

Ruggedbook 273



User Manual

About This Manual

This manual explains how to install, operate and maintain the Ruggedbook 273.

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Regulatory Compliance Statements

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

CAUTION! Exposure to Radio Frequency Radiation. The radiated output power of this device is far below the FCC radio frequency exposure limits. Nevertheless, the device shall be used in such a manner that the potential for human contact during normal operation is minimized. When connecting an external antenna to the device, the antenna shall be placed in such a manner to minimize the potential for human contact during normal operation. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.

Federal Communications Commission Notice

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. 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 and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance 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.

The maximum SAR value reported is 0.119. => the SAR value to be define after SAR test

Canada-Industry Canada (IC)

The wireless radio of this device complies with RSS 139 & RSS 210 Industry Canada. This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B conforme à la norme NMB-003 du Canada.

Europe-European Union Notice

Radio products with the CE alert marking comply with the R&TTE Directive (1999/5/EC) issued by the Commission of the European Community. Compliance with this directive implies conformity to the following European Norms (in brackets are the equivalent international standards).

- EN 60950-1 (IEC60950-1) - Product Safety
- EN 300 328 Technical requirement for radio equipment
- ETS 301 489 General EMC requirements for radio equipment.

Products that contain the radio transmitter are labeled with CE alert marking and may also carry the CE logo.

cUL/UL, TUV, CB, Notice

Safety

Use the following safety guidelines to help protect yourself and the 273.

- Do not attempt to service the 273 yourself. Always follow installation instructions closely.
- Be sure that nothing rests on the AC adapter's power cable and that the cable is not located where it can be tripped over or stepped on.
- Do not cover the AC adapter with papers or other items that will reduce cooling; also, do not use the AC adapter while it is inside a carrying case.
- Use only the AC adapter, power cord, and batteries that are approved for use with this 273. Use of another type of battery or AC adapter may cause risk of fire or explosion.
- If you use an extension cable with the AC adapter, ensure that the total ampere rating of the products plugged in to the extension cable does not exceed the ampere rating of the extension cable.

- When you move the 273 between environments with very different temperature and/or humidity ranges, condensation may form on or within the 273. To avoid damaging the 273, allow sufficient time for the moisture to evaporate before using the 273.
- When you disconnect a cable, pull on its connector or on its strain relief loop, not on the cable itself. As you pull out the connector, keep it evenly aligned to avoid bending any connector pins. Also, before you connect a cable make sure both connectors are correctly oriented and aligned.

Battery Safety

- Do not place the battery incorrectly as this may cause danger of explosion.
- Dispose of used batteries according to the manufacturer's instructions.
- Do not dispose of batteries in a fire. They may explode. Check with local authorities for disposal instructions.

Notices

This unit is equipped with a battery pack and backup battery. It is possible that the 273 may not power-on due to battery discharge as a result of storage.

In the above situation, insert the 273 into the cradle and connect the AC adapter to the cradle. Recharge the unit for 3 hours in order to fully charge its battery.

The backup battery will recharge from external power when the AC adapter is connected.

Battery charge notice

It is important to consider the environment temperature whenever you are charging the Lithium-Ion battery pack. The process is most efficient at normal room temperature or slightly cooler. It is essential that you charge batteries within the stated range of 0°C to 50°C. Charging batteries outside of the specified range could damage the batteries and shorten their charging life cycle.

Storage and safety notice

Although charged Lithium-Ion batteries may be left unused for several months, their capacity may be depleted due to build up of internal resistance. If this happens they will require recharging prior to use. Lithium-Ion batteries may be stored at temperatures between -20°C to 60°C, however they may be depleted more rapidly at the high end of this range. It is recommended to store batteries within normal room temperature ranges.

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Chapter 1 Introducing the 273

Thank you for purchasing the Ruggedbook 273.

The 273 is an ultra rugged and compact handheld computer. It's equipped with a barcode scanner and WLAN with Bluetooth send the receiving data back to your desktop or server for military or industrial management application.

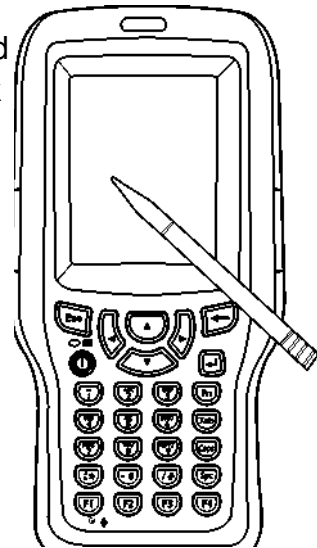
With a powerful Intel Bulverde PXA270 624MHz CPU and Microsoft Windows CE 5.0, this handy terminal creates the most performance and reliability to save your TCO (Total Cost of Ownership).

Your 273 was designed for users who need a compact and durable PDA for data collection and real time transactions.

The 273 is a rugged, compact and lightweight palm-size computer using the Windows CE5.0 operating system. The 273 incorporates an integral bar code scanning device, transfective LCD with touchscreen, keypad, and wireless and Bluetooth communication capability. Optional GPS and GPRS provide extra functionality.

The 273 provides users with a standard Wndows CE-based environment for customizing and operating the device.

To reduce TCO and enhance industrial applications, the 273 is sealed to meet IP64 user standards and has undergone multiple 5 feet drop tests to prevent downtime.


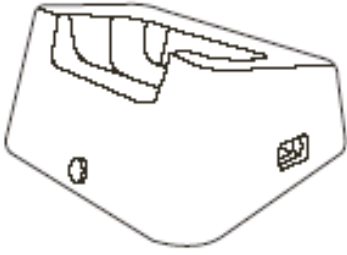
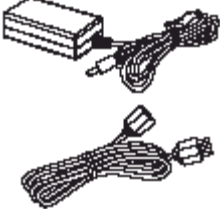

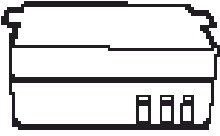


Features

<p>Powerful system</p> <ul style="list-style-type: none">• Microsoft Windows CE 5.0 operating system• Intel Bulverde PXA270 processor with speed up to 624 MHz <p>System memory</p> <ul style="list-style-type: none">• 128MB SDRAM on board• 128 MB Flash ROM <p>Display</p> <ul style="list-style-type: none">• 3.5-inch transfective QVGA LCD with touchscreen• 240 x 320 resolution <p>Barcode scanner</p> <ul style="list-style-type: none">• Built-in Bar Code Scan Engine <p>Communication</p> <ul style="list-style-type: none">• USB Host & Client• 802.11b/g• Bluetooth version 1.2• GPS (optional)• GPRS (optional)• RFID (optional)	<p>Audio</p> <p>Built-in microphone Built-in speaker (optional)</p> <ul style="list-style-type: none">• External microphone connector <p>External headset connector</p> <p>Expansion slot</p> <p>SD PCMCIA</p> <p>Battery life</p> <ul style="list-style-type: none">• Normal usage: 4 hours continuous use <p>Charging time: 3 hours.</p> <p>User-friendly interface</p> <ul style="list-style-type: none">• User configurable function keys <p>Trigger keys for barcode scanning</p>
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Package Contents

After opening the box, ensure the following accessories for the 273 are present:

		
273 Terminal	Cradle	
		
AC adapter and power cord	Stylus	Rechargeable Li-ion Smart battery

Optional Accessories

The following optional accessories can be used to add to the functionality of the 273.

- Sleeve with hand strap & shoulder strap
- Vehicle cradle

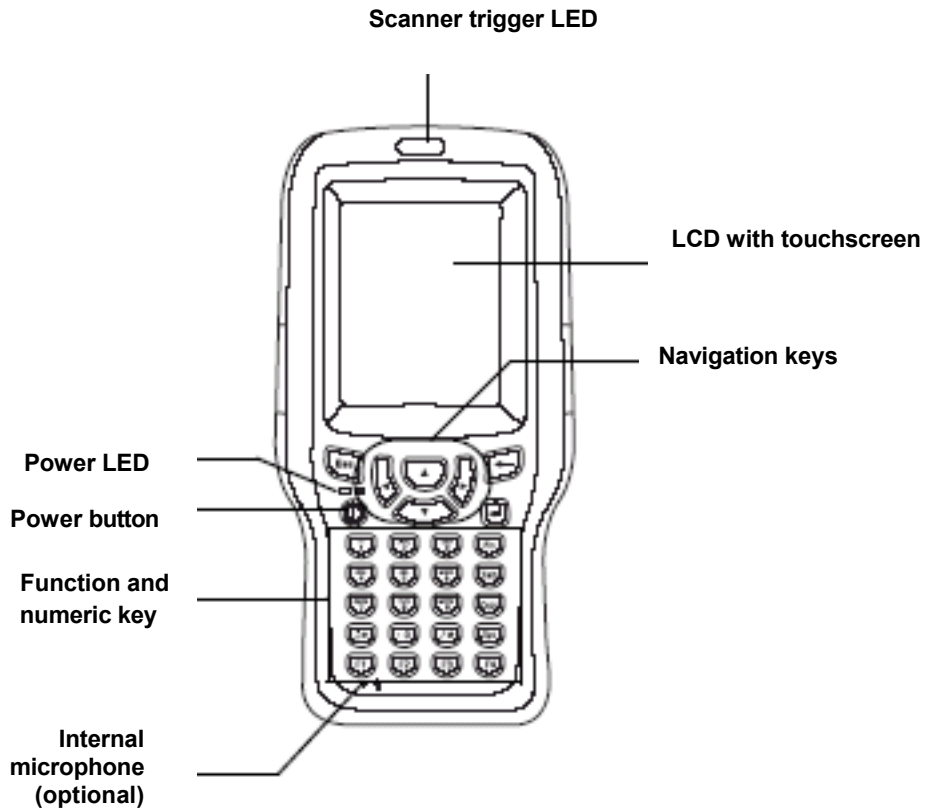
If anything is missing or appear damaged in any way, contact your dealer.

Chapter 1 — Introducing the 273

A Tour of the 273

The following sections describe the main components and features of the 273.

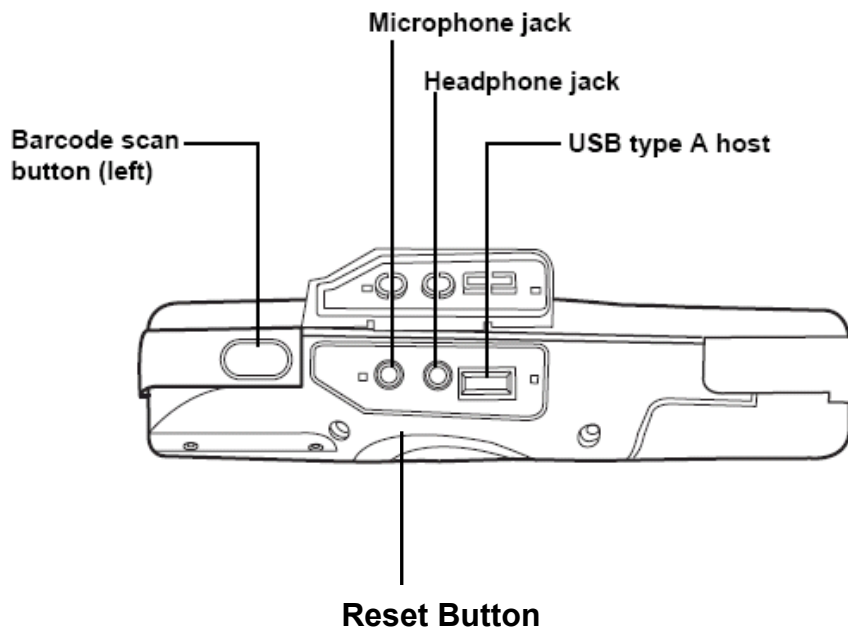
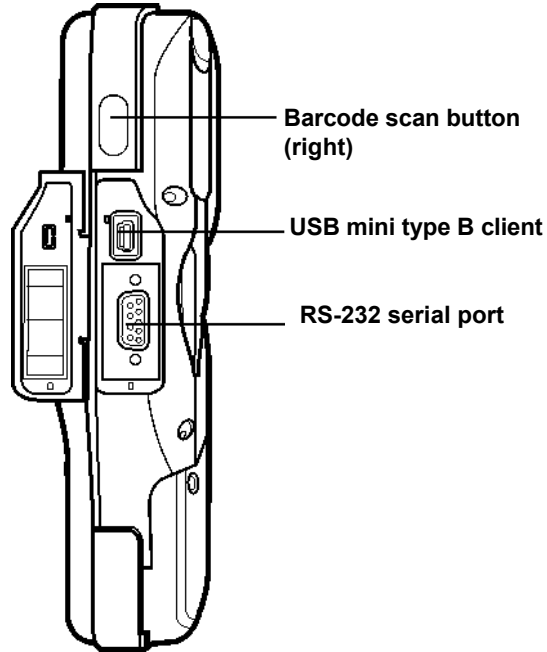
Front View



Chapter 1 — Introducing the 273

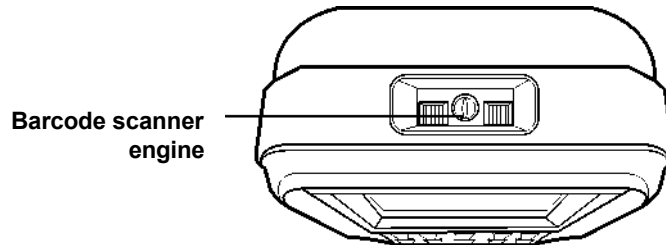
Component	Description
Power LED	<p>Indicates the battery charging power status.</p> <p>Green - Battery is fully charged or the device is running on battery power. When LED flashes, the battery charge is at 13%. Recharge the battery immediately.</p> <p>Red - Battery is charging.</p>
Power button	<ul style="list-style-type: none"> • If the device is off, press this button to turn it on. • When the unit is on, press this button for 3 second to 3 seconds turn the 273 off.
Function and numeric key	Keypad interface for controlling the 273. See <i>Keypads and Function Buttons</i> on page 23 for more information.
Internal microphone (optional)	Enables you to record voice audio.
Navigation Keys	Press these keys to navigate in the 273 interface.
LCD touch screen	Displays the applications and data stored on your device. It is touch-sensitive and responds to the stylus or finger.
Scanner trigger LED	Lights when the scan buttons are pressed scanner read the barcode.

Chapter 1 — Introducing the 273
Right and Left View

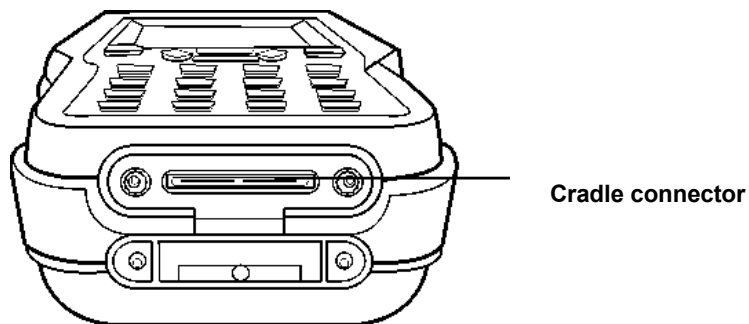


Component	Description
Right barcode scan button	Press to activate the barcode scanner.
USB mini type B port (client)	Connect a USB mini type B connector to this port.
RS232 port	Connect a serial connector to this port for serial communications.
Left barcode scan button	Press to activate the barcode scanner.
Microphone jack	Enables you to record voice audio with an external microphone.
Earphone jack	Connects to audio line-out devices (earphones or headphones) for use in noisy environments.
USB type A port (host)	Connect a USB type A connector to this port.

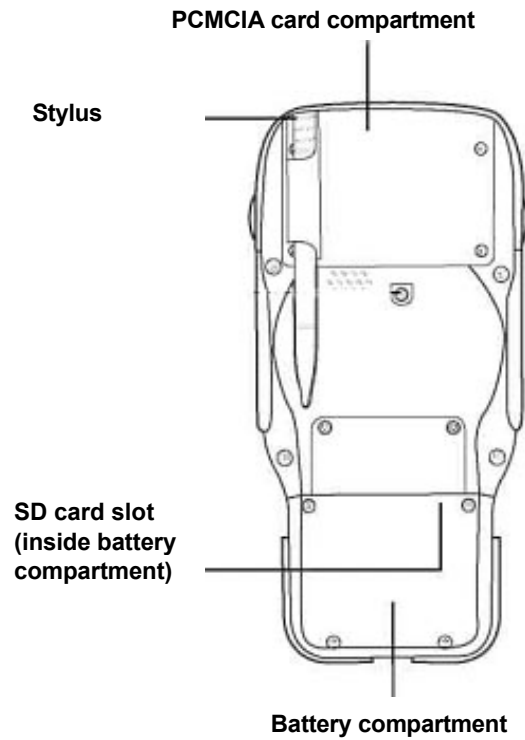
Chapter 1 — Introducing the 273
Top and Bottom View



Component	Description
Barcode scanner window	Scans barcodes when pressing the left and right barcode buttons
Cradle connector	Connects the 273 to cradle, enabling you to charge the battery, connect the 273 to a computer to synchronize data, connect to a LAN, and connect USB devices.



Back View

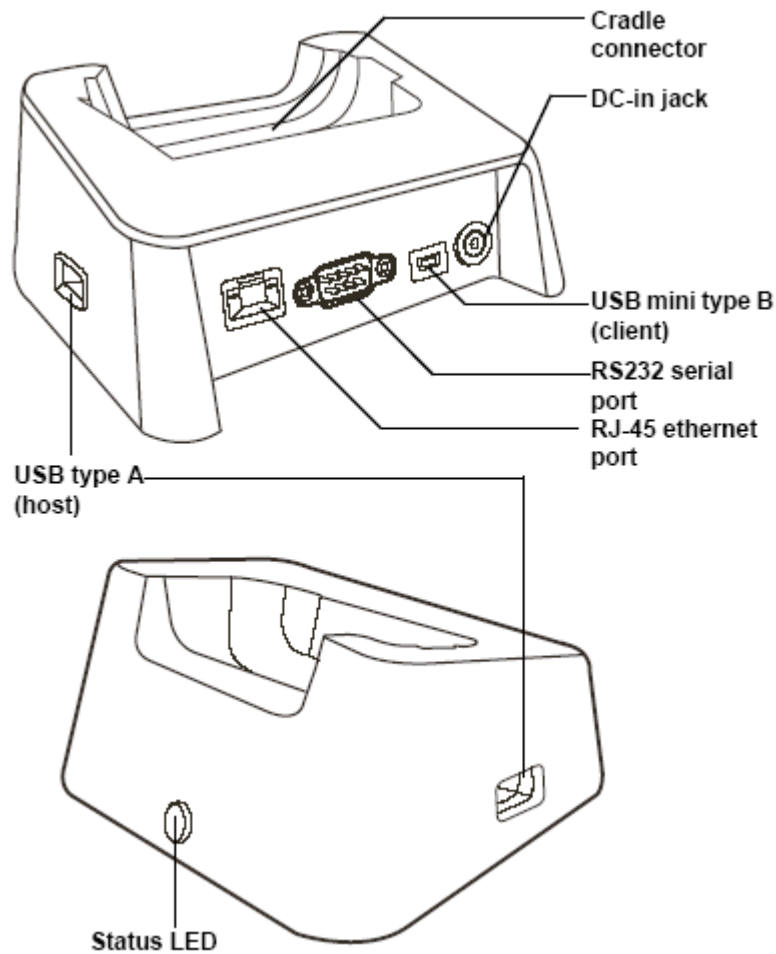


Component	Description
PCMCIA slot (internal)	Remove the cover to install a PCMCIA card for added functionality. See inserting a PCMCIA Card on page 28.
Stylus	Enables you to interact with the operating system. Remove the stylus from the holder and use it the same way you would a pen or pencil.
Speaker	Enables you to hear audio from the 273

Chapter 1 — Introducing the 273

Memory card slot (internal)	Accommodates Secure Digital memorycards. See Inserting an SD Memory Card on page 9.
Battery pack compartment	Houses the removable and rechargeable battery pack. See Installing the Battery on page 12.

Cradle



Chapter 1 — Introducing the 273

Component	Description
Cradle connector	Insert the 273 to this connector to charge the battery, synchronize data with a PC, connect to the internet, connect serial devices, or connect USB devices.
DC-in jack	Connect the AC adapter to this jack to supply power to the cradle and charge the 273 battery.
USB mini type B port (client)	Connect a USB mini type B connector to this port.
RS232 port	Connect a serial connector to this port for serial communications.
RJ-45 connector	Connect this jack to the LAN.
USB type A port (host)	Connect a USB type A connector to this port.
Status LED	Indicates that power and 273 are connected.

Chapter 2 Getting Started

This chapter explains how to install and charge the battery, how to check battery status, how to turn on the 273, and how to calibrate the screen.

Installing the Battery

This section explains how to install the battery.

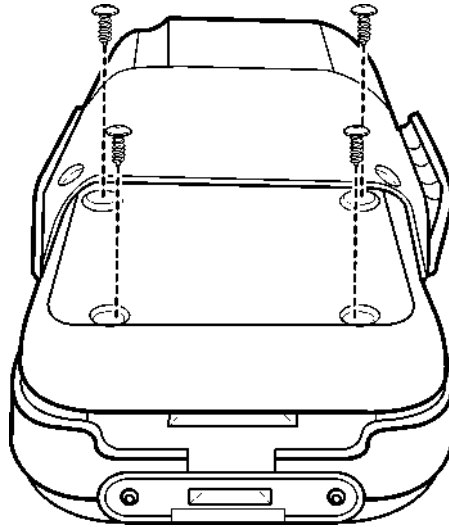


WARNING! There is a risk of fire and burns if the battery pack is handled improperly. DO NOT disassemble, crush, puncture, short external contacts, or dispose the battery pack in fire or water. DO NOT attempt to open or service the battery pack. Dispose of used batteries according to local recycling guidelines in your area.

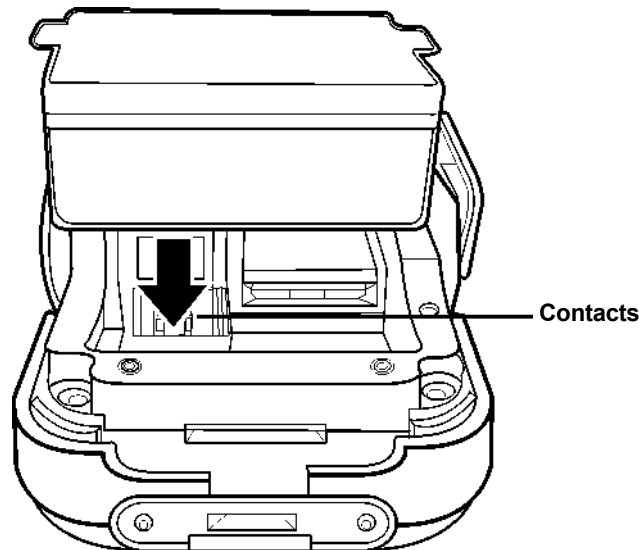
A backup battery cell is embedded into your device to prevent data loss in instances when the removable battery pack is removed or completely discharged. This backup battery cell will only support the system for a maximum of 3 minutes.

Chapter 2 — Getting Started

1. Remove the screws that secure the battery compartment cover to the chassis.



2. Align the battery pack, making sure the battery contacts are aligned with the contacts in the compartment and place the battery in the compartment as shown in the following illustration.



3. Replace the battery compartment cover.

Chapter 2 — Getting Started

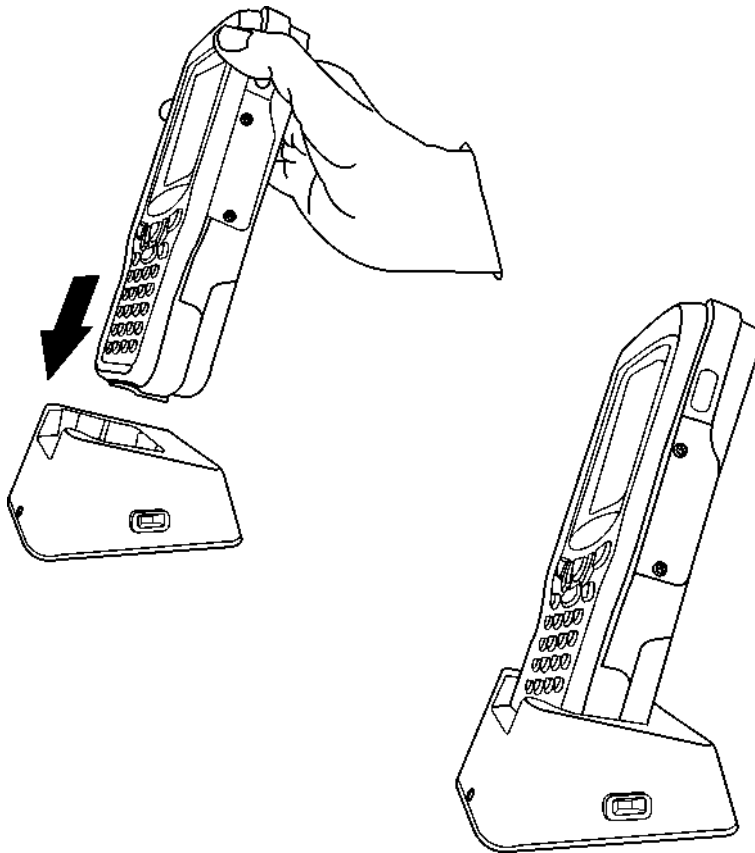
Charging the Battery

Before using the 273 for the first time, you need to charge it for about 3 hours. Charge the 273 using the docking station.

NOTE: When the battery power is below 10%, the 273 will enter suspend mode.

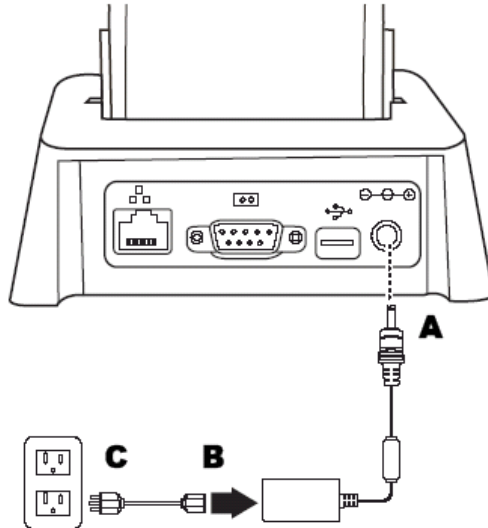
Charging the Battery with the Docking Station

1. Flip open the docking connector cover on the bottom of the 273.
2. Slide the device into the docking station until it clicks into place.



Chapter 2 — Getting Started

3. Plug the AC adapter cable into the power jack on the docking station (**A**).



4. Plug the power cable connector into the AC adapter (**B**)
5. Plug the AC adapter into an electrical outlet (**C**).
The LED indicator on the docking station lights up green.

LED Status

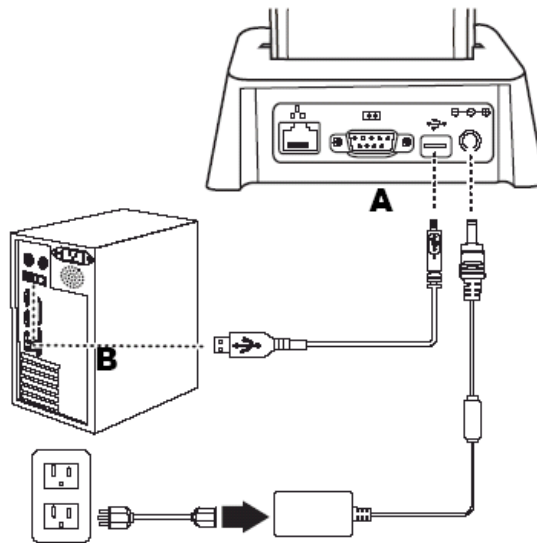
	LED	Meaning
273	Off	power off
	Solid green	power on
	Solid amber	charging complete
	Blinking green	battery very low (<13%)
	Blinking amber	charging
Docking Station	Solid Green	273 is inserted.
	Off	273 is not inserted

Chapter 2 — Getting Started

Connecting the 273 to a PC

Use the USB cable to connect the 273 to a PC to use with Active-Sync. Refer to See *Installing Microsoft ActiveSync* on page 39.

1. Connect the USB mini type B connector to the mini port on the cradle (A).
2. Plug the other end of the USB cable into the USB port on the PC (B).

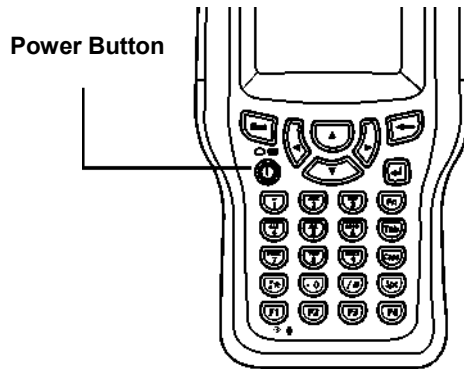


Turning the 273 on for the First Time

After you have initially charged your device for about 3 hours the device is ready to be used. You can now start up your device where you'll calibrate the display, learn some basic stylus usage, and set up the system time zone, date and time.

Powering On

1. Turn on your device by pressing the power button on the front panel.

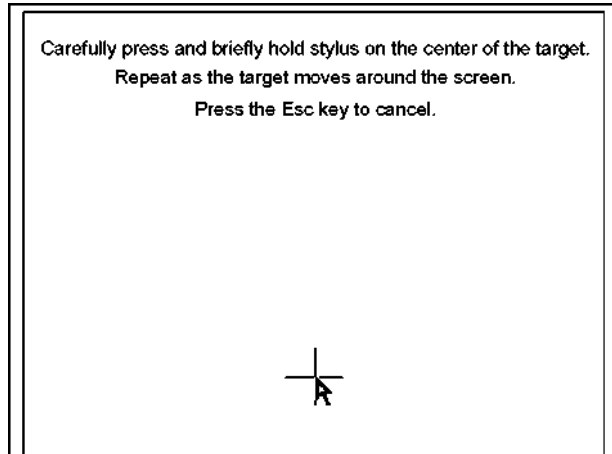


Chapter 2 — Getting Started

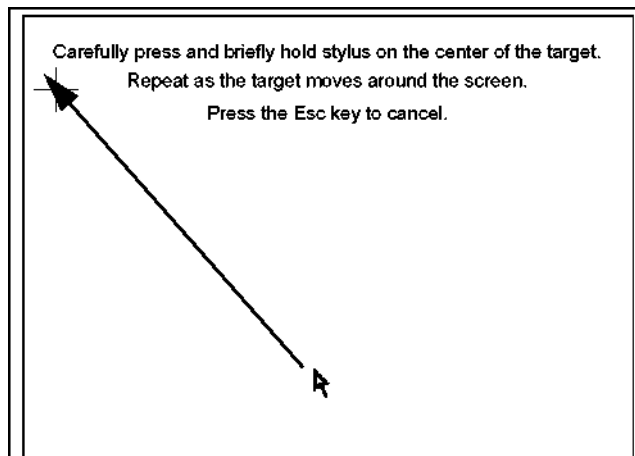
Calibrating the 273 Screen

The calibrate screen automatically appears when the unit is powered-on for the first time or after the system is reset.

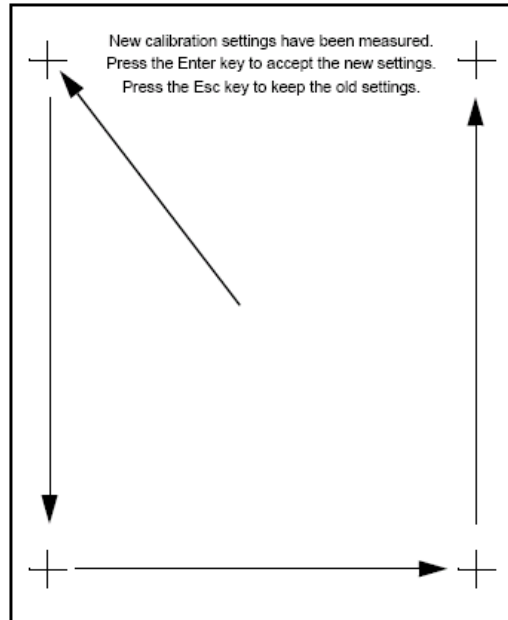
1. Tap the center cross hair firmly and accurately with the stylus.



The cross hair moves to the next location.



2. Continue tapping the cross hairs until the screen has been calibrated



3. After calibration is finished,

press the Enter key to save the settings or press Esc to revert to the previous settings.

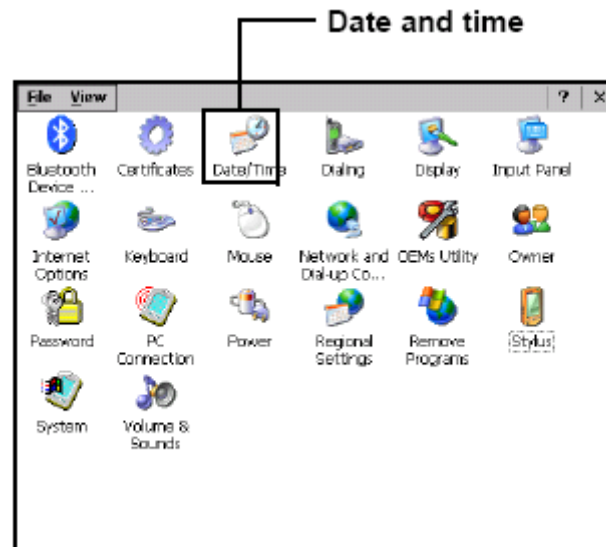
NOTE: To recalibrate the screen at any time, tap **Start** → **Settings** → **Control Panel**. Then double-tap **Stylus**. Tap the Calibration tab, and tap **Recalibrate**.



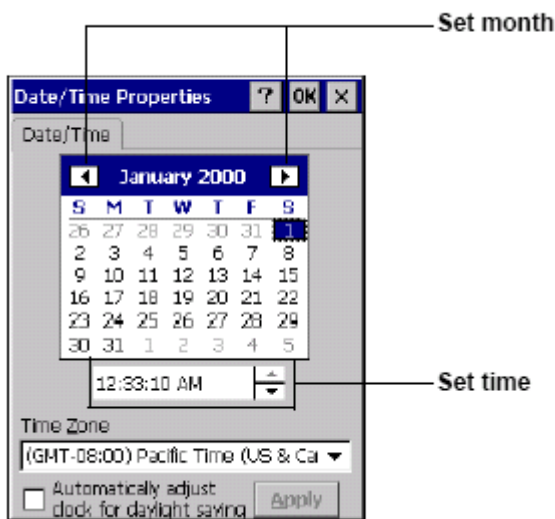
Setting the Time and Date

Follow these instructions to set the time and date.

1. Tap **Start**→ **Settings**→ **Control Panel**.



2. Double-tap Date/Time.
3. Tap the arrows next to the month to select the correct month.



4. Select a field in the time box and tap the arrows next to the time to change the value of the field.

Chapter 2 — Getting Started

5. Tap the drop-down arrow next to Time Zone to select the correct time zone for your area.

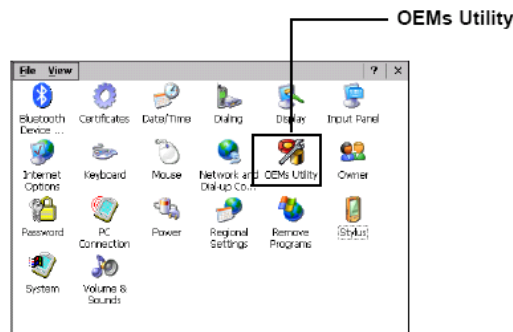


6. Check the box next to **Automatically adjust...** to have the OS automatically adjust for daylight saving time.
7. Click **Apply** to save the settings.

Adjusting the Screen Brightness

Follow these instructions to adjust the screen brightness.

1. Tap **Start** → **Settings** → **Control Panel**.
2. Double-tap **OEMs Utility**.

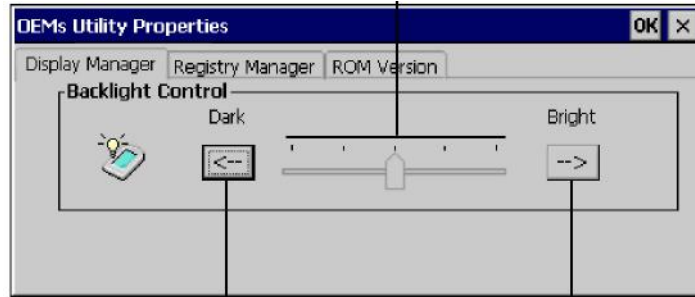


3. Click the **Display Manager** tab.

Chapter 2 — Getting Started

4. Under Backlight Control, click the **Dark** arrow to make the screen darker, or click the **Bright** arrow to make the screen brighter.

Drag slider to make the backlight brighter or darker



Click to make the backlight darker

Click to make the backlight darker

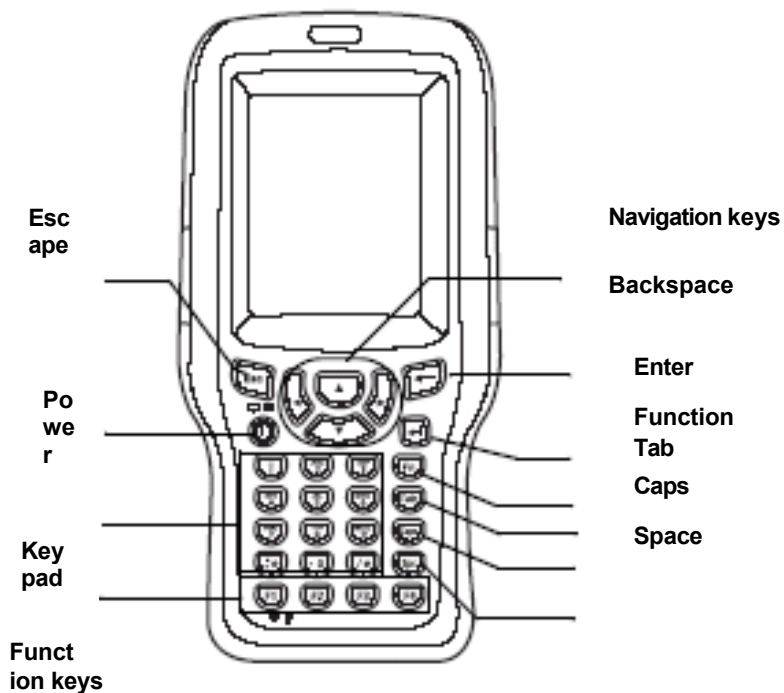
4. Click the close button to exit the utility


Chapter 3 Using the Hardware

Keypads and Function Buttons

The keypad enables you to both enter information and interact with the 273 operating system, and also operate secondary functions using the function keys and Fn key.






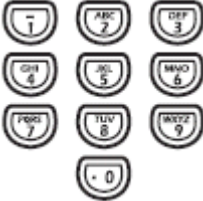
The following illustration shows the keypad keys.







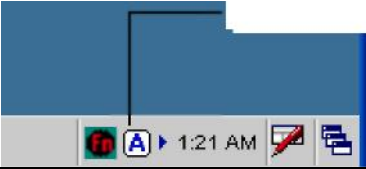




When the blue function (Fn) key is pressed,  an icon appears in the system tray.

Chapter 3 — Using the Hardware

The following table describes the keypad keys.


Key	Main Function
	Escape key.
	Navigation keys enable you to move up and down in menus or dialog boxes.
	Back space deletes a previous character.
	Turns the 273 on and off.
	Press the Enter key to confirm a command or action.
	Number 1 Alphanumeric 2, a, b, c Alphanumeric 3, d, e, f Alphanumeric 4, g, h, i Alphanumeric 5, j, k, Alphanumeric 6, m, n, o Alphanumeric 7, p, q, r, s Alphanumeric 8, t, u, Alphanumeric 9, w, x, y, z Number 0, space

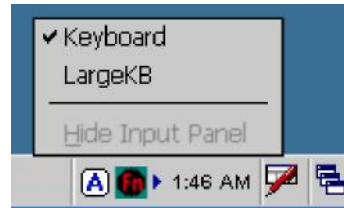
Chapter 3 — Using the Hardware

Key	Main Function
	<p>Press the Fn key to toggle between alphabetic and numeric mode.</p> <p>When the Fn icon is displayed in the system tray, the 273 is in alphabetic mode.</p> <p>Function key icon</p> 
	<p>Press to insert tab.</p>
	<p>Press to make alphabetic characters Uppercase.</p> <p>When CAPS is on, an icon appears in the system tray.</p> <p>Caps icon</p> 
	<p>Press to insert a space in text.</p>
	<p>When in numeric entry mode, press this key to enter an asterisk. When in alphabetic mode, press this key to enter a colon.</p>
	<p>When in numeric entry mode, press this key to enter an pound sign. When in alphabetic mode, press this key to enter a forward slash.</p>
	<p>You can assign function keys 1 to 4 to run applications.</p>

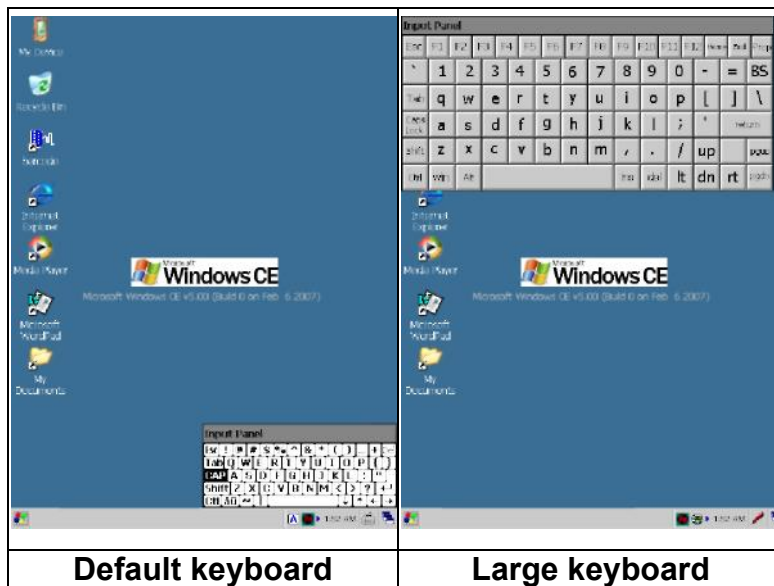
Chapter 3 — Using the Hardware

Entering Characters with the Keypad

The operating system has an onscreen keyboard that enables you to enter alphanumeric characters with the stylus. Press the input panel icon  in the system tray to view the input panel menu.



Tap **Keyboard** to view the default onscreen keyboard or tap **LargeKB** to view a large onscreen keyboard.

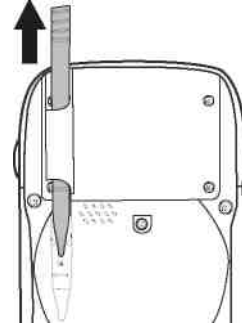


Tap **Hide Input Panel** to close the keyboard. The keyboard emulates a standard computer keyboard. Tap the onscreen keyboard to enter, edit, and delete text.

Using the Stylus


CAUTION! Never use anything other than the 273 stylus on the screen. Using another object as a stylus could cause permanent damage. You can use your finger to interact with the screen as well.

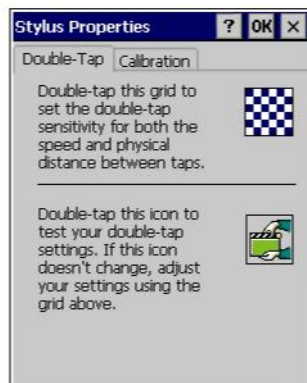
1. Remove the stylus from its holder.
2. Hold the stylus as you would a pencil.
3. To make a choice from a menu, lightly tap the tip of the stylus on that choice.



Adjusting the Double-Tap Rate

Set the stylus double-tap rate as follows.

1. Tap  **Start** -> **Settings** -> **Control Panel**.
2. Double-tap **Stylus**.
3. Tap the Double-Tap tab.



4. Double-tap on the checkerboard graphic to set your double tap rate.

Chapter 3 — Using the Hardware

Inserting a PCMCIA Card

The 273 accommodates a Type II PCMCIA card.

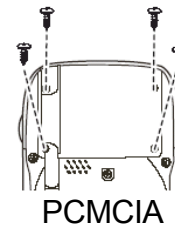
You can enhance the functionality of the 273 by installing PCMCIA cards such as the following:

- GPRS card
- RFID card
- PCMCIA storage card

NOTE : The list above are examples of the types of cards you can install and is not exhaustive.

Follow these instructions to insert a PCMCIA card into the slot.

1. Remove the screws securing the PCM-CIA cover to the chassis.
2. Remove the cover.



3. Slide the PCMCIA card into the slot as shown, until the contacts are seated into the PCMCIA connector.
4. Replace the cover.

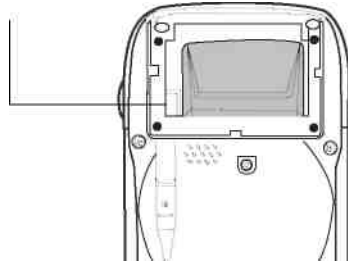


Removing a PCMCIA Card

To remove the PCMCIA card:

1. Press the black PCMCIA button next to the slot

**PCMCIA
button**



The button pops out.

2. Press the button again to push the PCMCIA card out.
3. Remove the card.

Inserting an SD Memory Card

Your 273 has an expansion slot compatible with a range of SD cards, which are primarily used to back up or transfer files and data. The slot also supports SDIO cards for added connectivity options.

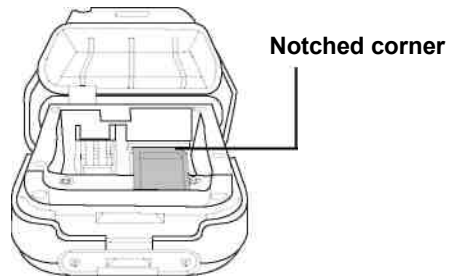
Follow these instructions to insert a SD card into the SD slot.

1. Remove the battery compartment cover and battery. See *Installing the Battery* on page 12.



2. Insert the SD card with the notched corner as oriented as shown in the following illustration

Chapter 3 — Using the Hardware



3. Push the card into the slot.
The card is secure when it is not protruding from the slot.
4. Replace the cover.

Removing a Storage Card

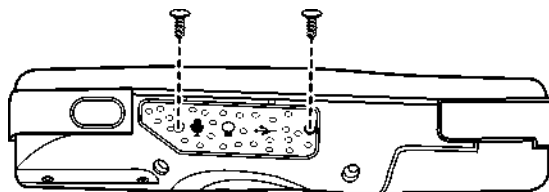
1. Remove the battery compartment cover and battery. See *Installing the Battery* on page 12.
2. Press the card in and release. The card pops out.
3. Remove the card from the slot.

Connecting Devices to the 273

This section describes how to connect devices to the 273. You can connect devices directly to the 273 or connect using the cradle.

Opening the Port Covers

The port covers protect the ports and connectors from rain, dust, and adverse environmental conditions.



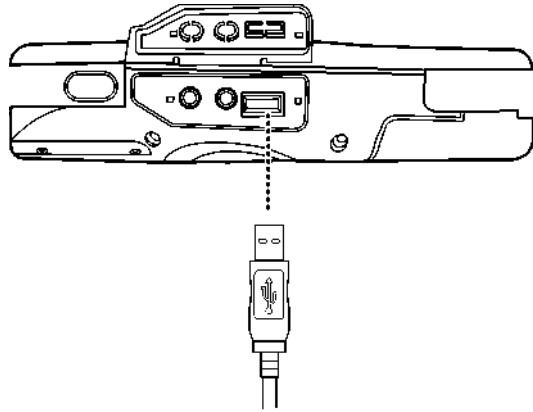
Ensure that you close the covers tightly and replace the screws after disconnecting cables and connectors.

Connecting USB

The 273 accommodates one USB Type A connector. You can connect a and one USB mini Type B connector.

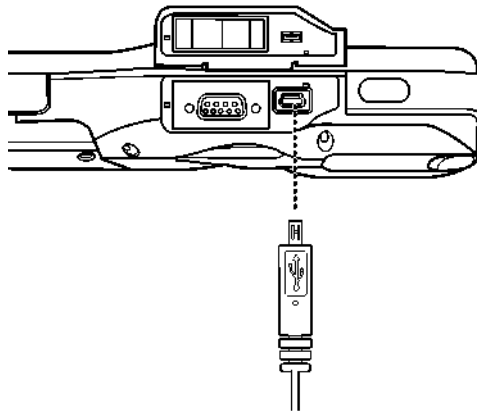
Connecting a USB Type A

The illustration displayed here shows how to connect a USB type A device, to the 273. The connector can only go in one way. If it does not go in smoothly, check the orientation and try again.



Connecting a USB Type B

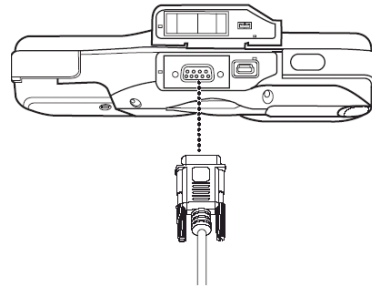
The illustration displayed here shows how to connect a mini USB type B cable to the 273. The connector is keyed to only go in one way. If it does not go in smoothly, check the orientation and try again.



Chapter 3 — Using the Hardware

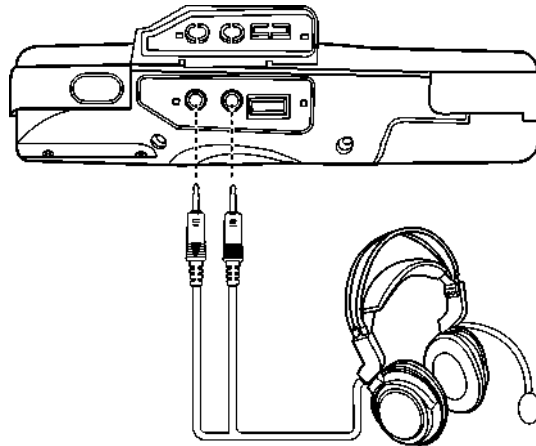
Connecting a Serial Cable device

Connect a serial device to the 273 to perform serial communications. Refer to the following illustration.



Connecting Headphones and a Microphone

The 273 has an external jack microphone and speaker. You can connect a headset and microphone to the 273 for use in noisy environments. Refer to the following illustrations.

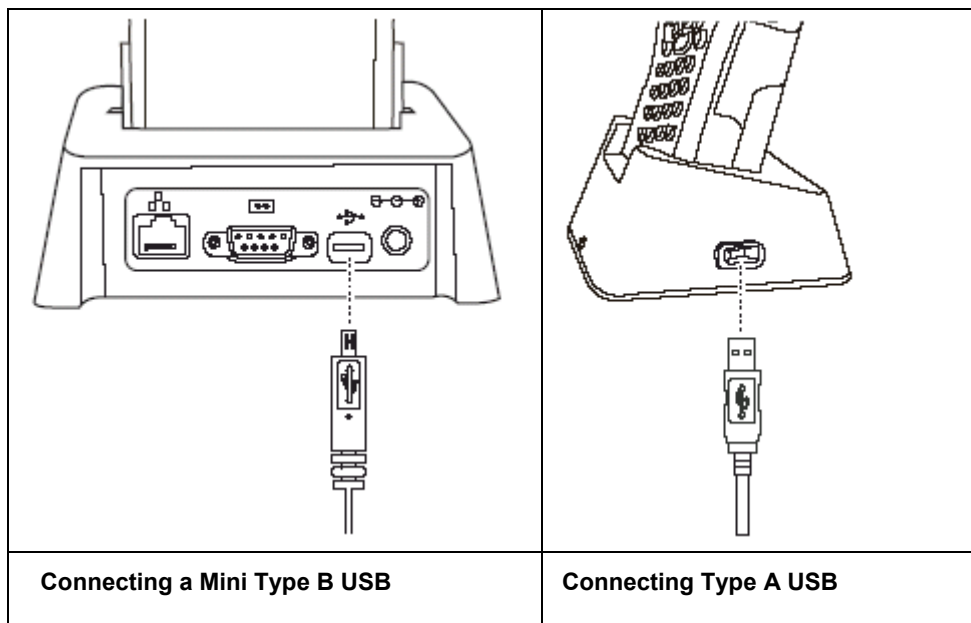


Connecting to the Cradle

The cradle enables you not only to recharge the 273's batteries, it also enables you to connect USB and serial devices, and connect to the LAN.

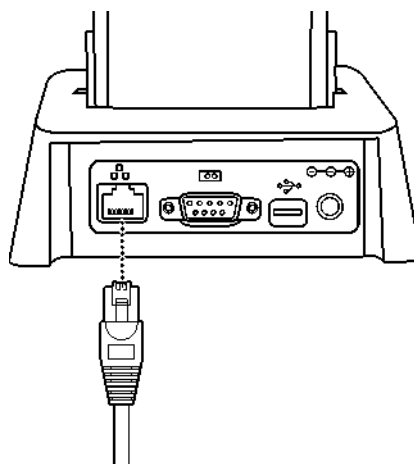
Connecting USB

You can connect USB Type A and Mini USB Type B connectors to the cradle to transfer data with the HT110CL. There is one Mini Type B USB port at the rear of the cradle, and two Type A USB ports on the sides. Refer to the following:



Connecting LAN

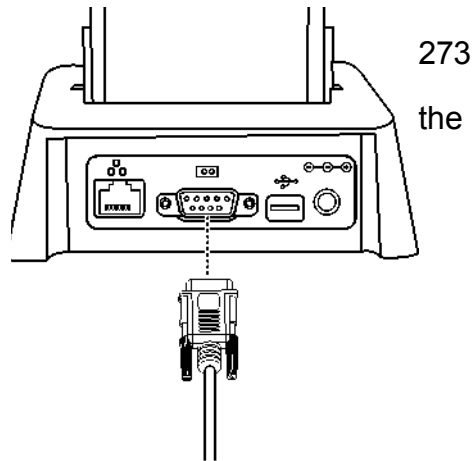
Connect a the cradle to the LAN using the RJ-45 port at the rear of the cradle. Refer to the following illustration.



Chapter 3 — Using the Hardware

Connecting a Serial Cable

Connect a serial cable to the cradle to perform serial communications. Refer to following illustration



Using the Barcode Scanner

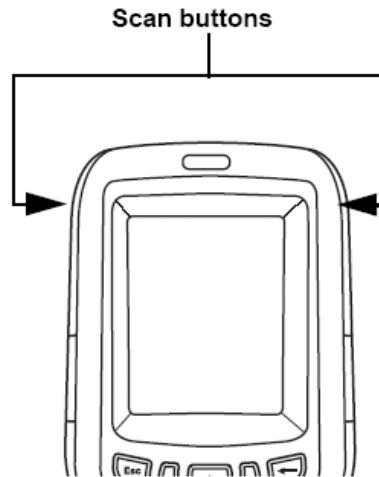
The 273 has an integrated scanner which reads all major bar code labels with excellent performance.

NOTE: Reading software must be enabled in order to operate the scanner. The 273 has a barcode reading program available on the desktop.


Activating the Barcode Scanner

Activate the barcode scanner by pressing either one of the trigger keys located on the left and right side of the unit.

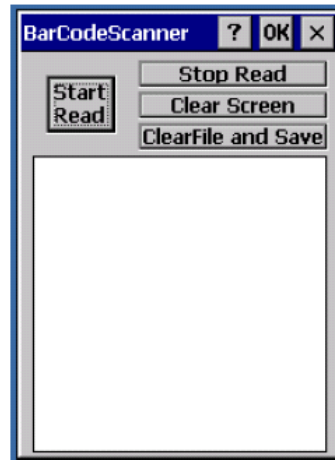
The 273 has a built-in barcode reading program that allows you to use the device's barcode scan function.



Launching the Barcode Reading Program

1. Double-tap the barcode icon  on the desktop to launch the barcode program. The Barcode Scanner program opens.

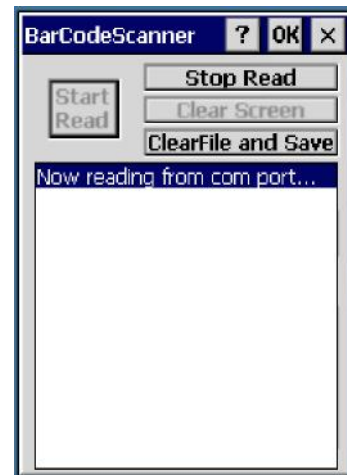
2. Tap **Start Read** and scan a barcode by pressing either of the scan code buttons on the 273 and scanning over the code. The 273 vibrates slightly and provides an audible signal that the barcode is being scanned.



The BarCode scanner program displays a status message :

3. Tap Stop Read to discontinue scanning. Tap Clear screen to remove the status messages. Tap **ClearFile and Save** to save the reading to a text file.

NOTE:The barcode scanner text file *BarCodeResult* is saved to the SD card. You must have an SD card inserted to save the results.



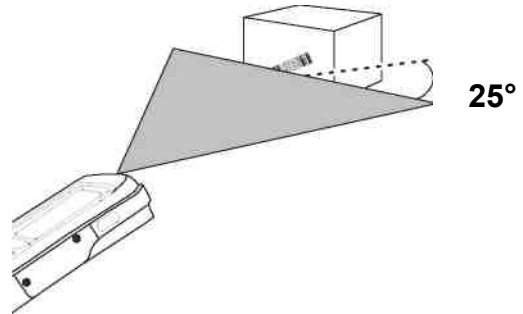
Chapter 3 — Using the Hardware

Location and Reading Position

This section describes the use of the barcode scanner.

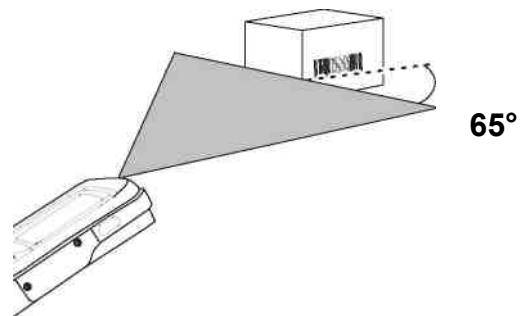
Tilt

Prevents reading of a bar code if all the bars are not inside the reading beam or if tilt is more than 25° tilt.



NOTE: Does not apply to stacked bar codes.

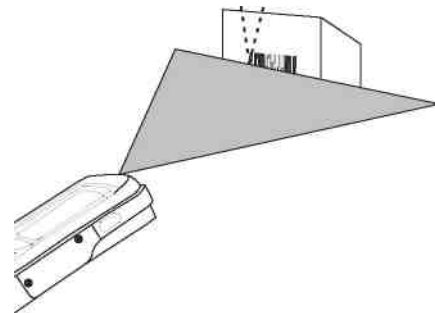
Skew



Reduces bar width and is much more critical for high-density barcodes
Reading may be possible with a skew angle up to 65° Reduce skew to increase reading efficiency skew

Pitch

Reduces bar height Reading may be possible with a pitch angle up to 75°



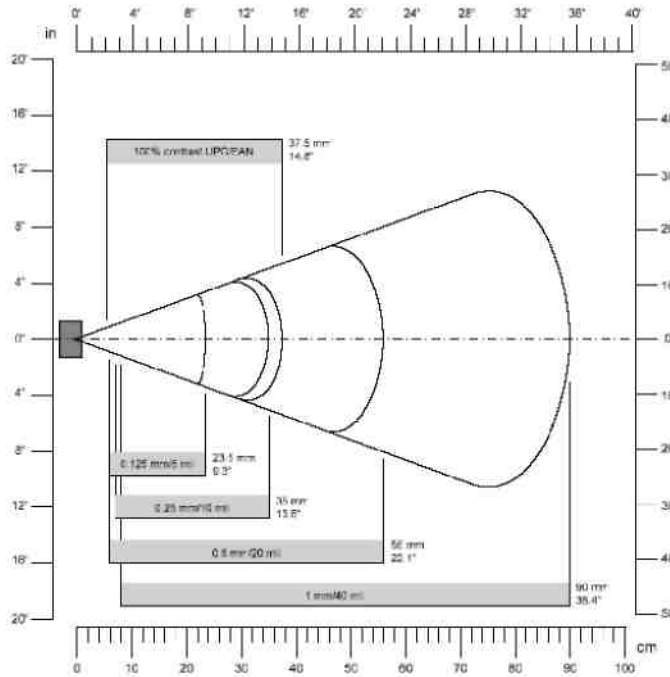
Reduce pitch to increase reading efficiency
A small pitch angle (2-3° minimum) is good as it prevents direct reflection pitch

Reading distances

All distances are measured from the front of the scan engine. When correctly mounted, an exit window will reduce reading distances by about 4%.

Typical reading distances

The reading distances shown below are typical reading distances measured in an office environment (200 lux) with extended reading mode activated.



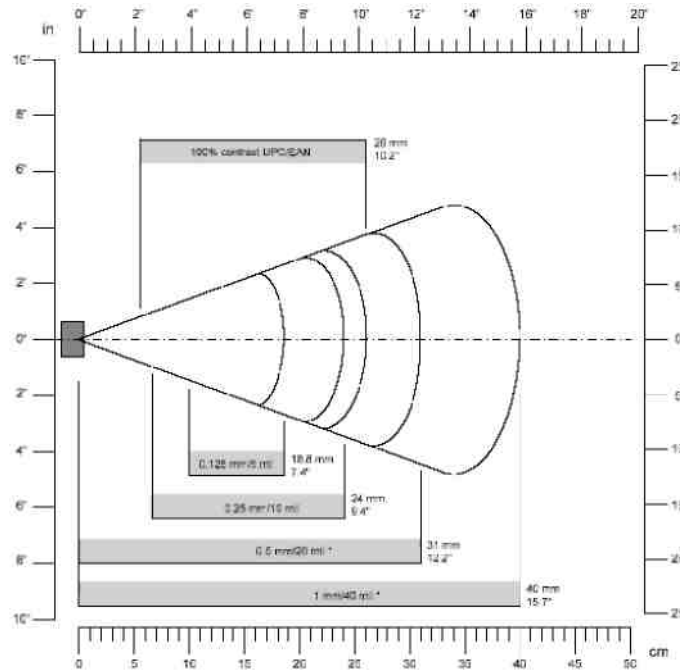
Symbology	Density	Minimum Distance	Maximum Distance
Code 39	0.1 mm / 4 mil	8.5 cm / 3.4"	22 cm / 8.7"
	0.125 mm / 5 mil	8 cm / 3.1"	23.5 cm / 9.3"
	0.25 mm / 10 mil	7 cm / 2.8"	35 cm / 13.8"
	0.5 mm / 20 mil	6 cm / 2.4"	56 cm / 22.1"
	1 mm / 40 mil	8 cm / 3.2"	90 cm / 35.4"
UPC/EAN	0.33 mm / 13 mil	5.5 cm / 2.2"	37.5 cm / 14.8"

Chapter 3 — Using the Hardware

Symbology	Density	Minimum Distance	Maximum Distance
PDF417	0.254 mm / 10 mil	13 cm / 5.2"	16 cm / 6.3"
	0.381 mm / 15 mil	10.8 cm / 4.3"	18.2 cm / 7.2"

Minimum reading distances

Minimum reading distances are measured in the dark (0 lux) with extended reading range disabled.



Symbology	Density	Minimum Distance	Maximum Distance
Code 39	0.1 mm / 4 mil	11 cm / 4.3"	15.2 cm / 6"
	0.125 mm / 5 mil	10 cm / 3.9"	18.8 cm / 7.4"
	0.25 mm / 10 mil	6.8 cm / 2.7"	24 cm / 9.4"
	0.5 mm / 20 mil	*	31 cm / 12.2"
	1 mm / 40 mil	*	40 cm / 15.7"
UPC/EAN	0.33 mm / 13 mil	5.5 cm / 2.2"	26 cm / 10.2"

* Minimum distances depend on symbology length and scan angle.

Getting Connected to a PC

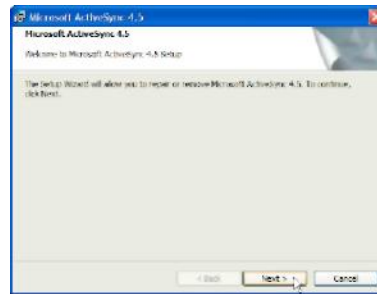
Installing Microsoft ActiveSync

In order to exchange data between your computer and 273, Microsoft ActiveSync must be installed on your computer. Connect the 273 to a PC using a USB mini type B cable.

NOTE: If you have a previous version of the Microsoft ActiveSync installed in your computer, uninstall it first before installing the latest version of Microsoft ActiveSync.

To install Microsoft ActiveSync on your computer:

1. Close any open programs, including those that run at startup, and disable any virus-scanning software.
2. Download the ActiveSync software from the Microsoft Active-Sync Download page at <http://www.microsoft.com/windowsmobile/downloads/activesync42.msp>.
3. Browse to the location of the downloaded file, and double click it. The installation wizard begins.
4. Click **Next**.



Chapter 4 — Getting Connected

You are prompted to read the End User License Agreement (EULA).

5. Accept the license agreement terms and click **Next**.

You are prompted for user information.

6. Type the user name and organization and click **Next** and you are prompted for the destination folder.

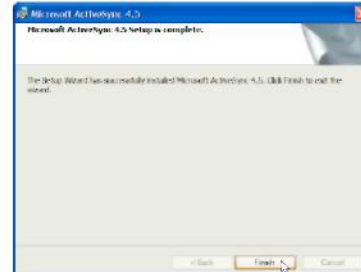
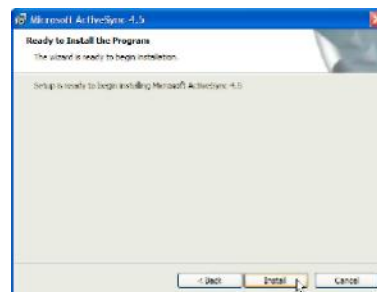
7. Select a drive to install the program to and click **Next**.

The installation wizard has gathered the information it needs to install ActiveSync and prompts you to begin installation.

8. Click **Install**.
The program begins installation


After the program has finished installing you see the screen shown here.

8. Click **Finish**.
You may be prompted to restart your computer.



Chapter 4 — Getting Connected


After you have installed ActiveSync and restarted your computer, the

ActiveSync icon  appears in your computer's system tray as shown and ActiveSync Connection Wizard starts. For detailed information on how to use ActiveSync on your computer, start ActiveSync then click **Help** →

■ Microsoft ActiveSync Help.

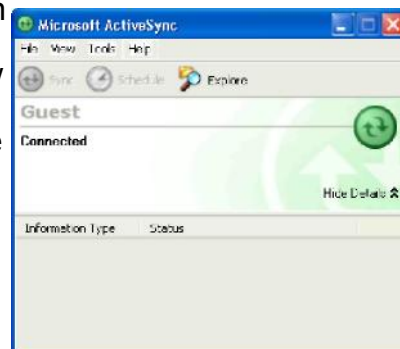
Connecting the Device to Your Computer

1. After ActiveSync has been installed, connect the USB Mini B cable to the USB port on your 273. Refer to *Connecting the 273 to a PC* on page 16.
2. Plug the other end of the USB cable into a USB port on your computer.
3. Turn the device
4. ActiveSync starts automatically and configure the USB port to work with the 273. The New Partnership setup wizard will automatically start.

NOTE: If ActiveSync doesn't start automatically, click **Start** →  **Programs** → **Microsoft ActiveSync**.

If a message appears indicating that it is unable to detect a connection, click the **Cancel** button and manually configure the communication settings.

5. Follow the onscreen instructions.
6. When the configuration process is complete, the ActiveSync window appears.
7. Synchronization will be initialized and will take place if you've chosen to synchronize periodically or upon connection.



NOTE: Your computer can create a partnership with multiple 273s. Also, a 273 can create a partnership with up to two computers

Chapter 4 — Getting Connected

Bluetooth Connection

Your device is equipped with Bluetooth wireless technology that you can use to synchronize information with a computer equipped with a Bluetooth adapter or access point. Bluetooth wireless technology allows you to communicate with the computer whenever it is within range.

1. Follow these instructions to set up a Bluetooth connection Tap **Start** → **Settings** → **Control Panel** and double-tap **Bluetooth**.

WiFi Connection

With the device's embedded WLAN module, you can send and receive signals to a WiFi network then synchronize files.

NOTE: WiFi access requires a separate purchase of a service contract with a wireless service provider. Contact a wireless service provider for more information.

A wireless network can be added either when the network is detected or by manually entering settings information. Before doing these steps, determine if authentication information is needed.

1. Tap **Start** → **Settings** → **Control Panel**, then double-tap **Network and Dial-up**
2. **Connections**.

For more information on how to configure the wireless network settings, tap **Start** → **Help**.

Chapter 5

Scanner Setup

Symbologies

The following symbologies are supported by the 273.

Mode	Symbology
Decoded	Codabar, Codablock A and F, Code 11, Code 39, Code 93/93i, Code 128/ISBT 128/ UCC EAN 128, Industrial and Standard 2 of 5, Interleaved 2 of 5, Matrix, MSI, PDF417/MicroPDF417/MacroPDF417 (unbuffered mode), Plessey, RSS, Telepen, UPC/EAN/ISBN
Emulated DBP	Codabar, Code 11, Code 39, Code 93/93i, Code 128/UCC EAN 128, Standard 2 of 5, Interleaved 2 of 5, Matrix, MSI, PDF417/MacroPDF417 (unbuffered mode), Plessey, RSS, Telepen, UPC/EAN
Standard DBP	All symbologies supported by the host decoder

Interface

The following interfaces are supported:

- **Decoded mode:** RS-232 TTL (max. baud rate 57600)
- **Emulated and standard DBP:** mode industry standard DBP output



Chapter 5 — Scanner Setup
Basic Setup

Reset Factory Defaults	Barcode
	reset factory defaults  \60\08\55\24



Selet Baud Rate	Barcode
	1200  \60\02\48\40\00\0A\40
	2400  \60\02\48\40\00\0D\20
	4800  \60\02\48\40\00\10\00

Chapter 5 — Scanner Setup

Select Baud Bits	Barcode
	<p>9600</p>  <p>\60\02\48\40\00\12\40</p>
	<p>19200 (*)</p>  <p>\60\02\48\40\00\15\20</p>
	<p>38400</p>  <p>\60\02\48\40\00\18\00</p>








Select Stop Bits	Barcode
	<p>1 (*)</p>  <p>\60\02\48\44\00\00\00</p>
	<p>2</p>  <p>\60\02\48\44\00\02\40</p>

Chapter 5 — Scanner Setup



Select Postamble	Barcode
	none  \60\02\42\01\00\00\00
	Carriage Return + Line Feed (*)  \60\02\42\01\00\00\02\00\22\4A

Disable all symbologies	Barcode
	 \60\08\55\23

Chapter 5 — Scanner Setup

Select Symbologies	Barcode
	Code 128 (*)  \60\01\53\20\00\02\40
	EAN 128 (*)  \60\01\53\22\00\02\40
	Interleaved 2 of 5  \60\01\56\00\00\02\40
	Standard 2 of 5  \60\02\00\40\00\02\40
	PDF417 (*)  \60\02\0B\20\00\02\40
	UPC-A (*)  \60\02\08\40\00\02\40
	UPC-E (*)  \60\02\08\41\00\02\40

Chapter 5 — Scanner Setup

Select Symbologies	Barcode
	<p data-bbox="1043 322 1139 344">EAN-8 (*)</p>  <p data-bbox="916 421 1139 443">\60\02\08\42\00\02\40</p>
	<p data-bbox="815 472 932 495">EAN-13 (*)</p>  <p data-bbox="815 571 1059 593">\60\02\08\43\00\02\40</p>

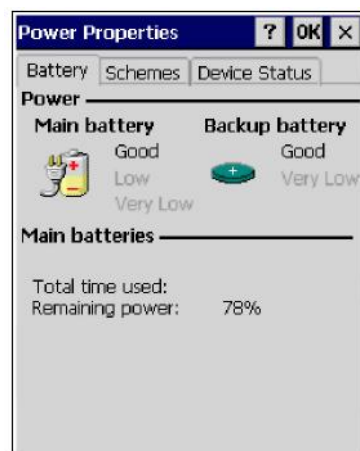
Advance Settings

Checking the Battery Status

This section describes how to view the power level for both the main and backup battery and how to set power saving options.

To check the main and backup battery status:

1. Open Power Properties. Tap **Start** → **Settings** → **Control Panel**. Then double-tap **Power**. The Power screen appears.
2. The battery menu item displays the status of the main and backup batteries.



NOTE: It is necessary to charge the battery when the battery charge reaches below 10%. If the battery does not accept a charge, contact Technical Support.

Chapter 6 — Advance Settings

Extending Battery Life

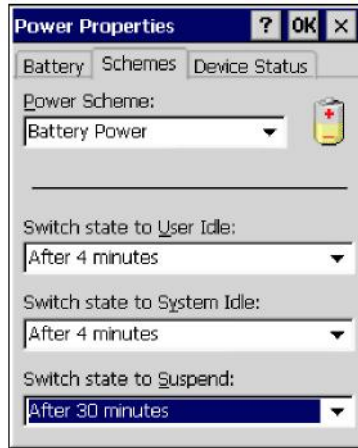
You can extend the 273 battery life by doing either of the following:

- Change the automatic power settings
- Minimize the use of the backlight

Changing the Automatic Power Settings

To change the automatic power settings:

1. In the Power Properties screen tap the **Schemes** tab.



2. Tap the arrow next to the Power Scheme and select Battery Power.
 3. Tap the arrows next to the following three power saving scenarios and select the desired time out for each item.
 - Switch state to User Idle: 273 enters power saving mode when there is no user input after the selected timeout. The backlight brightness is reduced. The backlight resumes normal brightness when the LCD is touched.
 - Switch state to System Idle: 273 enters power saving mode when there is no system activity after the selected timeout. The backlight brightness is reduced. The backlight resumes normal brightness when the LCD is touched.
 - Switch state to Suspend: 273 enters suspend mode when there is no user input or system activity after the selected timeout.
- Time out values range from Never, and 4/5/10/30 minutes.

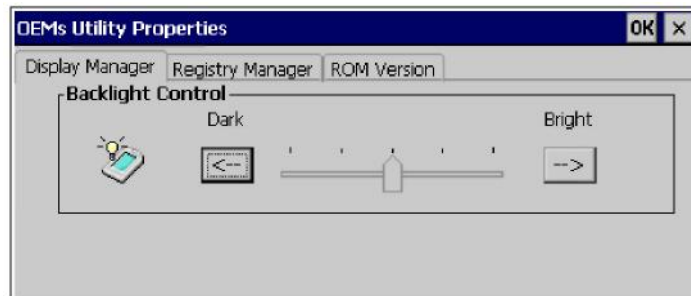
Adjusting Backlight Settings

The power consumption of the LCD backlight is high, turn off the backlight function if it is not necessary.

If a backlight is required, set “automatically turn off the backlight” function.

To change backlight settings:

1. Tap **Start** → **Settings** → **Control Panel**.
2. Tap **OEMs Utility**.
3. Select Display Manager, and tap the arrow next to Dark or drag the slider to the left to reduce the screen brightness.



Chapter 6 — Advance Settings

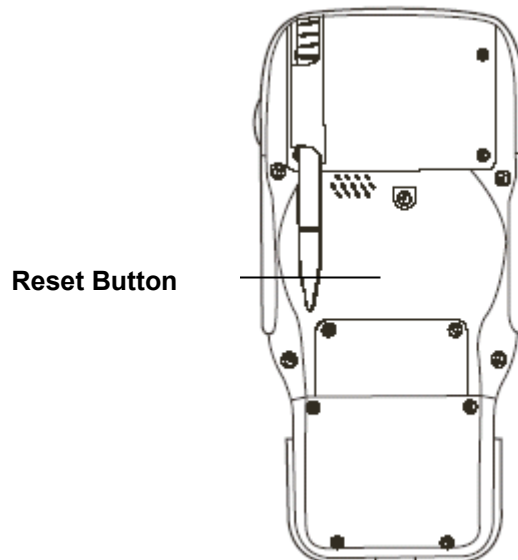
Performing a Reset

You may have to perform a reset if the device freezes (i.e., device no longer responds to the buttons on the screen).

A reset allows your device to get a fresh start, similar to rebooting a computer. This will restart your device and adjust memory allocation. All records and entries are retained after a reset. Unsaved data in open programs may in some cases be lost.

Performing a Warm Boot

1. Remove the stylus from its holder.
2. Lightly press the tip of the stylus to the reset button located on the rear of the 273.



System Specifications

Item	273
Operating System	Windows CE 5.0
Processor	Intel PXA270 624MHz
Memory	128MB SDRAM on board 128MB Flash ROM (M-System) on board
Display	3.5-inch transfective TFT LCD, QVGA resolution (240 X 320)
	3.5-inch transfective TFT LCD, VGA resolution (640 X 480) (option)
Touch Panel	Resistive touch pane touch panel
Audio System	AC-97, Internal microphone and one speaker (stereo supported via earphone jack)
Application Buttons	1 x power on/suspend button Navigation Key+ Function Key + Numeric Key (Total 28keys) 2 x Barcode scan button (Left & right lateral side) 1 x software reset switch (back side)
Communication	802.11b/g WLAN module built-in with integral antenna
	Bluetooth class 2, v1.2 built-in with integral antenna
Data Capture	Optional imager 1D, and support 2D stack (PDF417) decoding (Factory option), optional RFID (CF interface) reader

Chapter 6 — System Specifications

Item	273
External I/O Interfaces	One USB type A connectors, USB1.1 Host One USB mini type B connector, USB1.1 client One RS-232 (full) port One Stereo Headphone Jack One Microphone Jack One SD Slot One PCMCIA Slot type II One Cradle Connector (USB host x 1, USB client x 1, RS232 x 1(full), DC)
Scan rate	Decoded operation: to 500 scans per second (auto-adaptive) Standard and emulated DBP: 200 scans per second
Scanning angles	Scan angle: 40° Skew: 65° Pitch: 75° Tilt: 25° (N/A on stacked codes)
Barcode characteristics	Min X dimension: down to 0.1 mm / 4 mil Barcode width: up to 18 cm / 7 in on 0.3 / 12 Mil resolution code Print contrast: down to 25% Reading distance: 0 to 49.2 cm / 19.4 in
Main Battery	Rechargeable Li-ion smart battery, 7.4V, 1900mAh, 1P2S
Power Adapter	Universal AC 100V ~ 240V, 50~60Hz input, 12V, 3.5A output.
Physical	210 x 100 x 43~36 mm, 575g
Environment	Operating Temperature: -20 to +60°C
	Storage Temperature -40 to +70°C
	Charging Temperature 0 to +50°C
	Operating Humidity 5% ~ 95% non-condensing

Chapter 6 — System Specifications

Item	273
Rugged Specification	IP64, 5 feet drop to concrete, MIL-STD-810F
Certification	CE, FCC, cUL/UL, TUV, CB, CCC
Accessories	One AC-Adapter & power cord Stylus Cradle (One LED, One DC-in jack, USB type B x 1, two USB Type A connectors, one RS232/422/485, one pad connector) Sleeve with hand strap & shoulder strap (Optional) Battery charging station (Optional) Gun Handle (Optional) Single slot cradle (Optional)