



PenWare 1500



Product Reference Guide



PenWare 1500
Product Reference Guide

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Revision A

August 2003



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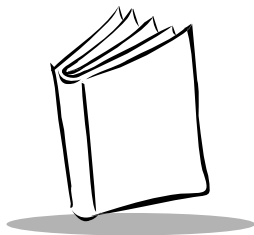
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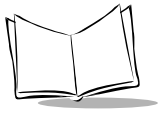
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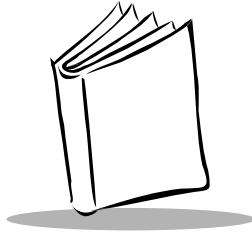
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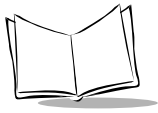
About This Guide

Introduction

The *PenWare 1500 Product Reference Guide* provides instructions for setting up and maintaining the PenWare 1500 Transaction System.

Chapter Descriptions

- [Chapter 1, *Getting Started*](#), lists the parts of the terminal and describes how to get the PenWare 1500 up and running quickly.
- [Chapter 2, *Setting Up the PenWare 1500 System*](#), describes how to connect the terminal to a host and to peripherals.
- [Chapter 3, *Initializing the PenWare 1500*](#), provides information on setting up the PenWare 1500.
- [Chapter 4, *Maintaining the PenWare 1500*](#), describes how to clean the terminal and perform power-on diagnostics.
- [Appendix A, *Technical Specifications*](#), provides specification information for the terminal.



Notational Conventions

The following conventions are used in this document:

- *Italics* are used to highlight specific items in the general text, and to identify chapters and sections in this and related documents. It also identifies names of screens, menus, menu items, and fields within screens.
- Courier text identifies buttons to be tapped or clicked on screens.
- Bullets (•) indicate:
 - action items
 - lists of alternatives
 - lists of required steps that are not necessarily sequential
- Sequential lists (e.g., those that describe step-by-step procedures) appear as numbered lists.

Service Information

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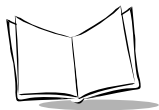
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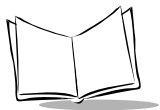
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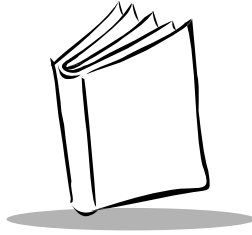
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PenWare 1500 Product Reference Guide



Chapter 1

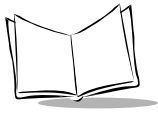
Getting Started

Introduction

The PenWare 1500 signature capture device integrates with various applications to enable electronic storage of signatures. Add these electronic signatures to transaction documentation to eliminate filing, storage, and physical handling of paper receipts.

The PenWare 1500 features:

- Backlit one-line alphanumeric data display/signature panel
- Electronic signature capture
- Compatibility with DOS, Windows 3.x/95/98/NT 3.51 or higher
- RS-232 interface for connection to a PC or cash register
- Two LED indicators.



PenWare 1500 System

The PenWare 1500 System includes:

- PenWare 1500 signature capture device
- AC power adapter
- RS-232 serial cable (HD15-DB9)
- Non-electronic stylus
- Quick Reference Guide
- PenWare Utilities Diskette v4.3.

posBuilder Software Development Toolkit

The posBuilder Software Development Toolkit provides developers advanced tools for rapid deployment of electronic signature capture functions, including signature capture, real time signature rendering, compression, and signature file for secure storage and future retrieval. Designed for 16/32-bit Windows and DOS host computers, the toolkit includes C libraries, a group of Active X Controls, user manual, and sample utilities software for functions such as signature capture, debit/credit transactions and graphic display.

Parts of the PenWare 1500

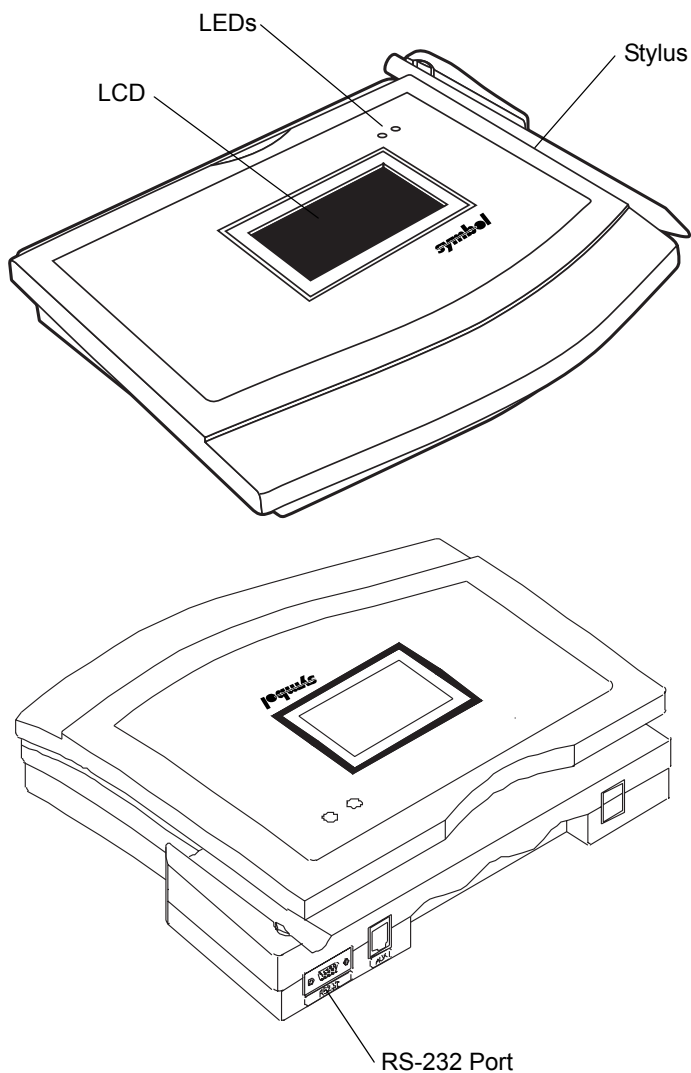
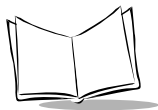


Figure 1-1. Parts of the PenWare 1500



LED Indicators

Figure 1-2. PenWare 1500 LED Indicators

Function	Green	Red
Power On	Flashing	Off
Idle	Off	Off
Capture	On	Off
Self Test/Calibrate	Off	Flashing



Chapter 2

Setting Up the PenWare 1500 System

This chapter provides information on installing the PenWare 1500, including connecting to a POS host device and installing peripherals.

System Requirements

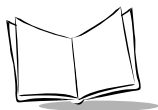
Installing the PenWare 1500 system requires a POS host device (PC or cash register) with an available serial port. The development software requires an IBM-compatible PC running DOS, Microsoft Windows 3.1/95/NT, or OS/2.

PenWare 1500 Connection Components

The following items required to install the PenWare 1500 system are provided with the terminal:

Table 2-1. Connection Items

Connection	Cables/Parts Required	Page Number
Host via RS-232	HDB15/DB9 serial cable (8 feet) AC power adapter cable	2-2
Host via PS/2 Cable	HDB15/DB9 serial cable (8 feet) PS/2 cable	2-3
Peripheral Connection via RS-232 Cable Passthrough	HDB15/Dual DB9 Y-cable (12 feet) AC power adapter cable	2-5



Connecting the PenWare 1500

This section describes how to connect the PenWare 1500 to a host in various configurations. To set up the PenWare 1500, also install and run the PenWare Initialization Program; see the [Chapter 3, Initializing the PenWare 1500](#) for more information.

RS-232 Installation

To install the PenWare 1500 in an RS-232 configuration:

1. Shut off power on the POS host device.
2. Plug the serial cable's 15-pin connector (HDB15) into the RS-232 port on the back of the PenWare 1500.
3. Plug the serial cable's 9-pin connector (DB9) into a serial port (typically COM1) on the POS host device.
4. Insert the male connector on the AC power adapter cable into the port on the back of the serial cable's 9-pin connector (DB9).
5. Connect the end of the AC adapter to a standard 120V, 60 Hz AC power outlet.
6. Power on the POS host device.

PenWare 1500

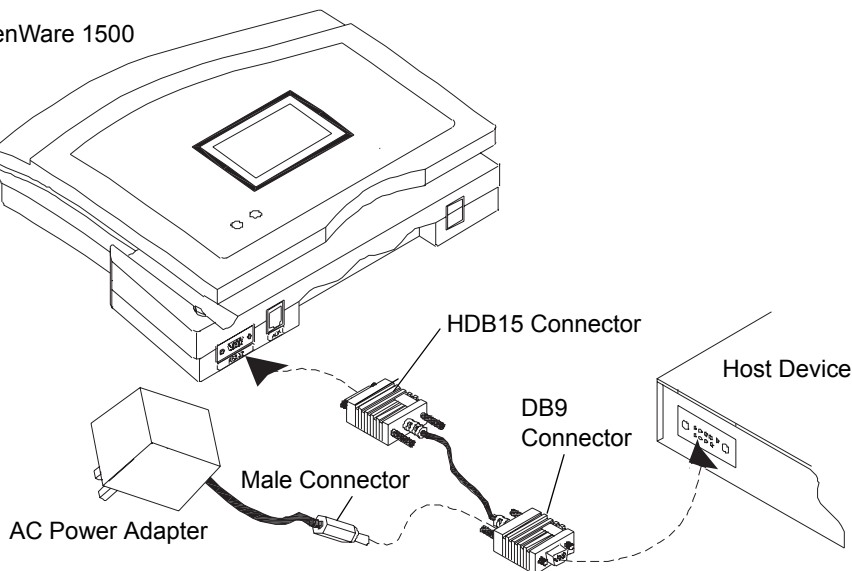


Figure 2-1. RS-232 Configuration

The screen lights and the *Penware 1500* logo displays for 3 seconds.

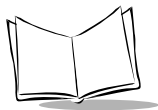
The green LED blinks while the terminal is searching for the host, then turns solid green when the host is found.

Note: *To enable the terminal to recognize the host, install and run the PenWare Initialization Program located on the PenWare Utilities Diskette. This program tests the host and terminal connection, and calibrates the signature pad if necessary. See the [Chapter 3, Initializing the PenWare 1500](#) for more information.*

PS/2 Installation

To install the PenWare 1500 in a PS/2 cable configuration:

1. Shut off power on the POS host device.
2. Plug the serial cable's 15-pin connector (HDB15) into the RS-232 port on the back of the PenWare 1500.
3. Plug the serial cable's 9-pin connector (DB9) into a serial port (typically COM1) on the POS host device.
4. Plug the single lead on the PS/2 cable into the host's mouse port.
5. Connect the mouse to the shorter PS/2 lead on the two-lead side.
6. Insert the remaining lead into the port on the back of the serial cable's 9-pin connector (DB9).



7. Power on the POS host device.

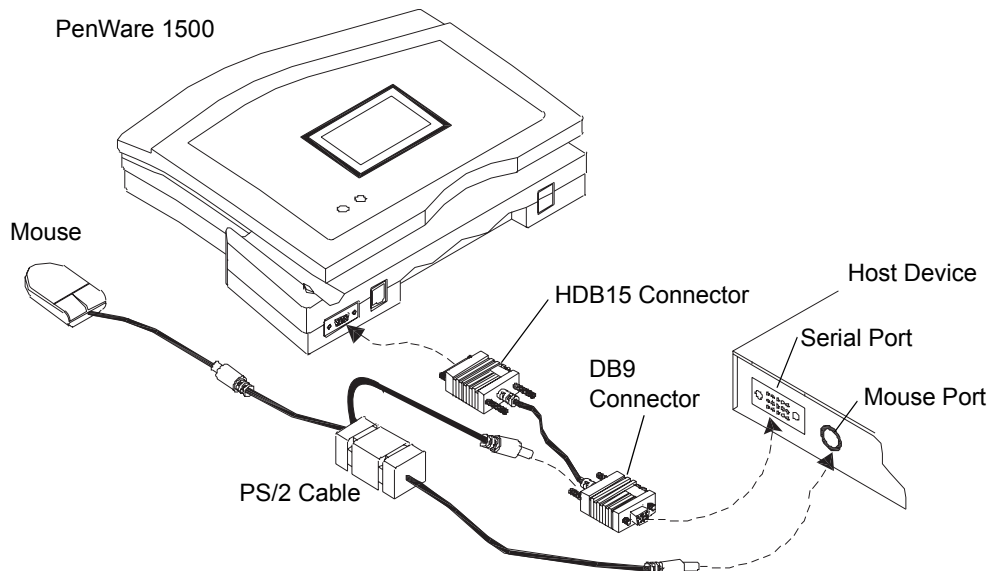


Figure 2-2. PS/2 Cable Configuration

The screen lights and the *Penware 1500* logo displays for 3 seconds.

The green LED blinks while the terminal is searching for the host, then turns solid green when the host is found.

Note: To enable the terminal to recognize the host, install and run the *PenWare Initialization Program* located on the *PenWare Utilities Diskette*. This program tests the host and terminal connection, and calibrates the signature pad if necessary. See the [Chapter 3, Initializing the PenWare 1500](#) for more information.

Connecting Peripheral Devices

To install a peripheral device in an RS-232 passthrough configuration:

1. Shut off power on the POS host device.
2. Plug the RS-232 Y-cable's 15-pin connector (HDB15) into the RS-232 port on the back of the PenWare 1500.
3. Plug one of the RS-232 Y-cable's 9-pin connectors (DB9) into a serial port (typically COM1) on the POS host device.
4. Plug the other 9-pin connector (DB9) into the peripheral device.
5. Insert the male connector on the AC power adapter cable into the port on the back of the 9-pin connector (DB9) that is connected to the host.
6. Connect the end of the AC adapter to a standard 120V, 60 Hz AC power outlet.
7. Power on the POS host device.

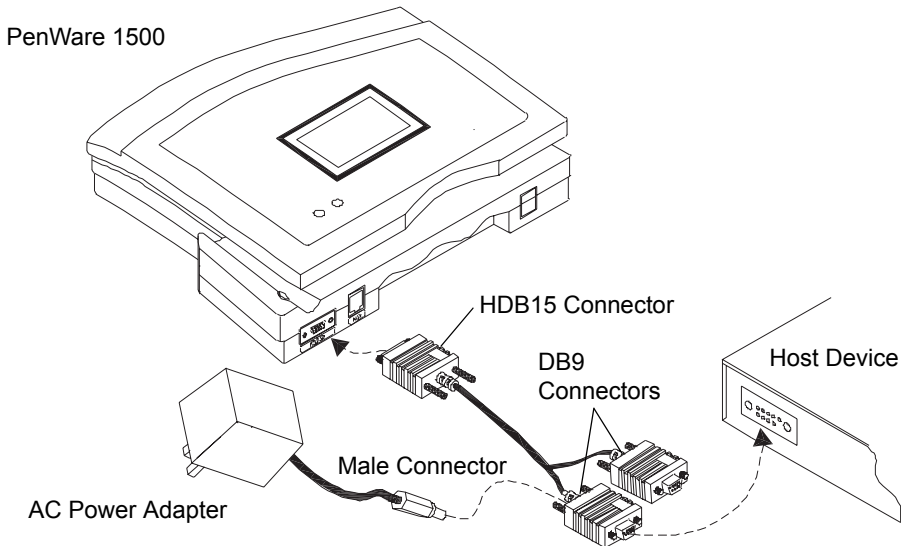
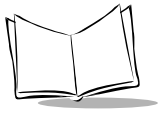
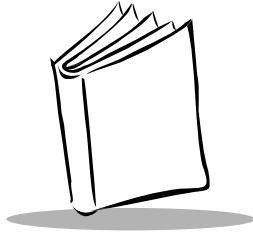


Figure 2-3. RS-232 Single Cable Passthrough Configuration



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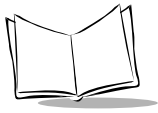
Chapter 3

Initializing the PenWare 1500

Use the PenWare Initialization Program (PWINIT) on the PenWare Utilities Diskette v4.3 shipped with the terminal to configure the PenWare 1500.

To install and run the PenWare Initialization Program:

1. Insert the PenWare Utilities Diskette in the disk drive (usually drive A or B) on the host computer.
2. Select *Run* from the *Start* menu.
3. Select *Browse* and locate the diskette drive.
4. Double-click on *Setup*.
5. Click *OK*.
6. Select *Yes* to launch the PenWare Initialization Program (PWINIT).
7. Click on *Finish*.
8. Perform the functions described in the following sections (calibrating the PenWare 1500 screen and setting LCD Clear Time) using PenWare Initialization Program.



Calibrating the PenWare 1500

To calibrate the touchscreen:

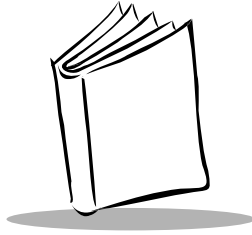
1. On the host computer, click the `Start` button within the PenWare Initialization Program. A cross hair appears on the PenWare 1500 screen.
2. Tap the center of the cross hair in the upper-left corner of the screen, then again in the lower-right corner.
3. Click `OK` on the host computer to return to the main PenWare Initialization Program screen.

Setting LCD Clear Time

LCD Clear Time clears the PenWare 1500 screen after a specified amount of time has elapsed with no device activity. For example, set the LCD Clear Time to 30 to clear the PenWare 1500 screen after 30 seconds of inactivity.

To set the clear time:

1. On the host computer, click `LCD CLEAR TIME` within the PenWare Initialization Program.
2. Enter the number of seconds.
3. Click `SET`.



Chapter 4

Maintaining the PenWare 1500

Cleaning the PenWare 1500

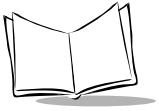
Use a soft cotton cloth lightly dampened with isopropyl alcohol to remove any ink, fingerprint smudges, and dirt.

Diagnostics

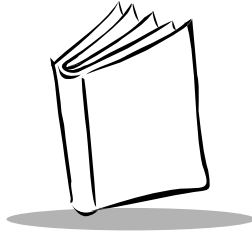
To perform power-on diagnostics:

1. Power up the PenWare 1500. The green LED flashes.
2. Touch the screen to invoke self-test mode. The green LED turns off, and the red LED turns on.
3. The LCD displays all pixels.

Note: *Any communication activity aborts diagnostic mode and returns the PenWare 1500 to idle mode to wait for a host command.*



PenWare 1500 Product Reference Guide



Appendix A

Technical Specifications

Table A-1. PenWare 1500 Technical Specifications

Item	Description
Physical Characteristics	
Dimensions	6.0 in. L x 7.6 in. W x 1.5 in. H 152.4 mm L x 193.04 mm W x 38.1 mm H
Weight	16 oz/0.5 kg
Display	Monochrome backlit LCD
LCD Size	2.5 in. L x 1.3 in. W/63.5 mm L x 33.0 mm W
LCD Resolution	160 Hori. x 65 Ver. pixels
Touchpad	Resistive, pressure sensitive
Touchpad Resolution	418 Hori. X 798 Ver. dpi
Characters Per Line	26
Power Requirements	200 mA @ 9V DC unregulated
Power Source	9V AC adapter; European and host-powered options available; PS/2 power cable option
Terminal Interface	One RS-232 port (baud rate 9600); one RS-232 passthrough (RJ45 or HDB15 serial port)

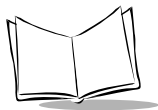
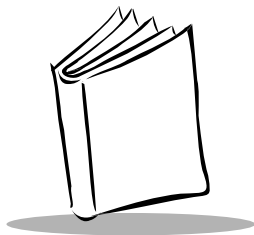


Table A-1. PenWare 1500 Technical Specifications (continued)

Item	Description
Peripherals and Accessories	
posBuilder Software Development Toolkit	Operating systems supported: DOS, Windows 3.x/95/98 and NT 3.51 or higher, IBM 4680/4690 Formats supported: BMP, SIG, DIB, CGM, EPS, PCL, TIFF, TXT, NLC, WMF, PCX and PLC Object tools: Support for VBX, ActiveX and OPOS, Onboard compression 7:1 standard (decompression required at host)
Regulatory	
Electrical Safety	UL and CE
EMI/RFI	FCC Class A



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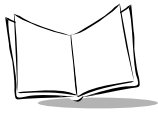
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