

Handy Terminal HT1100



User Manual

Preface

About This Manual

This manual explains how to install, operate and maintain the Handy Terminal HT1100.

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Regulatory Compliance Statements

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment may be held-in-hand in such way that a minimum distance of 20 cm between the handheld device and the user's body is ascertained. The equipment is not approved for body-worn applications.

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.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The equipment with its integral antenna(s) must provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunctions with any other antenna or transmitter.

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 not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user 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.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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 

CCC Notice

On Class A systems, the following warning will appear near the regulatory label:



WARNING! This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

Safety

Use the following safety guidelines to help protect yourself and the HT1100.

CAUTION! Do not operate the HT1100 for an extended period of time with the base resting directly on your body. With extended operation, heat can potentially build up in the base. Allowing sustained contact with the skin could cause discomfort or, eventually, a burn.

- Do not attempt to service the HT1100 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.
- Place the AC adapter in a ventilated area, such as a desktop or on the floor, when you use it to run the HT1100 or to charge the battery. 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 HT1100. Use of another type of battery or AC adapter may cause risk of fire or explosion.
- Before you connect the HT1100 to a power source, ensure that the voltage rating of the AC adapter matches that of the available power source.
 - 115 V/60 Hz in most of North and South America and some Far Eastern countries such as South Korea and Taiwan.
 - 100 V/50 Hz in eastern Japan and 100 V/60Hz in western Japan.
 - 230 V/50 Hz in most of Europe, the Middle East, and the Far East.
- 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.
- To remove power from the HT1100, turn it off, remove the battery, and disconnect the AC adapter from the electrical outlet.
- To help avoid the potential hazard of electric shock, do not connect or disconnect any cables or perform maintenance or reconfiguration of this product during an electrical storm.

- When traveling, do not check the HT1100 as baggage. You can put the HT1100 through an X-ray security machine, but never put the HT1100 through a metal detector. Be sure to have a charged battery available, in case you are asked to turn on the HT1100.
- When traveling, do not place the HT1100 in overhead storage compartments where it could slide around. Do not drop the HT1100 or subject it to other mechanical shocks.
- Protect the HT1100 and battery from environmental hazards such as dirt, dust, food, liquids, temperature extremes, and overexposure to sunlight.
- When you move the HT1100 between environments with very different temperature and/or humidity ranges, condensation may form on or within the HT1100. To avoid damaging the HT1100, allow sufficient time for the moisture to evaporate before using the HT1100. Allow the HT1100 to acclimatize to the room temperature before turning on the power.
- 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.
- Before you clean the HT1100, turn it off, unplug it from its power source, and remove the battery.
- Do not use this product near water, for example, near a bathtub, washing bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.

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 HT1100 may not power-on due to battery discharge as a result of storage.

In the above situation, insert the HT1100 into the cradle and connect the AC adapter to the cradle. Recharge the unit for 90 minutes in order to fully charge its backup 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.

Table of Contents

Preface

About This Manual	i
Regulatory Compliance Statements	ii
FCC Statement.....	ii
<i>Federal Communications Commission Notice</i>	ii
Canada-Industry Canada (IC)	iii
Europe-European Union Notice.....	iii
cUL/UL, TUV, CB, Notice	iii
CCC Notice.....	iii
Safety	iv
Battery Safety	v
Notices	vi
Battery charge notice.....	vi
Storage and safety notice.....	vi

Chapter 1

Introducing the HT1100

Features	2
Package Contents	3
Optional Accessories.....	3
A Tour of the HT1100	4
Front View	4
Right and Left View	6
Top and Bottom View	8
Back View.....	9
Cradle.....	10

Chapter 2

Getting Started

Installing the Battery	12
Charging the Battery.....	14
<i>Charging the Battery with the Docking Station</i>	14
Connecting the HT1100 to a PC.....	16
Turning the HT1100 on for the First Time	17
<i>Powering On</i>	17
<i>Calibrating the HT1100 Screen</i>	18

Table of Contents

Setting the Time and Date	20
Adjusting the Screen Brightness	21

Chapter 3

Using the Hardware

Keypads and Function Buttons	23
Entering Alphanumeric Characters	26
Entering Characters with the Keypad	26
Entering Characters with the Keypad	27
Using the Stylus	28
Adjusting the Double-Tap Rate	29
Inserting a PCMCIA Card	30
Removing a PCMCIA Card	32
Inserting an SD Memory Card	33
Removing a Storage Card	34
Connecting Devices to the HT1100	35
Opening the Port Covers	35
Connecting USB	35
<i>Connecting a USB Type A</i>	35
<i>Connecting a USB Type B</i>	36
Connecting a Serial Cable	36
Connecting Headphones and a Microphone	37
Connecting to the Cradle	37
<i>Connecting USB</i>	37
<i>Connecting LAN</i>	38
<i>Connecting a Serial Cable</i>	38
Using the Barcode Scanner	39
Activating the Barcode Scanner	39
Launching the Barcode Reading Program	40
Location and Reading Position	41
<i>Tilt</i>	41
<i>Skew</i>	41
<i>Pitch</i>	41
Reading distances	42
<i>Typical reading distances</i>	42
<i>Minimum reading distances</i>	43

Chapter 4

Getting Connected

Connecting to a PC	44
--------------------------	----

Installing Microsoft ActiveSync	44
Connecting the Device to Your Computer	47
Synchronizing with Your Computer	48
Connection Options	48
<i>USB Connection</i>	48
<i>Infrared Connection</i>	49
<i>Bluetooth Connection</i>	50
<i>WiFi Connection</i>	51
Synchronizing Information	52
Synchronization Options.....	52
Using ActiveSync to Exchange Files	53

Chapter 5

Scanner Setup

Symbologies	54
Interface.....	54
Basic Setup	55

Chapter 6

Advance Settings

Checking the Battery Status	60
<i>Checking the Battery Status</i>	60
Extending Battery Life	61
Changing the Automatic Power Settings	61
Adjusting Backlight Setting	62
Performing a Reset	63
Performing a Warm Boot.....	63

System Specifications

Table of Contents

Features

Powerful system

- Microsoft Windows CE 5.0 operating system
- Intel Bulverde PXA270 processor with speed up to 624 MHz

System memory

- 128MB SDRAM on board
- 128 MB Flash ROM

Display

- 3.5-inch transfective QVGA LCD with touchscreen
- 240 x 320 resolution

Barcode scanner

- Built-in Bar Code Scan Engine

Communication

- USB Host & Client
- 802.11b/g
- Bluetooth version 1.2
- GPS (optional)
- GPRS (optional)
- RFID (optional)

Audio

- Built-in microphone
- Built-in speaker (optional)
- External microphone connector
- External headset connector

Expansion slot

- SD
- PCMCIA

Battery life

- Normal usage: 4 hours continuous use
- Charging time: 90 minutes

User-friendly interface

- User configurable function keys
- Trigger keys for barcode scanning

Package Contents

After opening the box, ensure the following accessories for the HT1100 are present:

		
<p>HT1100 Terminal</p>	<p>Cradle</p>	
		
<p>AC adapter and power cord</p>	<p>Stylus</p>	<p>Rechargeable Li-ion Smart battery</p>

Optional Accessories

The following optional accessories can be used to add to the functionality of the HT1100.

- Sleeve with hand strap & shoulder strap
- Vehicle cradle

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

A Tour of the HT1100

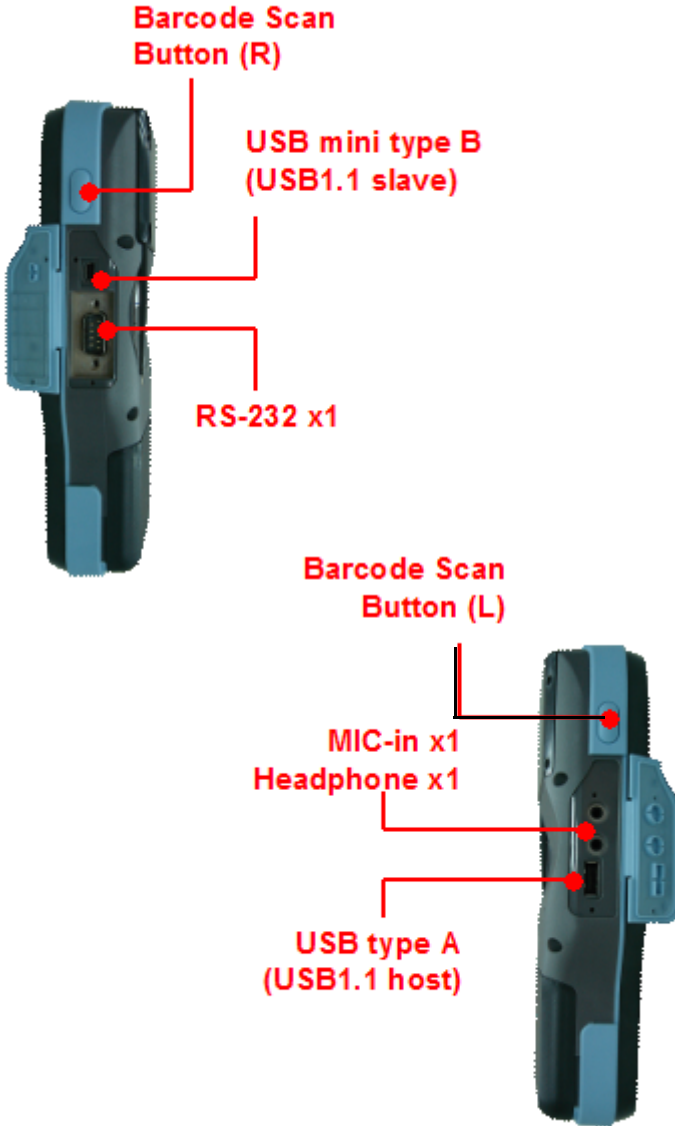
The following sections describe the main components and features of the HT1100.

Front View



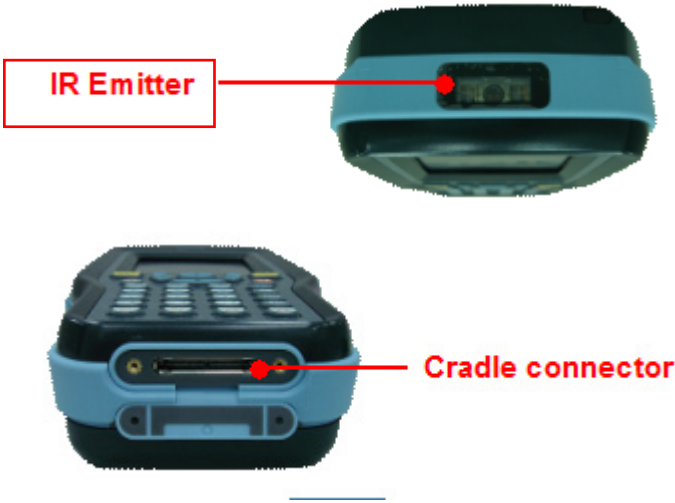
Component	Description
Power LED	<p>Indicates the battery charging power status.</p> <p>Green - Battery is fully charged or the device is running on battery power. When LED flashes, the battery charge is at 13%. Recharge the battery immediately.</p> <p>Red - Battery is charging.</p>
Power button	<ul style="list-style-type: none"> • If the device is off, press this button to turn it on. • When the unit is on, press this button for 1 second to enter power saving mode. Press the button again to turn the HT1100 off.
Function and numeric key	Keypad interface for controlling the HT1100. 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 HT1100 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.

Right and Left View



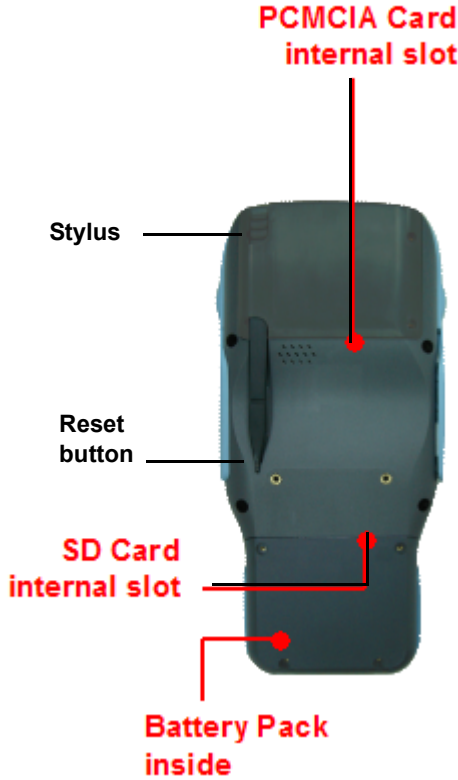
Component	Description
Right barcode scan button	Press to activate the barcode scanner.
USB mini type B port (client)	Connect a USB mini type B connector to this port.
RS232 port	Connect a serial connector to this port for serial communications.
Left barcode scan button	Press to activate the barcode scanner.
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.

Top and Bottom View



Component	Description
Infrared (IR) port and Barcode scanner window	<ul style="list-style-type: none">• Uses infrared technology to transmit and receive data from other IR-enabled devices.• Scans barcodes when pressing the left and right barcode buttons
Cradle connector	Connects the HT1100 to cradle, enabling you to charge the battery, connect the HT1100 to a computer to synchronize data, connect to a LAN, and connect USB devices.

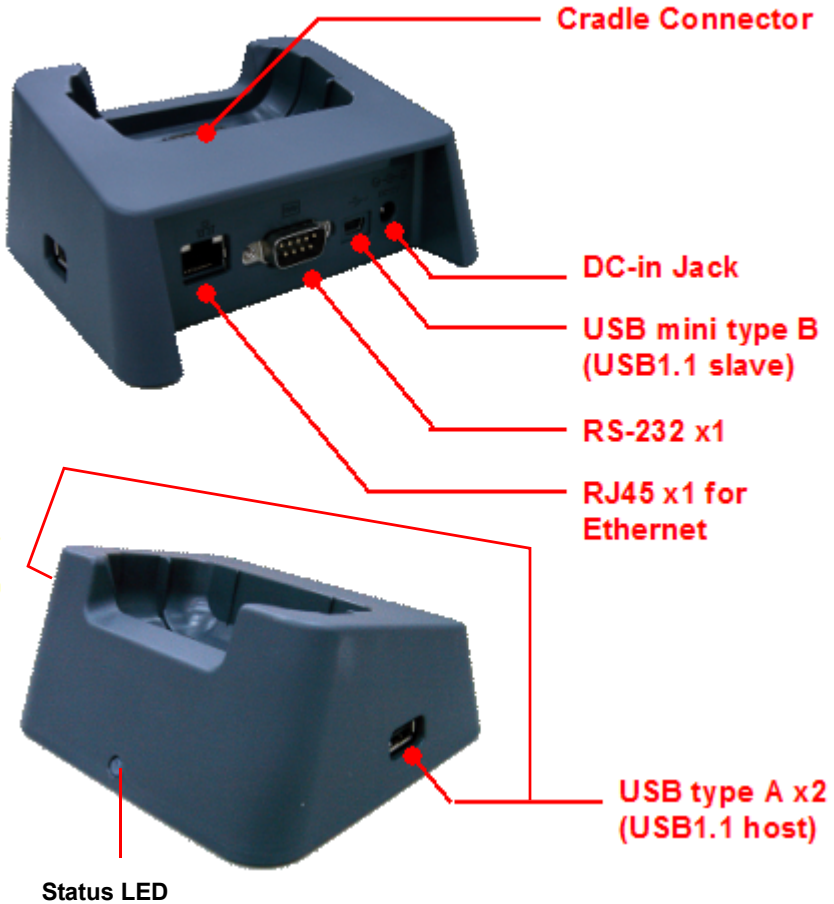
Back View



Component	Description
PCMCIA slot (internal)	Remove the cover to install a PCMCIA card for added functionality. See <i>Inserting a PCMCIA Card</i> on page 30.
Stylus	Enables you to interact with the operating system. Remove the stylus from the holder and hold and use it the same way you would a pen or pencil.
Speaker	Enables you to hear audio from the HT1100.
Reset button	Press the end of the stylus into the button to reset your device.

Memory card slot (internal)	Accommodates Secure Digital memory cards. See <i>Inserting an SD Memory Card</i> on page 33.
Battery pack compartment	Houses the removable and rechargeable battery pack. See <i>Installing the Battery</i> on page 12.

Cradle



Component	Description
Cradle connector	Insert the HT1100 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 HT1100 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 is 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 HT1100, 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.

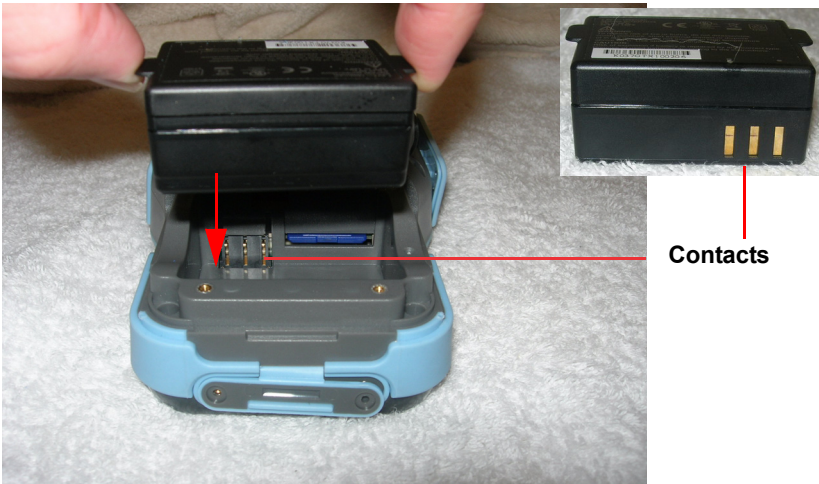
A backup battery cell is embedded into your device to prevent data loss in instances when the removable battery pack is removed or completely discharged. This backup battery cell will only support the system for a maximum of 60 minutes.



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.

Charging the Battery

Before using the HT1100 for the first time, you need to charge it for about 2 hours. After that, you can charge the HT1100 every day to recharge the battery to full capacity. Charge the HT1100 using the docking station.

CAUTION! Operating the HT1100 for the first time without fully charging the backup battery may result in loss of data stored in RAM memory. Allowing the battery to go below 3% charge may result in loss of data.

NOTES:

- Data you enter may not be properly stored until the built-in backup battery has been adequately charged.
- When the battery power is below 10%, the HT1100 will enter suspend mode.

Charging the Battery with the Docking Station

1. Plug the AC adapter cable into the power jack on the docking station, then connect the AC adapter into an electrical outlet.



- Flip open the docking connector cover on the bottom of the HT1100.



- Slide the device into the docking station until it clicks into place.



- The connection is secure when the bottom edge of the device is aligned with the docking station, and the LED indicator on the device lights up green.

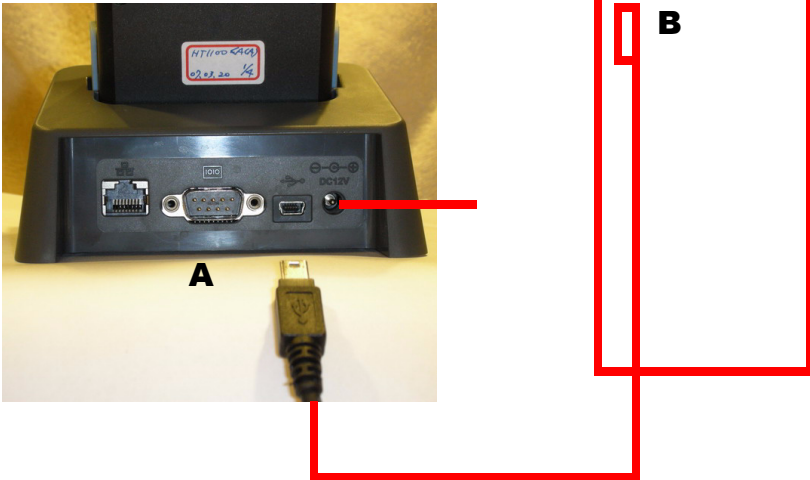
LED Status

	LED	Meaning
HT1100	Blinking Red	Charging
	Solid Green	Charging complete
	Flashing Green	Battery low (< 13% charge)
Docking Station	Solid Green	HT1100 is inserted.
	Off	HT1100 is not inserted

Connecting the HT1100 to a PC

Use the USB cable to connect the HT1100 to a PC to use with Active-Sync. Refer to See *Synchronizing with Your Computer* on page 48.

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 HT1100 on for the First Time

After you have initially charged your device for about **1.5 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.

Power Button



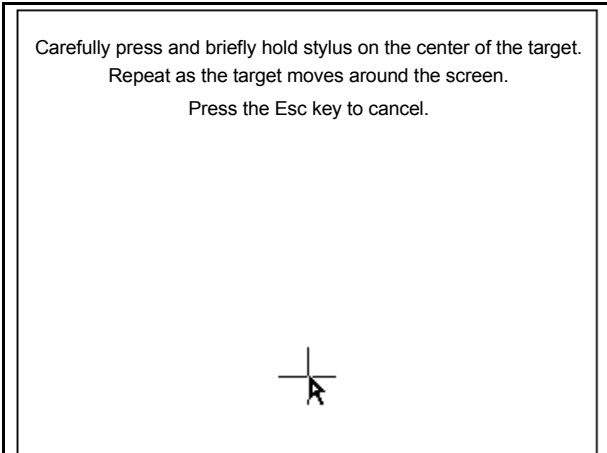
NOTE:The HT1100 screen ships with a protective plastic film. You may remove this if desired by peeling from one corner. The screen will be more susceptible to scratching without the film, but will be more readable.

2. The HT1100 welcome screen appears for a moment followed by the Windows CE screen.

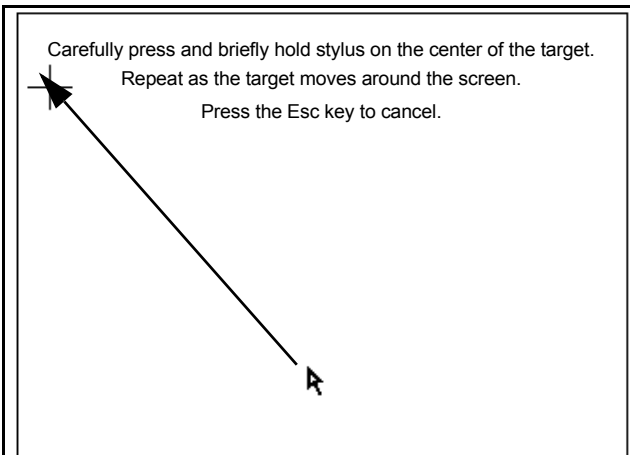
Calibrating the HT1100 Screen

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

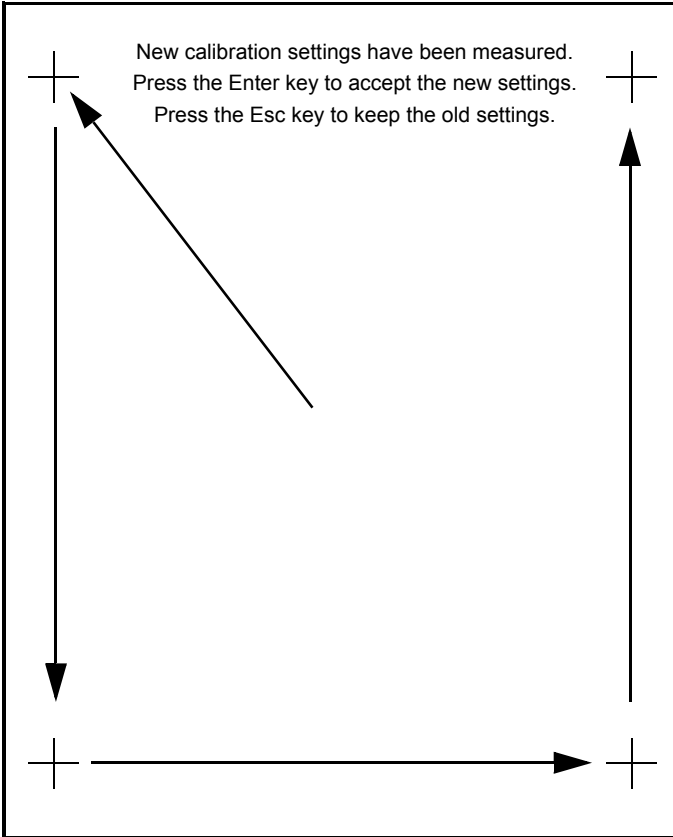
1. Tap the center cross hair firmly and accurately with the stylus.




The cross hair moves to the next location.

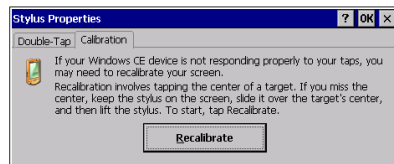


2. Continue tapping the cross hairs until the screen has been calibrated.



3. After calibration is finished, press the **Enter** key to save the settings or press **Esc** to revert to the previous settings.

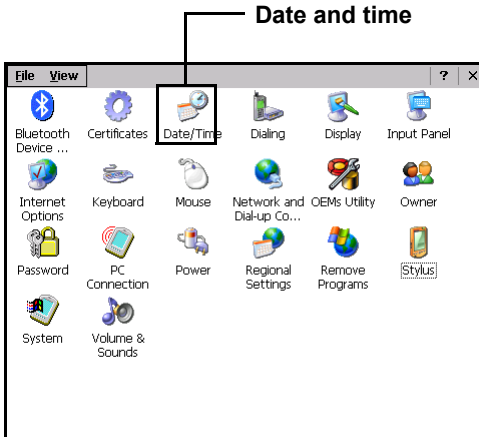
NOTE: To recalibrate the screen at any time, tap  **Start** → **Settings** → **Control Panel**. Then double-tap **Stylus**. Tap the Calibration tab, and tap **Recalibrate**.



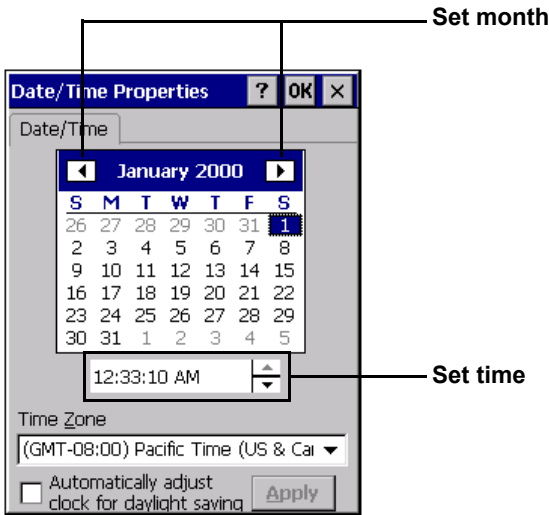
Setting the Time and Date

Follow these instructions to set the time and date.

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

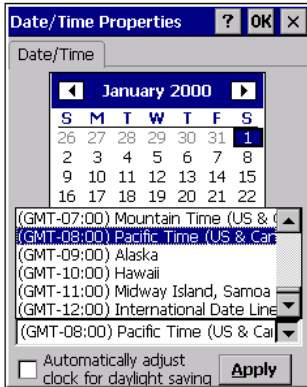


2. Double-tap Date/Time.
3. Tap the arrows next to the month to select the correct month.



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

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

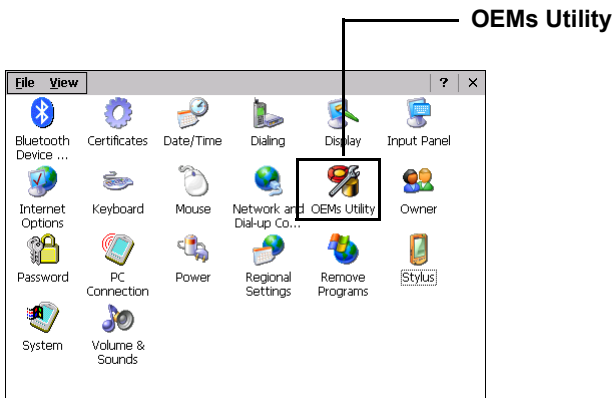


6. Check the box next to **Automatically adjust...** to have the OS automatically adjust for daylight saving time.
7. Click **Apply** to save the settings.

Adjusting the Screen Brightness

Follow these instructions to adjust the screen brightness.

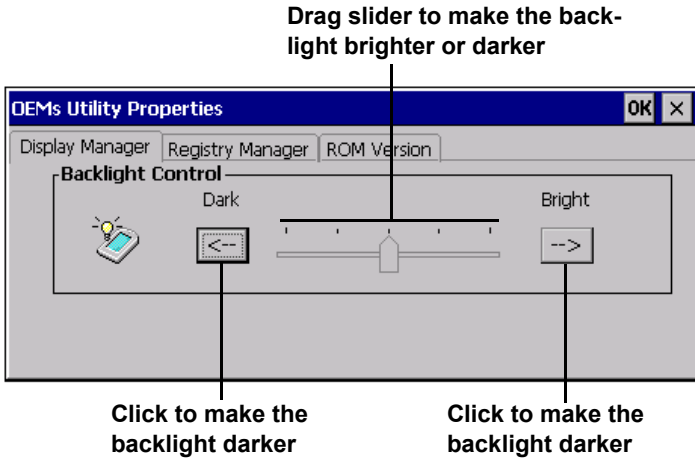
1. Tap **Start** → **Settings** → **Control Panel**.
2. Double-tap **OEMs Utility**.



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

Chapter 2 — Getting Started

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



- 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 HT1100 operating system, and also operate secondary functions using the function keys and Fn key.







The following illustration shows the keypad keys.





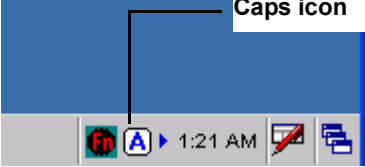






When the blue function (Fn) key is pressed, an icon  appears in the system tray.

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 HT1100 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

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 HT1100 is in alphabetic mode.</p> <p style="text-align: center;">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 style="text-align: center;">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>