User's Guide

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DISCLAIMER OF WARRANTY

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The Energy Star emblem does not represent EPA endorsement of any product or service.

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Important Safety Instructions

Read all of these instructions and save them for later reference. Follow all warnings and instructions marked on the computer.

- Turn off the computer before cleaning. Clean with a damp cloth only. Do not spill liquid on the computer.
- Use only the type of power source indicated on the computer's label.
- Connect all equipment to properly grounded power outlets. Avoid using outlets on the same circuit as photocopiers or air control systems that regularly switch on and off.
- Do not let the computer's power cord become damaged or frayed.
- If you use an extension cord with the computer, make sure the total ampere rating of the devices plugged into the extension cord does not exceed the cord's ampere rating. Also, make sure the total of all devices plugged into the wall outlet does not exceed 15 amperes.
- Except as specifically explained in this *User's Guide,* do not attempt to service the computer yourself.
- Unplug the computer and refer servicing to qualified service personnel under the following conditions:

  If the power cord or plug is damaged; if liquid has entered the computer; if the computer has been dropped or the cabinet damaged; if the computer does not operate normally or exhibits a distinct change in performance. Adjust only those controls that are covered by the operating instructions.
- When traveling by airplane, be sure to take your computer into the passenger compartment as carry-on luggage to prevent it from being stored in an unpressurized storage area.
- If you plan to use the computer in Germany, observe the following:

  To provide adequate short-circuit protection and over-current protection for this computer, the building installation must be protected by a 16 Amp circuit breaker.

  Beim Anschluß des Computers an die Netzversorgung muß sichergestellt werden, daß die Gebäudeinstallation mit einem 16 A Überstromschutzschalter abgesichert ist.

Importances Instructions de Sécurité

Lire attentivement les instructions suivantes et les conserver pour les consulter en cas de besoin. Observer soigneusement tous les avertissements et directives marques surl'ordinateur.

- Débrancher l'ordinateur avant de le nettoyer. N'utiliser qu'un chiffon humide. Veiller à ne pas renverser de liquides sur l'appareil.
- Utiliser seulement le type de source d'alimentation électrique indiqué sur l'étiquette.
- Tout l'équipement doit être branché sur des prises de courant propre. Ne jamais utiliser une prise sur le même circuit qu'un appareil à photocopies ou un système de contrô1e de ventilation avec commutation marche-arrêt automatique.
- S'assurer que le cordon d'alimentation de l'ordinateur n'est pas abîmé ni effiloché.
- Dans le cas où on utilise un cordon de rallonge avec l'ordinateur, s'assurer que l'intensité en ampères requise pour tous les appareils branchés sur ce cordon ne soit pas supérieure à la capacité du cordon. S'assurer aussi que cette intensité ne dépasse jamais la somme de 15 ampères pour l'ensemble des appareils.
- Sauf dans les cas spécifiques expliqués dans ce manuel de l'usager, ne pas essayer d'entretenir ou de réparer l'ordinateur soi-même.
- Débrancher l'ordinateur et contacter un technician qualifié dans les circonstances suivantes:

  Si le cordon ou la prise sent abîmés; si un liquide a pénétré à l'intérieur de l'appareil; si on a laissé tomber l'appareil ou si le boîtier est endommagé; si l'ordinateur ne fonctionne pas normalement ou fonctionne d'une manière très difference de l'ordinaire. N'ajuster que les commandes décrites dans les directives.
- Pour les voyages par avion, prendre l'ordinateur avec soi dans la cabine comme bagage à main, pour éviter qu'il soit transporté dans une soute non pressurisée.
- Pour utiliser l'ordinateur en Allemagne, il est nécessaire que le bâtiment soit muni d'un disjoncteur de 16 amperes pour protéger l'ordinateur contre les courts-circuits et le survoltage.

FCC COMPLIANCE STATEMENT
FOR AMERICAN USERS

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio and television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and 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 an experienced radio/ TV technician for help.

WARNING

The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification of this device and may cause interference levels that exceed the limits established by the FCC for this equipment. It is the responsibility of the user to obtain and use a shielded equipment interface cable with this device. If this equipment has more than one interface connector, do not leave cables connected to unused interfaces.

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

FOR CANADIAN USERS

This digital apparatus does not exceed the Class Blimits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioé1ectriques dépassant les limites applicable aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par le Ministère des Communications du Canada.

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Introduction

The EPSON® ActionNote™ 600 Series notebook computers give you exceptional speed, display quality, and expaddability—all packaged in the latest in notebook computer technology.

The ActionNote computer has 4MB of standard memory on the system board. Some systems have an additional 4MB memory module installed (check your system startup screen). Your ActionNote also comes with pre-installed MS-DOS,® Microsoft® Windows,™ and other software so you can run a vast array of the latest programs, utilities, and games designed for productivity and fun.

Your high-capacity hard disk drive will hold the hundreds of program and data files you create as you use your computer.

And when you're ready to acquire more capability, your computer's two PCMCIA card slots allow you to quickly and easily add flash RAM, fax/ modem, local area network (LAN), and other PC card options.

You can even use your ActionNote like a desktop PC when you're not on the road; just connect an external monitor, keyboard, mouse, and printer.

Computer Features

Your computer comes with the following features:

- ☐ 486DX2 microprocessor with 8KB of internal cache
- ☐ 4MB of RAM on the system board (additional 4MB memory module installed on some systems), expandable to 20MB
- ☐ 512KB of video RAM

- LCD screen supporting VGA resolutions of 640 x *480* in *256* colors or 64 gray shades
- High-speed, 32-bit local bus video technology supports resolutions up to 1024 *x 768* in 16 colors or 800 *x 600* in *256* colors on an external monitor
- High-capacity hard disk drive
- Built-in 16 mm trackball with two buttons
- Two stacked PCMCIA Type II slots, supporting two Type I or Type II cards or one Type III card
- Long-lasting, rechargeable NiMH battery
- Compact AC adapter
- Pre-installed software on your hard disk drive, including MS-DOS, Microsoft Windows, and in any other programs
- On-line computer user's guide, Windows manual, and other manuals providing instructions and inform ation while you are on the road.

Your ActionNote has been configured for you and the hard disk drive already contains most of the software you need. Video drivers have already been installed and you can select whether to load your PCMCIA drivers and utilities each time you boot your computer.

See the card titled "For Software Support" that came with your computer for a list of the manuals, diskettes, and brochures that are included with your software.

Also see the "About EPSON" group window in Windows for the latest information about your ActionNote and about EPSON's services.

Power-saving Features

The ActionNote complies with the United States Environmental Protection Agency's Energy Star Program, which prom otes the manufacture of energy-efficient printers, computers, and monitors. Your computer's power management features place the system in low-power standby and suspend modes when it has been inactive for specified periods of time. The System Configuration utility lets you customize the way your computer saves power so you can ensure that the power management features fit the way you work.

> *Note*
> If you use an Energy Star compliant external monitor with your computer, it also enters a low-power standby mode because it is not receiving video signals from your computer. (Screens on non-compliant monitors become blank but do not enter a low-power mode.)

What This Manual Covers

You do not need to read everything in this book to use your computer; see the following chapter summaries:

Chapter 1 provides steps for setting up your computer.

Chapter 2 covers basic information about using the computer.

Chapter 3 explains how to power your computer with the AC adapter or the battery and how to conserve battery power.

Chapter 4 describes how to connect optional devices, install additional memory, and remove the hard disk drive.

Chapter 5 provides troubleshooting tips.

Appendix A lists the computer's specifications.

At the end of them anual, you'll find an **Index** and a list of EPSON U.S. and international marketing locations.

Conventions Used in This Manual

This manual uses the following type conventions in the text:

Example	Meaning
Enter	Keys you press on the keyboard
Fn F12	Keys you press at the same time; hold down the key marked Fn and press the F12 key
C: \DOS	Text as it appears on the screen
DISKCOPY A: B:	Text that you type exactly as shown

Where to Get Help

If you purchased your computer in the United States or Canada, EPSON provides customer support and service through a network of Authorized EPSON Customer Care Centers. EPSON also provides support services through the EPSON Connection.[SM] In the United States or Canada, dial (800) 922-8911.

Call the EPSON Connection for the following:

- ❑ Technical assistance with the installation, configuration, and operation of EPSON products
- ❑ Assistance in locating your nearest Authorized EPSON Reseller or Customer Care Center
- ❑ Assistance with Extra Care Road Service
- ❑ Customer relations
- ❑ EPSON technical information library fax service
- ❑ Product literature on current and new products.

You can purchase accessories, manuals, or parts for EPSON products from EPSON Accessories at (800) 873-7766 (U.S. sales only). In Canada, call (800) 922-8911.

When you call for technical assistance, be ready to identify your system and its configuration, and provide any error messages to the support staff. See Chapter 5 for more information.

If you purchased your computer in the United States or Canada, EPSON also provides Extra Care Road Service. Your ActionNote package should contain information on this program; if not, call the EPSON Connection.

If you purchased your computer outside the United States or Canada, contact your EPSON dealer or the marketing location nearest you for customer support and service. International marketing locations are listed at the end of this manual.

If you need help with any software application program you are using, see the documentation that came with that program for technical support information.

CompuServe On-line Support

Your computer includes the CompuServe® WinCIM information manager and a free CompuServe membership. This membership entitles you to an introductory $15 usage credit on CompuServe's extended services and forums. The brochure that came with your computer describes the CompuServe services and how to access them, as well as providing subscription information.

> *Note*
> To access CompuServe, you must install a modem PC card in your computer.

The fastest way to access helpful tips, specifications, drivers, application notes, tables for DIP switch or jumper settings, and bulletins for EPSON products is through the Epson America Forum on CompuServe.

To access the Epson America Forum, simply click on the green traffic light icon and type **EPSON** at the menu prompt.

Chapter 1

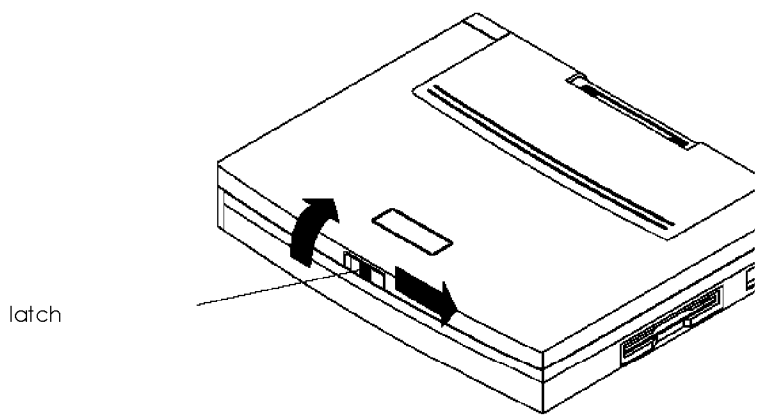
Setting Up the Computer

This chapter describes how to setup your computer. It covers:

- ❑ Opening the screen
- ❑ Identifying the system components
- ❑ Connecting the AC adapter
- ❑ Turning the computer on and off
- ❑ Reading the System Window icons
- ❑ Backing up files
- ❑ Running the System Configuration utility (SCU).

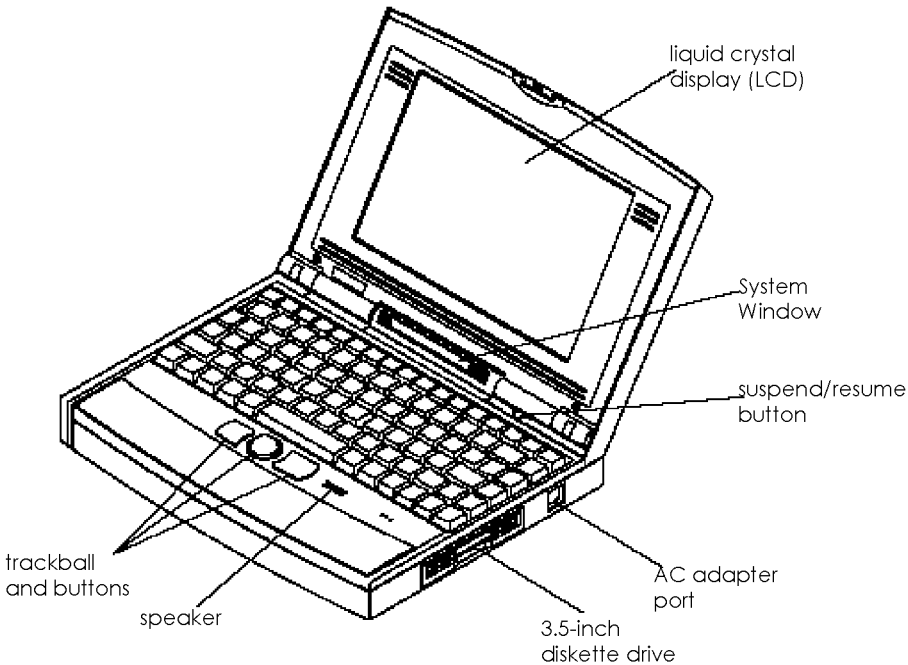
Opening the Screen

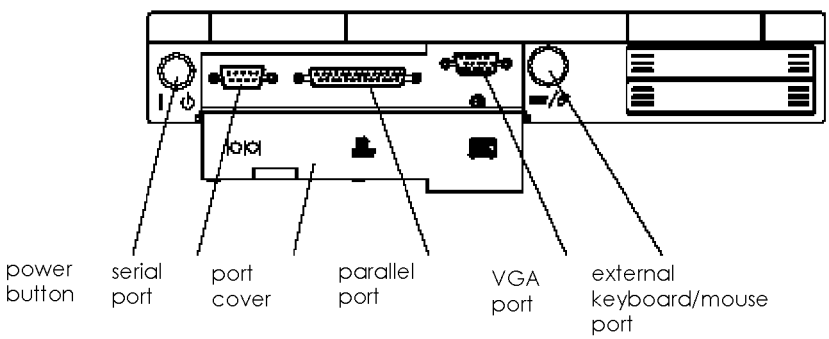
To open the LCD screen, slide the latch on the computer's lid to the right and lift the lid upward.



Identifying the System Components

Use the illustrations below to help you identify your system components.





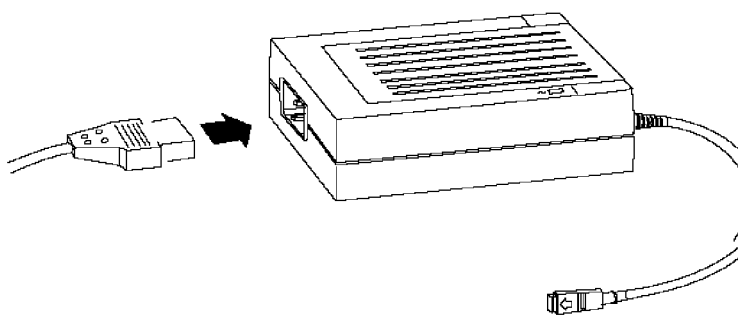
Connecting the AC Adapter

The AC adapter included with your computer can be used in most countries because it operates in the input ranges 100-250 VAC with frequencies of 47-63 Hz. If you are using the adapter in a country other than the one where you purchased your computer, make sure you have the correct power cord before you connect the AC adapter to an electrical outlet.

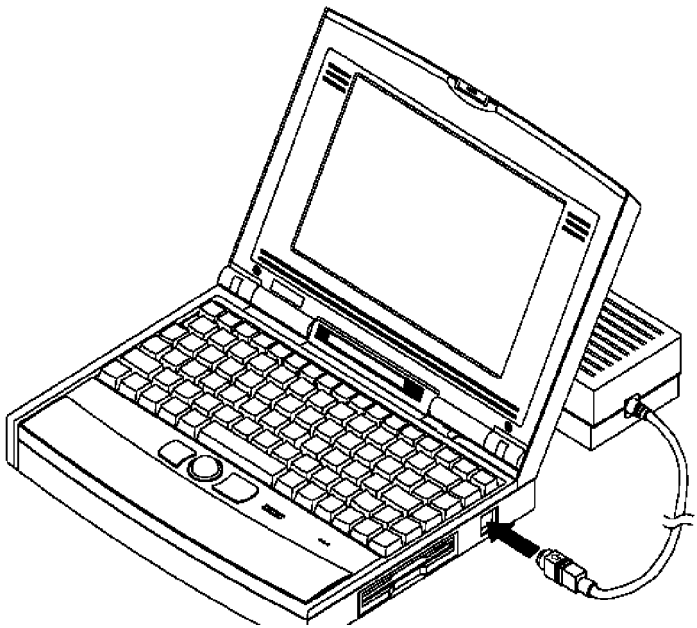
Caution

Use only the adapter designed for the ActionNote 600 Series computer (model number TSA3), or you could damage the computer.

To connect the AC adapter, first connect the adapter's power cord to the connector, as shown below.



Position the connector on the AC adapter cable so the side with the arrow faces up. Then connect the cable to the AC adapter port on the right side of the computer.



Plug the adapter's power cord into an electrical outlet. The green power light on the adapter comes on and the AC Power icon (the plug) appears in the computer's System Window. (See page 1-7 for a description of the System Window icons.)

For more information about powering the computer with the AC adapter, see Chapter 3. For instructions on connecting optional equipment to your computer, see Chapter 4.

Turning the Computer On and Off

The first time you use your computer, the battery may not be charged (NiMH batteries lose up to 20% of their charge each week they aren't recharged), so make sure the AC adapter is connected. Then press the power button on the back panel to turn on the computer.

The computer beeps and then begins a series of power-on diagnostics that check the circuit boards, memory, ports, keyboard, and disk drives.

First you see this prompt:

```
Press SPACEBAR to skip memory test
```

Press the spacebar or let the power-on diagnostic tests continue. Then you see this prompt on the bottom of the screen for 1 second:

```
<CTRL-ALT-S> to enter System Configuration
Utility
```

(Ignore this prompt for now.)

You then see a prompt asking if you want to load PC card drivers. If you do not respond to the prompt within 5 seconds, the computer loads the drivers and continues to boot. Ignore this prompt also. (See "Configuring PC Cards" in Chapter 2 for more information about this prompt.)

Your computer comes with MS-DOS and Microsoft Windows installed on the hard disk, so it starts Windows next.

Note
If you want to adjust the brightness, contrast, or other aspects of the display, see "Using the Fn Key" in Chapter 2 for keyboard commands you can use.

If you plan to use another operating system, such as OS/ 2,® UNIX®, or Windows NT, perform the necessary steps to install the program now. See the documentation that came with it for installation instructions.

Before you turn off the computer, save your data and exit the program you are currently using. Make sure the computer is not accessing data from the diskette drive, hard disk drive, or a PC card by checking the icons in the System Window; see page 1-7 for more information.

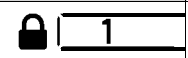
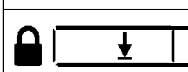
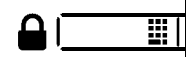
Press the power button for two seconds to turn off the computer. This two second delay is a safety feature to prevent you from accidentally turning off the computer.

Caution
Always make sure the computer is off before you connect or disconnect equipment, such as an external keyboard. You can, however, insert or remove a PC card, or connect a printer while the computer is on.

Reading the System Window Icons

These icons appear in the System Window above the keyboard to indicate the status of certain computer operations.

System Window icons

Icon	Name	Meaning
	Caps Lock	Caps Lock is on
	Num Lock	Num Lock is on; also helps control embedded keypad; see Chapter 2
	Scroll Lock	Scroll Lock is on
	Embedded Keypad Locked	Embedded keypad is locked; see Chapter 2
	Hard Disk Activity	Computer is accessing the hard disk drive
	Diskette Drive Activity	Computer is accessing a diskette
	PC Card Activity	Computer is accessing a PC card
	Suspend	System is in suspend mode; see Chapter 3
	Battery Status	Gauges charging status and power left in the battery; see Chapter 3
	Battery Charging	AC adapter is charging the battery; see Chapter 3
	AC Power	AC adapter is connected to the computer; see Chapter 3

For more information about the AC Power, Battery Charging, Battery Status, and Suspend icons, see Chapter 3. For information on the Num Lock and Embedded Keypad Locked icons, see Chapter 2.

Making Backup Copies of Your Files

Before you start using your computer, it's a good idea to make a backup copy of your hard disk drive. Use the MWBACKUP utility in the Windows Applications group or the MS-DOS BACKUP command to back up the contents of the drive. Refer to your on-line Windows manual or Windows Help utility for instructions on using MWBACKUP; use the MS-DOS help utility for instructions on using BACKUP.

You should make backup copies of any diskettes you have that contain programs and store the copies away from your originals. Also be sure to regularly backup your hard disk drive in case you need to restore the files and programs you keep there.

Running the System Configuration Utility

The System Configuration utility (SCU) defines your system's configuration so the computer recognizes all of its devices. The SCU is stored in the computer's ROM (read only memory), where you can access it whenever you turn on or reset the computer, or when you press **Ctrl Alt S** at the MS-DOS prompt.

> **Caution**
> The SCU reboots your computer when you exit the utility and any data left in your computer's memory at that time is lost. If you want to run the SCU while you are using an MS-DOS application, save your data and exit the program before you press **Ctrl Alt S.** To protect you from losing any data, you cannot run the SCU from Windows.

The configuration you define through the SCU is stored in an area of memory called CMOS RAM, which is backed up by a battery and is not erased when you turn off or reset the computer.

Note
If you remove the computer's battery and leave your system without a power source for more than 10 days, the internal battery runs out of power and does not retain your configuration information. If this happens, you must run the SCU again and re-enter any changes you made to the default settings.

When to Run the System Configuration Utility

Because your computer was set up and configured for you, the configuration information may already be correct for your needs. However, you may want to run the SCU to enter the correct time and date, set a password, or customize the power management features. (You can also access the power management features by pressing **Ctrl Alt P** or **Fn** Esc.) In addition, any time you change the computer's configuration (by installing or removing memory, for example), you need to run the SCU to update the configuration.

Starting the Utility

You can start the SCU by pressing **Ctrl Alt S** at the MS-DOS prompt or during power-on diagnostics. To start the SCU during power-on diagnostics, make sure there is no diskette in the diskette drive; then turn on your computer. You see the following prompt at the bottom of your screen for 1 second:

<CTRL-ALT-S> to enter System Configuration Utility

As soon as you see this message, press **Ctrl Alt S.**

If you do not press **Ctrl Alt S** within 1 second, the computer loads Windows. If this happens, exit Windows and press **Ctrl Alt S** at the MS-DOS prompt to start the SCU.

Changing the Settings

When the computer starts the SCU, you see the System Configuration screen which lists the current configuration option settings. To select the options you want to change, use the pull-down menus that you open from the menu bar at the top of the screen. Some of the menu bar options access other screens, such as the Power Management option (PowerMgmt).

Use the → and ← keys to highlight the menu bar option you want to select; then press **Enter.** If you prefer, you can also press the key for the highlighted letter in the menu option to select it. (The Defaults and Exit options do not have pull-down menus; see the table below for more information.)

Once you see a pull-down menu, use the ↓ or ↑ keys to highlight the option you want to change and press **Enter.** You 'll notice two ways to change a particular option's setting:

- Select a setting or respond to a prompt displayed in a dialog box on the screen
- Press **Enter** to enable or disable the option; a check mark (√) indicates an enabled option.

To close a pull-down menu or dialog box, press ESC.

The SCU screen displays the detected size of your system memory areas, including base, extended, and shadow memory. It also lets you change or verify the settings listed in the following table. An asterisk (*) next to an option indicates the default setting.

SCU options

Option	Description	Settings
Standard menu		
Date	Sets the date used by the system	*mm/old/yyyy*
Time	Sets the time used by the system	hh:mm:ss (24 hour format)
Trackball	Enables or disables the built-in trackball (assigned as COM1)	√ = Enabled* No √ = Disabled
COM Port	Assigns the built-in serial port address (the PCMCIA slots are COM3)	COM2 (2F8h) * COM4 (2E8h) Disable
Parallel Mode (1)	Assigns the operation mode of the parallel port	Normal * Bidirectional Disable
Diskette Drive	Specifies a diskette drive type for drive A (drive B option is inoperable)	1..44MB * 1.2 MB None
Hard Disk (2)	Automatically detects the drive type or allows you to define the parameters	Custom Auto * None
Preferences menu		
Quick Boot	Allows you **to skip** non-essential diagnostic tests at startup	√ = = Enabled No √ = Disabled*
Num Lock	Sets whether Num Lock mode is on or off when you turn on or reset the computer	√ = On No √ = Off*

SCU options [continued)

Option	Description	Settings
Typematic Rate	Sets the speed at which characters repeat when you hold down a key; in characters per second (Cps)	2 CPS 6 CPS 10 CPS* 15 CPS 20 CPS 30 CPS
Typematic Delay	Sets the amount of time it takes before a key repeats input when you hold it down; in milliseconds (ins)	250 ms 500 ms * 750 ms 1000 ms
Boot Password	See "Setting, Deleting, and Changing a Password" below	√ = = Enabled No √ = Disabled *
SCU Password	See "Setting, Deleting, and Changing a Password" below	√ : = Enabled No √ = Disabled *
Boot Drive	Selects the drive the computer should check first as it boots the system	Drive A * Drive C
VGA menu		
Display Mode	Selects the display mode the computer uses when you boot the system	LCD * CRT BOTH (active matrix and monochrome only)
LCD (appears only on monochrome models)	Sets the mode used to display text and graphics against the background on your screen; normal = white on a black background, reverse = black on a white background	Normal * Reverse

SCU options [continued)

Option	Description	Settings
Memory menu		
Cache Enable	Controls the processor's internal cache operation	√ = = Enabled* No √ = Disabled
PowerMgmt menu	See "Setting the Power Management Options," below	
Defaults	Sets all options to their default values	
Exit	See “Exiting the SCU, ” below	

* Default setting

(1) The parallel port is always LPT1. Some hardware diagnostic programs may only be able to read the parallel port in Normal mode.

(2) Select Auto so the computer can try to automatically configure your hard disk drive; select Custom to enter the specific parameters; select None if you removed your hard disk drive.

Setting, Deleting, and Changing a Password

You can set two types of passwords on your system: a Boot password and an SCU password. The Boot password prevents an unauthorized user from accessing any programs or data on your computer, including the System Configuration utility. The SCU password prevents access only to the SCU and your system configuration information.

If you set a Boot password, the computer prompts you to enter it each time you turn on or reset your computer. If you set an SCU password, the computer prompts you to enter it each time you press **Ctrl Alt S** to run the SCU.

Follow the instructions in the next sections to set, delete, or change your password. See the instructions in Chapter 2 for entering your password when the system prompts you for it.

Setting a password

Follow these steps to set a password:

1. Highlight the Boot Password or SCU `Password` option.
2. Press **Enter.** You see the password entry screen. (Press ESC to exit this screen, if necessary.)
3. Type a password from 4 to 8 characters long. As you type, you see only asterisks (*) displayed on the screen.
4. Press **Enter.** You see another password entry screen asking you to verify the password by entering it again.
5. Type the password again and press **Enter.** (If you enter an incorrect password, you see an error message; start over again at step 1.)
6. You see a message verifying that a password is set. Press any key to continue. The selected password option setting is changed to √ (Enabled).

Deleting or changing a password

If you want to delete or change a password, follow these steps:

1. Highlight the Boot `Password` or SCU `Password` option.
2. Press **Enter;** the √ disappears and the password is disabled.
3. If you want to change the password, press **Enter** again. You see the password entry screen.
4. Type a new password from 4 to 8 characters long. You see only asterisks (*) displayed on the screen.
5. Press **Enter.** You see another password entry screen asking you to verify the password by entering it again.

6. Type the password again and press **Enter.** (If you enter an incorrect password, you see an error message; start over again at step 1.)

7. You see a message verifying that a password is set. Press any key to continue. The selected password option setting is changed to √ (Enabled).

Setting the Power Management Options

When you select the PowerMgmt option from the SCU menu bar, the screen changes to the Power Management screen. Use the menu bar and pull-down menu options the same way you use them on the SCU screen.

> Note
> You can also access this screen outside of the SCU by pressing **Ctrl Alt P** or **Fn** Esc at the MS-DOS prompt or by pressing **Fn** Esc from Windows. Then when you exit the Power Management screen, you return to the MS-DOS prompt or to Windows, depending on where you were when you brought up the screen.

The table below lists the power management options. For a complete description of how these options work, see Chapter 3.

Caution
If you use your ActionNote on a network, you should disable the computer's power management features because they can interfere with your network software and prevent proper connection to the network.

Power management options

Option	Description	Settings
Controls menu		
Power Savings	Selects when the power management features are enabled; set Battery = enable when using battery power only	Always * Battery Disable
Battery Low	Selects whether to warn you of a low battery and enter suspend mode or to warn you and not enter suspend mode	4= Suspend * No √= Warn only
Alarm Resume (1)	Sets a time in which the system automatically resumes activity after entering suspend mode; if enabled, select a time	√ = = Enable No √ = Disable *
System menu		
CPU Standby	Sets an inactivity time period after which the system slows down the CPU (in seconds)	4 Sec * 8 Sec 16 Sec Disable
Global Standby	Sets an inactivity time period after which the system turns off all devices and slows down the CPU (in minutes)	1 Min 2 Min 4 Min 6 Min* 8 Min 12 Min 16 Min Disable

Power management options [continued]

Option	Description	Settings
Auto Suspend (2)	Sets the inactivity time period after which the system automatically enters suspend mode (in minutes) or you can disable automatic suspend mode; the type of suspend mode entered depends on the setting of the Disk Suspend option, described below	1 Min 5 Min 10 Min* 20 Min 30 Min 40 Min 60 Min Disable
Disk Suspend	Selects the type of suspend mode the system uses when it enters suspend mode: Suspend to Memory (Disabled) or Suspend to Disk (Enabled); see "Using Suspend to Disk Mode" in Chapter 3 before you enable this option	√ = = Enabled* No √ = Disabled
Video Monitoring (2) (3)	Determines whether video activity prevents the system from entering a standby or suspend mode	√ = Enabled* No √ = Disabled
Device menu		
Video	Sets an inactivity time period after which the computer turns off the LCD screen or you can specify that the LCD screen is always on	1 Min 2 Min 4 Min 6 Min* 8 Min 12 Min 16 Min Always On
Hard Disk	Sets an inactivity time period after which the computer places the hard disk drive in power down mode (in minutes) or you can specify that it never enters this mode (always on)	1 Min 2 Min* 4 Min 6 Min 8 Min 12 Min 16 Min Always On

Power management options [continued)

Option	Description	Settings
Defaults menu	Sets all the power management options to their default values	
Exit menu	Allows you to save your settings and exit the Power Management Screen (if you changed settings) or exit without saving your settings; returns to SCU, MS-DOS prompt, or Windows, depending on how you brought up the Power Management screen	

* Default setting

(1) To enable an Alarm Resume time, press Enter and then press ↑ or ↓ until you see Enabled. Then press Enter again and use the arrow keys to select a resume time in hours and minutes. Press Enter again to return to the pull-down menu.

(2) If you enabled Auto Suspend and Video Monitoring, you should not use any Windows screen saver programs because the screen saver may prevent your computer from entering suspend mode.

(3) If you enable Video Monitoring and your system's video is active, the system does not enter any standby or suspend modes. If you disable Video Monitoring the system ignores video activity (such as a blinking cursor) and enters these modes as necessary.

Existing the System Configuration Utility

When you are ready to exit the SCU, press Esc or select the Exit menu bar option. If you have not changed any settings, you see a message telling you to press Esc to exit the SCU.

If you have changed any settings, you see a screen offering two exit options:

Esc	Returns you to the SCU screen; press Esc again to exit the SCU without saving any changes and reboot the computer
Enter	Saves your settings and reboots the computer.

Chapter 2

Using Your Computer

This chapter describes basic computer operations, including:

- Caring for the computer
- Using energy wisely
- Using the keyboard
- Using the trackball
- Resetting the computer
- Changing the CPU speed
- Using password security
- Using diskettes
- Using video drivers and utilities
- Configuring PC cards.

Caring for the Computer

Follow these guidelines to keep your computer working well:

- Keep the computer and AC adapter dry, and do not subject them to extreme heat or cold.
- To prevent damage to the LCD, do not place anything on top of the computer, even if it is closed.

- ❑ When you are not using the serial, parallel, or VGA ports, keep the port cover closed to prevent damage to the pins.

- ❑ Occasionally clean the computer's exterior with a soft, damp cloth.

- ❑ Occasionally clean the LCD screen using glass cleaner on a soft cloth; *do not spray the cleaner directly onto the screen*.

- ❑ If your trackball is not working correctly, you may need to clean it. Follow the instructions on page 2-8.

Protecting the Hard Disk

Observe these precautions to protect your hard disk and data:

- ❑ Never turn off or reset the computer when the Hard Disk Activity icon appears in the System Window. This icon indicates that the computer is copying data to or from the hard disk.

- ❑ Never remove the hard disk drive when the computer is on.

- ❑ After turning the power off, wait 20 seconds before moving the computer. This allows the disks in the drive to stop spinning and the hard disk read/ write heads to lock in place so you do not damage the drive.

- ❑ Although the hard disk is very reliable, be sure to backup your files regularly. Make copies of all your system and program diskettes before copying them to the hard disk.

Caution
When traveling by airplane, be sure to take your computer into the passenger compartment as carry-on luggage so it is not stored in an unpressurized storage area.

Using Energy Wisely

By purchasing this Energy Star compliant computer, you join a growing number of users concerned about conserving energy. Here are a few additional energy-saving tips:

- ❑ If your printer and external monitor aren ‘t Energy Star compliant, turn them off when you ‘re not using them.
- ❑ Use the print preview option in your software before you print something. You’11 be able to catch formatting errors before you commit them to paper.
- ❑ Remove PC cards when you are not using them. When inserted, they use battery power. Fax/ Modem cards use the most power—they can reduce battery life to under an hour. The ActionNote computer allows you to “hot-swap” PC cards, so that you can insert and remove a card as you need it without having to restart or reconfigure your system.
- ❑ If you have an electronic m ail system available to you, send E-mail rather than memos. Not only is this faster, but you’11 save paper and storage space too.
- ❑ Use recycled paper and recycle your used paper whenever you can

Using the Keyboard

Although the keyboard on your computer has only 85 or 86 keys, it provides all the functions of a 101- or 102-key keyboard. It has an embedded keypad that you can access using the **Num Lock** and **Fn** keys. You can also control other features, such as the LCD screen, using the **Fn** key. The embedded keypad and the **Fn** key functions are described below.

Note
The keyboard on the ActionNote is available with different layouts for different languages. Additionally, you can use MS-DOS or Windows to reassign the layout of your keyboard to duplicate that of another country. See your on-line Windows manual or the MS-DOS help utility for more information.

Using the Fn Key

When pressed with other keys, the Fn key lets you control certain operations, as described in the following table. To use these commands, hold down the **Fn** key and then press the second key. If you are using an external keyboard (one without an **Fn** key), use the alternative **Ctrl Alt** key sequence, as described below.

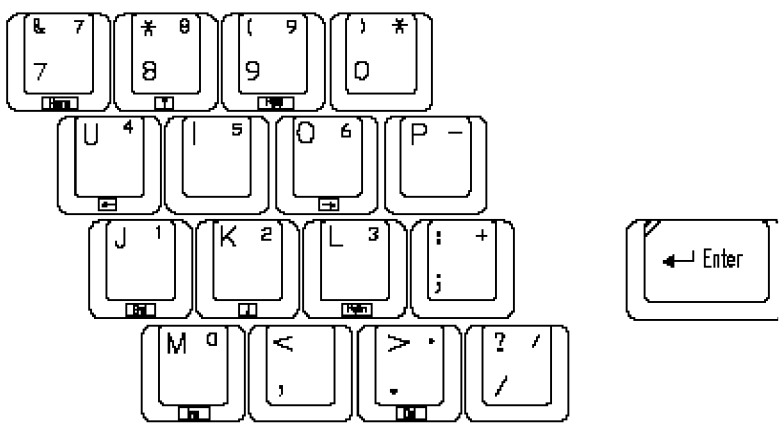
Fn key functions

Key command	Function
Fn F1 or Ctrl Alt F1	Decreases LCD brightness
Fn F2 or Ctrl Alt F2	Increases LCD brightness
Fn F3 or Ctrl Alt F3	Decreases contrast (active matrix LCD does not require this feature—correct contrast adjusts automatically)
Fn F4 or Ctrl Alt F4	Increases contrast (active matrix LCD does not require this feature—correct contrast adjusts automatically)
Fn F9 or Ctrl Alt F9	Toggles between disabling and enabling text enhancement so the characters stand out clearly in text display mode (monochrome LCD only)
Fn F10 or Ctrl Alt F10	Toggles the video between normal (white characters on black background) and reverse (black characters on white background); monochrome LCD only

Key command	Function
Fn F11 or Ctrl Alt F11	Increases or decreases the size of the vertical screen space used by the images displayed (use with MS-DOS only)
Fn F12 or Ctrl A1t F12	For the active matrix and monochrome LCDS, toggles the display three ways—from the LCD to the external monitor, then to both simultaneously, then back to the LCD. For the dual scan LCD, toggles the display between the LCD and the external monitor.
Fn Esc	Displays the Power Management screen when you are using MS-DOS or Windows
Fn Num Lock	Locks the embedded keypad, as described in the next section

Using the Embedded Keypad

The embedded keypad (shown below) allows you to enter numbers, symbols, and cursor control commands from a keypad arrangement on the main keyboard. Use the **Num Lock** and **Fn** keys to control the operation of the embedded keypad.



First lock the keypad by pressing **Fn Num Lock.** You see the Embedded Keypad Locked icon in the System Window. (To unlock it, press **Fn Num Lock** again; the icon disappears.) Depending on whether the keypad is locked or not, the embedded keypad works as described in the table below.

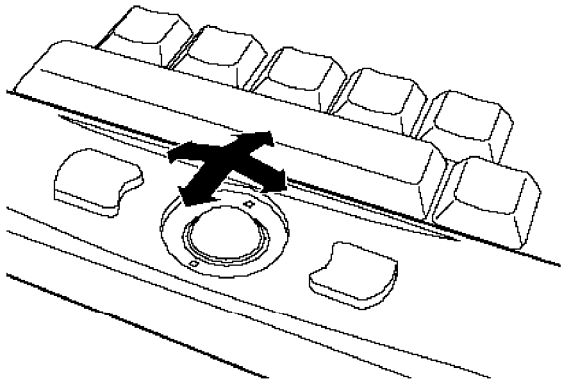
Keys pressed	Keypad locked	Keypad unlocked
Any embedded keypad key	Cursor control function	Alphanumeric characters
Fn + embedded keypad key	Alphanumeric characters	Cursor control function
Num Lock key (you see the Num Lock icon)	Numeric characters	Alphanumeric characters

Using the Trackball

The trackball on your ActionNote is a built-in pointing device very similar to a mouse; you can use it to move the cursor, select text or objects, cut and paste, or choose menu items. The trackball is compatible with most software applications that support pointing devices with PS/2 compatible drivers.

> **Note**
> PS/2 compatible trackball drivers for Windows and MS-DOS applications are already loaded on your computer.

To use the trackball, roll it to move the cursor in the direction of the ball: up, down, left, right, or diagonally.



Like the mouse, you can click or double-click the left button (press it once or twice quickly) to make menu selections or block text. Press the left button and hold it down while you move the trackball to drag objects around the screen.

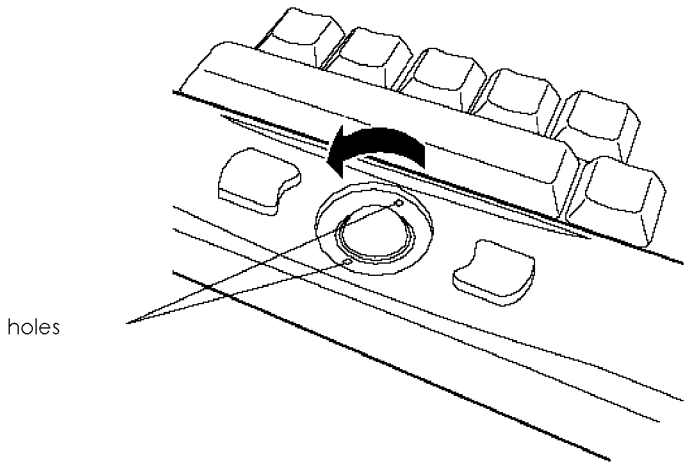
Note

The right button is sometimes used with programs written for a two-button mouse, but you can use it as your primary button. If you want to reassign the buttons and/ or adjust the trackball sensitivity, use the Windows Mouse utility in the Control Panel or the MS-DOS PANEL utility.

Cleaning the Trackball

If your trackball is not working properly, you may need to clean it. Follow these steps:

1. Insert the trackball removal tool that came with your computer into the two holes on the dial surrounding the trackball. Then turn the dial counterclockwise until it stops.



2. Use the tool, if necessary, to lift out the dial and the trackball.

3. Blow any dust out of the trackball base. If the metal rollers inside the base seem dirty, clean them gently with a cotton swab.

4. Wash the trackball with warm water and a mild soap; then dry it thoroughly with a lint-free cloth.

5. Place the trackball back in the base.

6. Place the dial over the trackball in the position it was in when you removed it. Then use the trackball tool to turn it clockwise until it locks into place.

Resetting the Computer

If necessary, you can reset the computer without turning it off by pressing a combination of keys. This reloads the operating system. To reset the computer, press **Ctrl Alt Del.** (If you are in Windows, you first see a warning screen reminding you to save your data and exit any open applications. Press **Ctrl Alt Del** again to reset.) The screen goes blank for a moment and then the computer resets itself.

> **Caution**
> Resetting the computer erases any data in memory that you have not saved, so do not use the reset function unless it is necessary. Also, some programs classify and store new data only when you exit them properly; so do not reset the computer before you exit a program, if possible.

If resetting the computer does not work, you probably need to turn it off, wait five seconds, and turn it back on again.

Changing the CPU Speed

Your computer's processor can operate at two speeds: high speed and 12 MHz. At high speed, the computer performs almost all its tasks faster. You may need to select the slower speed to run copy-protected programs or a program with a specific timing requirement. You may also want to select the slower speed to save power when you are using programs that do not require a high processor speed.

Your computer is setup to start at high speed. If you want to change the speed (through MS-DOS only), use the following key sequences:

Command	Function
Ctrl Alt ↓	Sets CPU speed to low (12 MHz)
Ctrl Alt ↑	Sets CPU speed to high

Using Password Security

Your ActionNote offers two types of passwords: a Boot password and an SCU password. If you set a Boot password, you must enter the password every time you turn on or reset your computer. If you set an SCU password, the computer prompts you to enter the password only when you press **Ctrl Alt S** to run the System Configuration utility.

If you want to enter, change, or delete a password, run the System Configuration utility as described in Chapter 1. When you see a prompt to enter a password, see the next sections.

Caution
Once you set a Boot password, you cannot access your system unless you enter it correctly, so make a note of it. If you forget your password, call the EPSON Connection.

Entering a Boot Password

When the computer requires you to enter a Boot password, you see a screen containing this prompt after you turn on or reset the computer:

```
Enter your BOOT PASSWORD:
```

Type the correct password and press **Enter.** To protect your password, the screen does not display the characters you type; you only see a box indicating each character as you type it.

If you do not type the correct password, the computer repeats the password prompt. Try typing the password again; the computer allows you three tries to enter it correctly. After the third incorrect attempt, the system beeps, reboots, and displays another prompt. You have three more tries.

Entering an SCU Password

When you set an SCU password, the computer prompts you for it only after you have pressed **Ctrl Alt S** to enter the System Configuration utility. Before you see the SCU screen, you see the following prompt on the password entry screen:

```
Enter your SCU PASSWORD:
```

Type your password and press **Enter.** To protect your password, the screen does not display the characters you type; you only see a box indicating each character as you type it.

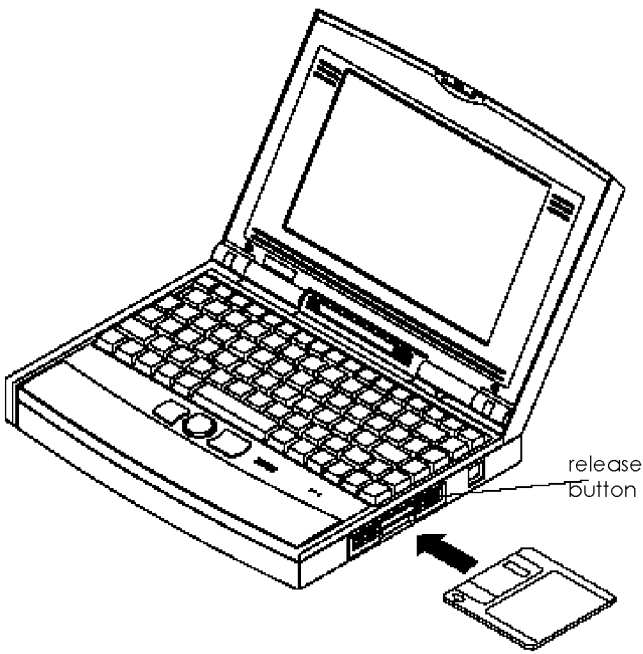
If you do not type the correct password, the computer repeats the password prompt. Try typing the password again; the computer allows you three tries to enter it correctly. After the third incorrect attempt, the system beeps and reboots; then you must enter **Ctrl Alt S** again.

Using Diskettes

You can use either of the following types of diskettes in your 3.5-inch, 1.44MB diskette drive:

- ☐ 720KB, double-sided, double-density (usually labeled 2DD)
- ☐ 1.44MB, double-sided, high-density (usually labeled 2HD).

To insert a diskette, hold it with the label facing up and the shutter leading into the drive. Slide it into the drive until it clicks into place.



To remove the diskette, make sure the Diskette Drive Activity icon does not appear in the System Window; then press the release button. When the diskette pops out, remove it.

Caution

Never remove a diskette or reset or turn off the computer while the diskette drive is being accessed; you could lose data. Also, be sure to remove the diskette before you turn off the computer.

Using Video Drivers and Utilities

Your system comes with high-resolution video display drivers for Windows installed on your hard disk drive. You can select the resolution (screen size), color, font size, cursor size, or enable backlight and display timeout periods for these drivers using the Windows ChipsCPL utility in the Control Panel. You can also use the Chip sCPL utility to switch your display between the LCD screen or an external monitor. When you use the Chip sCPL utility to switch your computer's display mode, Windows saves it as the permanent display mode.

You can use the SCU utility or the **Fn** keys to change your computer's display mode, too. Using an **Fn** key only changes the display mode for the current session, while using the SCU utility changes the display mode permanently.

Note

Your ActionNote is configured to display in a 640x 480 VGA resolution of 256 colors on your LCD or an external monitor. You can toggle between displaying on the LCD and the CRT (or simultaneously to both for active matrix and monochrome LCDS) by pressing **Fn F12.** You can also set the default video mode the computer uses every time you turn it on or reset it using the Display Mode option in the SCU; see Chapter 1 for more information.

To check on the availability of drivers for non-Windows applications, call the EPSON Connection or access the Epson America Forum on CompuServe.

Configuring PC Cards

Whenever you turn on or reset your computer, you have a number of options for configuring your PC card. The default setting loads all PCMCIA drivers. You must load PCMCIA drivers if you are going to use a PC card. If you are not going to use a PC card, do not load any PCMCIA drivers because they take up system memory that could be free for other uses. See the EPSON *Card and Socket Services User's Guide* for more information.

Once you have loaded the drivers and inserted a PC card, your computer configures most cards automatically using card and socket services software. Refer to the EPSON *Card and Socket Services User's Guide* for more information on configuring your PC card.

Caution
If you run the MS-DOS MEMMAKER utility, or load a memory manager program (such as EMM386.EXE), you must ensure that these programs do not interfere with the memory addresses and other settings used by your PC card drivers. See "PC Card Problems" in Chapter 5 for instructions on using these programs.

Installing Additional PC Card Drivers and Utilities

While the ActionNote is fully compatible with PCMCIA version 2.1 and JEIDA 4.1, some PC cards (such as LAN cards) require that you install special drivers or software before they can work correctly. For example, a LAN card may require that you install a socket services enabler either as a device driver or command that is executed when you load the network operating system.

See the documentation that came with your PC card to see if you need to install any additional drivers. You can obtain the latest information on available PC card drivers by checking the Epson America Forum on CompuServe. See "Where to Get Help" in the Introduction to this manual for information about connecting to the Epson America Forum.

Chapter 3

Powering the Computer

You can power your ActionNote with its compact AC adapter, removable NiMH battery, or optional automobile cigarette lighter adapter. This chapter describes how to use the AC adapter and battery and how to conserve energy by using the computer's power management features.

Note
In addition to the AC adapter and battery that come with your computer, you can purchase additional NiMH batteries, an AC adapter that plugs into an automobile cigarette lighter, and an external battery charger. Contact your Authorized EPSON dealer or EPSON Accessories for more information about these options.

Using the AC Adapter

The AC adapter allows you to connect the ActionNote to a standard electrical outlet to power the computer and charge the battery. You should use it whenever you have access to an electrical outlet, especially when you are using a PC card, to conserve battery power.

Note
Because LAN PC cards use a lot of power, you should power your computer from the AC adapter and disable power management when you are connecting to and using the network.

The compact AC adapter included with your computer is designed to operate in 100-250 VAC ranges with a frequency of 47-63 Hz. If you use the AC adapter in a foreign country, be sure to use the correct plug adapter to fit the electrical outlet.

To connect the AC adapter, see the instructions in Chapter 1. The adapter's power light comes on and the computer's AC Power icon appears in the System Window. The Battery Charging and Battery Status icons also appear to show you the charging status of the battery. See page 3-5 for more information on these icons.

Using the Battery

The removable NiMH battery powers the computer when the AC adapter is not connected. The battery provides from 4 to 6 hours of power for monochrome LCD models and from 2.5 to 4 hours for color LCD models when you use the computer's power management features.

> **Caution**
> Use only the NiMH battery designed for use with this computer (model number 10HR-4/3AU).

The length of time the battery provides power depends on how you use the computer. It consumes more battery power if you use a bright screen display, access the hard disk and diskette drive often, or if you are using a PC card or the built-in serial port.

To increase the amount of time you can use the computer without the AC adapter, you can keep a supply of charged batteries. This allows you to replace a spent battery and continue your work.

Note
You can save power when you are not using the serial port by setting the COM Port option to Disable in the SCU. Just be sure to run the SCU to enable the port again before you connect a device to it.

The ActionNote includes special power management features that protect your data even when there is very little power left in the battery. If the Battery Low option in the SCU is enabled (default setting), the computer automatically enters suspend mode when the battery power reaches a critically low level.

If you selected Suspend to Memory as your suspend mode, the contents of memory are protected for several hours. If you selected Suspend to Disk (the default setting), the memory contents are saved in a data file on your hard disk drive, so they are always available. (See Chapter 1 for instructions on selecting your suspend mode and see "Using the Power Management Features" on page 3-10 for more information about these modes.)

Note
Do not remove the computer's battery and leave it without a power source for more than 10 days. If this happens, the real-time clock battery runs out of power and cannot retain your system configuration information. You must run the SCU and re-enter any changes you made to the default settings.

The following sections describe how to monitor the battery life, how to recharge the battery, and how to replace it.

Monitoring Battery Power

There are two ways to monitor the battery power in your computer:

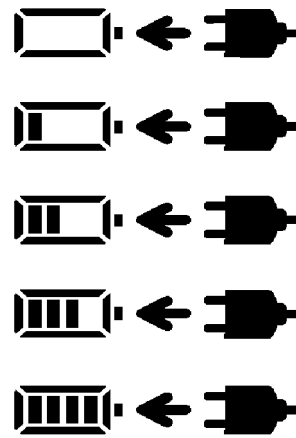
- ☐ Select the Windows Power icon in the Control Panel window
- ☐ Watch the computer's Battery Charging and Battery Status icons.

If you are using Windows, you can select the Power icon in the Control Panel window to see a status screen that gives information about your battery.

> **Note**
> For a description of the power management modes available from the Power dialog box, see "Using the APM Interface" on page 3-15.

The computer's Battery Charging and Battery Status icons work together to let you know how the battery is charging (if the AC adapter is attached) and how much power the battery contains.

If you have the AC adapter connected, you see the AC Power icon in the System Window. If the battery is currently charging, you see the Battery Charging icon and the Battery Status icon changes as follows to inform you of the charging status:



When the battery is fully charged, the Battery Charging icon disappears and the AC Power and Battery Status icons appear as follows:

If you are using only battery power to run your computer, you do not see the AC Power or Battery Charging icons. The Battery Status icon changes as follows as you use up battery power:


Your battery is charged at approximately 76% to 100% of capacity


Your battery is charged at approximately 51% to 75% of capacity


Your battery is charged at approximately 26% to 50%of capacity


Your battery is charged between low battery status and 25% of capacity


Your battery power is low; you have approximately 20 minutes of power left.

Note
Times and percentages are approximates only, and may differ depending on how you are using your computer.

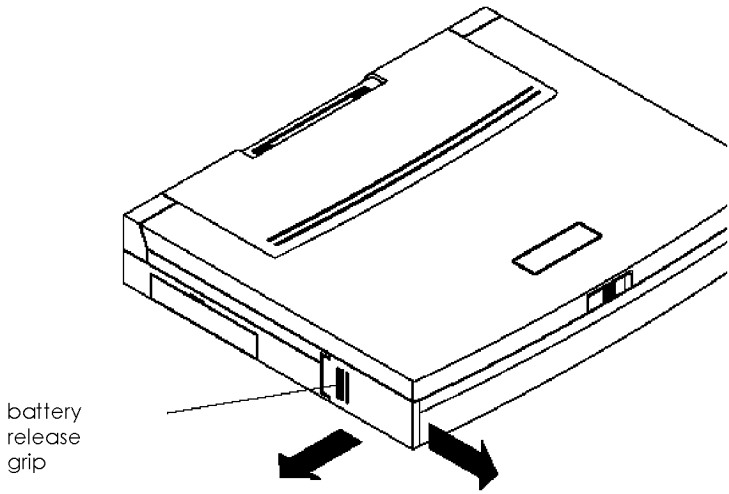
When the Battery Status icon blinks, you have about 10 minutes of power left; insert a spare battery (as described in the next section) or connect the AC adapter (as described in Chapter 1).

Replacing the Battery

Follow these steps to replace the battery:

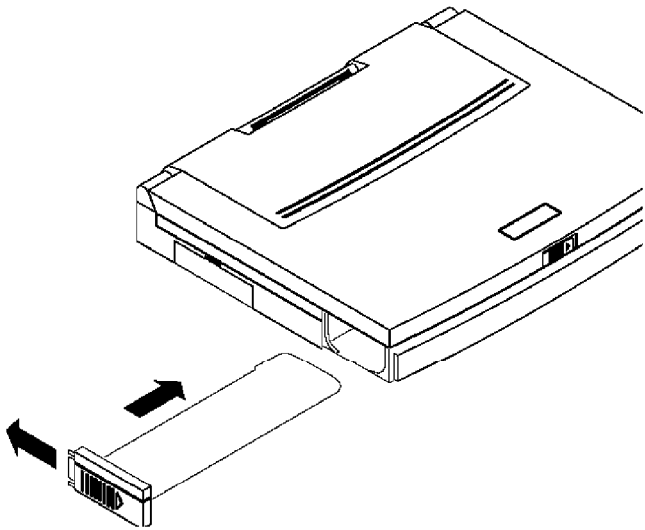
1. Complete your current activity and save your data

2. Slide the battery release grip on the battery cover toward the front of the computer until the cover disengages from the computer case. Then pull the battery straight out of its compartment.



Note
Avoid touching the battery contacts with any metal objects, such as keys or coins because they may short out the battery's circuits.

3. Insert the new battery into its compartment and push it in almost all the way.



4. Slide the battery cover toward the back of the computer while pushing the battery the rest of the way into its compartment. Make sure the locking tabs click into place and that you see the Battery Status icon in the System Window when you open the LCD screen.

Recharging the Battery

The battery that comes with your system is rechargeable. You may need to charge the battery before using it for the first time, and you must recharge it when it runs out of power.

If you have additional batteries, it's a good idea to keep them fully charged so you can replace the battery in your computer when it runs low. This is especially useful if you are traveling and run the computer only off the battery.

To charge the battery, leave it in the computer and connect the AC adapter. The computer automatically charges the battery whenever the AC adapter is attached.

> **Note**
> You can purchase an optional external battery charger so you can charge an extra battery while using another in your computer.

To monitor the progress of battery charging, watch the Battery Charging and Battery Status icons, as described on page 3-5.

It takes approximately 1.5 hours to charge a completely discharged battery when the computer is off or when it is in suspend mode. If you use the system while the battery is recharging, it can take up to 3 hours.

Your computer has a safety timer that prevents it from charging the battery too long. The timer stops charging after 2 hours if the computer is turned off and after 4 hours if it is turned on.

If you find that, over time, the battery is losing its charge sooner, the life of the battery may be reaching its end. As an NiMH battery loses its charge, it can have a slight effect on computer memory. Make sure you recondition the battery pack about once a month by letting the battery discharge completely; then recharge it. If this fails, replace it with a new battery.

> **Note**
> When you need to discard your battery, contact your local government agency for recycling information.

Using the Power Management Features

Your ActionNote offers a variety of automatic and manual power management features to help you conserve battery and electrical power. These features slow down or stop the operation of various system component—such as the CPU, the hard disk, and the LCD screen—when you are not using your computer but are leaving the power on.

There are four levels of power-savings that your computer can enter: two standby modes and two suspend modes. Each of the four modes provides progressively increased power conservation and affects the functioning of progressively more components in your computer.

The standby modes—CPU Standby and Global Standby—reduce the speed and performance of the CPU, components related to CPU operations, and peripheral components such as the hard disk and LCD screen.

The suspend modes, Suspend to Memory and Suspend to Disk, cut off power to the CPU and many other components to provide the maximum power savings.

> **Caution**
> Read "Using Suspend to Disk Mode" on page 3-16 before using Suspend to Disk mode so you can configure the computer correctly for it.

The power-saving operations performed by the computer in each of these modes are summarized in the table below.

Power-saving operations

Mode*	Function
CPU Standby	Reduces the CPU speed and the power used by CPU-related components
Global Standby	Reduces the CPU speed and the power used by CPU-related components; places peripheral components such as the hard disk, LCD screen, and screen backlight in their lowest active states
Suspend to Memory	Shuts off power to the CPU and DMA clocks; turns off the video and all other controllable peripheral devices
Suspend to Disk	Turns off all system logic, except for the system wakeup circuitry and battery charger; the system and video memory contents are saved to a file in one contiguous space on the hard disk for later restoration

* As Dower-saving increases, response time decreases. Power-saving increases with each mode listed. CPU Standby saves the least amount of power, while Suspend to Disk mode saves the most.

You can enable any or all of these power saving modes by using a combination of automatic and manual power management features, as described in the next sections.

Note

You can use all of the computer's power management features in conjunction with the Intel®/ Microsoft Advanced Power Management (APM) interface, version 1.0 or higher. This interface is provided with Windows and may be provided with other software on your system. See "Using the APM Interface" on page 3-15 for more information about how APM works along with your computer's power management features.

Automatic Features

Using the Power Management screen, you can select individual system inactivity time periods, at the end of which your computer can automatically enter any or all of the power-saving modes.

You can access the Power Management screen in two ways:

- ☐ Run the SCU (from the DOS prompt only) and select the PowerMgmt menu bar option. When you save and exit, the computer restarts.

- ☐ Press **Ctrl Alt P** (from the DOS prompt or Windows), or **Fn** Esc (from Windows only).

The Power Management screen allows you to select progressively longer timeout periods in which the system must be inactive before the computer enters CPU Standby mode, Global Standby mode, or either type of Suspend mode. You can also do the following:

- ❑ Disable any or all of the power savings modes

- ❑ Select Suspend to Memory or Suspend to Disk as your suspend mode

- ❑ Enable or disable the computer's ability to enter suspend mode automatically if your battery power is low

- ❑ Activate an alarm which sounds before the computer enters suspend mode

- ❑ Select whether video activity is counted as system activity

- ❑ Select discrete timeout periods for the video and hard disk components.

(See Chapter 1 for information on setting the Power Management screen options.)

When your computer has been inactive for one of the timeout periods you set, it performs the power savings operations listed in the table on page 3-11, depending on which mode it is entering.

When your system enters one of the standby modes, you probably will not notice any difference. However, when you resume activity from CPU Standby mode, the system responds immediately. When you resume from Global Standby mode, it can take up to 15 seconds for the hard disk drive to return to a fully active state.

When the computer enters Suspend to Memory mode, the Suspend icon appears in the System Window, and the screen goes dark. If the computer is in Suspend to Disk mode, no icon appears before the screen goes dark. The method you use to resume activity depends on the type of suspend mode you selected at the Power Management screen. See "Resuming Activity From Suspend Mode," below, for instructions on resuming from suspend mode.

Manual Features

You can also enter the suspend mode you selected at the Power Management screen by pressing the computer's Suspend/ Resume button, located just above the **Num Lock** key. If you need to step away from your computer for a while, but do not want to turn off the power, you can save energy by pressing this button.

When you press the Suspend/ Resume button, the computer beeps and then activates the suspend mode you selected on the Power Management screen. After a moment, the Suspend icon appears in the System Window and the screen becomes dark.

Note
If you selected Suspend to Disk mode, the computer may not suspend immediately after you press the Suspend/ Resume button. This is because your computer may be performing a background task (which is not apparent to you) that prevents it from entering Suspend to Disk mode. If your computer does not suspend after a few seconds, press the Suspend/ Resume button again.

You can reduce power consumption without affecting performance by closing the ActionNote's cover and turning off the LCD backlight. Simply close the cover or press the Suspend/ Resume button for more than two seconds. When you release the button or open the cover, the LCD backlight comes back on.

Resuming Activity From Suspend Mode

If you selected Suspend to Memory as your suspend mode, you can press the Suspend/ Resume button above the **Num Lock** key to resume activity. Then the Suspend icon disappears, the hard disk spins up, and the video screen comes back on.

If you selected Suspend to Disk as your suspend mode, the current system state is written to a file on your hard disk. This file is hidden to prevent you from accidentally deleting it. Because this mode essentially turns off your system, you must press the power button on the computer's back panel to resume using your computer.

Note
See "Using Suspend to Disk Mode" on page 3-16 before using Suspend to Disk mode.

When your computer comes back on, you see this message:

```
Previous System State is being Restored;
Please Wait . . .
```

After a few moments, the data is restored to your computer's memory and the screen returns to the state in which operations were suspended.

> **Note**
> When you resume from Suspend to Disk mode, any PCMCIA card and socket services that you loaded and initialized before you suspended to disk are not reloaded or reinitialized after you resume. Your computer may recognize SRAM PC cards, but it will not recognize most other PC cards. To reload and reinitialize these services, exit any application programs you are using and exit Windows. Then press **Ctrl Alt Del** to reboot your computer. Then select the option to load your PCMCIA card drivers at the prompt.

Using the APM Interface

In addition to your computer's power management features, your system supports the Intel/ Microsoft Advanced Power Management (APM) interface, version 1.0 or higher. This interface enhances your system's power-saving abilities by providing increasing inactivity detection and lower CPU power states without degrading performance.

APM is already enabled in the versions of MS-DOS and Windows installed on your computer. MS-DOS provides APM through the POWER. EXE utility. See your MS-DOS on-line help utility for more inform ation about POWER.EXE.

Windows provides a Power icon in the Control Panel that allows you to select Standard, Advanced, or no APM power management mode and includes a battery status gauge. Use the Windows on-line help utility and see the on-line Windows manual for instructions on using these features.

When you have enabled your computer's power management features and APM, the following operations are performed by APM:

- ☐ Monitors all system activity
- ☐ Detects true inactive states and power demands of the operating system and applications
- ☐ Determines when to activate the necessary power management features
- ☐ Allows MS-DOS, the computer's BIOS, and your application programs to share power management features in the most efficient manner.

> **Note**
> If you disable your computer's power management features, APM is also disabled, even if you have configured your software to use it.

Using Suspend to Disk Mode

If you select Suspend to Disk as your suspend mode, you must create a Suspend to Disk data file on the hard disk drive. The computer writes the contents of system and video memory in this file when it enters Suspend to Disk mode. The Suspend to Disk data file must reside in a contiguous space on an uncompressed hard disk partition. In addition, its size must be at least the sum of your system memory plus your video memory (512KB).

> **Note**
> If you select Suspend to Disk as your suspend mode but do not create the Suspend to Disk data file, the computer uses Suspend to Memory mode until you create the file.

The hard disk drive includes a Suspend to Disk data file allocation utility called 0VMAKFIL.EXE that you can use to create, remove, and recreate the Suspend to Disk data file. Follow the instructions below to create the file on your hard disk drive.

You may need to remove and recreate the file later if you use any doubling software, such as the MS-DOS DRVSPACE utility, or if you increase or decrease the size of your system memory. See "Recreating the Suspend to Disk data file" on page 3-19 for instructions.

Creating the Suspend to Disk data file

To create a Suspend to Disk data file, follow these steps:

1. If necessary, exit Windows to the MS-DOS prompt
2. Log onto the C:\ PM directory.
3. Type the following at the MS-DOS prompt and press **Enter** to create the Suspend to Disk data file:

   ```
   0VMAKFIL
   ```

4. You see a message listing the parameters of your hard disk drive and the following prompt:

   ```
   Okay to allocate Suspend To Disk Data File? (y/n)
   ```

   Press Y and **Enter** to continue

5. The 0VMAKFIL utility creates the Suspend to Disk data file. After several minutes, the utility displays a confirmation message and a prompt to reboot your system. Press **Ctrl Alt Del.**

   If the utility cannot create the file successfully, you may see one of the following error messages:

   ```
   No Suspend To Disk File Allocated

   Failed to open taporary file

   Disk too fragmented; targets contiguous
   area: nnn sectors
   ```

   If you see the last message, check the hard disk drive for any files you don't need, then delete them. Then run the MS-DOS DEFRAG.EXE utility to defragment your hard disk drive. See your on-line MS-DOS help utility for instructions.

6. When your system reboots, you see the following message:

   ```
   SystemSoft Suspend To Disk Enabled -
   Suspend To Disk File Found
   ```

If you see an error message instead, one of the following problems has occurred:

- ☐ Suspend to Disk data file does not exist
- ☐ Suspend to Disk data file is not a hidden file
- ☐ Suspend to Disk data file is not large enough to contain your system memory plus your video memory
- ☐ Your computer cannot determine the location of the first sector in the Suspend to Disk data file or the first sector does not contain the correct signature.

Check that you followed the steps above correctly, specified a large enough Suspend to Disk data file, and have enough room on the hard disk drive for the file.

Note

If you see the following error message when your system attempts to enter Suspend to Disk mode, you must run the MS-DOS DEFRAG.EXE utility to defragment your hard disk drive:

```
Suspend to Disk Disabled. Suspend to disk
file not contiguous
```

Then run 0VMAKFIL.EXE, as described above, to recreate the Suspend to Disk data file.

Recreating the Suspend to Disk data file

Before you can recreate your Suspend to Disk data file, you must remove the old data file and run the MS-DOS DEFRAG.EXE utility to make enough room for the file on your hard disk.

Caution
If you have used a disk doubling software program, such as MS-DOS DRVSPACE, you must make sure the Suspend to Disk data file resides in the boot partition of the drive and not in the doubled partition.

If you use DRVSPACE later, be sure to remove the Suspend to Disk data file from the hard disk, run DRVSPACE and DEFRAG, then create the new file in the boot partition using 0VMAKFIL.EXE (as described below).

Follow these steps:

1. If necessary, exit Windows to the MS-DOS prompt.

2. Log onto the C:/ PM directory.

3. Type the following at the MS-DOS prompt and press **Enter** to remove the existing Suspend to Disk data file:

   ```
   OVMAKFIL - R
   ```

   You see the following message:

   ```
   Deleted Existing Suspend To Disk Data File
   ```

4. Type the following and press **Enter** to run the DEFRAG.EXE utility:

   ```
   DEFRAG C :
   ```

   Follow the instructions on the screen to complete the defragmentation process.

5. Follow the steps under "Creating the Suspend to Disk data file," above, to recreate the file.

Chapter 4

Installing Optional Devices

This chapter explains how to connect or install these devices:

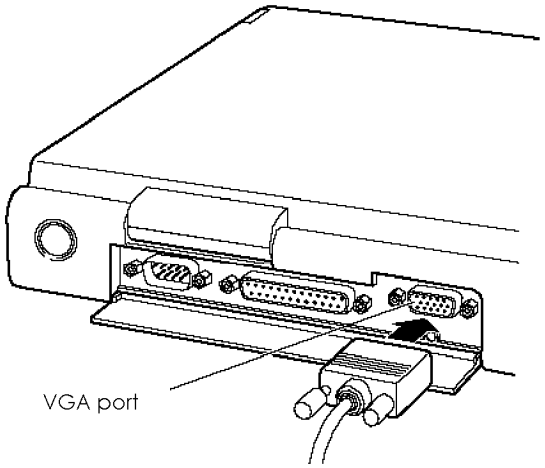
- ☐ External monitor
- ☐ Parallel device
- ☐ Serial device
- ☐ External keyboard, keypad, mouse, or other PS/ 2 device
- ☐ PC card
- ☐ Expansion memory module
- ☐ Hard disk drive.

Connecting an External Monitor

The VGA port on the back of your computer allows you to connect an external color or monochrome VGA monitor. Follow these steps:

1. Make sure both the computer and monitor are turned off
2. If necessary, connect the monitor cable to the monitor
3. If necessary, open the port cover on the back of the computer

4. Connect the monitor cable to the VGA port.



5. If the connector has retaining screws, tighten them.

6. Connect the monitor power cable to a grounded electrical outlet.

7. Turn on the monitor first, then the computer.

The display mode your computer uses depends on the setting you selected for the Display Mode option in the System Configuration utility. If you selected CRT, you see a display only on the external monitor. If you selected LCD, you must press **Fn F12** to change the display to the external monitor. If you selected **BOTH** (available with active matrix or monochrome LCDS), you see a display on the external monitor and LCD simultaneously, and may want to press **Fn F12** to change the display to the external monitor only. (If you are using an external keyboard, press **Ctrl Alt F12** to change the display mode.)

Be sure to run the SCU to change the setting of the Display Mode option so your monitor displays the way you want it to whenever you turn on or reset your computer. See Chapter 1 for instructions.

Your computer also includes a Windows utility that allows you to enhance the display characteristics of your LCD and external monitor and select your display mode. For details, see "Using Video Drivers and Utilities" in Chapter 2.

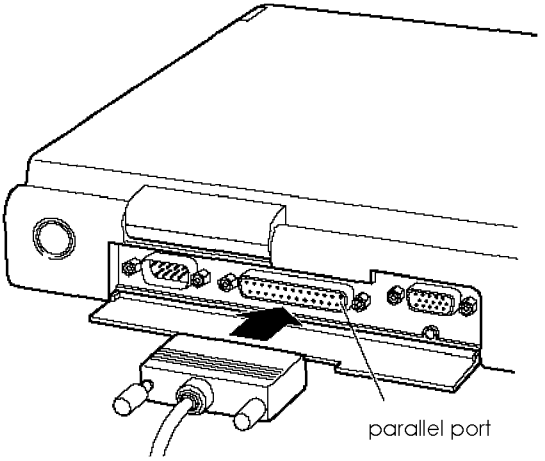
Connecting a Parallel Device

You can use the parallel port to connect a parallel device, such as a printer or scanner. Before you connect the device, check its manual to see if you need to change any of its settings. You may also need to change the Parallel Mode option in the SCU to match the mode for your device. See Chapter 1 for more information. Then follow these steps:

1. Make sure the computer and the parallel device are turned off, then place the device near your computer.

2. If necessary, open the port cover on the back of the computer.

3. Connect the appropriate end of the device cable to the parallel port.



4. If the connector has retaining screws, tighten them

5. Connect the other end of the cable to the parallel device. If the device port has retaining clips, squeeze them gently until they snap into place.

6. Connect the device's power cable to a grounded electrical outlet.

Connecting a Serial Device

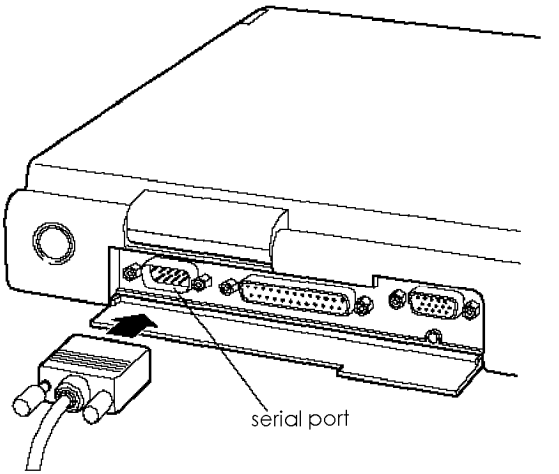
You can use the RS-232C serial port to connect a serial device, such as a serial printer, plotter, or mouse. Follow these steps:

1. Make sure both the computer and the serial device are turned off.

2. If necessary, connect the serial cable to your serial device.

3. If necessary, open the port cover on the back of the computer.

4. Connect the serial cable to the computer's serial port.



5. If the connector has retaining screws, tighten them.

6. If the serial device has a power cable, connect it to a grounded electrical outlet.

See the next section and the documentation that came with your serial device to see if any other steps are necessary.

Checking the Serial Port Settings

The serial port can send and receive data at a variety of speeds and with many different protocols. This means you need to configure the port to match the signals of the serial device you connect.

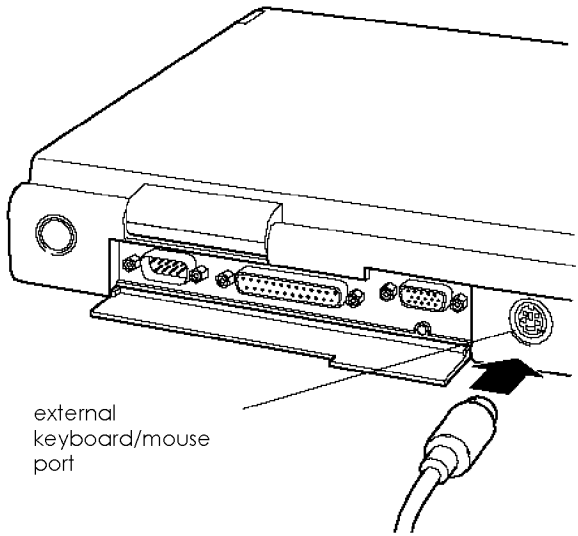
As a general rule, choose the highest speed (baud rate) and the protocol that provides the best error detection. Also, check the documentation that came with your serial device to see if you need to adjust any of the device settings.

Your computer's default setting for the serial port is COM2 (the trackball is COM1 and the PC card slots are COM3). If you want to change the serial port setting to COM4, run the System Configuration utility as described in Chapter 1. Make sure your serial device is set up to use COM2 or COM4 and that the settings shown in the Ports icon in the Windows Control Panel match these settings.

Connecting an External Keyboard or Mouse

You can use the external key board/ mouse port to connect a variety of PS/ 2 compatible devices, including an external keyboard, keypad, or mouse.

To connect a device, turn off your computer. Then align the device's connector with the external keyboard/ mouse port on the back of the computer and push in the connector.



If you connected an external keyboard, you can use it immediately after connecting it. If you connected an external pointing device, you must disable the computer's built-in trackball using the SCU before you can use the device. See Chapter 1 for instructions.

Before you can use a pointing device with your applications, you may need to install the special software driver that came with it. See the documentation supplied with the device for instructions.

Installing a PC Card

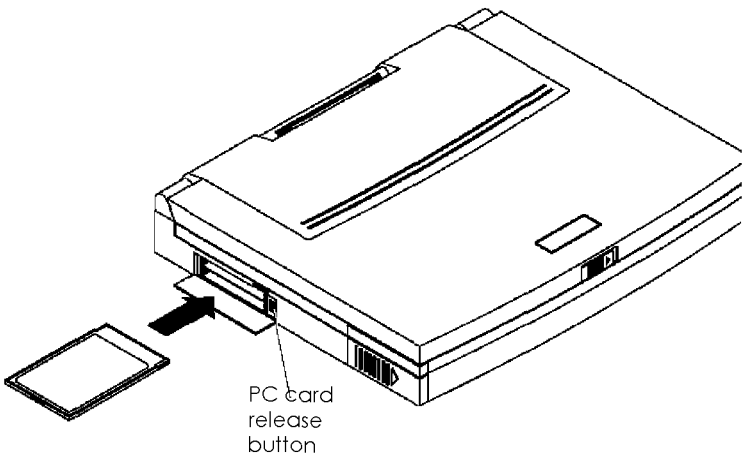
A PC card is a credit card-sized device that meets the PCMCIA universal standard for adding memory, storage, and interface cap abilities to portable systems. (See the EPSON *Card and Socket Services User's Guide* for more in formation.) Your computer supports up to two Type I and Type H PC cards, or one Type III PC card. In addition, your computer uses the Intel ExCa™ standard for hot insertion, which means the system recognizes a PC card inserted into a card slot with the computer turned on.

The upper PC card slot is slot O and the lower slot is slot 1. If you install a Type III PC card, you must install it in slot 1.

Follow these steps to install a PC card:

1. Open the door covering the PC card slots on the left side of your computer.

2. Hold the PC card so the 68-pin connector on the edge of the card faces the PC card slot and the card's label (it usually contains an arrow) faces up.



3. Align the card in the card guides of the appropriate slot. Then push the card gently but firmly into the slot as far as it will go. When you feel resistance, stop pushing; do not force it into the slot.

   When you have fully inserted the card, the release button on the side of the slot pops out.

When you want to remove the PC card, check the PC Card Activity icon in the System Window to verify that the computer is not accessing the card; then press the release button to eject it. Store the card properly in the case that came with it.

> **Caution**
> Do not change the setting of a memory PC card's write-protect switch while the card is installed in the computer or you may damage the card. First eject the card, then change the switch setting and reinsert it.

See Chapter 2 for instructions on configuring your PC card(s).

Installing a Memory Module

Your computer comes with at least 4MB of memory soldered on the system board. If your computer's startup screen shows more than 4MB of memory installed, your computer already has a memory module installed. You can increase the memory by installing a 4MB, 8MB, or 16MB memory module, as described in the table below.

Install this size memory module	For this amount of total memory
4MB	8MB
8MB	12MB
16MB	20MB

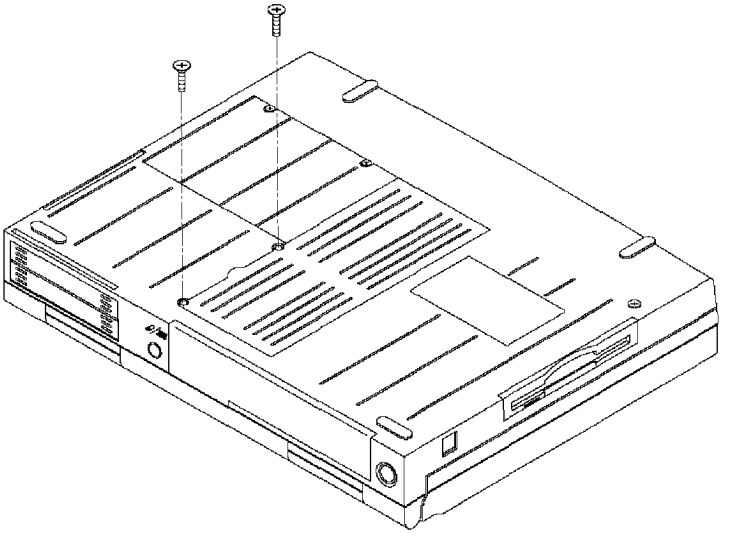
Caution

The memory module can be easily damaged and is expensive to replace; so if you don't feel confident about installing it yourself, ask your Authorized EPSON Servicer for assistance.

To install a memory module, you must first remove the memory module cover and the CPU heat spreader. Follow these steps:

1. Turn off the computer and any peripheral devices.
2. Disconnect any external device cables connected to the computer.
3. Close the LCD screen, if necessary.
4. Turn the computer over so it is upside down.

5. Use a cross-head screwdriver to remove the two screws securing the vented memory module cover on the bottom of the computer, as shown below. (These screws are created exclusively for the memory module cover, so keep them with the cover until you replace it.)

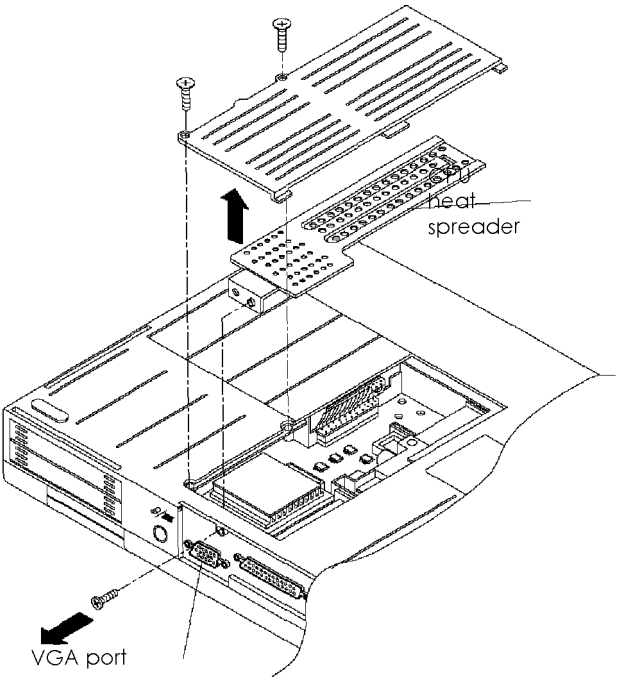


6. Lift off the cover and set it aside.

7. Beneath the cover is a black metal CPU heat spreader with holes in it. To remove it, first open the door covering the ports on the back of your computer.

> **Caution**
> The CPU heat spreader may be hot if the computer has been running recently. You may want to use a cloth to protect your hands as you follow the next step.

8. Remove the screw directly above the VGA port that secures the CPU heat spreader to the computer. Then lift out the heat spreader and set it aside. (This screw is created exclusively for the CPU heat spreader, so keep it with the heat spreader until you replace it.)

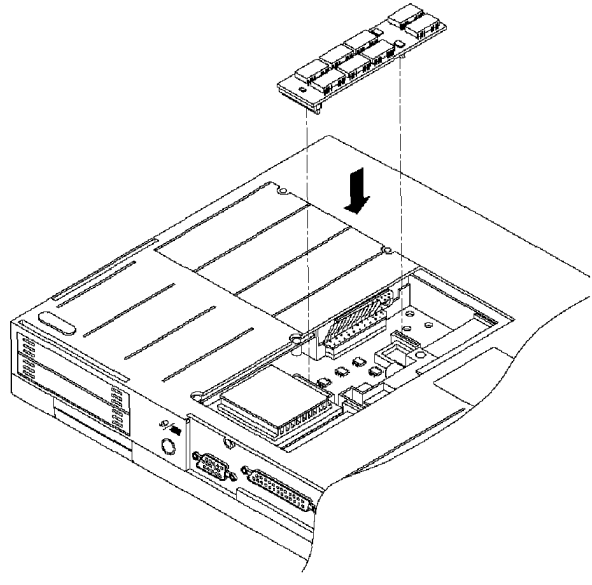


Note

There is a plastic pad that adheres to the CPU or to the heat spreader. Do not remove this pad. If it adheres to the heat spreader, make sure it aligns with the CPU when you replace the heat spreader in the steps below.

9. Locate the two connectors on the base of the memory module so you can align them with the two small sockets on the system board.

10. Align the module connectors with the computer's sockets, as shown below, and lower the module into position.



11 Carefully press the module connectors into the sockets, making sure you align the connector pins and the socket holes. Do not force the connectors into the sockets; if you have trouble, remove the module and try again.

12 Now replace the CPU heat spreader in the position shown in step 8 and secure it to the back of the computer with its retaining screw. Close the port cover door.

13 Replace the memory module cover in the position shown in step 5 and secure it to the bottom of the computer with its two retaining screws.

14. Turn the computer over and open the LCD screen.

15. Run the System Configuration utility, as described in Chapter 1, to make sure your computer recognizes the new memory configuration. (As soon as you turn on the computer, it will prompt you to run the SCU because of the memory size mismatch.) If you later remove or change the memory module, be sure to run the SCU again.

16. If you are using Suspend to Disk as your suspend mode, you should recreate the Suspend to Disk data file on your computer's hard disk drive so its size corresponds to your new memory size. See "Using Suspend To Disk Mode" in Chapter 3 for instructions.

Removing and Replacing the Hard Disk Drive

If you need to remove the hard disk drive, follow these steps:

1. Turn off the computer and any peripheral devices.

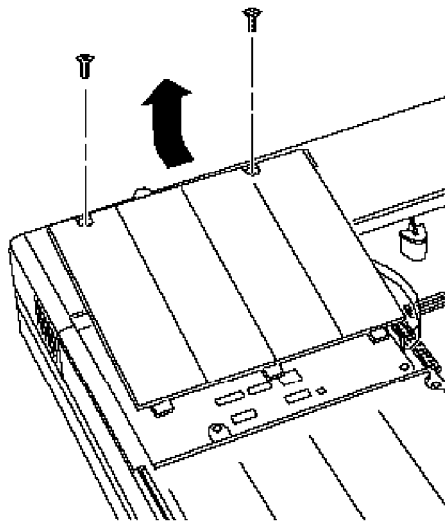
2. Disconnect any external device cables connected to the computer.

3. Close the LCD screen, if necessary.

4. Turn the computer over so the bottom faces up.

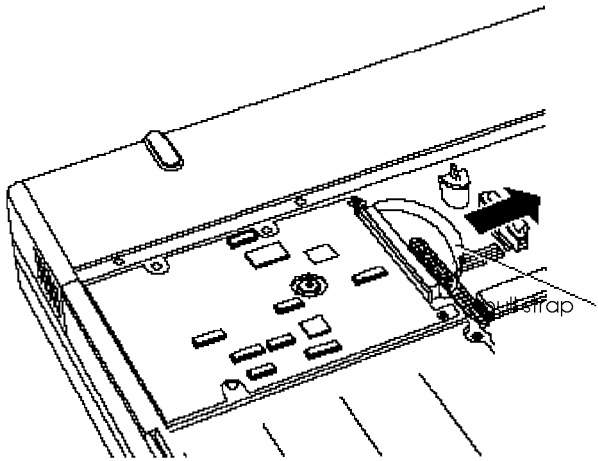
5. Follow the steps on pages 4-10 through 4-11 to remove the memory module cover and the CPU heat spreader.

6. Now remove the two screws securing the hard disk drive cover to the bottom of the computer. (These screws are created exclusively for the hard disk drive cover, so keep them with the cover until you replace it.)



7. Lift off the cover and set it aside.

8. To disconnect the cable from the drive, grasp the clear plastic pull strap and carefully pull it straight out from the drive connector. (You may need to lift up the drive slightly to pull out the cable connector.) Be sure to pull evenly along the width of the strap so you do not bend any of the pins in the drive connector.

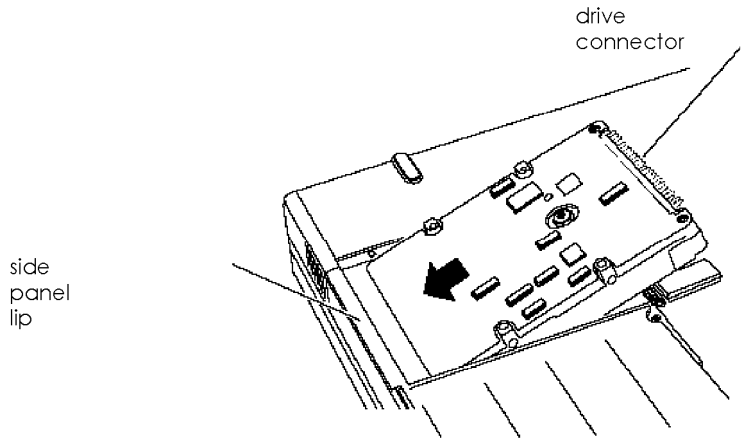


9. Then lift the drive out of the computer.

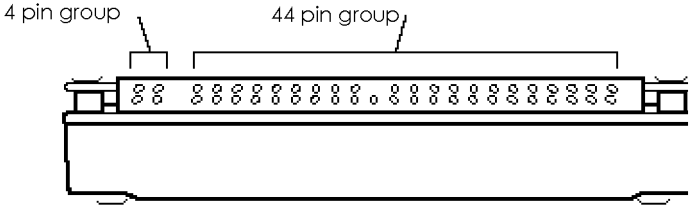
Note

The hard disk drive compartment on your computer can accommodate drives up to 19 mm high. The drive that comes with your computer is 12.5 mm, 15.5 mm, or 19 mm high. 12.5 mm and 15.5 mm drives come with a spacer underneath them. If you are going to install a drive that is more than 15.5 mm high, remove the spacer from the compartment before you perform step 10.

10. To reinstall the drive (or install a new one), position it as shown below; then place the rear of the drive beneath the lip of the computer's side panel. Leave the side of the drive containing the drive connector slightly above the compartment so you can connect the cable in the next step.



11. Align the holes in the cable connector with the group of 44 pins on the right side of the drive connector. Make sure the connector does not cover the group of four pins on the left side of the connector.



12. When you are sure the holes and pins are properly aligned, carefully push the cable connector straight onto the pins, pressing firmly and evenly along the width of the connector until it is fully seated.

13. Lower the drive into its compartment.

14. To replace the hard disk drive cover, hold it in the position shown in step 6 on page 4-14 and insert the three tabs along its edge into the three slots in the computer case. Then secure it with its two retaining screws.

15. Replace the CPU heat spreader and memory module cover by reversing steps 5 through 8 on pages 4-10 and 4-11.

16. Run the System Configuration utility as described in Chapter 1 to automatically configure (or reconfigure) your drive.

Chapter 5
Troubleshooting

You probably won't encounter any difficulties as you setup and use your ActionNote. If anything out of the ordinary happens, however, refer to this chapter for help.

If the suggestions here do not solve the problem, use the guidelines below to identify your system and make a note of any error messages your computer displays. Then contact your Authorized EPSON Servicer or call the EPSON Connection at (800) 922-8911.

Identifying Your System

When you request technical assistance, be ready to provide the serial number of your computer, its system BIOS version number, its configuration (including the types of disk drives and options), and the names and version numbers of any software programs you are using.

Use these guidelines to gather information about your system:

Serial number	Look on the underside of the computer to find the serial number,
System BIOS version	Restart your system. The computer displays the system BIOS version number as it performs power-on diagnostics.
System configuration	Press **Ctrl Alt S** and write down the configuration settings shown on the SCU screen and Power Management screen.

Windows version	**When** your computer has loaded Windows, select Help from the menu bar. Then select About program Manager to see the version number.
Software versions	In Windows applications, select About from the Help menu, or read the version number from the banner screen displayed when the program starts, or check your software manual.
MS-DOS version	In Windows, select the MS-DOS Prompt icon. When the MS-DOS prompt appears, type VER and press **Enter** to display the MS-DOS version number.
CONFIG.SYS	In Windows, use the Sysedit utility in the Applications group to see a list of the system configuration commands in the file. At the MS-DOS prompt, type TYPE C: \CONFIG.SYS and press **Enter.**
AUTOEXEC.BAT	In Windows, use the Sysedit utility in the Applications group to see a list of the system startup commands in the file. At the MS-DOS prompt, type TYPE **C:** \AUTOEXEC.BAT and press **Enter.**
SYSTEM.INI and WIN.INI	Use the Sysedit utility in the Applications group to see the Windows initialization commands in these files.

Error Messages

Your computer's built-in memory (ROM) contains a series of diagnostic programs, called power-on diagnostics, which your computer runs automatically every time you turn it on. These programs check internal devices such as ROM, RAM, the timer, the keyboard controller, and the hard disk drive.

When the diagnostics test RAM, you can see the total amount of memory currently installed in your system.

If the computer finds an error, it displays an error message on the screen. Write down the message and give it to the person who is helping you when you report the problem.

If the error is serious, the computer cancels further checking and halts system initialization. The error message remains on the screen and the computer locks up. If this happens, contact your Authorized EPSON Servicer or the EPSON Connection to report the problem.

The Computer ***Won't Start***

If your computer does not start when you press the power button, try the following:

1. Check the AC Power, Battery Charging, and Battery Status icons. See Chapter 3 for a description of these icons.

2. Press the power button to turn off the computer. (You need to press the power button for two second s.) If you are using the battery, remove it and reinstall it. If you are using the AC adapter, disconnect it and then reconnect it. Then turn the power on again.

3. If the computer still does not start, the problem is probably caused by the power source; see "Battery Problems" or "AC Adapter Problems," below.

Battery Problems

If you have trouble running the computer from a battery, follow the steps in this section to find the problem. (Be sure to read Chapter 3 for information on powering your system.)

1. Check the Battery Status and Suspend icons in the System Window. If the Battery Status icon indicates there is sufficient battery power left and you see a Suspend icon, the computer is in Suspend to Memory mode; press any key or press the Suspend/ Resume button to continue. If you are using Suspend to Disk as your Suspend mode, press the computer's power button to resume. See Chapter 3 for more information.

2. If the Battery Status icon is empty and blinking, the battery power is very low. If you have a second battery that is fully charged, first turn off your computer, then use the second battery to replace the one in the computer. If the computer then works properly, you need to recharge the other battery. See Chapter 3 for instructions.

3. If you replace the battery and the computer does not work properly, the new battery may also not be fully charged. Recharge this battery until it reaches its maximum capacity.

4. If you think the battery is not providing any power, it may not be installed properly. Try removing and reinstalling it according to the instructions in Chapter 3.

5. Connect the AC adapter to the computer and plug the adapter into an electrical outlet. Turn on the computer and see if it works using the AC adapter.

6. If the computer does not work with the AC adapter, see "AC Adapter Problems."

   If the computer works using the AC adapter, the problem may be that you have not used the battery in a long time (three months or more), and you may need to recharge it.

   If the Battery Charging icon appears, the battery is charging. See Chapter 3 for more information about charging the battery.

7. If you find that over time the battery is losing its charge in less and less time, it may be reaching the end of its life. You may need to replace it with a new battery.

> **Note**
> When you need to discard your battery, contact your local government agency for recycling information.

AC Adapter Problems

If the computer does not work with the AC adapter, check the adapter's power light and AC Power icon in the computer's System Window. If they are not on, try the following:

1. Disconnect the AC adapter and then reconnect it.

2. Make sure the AC adapter is securely connected to the computer and the electrical outlet.

3. If the connections are secure, check the electrical outlet to make sure it is supplying power. (For example, plug a lamp into the socket and turn it on.) If the outlet is working and the connections are secure, there may be something wrong with your AC adapter.

The ***LCD Screen is Blank***

If the computer starts up (power icons appear in the status panel) but no image appears on the LCD screen, follow these steps to solve the problem:

1. The computer may be in suspend mode; press any key or the Suspend/ Resume button to resume. If you are using Suspend to Disk as your Suspend mode, press the computer's power button to resume.

2. You may have set a timeout period for the LCD screen on the Power Management screen or with the Windows ChipsCPL utility. This turns off the screen automatically after a specified period of time has clap sed with no system activity. Press any key to restore the display. (See Chapters 1 and 3 for information about the power management options, and Chapter 2 for information on the ChipsCPL utility.)

3. Use the brightness and contrast key commands to adjust the screen display. (The contrast adjustment has no effect on active matrix screen s.) See Chapter 2 for instructions.

4. You may have switched your display to external monitor mode. Press **Fn F12** until you see the display on your LCD screen. Make sure the default display selected in the SCU Display Mode option and the setting in the Windows ChipsCPL utility are correct for your system. See Chapters 1 and 2 for more information.

The ***Internal Monitor Screen*** *is* ***Blank***

If you are using an external monitor and no image appears on its screen, follow these steps to solve the problem:

1. Make sure the monitor and then the computer are turned on.

2. Adjust the brightness and contrast of the monitor screen using the controls on the monitor. (The contrast adjustment has no effect on active matrix screens.)

3. Check that the monitor's power cable is securely connected to the monitor and to an electrical outlet. Be sure the monitor cable is properly connected to both the monitor and the computer. If you need to adjust the connection, turn the computer off, adjust the cables, and then turn on the computer again.

4. Check the monitor setting to make sure the correct one is selected. Some computers can accept input from two computers.

5. You may have switched your display to LCD mode. Press **Fn F12** until you see the display on your external monitor. Make sure the default display selected in the SCU Display Mode option and the setting in the Windows ChipsCPL utility are correct for your system. See Chapters 1 and 2 for more information.

6. If the monitor still does not work, turn off both the computer and the monitor. Then check the electrical outlet for power. Plug a lamp into the outlet and turn it on to see if the outlet supplies power.

7. If the outlet works and an image still does not appear on your monitor when you turn on the computer, contact your monitor dealer, or call your Authorized EPSON Servicer or the EPSON Connection.

The Computer Locks Up

If the computer locks up, try the following:

1. Some operations take longer than others to perform. For example, a spreadsheet program takes a long time to recalculate a spreadsheet and many program calculations can take several minutes to complete. Wait a few minutes to see if the computer returns to normal operations.

2. The computer may be in suspend mode. Press any key, or press the Suspend/ Resume or power button (depending on the type of suspend mode you are using) to resume activity. See Chapter 3 for more information.

> **Note**
> If your battery power is low and your computer is in Suspend to Disk mode, it may not have enough power to boot your system when you press the power button to resume. Connect the AC adapter or install a spare, charged battery; then press the power button.

3. You may be able to resume activity by canceling the current operation. If you are executing an MS-DOS command, try pressing **Ctrl C** or **Ctrl Break.** In Windows, press **Ctrl Alt Del** to reset the system.

4. Try pressing the **Num Lock** key. If the Num Lock icon does not appear in the System Window, the computer is probably locked up.

5. If the computer remains locked up after you've tried the solutions listed above, reset it by pressing **Ctrl Alt Del.**

6. If resetting does not work, the keyboard is probably locked. Turn off the computer, wait five seconds, and turn it back on.

Password Problems

If you set a password and you have trouble using it, try the following:

1. If you type the password and then see the password prompt again, type the password again and press **Enter.** If you type it incorrectly three times, the computer reboots and prompts you again.

2. If you know the current password but you want to change or delete it, see Chapter 1 for instructions.

3. If you have forgotten your password, call the EPSON Connection for assistance.

Embedded Keypad Problems

If you have trouble using the embedded keypad or any of the keys involved with the keypad, review the information in Chapter 2.

If you have accidentally locked the keypad, the Embedded Keypad Locked icon appears in the System Window. Press **Fn Num Lock to** unlock it.

Trackball Problems

If your trackball is not working properly, check the following:

1. Make sure the trackball is enabled in the System Configuration utility. See Chapter 1 for instructions.

2. Your trackball may be dirty. Follow the instructions in Chapter 2 to clean it.

3. If you still have trouble with the trackball, contact your Authorized EPSON Servicer or the EPSON Connection for assistance.

External Pointing Device Problems

If your trackball, mouse, or other PS/ 2 compatible pointing device does not work properly, try these solutions:

1. Did you install any necessary drivers and load them into your computer's memory? See the documentation that came with your device for instructions. Your built-in trackball is PS/ 2 compatible, so be sure to select these drivers when necessary. (PS/ 2 compatible drivers for Windows and MS-DOS applications are already installed on your system.)

2. Did you disable the computer's built-in trackball in the System Configuration utility? If not, you must disable it in order to use an external pointing device with your computer. See Chapter 1 for instructions.

3. Is the external device connected properly? Make sure you connected it to the external key boardl mouse port before you turned on the computer, as described in Chapter 4.

4. If the device is connected to the computer's serial port, make sure the device and the COM port option in the SCU are set to use the same COM port. See Chapter 1 for more information.

5. If you still have trouble with an external device, check the manual that came with it or contact the manufacturer.

Diskette Problems

If you have trouble accessing data on a diskette, follow these steps to identify the problem:

1. Is the diskette properly inserted in the drive? Remove the diskette and make sure it is inserted with the label facing up.

2. Are you using the right type of diskette for your drive? The 3.5-inch drive in your computer can read either 720KB or l.44MBdiskettes.

3. Is the diskette write-protected? If the write-protect switch is set, first make sure the diskette does not contain files you do not want to change or lose. Then move the switch to remove the write protection. Ordinarily, it's a good idea to leave program diskettes write-protected, but some programs don't work properly using write-protected diskettes.

4. Is the diskette formatted? A new diskette must be formatted before you can store data on it. See your MS-DOS on-line help utility or your on-line Windows manual for instructions.

5. Is the diskette damaged? If you have a backup copy of the diskette, use it to repeat the operation that caused the problem. If it works using the copy, the original diskette is probably damaged. Discard the original and use the copy.

   If you need to save the files on the original diskette, try copying one file at a time.

6. Try formatting a blank diskette to determine if the diskette drive is operating properly. If you cannot format a diskette, see the next section.

Diskette Drive Problems

If you are having problems with the diskette drive, check the following:

1. If the drive does not seem to be working, try performing a similar operation with a diskette in another computer's drive, if you have access to one.

2. Make sure the diskette drive is set to the correct type in the System Configuration utility. See Chapter 1 for instructions.

3. If the drive is making loud or unusual noises, stop the current operation immediately and contact your Authorized EPSON Servicer or the EPSON Connection.

Hard Disk Problems

If you have problems with your hard disk drive, check the following:

1. If you have set an inactivity time period in the Hard Disk option on the Power Management screen and the drive powered down, the hard disk may still be coming back up to speed. Your drive needs about 15 seconds to resume speed when you access it again.

2. Check the Hard Disk Activity icon. If you enter commands that access the hard disk, the icon should appear in the System Window. If the icon is blinking continually, there may be a problem with the hard disk; contact your Authorized EPSON Servicer or the EPSON Connection.

3. Make sure the Hard Disk option is set correctly in the SCU. See Chapter 1 for instructions.

4. Make sure the hard disk drive cable is securely connected, as described in the "Removing and Replacing the Hard Disk Drive" section of Chapter 4.

Sotfware ***Problems***

If you are having trouble with an application program, try the following solutions:

1. If the application program does not start, check that you are following the correct procedure for starting the program, and that it is installed correctly.

2. If the program is running, see if it includes on-line help to assist you in diagnosing the problem.

3. Your computer can run at either high speed or low speed. While almost all programs work properly at high speed, some must run at the slower speed. Check your software manual to see if this is the case, and change the CPU speed if necessary. See Chapter 2 for instructions.

4. If you have entered an MS-DOS command that you want to stop, press **Ctrl C or Ctrl Break.** If you are using Windows, press **Ctrl Alt Del to reset the system.**

5. An application program can occasionally lockup the computer, making it unresponsive to the keyboard. If your computer does not respond when you press the **Num Lock** key, turn off your system, wait five seconds, and then turn it back on and restart your application program.

6. If none of these solutions solve your software problem, contact the software manufacturer for technical support.

Printer Problems

You can solve most printer problems by following the instructions in your printer manual. If you have just connected the printer, check that it has power and is properly connected to the computer. See Chapter 4 for instructions on connecting a printer. (The printer manual also gives instructions on cable connections.)

If you have a serial printer or if the printer has problems feeding paper, check the printer manual for the correct DIP switch settings and for serial operation settings.

Memory Module Problems

If you have trouble with memory you have added to your system, check the following:

1. Make sure the power-on diagnostics memory count and the SCU are displaying the correct amount of memory. See Chapter 1 for more information.

2. Did you insert the memory module correctly? See "Installing a Memory Module" in Chapter 4.

3. Have you defined the memory properly in your CONFIG.SYS file? See your MS-DOS on-line help utility for more information.

PC Card Problems

If you are having trouble with a PC card inserted in your PC card slot, check the following:

1. Did you insert the card properly? Press the release button to remove the card; then try inserting it again. See Chapter 4 for installation instructions.

2. Did you load any PCMCIA drivers when you booted the computer? Reboot your computer and select the appropriate option at the PCMCIA driver prompt. Then try your PC card operation again. See Chapter 2 for more information about the PCMCIA drivers and utilities that come with your computer.

3. Did you resume from Suspend to Disk mode and then were unable to use the card? When you resume from Suspend to Disk mode, any PCMCIA card and socket services that you loaded and initialized before you suspended to disk are not reloaded or reinitialized after you resume. Your computer may recognize SRAM PC cards, but it will not recognize most other PC cards. To reload and reinitialize these services, exit any application programs you are using and exit Windows. Then press **Ctrl Alt Del** to reboot your computer. Select the option to load your PCMCIA card drivers at the prompt.

4. Have you loaded the correct PCMCIA drivers and utilities? Your computer is setup to work with most PCMCIA cards, but some cards require that you install special drivers or software. For example, a LAN card may require you to install a socket services enabler—either as a device driver or command that is executed when you load the network. See the documentation that came with the card for details.

5. If you inserted a RAM or hard disk card, did you format it? Like a diskette, a new RAM or hard disk PC card may need to be formatted (initialized) before you can use it. See the documentation that came with the card for instructions.

6. Are you using a LAN PC card with the power management features enabled or running only on battery power? You should disable the power management features when you are using the computer on a network because these features can interfere with your network software. Also be sure to connect the AC adapter when you use a LAN PC card because these cards consume a lot of power.

7. Is your PC card compatible with the ActionNote? The PC card slots in your computer support PCMCIA version 2.1 or earlier and accept up to two Type I or II cards, or one Type III card. If you aren't sure your card is compatible, call the EPSON Connection to ask about tested cards.

8. Did you run the MS-DOS MEMMAKER utility or load a memory manager (such as MS-DOS EMM386.EXE)? If so, you must ensure that these programs do not interfere with the memory addresses and other settings used by your PCMCIA drivers by editing your CONFIG.SYS file. See the EPSON *Card and Socket Services User's Guide* for more information.

Appendix A
Specifications

CPU and Memory

CPU	Cyrix SL-enhanced CX486DX2 microprocessor; includes built-in math coprocessor, 8KB of internal cache, and power management features; cache can be enabled or disabled using the SCU
System speed	Maximum speed and low speed (12 MHz) available; speed selection through keyboard commands
Memory	4MB or 8MB RAM standard on the system board; expandable to 8MB, 12MB, or 20MB using a 4MB, 8MB, or 16MBmemory module
ROM	128KB Flash ROM device containing the system and VGA BIOS and System Configuration utility code
Video RAM	512KB DRAM supports resolutions up to 640 x 480 in 256 colors on the color LCD and up to 1024 x 768 in 16 or 800 x 600 in 256 colors on an external monitor
Shadow RAM	Supports shadowing of 128KB of system and video BIOS ROM into RAM
Clock/ calendar	Real-time clock, calendar, and CMOS RAM; backed up by internal battery

Controllers

Video	Chips and Technology® 32-bit local bus interface to the microprocessor; supports enhanced video modes on an external monitor; supports resolutions up to 640 x 480 in 256 colors on the color LCD and up to 1024 x 768 in 16 or 800 x 600 in 256 colors on an external monitor; display mode selectable using the SCU, the **Fn F12** command, or Windows ChipsCPL utility
Diskette drive	Built-in super I/O controller for one internal 3.5-inch diskette drive; supports 720KB and 1.44MB formats
Hard disk	Built-in super I/O controller for standard IDE HDD; drive compartment accommodates a standard 2.5-inch wide hard disk drive up to 19 mm high
PCMCIA	Built-in controller for PCMCIA version 2.1, Type I, II, or III cards; supports up to two stacked Type I and Type II cards or one Type III card; JEIDA 4.1 compatible; supports standby and suspend modes; supports hot insertion (including ExCA standards)

Interfaces

External VGA	15-pin, D-sub, female connector for analog monitor
Parallel	Centronics® compatible; 25-pin, D-sub, fern ale connector; supports norm al (8-bit AT compatible, unidirectional) and bidirectional (16-bit PS/ 2 compatible) modes
Serial	RS-232C, programm able, asynchronous, 9-pin, D-sub male connector
External keyboard/ mouse	Auto-sensing, 6-pin, mini-DIN connector for a PSI 2-type external keyboard, keypad, mouse, or other pointing device

Keyboard

85/ 86 keys; 101/ 102-key keyboard compatible; embedded keypad; support for hot key commands

Trackball

Built-in 16 mm, serial trackball with two buttons

Mass Storage

Hard disk drive	One internal 2.5 inch long, 12.5 mm to 19 mm high IDE hard disk drive; SCU automatically detects standard IDE drive types
Diskette drive	One internal, 3.5-inch, low power consumption diskette drive; 720KB or 1.44MB format

LCD Screen

Active matrix color: 9.5-inch diagonal 640 x 480 x 256 colors,

Dual-scan twisted nematic (DSTN) color: 10.3-inch diagonal, 640 x 480 x 256 colors, backlit

Monochrome: 9.4-inch diagonal, 64 gray shades, 640 x 480, backlit

System Configuration Utility

Stored in ROM; accessible by pressing **Ctrl Alt S at system startup** or at MS-DOS prompt; includes power management features

Power Sources

AC adapter

Size	5.3 inches (L) x 2.8 inches (W) x 1.5 inches (H) (136 mm [L] x 72mm [W] x 37 mm [H])
Weight	13.5 ounces (380 grams)
AC cable length	6 ft (1.8 meters)
DC cable length	39 in (1 meter)
Input voltage	100 VAC to 250 VAC, autosensing
Input frequency	40 to 63 **Hz**
Output voltage	17 VDC with 2 Amp maximum and 20 VDC with 1.05 Amp maximum

Battery

Rechargeable, 12 Volt, 2.6Ah NiMH battery; current regulation and automatic charge stop by thermistor

Caution

Use only the adapters and replacement batteries designed for use with the ActionNote 600 series (AC adapter model number TSA3 and battery model number 10 HR-4/ 3AU).

Environmental Requirements

Condition	Operating	Non-operating
Temperature	42° to 95° F (5° to 35° c)	–4° to 140° F (-20° to 60° C)
Humidity (non-condensing)	30% to 90%	5% to 95%
Altitude	-200 to 12,000 ft (-67 to 4,000 m)	-200 to 30,000 ft (47 to 10,000 m)

Caution

When traveling by airplane, take the computer into the passenger compartment as carry-on luggage to prevent it from being stored in an unpressurized storage compartment.

Physical Dimensions

Model	Depth		Width		Height		Weight	
	inches	mm	inches	mm	inches	mm	lb	kg
Monochrome	8.6	219	11	279	1.75	44.5	5.8	2.7
STN color	8.6	219	11	279	2.0	51	6.8	3.1
Active matrix	8.6	219	11	279	2.0	51	6.8	3.1

Optional Equipment

- ❑ 4MB, 8MB, and 16MB memory expansion modules
- ❑ External keyboard
- ❑ External numeric keypad
- ❑ Additional NiMH batteries
- ❑ External battery charger
- ❑ Automobile cigarette lighter adapter
- ❑ Additional AC adapter
- ❑ PCMCIA cards including Flash RAM, SRAM, Hard disk, modem, fax/ modem, LAN cards, etc.

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