouble connecting, check firewall settings, remove laptop from docking station if attached, check the Microsoft website for Windows Mobile/Active Sync issues.

a. If you have not connected before or connected as a Guest, the Pocket PC Sync Setup Wizard is displayed. Do one of the following:

- To connect as a Guest (recommended), click Cancel. You are now connected as a Guest.
- To set up a full synchronizing partnership, click Next and select the items to synchronize (DO NOT INCLUDE Files and Notes)



b. If you created a full synchronizing partnership the first time you connected, ActiveSync synchronizes the items you selected.

A guest connection is a temporary relationship with a desktop computer. Each time the device connects to the desktop, you need to set it up as a guest by cancelling the Pocket PC Sync Setup Wizard.

If Win-Situ Sync is installed on the desktop PC, it may launch automatically when ActiveSync detects the connection. You can disable this automatic launch if you want. See Using Win-Situ Sync in Section 6.

EXPLORING THE RUGGEDREADER FROM THE DESKTOP COMPUTER

You can explore and manipulate files on the RuggedReader from the desktop computer using ActiveSync. To explore the RuggedReader, follow these steps:

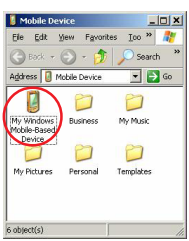
1. Connect the RuggedReader to the desktop and re-establish an ActiveSync Guest connection or partnership.

   Once connected, the Rugged Reader acts like a new drive called “Mobile Device” on the desktop computer.

2. To access the new “Mobile Device” drive (RuggedReader) from the desktop computer, click Tools > Explore Device in the ActiveSync window on your desktop computer.

   A list of folders appears, similar to File Explorer.

Double-click on My Windows-Mobile Based Device to see the folders on your RuggedReader.



From the list of folders, you can cut, copy, rename, and delete files, and you can transfer files to the desktop computer. See the following page for details.

TRANSFERRING FILES TO & FROM THE RUGGEDREADER

TIP: Win-Situ Sync can automatically synchronize data files from In-Situ's RuggedReader applications to the Win-Situ data folders on your desktop PC. Use the "manual" method described here to transfer files created in other applications, or if Win-Situ Sync is not available.

You can copy or move files between the RuggedReader and a desktop computer using ActiveSync. File transfer is done **from the desktop computer side**.

To transfer files **from** the RuggedReader **to** the desktop computer:

1. Connect the RuggedReader to the desktop and re-establish an ActiveSync Guest connection or partnership.
2. In the ActiveSync window on your desktop computer, click the Explore icon on the toolbar or select Explore Device from the ActiveSync Tools menu.

3. On the desktop computer, open My Computer or Windows Explorer.

TIP: As an alternative to cut/paste, you can drag and drop files and folders between the windows.

4. In the ActiveSync window, navigate to the file(s) or folder(s) you want to copy or move, select them, right-click, and select Copy or Cut from the pop-up menu.
5. In My Computer or Windows Explorer on the desktop computer, navigate to the folder where you want to place the files, right-click on a blank area of the folder and select Paste from the pop-up menu.

To transfer files **to** the RuggedReader **from** the desktop computer, follow steps 1 through 3. Then

- In Step 4, navigate to and select files on the desktop computer,
- In Step 5, switch to the ActiveSync window, navigate to the folder where you want to put the files, drag or paste onto the RuggedReader.

6 USING IN-SITU SOFTWARE

Control software for In-Situ instruments is pre-installed, licensed, and ready to run on your new RuggedReader.

For this Instrument	Use this Program
Level TROLL®, Aqua TROLL®	Win-Situ® Mobile
Multi-Parameter TROLL® 9500, Multi-Parameter TROLL® 9000, miniTROLL®	Pocket-Situ 4
T506 Total Dissolved Gas probe	TDG Logger

TIP: *Win-Situ Mobile talks to Level TROLLs and Aqua TROLLs. Pocket-Situ 4 talks to Multi-Parameter TROLLs and miniTROLLs.*

USING WIN-SITU® MOBILE

Win-Situ Mobile communicates with Level TROLLs and Aqua TROLLs. A brief overview of the software is presented here. If you need help, refer to the Win-Situ Mobile Quick Start included with your RuggedReader.

Connect the Hardware

Connect the Level TROLL or Aqua TROLL to the RuggedReader's 9-pin serial port (see the RuggedReader Quick Start guide).

Launch the Software

TIP: For convenience in launching Win-Situ Mobile, you can assign it to one of the keypad buttons. See the procedure in Section 3.

Press the power button . Tap Start to display the Start menu.

Tap Programs > Win-Situ Mobile . The program launches and displays the functional area called "My Data"

Connect to the Device

Tap the Connect button

TIP: If the program launches in "demo" mode, you can activate it with the license key and activation code from your In-Situ License Agreement. Or contact In-Situ Technical Support at 1-800-446-7488.

When connected, focus shifts to the functional area called "Home." A real-time reading of each supported parameter is displayed. Readings update automatically while the **Read** button is pressed.

= Device not connected

= Device connected

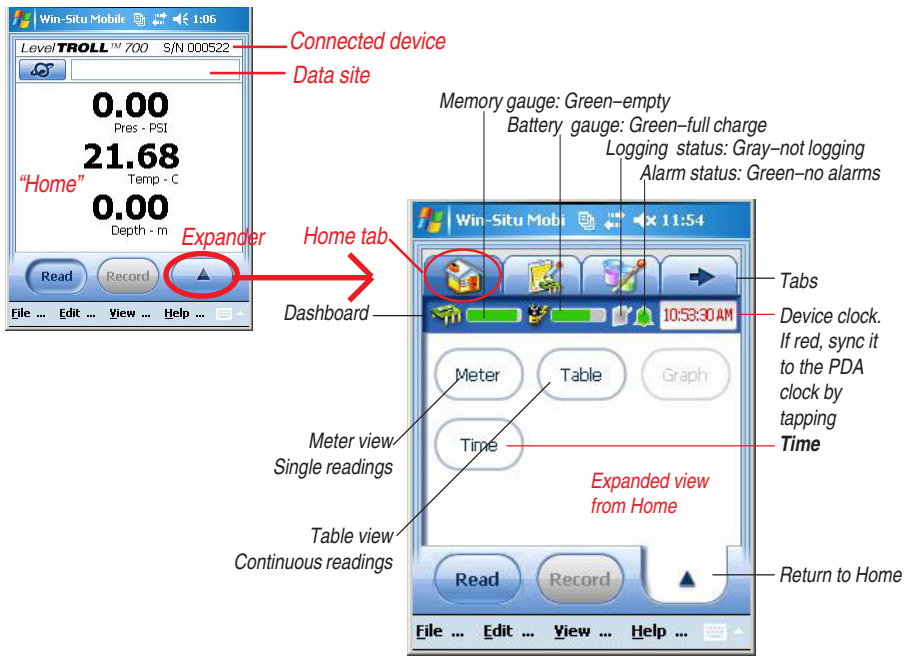
= Read button pressed (default)

= Read button not pressed

The following page introduces the buttons and functions in the Win-Situ Mobile Home screen.

Win-Situ Mobile, Functions from "Home" Tab

Note the all-important Expander button. It expands your view of available functions on all tabs



Set the TROLL's Clock

Set the device clock before logging: From Home, tap this sequence:

→ **Time** button → **Sync** button → →

Add a Data Site

= *Expander*

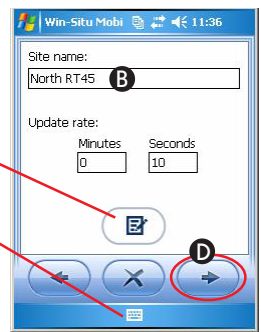
= *OK*

= *Next*

Data logs are organized and filed by the **Site** where the data were collected. The first thing you will be asked for in a log configuration is a site name. If a default site is provided, it may be used. But to clearly identify the place where data were logged, enter a new site, like this:

A File menu > New Site, tap the **New** button

B You are prompted for a Site name. There are 2 keypads you can use to enter text:
cellphone-type keypad
standard keypad



C Key in a short identifying name, then tap OK or to close the keypad

D Accept the default update rate, tap next

E In the next screen, enter site coordinates if you want, or tap OK to finish

F When the new site is shown again, tap OK

G When the Home tab returns to the screen, tap the site button , select the new site, tap OK. Your new site is now shown in the Home tab and is ready to use in logs.

Set up a Data Log

A Tap View menu > Logging to go to the Logging tab.

B At the Logging tap, tap the Expander button .

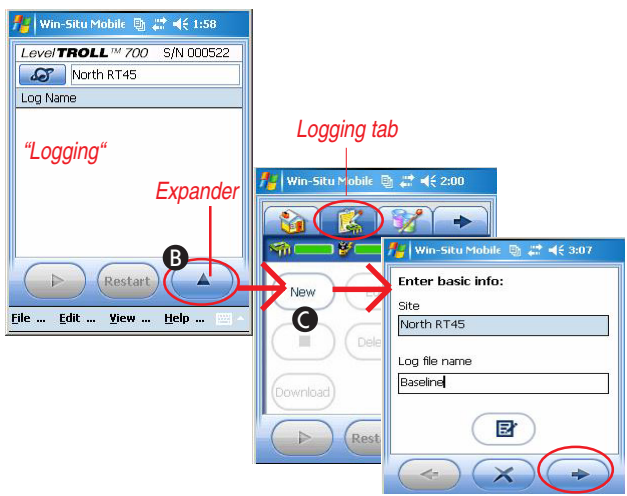
C In the Expander, tap the **New** button. The logging setup wizard starts. Follow the steps in the wizard, tapping Next to continue in each screen. For help on the prompts, see the Win-Situ Mobile Quick Start included with your RuggedReader.

At the end of the Logging Setup Wizard, a summary of the log setup is shown. Tap OK to write the log to the device.

= *Expander*

= *OK*

= *Next*



= Manual Start log

= Scheduled Start log

= Running log

Start the Log

A Scheduled log starts at its programmed time.

To start a Manual log: Tap View menu > Logging, tap the log, tap Start.

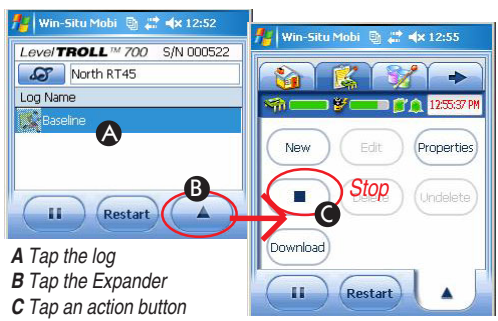
You can safely disconnect from the RuggedReader now.

Download/View the Log

Tap View menu > Logging, tap the log, tap the Expander, tap **Download**. To view the data, select Yes at the end of the download. In My Data tab, tap **View**.

Stop the Log

Tap View menu > Logging, tap the log, tap the Expander, tap Stop



A Tap the log
B Tap the Expander
C Tap an action button

Exit Win-Situ Mobile

When you're ready to exit Win-Situ Mobile, tap File menu > Exit.

USING POCKET-SITU 4

TIP: Pocket-Situ 4 talks to Multi-Parameter TROLLs and miniTROLLs.

If you've used Win-Situ® 4 to communicate with your TROLL 9500, miniTROLL, or TROLL 9000, you already know how to run Pocket-Situ! If you need help, refer to the Win-Situ 4/Pocket-Situ 4 user's guide on the In-Situ Software/Resource CD. A brief overview is given here.

Connect the Hardware

Connect the instrument to the RuggedReader's 9-pin serial port (see the RuggedReader Quick Start guide).

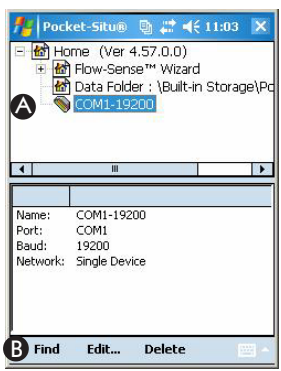
TIP: If the program launches in "demo" mode, you can activate it with the license key and activation code from your In-Situ License Agreement. Or contact In-Situ Technical Support at 1-800-446-7488.

Launch the Software

Press the power button on the RuggedReader. Tap Start to display the Start menu. Tap Programs > Pocket-Situ 4

On your first connection, follow the Connection Wizard to set up the COM port. Select a **Direct** connection to **One** device on **COM1** at **19200** baud.

"Find" the TROLL



A Tap the COM port.

B Tap **Find**. Pocket-Situ connects: First, the TROLL appears in the Navigation tree. Then Pocket-Situ retrieves device information. This can take a moment for an MP TROLL.

After the connection is made, the TROLL is shown in the Navigation tree with all device information.

If you are prompted to upgrade the device firmware, do so.

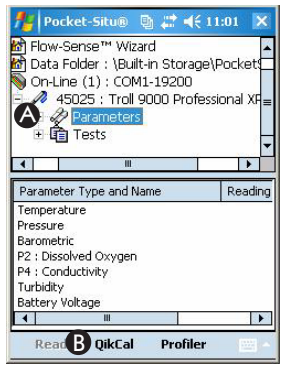
Set the TROLL's Clock

Select the TROLL in the tree and tap **Edit**, then **Clock** to synchronize the device clock to the RuggedReader clock.

Calibrate Water Quality Sensors

A Select **Parameters**

B Tap **QikCal**



Read Parameters

single reading:

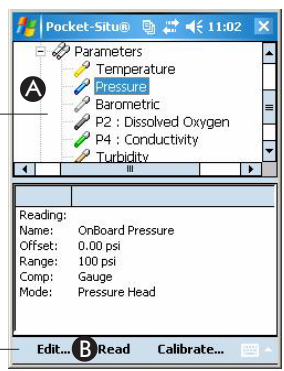
A Select any parameter

B Tap **Read**

Continuous readings (profiling):

A Select **Parameters**

B Tap **Profiler**



Log Data

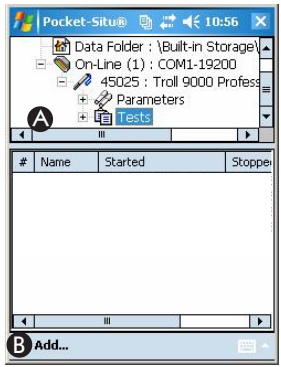
First, set up a test:

A Tap **Tests**

B Tap **Add**

C Follow the Wizard

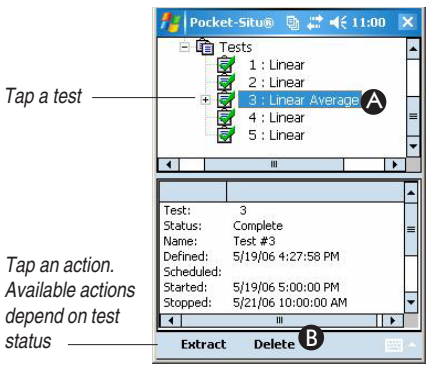
When finished, the test appears in the Navigation tree.



To start, stop, extract (download/view), or delete a test

A Tap a test

B Tap an action



Exit Pocket-Situ

When you're ready to exit Pocket-Situ:

Scroll to the top of the Navigation tree, tap **Home**

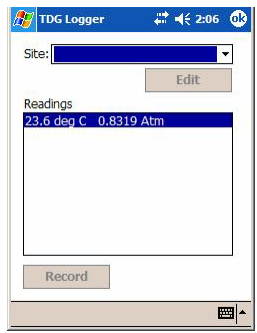
Tap **Exit**

USING TDG LOGGER

This application can display and log total dissolved gas and temperature readings from In-Situ's T506 TDG probe.

1. Connect the T506 to the RuggedReader's 9-pin serial port.
2. On the RuggedReader, tap Start > Programs > TDG Logger.

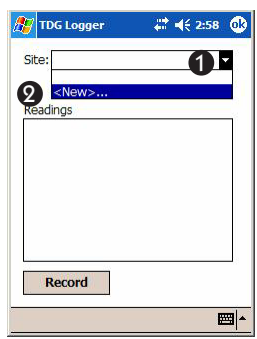
   The TDG Logger application will launch, and in a moment device readings will be displayed. Allow a few minutes for the readings to stabilize.



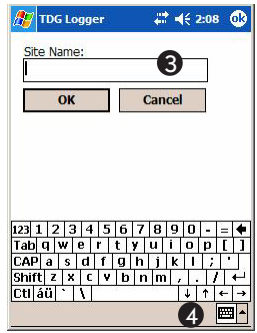
To record (log) readings, you must first specify a site. The Record button is dimmed out (unavailable) until a site is entered.

To enter a site:

1. Tap the down arrow beside the site box.
2. Select <New>.



3. Tap to put the cursor in the Site Name box.



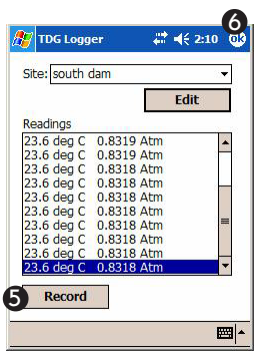
4. Tap the keyboard symbol and enter a site name.

   Tap OK when finished.

5. Tap the Record button to log readings.

6. Output will be logged until you tap OK to exit TDG Logger, or disconnect the probe.

   Readings will be logged to a .txt file on the RuggedReader (Built-In Storage \ TDGLogger) with the same name as the site. For the example here, use the File Explorer to navigate to My Device \ Built-In Storage \ TDGLogger \ south dam.txt.



TRANSFERRING FILES FROM THE RUGGEDREADER TO A DESKTOP/LAPTOP PC

Insure the following are installed on your desktop/laptop PC:

- Microsoft ActiveSync
- Win-Situ 5 for Level TROLL Aqua TROLL, and/or
- Win-Situ 4 for TROLL 9500, TROLL 9000, miniTROLL

Using Win-Situ® Sync (Automatic Transfer)

Win-Situ Sync can do the following on every ActiveSync connection (this is the default), or manually any time it is launched:

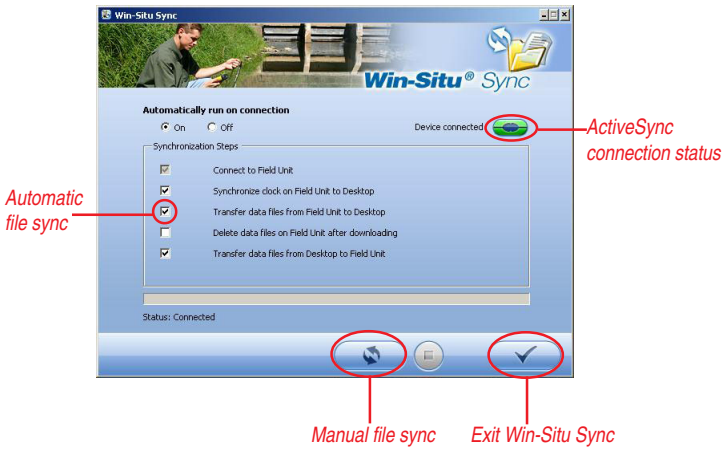
- Pull log data from Win-Situ Mobile on the RuggedReader to Win-Situ 5 on the desktop
- Pull log data from Pocket-Situ 4 on the RuggedReader to Win-Situ 4 on the desktop
- Pull log data from TDG Logger on the RuggedReader to MyDocuments \ TDGLogger on the desktop
- Optionally delete these files from the RuggedReader after the transfer
- Synchronize the RuggedReader time with the PC
- Push selected data files from Win-Situ 5 to Win-Situ Mobile
- Push selected Low Flow and data files from Win-Situ 4 to Pocket-Situ 4

TIP: If Win-Situ Sync is not available, ActiveSync may be used to manually transfer the files. See the following page.

1. Install Win-Situ Sync from the In-Situ website at www.in-situ.com (click on Downloads), or from the In-Situ Software/Resource CD.

2. When installed, the program will launch on ActiveSync connection. If the utility does not start automatically, briefly disconnect and then reconnect the USB cable. ActiveSync starts, and Win-Situ Sync begins to synchronize.

Application defaults are as shown below (you can change them). Progress is tracked as the steps are completed.



Using Microsoft ActiveSync (Manual Transfer)

If Win-Situ Sync is not available, ActiveSync can be used to transfer files manually from the RuggedReader to the desktop. Follow the procedure in Section 5, Transferring Files To & From the RuggedReader.

After the Transfer (either method)

To view the data, launch Win-Situ 5 or Win-Situ 4 on the desktop.

In the data area, navigate to and select the log file or test file.

To export to spreadsheet format, select File menu > Export to CSV or Export to Excel.

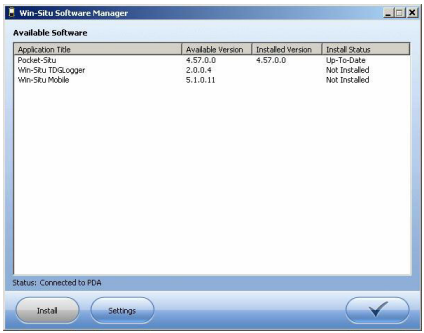
REINSTALLING THE IN-SITU SOFTWARE

TIP: *If possible, we recommend you re-establish an ActiveSync connection before downloading software. This simplifies installation.*

If you need to re-install the In-Situ software, follow these steps. Software may be installed from the In-Situ Software/Resource CD or the Downloads section of the In-Situ website at www.in-situ.com.

1. Do one of the following:
   - Insert the In-Situ Software/Resource CD in the CD drive of your desktop/laptop computer. (If the menu does not display automatically, choose Run from the Windows Start menu and type D:\ISISoftwareCD.html, where *D* is your CD-ROM drive letter.) Select Win-Situ Mobile or Pocket-Situ 4. Click on Setup. Follow the instructions to install the desktop utility, Win-Situ Software Manager, to your local hard drive. OR
   - Go to www.in-situ.com, click on Downloads, then on Software. Click the Win-Situ Mobile or Pocket-Situ 4 link and follow the instructions to install the desktop utility, Win-Situ Software Manager.
2. When prompted, launch the Software Manager utility. (You can also launch it from the Windows Start menu > Programs > In-Situ Inc folder.)
3. Connect to the RuggedReader via ActiveSync (if not already connected).

The Software Manager utility displays the available and current versions of software and the status of each.



4. Select the software to add to the RuggedReader and press **Install**. The selected software will be installed on the RuggedReader.

TIP: *If the software launches in "demo" mode after re-installation, you can activate it with the License Key and Activation Code from the In-Situ License Agreement shipped with your RuggedReader. Or contact In-Situ Technical Support at 1-800-446-7488.*

Installing from a CAB File

You can install Win-Situ Mobile or Pocket-Situ 4 onto the RuggedReader without an installation utility if you have the application's install file on your desktop/laptop computer as a "CAB" (a form of compressed application).

1. On the desktop: Connect in ActiveSync and drag the CAB into any folder on the RuggedReader. (See the procedure Transferring Files To & From the RuggedReader in Section 5.)

2. On the RuggedReader: Use File Explorer to navigate to the CAB file and tap to run it. (See Exploring Files in Section 4.) This installs the application.

The CAB file remains on the RuggedReader for re-installation of the application, if needed.

7 CARE AND MAINTENANCE

STORING THE RUGGEDREADER AND BATTERY PACKS

Storage Temperature Range

The RuggedReader can be stored at temperatures between -22° F and 140° F (-30° C to 60° C). If possible, store your RuggedReader indoors. Doing so helps protect your device from extreme temperatures and helps it run efficiently at startup.

Storing for Less than Two Weeks

If you plan to store your device for less than two weeks, suspend the device by following these steps:

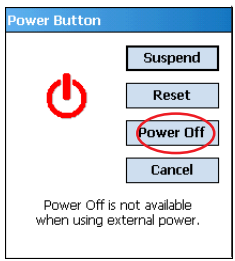
1. As a precaution, back up your data onto a desktop computer or an external storage device such as a CF or SD card.
2. Leave the battery pack in the device.
3. If you plan to store the device longer than a few days, it is a good idea to leave the device connected to the wall charger to make sure the battery pack is fully charged.
4. Suspend the device (press the power button briefly and release).

Storing for More than Two Weeks

To store the device safely for longer than two weeks, follow these steps:

1. Back up your data.
2. Tap the Applications Manager icon to close all running programs.
3. Charge the battery pack to full capacity (100%).
4. Unplug the wall charger.
5. Press the power button until the power button menu appears.
6. Select Power Off from the menu.
7. Place the RuggedReader in a safe, dry place.

TIP: The device cannot be powered off while it is plugged into the wall charger.



Taking the RuggedReader out of Extended Storage

The battery pack discharges slightly during extended storage periods. When you are ready to use your RuggedReader again, follow these steps so your battery pack runs efficiently:

1. Plug the RuggedReader into a charger.
2. Charge the battery pack.

   You can check the battery power status by tapping on the battery icon at the top of the screen.

PROTECTING AGAINST MECHANICAL SHOCK

The RuggedReader is designed for protection against mechanical shock. It can be dropped from up to five feet onto concrete. Shock protection is guaranteed only when the top cap and main piece are securely in place.

SAFELY USING THE BATTERY PACK

- Use only battery packs approved for use with this device.
- Do not store or leave your device or battery pack near a heat source such as a radiator, fireplace, stove, electric heater, or other heat-generating appliance or otherwise expose it to temperatures in excess of 140° F (60° C).
- Do not try to open the battery pack.
- Do not carry a battery pack in your pocket, purse, or other container where metal objects (such as car keys or paper clips) could short-circuit the battery pack terminals.
- Charge the battery pack only in the RuggedReader.
- Charge the battery pack in temperatures between 32°F and 95°F (0° C and 32° C).
- Keep the battery pack contacts clean. If they get dirty wipe them off with a soft cloth.
- Dispose of the battery pack properly. See Disposing of the RuggedReader and Batteries.

Use only the AC adapter shipped with your RuggedReader. Damage caused by the use of third-party converters is not covered by the warranty.

SAFELY USING THE WALL CHARGER

- Use only wall chargers intended for the RuggedReader. Using any other external power source can damage your product and voids your warranty.
- Wall chargers are designed for indoor use only. Avoid using the wall charger in wet, outdoor areas.
- Unplug the wall charger from the power outlet when it is not being used to charge the device.

REPLACING THE BATTERY PACK

To replace the battery pack, follow these steps:

CAUTION: The device only stays on for about five seconds without a power source. ***Always suspend your device before replacing the battery pack.***

1. Close all running programs.
2. **Suspend the device** (press the power button briefly and release)**.**
3. Slowly unhook and lift up the bottom hand strap latch. CAUTION: Do not let the hand strap hook hit the display.

4. Press on the battery door about ¼" beneath the door latch and slide the door latch to the right.

5. Remove the battery door.

   The door may make a noise while it is being removed, caused by the door scraping against the battery. The sound is normal and no damage is done when you hear this sound.

6. Remove the old battery pack.
7. Make sure the battery contacts of the replacement battery pack are clean and dry.

8. Insert the replacement battery pack, lining up the battery contacts with the RuggedReader contacts.

9. Insert the tabs on the bottom of the battery door into the case slots. Close the battery door, making sure the door latch is in the unlock position as the door meets the case.

10. With the door latch in the unlock position, press on the battery door just below the door latch and slide the latch to the left to lock it.

11. Reattach the hand strap.

Note: If you remove the battery from your device and the device is still attached to the wall charger, the battery icon still appears on the display. When the battery is replaced, charging resumes.

For instructions on charging a battery, see Step 2 in Section 2. For guidelines on caring for your battery pack, see Safely Using the Battery Pack earlier in this section.

USING THE RUGGEDREADER IN EXTREME TEMPERATURES

The RuggedReader operates from -22° F to 122° F (-30° C to 50° C). To help your device function properly, store it device indoors when possible.

Other tips:

- If the RuggedReader is exposed to temperatures below 14° F (-10°C), the device may slow down or its display backlight may become dim to reduce the load on the battery power.
- Extremely low or high temperatures may prevent the battery pack from charging. Charge the battery pack in temperatures between 32°F and 95°F (0° C and 32° C).

Always make sure the top cap is on and the screws are fitted tightly before you begin cleaning your RuggedReader.

CLEANING THE RUGGEDREADER

CAUTION: Long exposure to the following may damage your device:

· pine oil
· oil-based paint
· automotive brake cleaner
· isopropyl alcohol
· carburetor cleaner

TIP: *Try to avoid prolonged direct exposure to salt water, mud, or debris. Rinse the Rugged Reader in clean running water, shake or wipe to remove moisture, especially from the connectors. Note that the battery door may trap water or dirt.*

If the device is exposed to one of these, wipe it off with a mild cleaning solution. After exposure to salt water, rinse in clean water and dry.

Touchscreen

To clean the touchscreen, follow these steps:

1. Press the power button briefly to suspend the device.
2. If you applied a protector to the touchscreen, carefully remove it.

3. Apply water or a mild cleaning solution such as Windex or 409 to a microfiber cloth and gently wipe off the touchscreen. Other approved cleaners include Citrus Wonder and Citrus All Purpose Cleaner. CAUTION: Do not use tissues, paper towels, or harsh cleaning agents to clean the touchscreen.

4. If you used a cleaning solution, rinse the touchscreen with water and dry it with a microfiber cloth.

5. Press the power button to resume the device.

Case Overmolding

Clean the rubber-like overmolding that surrounds the case with a cloth and a mild cleaning solution like 409 or Citrus Wonder. Rinse with water and wipe dry.

Communications Module

This is the area housing the USB port, DC jack, and serial port. To clean the communications module, run it under a faucet. Use a soft toothbrush or toothpick to clean out any remaining dirt. Shake or blot to dry.

Speaker and Microphone

If debris gets in the speaker or microphone, use a soft bristle brush to remove it. Do not insert any object into the speaker or microphone holes.

Stylus Slot

Rinse the stylus slot with water. Shake to remove the excess.

Display Bezel

If the edge under the bezel gets dirty, use a microfiber cloth to remove the debris. Do not remove the bezel.

REPAIRING THE RUGGEDREADER

Do not attempt to service the RuggedReader yourself. *This action voids the warranty.*

If the RuggedReader is in need of repair, contact In-Situ Inc. for a Return Materials Authorization (RMA) number as described in Section 1. Do not attempt to service the device yourself. This action voids the warranty.

DISPOSING OF THE RUGGEDREADER AND BATTERIES

Do not dismantle your RuggedReader. To recycle your RuggedReader, return it to your distributor.

The lithium-ion battery packs for your RuggedReader are recyclable. Avoid placing them in the trash or the municipal waste system.

To find the nearest battery recycling center in the USA, visit the Rechargeable Battery Recycling Corporation's website at www.rbrc.org/call2recycle/index.html or call 1-800-8-battery.

ENVIRONMENTAL HAZARDS

The RuggedReader contains no mercury or cadmium.

8 TROUBLESHOOTING

Answers to issues not addressed here may be available through on-device help or the Windows Mobile website from Microsoft at www.Microsoft.com/mobile. If you cannot find answers to your questions through these methods, contact In-Situ Inc. as described in Section 1.

Problem

The touchscreen does not respond accurately to stylus taps.

Solutions

- Try recalibrating the touchscreen. (See Calibrating the Touchscreen in Section 3.)
- If the device is not responding to stylus taps at all and you are on the Today screen, look to see if the device is locked. To unlock the device, press the “Unlock” soft key on the screen.
- If the device is unlocked but the stylus continues to respond inaccurately, close all open programs and reset the device. (Press ⏻ until the power button menu appears, choose Reset.)

Problem

During calibration, the screen does not respond to stylus strokes or does not complete the calibration process.

Solutions

Check to see if there is something stuck underneath the bezel. Use a microfiber cloth to remove any excess debris. Also check to see if there is damage or wear on any area of the touchscreen. In case of damage, contact In-Situ Inc.

Problem

The RuggedReader runs slowly.

Solutions

It is possible that you have too many programs running. Try closing any programs you are not using. To view and close running programs:

1. Tap on the Applications Manager icon .
2. Tap on the Running Programs tab in the Applications Manager window.
3. Select a program and tap Stop. This closes the program.

Problem

My RuggedReader quickly drops its ActiveSync connection to my desktop computer.

Solutions

Firewall programs sometimes cause ActiveSync connection problems. In these cases, the firewall sees the RuggedReader as a strange and possibly hostile computer and prevents the device from connecting to the desktop computer. To allow the mobile device to connect to your desktop computer, follow these steps:

1. Use the serial cable to connect your device to the desktop computer. Follow the ActiveSync wizard instructions.
2. If your firewall application brings up a warning message asking whether you want to allow a connection, check the option to allow the connection and click "Yes." Note: If the warning message above does not appear when you try to connect to the desktop computer but the device is still being dropped, contact your system administrator.

For other ActiveSync issues, visit www.Microsoft.com/Windowsmobile/help/ActiveSync/default.mspx.

Problem

The RuggedReader locks up.

Solution

To reset the device, press and hold the power button ⏻ for 10 seconds or until the screen goes dark. The device turns on again after a few seconds.

APPENDIX A: SPECIFICATIONS

Operating System	Microsoft® Windows Mobile® 5.0
Processor	Intel® XScale® PXA270, 520 MHz
Memory	64 MB low-power RAM
Storage	Internal solid-state 128 MB Flash
Display	3.5" (89 mm) QVGA active matrix color TFT transflective (outdoor) viewable) LCD with LED backlight; 240 x 320 pixels
Touchscreen	Sealed, resistive, pressure sensitive
CF and SD Card Slots	Compact Flash (Type I or Type II), Secure Digital (SD or SDIO); CF card slot provides 3.3 volts; user accessible, sealed
Keyboard	Four-way directional button, standard key functions, LED backlit keys
Physical	6.5" length x 3.5" wide x 1.7" thick (165 x 89 x 43 mm), 17 oz (482 g); magnesium case with elastomer overmold
Operating Temperature	-22° to 122° F (-30° to 50° C)
Storage Temperature	-22° to 140° F (-30° to 60° C)
IP67	Sealed rating, waterproof and dustproof
MIL-STD-810F	Water, humidity, sand and dust, vibration, altitude, shock, high temperature, low temperature, temperature shock
Shock Absorbency	Multiple drops onto concrete from 5 ft (1.5 m) through temperatures ranging from -22 to 122° F (-30 to 50° C)

Batteries	Intelligent, rechargeable Li-Ion battery pack, 14 W-hr (nom.), operates for more than 20 hours on one charge, charges in 3 to 5 hours, internal circuitry sealed against moisture when battery is removed, change without tools
Communications Module	9-pin D-sub connector, USB Host (Mini A), USB Client (Mini B), 12 VDC jack for power input and battery charging; modular; field replaceable
Wireless Communication options	Bluetooth-supported with CF or SD Bluetooth card, Wi-Fi supported, wireless cellular modem
Internal Clock	Battery-backed real time clock keeps time and date when battery is removed
Development Environment	SDK for Windows Mobile for Embedded Visual C++ version 4.0 and Visual Studio 2005
Enunciators	External power/charge LED and notification LED; other enunciators on system tray
Standard Accessories	Rechargeable Li-Ion battery, wall charger (universal voltage, output 12V, 0.84A max.), USB sync cable, captured full-size stylus, hand strap, screen protectors, quick start guide, dashboard accessory pad, Microsoft Getting Started CD, In-Situ Software/Resource CD
Certifications	FCC Class A, European CE Mark
Software Included	Microsoft Internet Explorer® Mobile, Microsoft Office Mobile (Word Mobile, Excel® Mobile, PowerPoint® Mobile), Microsoft Outlook® Mobile (Inbox, Calendar, Contacts, Instant Messaging, Tasks, Notes, Spell Checker), Microsoft ActiveSync® 4.0 for desktop computer, Terminal Services Client, Microsoft Windows Media Player 10 Mobile, Calculator, games, Pictures and Videos (image and video viewer), Voice Recorder, Handwriting Recognition, Win-Situ® Mobile, Pocket-Situ 4, TDG Logger

9-PIN SERIAL PORT PINOUTS

Pin #	Description
1	Data Carrier Detect (DCD) Input
2	Receive Data (RCD) Input
3	Transmit Data (TXD) Output
4	Data Terminal Ready (DTR) Output
5	Ground (GND)
6	Data Set Ready (DSR) Input
7	Request To Send (RTS) Output
8	Clear To Send (CTS) Input
9	Ring Indicator (RI) Input

APPENDIX B: CERTIFICATIONS & REGULATORY INFORMATION

REGULATORY INFORMATION

U.S.A.

This equipment has been tested and found to comply with the limits for a Class A 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 user's guide, may cause harmful interference to radio communication. 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.

DECLARATION OF CONFORMITY

According to ISO/IEC Guide 22 and EN 450 14

Manufacturer's Name:	Juniper Systems, Inc.
Manufacturer's Address:	1132 West 1700 North Logan, UT 84321 USA

Declares, under our sole responsibility, that the product:

Product Name:	Archer Field PC
Model Number:	1.01
Product Options:	ALL

Conforms to the following Product Specifications:

- Emissions Testing EN 55022
- Immunity Testing EN 55024
- Electrostatic Discharge Immunity (IEC 61000-4-2)
- Radiated Immunity (IEC 61000-4-3)
- Electrical Fast Transients (EFT) Immunity (IEC 61000-4-4)
- Surge Immunity (IEC 61000-4-5)
- Conducted Immunity (IEC 61000-4-6)
- Power Frequency Magnetic Field Immunity (IEC 61000-4-8)
- Power Quality (dips and sags) (IEC 61000-4-11)

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.

APPENDIX C: PROGRAMS & SETTINGS

APPLICATIONS IN THE PROGRAMS MENU

The Programs menu lists applications installed on your RuggedReader. To access the Programs menu, tap Start > Programs. Applications in the Programs menu are described below in the order they appear.

TIP: *Many programs provide on-device help. To use it, open the program, then tap Start > Help.*

Games. Bubble Breaker and Solitaire.

ActiveSync. Synchronizes your RuggedReader with a desktop or laptop computer. You can also use ActiveSync to explore your RuggedReader and synchronize your contacts, calendar, e-mail, and more.

Calculator. Simulates a calculator.

Download Agent. Automates the process of downloading RuggedReader software updates from the Internet directly to your RuggedReader. If you are connected through ActiveSync to a PC with an Internet connection or if you are connected to the Internet through a modem card such as a dial-up, Ethernet, Wi-Fi, cellular, or Bluetooth card, Download Agent automatically displays available updates to the RuggedReader.

Excel Mobile. Lets you view and create charts. Compatible with Microsoft Excel— open and edit an Excel chart from your desktop computer using Excel Mobile on your RuggedReader.

File Explorer. Lets you view, expand, and collapse the RuggedReader directory folders so you can locate files.

Modem Link. Allows you to connect your RuggedReader to the Internet or computer network through Compact Flash (CF) and Secure Digital (SD) adapters (e.g., 56K dial-up modem or Ethernet adapters).

Notes. Lets you create personal notes or record voice clips. If you don't see the Recording toolbar, tap Menu > View Recording Toolbar.

Pictures & Videos. Lets you preview a picture or video without opening it.

Pocket MSN. Gives you quick access to your MSN Hotmail Inbox and your MSN Messenger account.

Pocket-Situ 4. Installed by In-Situ Inc.

PowerPoint Mobile. Lets you view or rehearse PowerPoint presentations built on a desktop computer.

Search. Searches for files or programs on the RuggedReader.

Tasks. Stores and tracks new and existing tasks.

Terminal Services Client. Lets you log on to a PC running Terminal Services or Remote Desktop and use all of the programs available on that PC from your mobile device.

TDG Logger. Installed by In-Situ Inc.

Win-Situ Mobile. Installed by In-Situ Inc.

Word Mobile. Creates and edits documents with graphics while maintaining document formatting. Compatible with Microsoft Word—open and edit a Word file from your desktop computer using Word Mobile.

Programs Installed by In-Situ Inc.

Pocket-Situ 4. Control software for MP TROLL 9500s, miniTROLLs, and MP TROLL 9000s.

TDG Logger. Displays and logs readings from In-Situ's T506 Total Dissolved Gas probe.

Win-Situ Mobile. Control software for Level TROLLs and Aqua TROLLs.

ACCESSING PROGRAMS ON THE GETTING STARTED CD

In addition to installing ActiveSync, the Getting Started CD that came with your RuggedReader provides links to purchase additional programs from Microsoft. If you wish to take advantage of these, insert the Getting Started CD into your desktop computer, select "Add new programs to my device," and follow the instructions. For further help, visit Microsoft's website, www.Microsoft.com/mobile.

SETTINGS

To access settings, tap Start > Settings. The Settings window appears, showing three menu tabs: Personal settings, System settings, and Connections settings. The table below shows the location of specific settings.

To change settings on your device: Choose one of the tabs at the bottom of the Settings screen, tap on the setting you want to change, adjust the setting controls and tap OK.

Settings

Setting	Personal settings	System settings	Connections settings
About		X	
Backlight		X	
Beam			X
Bluetooth			X
Buttons	X		
Brightness		X	
Certificates		X	
Clock & Alarms		X	
Connections			X
Error Reporting		X	
Input	X		
Lock	X		
Memory		X	
Menus	X		
MSN options	X		
Network cards			X
Owner Info	X		
Power		X	
Regional Settings		X	
Remove Programs		X	
Screen		X	
Sounds & Notifications	X		
Today	X		

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