

Digital HiNote

User's Guide

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Digital Equipment Corporation
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Digital HiNote User's Guide

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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.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment.

This equipment generates, uses, and can radiate radio frequency energy and, 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 is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into 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

All external cables connecting to this basic unit must be shielded. For cables connecting to PCMCIA cards, see the option manual or installation instructions.

Contents

7-9	Connecting the Port Replicator or PCMCIA Port Replicator to the Notebook Computer	7-10
7-10	Lifting the Lid	7-11
7-11	Releasing and Lifting the Keyboard Assembly.....	7-12
7-12	Installing Memory	7-13
7-13	Closing the Keyboard Assembly	7-14

Contents

Figures

	Typical Digital HiNote	xii
1-1	Providing a Comfortable Working Environment	1-3
3-1	Power Button Location	3-3
3-2	Reset Button Location	3-5
3-3	Power Management States (Factory Default Timer Settings)	3-7
5-1	Connecting a Mouse	5-2
5-2	Connecting a Keyboard.....	5-3
5-3	Connecting a Monitor	5-4
5-4	Connecting a Printer	5-5
5-5	Connecting a Serial Device.....	5-6
7-1	Connecting the Battery Charger	7-3
7-2	Inserting a PCMCIA Card.....	7-5
7-3	Connecting a Monitor	7-6
7-4	Connecting a Mouse	7-6
7-5	Connecting a Keyboard.....	7-7
7-6	Connecting a Device to the Serial Port.....	7-7
7-7	Connecting a Printer	7-8
7-8	Connecting Power.....	7-9

Contents

A

Technical Specifications

Notebook Computer Specifications.....	A-1
International AC Adapter.....	A-3
Battery Pack NiMH ⁽¹⁾	A-3
Battery Pack NiCAD ⁽¹⁾	A-4
Acoustics - Preliminary declared values per ISO 9296 and ISO 7779	A-4
Environmental Compatibility.....	A-5
Use of Brominated Flame Retardants in Enclosure Parts	A-5
Use of PVC in Enclosure Parts.....	A-5
Use of Asbestos	A-5
Ozone Depleting Substance (ODS)	A-5

B

Notebook Computer Messages

Introduction	B-1
POST and Boot Messages	B-1
POST and Boot Messages	B-2
Beep Codes.....	B-4

C

Device Mapping

Memory Map.....	C-1
I/O Address Map	C-2
Notebook Computer Interrupt Levels.....	C-3
DMA Channel Assignment	C-4

Contents

6

Problem Solving and Troubleshooting

Initial Troubleshooting	6-1
Notebook Computer Troubleshooting	6-4
If Your Notebook Computer Beeps	6-7
PCMCIA Troubleshooting	6-8
LCD Troubleshooting	6-12

7

Options

Introduction	7-1
Installing the Car Adapter	7-2
Installing the Battery Charger with International AC Adapter	7-2
Installing the Port Replicator or PCMCIA Port Replicator .	7-4
Disconnecting the Port Replicator or PCMCIA Port Replicator	7-10
Installing Memory	7-11

Contents

3

Power Management

Introduction	3-1
Setting Power Management Features	3-2
Battery and Performance Hot Keys	3-2
Power Button.....	3-3
Suspend/Resume	3-3
On/Off	3-4
Lid Switch	3-4
Reset Button.....	3-5
Suggested Settings.....	3-6
Specialized Cases	3-7

4

PCMCIA Utilities and Drivers

Introduction	4-1
Using PCMCIA Utilities	4-2
CardView	4-2
CARDINFO.....	4-3
CSALLOC.....	4-4
PCMCIA MS-DOS Drivers.....	4-5

5

Connecting External Devices

Introduction	5-1
Connecting an External PS/2 Mouse	5-2
Connecting an External Keyboard	5-3
Connecting a Monitor	5-4
Connecting a Printer	5-5
Connecting a Serial Device.....	5-6

Contents

About This Guide

Audience	vii
Organization	vii
Digital Program Menu	viii
Conventions	ix
Abbreviations	x
Special Notices	xi
Related Documentation	xi

1

Introduction

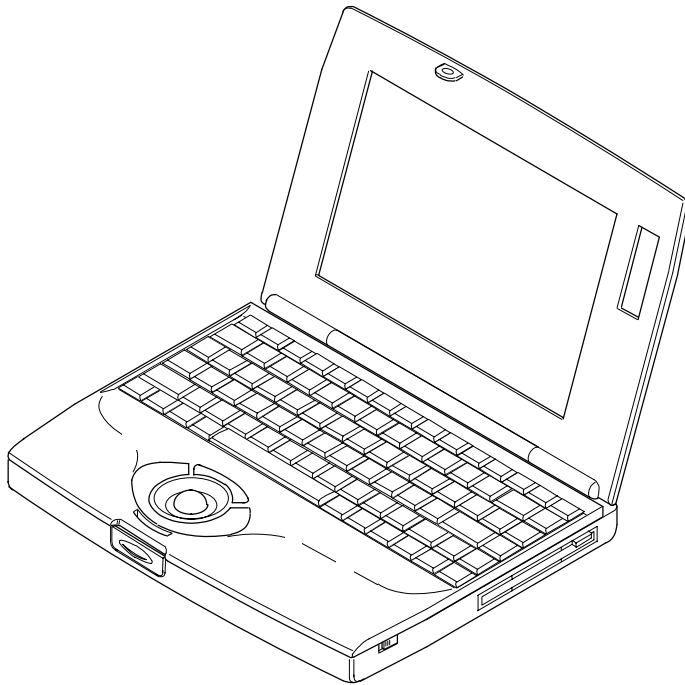
Providing a Comfortable Working Environment	1-2
Restarting Your Notebook Computer	1-4
Turning Off Your Notebook Computer	1-4
Notebook Computer Security	1-5
User Password	1-6
Supervisor Password	1-7
Security Lock Hole	1-7
Getting Help	1-8

2

Configuring Your Notebook Computer

Introduction	2-1
Running Setup	2-1
Updating Your Notebook Computer's Configuration	2-2
Power	2-4
System	2-9
Device	2-13
Security	2-14
Defaults	2-15
Exit	2-15

About This Guide



DEC00306

Typical Digital HiNote

Special Notices

Three kinds of special notices are used in this guide to emphasize specific information.



WARNING indicates the presence of a hazard that can cause personal injury if the hazard is not avoided.



CAUTION indicates the presence of a hazard that might cause damage to hardware or that might corrupt data.

NOTES are used to provide additional information.

Related Documentation

A *Quick Setup Guide* is available as a supplement to the information provided in this user's guide.

A *When Traveling Card* is available as a supplement to the information provided in this user's guide.

A Windows for Workgroups-based online help is available as a supplement to the information provided in this user's guide. This online help includes an online version of this user's guide, an online version of CardView (for use with PCMCIA), and an online version of additional notebook features. All help files can be accessed through the Digital Program menu.

README files come with your factory installed software. The information contained in these files can help you setup, configure, and operate your notebook computer.

About This Guide

Abbreviations

Abbreviation	Meaning
BIOS	Basic input/output system
DIMM	Dense in-line memory module
DRAM	Dynamic random access memory
FDC	Floppy disk controller
IDE	Integrated drive electronics (internal hard disk drive interface)
ISA	Industry standard architecture
LCD	Liquid crystal display
MS-DOS	Microsoft Disk Operating System
PCMCIA	Personal computer memory card international association
POST	Power-on self test
ROM	Read only memory
RTC	Real-time clock
VGA	Video graphics array
Windows	Microsoft Windows application software

Conventions

Convention Example	Description
<i>cardinfo</i>	An italicized word or phrase represents text or commands you must enter.
c:\windows>	Monospaced text indicates information that your computer or software displays.
<i>[drive letter]</i>	Italic monospaced text indicates a filename or directory path you must enter.
[Enter]	Square brackets surrounding text represents a keyboard key.
[Ctrl]+[Alt]+[Del]	A + sign indicates that the keys shown should be pressed simultaneously.
1 234 567	Spaces are used in large numbers instead of commas.

About This Guide

- **Chapter 7: *Options***—This chapter provides information about options that are available for your notebook computer. Installation procedures are also included.
- **Appendix A: *Technical Specifications***—This appendix lists vital notebook computer operating specifications.
- **Appendix B: *Notebook Computer Messages***—This appendix describes the Power-On Self Test (POST) and run-time error messages, including recommended corrective actions.
- **Appendix C: *Device Mapping***—This appendix contains tables listing your notebook computer's memory map, I/O address map, interrupt map, and DMA map.

Digital Program Menu

Your notebook computer was supplied with a factory installed Digital Program menu that is accessible from the Windows for Workgroups program manager. The Digital Program menu enables you to access on-line help information on how to use your notebook computer and specific information about its features. Double-click on the appropriate Digital Program icon for additional information.

NOTE: Digital recommends that you back up your factory installed software in case it is inadvertently deleted or if you need to reinstall any portion of it. Double-click on the Create Backups icon for additional information.

About This Guide

This guide describes how to operate, configure, and troubleshoot the Digital HiNote. This guide, along with the online help in the Digital Program menu should familiarize you with all aspects of the notebook computer. Use this documentation as a source of information to answer any questions you might have in the future.

Audience

This guide is written specifically for anyone using and configuring the Digital HiNote.

Organization

This guide contains the following:

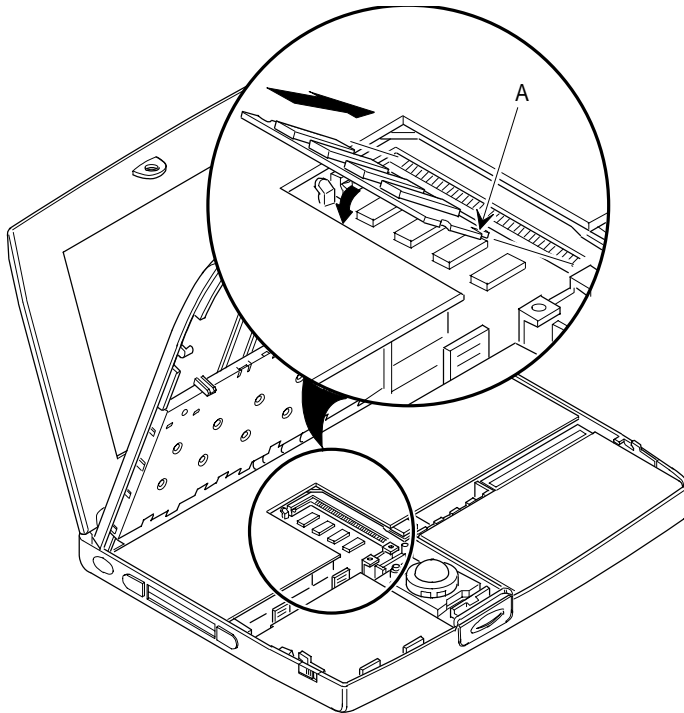
- Chapter 1: *Introduction*—This chapter provides general information about your notebook computer. Information includes: charging the battery, creating a comfortable working environment, how to restart and turn off your notebook computer, security features, and getting help.
- Chapter 2: *Configuring Your Notebook Computer*—This chapter explains how to configure your notebook computer using Setup.
- Chapter 3: *Power Management*—This chapter identifies your notebook computer's power management features for extending the life of your battery pack.
- Chapter 4: *PCMCIA Utilities and Drivers*—This chapter describes how to customize your notebook computer using the supplied utilities for using PCMCIA cards.
- Chapter 5: *Problem Solving and Troubleshooting*—This chapter describes initial and advanced troubleshooting solutions.
- Chapter 6: *Connecting External Devices*—This chapter describes how to connect an external keyboard, mouse, monitor, and printer.



CAUTION: Before installing any memory module, touch the metal part of the keyboard assembly to ensure proper grounding. Failure to do so might damage the notebook computer or memory module.

4. Install the memory module.

Make sure the notch (A, Figure 7-9) faces toward the trackball.



DEC00312-4

Figure 7-12. Installing Memory

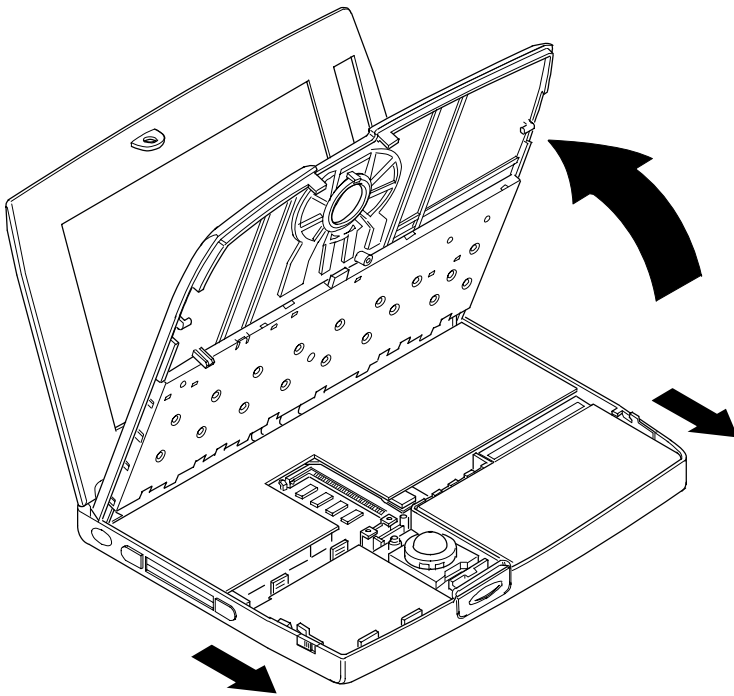
5. Close the keyboard assembly.

Make sure the keyboard assembly snaps back into place.

Options

3. Slide the latches (one on each side) toward the front of the notebook computer to release the keyboard assembly.

Lift up on the keyboard assembly.



DEC00312-2

Figure 7-11. Releasing and Lifting the Keyboard Assembly

Installing Memory

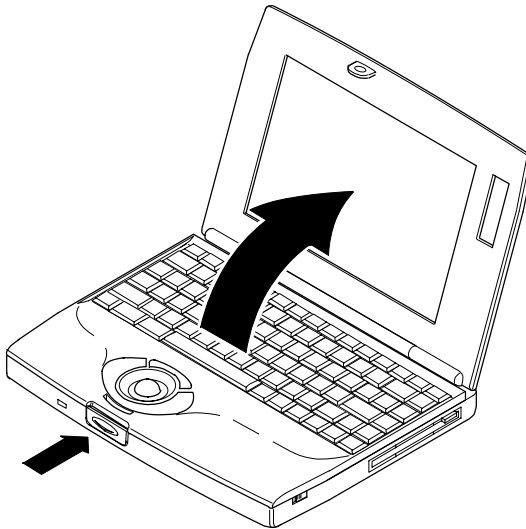
Three memory module options are available for your notebook computer: 4 MB, 8 MB, 16 MB. You can install these modules in the memory compartment underneath your notebook's keyboard assembly. To install these memory modules:



CAUTION: Before turning off your notebook computer, make sure the power button is set to the **On/Off** option in Setup, or you can press the reset button. Failure to do so might damage the notebook computer or memory module.

1. Turn off your notebook computer.
2. Press in on the lid latch.

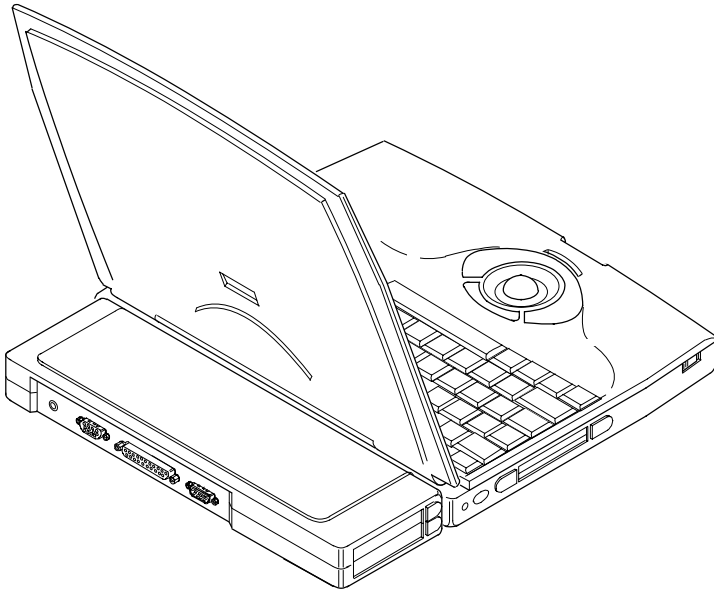
Lift up the lid.



DEC00311-2

Figure 7-10. Lifting the Lid

Options



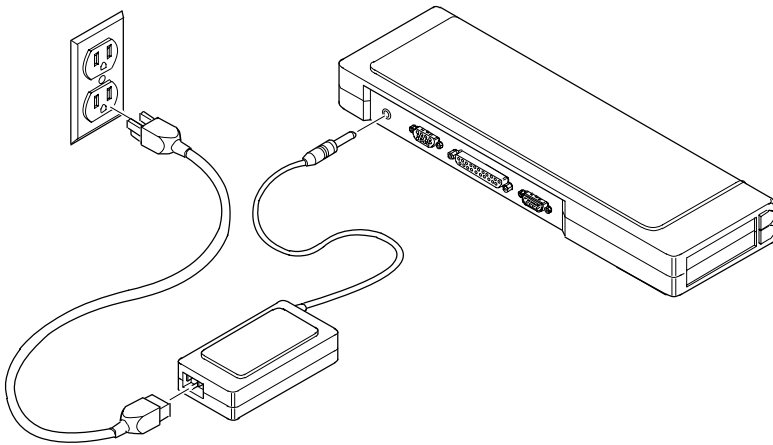
DEC00330-3

Figure 7-9. Connecting the Port Replicator or PCMCIA Port Replicator to the Notebook Computer

10. Restore power and continue operation.

Disconnecting the Port Replicator or PCMCIA Port Replicator

To disconnect the Port Replicator or PCMCIA Port Replicator, push the lever at the right side of either Port Replicator to disengage the notebook computer. Make sure you push the lever away from the notebook computer.



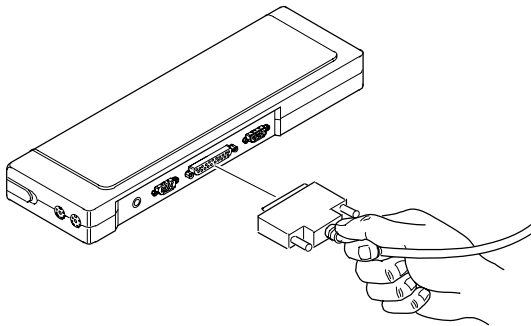
DEC00330-4

Figure 7-8. Connecting Power

9. Open the door at the rear of the notebook computer, and then connect the Port Replicator or PCMCIA Port Replicator to your notebook computer as shown.

Make sure the notebook computer connector on the Port Replicator or PCMCIA Port Replicator is correctly positioned to connect with the Port Replicator connector on the notebook computer.

Options



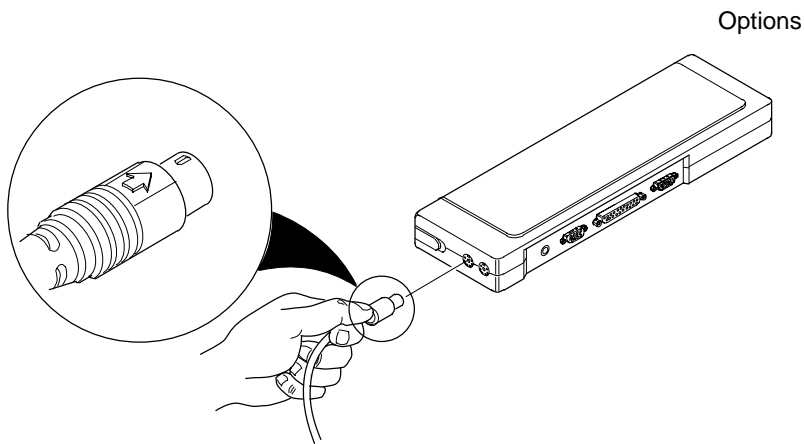
DEC00333-5

Figure 7-7. Connecting a Printer

8. Connect the PCMCIA Port Replicator to an appropriate power outlet using your notebook computer's International AC Adapter.

NOTE: You must use the International AC Adapter if you plan on installing PCMCIA cards in the PCMCIA Port Replicator.

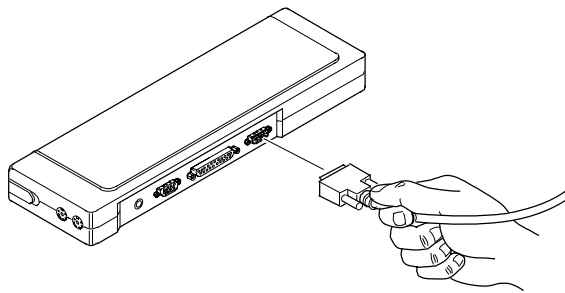
Also, with the International AC Adapter connected, you can charge your notebook computer's Battery Pack whenever you attach your notebook computer to the Port Replicator or PCMCIA Port Replicator.



DEC00333-2

Figure 7-5. Connecting a Keyboard

6. Insert the serial connector into the Port Replicator or PCMCIA Port Replicator serial port.

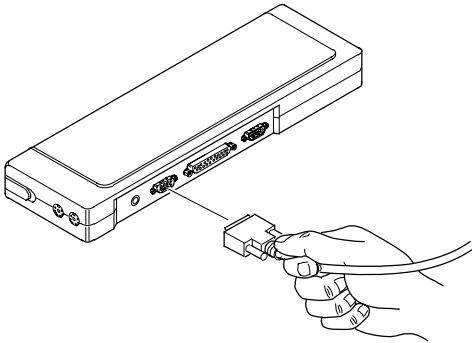


DEC00333-6

Figure 7-6. Connecting a Device to the Serial Port

7. Insert the printer cable connector into the Port Replicator or PCMCIA Port Replicator printer port.

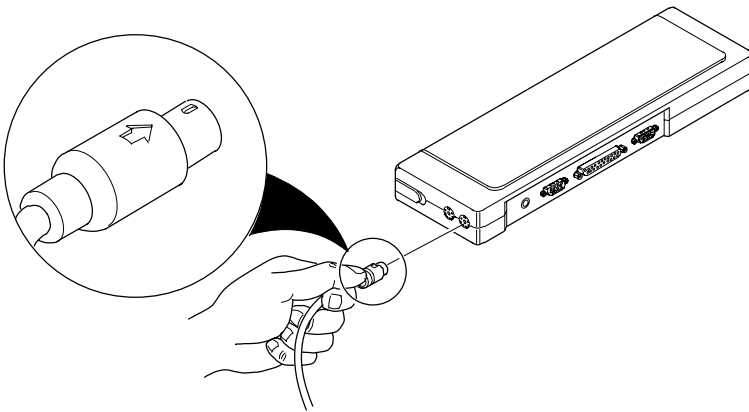
Options



DEC00333-4

Figure 7-3. Connecting a Monitor

4. Insert the external mouse cable connector into the Port Replicator or PCMCIA Port Replicator mouse port.

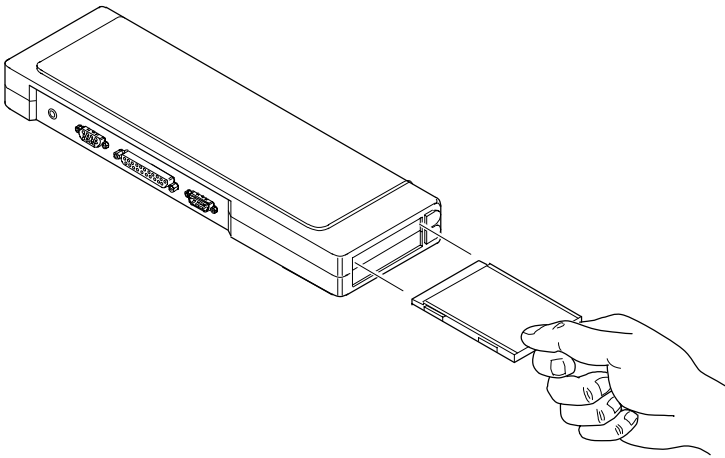


DEC00333-3

Figure 7-4. Connecting a Mouse

5. Insert the external keyboard cable connector into the Port Replicator or PCMCIA Port Replicator keyboard port.

Options



DEC00330-2

Figure 7-2. Inserting a PCMCIA Card

3. Insert the external monitor's signal cable connector into the Port Replicator or PCMCIA Port Replicator video port.

Connect to an appropriate wall outlet the monitor's power cord, which is at the rear of the monitor.

Options

Installing the Port Replicator or PCMCIA Port Replicator

With the Port Replicator or PCMCIA Port Replicator, you can connect to full-size peripheral devices, such as an external monitor or a printer, and leave them connected even when you take your notebook away from your desk. When you return your notebook computer to your desk, connect the Port Replicator or PCMCIA Port Replicator to your notebook computer and all the peripheral devices are immediately available and ready to use. There is never a problem of disconnecting and reconnecting several desktop devices each time you move your notebook on off your desk. The PCMCIA Port Replicator also contains an additional PCMCIA slot that supports two Type I, Type II, or Type III PCMCIA cards. To install either option:

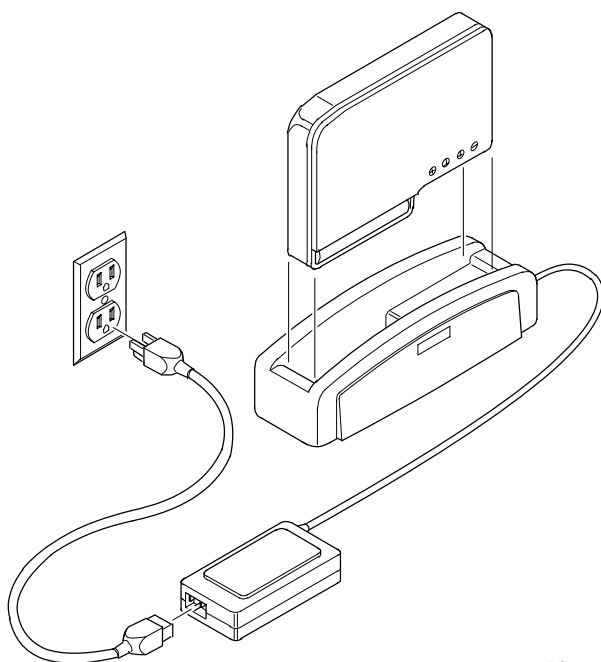


CAUTION: You must use the International AC Adapter to power the PCMCIA Port Replicator. The PCMCIA Port Replicator cannot operate without being powered by the International AC Adapter.

The Port Replicator does not require the International AC Adapter.

1. Make sure you have adequate space in your work area for all the peripherals you plan to connect.
2. Insert a PCMCIA card into the appropriate slot on the PCMCIA Port Replicator.

Options



DEC00332-2

Figure 7-1. Connecting the Battery Charger

NOTE: Make sure that the supplied power cord can be plugged into the power outlet. If not, contact your authorized Digital reseller or sales representative to obtain the correct power cord.

2. Insert a Battery Pack in the Battery Charger. An amber light on the Battery Charger indicates that the Battery Pack is charging; this light goes out when the Battery Pack is fully charged. (A fully drained Battery Pack takes about two hours to charge.)

Options

Installing the Car Adapter

The optional Car Adapter allows you to power your notebook computer using dc power from your car's cigarette lighter.

To use your Car Adapter to power your notebook computer:

1. Connect the adapter's dc power connector to your notebook computer.
2. Connect the adapter's cigarette lighter connector to the car's cigarette lighter.

NOTE: You must have power going to the cigarette lighter connector. This situation occurs when the car is running and in some cars occurs when the car is turned off. Other cars require that you turn the ignition key to accessory to power the cigarette lighter connector.

Installing the Battery Charger with International AC Adapter

The optional Battery Charger allows you to charge a Battery Pack without installing the Battery Pack in your notebook computer. This is helpful for charging spare Battery Packs or for charging a battery quickly while using your notebook computer.

To use the Battery Charger:

1. Connect the International AC Adapter to the Battery Charger and then to an appropriate power source (such as a wall outlet).

7

Options

Introduction

You can purchase the following Digital HiNote options to use with your Digital HiNote notebook computer:

- Car Adapter
- Optional Battery Pack
- Battery Charger with International AC Adapter
- International AC Adapter
- Port Replicator
- PCMCIA Port Replicator
- Additional Memory (4 MB, 8 MB, or 16 MB)
- Carry Cases

The remainder of this chapter describes how to install and use the Car Adapter, Battery Charger with International AC Adapter, Port Replicator, PCMCIA Port Replicator, and additional memory.

LCD Troubleshooting



WARNING: High voltages exist inside the Liquid Crystal Display (LCD) enclosure (notebook computer's screen display). To prevent electrical shock, do not open the LCD enclosure. If the LCD needs repair, return it to your Digital service representative.

Problem	Possible Cause	Action
Power is on, but there is no LCD display.	LCD brightness and contrast incorrectly set.	Adjust the LCD brightness and contrast using hot keys. Refer to the hot key on-line help contained in the Digital Program.
	Notebook computer switched to Suspend .	Press the Power button.
	Notebook computer LCD Timer Setting went into effect.	Press a key on the keyboard or move the trackball cursor.
	Notebook computer running in CRT mode.	Press [Fn] + [F4] until the LCD screen displays.
Screen saver utility installed.	Press a keyboard key or click on the trackball.	

Problem Solving and Troubleshooting

Problem	Possible Cause	Action
SRAM card does not work (double beep).	incorrect drive letter assigned.	Remove SRAM card and boot your notebook computer. Note the drive letter information displayed on the LCD. Insert the SRAM card and then type the correct drive letter at the DOS prompt.
	SRAM card not formatted.	Insert the SRAM card and then type: <i>format [drive letter]:</i> to format the SRAM card. If problem still persist, call your Digital service representative.
ATA card does not work (single beep).	Card not supported.	Contact your Digital service representative.
ATA card does not work (double beep).	Missing device driver(s)	Check your CONFIG.SYS file and make sure the ATADRV.EXE or MEMDRV.EXE device driver statement appears and is in the correct order. Refer to Chapter 4 for additional information. Contact your Digital service representative.

Problem Solving and Troubleshooting

Problem	Possible Cause	Action
SRAM card does not work (single beep).	Missing device driver(s).	<p>Make sure the MTDSRAM.EXE driver is properly installed on your hard disk drive. If not, reinstall it using your backup diskettes.</p> <p>Make sure the SRAMDRV.EXE or MEMDRV.EXE drivers are properly installed on your hard disk drive.</p> <p>Check your CONFIG.SYS file and make sure the SRAMDRV.EXE or MEMDRV.EXE device driver statements appear and are in the correct order. Refer to Chapter 4 for additional information.</p> <p>If problems still persist, contact your Digital service representative.</p>

continued

Problem Solving and Troubleshooting

Problem	Possible Cause	Action
Network card does not work (single beep).	Configuration error or card not supported.	<p>If you are in CardView, exit Windows for Workgroups and enter at the DOS prompt:</p> <pre>cardinfo /v</pre> <p>Locate the latest error message in the list and then write down the entire message that appears after the = sign.</p> <p>Return to CardView and select the network card configuration menu in CardView.</p> <p>Change the value of the item causing the latest error.</p>
Network card does not work despite a double beep, which indicates that the network card was properly recognized and configured by your notebook computer.	Network incompatibility.	<p>Further adjustments might need to be made depending on your network configuration. Refer to your network documentation.</p> <p>Contact your service representative.</p>

continued

PCMCIA Troubleshooting

Problem	Possible Cause	Action
PCMCIA card does not work.	Notebook computer not turned on.	Turn notebook computer on.
	Card improperly inserted.	Insert the card label-side up. Card is inserted properly if you hear two short beeps. If not, refer to specific card troubleshooting later in this section.
	Card not supported.	Contact your Digital service representative.
	Device drivers missing or improperly installed. PCMCIA Port Replicator improperly installed onto the notebook computer.	Refer to Chapter 4, "PCMCIA Utilities and Drivers." Refer to Chapter 7, "Options."
Modem card does not work from CardView (single beep).	Card improperly configured or configuration conflict.	Select the configuration option in CardView and run the configure modem option. Select configure and the insertion slot number of the faulty card. Change the COM port setting so there is no conflict.
Modem card does not work in CardSoft (double beep).	Communications software improperly configured.	Refer to your communications documentation and change the settings of the software to match those shown in the CardSoft display.

continued

If Your Notebook Computer Beeps

Problem	Possible Cause	Action
Notebook computer sounds a sequence of three beeps every 15 seconds.	Notebook computer entered a “Low Battery” condition.	Connect the notebook computer to an external power source and charge the battery.
Notebook computer sounds a sequence of three beeps every second.	Notebook computer entered a “Battery Very Low” condition.	Save your work and immediately connect the notebook computer to an external power source. If an external power source is not available, save your work and then allow your notebook computer to enter its Suspend mode.
Notebook computer sounds a sequence of five beeps.	A “CPU Extreme Temperature Alert” condition was detected.	Your notebook computer will automatically shutdown after it beeps. Remove your notebook computer from the extreme temperature area.

Problem Solving and Troubleshooting

Problem	Possible Cause	Action
Notebook computer does not boot from the diskette drive.	“Drive C” is selected from the “First Boot” option in Setup.	Enable “Drive A” via Setup. Press [Fn] + [F3] to enter Setup.
	Diskette does not contain system files.	Insert a diskette with the correct system files.
	Diskette drive is empty.	Insert a diskette that contains an operating system.
	Diskette is worn or damaged.	Try another diskette.
Target diskette drive cannot read or write information.	Diskette drive failed.	Contact your Digital service representative.
	Diskette is not formatted.	Format the diskette. Try another diskette.
	Diskette is worn or damaged.	
	Diskette is write-protected.	Slide the write-protect switch so the hole is not visible. Insert a diskette.
	Diskette drive is empty.	Contact your Digital service representative.
No response to keyboard commands.	Diskette drive failed.	Contact your Digital service representative.
	Keyboard is defective.	Contact your Digital service representative.
Notebook computer locks up.	Notebook computer is hung.	Open the keyboard assembly, press the reset button, close the keyboard assembly, and press the Power button.
	User or Supervisor password forgotten.	Contact your Digital support help line.
Cursor moves erratically across the LCD.	Trackball needs cleaning.	Clean the trackball. Refer to the trackball on-line help contained in the Education section of Digital Quick Start.

Problem Solving and Troubleshooting

Problem	Possible Cause	Action
Notebook computer operates incorrectly after installing an optional memory module.	Memory module installed incorrectly.	Remove memory module and reinstall.
	Memory module failed.	Replace memory module.
Notebook computer does not boot from the hard disk drive.	Operating system software is not installed on the hard disk drive.	Install the appropriate operating system.
	Hard disk drive is not correctly formatted or the requested partition does not exist.	Format the hard disk drive or partition the hard disk drive using the backup version of the operation software you created.
	There is no software on the requested partition.	Install software on the requested partition. See drive type label on drive or consult drive documentation.
	“Drive A” is selected from the “First Boot” option in Setup.	Remove the diskette from drive A.

continued

Notebook Computer Troubleshooting

Problem	Possible Cause	Action
No response when the notebook computer is turned on while running on battery power.	Battery pack is discharged.	Charge the Battery Pack.
	Defective Battery Pack.	Replace Battery Pack.
	Notebook computer hung.	Open the keyboard assembly, press the reset button, close the keyboard assembly, and press the Power button.
	Main logic board failure.	Contact your Digital service representative.
No response when the notebook computer is turned on while connected to an external power source.	International AC or Auto Adapter is not connected properly.	Make sure either adapter is properly connected to the notebook computer and to the ac power source.
	No power from the external power source, such as a wall outlet.	Check the external power source by connecting another device to it. If the external power source still does not work, try another power source.
	Main logic board failure.	Contact your Digital service representative.
Application software or files failing to load with an out of memory error message.	Insufficient notebook computer memory.	Install a larger memory module. If you are not using PCMCIA cards, comment out the driver statements in your CONFIG.SYS file. This will prevent the drivers from being loaded into memory.

continued



WARNING: Depending on your locality, your notebook computer's Battery Pack might be considered hazardous waste. Make sure you follow any state or local statute to properly dispose of an old Battery Pack.

Problem Solving and Troubleshooting

5. When installing PCMCIA cards did your notebook computer sound two short beeps?

If yes,

The PCMCIA card was installed correctly.

If no,

Refer to the PCMCIA troubleshooting table provided later in this chapter and to Chapter 4, “PCMCIA Utilities and Drivers.”

6. Check that all the necessary video, printer, and application device drivers are properly installed.

Refer to the documentation that was provided with the applicable device or application for information on device drivers and how to install them.

7. Run Setup to ensure that your notebook computer is appropriately configured.

Refer to Chapter 2, “Configuring your Notebook Computer.”

8. Check the troubleshoot tables in this chapter and follow the suggested actions. When using these tables, match your notebook computer’s problem to the problem listed in the tables.
9. Contact your Digital service representative.

NOTE: If you need to return your notebook computer or a failed component, pack it in its original container and return it to an authorized Digital representative.

If you are a self-maintenance customer, call your service representative for assistance and recommendations.

Problem Solving and Troubleshooting

1. Are you running your notebook computer using the Battery Pack or with an International AC Adapter?

Running with the Battery Pack:

Check that your Battery Pack is charged by connecting your International AC Adapter.

If the amber light goes on, your Battery Pack is charging. You can either use your notebook computer while the Battery Pack is charging or wait until it is fully charged.

If the amber light fails to go on, go to “Running with the International AC Adapter.”

Running with the International AC Adapter:

Check that your International AC Adapter is properly connected and the connections are secure.

2. Press [Ctrl] + [Alt] + [Del] to soft boot your notebook computer.
If your notebook computer fails to boot, turn it off, wait a few seconds, and then turn it back on.
3. When you reboot, does your notebook computer display any error messages?

If yes,

Refer to Appendix B, “Notebook Computer Messages,” and correct the error.

If no,

Proceed to step 4.

4. Raise the keyboard assembly and then press the reset button.
Refer to Chapter 3, for button location.
Lower the keyboard assembly and press down on each side to engage the side latches.

6

Problem Solving and Troubleshooting

This chapter provides initial troubleshooting procedures and the following troubleshooting tables listing specific problems, probable causes, and recommended actions to take if your notebook computer fails after you configure it or after you install optional hardware or software.

- Notebook Computer Troubleshooting
- PCMCIA Troubleshooting
- LCD Troubleshooting

Refer to Appendix B, "Notebook Computer Messages," for a list of error messages that might appear during normal operation.

Refer to the documentation supplied with additional options if you are experiencing problems with specific options that you have installed.

Initial Troubleshooting

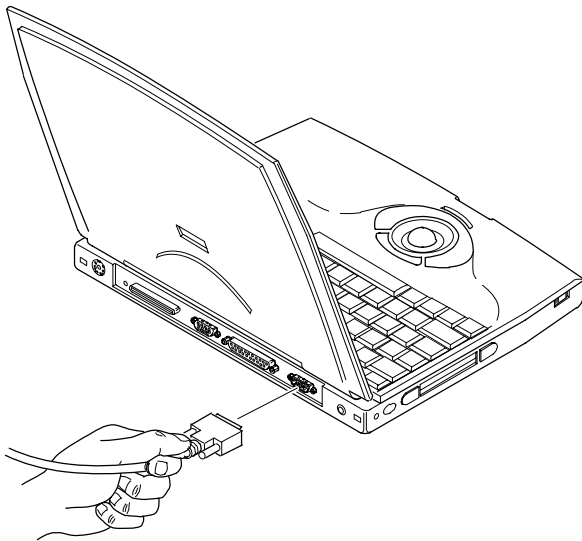
If your notebook computer beeps, it might be operating normally and is only trying to notify you of a condition. Check the beep table in this chapter for information about these beeps. If the beeps do not match those given in this chapter, refer to Appendix B, "Notebook Computer Messages," for beep codes.

If there are no beeps and you are experiencing a problem with your notebook computer, follow these initial troubleshooting steps.

Connecting External Devices

Connecting a Serial Device

Connect a serial device, such as a serial modem, to the serial port connector as shown.



DEC00319-6

Figure 5-5. Connecting a Serial Device

Connecting External Devices

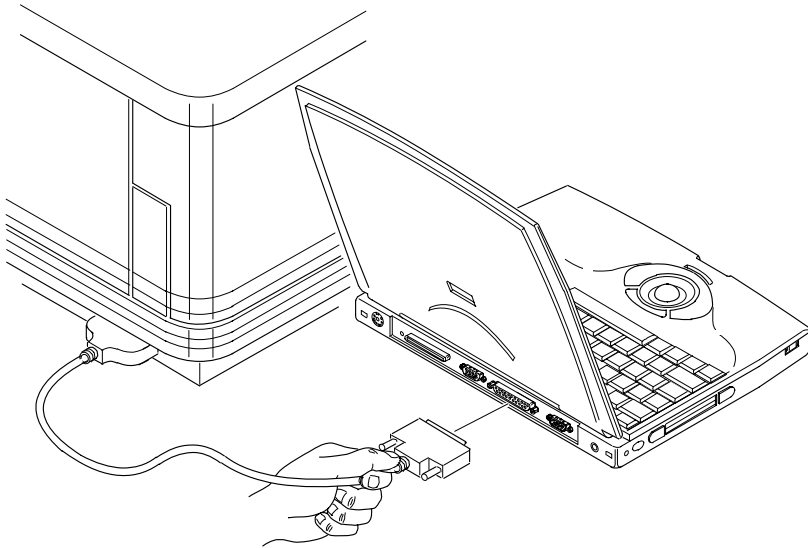
Connecting a Printer

1. Connect and fully tighten the printer signal cable to the parallel (LPT) port connector at the rear of the notebook computer.
2. Connect to an appropriate wall outlet the printer's power cord, which is at the rear of the printer.

Refer to your printer's documentation for configuration information and to Windows for Workgroups online help for general information about printers.



CAUTION: Make sure the printer is turned off before making the wall outlet connection.



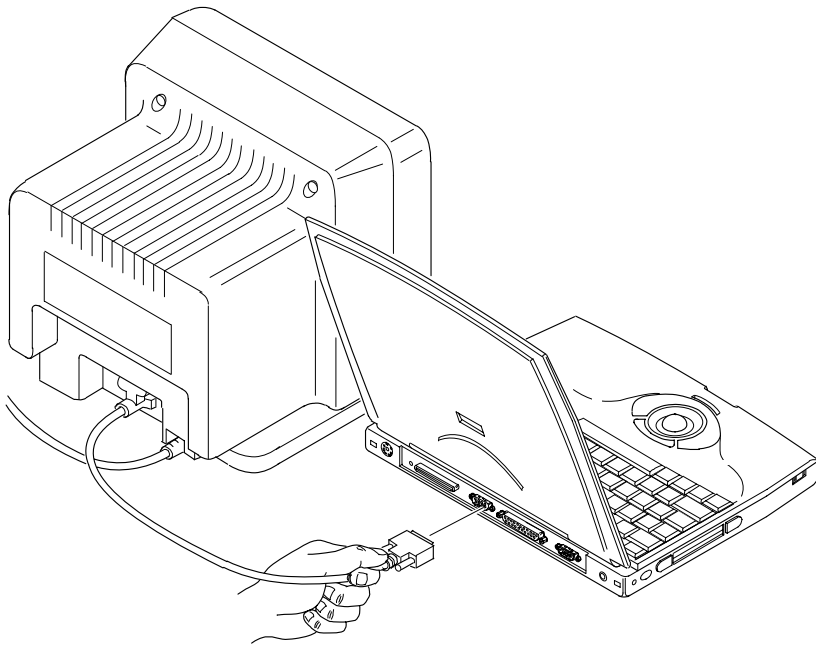
DEC00319-5

Figure 5-4. Connecting a Printer

Connecting External Devices



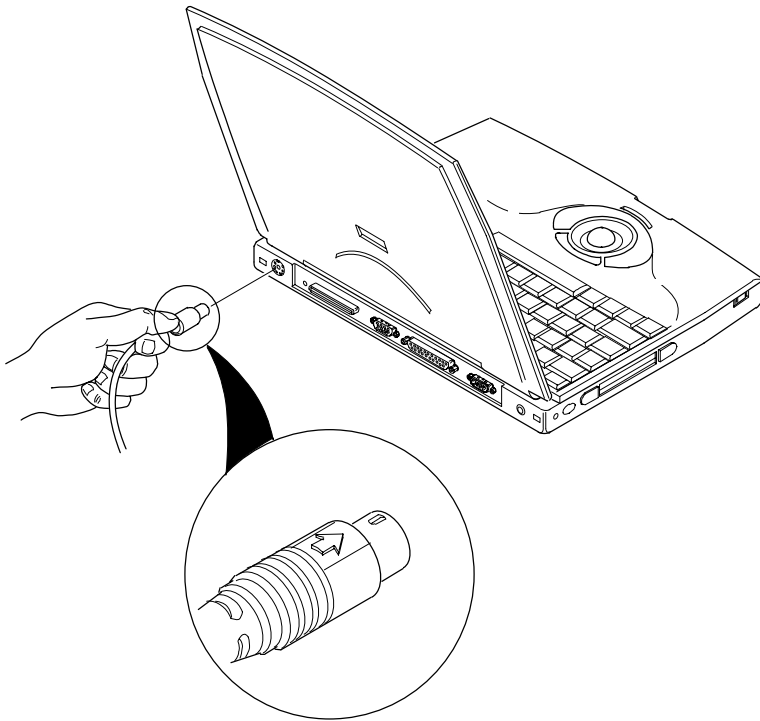
CAUTION: Make sure the monitor is turned off before making the wall outlet connection.



DEC00319-4

Figure 5-3. Connecting a Monitor

Connecting External Devices



DEC00319-2

Figure 5-2. Connecting a Keyboard

Connecting a Monitor

1. Connect and fully tighten the monitor signal cable to the VGA connector at the rear of the notebook computer.
2. Connect to an appropriate wall outlet the monitor's power cord, which is at the rear of the monitor.
3. Turn the monitor on.
4. Press **[Fn] + [F4]** until the monitor displays or both the monitor and the notebook computer LCD screen display.

Note that all 33 MHz models support only CRT or LCD display. They do not support simultaneous display.

Connecting an External Keyboard

1. Rotate the keyboard cable connector until the arrow marking is on top.

This marking indicates the keyway (notch) on the keyboard cable connector is aligned with the keyway at the notebook computer's socket.

2. Plug the keyboard cable connector into the socket.

NOTE: You can only connect an external mouse or an external keyboard. You cannot connect both simultaneously. You might, however, use the serial port to connect a serial mouse. Be sure your mouse supports the port to which you connect. If you do use a serial mouse port, you must disable the trackball using Setup. Contact your Digital sales representative for further information.

Connecting External Devices

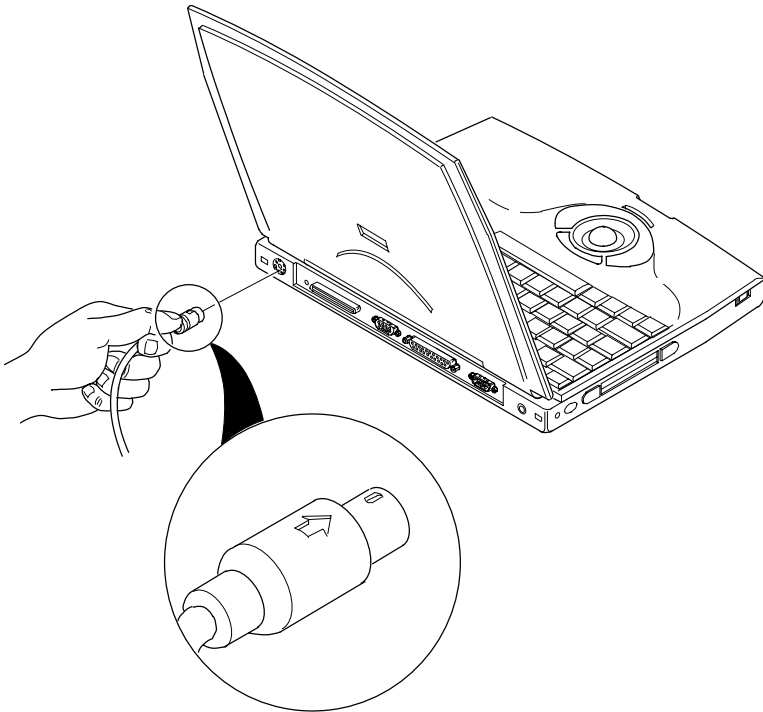
Connecting an External PS/2 Mouse

1. Rotate the mouse cable connector until the arrow marking is on top.

This marking indicates the keyway (notch) on the mouse cable connector is aligned with the keyway at the notebook computer's socket.

2. Plug the mouse cable connector into the socket.

NOTE: You can only connect an external mouse or an external keyboard. You cannot connect both simultaneously. You might, however, use the serial port to connect a serial mouse. Be sure your mouse supports the port to which you connect. If you do use a serial mouse port, you must disable the trackball using Setup. Contact your Digital sales representative for further information.



DEC00319-3

Figure 5-1. Connecting a Mouse

5

Connecting External Devices

Introduction

You can connect external devices directly to your Digital HiNote notebook computer. At the rear of the notebook computer there is a door. Flip it open to expose all the ports and connectors. The remainder of this chapter describes how to connect external devices to these ports.

PCMCIA MS-DOS Drivers

The following device drivers have been factory installed for you along with the correct device driver CONFIG.SYS statements (these statements also appear in the correct order). Do not add or remove any of these drivers.

```
SSCIRRUS . EXE
CS . EXE
CSALLOC . EXE
ATADRV . EXE
MTSRAMDRV . EXE
MTDDRV . EXE
CARDID . EXE
MS-FLASH . SYS
```

Keep a diskette copy containing your CONFIG.SYS file in case your notebook computer's hard disk drive ever fails. Then you can copy the CONFIG.SYS file to your new hard disk drive.

CSALLOC

CSALLOC is a DOS-based utility program used to scan your notebook computer for available memory, I/O ports, and interrupts (IRQs). This utility also writes the scanned information to file CSALLOC.INI.

The CSALLOC.ini file is automatically created each time you run CSALLOC. As a result, CSALLOC needs to be run each time you change memory, I/O port, or IRQ settings. To run CSALLOC:

1. Turn on or reboot your notebook computer.
2. At the DOS prompt, go to the CardSoft directory that was created for you at the factory.
3. To scan notebook computer resources type:

```
csalloc /s
```

4. To display notebook computer resources type:

```
csalloc /d
```

Resources marked with an (R) are reserved for use by PCMCIA cards or another notebook computer component.

Resources marked with an (A) are already allocated for use by CardSoft.

Resources marked with an (S) are shared resources that operate together without causing conflicts.

5. To create a new CSALLOC.INI file type:

```
csalloc /g
```

6. Reboot your notebook computer to initiate the CSALLOC.INI file.

CARDINFO

If you are unable to configure a PCMCIA card using CardView, you can use CARDINFO to scan PCMCIA slots and list important information about any installed PCMCIA card. Run CARDINFO if you need to:

- Know the types of PCMCIA cards you have installed
- Know what notebook computer resources are allocated
- Turn off or turn on power to a PCMCIA slot that contains a card
- Display manufacturer and product information about any installed PCMCIA card
- Know the drive letter for an ATA hard disk or ATA flash disk PCMCIA card
- Know the last error that occurred after inserting a PCMCIA card

To run CARDINFO

1. Turn on or reboot your notebook computer.
2. At the DOS prompt, go to the CardSoft directory that was created for you at the factory.
3. Type:

cardinfo

Your notebook displays information similar to the following:

```
Slot 0
Card Type = Token Ring
Manufacturer = <card vendor name>
Product Name = Token Ring
```

```
Slot 1
Slot 1 is empty
```

4. Exit CARDINFO following the instructions on your LCD.

Using PCMCIA Utilities

While running under Windows for Workgroups, always use CardView to allocate notebook resources, to make CardView work, and to view the status.

Refer to the CardView online help in the Digital Program.

If CardView fails to recognize your PCMCIA card and provide status about the card, exit out of Windows and run CARDINFO from the DOS prompt.

Use CARDINFO to tell you about the status of your PCMCIA card when running under MS-DOS. Also use CARDINFO when CardView failed to recognize a card. Refer to CARDINFO in this chapter for instructions on how to run CARDINFO.

If CARDINFO fails to recognize your card and/or provide card status, exit out of CARDINFO and run CSALLOC. CSALLOC automatically reallocates your notebook computer resources to allow it to recognize the PCMCIA card. Refer to CSALLOC in this chapter for instruction on how to run CSALLOC.

If a PCMCIA card still does not work, refer to Chapter 6, "Problem Solving and Troubleshooting."

CardView

CardView is a user-friendly graphical interface that enables you to access and customize your notebook computer's PCMCIA subsystem through a menu-driven interface. To access CardView, double click on the CardView icon in the Digital Program menu.

4

PCMCIA Utilities and Drivers

Introduction

The supplied PCMCIA utilities and MS-DOS-based drivers enable you to setup and configure your notebook computer for use with a variety of PCMCIA cards. If you are unfamiliar with utilities, device drivers, and their uses, read and understand the information provided in this chapter as well as the information provided in the PCMCIA online help file. The PCMCIA online help file can be accessed from the Digital Program.

For PCMCIA troubleshooting information, refer to Chapter 6, “Problem Solving and Troubleshooting.”

The remainder of this chapter describes how to use the following PCMCIA utilities and MS-DOS-based drivers supplied with your Digital HiNote:

- **CardView Utility** — this Windows for Workgroups-based utility enables you to identify and allocate the proper notebook computer resources (memory, IRQs, I/O ports, etc.) to make a PCMCIA card operate. CardView also notifies you of changes to your notebook computer, such as when a PCMCIA card is inserted or removed. In addition, CardView provides PCMCIA vendor information once a PCMCIA card is installed.
- **CARDINFO Utility** — this MS-DOS-based utility enables you to view the status of your PCMCIA slots.
- **CSALLOC Utility** — this MS-DOS-based utility enables you to identify and allocate the proper notebook computer resources (memory, IRQs, I/O ports, etc.) to make a PCMCIA card operate.
- **PCMCIA MS-DOS-based Drivers** — these factory-installed device drivers enable you to use your PCMCIA slots and run PCMCIA utilities.

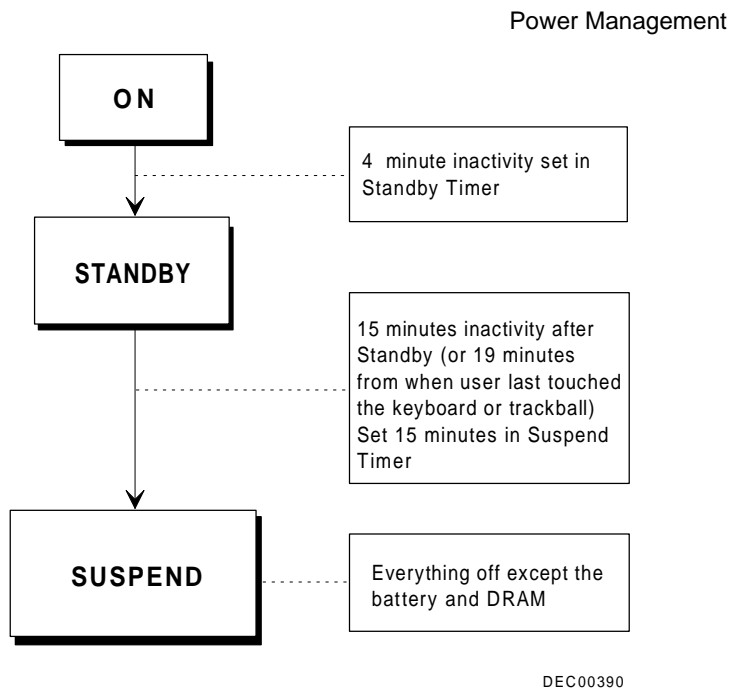


Figure 3-3. Power Management States (Factory Default Timer Settings)

Specialized Cases

Setting	Situation	Comments
PCMCIA Socket Power in Suspend set to On	Using a PCMCIA FAX/modem left on	PCMCIA power is on and waiting for a FAX modem ring. In this mode, the PCMCIA FAX modem can operate unattended. However, this causes drain on the battery.
Resume on modem ring set to "Enabled" in Setup	Using a PCMCIA FAX/modem	The PCMCIA modem card is set to Suspend but turns on when the modem rings.
Power Button On/Off	Installing or removing memory or a hard disk drive	Power button must be set to On/Off in Setup to perform these functions. The reset button can also be used.

Suggested Settings

Setup Field	Suggestion	Comments
Power Button or Lid Switch	Suspend/Resume	Depending on how your notebook computer went into Suspend , you must either press the power button or raise the cover to switch it back to On . Note that it takes a few seconds for your notebook computer turn back on.
Standby Timer	4 Minute Standby Timer	<p>Your notebook computer switches to Standby based on an inactivity time period selected in Setup. While in Standby, any trackball or keyboard movement will instantaneously switch your notebook computer back to where you left off.</p> <p>Note that longer Standby settings put more drain on the battery than shorter Standby settings. However, if you take short breaks between working sessions, shorter Standby settings might be cumbersome.</p>
Suspend Timer	15 Minute Suspend Timer	<p>Depending on how your notebook computer went into Suspend, you must either press the power button or raise the cover to switch it back to On.</p> <p>Note that it takes a few seconds for your notebook computer turn back on.</p> <p>Also, if you have the Standby timer set, your notebook computer will switch to Standby before switching to Suspend as shown in Figure 3-2.</p>

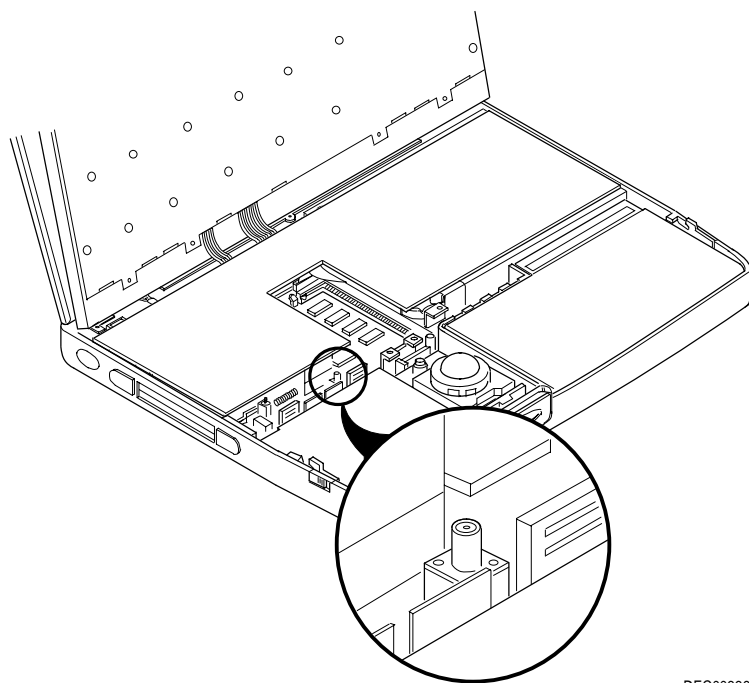
Reset Button

Pressing the reset button turns your notebook computer Off.

Pressing [Fn] + [Power button] also shuts the notebook computer **Off** regardless of any power management option selected in Setup or Windows for Workgroups.



CAUTION: Make sure you save all data before pressing the reset button. Pressing the reset button clears all data in memory.



DEC00336-4

Figure 3-2. Reset Button Location

Power Management

Resume is a transition state in which the notebook computer goes to **On** after a few seconds. After this transition, the application you were previously working on appears where you left off. For example, if you were working in a word processing program when your notebook computer switched to **Resume**, your cursor will appear in the exact spot you left it when your notebook computer returns to **On**.

To switch your notebook computer from **Suspend/Resume** back to **On** (full power), either press the power button or raise the lid (if the lid switch is set to **Suspend/Resume**).

Refer to the Lid Switch description later in this chapter.

On/Off

Setting the power button to **On/Off** enables you to completely power up or power down your notebook computer. When your notebook is **On**, no data is saved. When your notebook computer is **Off**, the battery is no longer being used and no information is saved.

Lid Switch

This switch, located at the top left of the keyboard assembly, can be configured to operate in three different modes:

1. **Suspend/Resume** toggle switch. Your notebook computer switches from **Suspend** to **On** when you open the lid and from **On** to **Suspend** when you close the lid.

To set this mode, select the `Enabled - Suspend/Resume` setting in the “Lid Switch” field of Setup.

2. Disables the LCD and initiates a FAST_BEEP sequence when the lid is closed.

To set this mode, select the `Enabled - Beeps on Closing` setting in the “Lid Switch” field of Setup.

3. Only disables the LCD when the lid is closed.

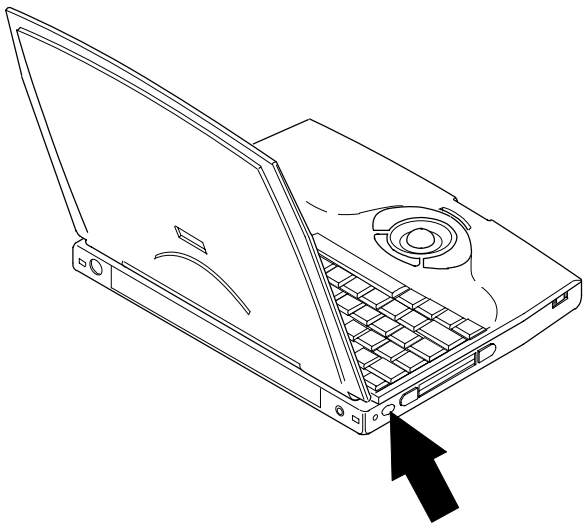
To set this mode, select the `Disabled - No Beeps` setting in the “Lid Switch” field of Setup.

NOTE: You generally select this mode when using an external monitor.

Power Button

The power button is located at the left side of your notebook computer and can be configured to operate in two different modes using the options available in Setup.

Refer to Chapter 2, “Configuring your Notebook Computer,” for additional information on selecting either configuration.



DEC00316-3

Figure 3-1. Power Button Location

Suspend/Resume

Setting the power button to **Suspend/Resume** enables you to place your notebook computer in a low-power state to conserve battery power.

While in suspend, your notebook computer appears to be off, however, all data is saved in DRAM for up to two weeks (when the battery starts from a fully charged state).

Setting Power Management Features

You access your notebook computer's power saving features using Setup or through a Windows for Workgroups-based power management menu. To access features using Setup, simply press [Fn] + [F3] any time your notebook computer is powered up. To access features using Windows for Workgroups, simply double-click on the power management icon located in the Program Manager.

If you're unsure about what power saving features best fit your needs, a maximum, minimum, or disabled option can be set using Setup (or through Windows for Workgroups). Setting any of these three options automatically configures your notebook computer for the option selected.

Refer to Chapter 2, "Configuring your Notebook Computer," for additional information on setting these options.

If you choose to set your own power saving features, read and understand the information that follows. Depending on your specific needs, certain options need to be set to maximize battery life.

Battery and Performance Hot Keys

Selecting either of these two options overrides any power saving settings selected in Setup or Windows for Workgroups.

If you want	Mode	Comments
Maximum battery life.	[Fn + F1].	Maximizes battery life by lowering the CPU speed. Use this hot key function when your notebook computer is in On mode. This hot key function works when your Power button is configured for either On/Off or Suspend/Resume .
Maximum performance.	[Fn + F2].	Maximizes performance, but places the heaviest drain on the battery (increases CPU speed). This hot key function works regardless of how the Power button is configured.

3

Power Management

Introduction

Good power management practices can help maximize notebook computer operation while under battery power. Generally, you can use your notebook computer for approximately 3½ hours at full power between battery charges. However, depending on how you set certain built-in power saving features, you can significantly increase this amount.

If you are using your notebook computer with an International AC Adapter (and not charging the Battery Pack), you can forego most of the power saving features and use your notebook computer as you would any desktop or desk-side computer.

If you are not an advanced user, start by using the power management settings that were provided by the factory. After using your notebook computer for a period of time, if a factory setting does not fit your specific need, follow the instructions given in the remainder of this chapter to change any setting accordingly.

Configuring Your Notebook Computer

Defaults

Fields	Settings	Comments
Set user default settings		Stores all Setup options as the user default values.
Load user default settings		Sets all Setup options to their user defined default values.
Load factory default settings		Sets all Setup options to their factory default values.

Exit

Fields	Settings	Comments
Save		Saves all Setup values and exits Setup.
Quit		Ignores all Setup values and exits Setup.

Configuring Your Notebook Computer

Security

Fields	Settings	Comments
Set user password	Refer to Chapter 1 for detailed information on how to set this password	This option enables you to create a password that must be entered prior to operating the notebook computer each time it boots, switches from Standby to On , or Resumes from a Suspend state.
Set supervisor password	Refer to Chapter 1 for detailed information on how to set this password	This option enables you to create a password that must be entered prior to accessing Setup. The supervisor password can also serve as a user password where appropriate.
Modify password mode	Bootup Bootup and resume Bootup, resume and wakeup ⁽¹⁾⁽²⁾	This option enables you to customize when a user password goes into effect.

⁽¹⁾ Factory default setting when operating with an International AC Adapter.

⁽²⁾ Factory default setting when operating with the Battery Pack only.

Configuring Your Notebook Computer

Device

Fields	Settings	Comments
Serial port	Disabled COM 1 (3F8h - IRQ4) ⁽¹⁾⁽²⁾ COM 2 (2F8h - IRQ3) COM 3 (3E8h - IRQ4) COM 4 (2E8h - IRQ3)	Enables or disables any desired onboard serial port at the specified address.
Parallel port	Disabled LPT1 (378h - IRQ7) ⁽¹⁾⁽²⁾ LPT2 (278h - IRQ5)	Enables or disables any desired onboard printer port at the specified address.
Parallel port mode	Standard ⁽¹⁾⁽²⁾ Bi-directional (PS2) Enhanced parallel port (EPP) Extended capabilities port (ECP)	<p>Standard - Port is used for sending information out. Use this mode when using the port to connect to a standard printer</p> <p>Bi-directional - The port works as a PS/2 compatible mode where it can send and receive data. If you select this option, make sure that the device you are attaching supports bi-directional mode.</p> <p>EPP and ECP provide for better throughput through the port. If you use these settings your device must support EPP or ECP, respectively.</p> <p>Note: Make sure your printer supports any mode chosen other than Standard. Refer to your printer's documentation for additional information.</p>

⁽¹⁾ Factory default setting when operating with an International AC Adapter.

⁽²⁾ Factory default setting when operating with the Battery Pack only.

Configuring Your Notebook Computer

Fields	Settings	Comments
Keyboard click	Enabled Disabled ⁽¹⁾⁽²⁾	Setting this option to “Enabled” causes the keyboard to emit a low clicking sound each time a key is pressed.
Num lock	On ⁽¹⁾⁽²⁾ Off	Turns on or turns off the numeric keypad keys each time your notebook computer boots.
Trackball	Enabled ⁽¹⁾⁽²⁾ Disabled	Setting this option to “Enabled” means your trackball is operating. Disable this option if you are using a serial mouse. If you are using a PS/2 mouse and find it is not responding, disable the trackball.

⁽¹⁾ Factory default setting when operating with an International AC Adapter.

⁽²⁾ Factory default setting when operating with the Battery Pack only.

Configuring Your Notebook Computer

Fields	Settings	Comments
Auto save	Enabled Disabled ^{(1) (2)}	<p>This option enables you to configure your notebook computer as to how you want it to respond to a low battery condition when disconnected from the AC Adapter.</p> <p>Enabling this option saves all the data in DRAM to the hard disk drive each time your battery is in a low battery condition. When your resume work, your notebook computer's cursor is exactly where you left it when your notebook computer first switched to Suspend. See Chapter 3, "Power Management," for more information.</p> <p>Note: Enabling this option can take up to 23 MB of disk space.</p>
Suspend beep	Enabled ^{(1) (2)} Disabled	<p>This option enables or disables the suspend beeps feature.</p> <p>If enabled, the notebook computer emits a series of warning beeps prior to switching into Suspend mode.</p>

⁽¹⁾ Factory default setting when operating with an International AC Adapter.

⁽²⁾ Factory default setting when operating with the Battery Pack only.

continued

Configuring Your Notebook Computer

Fields	Settings	Comments
PCMCIA boot	Enabled Disabled ⁽¹⁾⁽²⁾	<p>Enabling this option causes your notebook computer to boot from an installed PCMCIA card and then from the device set in “Boot Sequence.” For example, suppose you select “Enabled” and choose floppy disk then hard drive for the boot sequence. The notebook computer then boots first from the PCMCIA card. Failing to find a PCMCIA card, it boots from the floppy disk drive. If it fails to find a diskette in the drive, it boots from the hard drive.</p> <p>Disabling this option causes your notebook computer to boot from the device set in “Boot Sequence.”</p>
Quick boot	Enabled Disabled ⁽¹⁾⁽²⁾	<p>Enabling this option speeds up your notebook computer boot sequence by skipping certain diagnostic tests.</p> <p>If you want to test fully your notebook computer’s hardware each time it boots, disable this option.</p>

⁽¹⁾ Factory default setting when operating with an International AC Adapter.

⁽²⁾ Factory default setting when operating with the Battery Pack only.

continued

Configuring Your Notebook Computer

System

Fields	Settings	Comments
Set date	Current date	Sets your notebook computer to a specified date.
Set time	Current time	Sets your notebook computer to a specified time.
Boot sequence	Floppy disk then hard drive Hard drive then floppy disk ⁽¹⁾⁽²⁾	Setting the floppy disk then hard drive option causes your notebook computer to first try to boot from the floppy disk drive and then from the hard disk drive. Setting the hard drive then floppy disk option causes your notebook computer to first try to boot from the hard drive and then from the floppy disk drive.
Power button	On/Off Suspend/Resume ⁽¹⁾⁽²⁾	This option enables you to configure the power button as an On/Off switch or a Suspend/Resume switch.
Lid switch	Disabled - no beeps Enabled - with beeps Enabled - suspend/resume ⁽¹⁾⁽²⁾	This option enables you to configure the lid switch as to how you want the LCD to respond when opening and closing the LCD panel. Refer to Chapter 3, "Power Management," for detailed information on configuring the lid switch.

⁽¹⁾ Factory default setting when operating with an International AC Adapter.

⁽²⁾ Factory default setting when operating with the Battery Pack only.

continued

Configuring Your Notebook Computer

Fields	Settings	Comments
Resume on modem ring	Enabled Disabled ^{(1) (2)}	<p>This option enables or disables the resume on modem ring feature.</p> <p>Enabling this option forces the notebook computer to Resume from a Suspend state as a result of a modem ring.</p>
APM support	Enabled ^{(1) (2)} Disabled	<p>Enabling this option causes your notebook computer to wait for Microsoft's APM to call the firmware to Suspend. APM is Microsoft's Advanced Power Management program, which is part of the MS-DOS operating system. Note that it might take some time for APM to call the BIOS to Suspend. Also note that the APM might never issue this call.</p> <p>Disabling this option causes the BIOS to switch to Suspend based on specific timer settings without waiting for APM.</p> <p>If you find that your notebook computer fails to respond to power management settings, such as failing to Suspend after 10 minutes, set APM support to "Disabled."</p>

⁽¹⁾ Factory default setting when operating with an International AC Adapter.

⁽²⁾ Factory default setting when operating with the Battery Pack only.

Configuring Your Notebook Computer

Fields	Settings	Comments
PCMCIA socket power	On ⁽¹⁾ Off ⁽²⁾	<p>This option allows you to control power to a PCMCIA card during Suspend.</p> <p>PCMCIA power should be kept on at all times to preserve data and to allow the notebook computer to Resume by means of a modem ring from an installed fax/modem PCMCIA card.</p>
Resume on alarm	Enabled Disabled ⁽¹⁾⁽²⁾	<p>This option enables or disables the resume on alarm feature.</p> <p>Enabling this option forces the notebook computer to Resume from a Suspend state as a result of an internal real-time clock. Several organizational applications contain clock settings that you can set to beep you at specific times. These can activate this feature when resume on alarm is enabled.</p>

⁽¹⁾ Factory default setting when operating with an International AC Adapter.

⁽²⁾ Factory default setting when operating with the Battery Pack only.

continued

Configuring Your Notebook Computer

Fields	Settings	Comments
Suspend timer	Disabled ⁽¹⁾	Allows you to disable this feature or after a set period of notebook computer inactivity, forces the notebook computer to switch to Suspend . Note: Generally, users set this timer to a time greater than the Suspend timer. Then the notebook computer goes into Standby and then into Suspend . For example, if you select a 4 minute Standby timer and 15 minute Suspend timer, after 4 minutes of notebook computer inactivity, your notebook computer switches to Standby . Then after 19 minutes of inactivity, your notebook computer switches to Suspend . However, if you disable the Standby timer or set it to a time greater than the Suspend timer, then the notebook computer goes directly to Suspend .
	5 Min ⁽²⁾	
	10 Min	
	15 Min	
	20 Min	
	30 Min	
	40 Min	
60 Min		

⁽¹⁾ Factory default setting when operating with an International AC Adapter.

⁽²⁾ Factory default setting when operating with the Battery Pack only.

continued

Configuring Your Notebook Computer

Fields	Settings	Comments
Hard disk timer	Disabled ⁽¹⁾	Allows you to disable this feature or after a set period of hard disk drive inactivity, forces the hard disk drive into its power saving state.
	1 Min	
	2 Min	
	4 Min ⁽²⁾	
	6 Min	
	10 Min	
	15 Min	
Standby timer	16 Min	Allows you to disable this feature or after a set period of notebook computer inactivity, forces your notebook computer to switch to Standby . Note: the set period of inactivity is measured from On mode.
	1 Min	
	2 Min	
	4 Min ⁽²⁾	
	6 Min	
	8 Min	
12 Min		
	16 Min ⁽¹⁾	

⁽¹⁾ Factory default setting when operating with an International AC Adapter.

⁽²⁾ Factory default setting when operating with the Battery Pack only.

continued

Configuring Your Notebook Computer

Power

Fields	Settings	Comments
Power	Disabled ⁽¹⁾	Use disable when you want to disable all power savings for maximum performance, such as when you are running your notebook computer with an International AC adapter or an application that requires all devices running.
	Maximum battery life ⁽²⁾	Use maximum battery life when you want to maximize the time between battery charges.
	Maximum performance	Use maximum performance when you want to maximize the performance of your notebook computer while still retaining some power savings for extending the life of your battery.
	Advanced	Select advanced when you want to choose your own power saving features. Use this option only if you have a good understanding of effects your selections have on both battery life and overall performance.
LCD timer	Disabled ⁽¹⁾	Allows you to disable this feature or after a set period of keyboard or trackball inactivity, forces the LCD into its Suspend state.
	1 Min	
	2 Min	
	4 Min ⁽²⁾	
	6 Min	
	10 Min	
	15 Min	
16 Min		

⁽¹⁾ Factory default setting when operating with an International AC Adapter.

⁽²⁾ Factory default setting when operating with the Battery Pack only.

continued

Configuring Your Notebook Computer

- You can also press the key that corresponds to a menu item's highlighted letter. For example, "A" for Advanced in the Power Option, or field.
- From the Defaults menu:
 - Select "Set User Default Settings" to store the current Setup options as the user default values.
 - Select "Load User Default Settings," to set all Setup options to their user defined default values.
 - Select "Load Factory Default Settings," to set all Setup options to their factory default values.
- From the Exit menu:
 - Select "Save" to save all Setup values and exit Setup.
 - Select "Quit" to ignore the current Setup configuration and exit Setup.

Configuring Your Notebook Computer

3. After making your changes, exit Setup by selecting the Exit option appropriate for your needs.

NOTE: If you entered Setup while running an application, you can return to the same application after exiting Setup. However, some of your changes might only take effect when you reboot.

Updating Your Notebook Computer's Configuration

The following sections list Setup options you can update. When updating, keep the following in mind:

NOTE: You can also use your trackball where appropriate.

→	Wrap around keys that move the cursor to the right and left
←	
↑	Wrap around keys that move the cursor up and down
↓	
Tab	Moves the cursor between menu items
ESC	Closes the current menu
Enter	Accepts the current selection
Space bar	Selects the current option

2

Configuring Your Notebook Computer

Introduction

This chapter provides information on how to configure your notebook computer using Setup. However, your notebook computer is already configured with default settings that were selected for typical notebook computer use.

If you are familiar with utility programs and their uses, refer to the appropriate sections in this chapter to setup or update your notebook computer. Otherwise, carefully read and understand this chapter before attempting to modify your notebook computer's configuration settings.

Running Setup

With the notebook computer Setup, you can select and store information about the notebook computer's hardware and software in the battery-backed memory of the CMOS RAM. This information takes effect each time the notebook computer boots and can be changed each time you run setup.

Use Setup if you need to reconfigure your notebook computer, change power management settings, or after adding or removing additional memory.

To run Setup, perform the following steps:

1. Turn on your notebook computer and wait for the completion of the power on messages.
2. Make a note of any configuration errors listed, and then press **[Fn] + [F3]** to display the Setup menu.

Alternatively, you can press **[Fn] + [F3]** at any time while running your notebook computer and immediately enter Setup.

If you need help regarding...	Refer to the
Power management	Information provided in Chapter 3 of this user's guide.
Installing options	Information provided in Chapter 7 of this user's guide.
Problem solving and troubleshooting	Information provided in Chapter 6 of this user's guide.
Specific software application problems or questions	Application documentation or contact the software manufacturer.
Notebook computer features, storage devices, operating systems, and notebook computer care	Online help. From the Digital Program menu, select the appropriate icon.

Introduction

Getting Help

The following table describes where to find help on specific topics or procedures.

If you need help regarding...	Refer to the
Installing your notebook computer	<i>Quick Setup Guide</i>
Support and ordering information	Customer Support Card supplied with your notebook computer.
MS-DOS	On-line MS-DOS help.
Microsoft Windows for Workgroups	On-line Windows help.
Using the keyboard, external mouse, trackball, hot keys, and LCD status panel	Online help. From the Digital Program menu, select the appropriate icon.
Notebook error messages	Information provided in Appendix B of this user's guide.
Battery information	<i>Quick Setup Guide</i> Online help. From the Digital Program menu, select the appropriate icon.
Installing external options	Information provided in Chapter 7 of this user's guide.
PCMCIA information	Online help and CardView online help. From the Digital Program menu, select the appropriate icon. Information provided in Chapter 4 of this user's guide.

continued

Supervisor Password

Your notebook computer has a supervisor password option that you can set to prevent unauthorized access to Setup. If you set a supervisor password, you need to enter it each time you want to access Setup. Note that the supervisor password can also serve as a user password where appropriate.

Perform the following steps to set a supervisor password:

1. Turn on your notebook computer.
2. After POST successfully completes, press **[Fn] + [F3]** to access Setup.

The Setup main menu appears on the screen.

3. Highlight the Security Setup menu and press [Enter].
4. Highlight the Set Supervisor Password field and press [Enter].
5. Type in a four to eight character supervisor password and press [Enter].

To confirm, type in your supervisor password a second time and press [Enter].

6. Highlight the Supervisor Password field and press [Enter].
7. Select the appropriate option and then press [Enter].
8. Exit Setup and reboot your notebook computer.

Your notebook computer runs POST and then prompts you for the supervisor password you set if attempting to access Setup.

Security Lock Hole

You can secure your notebook computer to your desk by inserting a security screw into your notebook computer's lock hole and then by attaching the security screw to a security lock (such as a Kensington lock).

Introduction

User Password

Your notebook computer has three user password options that you can set to prevent unauthorized access to your notebook computer files. If you set a user password, you need to enter it each time your notebook computer boots, switches from **Standby** to **On**, or **Resumes** from a **Suspend** state.

Perform the following steps to set a user password:

1. Turn on your notebook computer.
2. After POST successfully completes, press **[Fn] + [F3]** to access Setup.

The Setup main menu appears on the screen.

3. Highlight the Security Setup menu and press [Enter].
4. Highlight the Set User Password field and press [Enter].
5. Type in a four to eight character user password and press [Enter].

To confirm, type in your user password a second time and press [Enter].

6. Highlight the User Password field and press [Enter].
7. Select the appropriate option and then press [Enter].
8. Exit Setup and reboot your notebook computer.

Your notebook computer runs POST and then prompts you for the user password you set.

Introduction

Perform the following steps when you turn off your notebook computer:

1. Close any application data files you have open.

Most application programs prompt you to save the information before closing the application program.

2. Close any applications you have running.

To close a Windows for Workgroups application, double click on the Control Box located in the upper left corner of the window.

3. Wait approximately 10 seconds for all disk activity to stop and then press the Power button.

Your notebook computer either turns **Off** or goes into **Suspend**, depending on how the Power button is configured. Alternatively, you can turn your computer **Off** by pressing **[Fn] + [Power Button]**.

Notebook Computer Security

Notebook computer security is important to avoid theft or accidental loss of your computer software and hardware. The Cashew HiNote provides the following levels of protection:

- User password
- Supervisor password
- Security lock hole



CAUTION: Keep your password information in a safe place. You will not be able to use your notebook computer if you forget your password. If you do happen to forget your password, contact your Digital service representative.

Restarting Your Notebook Computer

The following describes the methods for restarting (rebooting) your notebook computer. For information on starting your notebook computer for the first time, refer to the Quick Setup Guide.

Method	How to Invoke	Action Performed
Hard boot	Turning on the notebook computer when the Power button is set to On/Off in Setup. Refer to Chapter 3, “Power Management,” for switch locations.	Notebook computer goes through POST as if power is applied for the first time.
Soft boot	Pressing [Ctrl]+[Alt]+[Del].	Notebook computer goes through POST, but does not perform a memory test.



CAUTION: If you press the Reset button while your notebook computer is in suspend mode, all information contained in DRAM will be lost

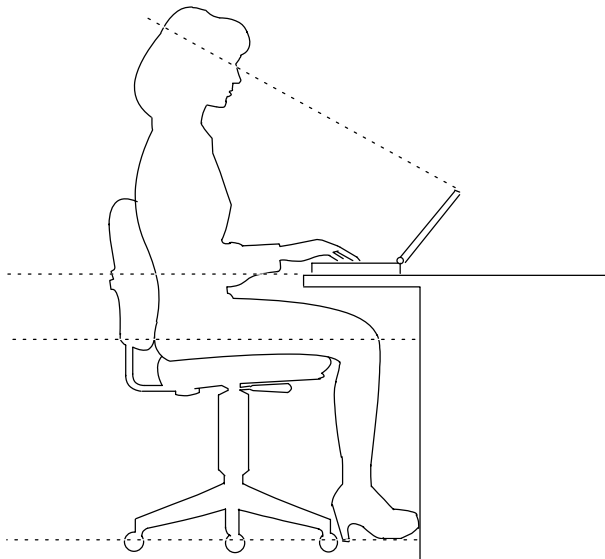
Turning Off Your Notebook Computer

NOTE: The information in this section only applies if the Power button is set to **On/Off** in Setup.

Before you turn off your notebook computer, make sure you save and close all open files. If you turn the notebook computer off without saving and closing all open files, you could lose some or all of your work.

Introduction

- Adjust your notebook computer so that:
 - Your wrists are straight and supported.
 - Keyboard, trackball, and external keyboard or mouse are at elbow height.
 - Your elbows are close to your sides, with your upper arms perpendicular to the floor.
 - You maintain a neutral neck posture with the top of the monitor screen no higher than eye level.
- Adjust your LCD or external monitor and lighting so that:
 - Light is directed away from the screen to reduce glare. Look away to distant objects frequently. Use the tilt and swivel capabilities of your LCD or external monitor to place it in the most comfortable position.
 - The screen is the correct distance for your vision.



DEC00318

Figure 1-1. Providing a Comfortable Working Environment

Introduction

PCMCIA Interface

Your notebook computer contains two PCMCIA slots for high-speed data transfers (Mono versions contain one slot). For notebooks with two slots, you can use two Type I or II PCMCIA cards or one Type III PCMCIA card. Mono versions accept one Type I, II, or III PCMCIA card. All slots accept 3.3 V dc or 5 Vdc PCMCIA cards.

Refer to the online help in the Digital Program menu and Chapter 4, “PCMCIA Utilities and Drivers,” for additional information on using PCMCIA cards.

The remainder of this chapter provides additional information about creating a comfortable working environment, restarting and turning off your notebook computer, using security, and obtaining help.

Providing a Comfortable Working Environment

Use the following tips to help minimize eye strain and body fatigue when operating your notebook computer for long periods of time.



WARNING: If you experience pain or discomfort while using your notebook computer, take a rest break and review the tips given below. If the pain or discomfort continues after resuming use, stop and report the condition to your job supervisor or physician.

- Adjust your chair so that:
 - Your feet are flat on the floor; use a footrest if needed.
 - Your legs form a right angle to the floor.
 - The backs of your knees are free from the chair seat.
 - Your body weight rests on your spine while supporting the lower back region.

1

Introduction

The Digital HiNote is a high-performance notebook computer designed for the mobile professional. It is equipped with the latest in portable computing technology. Developed using the following state-of-the-art technology, the Digital HiNote offers the best in class features for a notebook computer.

Microprocessor Intel i486 SL enhanced.

Power Management Your Digital HiNote has built-in power management features that automatically switch your notebook computer into power-saving modes or allows you to set specific power saving options depending on how you use your notebook computer.

Refer to Chapter 3, “Power Management,” for additional information on accessing and using your notebook computer’s power saving features.

Onboard Video Your notebook computer offers the latest in flat-panel LCD technology as well as support for external, high-resolution, variable-frequency analog monitors (both interlaced and non-interlaced operating modes).

Device Mapping

DMA Channel Assignment

Channel	Controller	Function
0	1	Not used
1	1	Not used
2	1	Diskette controller
3	1	ECP (optional)
4	2	Cascade DMA
5	2	Not used
6	2	Not used
7	2	Not used

Notebook Computer Interrupt Levels

Priority	Interrupt Controller	Interrupt Number	Interrupt Source
1	1	IRQ0	Timer tick
2	1	IRQ1	Keyboard controller
	1	IRQ2	Cascade interrupt
3	2	IRQ8	Real-time clock (RTC)
4	2	IRQ9	Reserved
5	2	IRQ10	Reserved
6	2	IRQ11	Reserved
7	2	IRQ12	Mouse interrupt
8	2	IRQ13	Math coprocessor
9	2	IRQ14	Hard disk drive
10	2	IRQ15	Reserved
11	1	IRQ3	COM2, COM4
12	1	IRQ4	COM1, COM3
13	1	IRQ5	Reserved
14	1	IRQ6	Diskette drive
15	1	IRQ7	LPT1, LPT2, LPT3

Device Mapping

I/O Address Map

Range (hexadecimal)	Function
000 - 00F	DMA controller A
020 - 021	Master interrupt controller
024	Index register
026	Data register
040 - 043	Interval timer
060 - 06F	Keyboard controller
070 - 07F	Real-time clock (RTC), NMI
080 - 08F	DMA page register
0A0 - 0A1	Slave interrupt controller
0C0 - 0CF	DMA controller B
0F0	Clear math coprocessor
0F1	Reset math coprocessor
0F8 - 0FF	Math coprocessor
1F0 - 1F7	IDE controller
278 - 27A	LPT2
2E8 - 2EF	COM4
2F8 - 2FF	COM2
378 - 37A	LPT1
3B0 - 3DF	Mono VGA registers
3BC - 3BE	LPT3
3C0 - 3DF	Mono VGA
3D0 - 3DF	Color VGA registers
3E8 - 3EF	COM 3
3F0 - 3F7	Diskette controller
3F6 - 3F7	IDE controller (alt status, device address)
3F8 - 3FF	COM1
46E8	VGA enable register

C

Device Mapping

This appendix provides a series of tables listing mapping and address information related to computer memory and various main logic board devices (keyboard controller, interrupt controller, DMA controller, etc.).

Your computer's memory and address locations are allocated at the factory to operate within a standard PC environment. However, due to the number of optional devices that are available, sometimes memory and address locations need to be changed. For example, some network PCMCIA cards require a specific memory location. If that location is already allocated, a memory conflict results and the PCMCIA card will not operate as expected. Note that some memory, I/O and interrupt locations can be changed using the BIOS Setup utility. Refer to Chapter 2, "Configuring Your Computer," for additional information.



CAUTION: Before changing any memory or address location, refer to the documentation supplied with the optional device or software application and make sure adequate information is available. If not, contact the option or software manufacturer for further information.

Memory Map

Range	Function	Notes
0h to 9FFFFh	Base memory	640 KB
A0000h to BFFFFh	Video RAM	128 KB
C0000h to C7FFFh	VGA BIOS	32 KB
C8000h to DFFFFh	BIOS extension ROM (AT bus usage)	96 KB
E0000h to EBFFFh	PCMCIA card access	48 KB
EC000h to ECFFFh	Plug and Play BIOS	16 KB
F0000h to FFFFFh	Notebook computer BIOS	64 KB

Notebook Computer Messages

Beep Codes

If the POST finds an error and cannot display a message, the computer's speaker emits a series of beeps to indicate the error.

For example, a refresh circuitry is faulty beep code emits a short (S), short (S), short (S), pause (P), short (S), long (L), short (S), and pause (P) sequence.

The following table lists the beep codes when the notebook computer encounters a fatal error. Fatal errors (errors that lock up your computer) are generally the result of a failed main logic board or some other add-on component (DIMM, BIOS, notebook computer battery, etc. If you cannot resolve problems using the troubleshooting procedures in Chapter 6, contact your Digital service representative.

Refer to Chapter 6, "Problem Solving and Troubleshooting," for beep codes that sound when your Battery Pack is low and while using PCMCIA cards.

Beep Code	Error Message
S,S,S,P,S,S,L,P	DMA page registers are faulty.
S,S,S,P,S,L,S,P	Faulty refresh circuit (see POST and boot messages)
S,S,S,P,S,L,L,P	ROM check sum incorrect (see POST and boot messages)
S,S,S,P,L,S,S,P	CMOS RAM test failed (see POST and boot messages)
S,S,S,P,L,S,L,P	DMA controller faulty (see POST and boot messages)
S,S,S,P,L,L,S,P	Interrupt controller failed (see POST and boot messages)
S,S,S,P,L,L,L,P	Keyboard or keyboard controller failed
S,S,L,P,S,S,S,P	Video controller failed
S,S,L,P,S,S,L,P	No memory found or memory controller failed

Notebook Computer Messages

Warning Message	Description/Solution
CMOS failure - Run Setup	Run Setup.
CMOS checksum invalid - run Setup	Run Setup.
No interrupts from timer 0	If the problem persists, contact your Digital service representative.
Unexpected amount of memory - Run Setup	Run Setup.
Time/Date corrupt - Run Setup	Run Setup and set the correct time and date.
Floppy disk track 0 failed	Run Setup. Check all connections. If the problem persists, contact your Digital service representative.
Floppy controller failed	Run Setup. If the problem persists, contact your Digital service representative.
Hard disk error	Run Setup. If the problem persists, contact your Digital service representative.
Hard disk failure	Run Setup. If the problem persists, contact your Digital service representative.
Hard disk not configured - Run Setup	Run Setup. Check all connections. If the problem persists, contact your Digital service representative.
Hard disk controller error	Run Setup. Check all connections. If the problem persists, contact your Digital service representative.
Hard disk controller failure	Run Setup. Check all connections. If the problem persists, contact your Digital service representative.

Notebook Computer Messages

POST and Boot Messages

Fatal Message	Description/Solution
Faulty refresh circuit	Contact your Digital service representative
ROM checksum incorrect	Contact your Digital service representative
CMOS RAM test failed	Contact your Digital service representative
DMA controller failed	Contact your Digital service representative
Interrupt controller failed	Where nnnn is the amount of extended memory (in kilobytes) that tested successfully.
Faulty DMA page registers	A walking bit read/write of the 16 DMA controller page registers starting at location 80h failed.
RAM error at location nnnn Wrote:yy Read:zz	Power your notebook computer off and then on. If the problem persists, contact your Digital service representative.
Clock not ticking correctly	The real time clock is not ticking
No bootable floppy drive 0 installed	Power down the notebook computer and check all connections. Run Setup. Replace the diskette drive.
Keyboard controller failure	Check the keyboard connection. If the connection is secure, the keyboard or keyboard controller might have failed. If the problem persists, contact your Digital service representative.
Keyboard failure	Check the keyboard connection. If the connection is secure, the keyboard or keyboard controller might have failed. If the problem persists, contact your Digital service representative.

continued

B

Notebook Computer Messages

Introduction

This appendix lists the Digital HiNote messages you might see or hear when you turn on power. The computer messages are grouped as follows:

- POST and boot computer messages
- Beep codes
- Error handling

POST and Boot Messages

The POST displays two types of messages to alert you to errors in hardware, software, and firmware or to provide operating information about your notebook computer. Messages with a prefix FATAL alert you to a hardware failure. Following a FATAL message, the notebook computer emits a series of audible beeps and then locks up. Messages with a prefix WARNING alert you to a configuration error. Following a WARNING message, the prompt `Press F1 to continue` is displayed. Your notebook computer will stop until F1 is pressed.

The following table lists a general grouping of notebook computer messages. In addition, each message is accompanied by text describing the message and in most cases, a recommended solution to the problem.

NOTE: Italics indicate variable parts of a message such as memory addresses, hexadecimal values, and so on. These messages can differ at each occurrence.

Environmental Compatibility

This product has been designed and manufactured to achieve environmental compatibility including:

Use of Brominated Flame Retardants In Enclosure Parts

The thermoplastic enclosures do not contain polybrominated diphenylether (PBDE) as a flame retardant additive and therefore, they are not suspected to emit toxic dibenzofuran and dibenzodioxin gases.

Use of PVC In Enclosure Parts

The plastic enclosures are not using rigid PVC but a modified Polyphenylene-oxyde, NORYL PX4400, and a standard ABS, CYCOLAC DFS, both from General Plastics (GEP).

Use of Asbestos

Digital Equipment Corporation does not use asbestos in any form in the manufacturing of its products. The use of asbestos in Digital's products is prescribed by our internal design standard EL-00136-00.

EL-00136-00 "Digital Policy on Government-Regulated Materials in Digital Products."

Ozone Depleting Substance (ODS)

This product is in full compliance with the labeling requirements in the Clean Air Act Amendments of 1990 (USA). It does not contain nor is it manufactured with a Class 1 ODS, as defined in title VI Section 611 of that act.

Technical Specifications

Battery Pack NiCAD⁽¹⁾

Dimension	Specification
Height	19 mm (0.74 in.)
Depth	89.7 mm (3.5 in.)
Width	125 mm (4.9 in.)
Weight	400 g (14.1 oz)
Voltage	9.6 V dc nominal
Capacity	1700 mAh
Operating temperature	0 °C to 45 °C (32 °F to 113 °F)
Storage temperature	-30 °C to 35 °C (-22 °F to 95 °F)
Shelf life	30 days

⁽¹⁾ Battery pack NiCAD (33 MHz mono only; not available as an additional option.)



CAUTION: Depending on your locality, your notebook computer's battery pack might be considered hazardous waste. Make sure you follow any state or local statute to properly dispose of an old battery pack.

Acoustics - Preliminary declared values per ISO 9296 and ISO 7779

Product	Sound Power Level		Sound Pressure Level	
	L _{WA} d, B (Operator Position)		L _{pAm} , dBA (Operator Position)	
	Idle	Operate	Idle	Operate
Digital HiNote with 124 MB IDE	3.7	4.2	29	37
Digital HiNote with 244 MB IDE	3.7	4.7	29	39

[Current values for specific configurations are available from Digital representatives
1 B = 10 dBA.]

Technical Specifications

International AC Adapter

Dimension	Specification
Height	3.2 cm (1.26 in.)
Depth	6.0 cm (2.36 in.)
Width	12.1 cm (4.78 in.)
Weight	0.40 kg (0.90 lbs) with cables

Rated Voltage Range	Maximum Range	Rated Input Current	Operating Frequency Range	Output Rating
100 V ac - 120 V ac	90 V ac - 135 V ac	0.4 A	47 Hz - 63 Hz	15 V dc @ 2.4 A
220 V ac - 240 V ac	180 V ac - 264 V ac	0.2 A	47 Hz - 63 Hz	

Battery Pack NiMH⁽¹⁾

Dimension	Specification
Height	19 mm (1.3 in.)
Depth	89.7 mm
Width	125 mm
Weight	400 g
Voltage	9.6 V dc nominal
Capacity	1700 mAh
Operating temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage temperature	-20 °C to 30 °C (-4 °F to 86 °F)
Shelf life	30 days

⁽¹⁾ Also available as an additional option.

Technical Specifications

Dimension	Specification
Width	216 mm (8.5 in.)
Length	280 mm (11 in.)
Height, incl. feet	38.5 mm mono (1.5 in.) 43.5 mm color (1.7 in.)
Weight	Mono: 2 kg (4.2 lbs) Color: 2.4 kg (4.95 lbs)

Attributes	Specification
Operating temperature ⁽¹⁾	10 °C to 40 °C (50 °F to 104 °F)
Non-operating temperature ⁽¹⁾	-20 °C to 60 °C (-4 °F to 140 °F)
Operating humidity (noncondensing)	20% to 80% relative humidity, maximum wet bulb 33 °C (91 °F)
Non-operating humidity (noncondensing)	5% to 95% relative humidity, maximum wet bulb 35 °C (95 °F)
Altitude	
Operating	-60 m to 3 040 m (-197 to 9 975 ft)
Nonoperating	maximum -60 m to 12 160 m (-197 to 39 895 ft) maximum
Shipping vibration	IAW Federal Standard 101, method 5019
Shock	
Operating	10 G, 11 ms halfsine
Nonoperating	100 G, 11 ms halfsine

⁽¹⁾ Notebook computer and International AC Adapter

A

Technical Specifications

This appendix provides information about the technical characteristics of your Digital HiNote.

- Notebook computer specifications
- International AC adapter
- NiMH battery pack
- NiCAD battery pack
- Environmental compatibility

Notebook Computer Specifications

Feature	Specification
Type/speed	3.3 V dc Intel I486 CPU 33 MHz, 50 MHz, and 75 MHz
Wait state	3, 2, 2, 2 wait states for reads
Internal cache	8 KB for 33 MHz and 50 MHz 16 KB for 75 MHz

Attributes	Specification
ISA bus clock	8.33 MHz
ISA data I/O	8-bit and 16-bit
Main logic board DRAM	4 MB standard (expandable up to 20 MB, using an optional 16 MB memory module)
Video memory	512 KB for 33 MHz 1 MB for other notebook computers
Flash ROM BIOS size	256 KB

Introduction

power management
 specialized cases, 3-7
 suggested settings, 3-6
problem solving, 6-1

R

reset button, 3-5
running Setup, 2-1
 tips, 2-2

S

security
 lock hole, 1-7
 notebook computer, 1-5
 supervisor password, 1-7
 user password, 1-6
Setup
 running, 2-1
Setup menus
 defaults, 2-15
 device, 2-13
 exit, 2-15
 power, 2-4
 security, 2-14
 system, 2-9
supervisor password, 1-7
system utilities and driver diskettes

DOS and CAD video drivers, 4-5
SMTR.EXE, 4-1

T

technical specifications, A-1
 acoustics, A-4
 attributes, A-2
 battery pack NiCAD, A-4
 battery pack NiMH, A-3
 dimensions, A-1
 environmental compatibility, A-5
 international AC adapter, A-3
troubleshooting
 initial, 6-2
 LCD, 6-12
 notebook computer, 6-4
troubleshooting
 notebook computer beep
 codes, 6-7
 PCMCIA, 6-8
turning off your computer, 1-4

U

user password, 1-6

Introduction

O

options, 7-1

- car adapter, 7-2
- international AC adapter with battery charger, 7-2
- memory, 7-11
- port replicator/PCMCIA port replicator, 7-4

setting features, 3-2

P

passwords, 1-5

PCMCIA drivers, 4-5

PCMCIA port replicator

- inserting a PCMCIA card, 7-5

PCMCIA utilities

- CARDINFO, 4-3
- CardView, 4-2
- CSALLOC, 4-4
- using, 4-2

PCMCIA utilities and drivers, 4-1

port replicator/PCMCIA port

replicator

- connecting a keyboard, 7-7
- connecting a monitor, 7-6
- connecting a mouse, 7-6
- connecting a printer, 7-8
- connecting a serial device, 7-7
- connecting the international AC adapter, 7-9
- connecting to a notebook computer, 7-10
- disconnecting from a notebook computer, 7-10

POST

- error messages, B-1

power button

- location, 3-3
- on/off, 3-4
- suspend/resume, 3-3

power management, 3-1

- battery and performance
 - hot keys, 3-2
- factory default timer settings, 3-7

Index

B

- battery pack
 - NiCAD, A-4
 - NiMH, A-3
- beep codes, B-4

C

- comfortable working environment
 - providing, 1-2
- computer
 - security, 1-5
 - turning off, 1-4
- computer booting
 - methods, 1-4
- configuring your computer, 2-1

D

- device mapping, C-1
 - DMA channel assignments, C-4
 - I/O address, C-2
 - interrupt levels, C-3
 - memory map, C-1
- DOS and CAD video drivers, 4-5

E

- error messages, B-1
- external devices
 - connecting, 5-1
 - connecting a keyboard, 5-3
 - connecting a monitor, 5-4
 - connecting a printer, 5-5
 - connecting a PS/2 mouse, 5-2
 - connecting a serial device, 5-6

G

- getting help, 1-8

I

- initial troubleshooting, 6-2
- installing memory
 - closing the keyboard, 7-14
 - lifting the keyboard, 7-12
 - lifting the lid, 7-11

L

- lid switch
 - location, 3-4

M

- memory
 - installing, 7-11
- messages
 - POST and boot, B-2

N

- notebook computer
 - acoustics, A-4
 - boot messages, B-1
 - configuring, 2-1
 - device mapping, C-1
 - error messages, B-1
 - features, 1-1
 - getting help, 1-8
 - initial troubleshooting, 6-2
 - restarting, 1-4
 - security, 1-5
 - technical specifications, A-1
 - turning off, 1-4