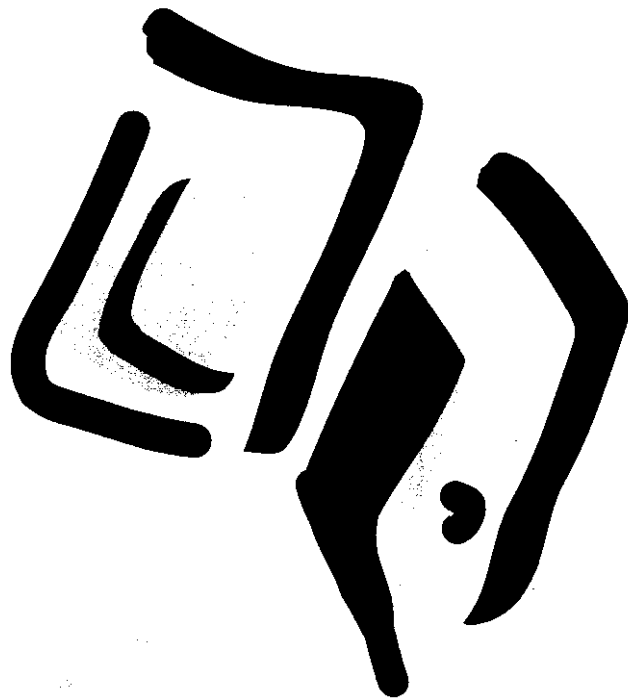


User's Guide

Notebook Computer

GET 32-ED

Factory Model 4100



P/N 62-970100-00

Agency and Safety Notices

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

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

Please note:

1. The use of a non-shielded interface cable with this equipment is prohibited.

Canadian Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

The information in this guide is subject to change without notice.

Product names mentioned herein may be trademarks and/or registered trademarks of their respective companies.

First Edition (Mar. 1998)

Battery Notice

ATTENTION:

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

CAUTION:

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

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About this Manual

Summary

This manual helps you understand the computer and guides you through setting up and using the computer.

Read Chapter 1 first. After that, you can go on with any part of the manual in no particular order; or you can read a specific topic later when you need the information.

Listed below is the summary of the chapters and appendixes of this manual:

Chapter 1, **Getting Started**, briefly introduces the computer and gives step-by-step instructions in setting up your computer for work. It also tells you how to take care of the computer.

Chapter 2, **Operating Basics**, tells you in details how to use the computer's components and features.

Chapter 3, **Battery and Power Management**, provides information on using battery power and describes Power Management.

Chapter 4, **System Expansion**, provides information on connecting and using optional devices.

Chapter 5, **Setup Configuration Utility**, provides information on the Setup Configuration Utility (SCU) that configures your computer for use and activates its special features.

Chapter 6, **Software Drivers and Utilities**, lets you know what the drivers and utilities are for.

Chapter 7, **Troubleshooting**, gives solutions to common problems you may encounter when using the computer.

The Appendixes give technical information such as specifications of the computer.

Notational Conventions

Through this manual, the following conversions are used to distinguish elements of text:

[Ctrl] Identifies keys to press. When keys are joined by the plus sign (+), press the first key, and, while keeping the first key down, press the remaining keys; then release all the keys.



Identifies additional information that needs special attention.



Identifies important information which, if not followed, may result in loss of data or damage to the computer.

Getting Started

This chapter briefly introduces the features and components of the computer. It then tells you step-by-step how to get the computer up and running, and finally gives tips for taking care of the computer.

Unpacking the Computer

You should find these standard items after unpacking the shipping carton:

- Notebook computer
- Carrying bag
- Accessories:
 - AC adapter
 - AC power cord
 - Battery pack
 - Driver CD and/or supplement diskettes (for revision update if required)
 - *This User's Guide*

Inspect all the items to see if anything is damaged or missing. If so, notify your dealer immediately.

Keep the shipping carton and all packing materials in case you need to ship or store the computer in the future.

Features

The computer has been designed with the most advanced mobile computer technologies to satisfy professional users' needs.

The computer features:

- **CPU**
Intel Tillamook or Deschute microprocessor
- **Memory**
32/64/128/192MB SDRAM
512KB cache memory
- **Mass Storage Device**
3.5-inch, 1.44MB floppy disk drive or optional LS-120 drive
IDE 3/5/8GB (or higher capacity) hard disk drive
20X (or higher speed) CD-ROM drive or optional CD-R/DVD drive
- **Video Subsystem**
13.3- or 14.1-inch Color TFT Liquid Crystal Display (LCD)
Simultaneous display on LCD and external CRT monitor
2MB video RAM
- **Audio Subsystem**
3D audio capability
Built-in microphone and stereo speakers
External audio jacks
- **Networking**
10/100 Base-T Ethernet
- **I/O Interfaces**
One serial connector, one parallel connector, one external monitor connector, one keyboard/mouse connector, one IR port, one 1394 connector (optional), two USB connectors, one RJ-11 modem connector (optional), one RJ-45 LAN connector, two PCMCIA slots, one video output jack, three audio jacks, one MIDI/game connector, and one expansion connector

• **Input Devices**

- Notebook computer keyboard
- Touchpad pointing device

• **Power**

- AC adapter
- Smart Li-ion (Lithium-ion) rechargeable battery pack

• **Power Management**

- Global Standby, Power-On-Suspend, and Suspend-to-Disk modes

• **Password Security**

- Security for power-on, Quick Lock, hard disk drive, and SCU program

System View

Below are figures that identify the components of the computer, followed by brief descriptions.

Right-Side

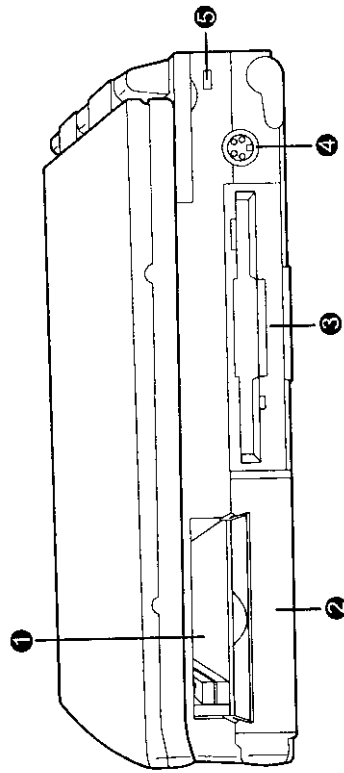


Figure 1-1. Right-Side View

Ref. Component	Function
❶ PC Card Slots	Accept one Type III PC card or two Type II or Type I PC cards. (See also page 2-17.)
❷ Battery Pack	The internal power source for the computer. (See also Chapter 3.)
❸ Floppy Disk Drive	Drive A of the computer, accepts a 3.5-inch diskette. The bay can also accommodate a secondary battery pack or LS-120 drive. (See also page 2-8.)
❹ S-VHS Connector ()	Connects a TV set, NTSC/PAL selectable, ideal for business presentation. (See also page 4-10.)
❺ Cable Lock Slot	Accepts Kensington-type cable lock for protecting the computer against theft. (See also page 2-20.)

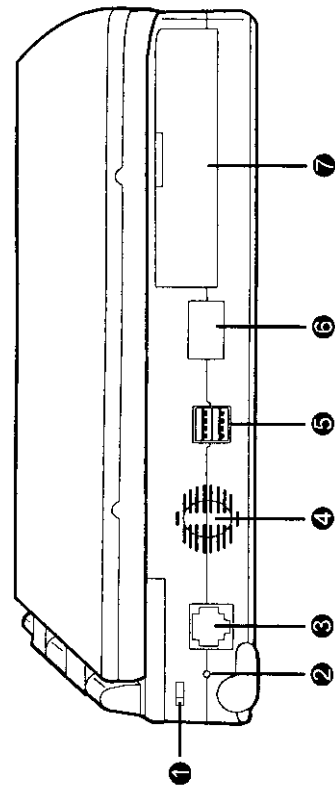


Figure 1-2. Left-Side View

Ref. Component	Function
❶ Cable Lock Slot	Accepts Kensington-type cable lock for protecting the computer against theft. (See also page 2-20.)
❷ Power Shutdown Switch	Used to shut down the computer when the system hangs and the power button fails to function.
❸ RJ-45 LAN Connector ()	Connects the network cable. (See also page 2-15.)
❹ Ventilation Openings	Should never be blocked.
❺ USB Connectors ()	Connect USB devices. (See also page 4-8.)
❻ IR (infrared) Connector	Allows wireless communications with an IR-compliant device; supports SIR, FIR, and ASK standards. (See also page 4-7.)
❼ Hard Disk Drive	Drive C of the computer. (See also page 2-9.)

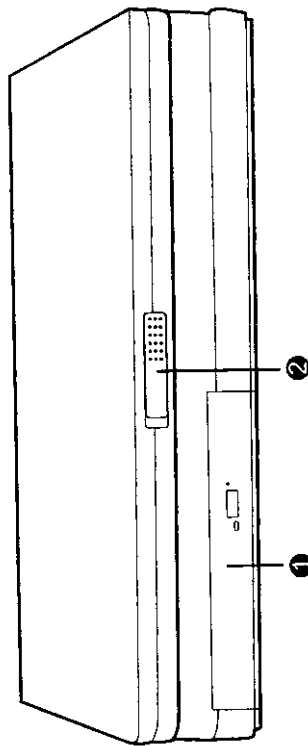


Figure 1-3. Front View

Ref. Component	Function
❶ CD-ROM Drive	Usually configured as drive D of the computer, accepts a compact disk. (See also page 2-11.)
❷ Cover Latch	Locks the top cover. To open the cover, slide the latch toward the right and lift the cover.

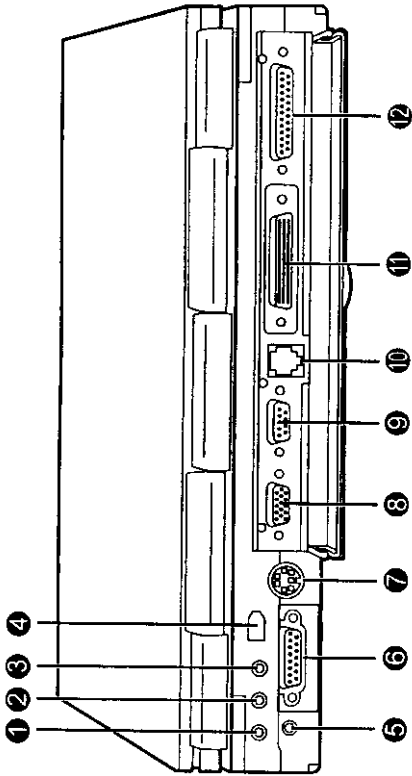


Figure 1-4. Rear View

Ref.	Component	Function
1	Microphone Jack ()	Connects an external microphone. (See also page 4-9.)
2	Stereo Line-In Jack ()	Connects an audio device such as a Hi-Fi set, radio set, and CD player for the input of sound. (See also page 4-9.)
3	Stereo Speaker Jack ()	Connects stereo headphones or external stereo speakers for the output of sound. (See also page 4-9.)
4	1394 Connector ()	On select models only, connects a 1394 device. (See also page 4-12.)
5	AC Power Jack ()	Connects the AC adapter. (See also page 1-13.)
6	MIDI/Game Connector ()	Connects a MIDI device or joystick. (See also page 4-11.)

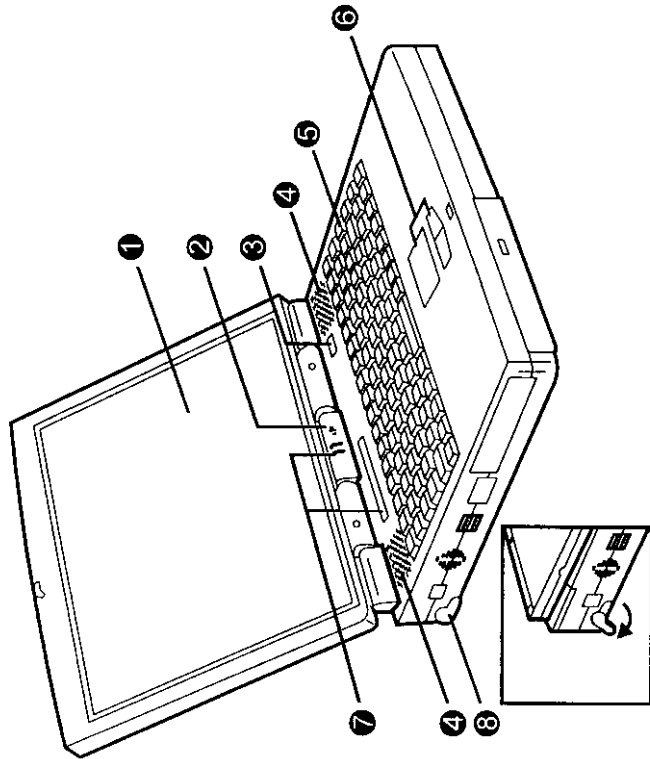


Figure 1-5. Top-Open View

Ref. Component	Function
1 LCD	Displays the output of the computer on the screen. (See also page 2-13.)
2 Microphone	Records voice or sound. Will be disabled if an external microphone is connected.
3 Power Button	Turns the computer power on or puts the computer into suspend mode. (See also pages 3-10 and 5-8.)
4 Stereo Speakers	Plays voice or sound. Will be disabled if external speakers are connected.

5 Keyboard	Computer input device. (See also page 2-3.)
6 Touchpad	Pointing device of the computer. (See also page 2-5.)
7 Indicator Panel	Displays the status indicators of the computer. (See also page 2-2.)
8 Legs	Tilts the computer, both for comfortable typing and ventilation.

Preparing the Computer for Operation

The computer runs on either external AC power or the rechargeable battery power. For first time operation, you are advised to connect the AC adapter for external power.

Installing the Battery Pack

The battery pack comes separately. Before you begin to use the computer, you need to install the battery pack.

Follow this procedure to install the battery pack:

1. Make sure the computer is not turned on or connected to AC power.
2. Carefully turn the computer upside down.
3. Slide the locking latch to the unlocked position and remove the bay cover.
4. Slide the battery pack into the bay.

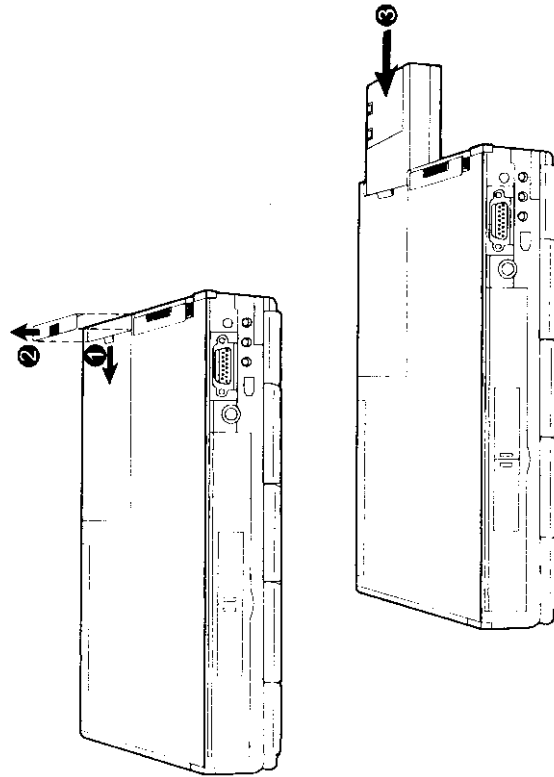


Figure 1-6. Installing the Battery Pack

5. Replace the cover. The locking latch should click into the locked position.

Connecting to AC Power



Use only the AC adapter supplied with the computer. Using incorrect AC adapters will damage the battery pack and the computer.

1. Make sure the computer is turned off.
2. Plug the DC power cord of the AC adapter into the AC power jack on the rear of the computer.
3. Plug the female end of the AC power cord into the AC adapter and the male end into an electrical outlet.

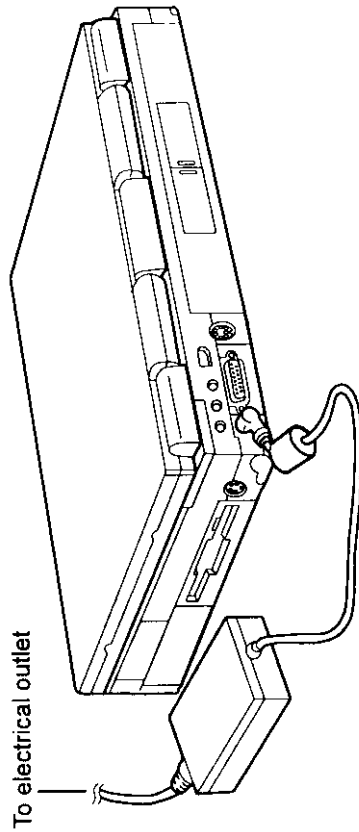


Figure 1-7. Connecting the AC Adapter

After the AC adapter is connected, the AC power indicator () lights up, indicating that power is being supplied from the electrical outlet to the AC adapter and to your computer. When the battery indicator () flashes, it means that the AC adapter is charging the battery.



When disconnecting the AC adapter, unplug from the electrical outlet first and then from the computer. A reverse procedure could damage the AC adapter or computer.

Using Battery Power

You can operate the computer using battery power only. However, before you first use battery power, you should initialize the battery pack. (See "Initializing the Battery Pack" in Chapter 3.)

For detailed information on using battery power, see Chapter 3.

Opening the Top Cover

To open the cover, slide the cover latch toward the right and then lift the cover.

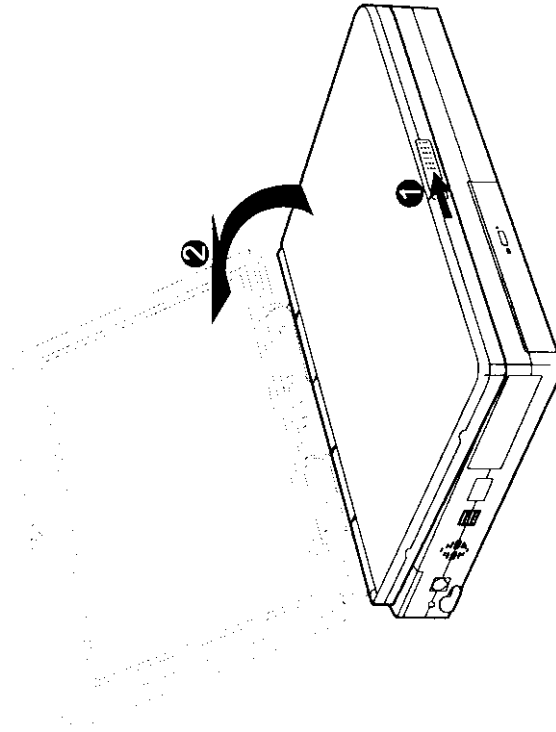


Figure 1-8. Opening the Top Cover

Starting Up

A computer starts up with an operating system (OS) such as MS-DOS, Windows, and OS/2. It automatically loads the OS after you turn it on. This process is also called booting.



You have to install an OS if it has not already been installed by your dealer.

Follow this procedure to start up the computer.

1. Make sure the computer is connected to an AC power outlet or the battery pack is charged.
2. Press the power button to turn on the computer. The power/suspend indicator () lights green to indicate that the power is on.

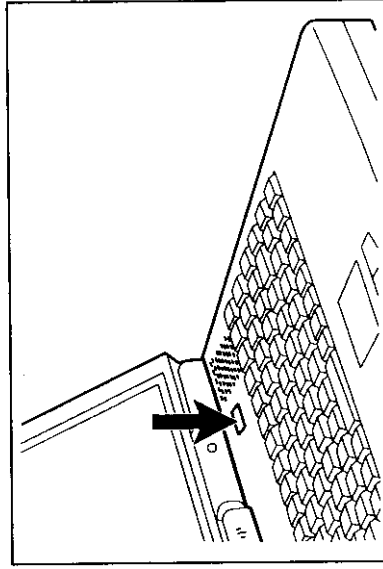


Figure 1-9. Power Button

3. Each time the computer is turned on, it performs a Power-On Self Test (POST). If POST detects any error, you will be asked to reconfigure the computer using the SCU program. (See Chapter 5 for information on SCU.)
4. When POST successfully completes the check, the computer first tries to boot from drive A, C, or the CD-ROM depending on the "Boot Device" setting in the SCU program. (Default setting is *Hard Disk C.*)



During booting up, you can change the booting device by pressing [Space] bar the moment the message "System will Boot from C:, Press <Space> to change Boot Device or Run Setup" appears at the bottom of the screen.



As a precaution, always boot from drive C. If you are expressly booting from drive A, make sure the diskette is virus free.

5. After booting up, the computer is ready to execute any command.

Adjusting the Display

You attain display clarity by:

- Tilting the cover forward or backward for a clear viewing position.
- Adjusting the brightness of the display by pressing [Fn]+[F9] or [Fn]+[F10].

Installing Software Drivers

A driver CD and/or supplement diskettes are supplied with your computer. You need to install drivers for some special features of your computer to take effect. (See Chapter 6 for information on the drivers.)

Turning Off the Computer



Do not turn off the computer when any disk drive indicator is on. You may lose your data by doing so.

1. Make sure to save your data before exiting the program.
2. Remove any diskette and CD-ROM.
3. With operating systems such as Windows 95 and OS/2 that provide the "Shut Down" command, simply select this command. The computer will turn off automatically.

Otherwise, press the power button. The computer will enter Power-On-Suspend, Suspend-to-Disk, or power off mode depending on the

"Power Button Function" setting in the SCU program. (Default setting is PowerOn Suspend.)



If you have to turn the computer on again immediately after turning it off, wait for at least five seconds. Turning the computer rapidly off and on could cause damage to it.

4. Turn off the power of any connected external devices.
5. To close the top cover, tilt down the cover until the cover latch clicks into place.
6. To disconnect the AC adapter, unplug from the electrical outlet first and then from the computer.

Taking Care of the Computer

With good care, you will enjoy long and trouble free computer operation.

Computer Precautions

- Avoid a location subject to high humidity, extreme temperatures, mechanical vibration, direct sunlight, heavy dust, or magnetic fields.
- Keep all liquids away from the computer. Never place any beverage on top of the computer.
- Do not abruptly move the computer from a cold location to a warm one where the temperature difference exceeds 10°C (18°F). Doing so could cause condensation inside the unit and damage the storage media.
- Do not place heavy objects on top of the computer when it is closed as this may damage the display.
- Do not scratch the surface of the LCD screen.
- To protect the screen from dust, stains or finger contact, you could carefully attach a thin transparent plastic sheet (such as those used to protect a manuscript) to the inside lid of the computer.
- Never spray or wipe the screen with domestic cleaning fluid. When necessary, gently wipe it with a soft and damp cloth.
- When the external connectors are not in use, keep their covers closed to prevent possible damage caused by dirt or static electricity.
- To protect the computer from overheating, do not cover the ventilation openings on the computer.
- Turn off the computer and remove the battery pack before installing or removing a device.

Battery Precautions

- Keep the battery pack away from fire and water.
- Do not short-circuit the battery pack with conductors such as metal objects and liquids.
- Do not place the battery pack where the temperature exceeds 60°C (140°F).
- Do not attempt to disassemble the battery pack.

Traveling with the Computer

- Make sure the battery pack is fully charged.
- Make sure the computer is turned off and the top cover is securely closed.
- Use the AC adapter as the power source whenever possible.
- Hand-carry the computer. NEVER check it in as luggage.
- As an added precaution, before traveling with your computer, make a backup of all your important data on diskettes and bring them with you.
- Before traveling abroad with the computer, consult your dealer for the appropriate AC power cord to be used in the country of your destination.
- Make sure to take along with you a handy, but good quality, adapter plug, especially when traveling in Europe. This could be useful in hotels or when commuting by certain high speed trains with facilities for businessmen.

Operating Basics

This chapter gives detailed information on system components. If you are a novice user, this chapter helps you better understand the operation of the computer. If you are an advanced user, simply refer to a relevant section when you need specific information.

Indicator Panel

Above the keyboard is a small LCD for displaying status indicators of your computer; and above this small LCD are two LED indicators for displaying power status.

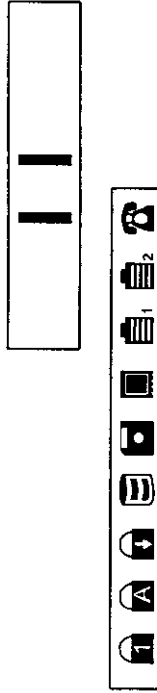


Figure 2-1. Indicator Panel

Descriptions of the indicators follow:

LED

-  **AC Power Indicator** lights green when the AC adapter is connected to the computer and an electrical outlet.
-  **Power/Suspend Indicator** lights green when the computer power is on and lights amber when the computer is in Power-On-Suspend mode.

LCD

-  **Num Lock Indicator** appears when the Num Lock key has been pressed to activate Num Lock.
-  **Caps Lock Indicator** appears when the Caps Lock key has been pressed to activate Caps Lock.
-  **Scroll Lock Indicator** appears when the Scroll Lock key has been pressed to activate Scroll Lock.
-  **Hard Disk Drive Indicator** appears when the hard disk drive or CD-ROM drive is in use.
-  **Floppy Disk Drive Indicator** appears when the floppy disk drive is in use.
-  **PC Card Indicator** appears when the PC card is in use.

-  **Battery Indicator** appears when the battery is inserted. The letters 1 and 2 indicate primary and secondary battery pack respectively. The number of bars (1 to 4) inside the frame indicates the estimated battery charge. One glowing bar indicates 25% capacity.

 **Fax/Modem Indicator** appears when the fax/modem is in use.

Keyboard

Your computer keyboard has all the functions of a standard AT-enhanced keyboard plus several keys specific to your computer. Special computer keys are described in this section.

Numeric Keypad

The numeric keypad is embedded in the keyboard as shown below. When Num Lock is on, these numeric keys take effect.

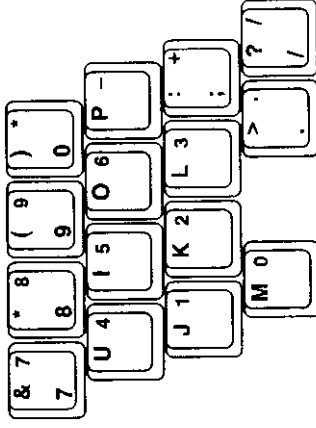


Figure 2-2. Numeric Keypad



If you want Num Lock to be automatically activated after the computer is turned on, enable the "Keyboard Numlock" item in the SCU program. (See the "Startup Menu" section in Chapter 5.)

Windows 95 Keys

A Windows 95 keyboard has a Windows Logo () key and an Application Logo () key. Each key is used in combination with other keys to perform software-defined functions.

Hot Keys

Hot keys are two keys you press simultaneously to activate special computer functions. They are:

- [Fn]+[F1]  Activates Power-On-Suspend mode. Pressing any key will end the mode. If the computer remains in Power-On-Suspend mode until the timer for Suspend-to-Disk mode times out, the computer enters Suspend-to-Disk mode. (See the "Power Management" section in Chapter 3 for more information.)
- [Fn]+[F2]  Activates Quick Lock that locks the keyboard. To unlock, you need to enter the password. (To set a password and enable Quick Lock, see the "PassWord Menu" section in Chapter 5.)
- [Fn]+[F4]  1. Cycles the display output through the LCD screen, external CRT monitor, and simultaneous (display on both) if an external monitor is connected.
2. Toggles the display output between the LCD screen and the TV if a TV is connected.
- [Fn]+[F5]  Toggles muting on and off. When you mute the computer, there is no sound from the internal or external speakers (if the latter are connected).
- [Fn]+[F7]  Increases the sound volume
- [Fn]+[F8]  Decreases the sound volume.

- [Fn]+[F9]  Increases the LCD brightness.
- [Fn]+[F10]  Decreases the LCD brightness.

Touchpad

The touchpad is a pointing device similar to a mouse. With the touchpad, you can easily control the movement of the pointer (or cursor) on the screen and make selections with the two buttons.

Using the Touchpad

To use the touchpad, place your thumb or forefinger on the touchpad. As you slide your fingertip across the pad, the pointer on the screen moves accordingly.

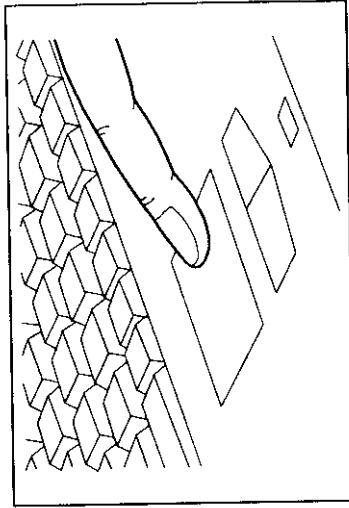


Figure 2-3. Using the Touchpad

Here are common mouse terms and what you should do.

Customizing the Touchpad

You may want to customize the touchpad. For example, a left-handed user can swap the buttons so that the right button will do the work of the left button, and vice versa. You can also change the size of the on-screen pointer, the speed of the pointer, and so on.

If you are using Windows, double-click the "Mouse" icon in the Windows "Control Panel". The "Mouse Properties" window allows you to change various configurations. Instead of Windows, you can also use the touchpad software supplied with your computer to change the configuration. (See Chapter 6 for information on drivers.)

Term	Action
Point	Slide your fingertip so that the pointer points to the selection on the screen.
Click	Press and release the button (usually left button). * An alternative and faster way of pressing the left button is to tap your fingertip gently anywhere on the rectangular pad.
Double-click	Press and release the button (usually left button) twice in quick succession. * An alternative and faster way of pressing the left button twice is to tap your fingertip twice in quick succession.
Drag and drop	Press and hold the button (usually left button), then move your fingertip. When you finish dragging your selection to its new location, release the button. * You can also perform drag-and-drop using the touchpad as a large left button. Position the cursor over the item that you want to drag. Gently tap twice on the pad. On the second tap, keep your fingertip in contact with the pad and slide your fingertip across the pad to drag the selected object to the destination. Then, lift your fingertip from the pad and the selected object will drop into place.

*** Table Note:** If you swap the left and right buttons, "tapping" on the pad as an alternative way of pressing the left button will be invalid

 *If the touchpad seems to become less sensitive, cleaning the pad may solve the problem. Clean by using adhesive tape to remove the dust and grease on the pad surface.*

Floppy Disk Drive

Your computer has a high-density 3.5-inch floppy disk drive -- Drive A. The floppy disk drive allows you to install new programs from diskettes into a computer or to store data on diskettes so you can transfer data from one computer to another.

The floppy disk drive bay is a multi-purpose bay. You can replace it with a secondary hard disk drive or LS120 drive. (See the "Replacing the Floppy Disk Drive" section in Chapter 4 for removal instructions.)

Inserting and Removing a Diskette

- 

1. *Never turn off or reset the computer when the floppy disk drive indicator is on.*
 2. *Always store your diskettes in a clean container in a safe place to protect them from the environment and magnetic fields.*

To insert a diskette, hold it with the arrow facing up and towards the drive. Slide the disk into the drive until it clicks into place.

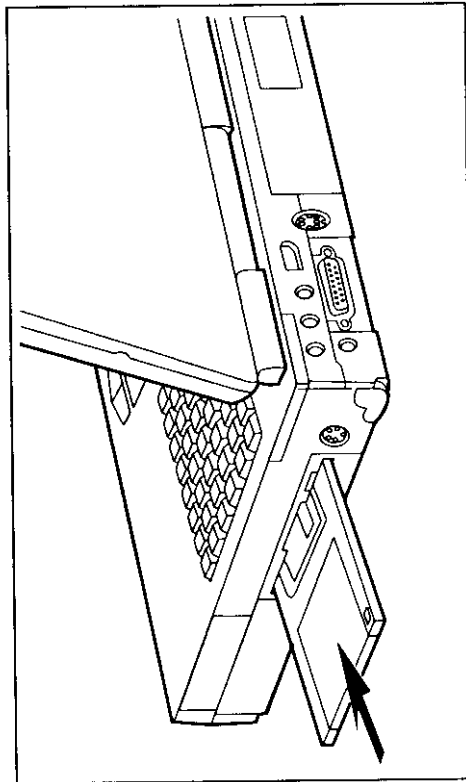


Figure 2-4. Inserting a Diskette

To eject a diskette, first make sure that the floppy disk drive indicator is off, and then press the eject button on the drive. The diskette will partially pop out of the drive. Slide out the diskette and store it properly.

Formatting a Diskette

A diskette must be formatted before use. To learn how to format a diskette, see your operating system manual.

Hard Disk Drive

Your computer has a 2.5-inch IDE (Integrated Drive Electronics) hard disk drive -- Drive C.

A hard disk drive contains non-removable magnetic platters. When compared with a diskette, it can read and write data much faster and has a much larger storage capacity.

- 

1. *Regularly back up your data files from the hard disk drive to diskettes.*
 2. *Never turn off or reset the computer when the hard disk drive indicator is on.*
 3. *Never try to remove or install the hard disk drive while the system power is on. Doing so can result in loss of data, and can damage the system and the hard disk drive.*

Removing the Hard Disk Drive

The hard disk drive is packaged in a module so that you can easily remove it. For safety reasons, you may want to temporarily remove the hard disk drive and store it in a safe place after you finish using the computer.

Follow this procedure to remove and replace the hard disk drive module.

1. Make sure the computer is turned off.
2. Open the hard disk drive compartment cover.
3. Pull the handle to slide the hard disk drive out of the compartment.

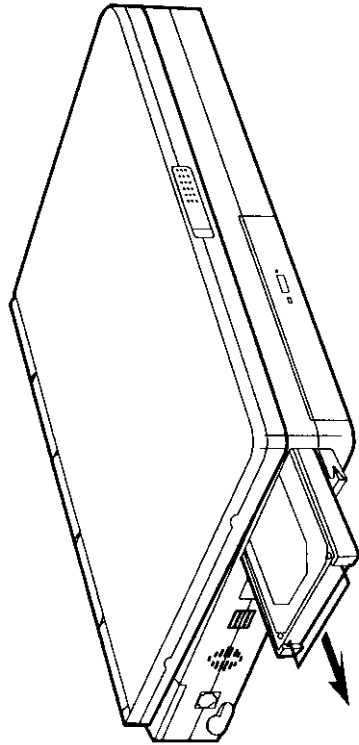


Figure 2-5. Removing the Hard Disk Drive Module

4. To replace the hard disk drive, slide the hard disk drive back into the compartment.
5. Close the compartment cover.

CD-ROM Drive

Your computer has a CD-ROM drive, usually configured as drive D.

A CD-ROM drive uses removable 5.25-inch silver CD-ROM disks which look like standard music CDs. A CD-ROM disk is an ideal medium to use for distributing multimedia software because of its large storage capacity (up to 600MB).

Inserting and Removing a CD



1. When inserting a CD, do not use force.
2. Make sure the CD is correctly inserted into the tray, then close the tray.
3. Do not leave the CD tray open. Also, avoid touching the lens in the tray with your hand. If the lens becomes dirty, the CD-ROM may malfunction.
4. Do not wipe the lens with materials with rough surface (such as paper towel). Instead, use a cotton swab to gently wipe the lens.

FDA regulations require the following statement for all laser-based devices:

"Caution, Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure."

Follow this procedure to insert or remove a CD.

1. Turn on the computer.
2. Press the eject button and the CD tray will slide out. If the tray only partially slides out, then gently pull it out completely.
3. To insert a CD, hold it with the label facing up and then place it on the tray.



Depending on your CD-ROM drive model, the front panel of your CD-ROM drive may look slightly different from the one shown below.

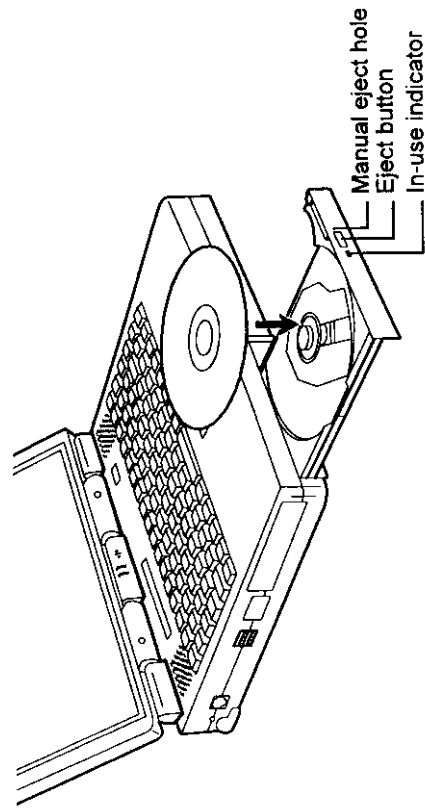


Figure 2-6. Inserting a CD

To remove a CD, hold the CD by its outer edge and lift it from the tray.

4. Slide the tray back into the drive bay. On some models, you can press the eject button to slide back the tray.

Manually Releasing a CD

Though unlikely, if you are unable to release the CD tray by pressing the eject button, you can manually release the CD using the following method:

1. Turn off the system.
2. Insert a small pointed device into the manual eject hole (see Figure 2-6) and push firmly to release the tray.
3. Pull the tray out completely, then remove the CD.

LCD Display

Your LCD (Liquid Crystal Display) has a default resolution of 800 x 600 dots in 64K colors. You can select the resolution and the number of colors using the video drivers. (See Chapter 6 for information on the drivers.)

The resolutions and colors supported by your LCD are:

Resolution	Number of Colors
640 x 480	256 64K
800 x 600	256 64K
1024 x 768	256 64K

Power Management is implemented in the LCD in the following ways:

- The screen goes blank when no activity has taken place within a given period of time. The screen image returns when any activity is detected.
- When you close the LCD display,
 - If an external monitor is not connected, the computer will enter Power-On-Suspend mode. When you next open the LCD display, the computer will resume.
 - If an external monitor is connected, the display output is switched to the monitor. When you next open the LCD display, you can switch the display output back by pressing [Fn]+[F4].

Audio Subsystem

The audio subsystem of your computer features 16-bit 3D sound, FM synthesizer, and wave table. You can easily play, record, and edit voice, sound, and music.

A microphone (Figure 1-5 ②) and stereo speakers (Figure 1-5 ④) are built into the computer. In place of the internal microphone and speakers, you can use external audio equipment with your computer. (See the "Connecting Audio Equipment" section in Chapter 4 for information.)

Networking

Your computer incorporates the 10/100 Base-T LAN (Local Area Network) capabilities to make it ready for connection to a network environment using Ethernet protocol.

Connecting the Network Cable

1. Turn off the computer.
2. The RJ-45 connector on the left side of the computer can be connected to a type 1 STP or category 5 UTP cable.

Connect the cable connector to the RJ-45 LAN connector on the left side of the computer.

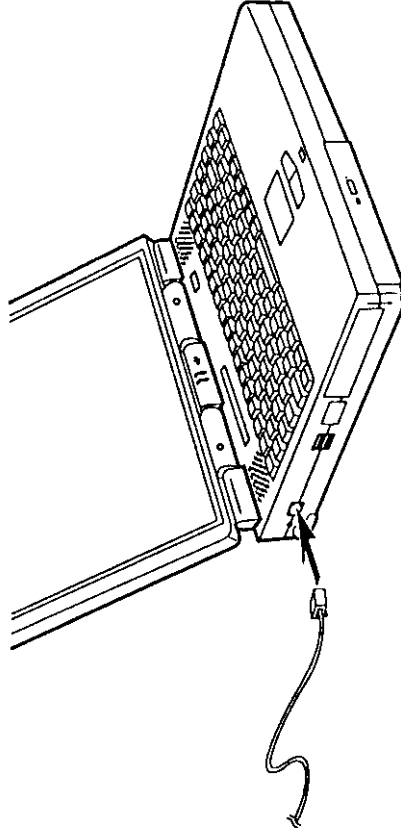


Figure 2-7. Connecting the Network Cable

3. Turn on the computer.

Enabling/Disabling the LAN Connection

If your computer is connected to LAN, there will be 5 to 20 seconds time lag before Windows starts to work when resuming from suspend mode. The time-delay is spent by Windows to check and "wake up" all hardware and re-connect the network when resuming from low power

mode. If you want to minimize the time lag, you can disable the LAN connection since the LAN function can be disabled or enabled easily and dynamically in Windows. The following description shows the procedures for disabling or enabling LAN through Windows.

1. Click "Start", "Setting", and then "Control Panel".
2. Double click the "System" icon.
3. Click "Device Manager".
4. Double click "Network Adapter".
5. Double click "Realtek RTL8139 PCI Fast Ethernet".
6. Select "General".
7. Select "Disable in this hardware profile" in "Device Usage" dialog to disable LAN, or not to select "Disable in this hardware profile" to enable LAN.
8. Restart the computer.

PC Cards

PC cards, sized like credit cards, are inserted into the PC card slots to provide specific functions such as memory, fax/modem, networking, and PCMCIA Type III 1.8-inch hard disk drive.

PC cards that conform to the PCMCIA 2.1/3.0 standard can be used with your computer. Two advanced interfaces are also supported: CardBus and ZV (Zoomed Video) port. CardBus and ZV port standards are developed to provide high-speed data transmission required by applications such as full-motion video, video capture, and networking.

Inserting and Removing a PC Card

1. Locate the PC card slot cover on the right side of the computer. Open the cover to access the slots. The upper slot is Slot 0 and the lower Slot 1.
2. To insert a PC card, with the label facing up, slide it into the appropriate slot until the eject button pops out.

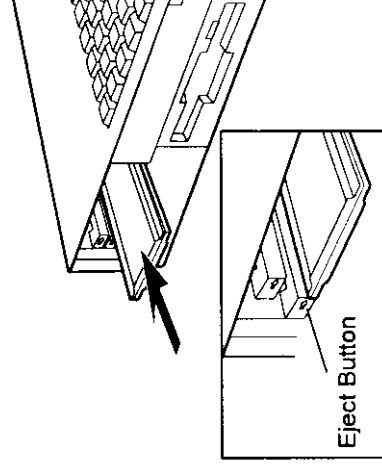


Figure 2-8. Installing a PC Card

- To remove a PC card, press the corresponding eject button. The card will pop out partially. Slide out the card and store it properly.
3. See the documentation supplied with your PC card for further instructions.

Modem Communications

Depending on the model, your computer may have the 56Kbps V.70 modem.

A modem allows you to transmit data, fax, and voice over phone lines.

Connecting to Phone Line

1. Turn off the computer.
2. Open the I/O compartment cover at the rear of the computer. Connect either end of the phone cable to the RJ-11 modem connector and the other end to the wall jack.

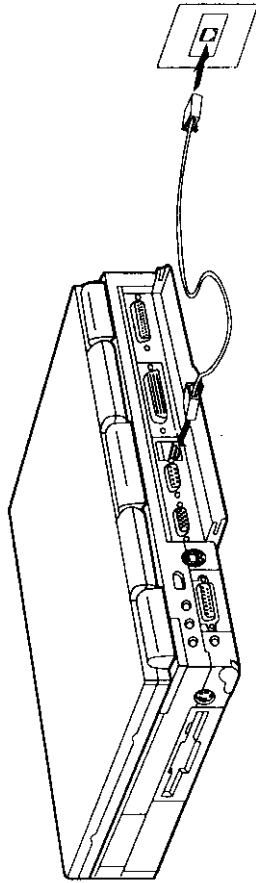


Figure 2-9. Connecting the Phone Cable

3. Turn on the computer.

Security

Safeguard your computer against theft and unauthorized access by using the password and mechanical lock.

Password

Some of the most advanced and original security features have been integrated in this computer to ensure the integrity at all times and in all circumstances, of the data stored on the hard disk.

This security system is implemented by an innovative 32 bit encryption algorithm ensuring absolute password integrity.

As a double security the password is "system exclusive" (saved in a special location) and at the same time imbedded in the hard disk drive itself. The hard disk can be used in other similar systems (provided permission to enter the host system is obtained) but it only answers to the original "user exclusive" password.

This unique feature means that even in the event of theft or tampering by an unauthorized user, your data or intellectual property remains intact and totally inaccessible.

The password protects your computer in the following ways:

- The computer will start up only with the password.
- The SCU program can be accessed only with the password.
- After [Fn]+[F2] has been pressed to activate Quick Lock, the keyboard can be unlocked only with the password.
- The hard disk drive can be accessed only with the password.

To set up the security feature, run the SCU program. (See the "PassWord Menu" section in Chapter 5.)



Point to Ponder...

It has been scientifically estimated that it would take at least 50 years for even the most astute mathematical intellect to decipher the algorithmic table devised to protect data on this computer.

! It is of utmost importance to save your password on a diskette and store it in a safe place. The professional user furthermore is strongly recommended to back up all important data (client base, corporate files, financial statements etc.) on a weekly basis or, even better, immediately after it has been generated.

Cable Lock

You can prevent theft by using the rectangular hole as an anchor point for a Kensington-type security cable. Use the cable to lock your computer to an appropriate location for security.

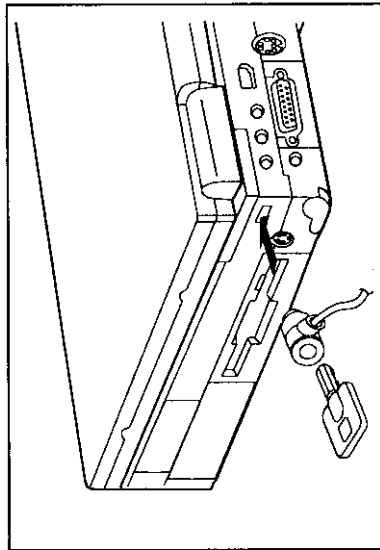


Figure 2-10. Using the Cable Lock

Battery and Power Management

This chapter gives information on using battery power. It also describes how the Power Management feature works to save power.

Battery Pack

The rechargeable battery pack supplies power to your computer when external power is not connected.

The average operating time of a battery pack is 2.5 hours for a Li-ion battery pack. The operating time can be prolonged if Power Management is activated. However, actual operating time can vary, depending on several factors; these could be, the Power Management settings, the software in use, the brightness of the display, and the system configuration.

If you wish to extend the operating time when using battery power, you can use an additional battery pack. (See the "Additional Battery Pack" section later in this chapter.)

Initializing the Battery Pack

To assure optimal performance, initialize a battery pack before you use it for the first time. Initialization means discharging and fully recharging twice. This procedure could take a few hours.

1. Make sure the AC adapter is not connected and the battery pack is installed.
2. Turn on the computer.
3. Press the space bar immediately so that the boot menu pops up.
4. Select the "Run SCU Setup" item using the arrow key and then press [Enter] to run SCU.
5. Leave the computer power on.
6. Wait until the battery is fully discharged and the power is off.
7. Connect the AC adapter to fully charge the battery pack.
8. Repeat steps 2 to 6.

 You cannot initialize two battery packs at the same time.

Recharging the Battery Pack

To recharge the battery pack, connect the AC adapter to the computer and an electrical outlet.

The battery indicator () flashes its frame () to indicate that the battery is being recharged. The bars inside the frame let you know the current percentage of the battery capacity. Each bar glows to indicate 25% capacity.

To ensure the battery pack is charged to its full capacity, it is advisable to keep the computer turned off during the recharging process. The battery is fully recharged when all four bars of the battery indicator glow and the frame stops flashing.

It takes, on average, 90 minutes to charge the battery pack to 80% of its capacity. Two or three more hours are needed to charge it fully.



1. *Recharging will not start if the battery's temperature is below 0°C (32°F) or above 45°C (113°F).*
2. *The recharging process will stop if the battery temperature rises above 60°C (140°F). It will continue when the temperature drops.*
3. *During recharging, do not disconnect the AC adapter before the battery has been fully charged; this could result in a prematurely charged battery.*
4. *After the battery has been fully recharged, do not immediately disconnect and reconnect the AC adapter to charge it again. Doing so may damage the battery.*

Checking the Battery Level

 *The battery level cannot be measured physically. Any reading on a battery meter or gauge is only an estimation. This, however, could be less than accurate due to factors such as temperature and a long period of storage. If the difference between the displayed battery level and the actual operating time is too large, initialize the battery pack as described earlier in this chapter to correct the problem.*

By Battery Indicator

The bars in the battery indicator () show the estimated battery charge. Each bar glows to indicate 25% capacity.

By Operating System

Some operating systems, such as Windows, displays a battery meter that indicates the battery level.

By Gas Gauge

A “gas gauge” on the battery pack itself also indicates estimated battery charge. If the battery pack is not installed and you want to check the level of the battery, you can do so by noting the number of lighted green segments. These indicate the relative percentage of the battery charge. The battery pack is fully discharged when a lighted green segment no longer appears.

Additional Battery Pack

 *There is danger of explosion if the battery is incorrectly replaced. Replace the battery only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to the manufacturer's instructions.*

If you wish to prolong operating time on battery power while traveling, an optional extra fully charged battery pack is necessary.

This additional battery pack can either be installed in the computer as the secondary battery pack or used to replace the primary discharged battery pack.

You must use a Duracell DR-202S Li-ion battery pack or an equivalent one.

Installing the Secondary Battery Pack



1. *As a special bracket is required to install the secondary battery pack, you are advised to purchase the optional battery pack from an authorized dealer.*
2. *When the secondary battery pack is installed, recharging and discharging always begins with the primary battery pack.*

The additional battery pack can be installed in the floppy disk drive bay as the secondary battery pack. For installation instructions, see the “Replacing the Floppy Disk Drive” section in Chapter 4.

Replacing the Primary Battery Pack

1. Make sure the computer is not turned on or connected to AC power.
2. Carefully turn the computer upside down.
3. Slide the locking latch toward the unlocked position and remove the compartment cover.

4. Pull the battery pack out of the compartment.

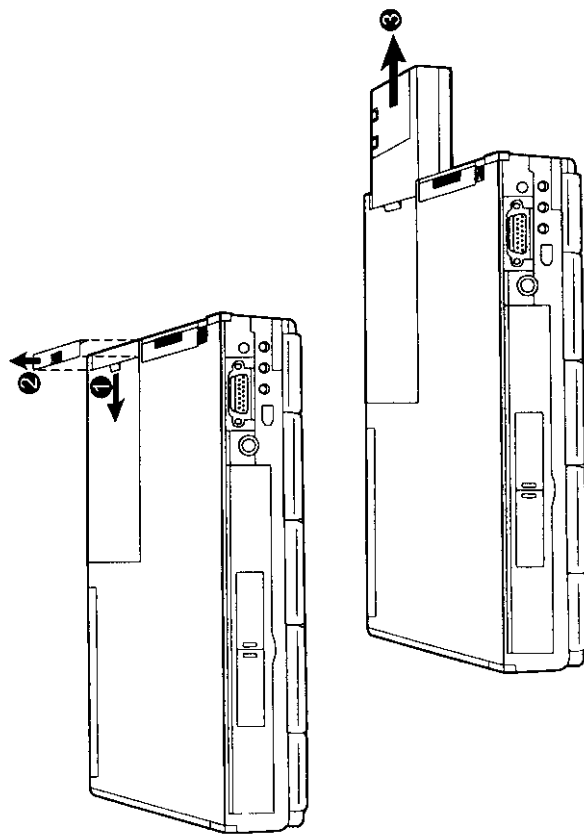


Figure 3-1. Removing the Primary Battery Pack

5. Slide the new battery pack into the compartment.
6. Replace the compartment cover. Make sure the locking latch is in the locked position.

Low Battery

When a single bar begins to flash in the battery indicator, battery power has reached the "low" level and only ten minutes of computer operation remains.

At this stage, make sure to save your data then connect the AC adapter or turn off the computer.

Battery operating time depends on functions performed. If, for example, the audio subsystem, PC card, or disk drives are in use, then the battery expends itself sooner.

If no appropriate action is taken within about three minutes of the battery reaching "low" level, the computer automatically suspends to disk and turns off.



1. If the suspend-to-disk partition does not exist on your hard disk, the computer will not be able to suspend to disk.
2. If you fail to save data when the battery power runs out, then you lose it.

Power Management

Your computer's Power Management feature saves power by automatically reverting to low power mode when the system is inactive for some time. The computer returns to full power mode whenever activity is detected such as when a key is pressed.

This section describes how Power Management works. To customize Power Management, you need to run the SCU program. (See the "PowerManagement Menu" section in Chapter 5 for instructions.)

Local Power Management

Local Power Management is "device-level" power saving. When a single device is inactive for some time, it automatically shuts down or is slowed down to reduce power consumption. The device reactivates when next accessed.

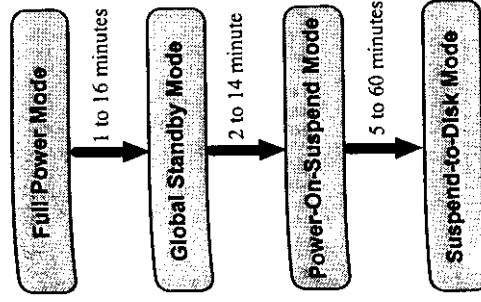
For your computer, the single devices under its control are:

- **LCD screen**
The screen blanks out after a period of inactivity.
- **Hard disk drive**
The hard disk drive "spins down" after a period of inactivity.

Global Power Management

Global Power Management is system-level power saving. When the system is inactive for some time, it automatically enters low power mode to reduce power consumption. The computer will resume when a system activity is detected. You can press any key to resume computer operation.

Low power modes work in the following way:



In **Global Standby** mode, the CPU clock stops and several system devices enter lower power mode.

In **Power-On-Suspend** mode, more system devices enter lower power mode. The power/suspend indicator () lights amber in Power-On-Suspend mode. To end Power-On-Suspend mode, you need to press a key.

When **Suspend-to-Disk** takes effect, the system saves the current status to a "suspend-to-disk partition" on the hard disk. The computer then turns off automatically. When you next turn on the computer, it retrieves the status from the suspend-to-disk partition, so that your computer is returned to exactly where you were at the time of suspension.

Suspend-to-Disk is convenient in the sense that you do not have to close all the software applications before turning off, and, when you next turn on the computer, the software applications are ready for use in a matter of seconds.



1. Whenever the computer is turned on, it checks the suspend-to-disk partition. If the partition does not exist and there is enough hard disk space left, the computer automatically creates the partition.
2. If there is no suspend-to-disk partition, you can not use the Suspend-to-Disk function.
3. You can verify the suspend-to-disk partition using the SCU program. (See the "Utility Menu" section in Chapter 5.)

Manually Entering Low Power Mode

In addition to the timer setup in the SCU program that causes the computer to enter lower power mode automatically, you can manually initiate lower power mode at any time in one of the following ways:

- **By pressing [Fn]+[F1]**
This will activate Power-On-Suspend mode. If the computer remains in Power-On-Suspend mode until Suspend-to-Disk mode timer times out, the computer enters Suspend-to-Disk mode.
- **By closing the top cover**
If an external monitor is not connected, closing the top cover causes the computer to enter Power-On-Suspend mode. When you next open the LCD display, the computer operation resumes. If the top cover remains closed until the Suspend-to-Disk mode timer times out, the computer enters Suspend-to-Disk mode.
- **By pressing the power button**
When you press the power button, the computer enters Power-On-Suspend or Suspend-to-Disk mode depending on the "Power Button Function" setting in the SCU program. (Default setting is *PowerOn Suspend*.) If the computer remains in Power-On-Suspend mode until the Suspend-to-Disk mode timer times out, the computer enters Suspend-to-Disk mode.

 *It's a good habit to save your data before you manually initiate low power mode.*

System Expansion

This chapter gives information on connecting and using additional devices to expand the capabilities of your computer.

Peripherals

I/O connectors on the computer allow you to connect external peripherals described in this section.

Connecting an External Monitor

You can connect an external monitor for the benefits of a larger CRT display screen when in the office or at home.

Follow these steps to connect a VGA monitor:

1. Make sure the computer is not turned on.
2. Open the I/O compartment cover on the rear of the computer.
3. Plug the monitor's D-type signal connector to the computer's external monitor connector.

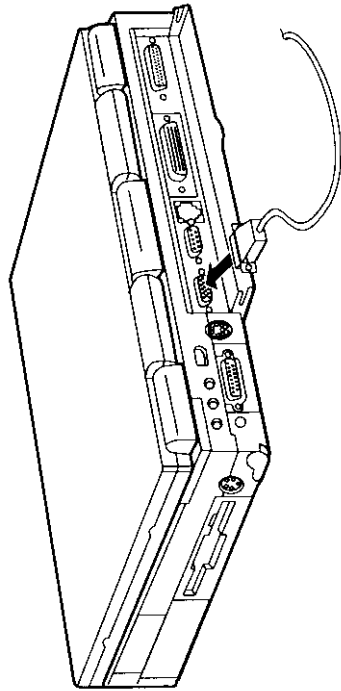


Figure 4-1. Connecting an External Monitor

4. Plug one end of the monitor's power cord into the power socket on the monitor and the other end into an electrical outlet.
5. To use the monitor, turn on the monitor before turning on the computer.
6. Simultaneous display should take effect, meaning screen images will appear on both the monitor and the LCD. You can then switch

the display to the monitor only, the LCD only, or simultaneous display, by pressing [Fn]+[F4].

Your computer supports up to 1600 x 1200 resolution on an external monitor. You can select the resolution and the number of colors using the video drivers. (See Chapter 6 for information on the drivers.)

The resolutions and colors supported by your computer for the monitor are:

Resolution	Number of Colors
640 x 480	256 64K 16M
800 x 600	256 64K 16M
1024 x 768	256 64K 16M
1280 x 1024	256 64K
1600 x 1200	256



If you are using simultaneous display on both the LCD and monitor screens, the maximum resolution is the one supported by the LCD.

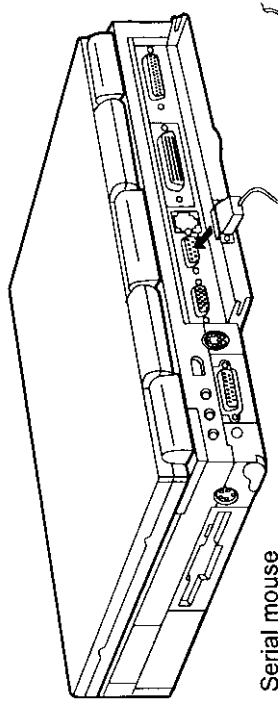
Connecting a Mouse

You can use a mouse instead of the touchpad with the computer.

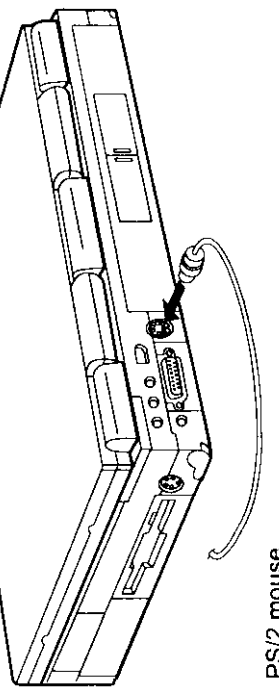
Follow these steps to connect a mouse:

1. Make sure the computer is not turned on.
2. If connecting a serial mouse, plug the mouse cable to the serial connector at the rear of the computer.

If connecting a PS/2 mouse, plug the mouse cable to the keyboard/mouse connector at the rear of the computer.



Serial mouse



PS/2 mouse

Figure 4-2. Connecting a Mouse

3. Turn on the computer. You can now use the mouse. The internal touchpad is automatically disabled.

Connecting an External Keyboard

You can connect a PS/2 keyboard to your computer to enjoy the benefits of a full-size keyboard.

Follow these steps to connect a PS/2 keyboard:

1. Make sure the computer is not turned on.
2. Plug the keyboard cable into the keyboard/mouse connector at the rear of the computer.

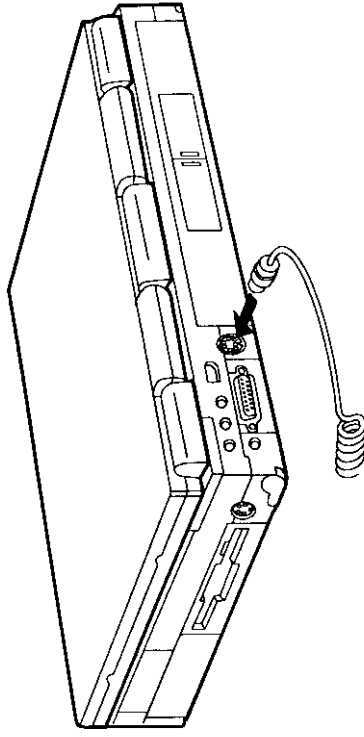


Figure 4-3. Connecting an External Keyboard

3. Turn on the computer. You can now use the external and internal keyboards at the same time.

Connecting a Parallel Printer

Follow these steps to connect a parallel printer:

1. Make sure the computer is not turned on.
2. Open the I/O compartment cover at the rear of the computer.
3. Plug the printer cable into the parallel connector at the rear of the computer.

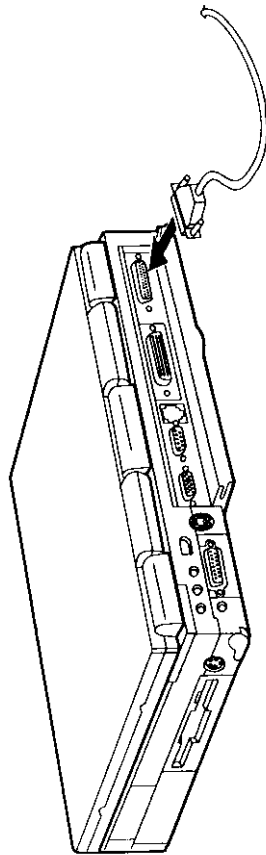


Figure 4-4. Connecting a Printer

4. To use the printer, turn on the printer and then the computer.

Connecting an IR Device

The IR (infrared) port allows wireless communications. You can transfer data between two infrared-equipped computers or transfer data to an IR device such as an infrared printer.

An IR device complying with IrDA 1.0 (SIR), IrDA 1.1 (FIR), or ASK standard can be used with your computer.

Follow these steps to connect an IR device:

1. Position the device so that its IR port faces the IR port of the computer within a distance of 1-meter and at a ± 15 -degrees angle.

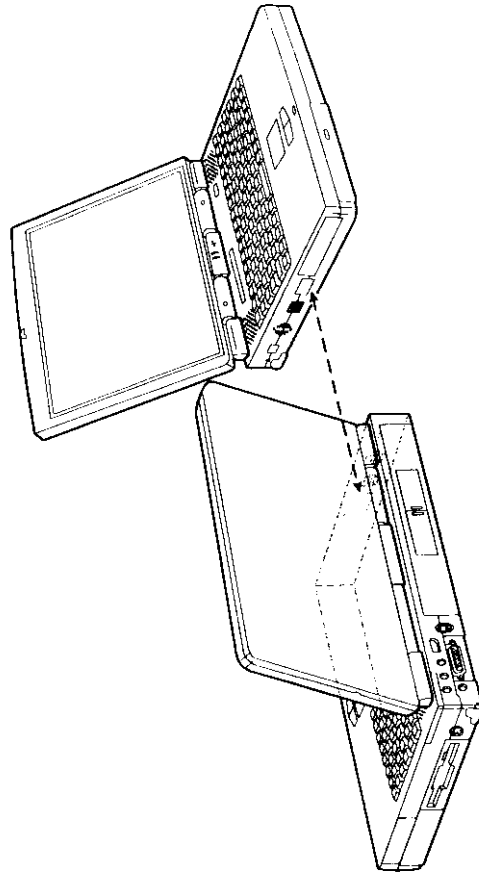


Figure 4-5. Connecting an IR Device

2. To take advantage of IR communications, you need third party software.

Connecting a USB Device

The USB (Universal Serial Bus) standard gives you the benefits of a single interface for multiple devices when low-to-medium speed peripherals are concerned. Through the USB, peripherals can be connected or disconnected without turning off the computer.

Follow these steps to connect a USB device:

1. Plug the cable into the USB connector on the left side of the computer.

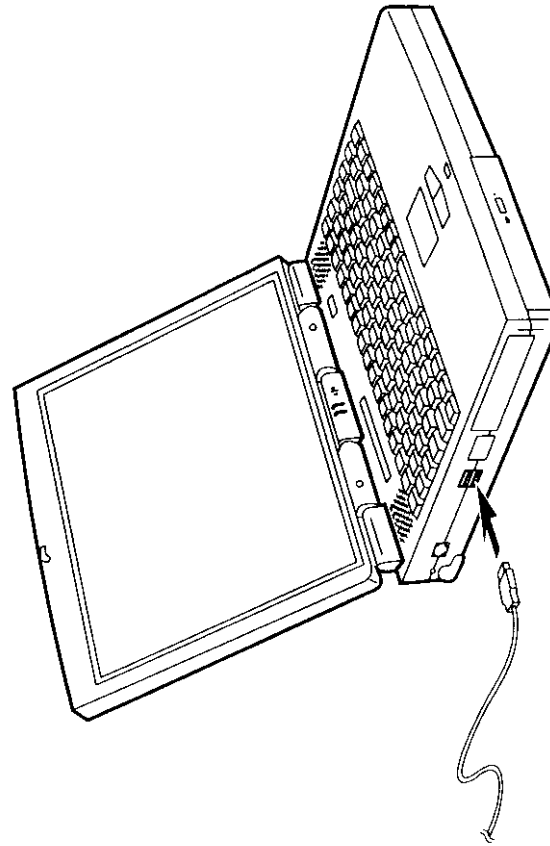


Figure 4-6. Connecting an USB Device

2. Run the SCU program to enable the "Enable USB Device" item. (See the "Device Menu" section in Chapter 5.)

Connecting Audio Equipment

Follow these steps to connect audio equipment:

1. Make sure the computer is not turned on.
2. You may need an audio cable for the connection. There are three audio jacks at the rear of your computer:
 - An external microphone, for use in place of the computer's built-in microphone, can be plugged into the **microphone jack**.
 - The **stereo line-in jack** can be connected to the line-out jack of any Hi-Fi set, radio set, CD player, synthesizer, walkman, etc.
 - The **stereo speaker jack** can be connected to the line-in jack of a set of headphones, external speakers with amplifier, or an audio recording device.

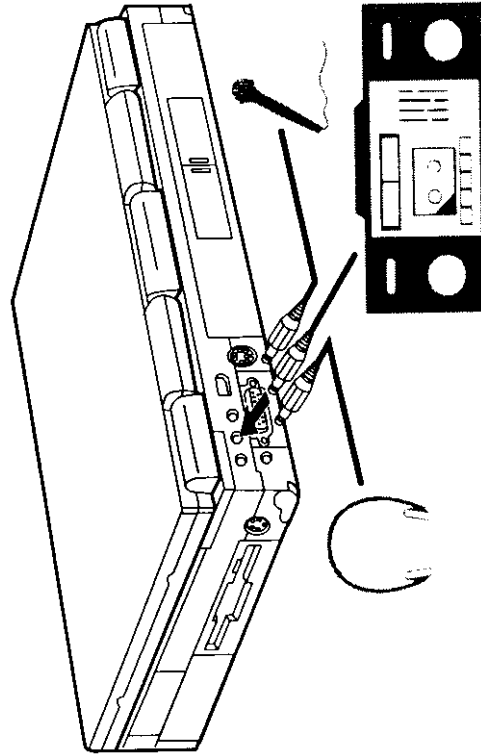


Figure 4-7. Connecting Audio Equipment

Connecting a TV

Follow these steps to connect a TV:

1. Make sure the computer is not turned on.
2. You need an S-VHS video cable for connection. Plug the video cable connector into the S-VHS connector on the left side of the computer.

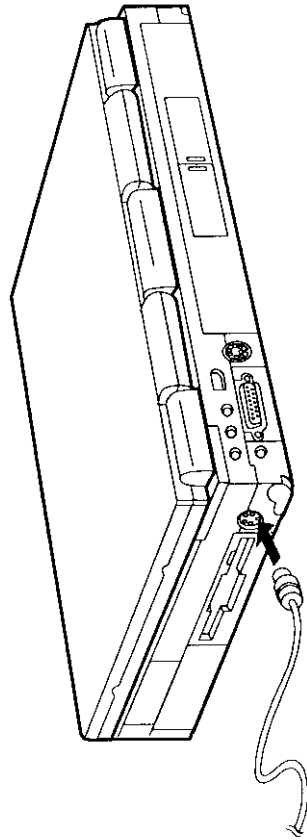


Figure 4-8. Connecting TV

3. Plug the other end into the S-VHS connector on the TV.
4. Power on the TV.
5. Turn on the computer and run the SCU program. Set the "Set TV Mode" item to *NTSC* or *PAL* (*PAL* for use in the UK and Europe) according to your area. Save and exit the SCU program. The computer restarts.
6. Switch the TV to the video mode.

Connecting a MIDI Device or Joystick

Follow these steps to connect a MIDI device or joystick:

1. Make sure the computer is not turned on.
2. Plug the device cable into the MIDI/joystick connector at the rear of the computer.

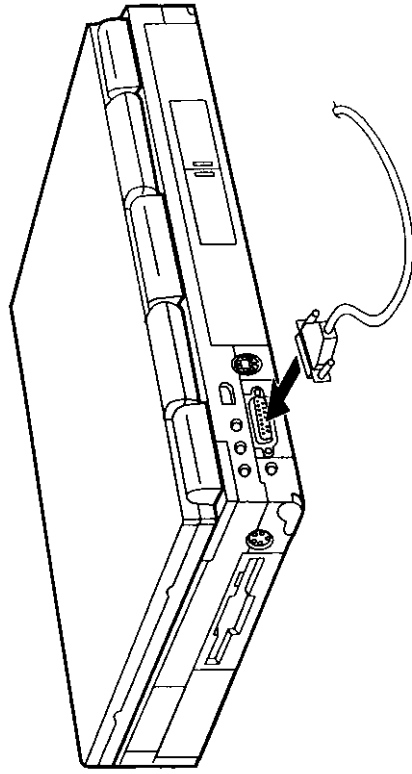


Figure 4-9. Connecting a MIDI Device/Joystick

Connecting a 1394 Device

Depending on the model, your computer may have a 1394 connector. The IEEE 1394 standard describes a serial bus driven by an advanced communication protocol which provides faster data transmission rates and universal I/O interconnect.

Follow these steps to connect a 1394 device:

1. Make sure the computer is not turned on.
2. Plug the cable into the 1394 connector at the rear of the computer.

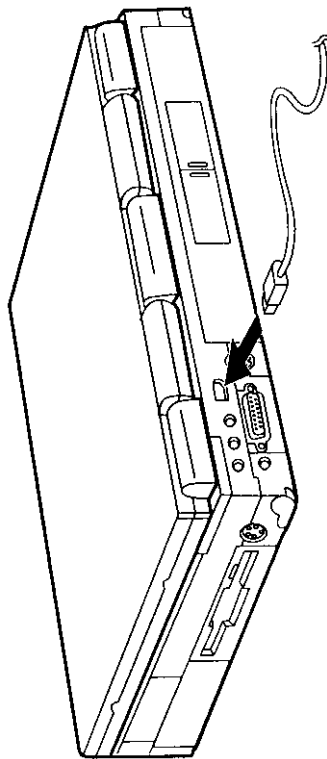


Figure 4-10. Connecting a 1394 Device

3. Run the SCU program to activate the 1394 device by setting the "Disable 1394 Device" item to disabled mode. (See the "Device Menu" section in Chapter 5.)

Connecting the Docking Station

The optional Docking Station is a base unit that connects to the expansion connector (Figure 1-4 ⑩) of your computer to support the following functions:

- Port replication
- One 5.25-inch drive bay and one 3.5-inch drive bay
- Two PCI slots

For more information, see the manual supplied with the Docking Station.

Internal Hardware Expansion

Replacing the Floppy Disk Drive

The computer's floppy disk drive bay is a multi-purpose bay. In addition to the default floppy disk drive, a secondary battery pack or LS120 drive can be installed in this bay.

Follow these steps to remove the floppy disk drive and install a new device:

1. Turn off the computer.
2. Disconnect the AC adapter.
3. Remove the battery pack. (See the "Replacing the Primary Battery Pack" section in Chapter 3.)
4. Carefully turn the computer upside down.
5. Slide the locking latch to the unlocked position and pull the floppy disk drive out of the compartment.

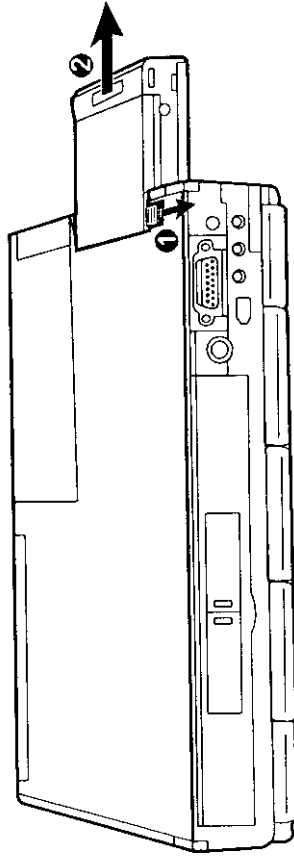


Figure 4-11. Removing the Floppy Disk Drive

6. If you intend to install a secondary battery pack, a special bracket is required. This can be obtained from your dealer.

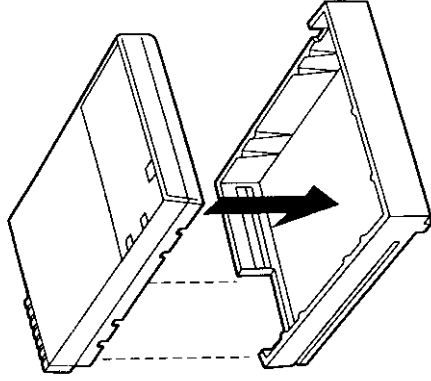


Figure 4-12. Attaching the Battery Pack to the Bracket

7. Slide the new device all the way into the compartment until the locking latch clicks into the locked position.
8. If you installed an LS-120 drive, turn on the computer and run the SCU program to enable the "Enable 2nd IDE Port" item. (See the "Device Menu" in Chapter 5.)

CPU and Memory Upgrades

Internal devices, such as CPU and memory modules, can be upgraded. See appendix A for CPU and memory specifications. If you want to upgrade the computer, contact your dealer. Do not install an internal device on your own.

System Configuration Utility

This chapter tells you how to configure your system using the SCU (Setup Configuration Utility).

Introduction

SCU is a program that allows you to enter system configuration information and to store the information in CMOS (Complementary Metal Oxide Semiconductor) RAM. CMOS RAM data is maintained by a RTC backup battery so that configuration information is not lost when the system is turned off.

A computer needs the configuration information to identify the type of devices installed and to set up special features.

The configuration information has been set up with default settings in the factory. You need to run SCU only when:

- Error messages appear on the screen asking you to run SCU.
- You want to change factory default settings.
- You want to update the configuration information according to a new device installed or an existing device removed.

Starting SCU

To run SCU, turn on or restart the system and press the [Space] bar when the "System will Boot from C:, Press <Space> to change Boot Device or Run Setup" message appears at the bottom of the screen. The boot menu as shown below pops up.

Boot from FDD A:
Boot from HDD C:
Boot from CD-ROM
Run SCU Setup
<Enter> to Confirm
<Esc> to Cancel

Select the "Run SCU Setup" item using the arrow key and then press [Enter] to run SCU.

The SCU program is subject to change without notice. If the SCU program was modified after this manual was printed, you will find discrepancies between this chapter and the SCU program.

SCU Screen

Startup PowerManagement Password Device Features Utility Memory Exit

Devices

IDE Hard Drive : 2067 MB
IDE CDROM Drive: TOSHIBA CD-ROM
Secondary IDE : --
Serial Port 1 : 03F8h IRQ 04
SIR/FIR Port : 02F8h IRQ 03 DMA 00
Internal Modem : 03E8h IRQ 05
ECP/PIO Port : 0378h IRQ 07 DMA 03
Game Port : 0201h
AUDIO Device : 0220h 0530h 0388h 0330h
DMA 01 07 IRQ 11
PCI Device 02 : 10C8 0004h VGA
PCI Device 03 : 104C AC15h PCMCIA
PCI Device 04 : 9004 5800h 1394
PCI Device 05 : FFFF FFFFh MPEG2
PCI Device 06 : 10EC 8139h LAN

configure system startup options

<Cursor> key to select menu item
<space> and <Enter> keys to toggle or activate menu item

System

Pentium-MMX CPU 233 Mhz
L2 Cache Size = 512 KB
Total DRAM Size= 32 MB
Bank 0 : SDRAM 32 MB
Bank 1 : None
Bank 2 : None
Bank 3 : None
Bank 4 : None
Bank 5 : None
System BIOS Rev. : 0.09
Boot Block Rev. : 0.04

The SCU screen consists of four areas:

- **Menu bar** is at the top of the screen. It contains menu titles for different categories. When a title is selected, a pull-down menu appears containing setup items. A check mark (✓) in front of an item indicates "Enabled" and a hyphen (-) indicates "Disabled". When an item with no mark in front is selected, a submenu will pop up.
- **Information area** is the center area of the screen. This area displays the system's current configuration information. When a setup item is selected, a submenu may appear in this area for you to make selections.
- **Help** is below the center area. It provides an explanation of the selected item.
- **Keyboard help** is at the bottom of the screen. It gives keyboard instructions for moving around and making selections.

Entering the Information

You can use both the touchpad/mouse and keyboard to move around and make selections.



Selection is easier with a touchpad or mouse than with a keyboard.

With the Touchpad/Mouse

For most items, simply move the pointer with the touchpad/mouse and on pinpointing your selection, click the left button. To cancel your selection, click the right button.

With the Keyboard

In general, use arrow keys to move around and press [Enter] to select.

To complete the selection, there are different keyboard operations under different situations:

- For an item containing no submenu, press [Space bar] to toggle between enabled (✓) and disabled (-).
- In a submenu listing all the options, press the arrow key to move the bullet (•) to your selection then press [Enter] to complete the selection.
- In a submenu containing multiple setup items, press the arrow keys to move to an item. Press the [Space bar] to pull down the list of options, use arrow keys to select an option, and press [Enter] to complete the selection. Alternatively, you can press [F5] or [F6] to cycle through the options bypassing the pull-down menu.

You can also use the shortcut key highlighted by a different color on the screen.

Startup Menu

The Startup pull-down menu allows you to select settings relevant to startup operation.

Startup

Date and Time Boot Device
Enable Fast Boot Keyboard Numlock Virus Alert

All items on this menu are described in the sequence below.

Date and Time

Sets the system date and time (24-hour format).

Boot Device

Specifies the device from which the system searches the operating system. The choices are *Diskette A*, *Hard Disk C*, and *CD-ROM Drive*.

Enable Fast Boot

Sets if the memory test is skipped during POST. If this item is enabled, the booting time can be shortened.

Keyboard Numlock

Sets if the Num Lock is automatically turned on for the internal touchpad after system startup.

Virus Alert

Sets if the warning messages announce that the hard disk boot sector (partition table) has been changed.

PowerManagement Menu

The PowerManagement pull-down menu allows you to set up Power Management features.

PowerManagement

✓ Enable PowerManagement - Enable Ring Resume
Standby/Suspend Timer Device PowerManagement CPU PowerManagement Power Button Function

All items on this menu are described in the sequence below.

Enable Power Management

Activates the Power Management features.

Enable Ring Resume

Sets if the system resumes from low power mode (Global Standby, Power-On-Suspend, or Suspend-to-Disk) when the modem receives an incoming call.

Standby/Suspend Timer

Invokes a submenu that lets you set up global Power Management timers. It contains the following items:

Global Standby Timer

Sets the timer for initiating Global Standby mode. If the computer has been idle up until timing out, it enters Global Standby mode.

Power On Suspend Timer

Sets the timer for initiating Power-On-Suspend mode. If the computer remains in Global Standby mode until timing out, it enters Power-On-Suspend mode.

Suspend To Disk Timer

Sets the timer for initiating Suspend-to-Disk mode. If the computer remains in Power-On-Suspend mode until timing out, it enters Suspend-to-Disk mode.

Device PowerManagement

Invokes a submenu that lets you set up local Power Management features. It contains the following items:

Hard Disk Idle Timer

Sets the timer for initiating the hard disk's low power mode. If the hard disk has not been accessed until timing out, it spins down. When next accessed, the hard disk begins to spin again.

Video Idle Timer

Sets the timer for initiating the display screen's low power mode. If there has been no video activity (as defined by the next two items) until timing out, the screen blanks out. The screen image returns when video activity is detected.

% Bus Utilization Threshold

Works in conjunction with the next item. This item sets the minimum frequency of video activities for Power Management to work. A larger number of percentage means more frequent video activities. With a number set as the threshold, any video activity frequency below the threshold will be ignored by Power Management and thus will not reset the Video Idle Timer. The valid number for this item is between 0 and 100 (%); the default setting is 2.

Bus Utilization Threshold

Sets the threshold that defines a recognized video activity. For Power Management, a video activity is recognized when a certain number of continuous video signals have been transmitted in the computer. The "certain number" is set by this item. A larger number means a higher standard for recognizing video activity. The valid number for this item is between 0 and 256 (in bus clock); the default setting is 50.

Audio Power Management

Sets if the audio subsystem enters low power mode. This occurs if no audio I/O activity takes place within 4 seconds.

CPU PowerManagement

Invokes a submenu allowing power management control by way of a CPU cooling fan and clock throttling. It involves the following items:

CPU Thermal Control Select

Controls the CPU power management for *Maximum Performance* and *Maximum Battery Life*. If *Maximum Performance* is selected, the CPU is cooled by the fan. If *Maximum Battery Life* is selected, the CPU is cooled by automatic CPU clock throttling.

Temperature Control Range

Selects the CPU temperature range. When the CPU temperature exceeds the selected range, the computer takes action to cool the CPU. When the temperature drops below the range, cooling ceases.

CPU Clock Throttle Select

Selects the CPU clock "throttling" duty cycle in normal operation. Consider setting CPU clock throttling when using MS-DOS with the intention of extending battery life or lowering CPU temperature.



You are advised to keep this item disabled since setting CPU clock throttling will affect system performance.

Fast Burst Timer Count

Sets the time (in milliseconds) that the CPU operates at full speed when an access to a faster device such as a hard disk is required but the CPU clock is throttled.

Slow Burst Timer Count

Sets the time (in seconds) that the CPU operates at full speed when an access to a slower device such as a floppy disk drive is required but the CPU clock is throttled.

Power Button Function

Defines the function of the Power Button: *Power On Suspend*, *Suspend to Disk*, or *System Power Off*. The choice of *System Power Off* allows the Power Button to directly turn off the computer without suspending to disk when the computer is in the MS-DOS environment; the computer still suspends to disk when the computer is in Windows environment.

PassWord Menu

The PassWord pull-down menu allows you to create passwords to protect your computer against unauthorized use.

PassWord

Edit New Password

- Enable Boot Security
- Enable SCU Security
- Enable Quick Lock
- Enable HDD Security

All items on this menu are described in the sequence below.

Edit New Password

Sets the password for starting up the system, running the SCU program, unlocking Quick Lock, or using the hard disk drive. When setting a password, first make sure that Num Lock is off, then type your password and press [Enter]. Confirm your password by typing it again and pressing [Enter].



Remembering the password is essential.

Enable Boot Security

Sets if the system asks for the password before starting up.

Enable SCU Security

Sets if the system asks for the password before running the SCU program.

Enable Quick Lock

Activates Quick Lock function. Now, during a short absence from the computer, you can use [Fn]+[F2] to lock the keyboard. To unlock the keyboard, enter the password.

Enable HDD Security

Sets if the system asks for the password before the hard disk drive can be accessed. If incorrect password is entered, the system simply ignores the existence of the hard disk.

This feature protects the hard disk data because the password is written to the hard disk drive itself. If the hard disk is removed and installed in another

computer from a different manufacturer, the hard disk is not recognized at all. If it is removed and installed in another computer from the same manufacturer, the hard disk can be accessed only if the correct password is entered.

 After you set up the password and enable this item, the password is written to the hard disk drive. If you clear the password later, the password is only cleared from the system, not from the hard disk drive. You still need to enter the original password when you want to disable the "Enable HDD Security" item.

Device Menu

The Device pull-down menu allows you to select settings relevant to system devices.

Device

- FDD Seek Test
- Enable 2nd IDE Port
- Floppy B Installed
- Enable USB Device
- Disable 1394 Device

All items on this menu are described in the sequence below.

FDD Seek Test

Sets if the system searches for the type of floppy disk drive by track number (40 or 80) during POST. 360K type is 40 tracks while 760K, 1.2M and 1.44M are all 80 tracks.

Enable 2nd IDE Port

Sets if the optional LS-120 drive is installed.

Floppy B Installed

Sets if the optional Docking Station is connected with drive B installed.

Enable USB Device

Sets if an IRQ is assigned for the USB function of your system. Enable this item only if you are using USB devices.

 If you are not using USB devices, enabling this item will slow down the system.

Disable 1394 Device

Sets if the 1394 function of your system is disabled. Enable this item only if you are using 1394 devices.

Features Menu

The Features pull-down menu allows you to set up several system features.

Features

Set TV Mode
Keyboard Repeat
Keyboard Matrix

All items on this menu are described in the sequence below.

Set TV Mode

Sets the TV mode when a TV is used for the display output. Select *PAL* for use in the UK and Europe; *NTSC* for use in other areas.

Keyboard Repeat

Invokes a submenu that lets you set up "Keyboard Repeat" function. "Keyboard repeat" means that continually holding down a key on the keyboard is interpreted as repeatedly pressing the key. The submenu contains the following items:

Keyboard Repeat Rate Sets the rate (in characters/second) at which the keys are repeated.

Key Delay Sets the delay (in seconds) between when the key was first pressed and when the repeating begins.

Keyboard Matrix

Sets the keyboard language. Select *Japanese* for use in Japan; *English* for use in other areas.

Utility Menu

The Utility pull-down menu provides a function that verifies the suspend-to-disk partition.

Utility

Verify S2D Partition

Verify S2D Partition

Checks the suspend-to-disk partition for any defect block. You may use this function once in a while to make sure that defect blocks in the suspend-to-disk partition are not used to store data.



This function also back up the BIOS ROM data to the suspend-to-disk partition. This is helpful when the BIOS ROM happens to fail. With the backup data, the computer can still boot using the BIOS ROM data in the suspend-to-disk partition.

Memory Menu

The Memory pull-down menu allows you to set up shadow RAM and system memory configuration.

Memory

✓ BIOS Shadow RAM Cacheable
✓ VGA Shadow RAM Cacheable
Setup EDO/SDRAM Timing

All items on this menu are described in the sequence below.

BIOS Shadow RAM Cacheable

Sets if the system BIOS is copied to RAM to increase the BIOS speed.

VGA Shadow RAM Cacheable

Sets if the video BIOS is copied to RAM to increase the video speed.

Setup EDO/SDRAM Timing

Invokes a submenu that lets you set up specific information of the RAM installed in your computer. It contains the following items:



Never alter these items by yourself. Leave these items to your dealer, who knows the specifications of the RAM installed in your computer. The computer may malfunction if you set the items to incorrect values.

EDO DRAM Read Burst Timing

Sets the read burst timing according to the EDO DRAM installed in your computer.

EDO DRAM Write Burst Timing

Sets the write burst timing according to the EDO DRAM installed in your computer.

Select SDRAM CAS Latency

Sets the CAS latency according to the SDRAM installed in your computer.

Exit Menu

The Exit pull-down menu provides ways of exiting SCU. When you are finished with the settings, save and exit SCU so that the new settings can take effect.

Exit

Save and Reboot Exit (No Save)
Default Settings Restore Settings

Save and Reboot

Saves changes you have made and reboots the system.

Exit (No Save)

Exits without saving the changes you have made.

Default Settings

Loads factory default settings for all the items.

Restore Settings

Restores previous settings for all the items.

Software Drivers and Utilities

This chapter introduces the software drivers and utilities supplied with your computer.

Drivers Listing

 *You may find discrepancies between this chapter and the contents of the CD as the CD may have been updated after this manual was published.*

To take advantage of dedicated functions on your computer, you need to install specific drivers. Your dealer should have installed the drivers for you. You only need to re-install them when you re-install the operating system. For installation instructions, see the README or other text files on the CD.

Described below are what the drivers are for:

- **Audio driver**
The audio driver is required for using the audio functions of the computer.
- **VGA driver**
The VGA driver is required for setting high-resolution displays of the computer.
- **PCMCIA driver**
The PCMCIA driver is required for using PC cards.
- **CD-ROM drive driver**
The CD-ROM drive driver is required for using the CD-ROM drive under MS DOS.
- **FIR driver**
The FIR driver allows your computer to communicate with IrDA 1.1 (Fast IR) compliant devices.
- **3 mode FDD driver**
The 3 mode driver allows you to access the Japanese 3 mode floppy diskettes.
- **LAN driver**
The LAN driver is required for the network software.
- **BIOS Flash Utility**
This utility allows you to update the computer BIOS.

- **Modem driver (select models only)**
The modem driver is required for using the internal modem.
- **1394 driver (select models only)**
The 1394 driver is required for using a 1394 device.

Troubleshooting

This chapter provides solution to common problems you may encounter while operating the computer. If you still cannot solve the problem after following the instructions in the chapter, please contact an authorized service representative for help.

Before You Begin

Computer problems can be caused by software, hardware or external devices connected to the computer. For convenient reference, the problems are categorized into two major sections (hardware problems and external device problems) in this chapter and the problems are listed in the tables.

Before you begin, first check:

- Is the computer turned on and the power/suspend indicator lighted?
- Are all cables properly and securely connected?
- Does the battery pack have power?

Hardware Problems

Power Button Problems

Problem	Possible Cause	Solution
Pressing the power/suspend button does not turn on the computer.	The AC power cord is not properly connected.	Reconnect the AC power cord. The AC power indicator should light green.
	The battery pack is discharged.	Charge the battery pack.

Startup Problems

Problem	Possible Cause	Solution
"Missing operating system" appears on the screen while the system is booting from drive C.	The hard disk does not have an operating system installed or the operating system is corrupted.	Contact your service representative for help.
"CMOS failure - run SCU" appears on the screen.	The RTC (real time clock) battery fails to retain the CMOS RAM content because the battery is dead.	Contact your service representative to replace the RTC battery.
"CMOS checksum invalid - run SCU" appears on the screen.	The CMOS RAM content is corrupted.	Run SCU to re-initialize the CMOS RAM contents.

"Time and date corrupt - run SCU" appears on the screen.	Wrong date and/or time setup.	Run SCU to set up the correct date and/or time.
	The RTC battery is discharged.	Contact your service representative to replace the RTC battery and set up the correct date and/or time.

Floppy Disk Drive Problems

Problem	Possible Cause	Solution
"Non system disk" or "diskette error" appears on the screen while the system is booting from drive A.	The diskette is not formatted.	Format the diskette as a bootable one.
	The diskette is not bootable.	
The diskette is formatted but the system can not boot from it.	The boot sector on the diskette is bad.	Re-format the diskette as a bootable one or replace it with a workable one.
The disk drive can not write to a diskette.	The diskette is write-protected.	Disable the write-protect or use a diskette that is not write-protected.
	The computer is writing to the wrong drive.	Check the drive letter in the path statement.
	Not enough space is left on the diskette.	Use a diskette with enough space.
	The disk drive has been disabled.	Enable the disk drive through Windows using the Device Manager in the Systems icon of the Control Panel.
The disk drive can not read a diskette.	The diskette is not formatted.	Format the diskette.
	Wrong type of diskette is being used.	Use the type of diskette required by the drive.
	The diskette has a bad sector.	Copy the file to the hard disk drive or another diskette. Reformat the bad diskette.
	The diskette has been disabled.	Enable the disk drive through Windows using the Device Manager in the Systems icon of the Control Panel.

	The diskette is not formatted.	Format the diskette.
--	--------------------------------	----------------------

Hard Disk Drive Problems		
Problem	Possible Cause	Solution
Newly installed hard disk drive does not work.	The hard disk drive is not seated properly.	Turn off the computer and unplug the AC power cord. Remove the battery pack. Remove and reinstall the hard disk drive.
	The hard disk drive was removed and replaced while the computer was on or suspended.	Turn off the computer; then turn it on again.
	The hard disk drive is locked by the hard disk drive password.	Enter password when requested. (See the "Pass Word Menu" section in chapter 5.)
Hard disk drive error occurs.	The hard disk drive has bad sectors.	Contact your service representative for help.
	The hard disk drive has failed.	Contact your service representative for help.
Reading the hard disk drive takes an unusually long time after restarting the computer.	The system has entered suspend mode due to low battery condition and is now resuming from it.	Allow time for the system to return to its pre-suspension state.
The hard disk drive was formatted but can not boot.	The hard disk boot sector is bad.	Contact your service representative for help.
Can not suspend to disk when pressing the power/suspend button.	The suspend-to-disk partition is not created or the partition is too small.	Contact your service representative for help.
Error message appears when reading the suspend-to-disk partition.	The suspend-to-disk partition is bad.	Contact your service representative for help.
Error message appears when reading the suspend-to-disk partition and the hard disk drive can still boot.	The first sector of the suspend-to-disk partition is bad.	Verify the partition using the Utility function of the SCU program. If the bad sector cannot be recovered, reformat and create the suspend to disk partition.

CD-ROM Drive Problems

Problem	Possible Cause	Solution
Can not boot from the CD-ROM.	The inserted CD title is not bootable.	Boot either from the hard disk or floppy disk drive.
	The CD-ROM drive is still identifying the inserted CD title.	Wait until the CD-ROM drive has completed the identification of the CD title and the CD-ROM drive indicator is off.
	The surface of the CD-ROM title is contaminated.	Clean the CD-ROM title surface.
The CD-ROM title can not be accessed.	The CD-ROM title is bent and damaged.	Replace with a new one.

Battery Pack Problems

Problem	Possible Cause	Solution
The computer cannot power on with the battery pack installed and AC adapter unplugged.	The battery pack is discharged.	Connect the computer to an external power source and charge the battery pack. Replace the battery pack with a fully charged one.
The computer beeps and the battery indicator shows one blinking bar.	The computer is in low battery condition.	Save your data and do one of the following : - Connect the computer to an external power source and charge the battery pack. - Replace the battery pack with a fully charged one. You can swap the battery pack without powering off the computer. - Press [Fn]+[F1] to suspend the computer so that the battery power can be saved until you find the external power source or a fully-charged battery pack.

The battery indicator bar blinks for low battery condition, but the computer does not beep.	The speaker volume is turned down.	Press [Fn]+[F7] to increase the speaker volume.
	The speakers are set mute.	Press [Fn]+[F5] to disable the mute.
	No battery pack is installed.	Install a fully charged battery pack.
	The battery pack is not seated properly.	Remove and re-installed the battery pack.
The battery indicator does not appear on the indicator panel.	The battery pack was exposed to temperature extremes.	Allow time for the battery pack to return to room temperature.
	The battery pack is at the end of its life cycle.	Replace battery pack.
	The battery pack is already fully charged.	Use the battery pack without attempting to fast charge.
	The RTC battery is dead.	Contact your service representative to replace the RTC battery.
Every time the computer is turned on, I have to set the date and time.	The battery pack is being exposed to extreme high temperatures.	Move the computer to a cooler place and recharge the battery pack.
The battery operating time does not last as long as expected.	The battery pack is being exposed to extreme low temperature.	Move the computer to a warmer place and recharge the battery pack.
	The battery pack has partially self-discharged.	Recharge the battery pack.
	An external device (such as a CD-ROM or PC card) is draining the battery power.	Turn off or remove the external device when it is not in use.
	The battery pack has been installed but not in use for a long time.	Discharge the battery pack fully and then recharge.
The battery pack is warm to the touch after charging.	The battery pack is at the end of its life cycle.	Replace with a new battery pack.
	It is warm due to the charging or other system components.	No action is required.
The battery indicator frame blinks.	The battery is being charged.	No action is required.

Memory Problems

Problem	Possible Cause	Solution
“Unexpected amount of memory - run SCU” appears on the screen.	Optional DIMM are installed incorrectly.	Ensure that the DIMM have been installed correctly.
	One or more than one of the components of the installed DIMM has an error.	Replace with a new DIMM.
	The DIMM has been added or removed.	Run SCU to update the memory size.
“Out of memory” appears on the screen, or insufficient memory error occurs during operation.	The system runs out of memory for the application.	Add more memory according to the application's memory requirement.
	Too many memory-resident applications are running at the same time.	Quit the memory-resident applications you do not need.

Keyboard Problems

Problem	Possible Cause	Solution
The keyboard and pointing device are locked.	You initiated QuickLock.	Enter your password to end QuickLock.
The embedded numeric keypad on the computer keyboard is disabled.	The Num Lock function is not turned on.	Press [Num Lock] to enable the Num Lock function and the numeric keypad.

Touchpad Problems

Problem	Possible Cause	Solution
The touchpad does not work.	The touchpad driver is not installed properly.	Install the touchpad driver.
The device driver is loaded but the touchpad does not work.	Wrong point device is selected.	Click the General tab on the Mouse icon in Control Panel and select the proper pointing device.
The cursor skips or moves abnormally when using the touchpad.	The touchpad needs cleaning.	Clean the surface of the touchpad.

Sound Problems

Problem	Possible Cause	Solution
The computer beeps after you turn it on.	This is normal. It indicates successful completion of the booting.	No action is required.
The computer does not beep after booting.	The computer speakers are turned off or the volume is turned down.	Press [Fn]+[F5] to turn on the speakers or press [Fn]+[F7] to increase the volume.
There is no sound when playing CD audio or MIDI.	The driver is not installed properly.	Install a proper driver.
	The speakers are set mute.	Press [Fn]+[F5] to turn on the speakers.
There is no sound for a few seconds when playing CD audio.	The audio power management is enabled.	Run SCU to disable the "Audio Power Management" item.

LCD Display Problems

Problem	Possible Cause	Solution
The screen is blank and the power/suspend indicator lights green.	You may have a screen blanking utility installed.	Press any key and/or enter your password.
	The brightness needs adjusting.	Press [Fn]+[F9] or [Fn]+[F10] to adjust the brightness.
	The screen is over-heated.	If computer is in direct sunlight, move it away and allow it to cool down.
	The display has entered its low power mode.	Press any key to resume.
The screen is blank and the power/suspend indicator lights amber.	The system is in Power-On-Suspend mode.	Press any key to resume.
The screen is blank and the power/suspend indicator is off.	The system is in Suspend-to-Disk mode.	Press the power/suspend button to resume.
The characters are dim.	The brightness needs adjusting.	Press [Fn]+[F9] or [Fn]+[F10] to adjust the brightness.
	The screen is facing direct light.	Tilt the display or move the computer away from the direct light.

The screen is blank and keyboard is locked.	QuickLock and display power management are initiated.	Type your password to unlock the keyboard and resume.
The computer screen and external monitor do not display simultaneously.	The external monitor was connected after the computer was turned on.	Press [Fn]+[F4] to shift to simultaneous display. Turn the computer off and reconnect the external monitor. Turn the external monitor on before turning on the computer.

Network Problems

Problem	Possible Cause	Solution
Cannot access the network after connecting the network cable.	The LAN driver is not installed. The network cable is not connected to the HUB properly.	Install a proper driver. Ensure the network cable is properly connected to the HUB.
Communication speed is not as fast as up to 100Mb per second.	The HUB is 10Mb base-T. The HUB is 100Mb base-T with 100/10Mb auto switching capability and one of the systems connected to the HUB supports 10Mb base-T only	To effect the speed of 100Mb per second, you must use a 100Mb-only base-T HUB. If using a 100Mb base-T HUB with 100/10Mb auto switching capability, ensure that the system connected to the HUB supports 100Mb base-T.
There is a delay time when the system is resuming from power management mode if connected to network.	The approximate delay time of 10 to 20 seconds is spent by Windows to check and wake up each hardware component and to reconnect the network when resuming from power management mode.	No action is required.

Fax/Modem Problems

Problem	Possible Cause	Solution
Cannot send or receive message after connecting the phone cable.	The phone cable is not properly connected. The driver is not properly installed. No proper application is installed.	Reconnect the phone cable. Install a proper driver. Install a proper application.
Cannot receive message when the computer is in Power-On-Suspend or Suspend-to-Disk mode.	The "Ring Resume" function has been disabled.	Enable the "Enable Ring Resume" item in the SCU program.

IEEE 1394 Problems

Problem	Possible Cause	Solution
Cannot transfer data from the external devices through the 1394 connector.	The 1394 driver is not installed. The 1394 function has been disabled.	Install a proper 1394 driver. Disable the "Disable 1394 Device" item in the SCU program.
The data transmission rate is not as fast as expected.	The 1394 of this computer supports up to 200Mb per second data transmission rate. The slow transmission rate may be caused by the external device that does not support 200Mb per second data transmission rate.	No action is required.

USB Problems

Problem	Possible Cause	Solution
The computer can not communicate with external devices through the USB connector	The USB function is disabled. The USB driver is not installed.	Enable the "Enable USB Device" item in the SCU program. Install a proper driver.

IR (Infrared) Problems

Problem	Possible Cause	Solution
The computer can not communicate with other devices using the IR connector.	The distance and angle between the external device and your computer is incorrect.	Ensure the distance is within 1 meter and angle is within ± 15 degrees.
	The surface of the IR lens is not clean.	Clean the IR lens.
	There are cables or electrical devices in between the external device and your computer.	Remove the obstructions in between the computer and external device.
	The external device and your computer are not using the same communication speed.	Ensure the communication speed used by the computer and external device is identical.
Incorrect data is transferred through the IR connector.	No proper software has not been installed.	Install a proper application.
	The computer or the external device is facing direct sunlight or fluorescent lamps.	Move the computer or external device away from direct sunlight or fluorescent lamps.
	The computer or the external device is facing direct sunlight or fluorescent lamps.	Move the computer or external device away from direct sunlight or fluorescent lamps.
	There are remote-controlled devices in between the computer and the external device.	Remove the obstruction in between the computer and external device.
	The distance and angle between the external device and your computer is incorrect.	Ensure the distance is within 1 meter and angle is within ± 15 degree.

External Device Problems

External Keyboard Problems

Problem	Possible Cause	Solution
The external keyboard does not work.	The keyboard is not securely connected or is connected to the wrong connector.	Reconnect the keyboard cable.

Mouse Problems

Problem	Possible Cause	Solution
The external serial or PS/2 mouse does not work.	The mouse is not securely connected to the connector.	Reconnect the mouse cable.
	No proper driver is installed.	Install proper mouse driver for the external mouse.

Printer Problems

Problem	Possible Cause	Solution
The printer cannot be turned on.	The power cable is not connected properly.	Reconnect the power cable.
The printer does not print.	The printing device is not selected.	Select the printer in Windows Printer Setup.
	The printer is not turn on.	Turn on the printer.
	The printer is not on line.	Set the printer to on-line.
	The printer driver for your application is not installed.	Double click the Printer icon on the Control Panel to add proper printer driver.
	The printer that is set up for a network is not connected to the net work.	Connect the printer to the network.
The printer is off line.	The printer cable is too long, unshielded, or defective.	Replace with a new, shorter printer cable.
	The paper tray is empty.	Fill the paper tray with paper and set the printer to on-line.
The printer prints garbled information.	The printer driver is not correctly installed.	Double click the Printer icon on the Control Panel to add proper printer driver.
	The printer cable is not connected properly.	Reconnect the printer cable.

PC Card Problems

Problem	Possible Cause	Solution
The computer does not beep when a PC card is inserted.	The card is not inserted properly.	Remove and re-insert the card gently to avoid damaging the pins.
	The card or driver is not compatible with your computer.	Contact your service representative for a list of PC card compatible with your computer.
The PC card does not work.	The card is not fully inserted into the slot or is not inserted properly.	Remove and re-insert the card gently to avoid damaging the pins
The Fax/Modem PC card does not work.	You are trying to access the card using the wrong COM port.	Right click My Computer on the Windows desktop. Left click the Properties, then Device Manager, and double click Port Setting to view the COM port setting.
	The phone cable is not connected properly.	Reconnect the phone cable.
The storage memory card does not work.	The card is not compatible with your computer.	Contact your service representative for a list of PC cards compatible with your computer.
The network PC card does not work.	The network driver is not set up properly or resources are not available for this configuration.	Refer to the documentation that came with your network PC card or contact your service representative for more information.
The system locks up while starting Windows 95 if both legacy PCMCIA card and CardBus card have been inserted.	Win95 does not support booting with legacy card and CardBus card inserted simultaneously.	Remove the legacy card or all the cards before booting.
	Windows 95 locks up when inserting a CardBus card if a legacy PCMCIA card has already been inserted or used to be in the slot.	Always insert a CardBus card first if you intend to use both CardBus card and legacy card simultaneously.

Windows 95 locks up if the legacy PCMCIA card and CardBus card exit simultaneously and the legacy PCMCIA card was inserted first.	Win95 does not allow a legacy card to be inserted first if you want to use both the legacy card and CardBus card simultaneously.	Always insert a CardBus card first if you intend to use both CardBus card and legacy card simultaneously.
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Monitor Problems

Problem	Possible Cause	Solution
The computer screen and external monitor do not display simultaneously.	The display output was shifted.	Press [Fn] + [F4] to shift to simultaneous display.

TV Problems

Problem	Solution
This is a reminder if you want to shift the display output to TV.	The LCD display resolution must be set to 640x480 or 800x600. You can adjust the resolution through Setting in Display icon on Control Panel. Ensure you also select the correct Display Options (TV or LCD) and TV Options (NTSC or PAL/SECAM) via the NeoMagic in the Display icon of Control Panel.

Appendixes

The appendixes provide technical information.

Specifications

 The specifications are subject to change without notice.

CPU		Intel Tiliamook-233/266MHz, Intel Deschutes 266 (Other CPUs developed later may be supported. For the latest information on the CPU supported by your computer, ask your dealer.)
Memory		
RAM	3.3V 32/64MB Synchronous DRAM, with three SO-DIMM sockets, max. 192MB	
Cache Memory	512KB synchronous pipeline burst SRAM	
ROM	256KB Flash ROM, supporting system and video BIOS, SMM, APM 1.2, PCI 2.1/3.0, PnP 1.0A, ACPI, and keyboard BIOS	
Main Components		
LCD Display	13.3/14.1-inch color LCD, XGA TFT, integrated power conserve mode	
Keyboard	89/90 keys, numeric keypad, 12 function keys, a special Fn (Function) key and Windows 95 keys	
Floppy Disk Drive	3.5-inch, 135TPI, double sided, total formatted capacity 1.44MB, with 3 mode support	
Hard Disk Drive	Enhanced-IDE, 2.5-inch, ATA3, 3GB or larger capacity when available, with LBA/PIO mode 4 support	
CD-ROM Drive	Enhanced-IDE, 2.5-inch, 20X or higher speed when available	
Touchpad	Compatible with PS/2 mouse	
Controllers and Interfaces		
Audio	Supports 16-bit stereo 3D surround sound and wave table, compatible with MS Windows Sound System and Sound Blaster Pro	
PC Card Slots	Compliant with PCMCIA 2.1/3.0 specifications, two PC card slots for two type II or one type III application, supporting CardBus and Zoomed Video port	
LAN	Compliant with IEEE 802.3u 100 base-T and PCI 2.1 specifications, supporting full duplex 10Mb/s and 100Mb/s operation	
1394	Compliant with IEEE 1394 and PCI 2.1 specifications, supporting isochronous and asynchronous mode data transfer. The connector can connect a maximum of 63 computers and consumer electronics devices with speed of up to 200Mb/s.	
I/O Connectors	One standard/ECP/EPP parallel connector One RS-232C serial connector One VGA monitor connector One PS/2 keyboard/mouse connectorz One FIR/ASK infrared port One MIDI/game connector Two USB connectors One IEEE 1394 connector (optional) One S-VHS video output connector One RJ-45 LAN connector One RJ-11 modem connector (optional) Three RCA jacks: line-in, line-out, and microphone-in One expansion connector	

Power Source	
AC Adapter	60W output
Battery Pack	Duracell equivalent Smart Pack DR-202S Li-ion
Physical Specifications	
Dimensions	310mm (W) x 257mm (D) x 54mm (H) 12.2inch x 10.1inch x 2.1inch
Weight	3.8kg 8.5lb



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