Entering Alphanumeric Characters

You can use the keypad to enter alphanumeric characters or use the input panel in the operating system.

Entering Characters with the Keypad

Follow these instructions to enter text with the keypad.

- Press the Fn key to toggle keypad input between numeric and alphanumeric input. When the Fn key icon appears in the status tray, input is alphabetic. When the Fn key icon is absent, input is numeric.
- To enter letters, press a key to cycle through the letters on the key. For example, pressing will display a lower case 'a'.
- Continue to press to scroll between a, b, and c. Note that if you don't press the key within two seconds, the cursor will move to the next field.
- Press of to enter uppercase letters. The Caps icon A appears in the system tray.
- Press the backspace key 🗾 to delete characters.
- Press the tab key with to enter a tab.
- Press the enter key 🔽 to move to a new line.
- Press the space key **s** to enter a space.

Chapter 3 — Using the Hardware

Entering Characters with the Keypad

The operating system has a 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.

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.

Chapter 3 — Using the Hardware Using the Stylus

CAUTION! Never use anything other than the HT1100 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.
- 4. To write data into a field on a form, use the stylus to print the letters or numbers. Use very light pressure.



Adjusting the Double-Tap Rate

Set the stylus double-tap rate as follows.

- 1. Tap **Start** \rightarrow Settings \rightarrow 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 HT1100 accommodates a Type II PCMCIA card.

You can enhance the functionality of the HT1100 by installing PCMCIA cards such as the following:

- GPS PC card
- GPRS PC card
- 802.11b/g WLAN PC card
- Fingerprint PC 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 PCMCIA slot.

1. Remove the screws securing the PCMCIA 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.

Chapter 3 — Using the Hardware

Removing a PCMCIA Card

To remove the PCMCIA card:

1. Press the black PCMCIA button next to the slot



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 HT1100 has an expansion slot compatible with a range of SD and MMC storage 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 See *Installing the Battery* on page 12.



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



3. Push the card into the slot.

Chapter 3 — Using the Hardware



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 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.

Chapter 3 — Using the Hardware Connecting Devices to the HT1100

This section describes how to connect devices to the HT1100. You can connect devices directly to the HT1100 or connect using the cradle.

Opening the Port Covers

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

Remove the screws and open the port covers to access the ports.



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

Connecting USB

The HT1100 accommodates two USB Type A cables. You can connect a USB mini Type B cable to the cradle. See *Cradle* on page 10.

Connecting a USB Type A

The illustration displayed here shows how to connect a USB type A cable to the HT1100. The connector can 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 USB Type B

The illustration displayed here shows how to connect a mini USB type B cable to the HT1100. The connector is keyed to only go in one way. If it does not go in smoothly, check the orientation and try again.



Connecting a Serial Cable

Connect a serial cable to the HT1100 to perform serial communications. Refer to the following illustration



Connecting Headphones and a Microphone

The HT1100 has a built-in microphone and speaker. However, you can connect a headset and microphone to the HT1100 for use in noisy environments. Refer to the following illustrations.



Connecting to the Cradle

The cradle enables you not only to recharge the HT1100's batteries, it also enables you to connect USB and serial devices, and connect to the LAN.

Connecting USB

You can connect both USB Type A and Mini USB Type B connectors to the cradle to transfer data with the HT1100. 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:



Chapter 3 — Using the Hardware

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.



Connecting a Serial Cable

Connect a serial cable to the HT1100 cradle to perform serial communications. Refer to the following illustration



Using the Barcode Scanner

The HT1100 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 HT1100 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 HT1100 has a built-in barcode reading program that allows you to use the device's barcode scan function.



Chapter 3 — Using the Hardware

Launching the Barcode Reading Program

Double-tap the barcode icon not barcode program.

The Barcode Scanner program opens.

 Tap Start Read and scan a barcode by pressing either of the scan code buttons on the HT1100 and scanning over the code.

> The HT1100 vibrates slightly and provides an audible signal that the barcode is being scanned.



The BarCode scanner program displays a status message:

 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.



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 cr for highdensity barcodés
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



Chapter 3 — Using the Hardware

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 range 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"
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

Г

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.

Connecting to a PC

Installing Microsoft ActiveSync

In order to exchange data between your computer and HT1100, Microsoft ActiveSync must be installed on your computer. Connect the HT1100 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.
- Download the ActiveSync software from the Microsoft Active-Sync Download page at http://www.microsoft.com/windowsmobile/downloads/ activesync42.mspx.
- Browse to the location of the downloaded file, and double-click it.

The installation wizard begins.

4. Click Next.



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

 Accept the license agreement terms and click Next.

> You are prompted for user information.

 Type the user name and organization and click Next.

18 Microsoft Activesync 4.5	
License Agreement Please read the following license agreement carefully.	-
MICROSOFT SOFTWARE LICENSE TERMS	^
MICROSOFT ACTIVESYNC 4.5	
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft	>
Image: Constraint of the license agreement Print Image: O I do not accept the terms in the license agreement Print	
<back next=""> Cancel</back>	

🔂 Microsoft ActiveSync 4.5	
Customer Information Please enter your information.	4
User Name: John Doe	
Organization: Acme	
, ,	
< Back N	lext > Cancel

You are prompted for the destination folder.

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





.....

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

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



6

Cancel

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 \rightarrow 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 HT1100. Refer to *Connecting the HT1100 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 on.
- ActiveSync starts automatically and configure the USB port to work with the HT1100. The New Partnership setup wizard will automatically start.

NOTE:If ActiveSync doesn't start automatically, click **Start** \rightarrow **Programs** \rightarrow **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.
- When the configuration process is complete, the Active-Sync window appears.
- 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 HT1100s. Also, a HT1100 can create a partnership with up to two computers.

Synchronizing with Your Computer

Synchronization takes place according to the options you choose while setting up ActiveSync on your computer. If you accept the default (On Connect) synchronization option in the Microsoft ActiveSync Setup Wizard, you'll be able to simply connect your HT1100 to your desktop computer and synchronization will take place.

NOTE:Refer to the ActiveSync online help for more information about synchronization options.

Connection Options

You can set remote synchronization with your computer using the following connection options:

- USB connection
- Infrared connection
- Bluetooth connection
- WiFi connection

USB Connection

To synchronize with your computer using a USB connection:

- 1. Open ActiveSync.
- 2. Connect your device to your computer using the USB charging cable.
- 3.
- 4.
- 5.
- 6.

Infrared Connection

The infrared port allows you to synchronize information with an infrared enabled computer. Align the infrared port of your device with the infrared port on the computer.

This method is ideal for quickly switching between multiple devices since there are no cables or adapters to change.

- 1. Perform the steps below on your computer:
 - a. Configure an infrared port on your computer following the manufacturer's instructions.
 - b. Once your computer's IR port is ready, open ActiveSync.

😣 Microsoft ActiveSync	
File View Tools Help	
Synchronize Mobile Device Delete Mobile Device Connection Settings Close H	ide Details \$
Information Type Status	
Windows PC Image: Contacts Image: Calendar Image: Calendar	

c. Click File \rightarrow Connection Settings.

d. Check Allow connections to one of the following and select Infrared Port (IR) from the drop-down list.

😣 Connection Settings	
Device connected	Connect
🔽 Show status icon in taskbar	
Allow USB connections	
Allow connections to one of the following:	
COM4	
This COM4	
Open ActiveSync when my device connects	
Help OK	Cancel

- e. Click OK.
- 2. Perform the steps below on your device:
 - a. Align the IR port of your HT1100 with that on your computer so that they are unobstructed and within close range.
 - b.
 - c.
 - d.

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.

Follow these instructions to set up a Bluetooth connection.

- 1. Tap Start \rightarrow Settings \rightarrow Control Panel and double-tap Blue-tooth.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.

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 \rightarrow Settings \rightarrow Control Panel, then double-tap the Network and Dial-up Connections.
- 2.
- 3.
- 4.
- 5.
- 6.

For more information on how to configure the wireless network settings, tap $Start \rightarrow Help$.

Synchronizing Information

All files created on the device are stored in My Document/HT1100 My Document folder (if the designated device name is HT1100). You can view files by double-clicking the HT1100 My Documents icon on your computer.

If you have enabled file synchronization, your HT1100 files are automatically synchronized in the My Documents folder on your computer, unless a different name was chosen for HT1100.

Synchronization Options

Synchronization options can be modified, including when you synchronize and what gets synchronized. In the Mobile Device window, click Tools \rightarrow Sync Options.

For each type of information, the synchronization process can be hastened by limiting the amount of data to be synchronized. To do this, select a service and click the Settings button. After enabling a service, you must close and reopen the ActiveSync.

Using ActiveSync to Exchange Files

You can use ActiveSync to exchange information from your device your computer and vice versa. Changes you make to the information on one location will not affect the information on the other one. If you want to automatically update information on both your device and computer, synchronize the information instead.

You can copy two types of information to your device: files and Pocket Access Windows CE Store information.

The procedure below only applies to copying files. Refer to the Active-Sync Help on your computer for instructions on how to copy Pocket Access Windows CE Store information.

NOTE:Files created on your computer may need to be converted by ActiveSync so that they can be viewed and edited on your device, and vice versa.

To copy files:

- 1. Connect your device to your computer.
- In ActiveSync on your computer, click Explore. Windows Explorer opens the Mobile Device window for your device.
- Locate the file that you want to copy on your device or computer.
- 4. Do either one of the following:
 - To copy the file to your device, right-click the file and click Copy. Place the cursor in the desired folder for your device, right-click, then click Paste.
 - To copy the file to your computer, right-click the file and click Copy. Place the cursor in the desired folder for your computer, right click, then click Paste.

Chapter 5 Scanner Setup

Symbologies

The following symbologies are supported by the HT1100.

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

Basic Setup

Reset Factory Defaults	Barcode
Ţ	reset factory defaults

Select Baud Rate	Barcode
	1200 \\60\02\48\40\00\0A\40
	2400
	4800

Chapter 5 — Scanner Setup

Select Baud Rate	Barcode
	9600 \\60\02\48\40\00\12\40
	19200 (*) \
	38400 \60\02\48\40\00\18\00

Select Stop Bits	Barcode
	1 (*) \\60\02\48\44\00\00\00
	2



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

Select Symbologies	Barcode
	Codabar (minimum length = 6) 0.0014B2000240
	Code 39 (*)

Chapter 5 — Scanner Setup

Select Symbologies	Barcode
	Code 128 (*)
	EAN 128 (*)
	Interleaved 2 of 5
	Standard 2 of 5
	PDF417 (*)
	UPC-A (*)
	UPC-E (*) \\60\02\08\41\00\02\40

Chapter 5 — Scanner Setup

Select Symbologies	Barcode
	EAN-8 (*)
	EAN-13 (*)

Chapter 6 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.

Checking the Battery Status

If the battery level becomes low in the course of normal use, a status icon if appears on the device screen indicating low or very low battery status. In both cases, perform an ActiveSync operation to back up your data, then recharge your device as soon as possible.

If the battery level reaches low status, the device will enter suspend mode. Recharge the battery as soon as possible.

To check the main and backup battery status:

 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.

Extending Battery Life

You can extend the HT1100 battery life by doing either of the following:

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

Changing the Automatic Power Settings

The HT1100 will enter idle mode when there is no task, or all tasks are waiting for input.

To change the automatic power settings:

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

Power Properties	? OK ×
Battery Schemes	Device Status
Power Scheme:	(*)
Battery Power	-
Switch state to Use	r Idle:
After 4 minutes	•
Switch state to Syst	em Idle:
After 4 minutes	-
Switch state to <u>S</u> usp	pend:
After 30 minutes	•

- 2. Tap the arrow next to the Power Scheme and select Battery Power.
- 3. Tape the arrows next to the following three power saving scenarios and select the desired time out for each item.
 - Switch state to User Idle: HT1100 enters power saving mode when there is no user input after the selected timeout.
 - Switch state to System Idle: HT1100 enters power saving mode when there is no system activity after the selected timeout.
 - Switch state to Suspend: HT1100 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.

Chapter 6 — Advance Settings

Adjusting Backlight Setting

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 \rightarrow Settings \rightarrow 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.

OEM	s Utility Pro	perties				ОК	×
Disp	lay Manager - Backlight C	Registry Manage	er ROM	I Version			
	_	Dark			Bright		
	Ś	·	•	· ·	 >		

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 HT1100.



Appendix System Specifications

Item	HT1100
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 transflective TFT LCD, QVGA resolution (240 X 320)
	3.5-inch transflective TFT LCD, VGA resolution (640 X 480) (option)
Touch Panel	Resistive 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

Item	HT1100
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: up 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	Min X dimension: down to 0.1 mm / 4 mil
characteristics	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	HT1100
Rugged Specification	IP67 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) Vehicle cradle (Optional)