Itron

FC200

Getting Started Guide

D R A F T !

Identification

FC200 Getting Started Guide
TDC-0598-000d   9/16/04

Trademark Notice

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Use of This Device

This device is to be operated by properly trained personnel only.

Warning

It is important that only authorized Itron personnel attempt repairs on Itron equipment, as this might void any maintenance contract with your company. Unauthorized service personnel might be subject to shock hazard on some Itron equipment if removal of protective covers is attempted.

Suggestions

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Contents

Introduction

This document contains information to help you get started using your Itron FC200™ handheld computer.

For additional information, refer to the FC200's online help.

To open online help:

- Select **Windows logo > Help > Handheld Computer Help**.

You may also need to refer to some of the other documentation available for your FC200. This includes:

- *FC200 Desk Mount User's Guide*, which contains instructions for using and installing the FC200 Desk Mount, including notes on how to use USB communications.

- *FC200 Vehicle Mount User's Guide*, which contains instructions for using and maintaining the FC200 Vehicle Mount.

Unpacking the FC200 Computer

Make sure you have these items in your FC200 package:

- FC200 handheld computer
- AC power adapter
- Power cord
- 2 styluses
- Stylus tether
- Lithium-ion battery pack
- USB client cable — 26-pin to USB client
- Serial cable — 26-pin to 9-pin

Optional items:

- Comm module covers
- Ethernet cable — 26-pin to RJ45
- USB host cable — 26-pin to USB host

Getting Familiar with Your FC200

The following illustrations identify the main features of your FC200.

Microphone

Radio antenna connector

Audio in/out jack

Touch screen/LCD

Charge status LED

Custom status LED

Orange function key

Blue function key

Keypad

Power key

Speaker

Stylus

External antenna connector (optional)

Adjustable handstrap

Battery locking screws

Hand strap retaining clip
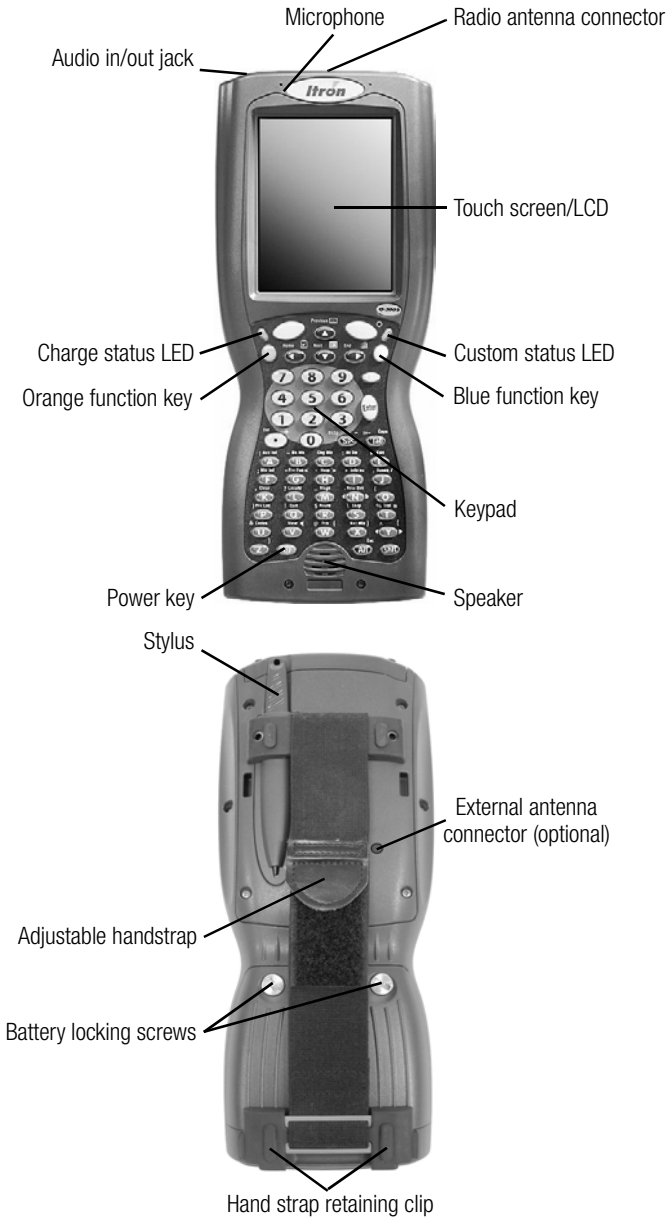
LED Status Indicators

The FC200 has two light-emitting diode (LED) status indicators located at the upper corners of the keypad. The LEDs light up when a particular function of the computer is active.

LED	Light	Description
Charge Status	Regular blinking green (one-second intervals)	Battery is charging.
	Steady green	Battery is fully charged.
	Irregular blinking green (irregular blink interval)	Charging error has occurred; contact an Itron customer service representative.
Custom Status	Alternating red/green blinks	iRescue is performing a backup. See "Using iRescue" on page 29.
	Red, green, or amber	May have customer-specific functions.

Communication Ports

The FC200 has two communication ports on the bottom of the computer (see picture below). Refer to documentation included with individual devices for details on connecting these devices to your computer.
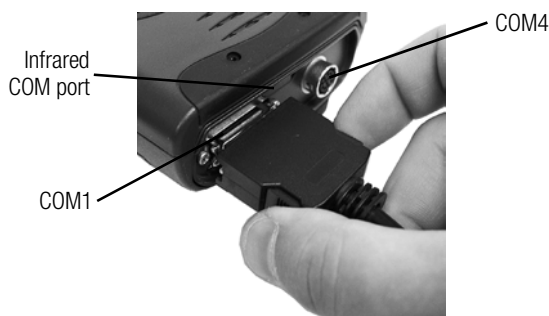
The following table lists the COM ports' capabilities.

COM1		COM4	Infrared COM port
• Power in • Serial COM		• Power in	• Infrared communications
• USB • Ethernet		• Serial COM	

Installing the Battery Pack

The FC200's lithium-ion (Li-Ion) battery is sealed in a separate bag during shipping. Remove the battery from its packing before installation.

To install the battery pack, follow these steps.

Step	Action
1	Remove the FC200's hand strap by holding the inverted handheld in one hand and gently pushing the elastic strap upward and away from the bottom.

2	Place the FC200 face down on a clean surface and insert the battery into the battery compartment. Press the top edge of the battery pack firmly to ensure that the power connector engages securely.

Step	Action
3	Tighten the two locking screws clockwise with a flat-bladed screwdriver or a coin.

4	Reattach the hand strap.

Controls

The FC200 is equipped with an alphanumeric keypad, cursor control keys, and special function keys. Other functions are available via the touch screen (see "Using the Stylus" on page 10 and "Entering Data" on page 11).

Orange function key

Blue function key

Alphanumeric keys

Shift key

Alt/Esc key

The **Orange** and **Blue** function (FN) keys are located at the upper-left and upper-right corners of the keypad. These provide access to the orange and blue characters and functions printed above each alphanumeric and cursor key.

To access the character or function shown above a key, follow these steps.

Step	Action
1	Press and release the appropriate function key.
2	Press the alphanumeric or cursor key with the desired character or function printed above it.

The following table summarizes the functions of the keypad's keys and key combinations:

Key	Default	Shft	Orange FN	Blue FN
A	a	A	|	
B	b	B	~	Break
C	c	C		
D	d	D	:	

Key	Default	Shft	Orange FN	Blue FN
E	e	E	#	
F	f	F	;	
G	g	G	"	<
H	h	H	'	>
I	i	I	*	Ins
J	j	J	,	/
K	k	K	.	
L	l	L	?	
M	m	M		
N	n	N	'	
O	o	O	(	
P	p	P	)	Pause
Q	q	Q	!	
R	r	R	$	Print Screen
S	s	S	\	Scroll Lock
T	t	T	%	=
U	u	U	&	
V	v	V		enter Volume Control*
W	w	W	@	{
X	x	X		}
Y	y	Y	^	[
Z	z	Z		]
1	1	!	F1	F11
2	2	@	F2	F12
3	3	#	F3	F13
4	4	$	F4	F14
5	5	%	F5	F15
6	6	^	F6	F16
7	7	&	F7	F17
8	8	*	F8	F18

Key	Default	Shft	Orange FN	Blue FN
9	9	(	F9	F19
0	0	)	F10	F20
.	. (decimal)	>	Del	+
Tab	Tab	Tab	Back Tab	Caps Lock
Ctrl	enter Control Mode	enter Control Mode	enter Control Mode	enter Control Mode
Spc	Space	Space	BkSp	-
right Yellow	Right Scan	Right Scan	Right Scan	Backlight
left Yellow	Left Scan	Left Scan	Left Scan	
Enter	Enter	Enter	Enter	Enter
▲	Up Arrow	Up Arrow	PgUp	
▼	Down Arrow	Down Arrow	PgDn	
▶	Right Arrow	Right Arrow	End	Start
◀	Left Arrow	Left Arrow	Home	
Alt	enter Alt mode	enter Alt mode	enter Alt mode	Esc
Pwr	Power/ Suspend	Power/ Suspend	Power/ Suspend	Power/ Suspend

*After entering volume control, press the up- and down-arrows to change volume.

Turning the Handheld On and Off

To turn the handheld on using external power, do one of the following.

• Plug it into an AC electric outlet using the provided AC adapter. Connect the adapter to the 26-pin COM port on the bottom of the unit.

  Note The AC adapter connector has spring-loaded clips that keep the adapter attached when the unit is in use. Press in both clip latches before attaching or removing the AC adapter to prevent damage to the clips.

OR

• Insert the handheld into an optional cradle.

The unit automatically powers on when external power is applied.

To turn off the handheld, press the power key, or select **Windows logo > Suspend**.

To turn the handheld on while using battery power, press the power key.

Note During initial power-up and after a hard reset, it takes about two minutes for the operating system to load. Then the software version momentarily appears, followed by the touch screen calibration screen. If the calibration screen does not appear, see .

Using the Stylus

The FC200 stylus is designed to be lightweight, comfortable to use, and gentle on the touch screen. It is stored in a sleeve on the back of the handheld.

To remove the stylus from the sleeve, do this.

• Press on the textured part of the stylus, and push it up and out of the sleeve.

Note Return the stylus to the sleeve when not in use. If you lose the stylus, use your finger tip to operate the touch screen until you can replace the stylus. Of course, a finger tip is less precise than the stylus and does not work as well.

WARNING! Do not use a ballpoint pen or other sharp-pointed object to operate the touch screen, and do not use excessive force when using the stylus—you could damage the screen's surface.

Replace your stylus when the tip shows wear, when your screen taps do not register easily, or when the stylus has been used daily for six months.

## Entering Data

You can enter data on the handheld in either of two ways:

• By pressing the appropriate keys on the keypad, using the arrow keys to move the cursor around the screen.

• By using the input panel. This appears automatically at the bottom of the screen in some applications when you tap a field requiring text entry, or you can open it by tapping the key-board icon in the taskbar.

To enter data using the input panel, follow these steps.

Step	Action
1	Display the input panel by: • Tapping the field in which you want to enter data OR • Tapping the keyboard icon at the bottom of the screen ().
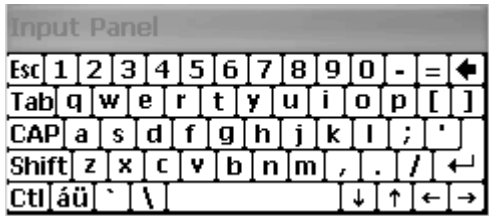
Step	Action
2	Enter the desired data by tapping the appropriate keys on the input panel. • To correct a mistake, tap **Backspace** (◀) to delete incorrect characters. • To display the shifted-character keyboard, tap **CAP**. • To enter accented characters, tap **áü** to display the accented-character keyboard. Tap **áü** again to return to the standard keyboard.
3	If the input panel blocks the part of the the window you are working with, use the stylus to drag the panel by its menu bar out of the way.
4	When you've finished using the input panel to enter data, tap the keyboard icon again to hide it, or your application may hide it automatically.

Resetting Your Handheld

If your FC200 locks-up or fails to operate, you may need to reset it. You can do this in two ways:

- **Soft Reset** A soft reset does not affect the operating system and no data loss occurs.

- **Hard Reset** A hard reset returns the handheld to its original configuration—any user-installed applications or data are lost.

WARNING! When you perform a hard reset, you lose the settings saved in the operating system, as well as all data stored in RAM. When you restart, you may have to reenter the time, date, and personal data and recalibrate your touch screen. Because of the extreme nature of a hard reset, you should consider it an emergency procedure only—use a soft reset instead, whenever possible.

To perform a soft reset, do this.

- Hold down the **Orange** function key and the **Power** key together for five seconds. The screen dims while the FC200 carries out the soft reset.

To perform a hard reset, do this.

- Hold down the **Orange** and **Blue** function keys and the **Power** key together for 10 seconds or until the boot-loader screen appears.

You may be able to restore your FC200 following a soft or hard rest using the iRescue program (see).

Calibrating the Touch Screen

The first time you turn on the FC200, it automatically runs the touch screen calibration program.

To calibrate the touch screen, follow these steps.

Step	Action
1	Remove the stylus from its sleeve at the rear of the unit and follow the on-screen instructions.
	Caution Do not use a ballpoint pen or other sharp-tipped object instead of the stylus—you could damage the touch screen.

Step	Action
2	When a cross-hairs icon (┼) appears on the screen, use the tip of the stylus to lightly tap the center of the cross-hairs.
	Note Be careful to accurately locate the tip of the stylus on the center of the cursor.
	The target moves to a corner of the screen.
3	Tap the stylus on the center of the target.
	The target moves to another corner.
	Repeat this step at each corner.
	When calibration is successful, the target vanishes.
4	Tap the screen once or press **Enter** to accept the calibration settings. Press **Esc** to cancel the calibration.

Note If you make a mistake calibrating the touch screen, you can run the calibration program again by selecting **Windows logo > Settings > Control Panel > Stylus**. Then select **Calibration > Recalibrate**. Recalibration is only necessary to increase the accuracy of a previously calibrated touch screen, or to adjust for "calibration drift" that may occur over time.

Recording Your Owner Information

It is recommended that you finish setting up your FC200 by setting your owner information, date, and time.

To set your owner information, follow these steps.

Step	Action
1	Select **Windows logo > Settings > Control Panel > Owner Properties**.

2	Press **Tab** to cycle through the fields, or tap the desired field. The input panel appears at the bottom of the screen (see "Entering Data" on page 11).
3	Use the input panel or the keypad to enter the desired information.
4	When you are finished, tap **OK** to save your owner information and exit.

To set the date and time, follow these steps.

Step	Action
1	Select **Windows logo > Settings > Control Panel > Date/Time**.
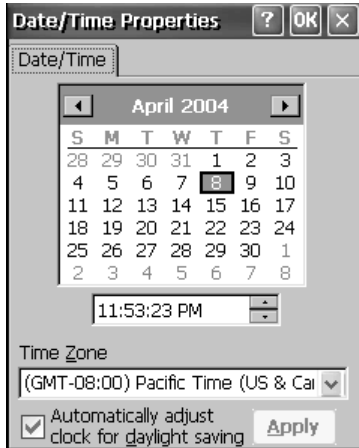
2	To set the time, tap the parameter you wish to change, such as the hour value, then use the numeric keypad to change the value.
3	To set the date, tap the month name and select the desired month from the pop-up menu. Then tap the desired day.
4	Select your time zone from the drop-down menu and check **Automatically adjust clock for daylight saving**, if appropriate.
5	When you are finished, tap **OK** to save your settings and exit.

Controlling the Screen Backlight

Several keypad combinations let you turn the screen backlight on and off and adjust backlight brightness. Control panel settings let you set the backlight timeout — the length of time the backlight remains turned on before it automatically goes off.

Yellow backlight key

Orange function key

7 key

Blue function key

o key

- To toggle the screen backlight on and off, press and hold the **Blue** function key while pressing the right **Yellow** (backlight) key.

- To increase backlight brightness, press and hold the **Orange** function key while you press the lowercase **o** key.

- To decrease backlight brightness, press and hold the **Orange** function key while you push **7**.

To set the backlight timeout, follow these steps.

Step	Action
1	Select **Windows logo > Settings > Control Panel > Display > Backlight**. **Note** The backlight timeout is enabled by default for both battery power and external power.
2	Select the desired time period from the drop-down lists for both battery power and external power.
3	Tap **OK** when finished.

Batteries

The FC200 uses a rechargeable lithium-ion (Li-Ion) battery pack as its main power source. The FC200 also has an internal backup battery that maintains the unit for up to 24 hours if the main Li-Ion battery is removed or depleted.

WARNING! *Do not* try to use any other power source—it may damage your handheld.

After you install a new Li-Ion battery pack, you should charge the new battery to 100 percent capacity before using it. This takes about three and a half hours. This ensures that its power gauge calculations will be correct. Frequent incomplete charges lead to progressively larger errors that only a full charge will rectify.

The internal backup battery's charge is automatically topped up by the main battery whenever the FC200 is turned on. If the backup battery is used due to a fully depleted or removed main battery, you should charge the FC200 for a full eight hours to ensure that the internal backup battery is fully charged.

To ensure data integrity, keep the main battery charged and save important data in nonvolatile memory, such as on a CompactFlash card.

Whenever you are working near an AC power outlet, use the FC200 with its AC adapter to conserve the battery pack's charge. The AC adapter keeps the battery pack topped-up and supplies a maintenance charge to the backup battery.

If possible, charge your battery pack at the end of every working day. Proper charging keeps both your main and backup batteries in good condition.

If the backup battery becomes fully discharged, install a new main battery or attach the AC adapter as soon as possible. The backup battery typically recharges in eight hours, although it may take longer if the surrounding temperature is extremely hot or cold.

WARNING! If the main battery has been out of the handheld for an extended period of time and becomes fully discharged or dead, the backup battery *will only last 24 hours*. The unit will perform a hard reset the next time power is supplied from either AC power or a new battery. A hard reset results in loss of data and custom programs.

If you do not intend to use your handheld for an extended period of time, back up all important data in nonvolatile memory, such as on a CompactFlash card.

Checking the Batteries

To check the batteries, do this.

• Select **Windows logo > Settings > Control Panel > Power > Battery**.
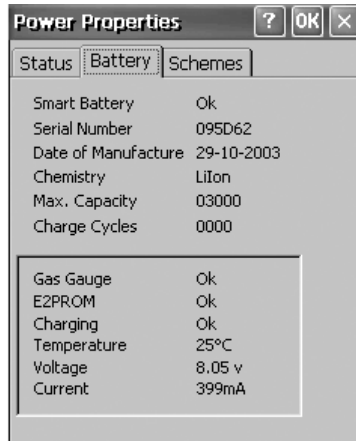
Main Battery Status

The battery level reading shows the current charge status of the main battery. If the status is shown as critical, recharge or replace the battery immediately. For best results, use external power whenever available and charge your battery at the end of each work day.

If you turn the handheld off before replacing the battery, you will not lose its Windows registry or data held in memory.

The backup battery's charge status is not displayed because it is constantly charging.

Battery Conservation

To conserve power when on battery power only, you can set the FC200 to switch itself off (suspend) automatically when not in use. You can also specify how long it waits before switching off. The default setting is three minutes when the handheld is using battery power and five minutes when it is using external power.

To change the suspend timeout, follow these steps.

Step	Action
1	Select **Windows logo > Settings > Control Panel > Power > Schemes**.
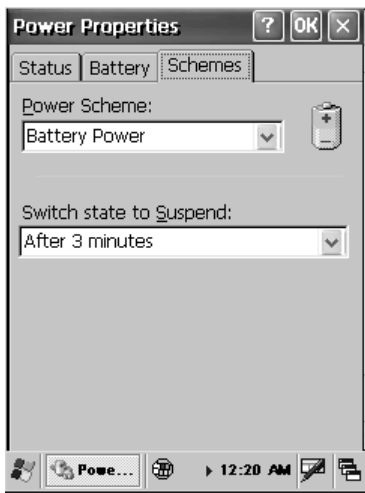
2	Select the desired power scheme, then select a suspend time.

Charging the Battery

Use only the AC adapter or vehicle charger supplied with your FC200.

To charge the battery, follow these steps.

Step	Action
1	Connect the AC adapter or vehicle charger to a suitable power supply.

Step	Action
2	Plug the FC200's charging adapter into the handheld's 26-pin COM port.
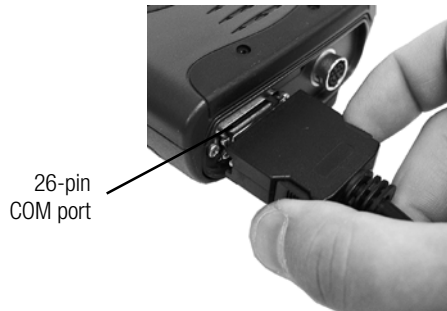
26-pin
COM port

Note The AC adapter connector has spring-loaded clips that keep the adapter attached when the unit is in use. Press in both clip latches before attaching or removing the AC adapter to prevent damage to the clips.

The battery pack may take up to three hours to fully recharge. Make sure the pack is fully recharged so the battery gauge calculations will be accurate.

Charging status is indicated by the regular flashing of the green LED, located in the upper-left corner of the handheld's numeric keypad. When the battery pack is fully charged, the green LED remains lit constantly.

Note If the LED flashes irregularly, a charging error has occurred. Contact an Itron technical support representative.

Replacing the Battery Pack

⚠️ **WARNING!** Do not try to open, puncture, or burn the battery pack. It can burst or explode, releasing hazardous chemicals. Replace or maintain your battery pack as described in this guide.

To replace the battery pack, follow these steps.

Step	Action
1	Exit all programs and turn off the handheld. **Caution** If you do not first turn off the computer, you will lose all its data.
2	Remove the hand strap by pulling the lower clip down and out of its recess.
3	Release the two battery retaining screws by turning them counterclockwise.
4	Remove the old battery pack using a coin or flat-bladed screwdriver.
5	Place the new battery pack in position, and press down firmly.
6	Lock the battery retaining screws by turning them clockwise.
7	Refit the hand strap.

WARNING! Use only the same brand of Li-Ion battery packs as the one originally shipped with your FC200. The handheld is not designed to work with any other kind of battery. Use of non-approved batteries can damage the handheld and may be hazardous.

Battery Safety Instructions

- Replace the battery pack only with another Itron-approved battery pack.

- Follow the manufacturer's recommendations and local regulations when disposing of or recycling used batteries.

- Do not subject the battery to abuse, piercing, or excessive impact.

- Immediately discontinue use of the battery if it looks abnormal in any way, and consult an Itron technical support representative for advice.

- Do not immerse the battery pack in liquid.

- Do not subject the battery pack to temperatures higher than 140° F (60° C).

- Do not short-circuit the battery pack by connecting its terminals. Do not store the battery pack with metallic objects that might accidentally cause a short circuit.

- Battery chemical leakage is harmful. In the unlikely event of battery leakage, do not touch the leaked chemicals.

  In case of accidental contact, wash the affected area immediately with running water and seek medical advice. In case of accidental ingestion, seek immediate medical attention.

- Keep batteries out of the reach of children.

Battery Storage

Li-Ion battery packs gradually deteriorate, particularly if they are not stored in ideal conditions.

When storing Li-Ion battery packs, keep these points in mind:

- Fully charged packs deteriorate faster than partly discharged ones. For ideal storage, charge the packs to 100 percent capacity, then discharge them to 50 percent before storing them.

- Do not allow stored battery packs to discharge completely, as this may permanently damage them. Follow a regular maintenance charge policy for stored packs.

- Avoid storing packs at temperatures greater than 86° F (30° C), as this hastens self-discharge and shortens battery life.

- Storing packs at temperatures near 32° F (0° C) retards self-discharge and battery aging, so batteries being stored for long periods are best kept near freezing.

- If you store battery packs at normal ambient temperatures, follow these guidelines to help maintain battery pack condition:

    – Charge installed packs every 21 days to maintain their charge capacity.

    – Charge uninstalled packs every six months.

- When you bring an FC200 out of storage, charge it for at least eight hours so that both the main battery pack and the internal backup battery are fully charged.

Caring for Your FC200

Your FC200 handheld is rugged and waterproof. However, you should take the following precautions to ensure that it gives you many years of reliable service.

- Avoid unnecessarily subjecting the handheld to extreme temperature, such as leaving it in a vehicle in bright sunlight.

- Avoid leaving it in damp or dusty places.

- Do not use hard or sharp objects on the touch screen. The FC200 uses a plastic-over-glass LCD (display screen) to provide the best display clarity. The screen is well-protected against falls onto flat surfaces, but it can still be damaged if struck directly or scratched by a sharp object.

- Avoid dropping your handheld or subjecting it to to severe impacts.

- Do not apply excessive pressure to the touch screen, which can cause it permanent damage.

- If you carry your handheld in a carrying case or with other items, make sure the touch screen is protected against scratching and other damage.

- Use only a soft, dry cloth to remove dust and dirt.

WARNING!   Never use solvents of any kind on the case, keypad, or display screen.

Cleaning Your FC200

When the screen of your FC200 gets dusty or mildly dirty, try wiping it with a dry, clean cloth.

To clean a very dirty computer, when wiping with a dry cloth fails to clean it, follow these steps.

Step	Action
1	Make sure the battery is correctly installed and that the battery compartment is sealed against moisture. If you have dropped the handheld, make sure the case is intact.
2	Wipe the handheld's case and screen with a damp cloth.
3	Wipe the screen with a dry cloth.
4	To remove stubborn deposits, use a soft-bristle brush. *Treat the screen and keypad gently.*
5	Blow any water out of the connectors, and then leave the handheld to drain and air-dry. *Do not expose it to temperatures above 140° F (60° C).*

WARNING!   Never use solvents of any kind on the case, keypad, or display screen.

Storing Your FC200

To store your FC200 (two weeks or less), follow these steps.

Step	Action
1	Install the battery pack, connect the FC200 to external power, and allow the battery pack to fully charge. The Charge Status LED will flash at one-second intervals when charging and will be on solid when charging is complete.
2	Remove external power, exit all applications, turn off the unit, and place it in storage.

Upon removal from storage, the battery pack will require a charge (see "Charging the Battery" on page 20). Any programs and data in SDRAM will be retained.

To store the FC200 for longer than two weeks, first remove the battery pack and store it separately (see "Battery Storage" on page 23).

Using Your FC200 Safely

Your FC200 is ergonomically designed for safe, comfortable use. However, as with all equipment, you should follow good working practices while using it.

Some people experience discomfort while using computers. If ignored, this discomfort can lead to *Repetitive Stress Injury (RSI)*, which is also known as *cumulative trauma disorder* or *repetitive motion injury.*

Minimize the risk by following these guidelines:

- Maintain good posture while using the handheld. Keep your fingers and body relaxed whenever possible.

- Avoid keeping your muscles tense for long periods. Change tasks often to avoid prolonged muscle strain. Support the handheld while using it.

- Reduce eyestrain by adjusting the backlight to suit your working environment. Look away from the screen periodically and focus your eyes on distant objects. Have your eyes checked regularly.

- Take frequent short breaks. Use these breaks to exercise the muscles in your hands, arms, shoulders, neck, and back.

CompactFlash Cards

The FC200 has a user-accessible CompactFlash card slot. Files stored on CompactFlash cards can be created, deleted, moved, and modified in exactly the same way as files stored in the handheld's memory. However, unlike data in the memory, files on CompactFlash cards are not lost when you reset the computer.

Using CompactFlash Cards

The FC200 can use Type 1 CompactFlash cards for secure data storage. User-installed application programs and associated data files on a CompactFlash card are not lost after a hard reset.

Note Do not operate the FC200 without its CompactFlash card.

The CompactFlash socket is located in a recess under the handheld's battery. You must remove the battery to gain access to the card. Because the battery compartment is waterproof and secured by screws, it should not be opened where there is a risk that moisture, dust, or dirt could get in.

Installing a CompactFlash Card

⚠️ **WARNING!** The handheld's operating system resides on the Compact-Flash card provided with it. You will lose the OS if you remove the card or replace it with a card that does not have the OS.

To install a CompactFlash card, follow these steps.

Step	Action
1	Back up your data (see "Using iRescue" on page 29).
2	Remove AC power and turn off the handheld.
3	Remove the battery pack (see "Replacing the Battery Pack" on page 22).
4	Remove the CompactFlash card stop, the small plastic piece that holds the card in place.

Step	Action
5	Carefully insert the CompactFlash card into the socket, label side up.
6	Replace the CompactFlash card stop.
7	Refit the battery pack and tighten the two retaining screws.

Step	Action
8	Perform a soft reset (see "Resetting Your Handheld" on page 13).

Accessing Files on the CompactFlash Card

To access files on the CompactFlash card, do this.

- From the Windows desktop, select **My Computer > System > CompactFlash**.

Peripherals

The FC200 supports a range of peripherals, including TOU probes, water probes, and external barcode scanners. Contact your Itron customer service representative for a full list of supported peripherals.

⚠ **WARNING!** Connect only approved cables and peripherals to your handheld.

To connect a peripheral to one of the FC200's COM ports, follow these steps.

Step	Action
1	Connect the peripheral cable to the the peripheral (if detached).
2	Connect the peripheral cable to the handheld.
3	Switch on both the handheld and the peripheral.

When using a peripheral with the FC200's infrared (IR) COM port, Make sure the handheld's IR window at the bottom of the unit is pointing at the peripheral's IR port and that the units are separated by at least 6 inches (15 cm).

Using iRescue

The iRescue program lets you back up and restore the contents of the FC200's files and registry. Use iRescue to:

- Clone program settings and files from one device onto other devices.

- Restore data if the FC200's battery is drained completely before a recharge

- Restore data following a reset.

- Restore data if files or settings were unintentionally modified or deleted, causing a device malfunction or data loss.

The program saves backup data onto the FC200's removable storage media, such as a CompactFlash card.

To start iRescue, do this.

- Select the iRescue icon ( ) in the taskbar or select **Windows logo > Programs > iRescue**.

Note To view version information, tap **About**.

FC200 Backups

Use iRescue to perform full backups of all handheld files and applications.

To perform a full backup of the FC200, follow these steps.

Step	Action
1	Close all other programs. If any programs are running, iRescue prompts you to close them.
2	Select the iRescue icon ( ) in the taskbar or select **Windows logo > Programs > iRescue**.
3	Select the **Backup** tab.
4	Tap **Settings** and choose a backup destination from the **Location** drop-down list. This list shows all removable storage media on the handheld.
5	Tap **OK**.
6	Tap **Backup** to begin the backup.
	Information about each completed file or error status appears in the Backup status box and the Custom Status LED flashes red and green alternately during this operation.

Backup Settings

You can change the settings iRescue uses to back up the handheld, including:

• The maximum number of backups iRescue saves

• Whether or not iRescue performs automatic backups when the handheld's battery charge gets low

• Whether or not iRescue automatically deletes the oldest backup to avoid exceeding the maximum number of backups

• The frequency of automatic backups

To change iRescue's backup settings, follow these steps.

Step	Action
1	From the iRescue Backup tab page, tap **Settings**.

2	From the **Location** drop-down list, select the backup location.
3	In the **Maximum Number of Stored Backups** box, specify how many backups the program is allowed to keep. **Note** If the number of backups is exceeded, iRescue prompts the user to delete one or more of the existing backups before performing a new backup.
4	You can set iRescue to automatically perform a backup when the battery charge level drops to 10 percent. • Select **Automatic Backup on Battery Low Event** to enable this feature. OR • Clear the check box to disable it.

Step	Action

5	You can set iRescue to automatically delete the oldest backup to free up space for the next backup if either of the following is true:
	
	    – The maximum number of backups will be exceeded by the next backup.
	
	    – The handheld does not have enough space for the next backup.
	
	Do one of the following:
	
	• Select the **Auto-discard oldest backup…** check box to enable this feature.
	
	• Clear the check box to disable it.
	
	Note If this option is not checked, the automatic backup on low battery only occurs if the maximum number of backups is not exceeded and there is enough space for the backup.

6	Tap **Schedule . .** and select a daily, weekly, or monthly automatic backup schedule.

Note During an automatic backup, whether scheduled or battery-level initiated, iRescue neither closes nor saves running applications. This does not apply to user-initiated backups, for which iRescue prompts you to close other running applications.

Viewing and Deleting Backup Files

The Manage dialog box lets you:

• View all available backups on all removable storage media present on the device.

• Delete selected backups.

To display the Manage dialog box, follow these steps.

Step	Action
1	From the iRescue Backup tab page, tap **Manage**. The Manage dialog box appears, listing all available backups.
2	To delete a backup file from the list, select it, then tap **Delete**.

Restoring Handheld Data from a Backup

The Restore tab page lets you restore your FC200's data from a backup.

To restore handheld data from a backup, follow these steps.

Step	Action
1	Open iRescue and select the **Restore** tab.
2	Select a backup file from the **Select Date** drop-down list.
	This displays all available backups from each of the removable storage media. The tree view displays the contents of the selected backup.
3	Double-tap the **Files** item to view a list of folders and files contained in the backup.
4	By default, and each time a different backup is selected, all files and folders are selected for restoration.
	To restore only selected files, clear files that you do not want to restore.
5	Tap the **Restore** button to restore the selected files and registry settings.

Installing Microsoft ActiveSync

ActiveSync is a Microsoft utility that lets you share and update information between your handheld and a desktop computer running Microsoft Windows.

Four connection options are available on the FC200, to suit the capabilities of your desktop computer:

- Serial (COM1)
- USB (COM1 only)
- Wireless infrared
- Ethernet (COM1 only—requires a partnership before use)

Note An Ethernet connection requires an optional RJ-45 dongle or Desk Mount. These accessories are not supplied with your FC200.

To use Microsoft ActiveSync to connect the handheld to a desktop computer, follow these steps.

Step	Action
1	Download the latest version of the ActiveSync software from the following Internet site: http://www.itronix.com/Q-200ActiveSync …and install it on your desktop computer. Once ActiveSync is installed, its icon (🔄) appears in the Windows system tray.
2	Click the ActiveSync icon. Choose **Connection Settings**, and make sure the connection method you want to use is enabled.
3	Attach the appropriate cable or line up the infrared ports on both the FC200 and desktop computer. **Note** When using a USB connection, connect the 26-pin cable connector to COM1 on your handheld first, then connect the USB connector to your desktop computer.
4	Turn on the handheld. ActiveSync should automatically start connecting. When a connection is established, the handheld chimes, and the ActiveSync New Partnership window appears on the desktop computer.

Step	Action
5	Under **Would you like to set up a partnership?** select **No**, then click **Next**.
6	Follow the instructions shown on your screen to complete the installation.

FC200 Best Practices

The following recommendations are intended to help maximize the service life of your FC200 and resolve problems you might experience.

Daily Operation

Perform the following tasks each day of handheld operation.

- Inspect the handheld for broken, loose, or missing parts and fasteners, taking corrective action as required.

- Make sure all applications are closed, and perform a soft reset at the beginning of each work day (see "Resetting Your Handheld" on page 13).

- Make sure the computer is operated and stored within the recommended temperature range.

  – Operating temperature: -4° F to 140° F (-20° C to 60° C)

  – Storage temperature -67° F to 167° F (-55° C to 75° C)

- Conserve battery pack energy when possible to maximize battery life during daily use.

  – Select **Windows logo > Settings > Contol Panel > Power > Status** to view the battery level.

  – Shallow or partial discharge and charge cycles are preferred, compared to draining the battery pack completely and recharging it. Charging after a shallow or partial discharge will not degrade battery pack life or performance.

- Avoid prolonged exposure to temperature extremes.

  – Cold temperature extremes may result in reduced available energy from the battery pack. This energy is recoverable as the battery pack warms to 68° F (20° C).

  – Extended exposure to warm temperature extremes can result in permanent reduction in available energy from the battery pack.

  – Charging is disabled below 32° F (0° C) and above 113° F (45° C) to protect the lithium-ion batteries in the pack.

- Temperature and direct sunlight can affect the LCD.
  - Cold temperature may cause the LCD refresh rate to seem sluggish and affect contrast. At about 40° F (4° C) the LCD refresh rate change may be noticeable, depending on the activity in process.
  - Extended exposure to direct sunlight may cause the LCD contrast to darken. Use the backlight adjustment keys to optimize visibility.
- Exit all applications at the end of each work day.
  - This ensures that all applications, and system resources used by those applications, are reinitialized when the program is started the next day.
  - Unless an application is specifically designed for 24/7 operation, the daily practice of restarting (resetting) an application can minimize the potential for a wide variety of operational anomalies, which may be mistaken for hardware failure.

Power Management

- Avoid changing battery suspend timeout settings. Extending or disabling the timeout will increase power consumption and reduce operational time on battery power.
- Avoid changing backlight timeout settings. Extending or disabling the backlight timeout will increase power consumption and reduce operational time on battery power.
- Power off manually when not using the computer for extended periods to conserve battery power.
- RF devices can consume battery power unnecessarily when not in use. Disable RF devices when not in use.
- A serially connected device may be powered by the FC200. It is best to exit the application prior to powering off. Restarting the application should reinitialize the device. Peripherals using FC200 battery power may result in reduced FC200 operational run times.

File Management

- Data or files stored in volatile memory (SDRAM) are lost during a hard reset. Back up essential data and files periodically.
- Periodically perform housekeeping of files:
  - Uninstall unused drivers and applications.

– Delete unneeded files and clean up folders.

Charging

- Charge the handheld at room temperature (approximately 68° F/20° C) for best charge results.

- Charge the handheld at the end of each work day (see "Charging the Battery" on page 20).

- At the beginning of each work day check the charge status (see "LED Status Indicators" on page 3).

- During each work day, connect the handheld to external power whenever possible.

FC200R Best Practices

- Hold the device 8 inches (20 cm) away from your body when transmitting.

- Radio reads are best captured while you are walking during radio communications.

- Hold the FC200R so the radio antenna is vertical (upright).

Troubleshooting

If you have a problem with your FC200, review the appropriate troubleshooting steps, as follows. After that, if you still have not resolved the problem, contact an Itron customer service representative.

Handheld will not turn on or stops running

- Check the battery pack, try a different pack, or try operating from the AC adapter.

- If you drop your handheld and it stops operating, try switching it off and on. Make sure the battery pack is connected correctly.

WARNING! The FC200 contains no user-serviceable parts, and high voltages may be present. Do not try to open it. Opening its case will void your warranty.

Battery does not charge

- Verify the connection and power to the charger.

- Check the charger connection to the handheld, and make sure the handheld detects external power. The FC200 should power on when connected to external power, and the Charge Status LED should flash.

- Check the battery information in the Power Properties dialog box (select **Windows logo > Settings > Control Panel > Power**). Make sure there are no errors or anomalies. If the screen reports any failures, replace the battery pack.

Battery does not last

- Ensure that the battery indicates a full charge following an overnight charge (solid green Charge Status LED).

- Select **Windows logo > Settings > Control Panel > Power > Battery** to view battery pack information, including the number of cycles on the battery pack. Typical useful life of the FC200 battery pack is between 300 and 500 charge/discharge cycles. When the battery has reached 70 percent of its original capacity, it should be replaced.

- If the battery does not last following a full charge, replace it with a new battery.

Lockups

1 Determine if touch screen or keypad inputs are recognized.

2 Try to recalibrate the touch screen. Select **Windows logo > Settings > Control Panel > Stylus > Calibration > Recalibrate**.

3 If touch screen recalibration does not resolve the issue, close all applications. Then restart the applications and try the specific operation again.

4 If restarting applications does not resolve the issue, connect external power. Perform a soft reset (see "Resetting Your Handheld" on page 13).

5 If all else fails, perform a hard reset (see "Resetting Your Handheld" on page 13).

RF communication

1 If coverage is historically good at this location, check the signal strength. Reposition the computer slightly to increase signal strength. Wait about five minutes. Determine if there is RF activity.

2 If the problem is not resolved, exit all applications, restart the applications, and try RF communications again.

3 If the problem is still not resolved, connect external power and perform a soft reset. Restart applications and try RF communications again.

Infrared communication

- If the peripheral has a protective cap covering its IR port, remove it.

- If necessary, switch the peripheral off, then on again, to initiate communications.

- Separate the two units by a slightly larger or smaller distance and try again.

ActiveSync communication

- If you have trouble connecting, make sure the PC connection setting on the handheld matches the setting on the desktop computer.

  To change the setting on your handheld, select **Windows logo > Settings > Control Panel > PC Connection**. It is set to **USB** by default.

- For detailed information about using Microsoft ActiveSync, see the program's online help, or the Microsoft ActiveSync product website.

AC Power Adapter

Caution Read the following instructions before using the AC power adapter.

WARNING! The adapter contains hazardous voltages. It contains no user-serviceable parts. Do not try to open it.

- Use the adapter indoors only.
- Avoid spilling liquid on the adapter. Do not connect it if it is damp.
- Ensure ventilation around the adapter is not restricted while it is in use.
- Use only the specific AC adapter supplied. Do not substitute an alternative or unapproved type—this may damage the FC200 and void the warranty.
- Inspect the AC adapter before use. Do not use it if there are any signs of damage or deterioration.
- Make sure all connectors are firmly connected.
- Avoid mechanical strain to cables and connectors.
- Make sure the green LED is illuminated while the adapter is in use.
- In the event of overloading, the AC adapter is designed to be fail-safe and may stop functioning.
- Do not try to use the AC adapter to power any other equipment.
- Avoid use in dusty, damp, or contaminated environments.

Electromagnetic Compatibility

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. FC200 AC adapters employ special provisions to avoid radio interference and should not be altered or substituted for.

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

Europe

This product complies with the radio interference protection requirements of the Council Directive 89/336/EC on the approximation of the laws of the Member States of the European Union relating to electromagnetic compatibility. The product was tested in a typical configuration and found to conform to the following test specifications:

EN55022: Radiated and conducted emissions, Class B.

EN55024: ESD and radiated and conducted immunity.

For further compliance details, refer to the specific CE Declaration Of Conformity. This is available on request. Please quote the exact and full model number for the product(s) in question.

USA

RADIO INTERFERENCE, FCC Statement

NOTE: 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 in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To insure FCC regulatory compliance, only the antenna supplied by Itron for the FC200/FC200R should be used with the device.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Canada

English

This digital apparatus does not exceed class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications, standard ICES-003.

Français

Avis de conformité, aux normes du Ministère des Communications du Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicable aux appareils numériques de classe B préscrites dans le Règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada, NMB-003.