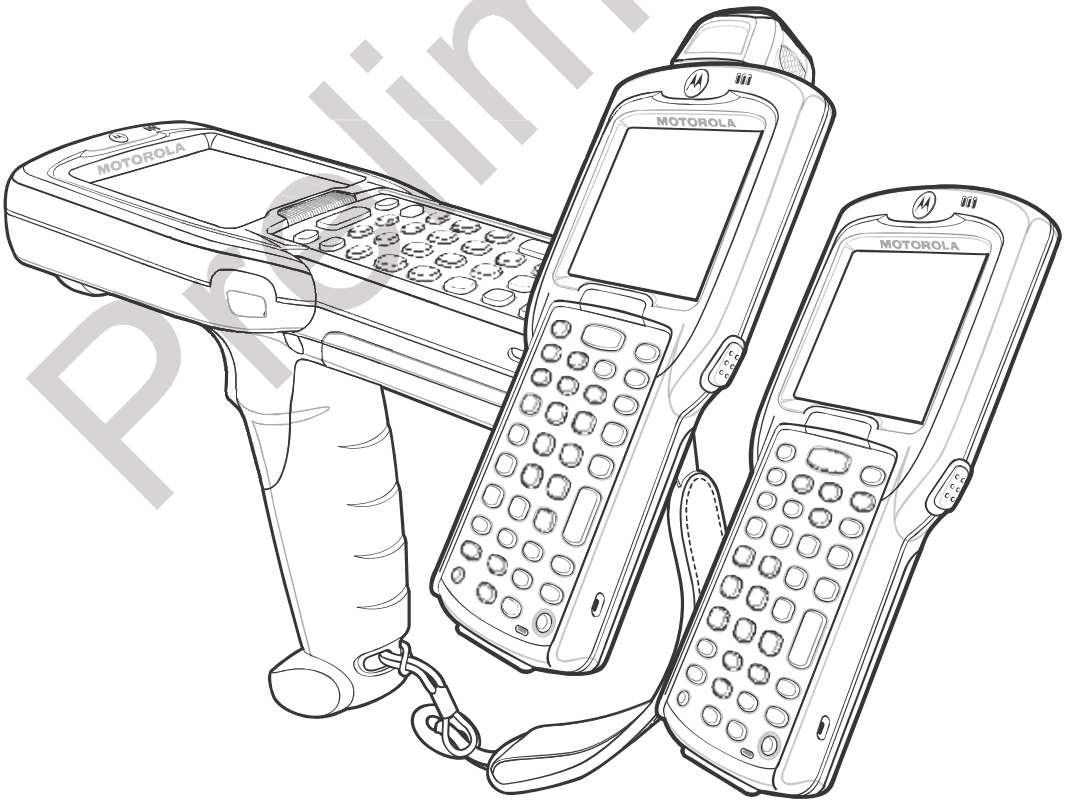
MC31XX Series Mobile Computer

User Guide

Preliminary



MC31XX Series Mobile Computer

User Guide

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August 2009

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Patents

This product is covered by one or more of the patents listed on the website: www.motorola.com/enterprisemobility/patents

Revision History

Changes to the original manual are listed below:

Change	Date	Description
-01 Rev -	August 2009	Draft

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About This Guide

Introduction

This guide provides information about using the MC31XX mobile computers and accessories.

NOTE Screens and windows pictured in this guide are samples and may differ from actual screens.

Documentation Set

The documentation set for the MC31XX is divided into guides that provide information for specific user needs.

- **MC31XX Series Quick Start Guide** - describes how to use the MC31XX-S and -R mobile computers.
- **MC3190-G Quick Start Guide** - describes how to use the MC3190-G mobile computer.
- **MC31XX Series Mobile Computer User Guide** - describes how to use the MC31XX mobile computer.
- **MC31XX Series Mobile Computer Integrator Guide** - describes how to set up the MC31XX mobile computer and the accessories.
- **Microsoft Applications for Windows Mobile and CE 6.0 User Guide** - describes how to use Microsoft developed applications.
- **Microsoft Applications for Windows Mobile 6 User Guide** - describes how to use Microsoft Windows Mobile 6 developed applications.
- **Application Guide for Motorola Enterprise Mobility Devices** - describes how to use Motorola Enterprise Mobility developed applications.
- **EMDK Help File** - provides API information for writing applications.

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Configurations

This guide covers the following configurations:

Configuration	Radios	Display	Memory	Data Capture	Operating System	Keypads
MC3100R	WPAN: Bluetooth	Color	128 MB RAM/ 256 MB Flash	1D laser scanner in rotating turret	Windows CE 6.0 Professional	28, 38 or 48 key
MC3100S	WPAN: Bluetooth	Color	128 MB RAM/ 512 MB Flash	1D laser scanner, 2D imager	Windows CE 6.0 Professional or Windows Mobile 6.1 Classic	28, 38 or 48 key
MC3190G	WLAN: 802.11a/b/g WPAN: Bluetooth	Color	128 MB RAM/ 512 MB Flash	1D laser scanner or 2D imager	Windows CE 6.0 Professional	28, 38 or 48 key
MC3190R	WLAN: 802.11a/b/g WPAN: Bluetooth	Color	128 MB RAM/ 512 MB Flash	1D laser scanner in rotating turret	Windows CE 6.0 Professional or Windows Mobile 6.1 Classic	28, 38 or 48 key
MC3190S	WLAN: 802.11a/b/g WPAN: Bluetooth	Color	128 MB RAM/ 512 MB Flash	1D laser scanner, 2D imager or DPM imager	Windows CE 6.0 Professional or Windows Mobile 6.1 Classic	28, 38 or 48 key

Software Versions

This guide covers various software configurations and references are made to operating system or software versions for:

- Adaptation Kit Update (AKU) version
- OEM version
- BTExplorer version
- Fusion version.

AKU Version for Windows Mobile 6.1 Devices

To determine the Adaptation Kit Update (AKU) version on a Windows Mobile 6.1 device:

Tap **Start** > **Settings** > **System** tab > **About** icon > **Version** tab.

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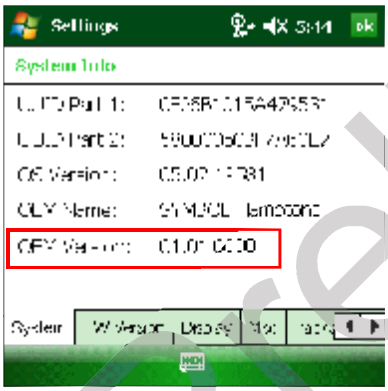
The second line lists the operating system version and the build number. The last part of the build number represents the AKU number. For example, *Build 119581.1.1.1* indicates that the device is running AKU version *1.1.1*.

OEM Version on Windows Mobile 6.1 Devices

To determine the OEM software version on a Windows Mobile 6.1 device:

Tap **Start** > **Settings** > **System** tab > **System Information** icon > **System** tab.



OEM Version on Windows CE 6.0 Devices

To determine the OEM software version on a Windows CE 6.0 device:

Tap **Start** > **Settings** > **Control Panel** > **System Info** icon > **System** tab.

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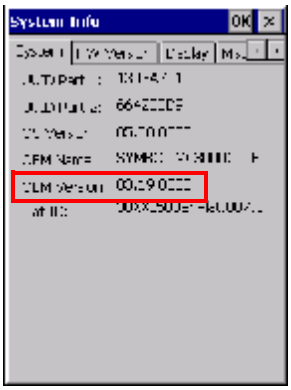

BTExplorer Software

To determine the BTExplorer software version on a Windows Mobile 6.1 or Windows CE 6.0 device:

Tap **BTExplorer** icon > **Show BTExplorer**> **File** > **About**.

Fusion Software

To determine the Fusion software version on a Windows Mobile 6.1 or Windows CE 6.0 device:

Tap **Wireless Strength** icon > **Wireless Status** > **Versions**.

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Chapter Descriptions

Topics covered in this guide are as follows:

- Chapter 1, Getting Started, describes the mobile computer's physical characteristics, how to install and charge the batteries, remove and replace the handstrap and how to start the mobile computer for the first time.
- Chapter 2, Operating the MC31XX, provides basic instructions for using the mobile computer and navigating the mobile computer software.
- Chapter 3, Using Bluetooth, explains how to perform Bluetooth functionality on the mobile computer.
- Chapter 4, Accessories, describes the accessories available for the mobile computer and how to use the accessories to charge the mobile computer.
- Chapter 5, Maintenance and Troubleshooting, includes instructions on cleaning and storing the mobile computer, and provides troubleshooting solutions for potential problems during mobile computer operation.
- Appendix A, Technical Specifications, includes a table listing the technical specifications for the mobile computer.
- Appendix B, Keypads, contains keypad descriptions and special character generation tables.

Notational Conventions

The following conventions are used in this document:

- The term "mobile computer" refers to the Motorola MC31XX.
- *Italics* are used to highlight the following:
  - Chapters and sections in this and related documents
  - Dialog box, window and screen names
  - Drop-down list and list box names
  - Check box and radio button names
  - Icons on a screen.
- **Bold** text is used to highlight the following:
  - Key names on a keypad
  - Button names on a screen.
- Bullets (•) indicate:
  - Action items
  - Lists of alternatives
  - Lists of required steps that are not necessarily sequential.
- Sequential lists (e.g., those that describe step-by-step procedures) appear as numbered lists.

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Related Documents and Software

The following items provide more information about the MC31XX mobile computers.

- *MC31XX Series Quick Start Guide*, p/n 72-124259-xx
- *MC3190G Quick Start Guide*, p/n 72-124276-xx
- *MC31XX Regulatory Guide*, p/n 72-124293-xx
- *MC31XX Series Mobile Computer Integrator Guide*, p/n 72E-68900-xx
- *Application Guide for Motorola Enterprise Mobility Devices*, p/n 72E-68901-xx
- *Microsoft® Applications for Mobile and CE 6.0 User Guide*, p/n 72E-78456-xx
- *Microsoft® Applications for Mobile 6 User Guide*, p/n 72E-108299-xx
- *Enterprise Mobility Developer Kit (EMDK) Help File*, p/n 72E-38880-03
- *Windows CE Platform SDK for MC3100c50,* available at: http://www.motorola.com/enterprisemobility/support
- *Enterprise Mobility Developer Kit for C (EMDK for C),* available at: http://www.motorola.com/enterprisemobility/support
- Device Configuration Package for MC3100 (DCP for MC3100), available at: http://www.motorola.com/enterprisemobility/support
- ActiveSync software, available at: http://www.microsoft.com.

For the latest version of this guide and all guides, go to: http://www.motorola.com/enterprisemobility/manuals.

Service Information

If you have a problem with your equipment, contact Motorola Enterprise Mobility support for your region. Contact information is available at: http://www.motorola.com/enterprisemobility/contactsupport.

When contacting Enterprise Mobility support, please have the following information available:

- Serial number of the unit
- Model number or product name
- Software type and version number

Motorola responds to calls by email, telephone or fax within the time limits set forth in support agreements.

If your problem cannot be solved by Motorola Enterprise Mobility Support, you may need to return your equipment for servicing and will be given specific directions. Motorola is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you purchased your Enterprise Mobility business product from a Motorola business partner, contact that business partner for support.

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Chapter 1 Getting Started

Preliminary

Introduction

This chapter describes the mobile computer physical characteristics, how to install and charge the batteries, how to remove and replace the handstrap and how to start the mobile computer for the first time.

Unpacking the Mobile Computer

Carefully remove all protective material from around the mobile computer and save the shipping container for later storage and shipping. Verify that the equipment listed below is included:

- Mobile computer
- Battery
- Regulatory Guide
- Quick Start Guide.

Inspect the equipment for damage. If any equipment is missing or damaged, contact the Motorola Enterprise Mobility Support immediately. See *Service Information on page xvi* for contact information.

Features

There are three versions of the MC31XX mobile computers, the MC31XXS with 1D laser and 2D Imager, the MC31XXR with Rotating Scan Turret and the MC3190G with 1D laser and 2D Imager. For more information on the Rotating Scan Turret, see *Figure 1-3 on page 1-3*.

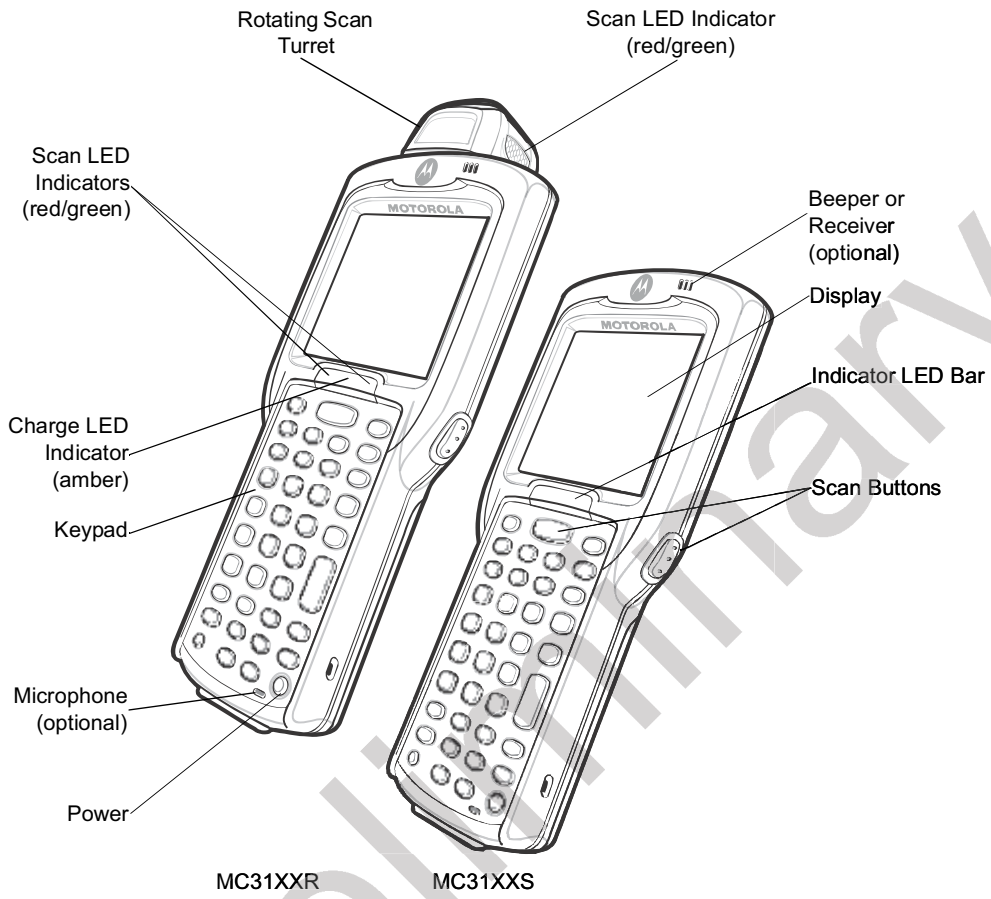

Figure 1-1 *MC31XXS and MC31XXR Mobile Computers (Front View)*

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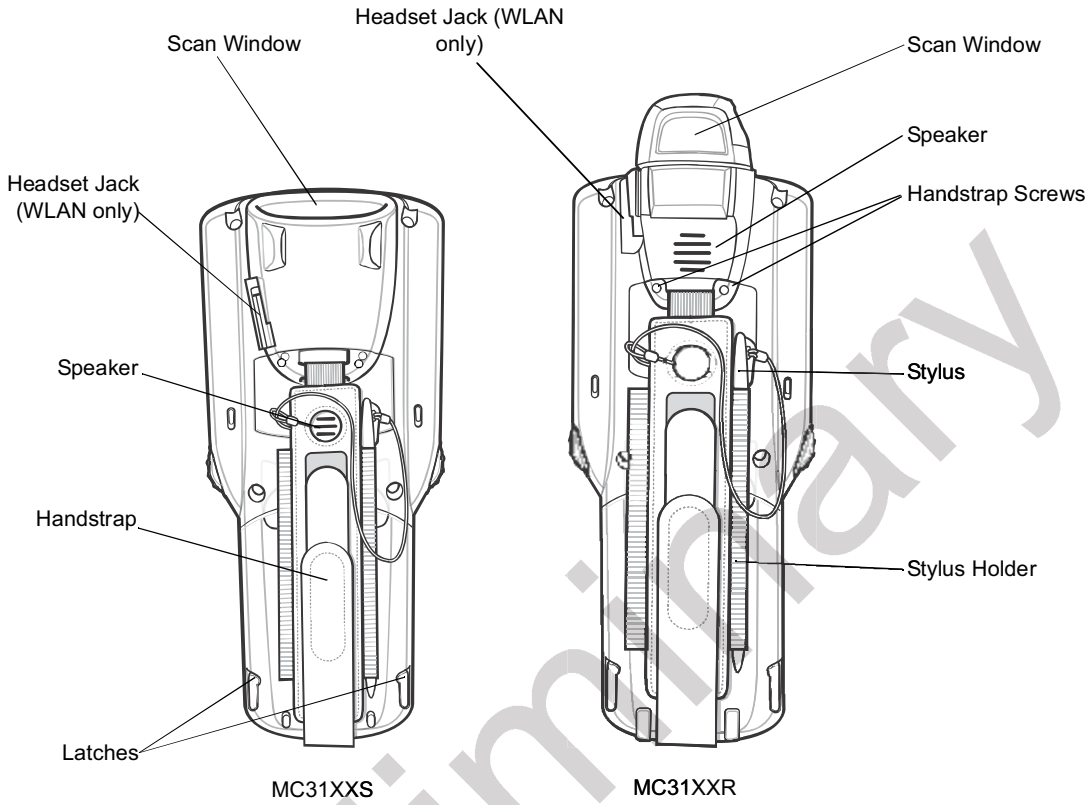

Figure 1-2 *MC31XXS and MC31XXR Mobile Computers (Back View)*

Rotating Scan Turret

The MC31XXR mobile computer features a Rotating Scan Turret with three position stops. This feature offers greater scanning flexibility.

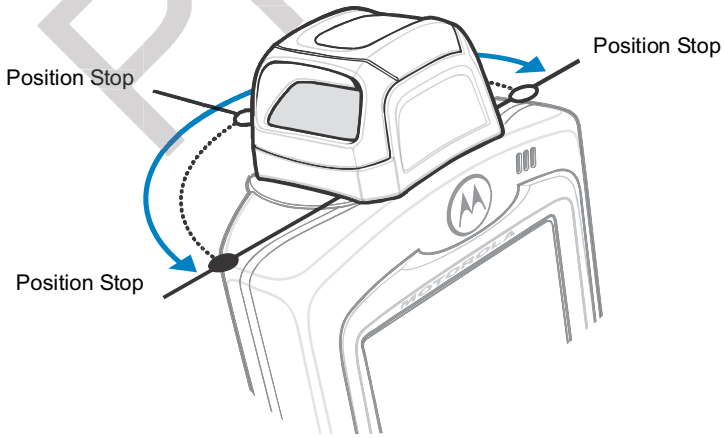

Figure 1-3 *Rotating Scan Turret*

Preliminary

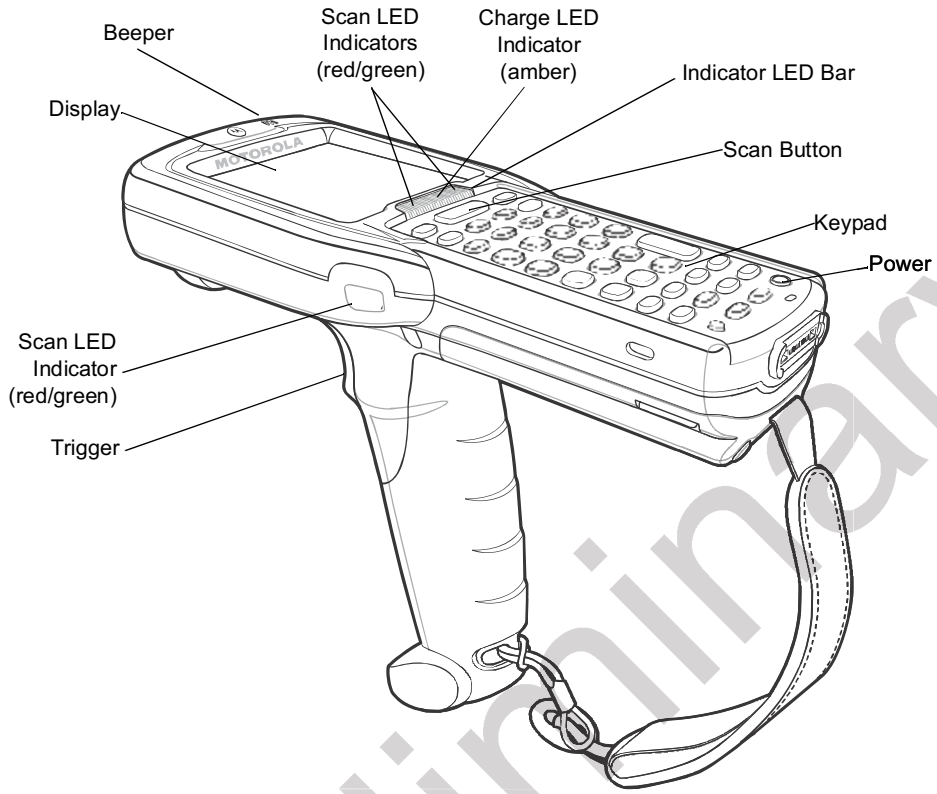

Figure 1-4 *MC3190G Mobile Computer (Front View)*

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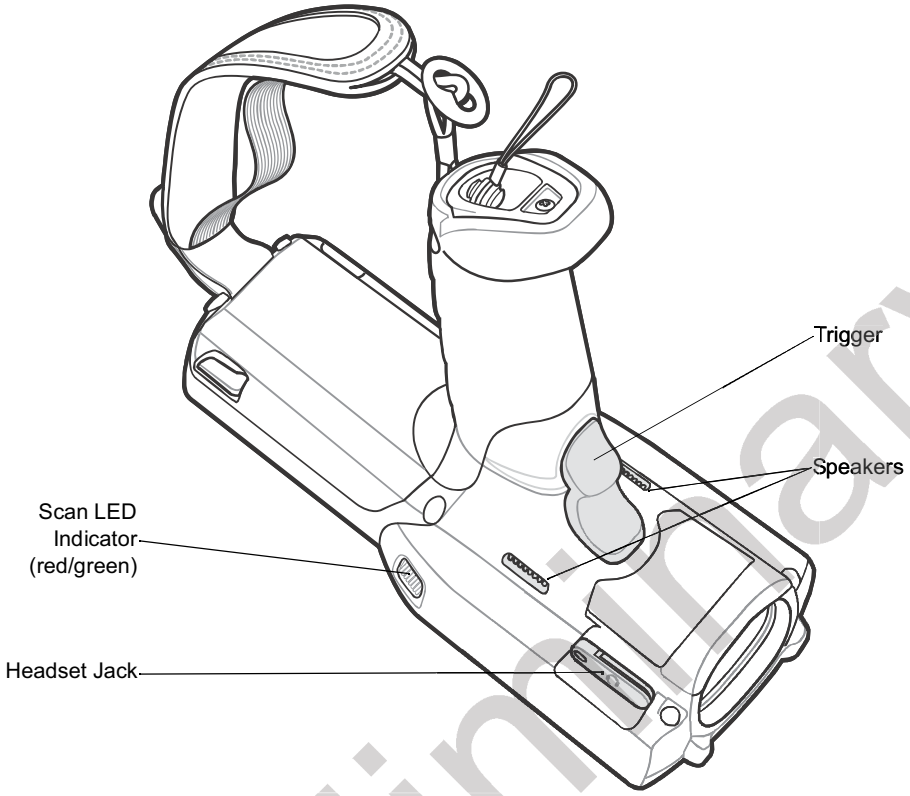

Figure 1-5 *MC3190G Mobile Computer (Back View)*

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Mobile Computer Startup

To start using the mobile computer:

- Install the SD card.
- Install the main battery.
- Charge the main battery and the backup battery.
- Start the mobile computer.

Install SD Card

The Secure Device (SD) card provides secondary non-volatile storage (the flash memory is slower than RAM). The SD card holder is located under the battery.

CAUTION Follow proper Electro-Static Discharge (ESD) precautions to avoid damaging the SD card. Proper ESD precautions include, but are not limited to, working on an ESD mat and ensuring that the operator is properly grounded.

Do not use the SD card slot for any other accessories.

NOTE Select SD cards with environmental and/or the write cycle performance specifications that meet or exceed the application requirements.

To insert the SD card:

1. Lift the SD card retaining door.
2. Position the SD card, with the contacts down, into the SD card slot. The SD card corner notch fits into the slot only one way.
3. Close SD card retaining door.

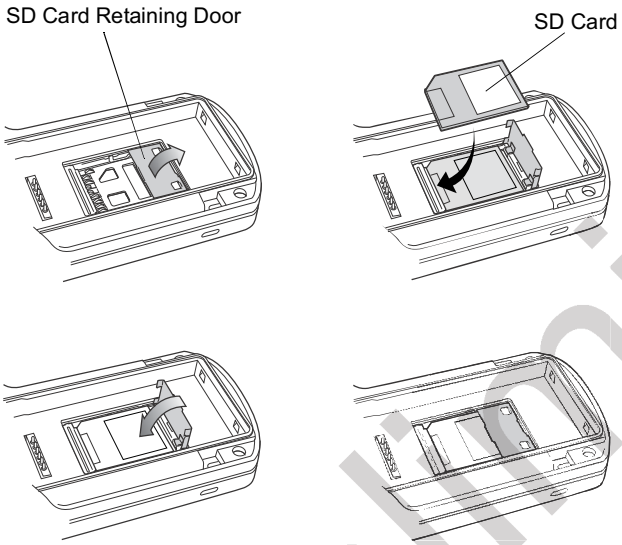

Figure 1-6 *Inserting the SD Card*

Install Main Battery

If the main battery is charged, the mobile computer can be used immediately. If the main battery is not charged, see *Battery Charging on page 1-8*. To remove the main battery, see *Main Battery Removal on page 1-11*.

To install the main battery:

1. Remove the battery door.
2. Insert the battery into the slot, bottom first and press the battery gently into the slot. The battery clip locks the battery into place.

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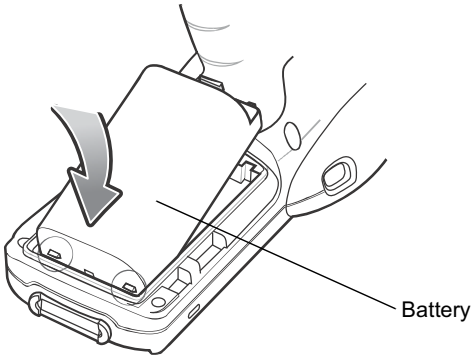

Figure 1-7 *Insert Battery*

3. With the latches in the open position, replace the battery door, top first and press to close.

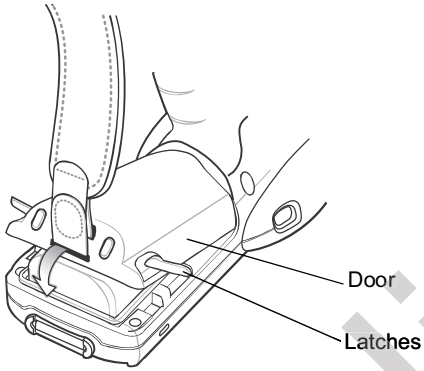

Figure 1-8 *Insert Battery Door*

4. Rotate the latches (to the lock position) to lock the door in place.

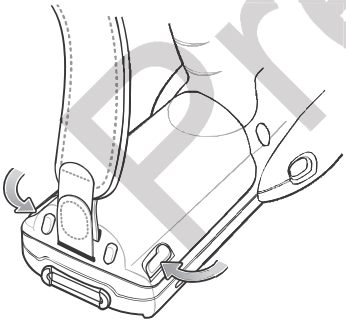

Figure 1-9 *Close Latches*

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Battery Charging

CAUTION Ensure that you follow the guidelines for battery safety described in *Battery Safety Guidelines on page 5-2*.

Use the mobile computer cradles, cables and spare battery chargers to charge the mobile computer main battery.

The main battery can be charged before insertion into the mobile computer or after it is installed. The Standard Battery and the Extended Life Battery. Extended Life Battery requiresdifferent door. Use one of the spare battery chargers to charge the main battery (out of the mobile computer) or one of the cradles to charge the main battery while it is installed in the mobile computer.

Before using the mobile computer for the first time, fully charge the main battery until the amber Charge LED Indicator remains lit (see *Table 1-1 on page 1-9* for charge status indications). The Standard Battery fully charges in less than four hours and the Extended Life Battery fully charges in less than six hours.

The mobile computer is equipped with a memory backup battery which automatically charges from the main battery whether or not the mobile computer is operating or is in suspend mode. The memory backup battery retains data in memory for at least 30 minutes when the mobile computer's main battery is removed or fully discharged. When the mobile computer is used for the first time or after the memory backup battery has fully discharged, the memory backup battery requires approximately 15 hours to fully charge. Do not remove the main battery from the mobile computer for 15 hours to ensure that the memory backup battery fully charges. If the main battery is removed from the mobile computer or the main battery is fully discharged, the memory backup battery completely discharges in several hours.

When the main battery reaches a very low battery state, the combination of main battery and backup battery retains data in memory for at least 72 hours.

NOTE Do not remove the main battery within the first 15 hours of use. If the main battery is removed before the backup battery is fully charged, data may be lost.

Batteries must be charged within the 0° to +40° C (32° to 104° F) ambient temperature range.

The following accessories can be used to charge batteries:

- Cradles (and a power supply):
  - Single Slot Serial/USB Cradle
  - Four Slot Cradles.
- Cables (and a power supply):
  - USB Client Charge Cable
  - Serial (RS232) Charge Cable.
- Spare Battery Chargers (and a power supply):
  - Single Slot Serial/USB Cradle
  - Four Slot Spare Battery Charger
  - Universal Battery Charger (UBC) Adapter.

To charge the mobile computer using the cradles:

1. Insert the mobile computer into a cradle. See Chapter 4, Accessories for accessory setup.

2. The mobile computer starts to charge automatically. The amber Charge LED Indicator indicates the charge status. See *Table 1-1 on page 1-9* for charging indications.

To charge the mobile computer using the cables:

1. Connect the MC31XX Communication/Charge Cable to the appropriate power source and connect to the mobile computer. See Chapter 4, Accessories for accessory setup.
2. The mobile computer starts to charge automatically. The amber Charge LED Indicator indicates the charge status. See *Table 1-1* for charging indications.

Table 1-1 *Mobile Computer LED Charge Indicators*

LED	Indication
Off	Mobile computer not placed correctly in the cradle; charge cable not connected correctly; charger is not powered.
Fast Blinking Amber	Error in charging; check placement of the mobile computer.
Slow Blinking Amber	Mobile computer is charging.
Solid Amber	Charging complete. Note: When the battery is initially inserted in the mobile computer, the amber LED flashes once if the battery power is low or the battery is not fully inserted.

Spare Battery Charging

There are three accessories that can be used to charge a spare battery:

- Single Slot Serial/USB Cradle
- Four Slot Spare Battery Charger
- UBC Adapter.

To charge a spare battery:

1. Connect the charging accessory to the appropriate power source. See Chapter 4, Accessories for setup instructions.
2. Insert the spare battery into the spare battery charging slot and gently press down on the battery to ensure proper contact.

The battery starts to charge automatically. The amber charge LED Indicator lights to indicate the charge status. See Chapter 4, Accessories for charging indications. The Standard Battery usually fully charges in less than four hours and the Extended Life Battery usually fully charges in less than six hours.

Stylus

Use the stylus for selecting items and entering information on the screen. The stylus functions as a pen and a mouse. Tap the touch screen once with the stylus to select options and open menu items.

To remove the stylus, slide the stylus out of the stylus holder. To store the stylus, push the stylus back into the stylus holder.

Preliminary

Starting the Mobile Computer

Press the **Power** button to turn on the mobile computer. If the mobile computer does not power on, perform a cold boot. See *Resetting the Mobile Computer on page 2-26*.

When the mobile computer is powered on for the first time, it initializes. The **Splash** screen appears for a short period of time, followed by the **Calibration** screen.

Figure 1-10 *Splash Screen*

On Windows CE 6.0 configurations, after the calibration procedure is performed the factory settings launch the **Sample Applications** window displays. Application specific shells may provide application specific windows instead of the **Sample Applications** window. These screens also appear when a cold boot is performed.

If the mobile computer does not power on, see *Resetting the Mobile Computer on page 2-26*.

Calibration Screen

Use the **Calibration** screen to align the touch screen:

1. Remove the stylus from the stylus holder.
2. Carefully press and briefly hold the stylus tip on the center of the **Calibration** screen target. Repeat the procedure as the target moves and stops at different locations on the screen. This enters the new calibration settings.

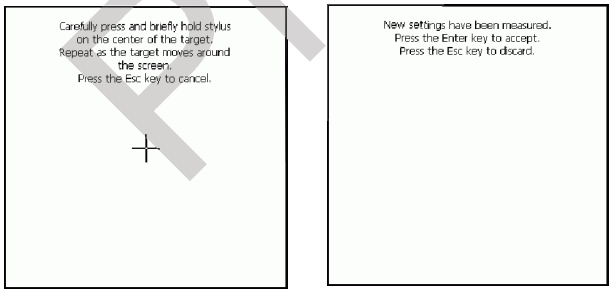

Figure 1-11 *Calibration Screen*

3. Once all of the new calibration settings are input, tap the screen or press the **ENTER** button to save the new calibration settings. Press **ESC** to discard the new calibration settings.

Preliminary

Sample Applications Window (Windows CE Only)

The **Sample Applications** window is the factory default menu. On initial power up (or on a warm or cold boot) the **Sample Applications** window appears. These sample applications are intended to be used by application developers as application development examples. These applications were not developed to support end users. Refer to the *Application Guide for Motorola Enterprise Mobility Devices* for information about the **Sample Applications** window applications.

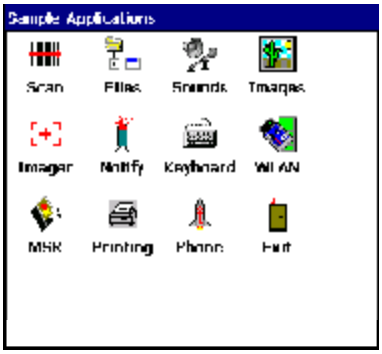

Figure 1-12 *Sample Applications Window*

Waking the Mobile Computer

The wakeup condition settings are used to define what actions wake up the mobile computer. The settings are configurable so they are subject to change/update. For more information see, *Waking the Mobile Computer on page 2-28*.

Main Battery Removal

To remove the main battery from an MC31XXS/R:

1. If the MC31XXS/R is in suspend mode, press the Power button to wake the device.
2. Press the power button to place the MC31XXS/R in suspend mode.
3. Wait for the red Decode LED to turn on and then turn off.
4. Rotate the latches to the open position.

CAUTION Do not lift up on the latches when removing the door. Lift up on the handstrap only.

Preliminary

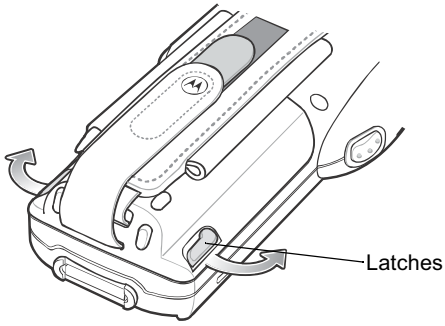

Figure 1-13 *Open Latches*

5. Lift the door off, bottom first.

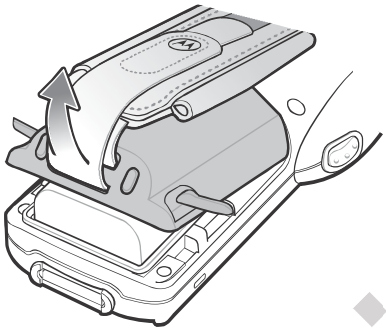

Figure 1-14 *Lift Battery Door*

6. With finger, press the battery clip in (at the top of the battery) and lift the battery out top first.

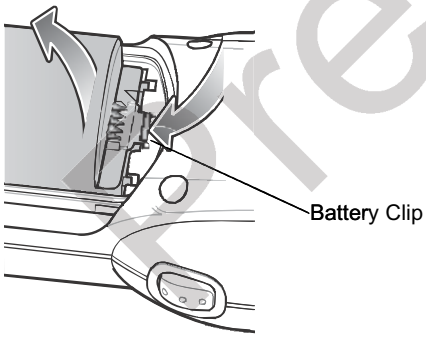

Figure 1-15 *Remove Battery*

To remove the main battery from an MC3190G:

1. If the MC3190G is in suspend mode, press the Power button to wake the device.
2. Press the Power button to place the MC3190G in suspend mode.
3. Wait for the red Decode LED to turn on and then turn off.
4. Rotate the latches to the open position.

Preliminary

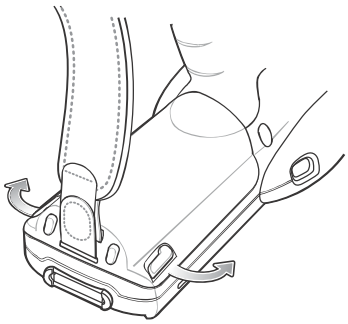

Figure 1-16 *Open Latches*

CAUTION Do not lift up on the latches when removing the door. Lift up on the handstrap only.

5. Lift the door off, bottom first.

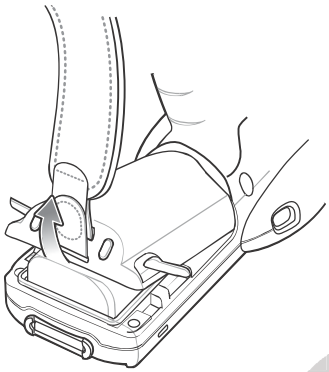

Figure 1-17 *Lift Door*

6. With two finger, press the battery toward the bottom of the mobile computer and lift the battery out top first.

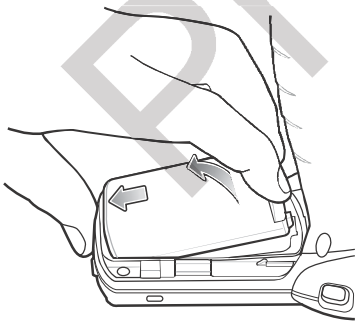

Figure 1-18 *Press the Battery Toward Bottom of MC3190G*

Handstrap Removal and Replacement (MC31XXS/R)

To remove the handstrap:

Preliminary

1. Use a #00 Phillips screwdriver to remove the screws.
2. Lift the mounting clip.
3. Slide the mounting clip out of the strap loop.
4. Open the handstrap flap and pull the handstrap through the battery door mounting slot.

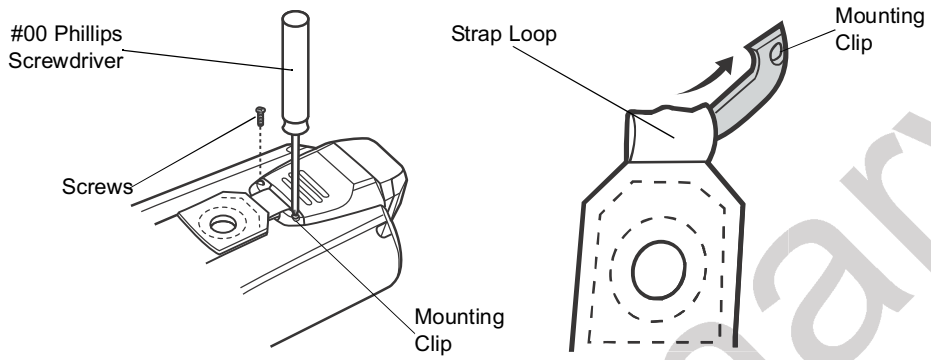

Figure 1-19 *Strap/Door Removal and Replacement (MC31XXS/R)*

To replace the handstrap:

1. Feed the mounting clip through the strap loop.
2. Secure the mounting clip to the housing using the two screws.
3. Feed the handstrap through the slot on the battery door.
4. Attach the hook material to the loop material and press together.

Handstrap Removal and Replacement (MC3190G)

To remove the handstrap:

1. Slip the button through the loop.
2. Remove loop section from handle.
3. Rotate the latches to the open position.

CAUTION Do not lift up on the latches when removing the door. Lift up on the handstrap only.

4. Lift the handstrap to lift the door off, bottom first.

Reverse the procedure to replace the door.

Preliminary

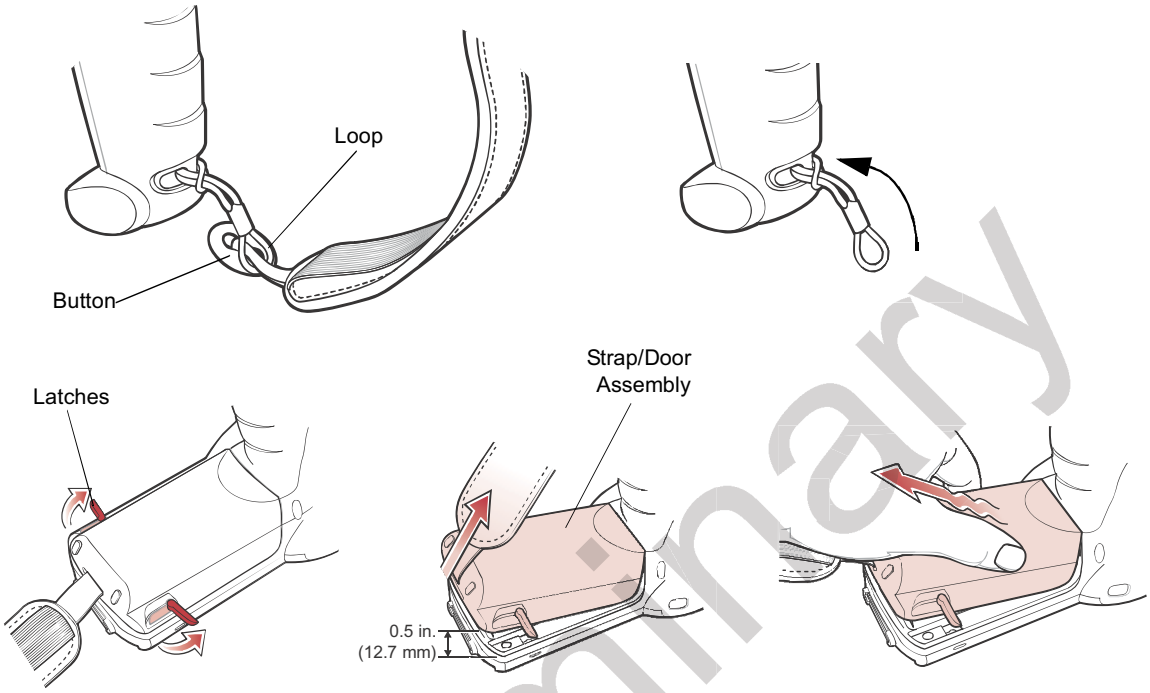

Figure 1-20 *Handstrap Removal and Replacement (MC3190G)*

Preliminary

Turning Off the Radios

On Device with Windows CE 6.0

WLAN Radio

To turn off the WLAN radio tap the **Fusion Signal Strength** icon on the task tray and select **Disable Radio**. A red X appears across the icon indicating that the radio is disabled (off).

Figure 1-21 *Fusion Signal Strength Icon*

To turn the radio back on, tap the **Fusion Signal Strength** icon on the task tray and select **Enable Radio**. The red X disappears from the icon indicating that the radio is enabled (on).

Bluetooth Radio with StoneStreet One Stack Enabled

To turn off the Bluetooth radio, tap the **Bluetooth** icon in the task tray and select **Disable Bluetooth**.

Figure 1-22 *Bluetooth Icon*

To turn on the Bluetooth radio, tap the **Bluetooth** icon in the task tray and select **Enable Bluetooth**.

Bluetooth Radio with Microsoft Stack Enabled

To turn off the Bluetooth radio, tap **Bluetooth** icon in the task tray and select **Disable Bluetooth**.

Figure 1-23 *Bluetooth Icon*

To turn on the Bluetooth radio, tap **Bluetooth** icon in the task tray and select **Enable Bluetooth**.

On Devices with Windows Mobile 6.1

Windows Mobile 6.1 devices include **Wireless Manager**, which provides a simple method of enabling, disabling, and configuring all the device's wireless capabilities in one place.

To open **Wireless Manager**, tap the **Connectivity** icon.

Preliminary

Figure 1-24 *Opening Wireless Manager*

Select **Wireless Manager**.

Figure 1-25 *Wireless Manager Window*

To enable or disable a wireless connection, tap its blue bar.

To enable or disable all wireless connections, tap and hold the **All** bar.

To configure settings for a connection, tap **Menu**.

Figure 1-26 *Wireless Manager Menu*

Preliminary

Preliminary

Chapter 2 Operating the MC31XX

Introduction

This chapter provides basic instructions for using the mobile computer and navigating the mobile computer software.

Power Button

Press the red **Power** button to toggle the mobile computer between suspend and resume. When the screen is off the mobile computer is in suspend mode and when the screen is on the mobile computer is on.

Windows CE Sample Applications Window

On initial power up (or on a warm or cold boot) the **Sample Applications window** appears. This window links to sample/demo applications. The sample/demo applications are intended to be used by application developers as application development examples. These applications were not developed to support end users. Refer to the *Application Guide for Motorola Enterprise Mobility Devices* for the *Demo window* applications.

Figure 2-1 *Sample Applications Window*

Preliminary

NOTE The **Sample Applications** window is the factory default launcher menu. Application specific shells may vary.

Windows CE Desktop

To access the desktop tap the **Exit** icon on the **Sample Applications** window or tap the **Desktop Display** button. See *Figure 2-3 on page 2-3* for the **Desktop Display** button location. The desktop displays the applications available with the Windows CE .NET 6.0 Professional configurations. For information on using the Microsoft® Applications refer to the *Microsoft® Applications for Mobile and CE 6.0 User Guide*, p/n 72E-78456-xx.

Figure 2-2 *Desktop*

Windows CE Status Icons

The taskbar (at the bottom of the screen) displays the **Start** button, active programs, battery status and communication status. The taskbar icons are described in *Table 2-1*. The taskbar icons display the function status, indicate what programs are active and indicate the battery charge status. The Taskbar buttons are used to access menus, select/deselect functions or to change display windows.

- Status Icons: The status icons indicate the function key status. If the **FUNC**, **SHIFT**, **CTRL**, **ALT** or **ALPHA** functions are active the appropriate status icon is displayed.
- Active Programs Icons: The active applications icons are displayed on the taskbar. If more than one program is active, icons can be used to toggle between the open programs (applications). Tap on a taskbar application to maximize the application.
- AC Power/Battery Status Icons: The AC Power/Battery Status icons are shown in the taskbar to indicate the present power supply status of the mobile computer. The main battery status icons provide the battery status in 10% increments from 10% to 100%. The backup battery low icon indicates that the backup battery charge is low. See *Battery Charging on page 1-8* for backup battery charging instructions.

Preliminary

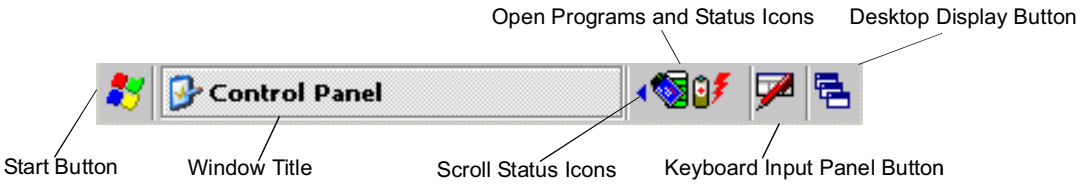

Figure 2-3 *Taskbar*

Table 2-1 *Taskbar Icons*

Icon	Description
	Indicates that the battery is charging.
	Indicates that the battery is fully charged (100% charged). The battery status icons provide the battery status in 10% increments from 10% to 100%.
	Indicates that communication with the smart battery has not been established. After a mobile computer reset, this icon may be displayed for up to 30 seconds. See, *Battery Unknown Icon on page 2-4* for additional information.
	Indicates that the backup battery is low.
	Indicates that the battery is fully charged and the mobile computer is running on external power.
	Indicates IP status. Only displays when the mobile computer is in emulation mode.
	Indicates that the ActiveSync application is running.
	Indicates that the wireless application radio is connected to a wireless LAN network with excellent signal strength.
	Indicates that the wireless application radio is not connected to a wireless LAN network.
	The *Bluetooth Enabled* icon appears in the task tray and indicates that the Bluetooth radio is on (Displays only if the StoneStreet One Bluetooth stack is enabled).
	The *Bluetooth Disabled* icon appears in the task tray and indicates that the Bluetooth radio is off (Displays only if the StoneStreet One Bluetooth stack is enabled).
	The *Bluetooth Communication* icon appears in the task tray and indicates that the mobile computer is communicating with another Bluetooth device (Displays only if the StoneStreet One Bluetooth stack is enabled).
	Opens the IST control panel.
↑	Indicates that the **SHIFT** button function is selected.

Preliminary

Table 2-1 *Taskbar Icons (Continued)*

Icon	Description
F	Indicates that the **FUNC** button function is selected.
^	Indicates that the **CTRL** button function is selected.
ALT	Indicates that the **ALT** character selection is selected.
ALP	Indicates that the mobile computer is in **ALPHA** button mode is selected.

Battery Unknown Icon

The Battery Unknown icon displays when communication with the smart battery has not been established. As part of normal operation this icon may be displayed for 30 seconds following a mobile computer reset.

If the icon displays beyond this 30 second period:

1. Remove and re-seat the battery.
2. If after re-seating the battery, the icon remains, warm boot the mobile computer.
3. If after warm booting the mobile computer, the icon remains, then cold boot the mobile computer.
4. If after cold booting the mobile computer, the icon remains, install a new (tested and working) battery.
5. If the icon remains, return the mobile computer for servicing.

Start Button

Tap the **Start** button to launch the *Start* menu.

- *Programs*: Use to access available programs.
- *Favorites*: Displays files in *Favorites* directory.
- *Documents*: Displays files in *Documents* directory.
- *Settings*: Accesses the Control Panel, the Network and Dial-up Connections and the Taskbar and *Start* menu.
- *Help*: Accesses the Windows CE Help.
- *Run . . .* : Runs a program or application.
- *Suspend*: Places the mobile computer in the suspend state.

Programs Menu

From the *Start* menu, tap *Programs* to launch the *Programs* menu. The programs provided with Windows CE .NET 6.0 Professional display in the *Programs* menu. Refer to the *Application Guide for Motorola Enterprise Mobility Devices*, p/n 72-68901-xx and the *Microsoft® Applications for Mobile and CE 6.0 User Guide*, p/n 72E-78456-xx for application information.

Preliminary

Keyboard Input Panel Button

Use the Keyboard Input Panel as an alternate input device. For more information, see *Entering Information Using the Keyboard Input Panel on page 2-15*.

Desktop Display Button

Use the *Desktop Display* button to minimize all open programs and display the desktop.

- *My Computer:* Double-tap the icon to open My Computer.
- *Recycle Bin:* Deleted files remain in the recycle bin until the recycle bin is emptied. Once emptied the files cannot be retrieved.
- *Remote Desktop Connection:* Tap the *Remote Desktop Connection* icon to access the *Remote Desktop Connection* window.

Task Manager and Properties

Use the Task Manager to control an application's use and use the *Properties* functions to set display and clock options.

Task Manager

NOTE The 20-key mechanical keypad does not contain a **CTRL** key.

1. Select **FUNC** - **CTRL**, (to activate the **ALT** state) and tap on the taskbar to display the *Task Manager, Properties Selection* menu.
2. Tap *Task Manager* to display the Task Manager window.

Figure 2-4 *Task Manager Window*

3. Tap a task in the *Active Tasks* list and tap **Switch To** to make that task the primary task, or tap **End Task** to end the selected task.
4. Tap **X** to exit the *Task Manager* window.

Preliminary

Properties

1. Tap **Start** > **Control Panel** > **Taskbar and Start Menu ...** . The **Task Manager, Properties** window displays, see *Figure 2-6 on page 2-6*.
2. Tap *Properties* to display the *Taskbar and Start Menu*, *General* tab.
3. This menu provides taskbar options:
   - Check the *Always on Top* checkbox to keep the taskbar on top of all other windows.
   - Check the *AutoHide* checkbox to make the taskbar disappear, touch the bottom of the display to make the taskbar return.
   - Check the *Show Clock* checkbox to display the clock on the taskbar.
4. Tap **OK** to save the settings and exit the window.

Figure 2-5 *Taskbar and Start Menu, General Tab*

Advanced Tab

1. Tap the *Advanced* tab to enter the *Taskbar and Start Menu*, *Advanced* tab.
2. Tap the **Clear** button to delete all of the documents listed in the **Start** > **Documents** entry, see *Start Button on page 2-4*. Typically this list is empty, but if there were documents in the list the **Clear** button would delete them.
3. Tap the **Expand Control Panel** checkbox to display the entire contents of the MS control panel in list form, rather than icons.

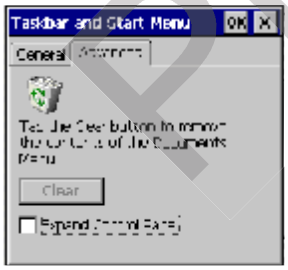

Figure 2-6 *Taskbar and Start Menu, Advanced Tab*

4. Tap **OK** to save the settings and exit the window.

Preliminary

Windows Mobile 6.1 Today Screen

The Today screen displays important information, such as upcoming appointments and status indicators. Tap a section on the screen to open the associated program. Alternatively, tap **Start** > **Today** to display the **Today** screen.

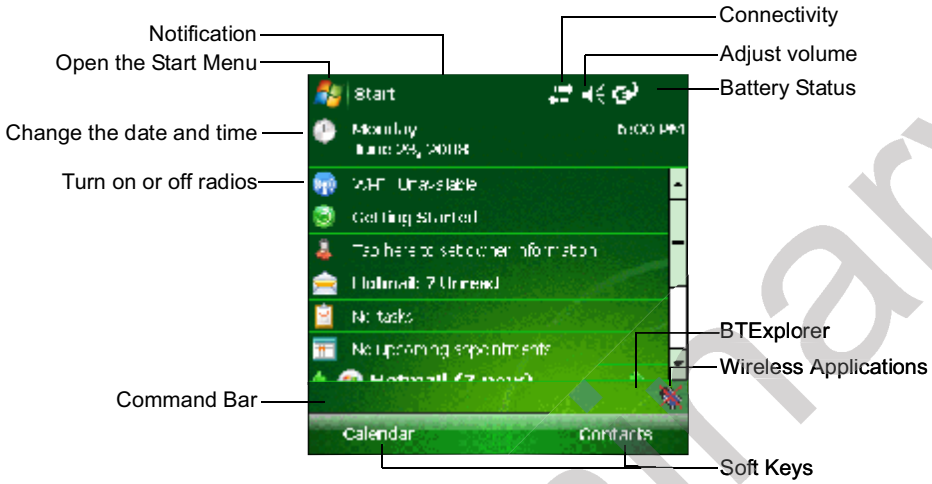

Figure 2-7 *Today Screen*

To customize the **Today** screen, tap **Start** > **Settings** > **Today** icon. Use the **Appearance** tab to customize the background and the **Items** tab to change the list and order of items that appear on the screen.

Windows Mobile 6.1 Status Icons

Status Bar

Status icons are shown in the **Status Bar** to indicate present status of the mobile computer. Tapping each status icon displays the corresponding dialog box and enables you to change or adjust its settings. You may see the status icons listed in *Table 2-2* on the **Status Bar** located at the top of the screen.

Table 2-2 *Status Icons*

Icon	Function	Description
	Audio	Speaker is on.
		Speaker is off.

* Only appears in the *Time and Next Appointment* dialog box.

Preliminary

Table 2-2 *Status Icons (Continued)*

Icon	Function	Description
	Battery	Backup battery is very low.
		Main battery is charging.*
		Main battery level.*
		Main battery is very low.*
	Connectivity	Connection is active.
		ActiveSync error
		Synchronization is occurring.
	Instant Message	Notification that one or more instant messages were received.
	E-Mail	Notification that one or more e-mail messages were received.
1:20	Time and Next Appointment	Displays current time in analog or digital format.
	Multiple Notifications	There are more notification icons than can be displayed. Tap to display remaining icons.

* Only appears in the *Time and Next Appointment* dialog box.

Command Bar

You may see the icons listed in *Table 2-3* on the Command Bar located at the bottom of the screen.

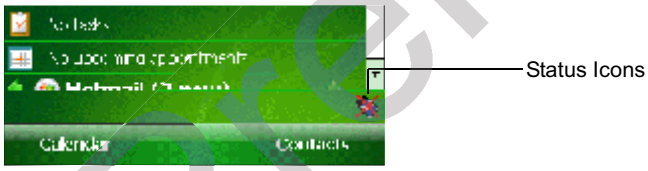

Figure 2-8 *Command Bar*

Table 2-3 *Command Bar Icons*

Icon	Description
	Wireless connection status icon. Indicates WLAN signal strength and opens the Wireless Applications menu.
	The **Bluetooth Enabled** icon appears in the task tray and indicates that the Bluetooth radio is on (Displays only if the StoneStreet One Bluetooth stack is enabled).
	The **Bluetooth Disabled** icon appears in the task tray and indicates that the Bluetooth radio is off (Displays only if the StoneStreet One Bluetooth stack is enabled).

Preliminary

Table 2-3 *Command Bar Icons (Continued)*

Icon	Description
	The **Bluetooth Communication** icon appears in the task tray and indicates that the mobile computer is communicating with another Bluetooth device (Displays only if the StoneStreet One Bluetooth stack is enabled).
	Opens the IST control panel.
	The **ActiveSync** icon appears in the task tray and indicates an active serial connection between the mobile computer and the development computer.

Speaker Icon

You can adjust the system volume using the **Speaker** icon in the Status bar.

1. Tap the **Speaker** icon. The **Volume** dialog box appears.

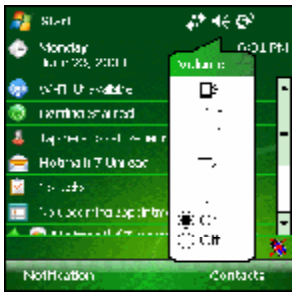

Figure 2-9 *Volume Dialog Box*

2. Tap and move the slide bar to adjust the volume.
3. Select the **On** or **Off** radio button to turn the volume on or off.

NOTE Use can also adjust the system volume using the **Sounds & Notifications** window or by using the keypad special functions. See *Special Character Generation Map on page B-14*.

Battery Icons

The **Main Battery** icon appears in the **Title Bar** when the Today screen is visible. The icon indicates the battery power level.

Preliminary

Figure 2-10 *Battery Icon on the Title Bar*

You can also view the battery status using the **Power** window.

When the main battery power falls below a predetermined level a **Main Battery** dialog box appears indicating the status of the main battery. When the backup battery power falls below a predetermined level a **Backup Battery** icon and dialog box appears indicating the status of the backup battery.

Figure 2-11 *Battery Status Icons and Dialog Boxes*

Connectivity Icon

The **Connectivity** icon indicates the communication status of the terminal when it's connecting to the internet or host computer.

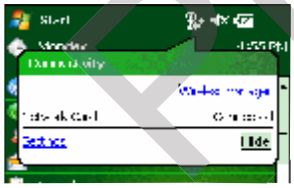

Figure 2-12 *Connectivity Dialog Box*

Time Icon

NOTE The **Time** icon only appears in the **Title Bar** when an application displays. It does not appear it the **Title Bar** when the **Today** screen displays.

The **Time** icon displays the current time in a digital or analog format. To change the time format, tap and hold the **Time** icon until a menu appears. Select the format you want.

Preliminary

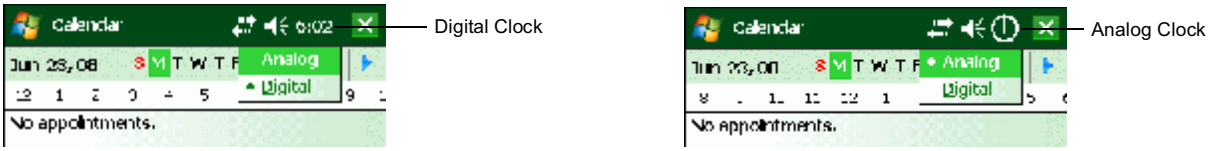

Figure 2-13 *Time Icon Format Menu*

To display current date, time and appointments:

1. Tap the **Time** icon to display the **Time and Next Appointment** dialog box.

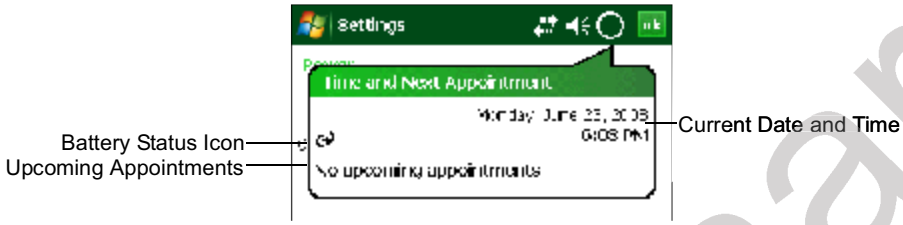

Figure 2-14 *Time and Next Appointment Dialog Box*

2. The dialog box displays the current date and time, the battery status and any upcoming appointments in the **Calendar**.

E-Mail Icon

The **E-Mail** icon notifies you when you have received incoming e-mails.

Figure 2-15 *New E-mail Messages Dialog Box*

Multiple Notification Icon

The **Multiple Notification** icon appears when two or more message notifications occur. Tap the icon to display the multiple notification icons.

Preliminary

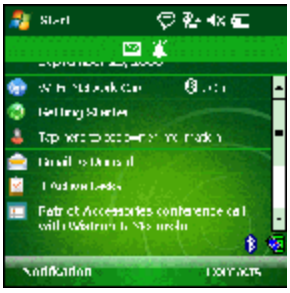

Figure 2-16 *Multiple Notifications Icon*

Locking the Mobile Computer (Windows Mobile 6.1 Only)

You can lock the MC311XX by disabling key presses and screen tap or by requiring a password.

Keypad Locking

Locking the MC31XX turns off keyboard and touch screen functionality. This is helpful when the MC31XX is turned on and you want to prevent accidental key presses.

To lock the device, tap the **Device unlocked** icon. The icon changes to locked.

Figure 2-17 *Device Locked/Unlocked Icons*

To unlock the device and free it for use, tap **Unlock**.

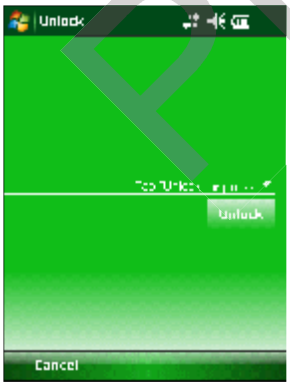

Figure 2-18 *Unlock Device Window*

Tap **Unlock** on the **Unlock** window.

Preliminary

Password Locking

Use the **Password** window to set a password to disable unauthorized access to the MC31XX.

NOTE If the device is configured to connect to a network, use a strong (difficult to figure out) password to help protect network security. Password cracking tools continue to improve and the computers used to crack passwords are more powerful than ever.

1. Tap **Start** > **Settings** > **Personal** tab > **Lock** icon > **Password** tab.

Figure 2-19 *Password Window - Password Tab*

2. Select **Prompt if device unused for** check box to enable password protection.
3. From the drop-down list, select a time value for the protection to take affect after non-use.
4. From the **Password type:** drop-down list, select either **Simple PIN** or **Strong alphanumeric**.
5. For a simple password, enter a four-digit password in the **Password** field.

   For a stronger password:

   a. Enter a seven character password in the **Password:** field. A strong password must contain at least seven characters and contain at least three of the following: uppercase and lowercase letters, numerals, and punctuation.

   b. Re-enter the password in the **Confirm:** field.
6. Tap **ok**.
7. To set a hint to remember the password, tap the **Hint** tab.

Preliminary

Figure 2-20 *Password Window - Hint Tab*

8. In the text box, enter a hint for a password reminder.
9. Tap **ok**.

When the MC31XX is not used for a period of time and the user tries to access the device, the Password window appears.

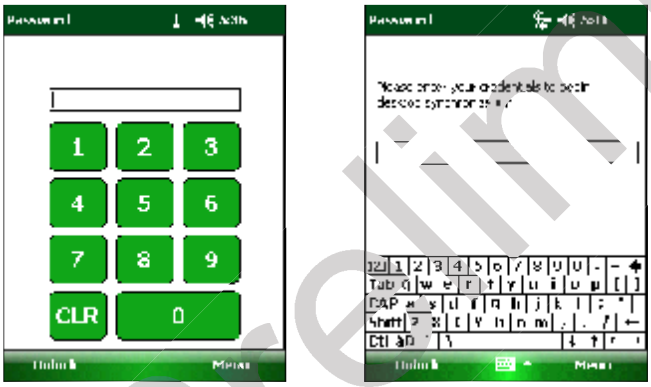

Figure 2-21 *Enter Password Windows*

Enter the password to un-lock the device.

Tap **Unlock**.

Preliminary

Entering Information

To enter information:

- Use the keypad.
- Use the keyboard input panel (soft keyboard) to enter text.
- Scan bar code data into data fields.
- Use Microsoft® ActiveSync® to synchronize or copy information from the host computer to the mobile computer. For more information on ActiveSync, refer to the *MC31XX Integrator Guide*.

Entering Information Using Keypad

The 28, 38 and 48-key alphanumeric keypads produce the 26-character alphabet (A - Z), numbers (0 - 9), function keys and assorted characters. The keypads default characters/functions are printed black or white, the **ALPHA** character/functions are printed orange and the **FUNC** character/functions are printed blue. The 20-key mechanical keypad produces numbers (0 - 9) and function key and various characters. See Appendix B, Keypads for keypad configurations, keypad special functions and special character generation.

Entering Information Using the Keyboard Input Panel

Use the keyboard input panel (soft keyboard) to enter information in any program. To launch the keyboard input panel, tap the button on the taskbar. Tap a key to enter the value. Tap the keyboard input panel button to display or to hide the keyboard input panel.

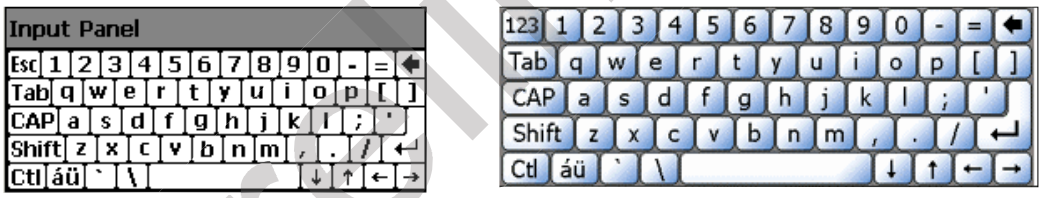

Figure 2-22 *Keyboard Input Panel*

Entering Data via the Bar Code Scanner

The sample bar code scanner application scans data into data fields in the same way data is entered via the keypad.

Preliminary

Interactive Sensor Technology

This section describes the functionality of the Interactive Sensor Technology (IST) feature on the MC31XX.

The IST supports the following features.

- Power Management – manage power by configuring IST to control switching on/off the backlight, control suspend mode of the MC31XX by monitoring motion and orientation.
- Display Orientation – switch the screen orientation to either landscape or portrait depending on the MC31XX orientation.
- Free Fall Detection – monitors free fall duration and records the time and type of the drop event.

Power Management

The MC31XX orientation and motion sensitive data can be used as an indicator of MC31XX usage and can be used to manage the battery power of the mobile computer. For example, IST can be configured to control the backlight on and off functionality or go into suspend according to a user gesture by placing screen facing down. It can also be used to keep the MC31XX active while it is in movement to prevent it from quickly going into suspend mode while in use.

Display Orientation

The screen can be rotated between portrait and landscape modes automatically, depending on the physical orientation of the MC31XX. For example, if the MC31XX is rotated 90° counterclockwise, IST rotates the display counterclockwise 90° so that the screen display appears correct.

This functionality is achieved by monitoring screen angle and rotating the display to counter any changes. IST only rotates the screen in multiples of 90°.

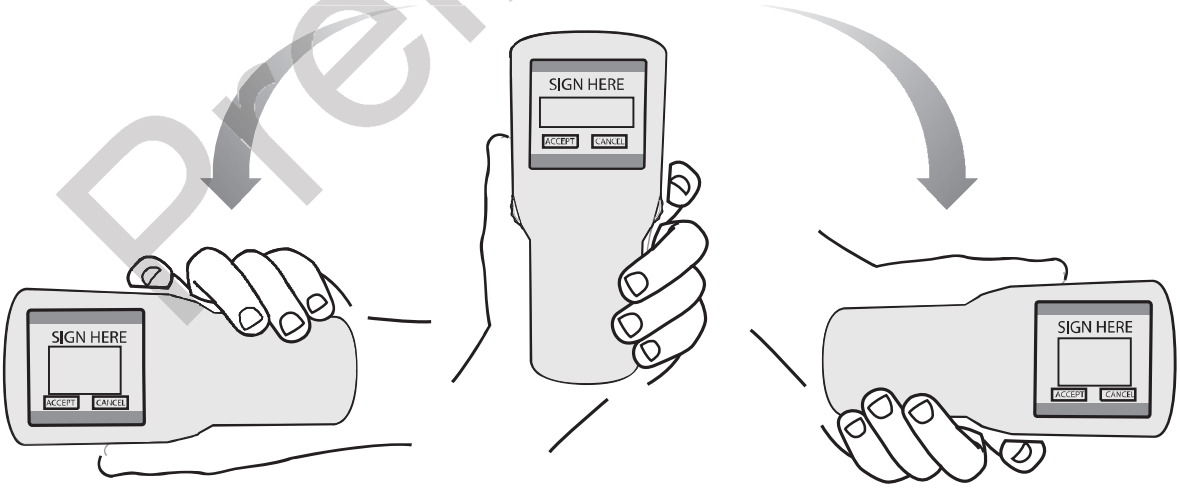

Figure 2-23 *Display Orientation*

Preliminary

Free Fall Detection

IST continuously monitors gravitational force on the MC31XX according to its current position. When the MC31XX free falls, IST detects the absence of gravitational force and records the event data if it detects a free fall more than 450 ms, which may indicates nearly a one meter drop. This data can be used as an indicator of potential abuse or misuse.

IST features a log for recording the free fall events. This log records the date, time and the time period of the free fall.

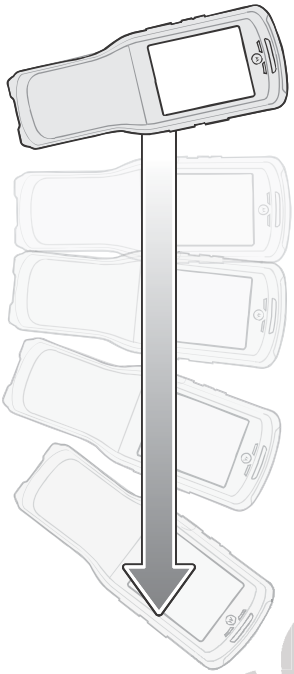

Figure 2-24 *Free Fall Detection*

Preliminary