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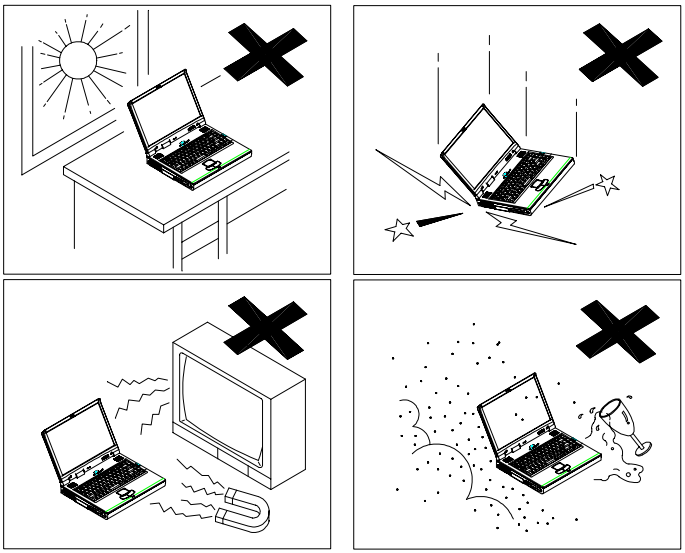
Chapter 1: Introduction

Thank you for purchasing a new notebook computer from us. We hope you will enjoy using our product and before doing so will take the time to carefully read this manual. Reading this manual will make using your notebook computer easier and more enjoyable.

Safety Tips

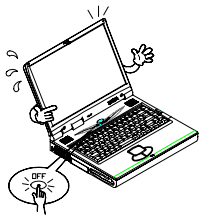
As with any other piece of precision electronic equipment, proper care and operation of your notebook computer will prolong its use. Help your notebook computer last longer by following this advice:

DO NOT expose it to excessive heat or direct sunlight.
DO NOT expose your notebook computer to any shock or vibration.
DO NOT expose it to strong magnetic fields.
DO NOT leave it in a place where foreign matter or moisture may effect the system.

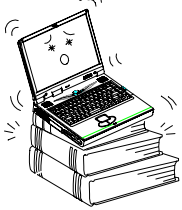


In addition:

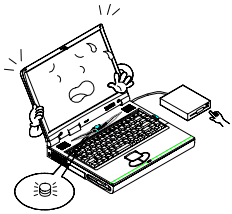
Do not turn off the power until you properly shutdown all programs.



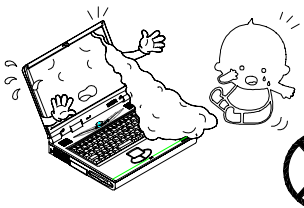
Do not place the computer on an unstable surface.



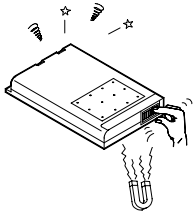
Do not turn off any peripheral devices when the computer power is on



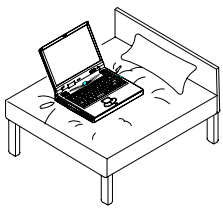
Do not touch the poisonous liquid if the LCD panel breaks.



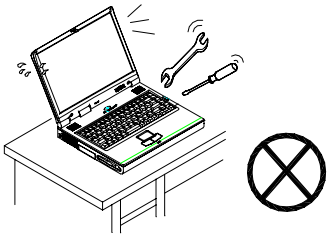
Do not touch the battery contacts with your hands or any metal objects.



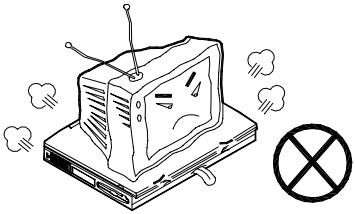
Do not place the computer on any surface which will block the vents.



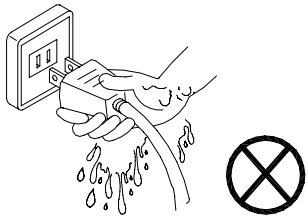
Do not disassemble the computer by yourself.



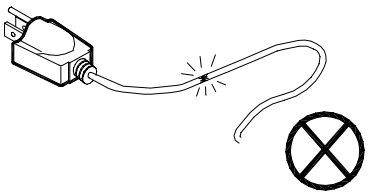
Do not place anything heavy on the computer.



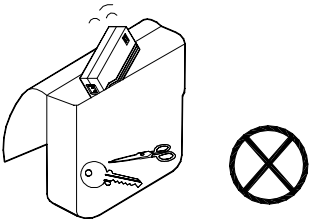
Do not plug in the power cord if you are wet.



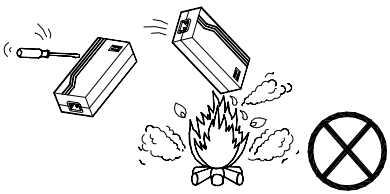
Do not use the power cord if it is broken.



Keep the battery away from any metal appliances.

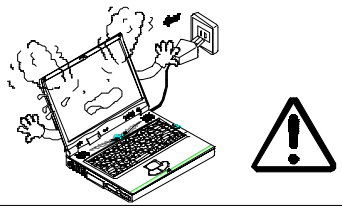


Do not throw the computer or accessories into a fire.

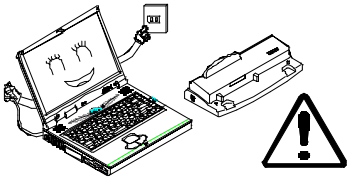


Here is still more important information:

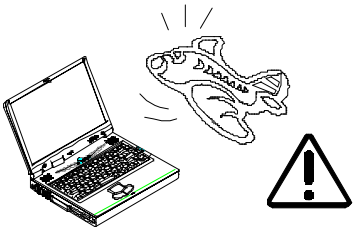
If there is an unusual odor, heat or smoke coming from your computer, unplug the cord.



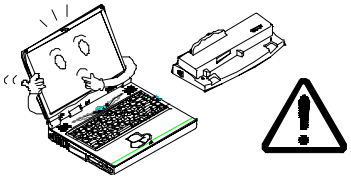
Unplug the power cord before attaching any peripheral devices.



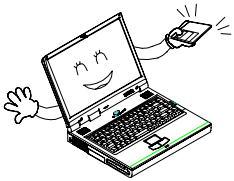
When traveling by air, follow the airline's instructions for in-flight use.



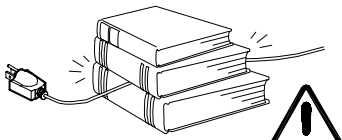
Use only approved brands of peripheral devices.



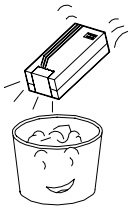
Perform routine maintenance on your computer.



Do not place heavy objects on the power cord.



Affix tape to the battery contacts before disposing of the battery.



Take periodic breaks if you are using the computer for long periods of time.

Remember to periodically save your data. Data may be lost if the battery is depleted.

Don't use or store the computer in a humid environment.

Operating Environment

Ergonomics

Developing good work habits are important if you need to work in front of the computer for long periods of time. Improper work habits can result in discomfort or serious injury from repetitive strain to your hands, wrists or other joints. The following are some tips to reduce the strain:

- Adjust the height of the chair and/or desk so that the keyboard is at or slightly below the level of your elbow.
- Keep your forearms, wrists, and hands in a relaxed position.
- Your knees should be slightly higher than your hips.
- Place your feet flat on the floor or on a footrest if necessary.
- Use a chair with a back and adjust it to support your lower back comfortably.
- Sit straight so that your knees, hips and elbows form approximately 90° angles when you are working.

Lighting

- Proper lighting and a comfortable display viewing angle can reduce eyestrain and muscle fatigue in your neck and shoulders.
- Position the display to avoid glare or reflections from overhead lighting or outside sources of light.
- Keep the display screen clean and set the brightness and contrast to levels that allow you to see the screen clearly.
- Position the display directly in front of you at a comfortable viewing distance.
- Adjust the display viewing angle to find the best position

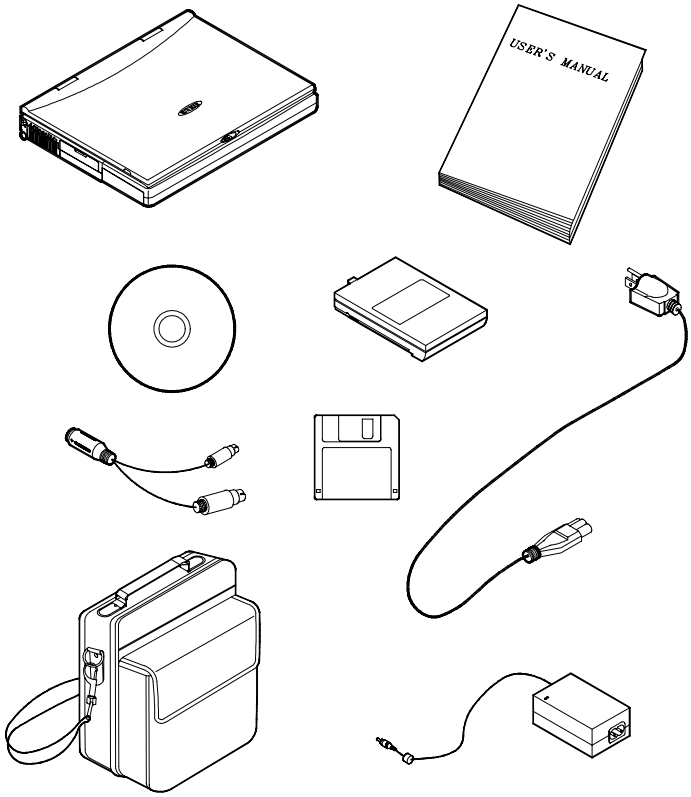
In addition, continuous concentration on computing work can result in discomfort and injury.

Remember to:

- Alter your posture frequently.
- Stretch and exercise your body several times a day.
- Take periodic breaks when you work at the computer for long periods of time. Frequent and short breaks are better than fewer and longer breaks.

Checking your items:

Carefully remove everything from the shipping box and check the items one by one. If any item is missing or damaged, contact your dealer immediately.



√ Notebook Computer.
√ Carrying Bag.
√ Power Adapter.
√ Power Cord.
√ User Manual.
√ PS/2 Transfer Cable.
√ Battery Pack.
√ Utilities Diskette(s) and CD-ROM.

Chapter 2: A quick tour of your new computer

Now lets take a quick look at you notebook and its features.

Right Side view

Battery Pack

The notebook comes with a rechargeable battery pack that lets you operate the computer without an external power source.

Removable 5.25" CD-ROM Drive

The notebook comes standard with a 24-speed 5.25" CD-ROM drive. The removable CD-ROM drive module can be replaced with the optional drive units, such as a 12.7 mm high DVD-ROM drive. (Please refer to the chapter 5 for more information on using the CD-ROM.)

LED power indicators

These indicators display the current power source of the computer. For more information please refer to Chapter 3.

Infrared port

This port allows communication with an infrared-compatible device. The Infrared port supports IrDA (HPSIR) 1.1 mode, Amplitude Shifted Keyed IR (ASKIR) mode, and Fast IR (FIR) mode. For further information, please refer to the manual of the wireless device you wish to connect.

Line-in jack

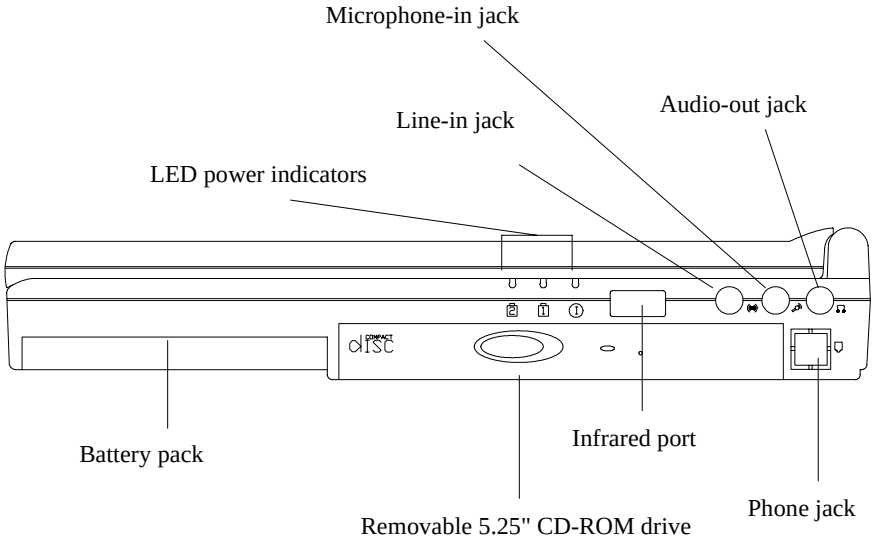
An external audio source can be fed into the notebook through this jack.

Microphone-in jack

A microphone can be connected to your notebook with this jack.

Speaker-out jack
Headphone and speakers can be attached to the system through this jack.

Phone jack (optional)
The phone jack is used to support an optional built-in modem or LAN card. If you do not intend to install this optional card, please do not punch out the phone jack. For more information on the phone jack please refer to chapter 4.



Rear View

PS/2 Type port

The PS/2 Type Port uses a 6 pin connector for connecting an external PS/2 type mouse or keyboard.

Dual USB ports

The dual Universal Serial Bus (USB) ports make adding peripheral devices easy.

Expansion port

The Expansion port uses a 120 pin Docking connector for connecting a Port Replicator.

Serial port[1]

The RS-232C serial port uses a 9 pin male connector for connecting an external serial mouse, serial printer or fax/modem.

External Monitor (CRT) port

The External Monitor uses a 15 pin connector for connecting an external CRT monitor. Simultaneous display on the LCD screen and external CRT monitor is possible.

S-video jack

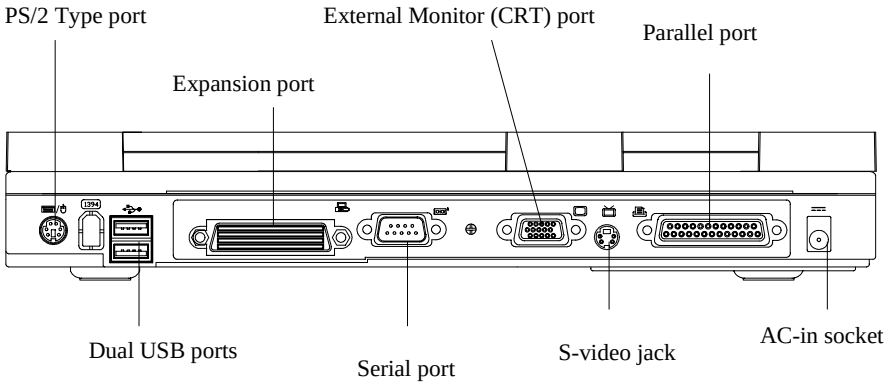
Use this jack to transmit a video signal to a TV set.

Parallel port

The Parallel Port uses a 25 pin female connector for connecting a parallel printer or other parallel devices. This parallel port supports EPP (Enhanced Parallel Port) V1.7/V1.9 and ECP (Extended Capabilities Port) modes.

AC-in socket

The AC adapter is plugged into this socket to power to your notebook.



Left Side View

Security slot

A lock for your computer can be attached to this slot to prevent possible theft.

Vent

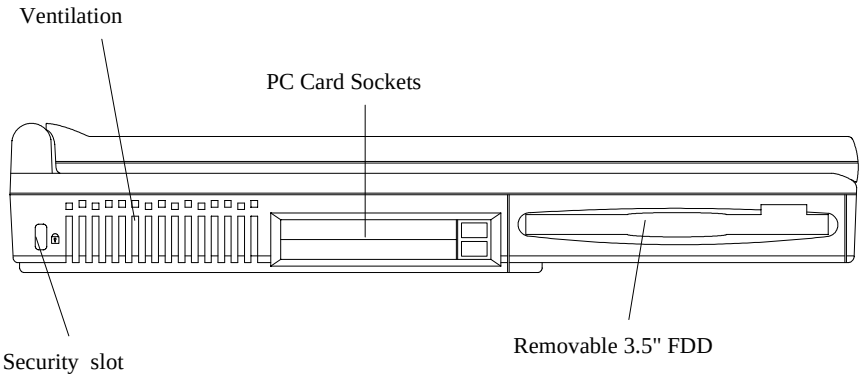
Prevents the notebook from overheating.

PC Card Sockets

The notebook provides two Type II or one Type III PC card sockets. These sockets support a Zoom Video Port (socket A) or CardBus.
The top socket is Socket A, the bottom socket is Socket B

3.5" Floppy Disk Drive (FDD)

The drive is a 3.5", 3 mode, 1.44 MB removable floppy disk drive. The floppy disk module can be replaced with a 12.7 mm high 2.5" hard disk drive or a 12.7 mm high LS-120 120 MB floppy drive. (Please refer to Chapter 3 for more information on using the floppy disk drive.)



Underside

CD-ROM Cover

Secures the removable CD-ROM drive in its bay. For more information on removing the CD-ROM please refer to Chapter 5.

CD-ROM tab

Use this tab to pull the CD-ROM module from its bay after you have unscrewed the CD-ROM cover. (Please refer to chapter 5 for more information on inserting or removing the CD-ROM.)

Battery pack latches

These latches secure the battery pack in its bay. (Please refer to chapter 3 for more information on inserting or removing the Battery pack.)

FDD latch

This latch secures the Floppy Disk Drive module in its bay. (Please refer to the chapter 5 for more information on inserting or removing the Floppy Disk Drive.)

FDD tab

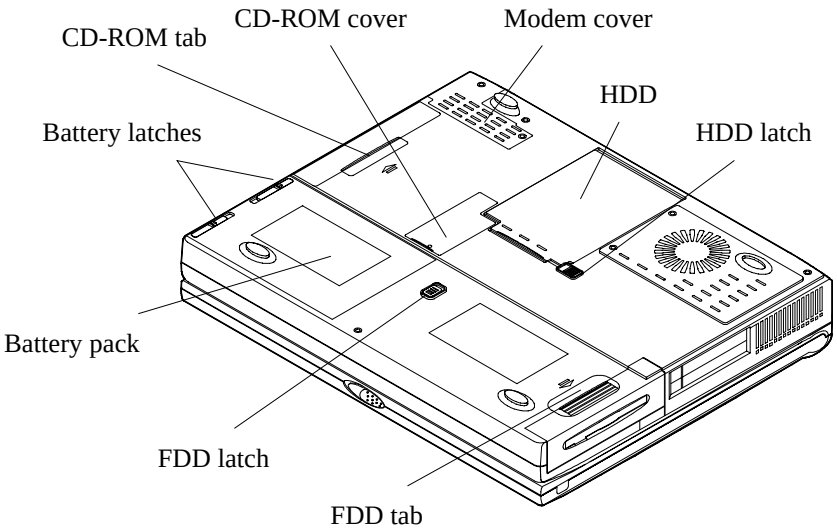
Use this tab to release the Floppy Disk Drive module from its bay after releasing the FDD latch. (Please refer to the chapter 5 for more information on inserting or removing the Floppy Disk Drive.)

HDD latch

This latch secures the Hard Disk Drive (HDD) module in its bay. (Please refer to chapter 3 for more information on inserting or removing the Hard Disk Drive.)

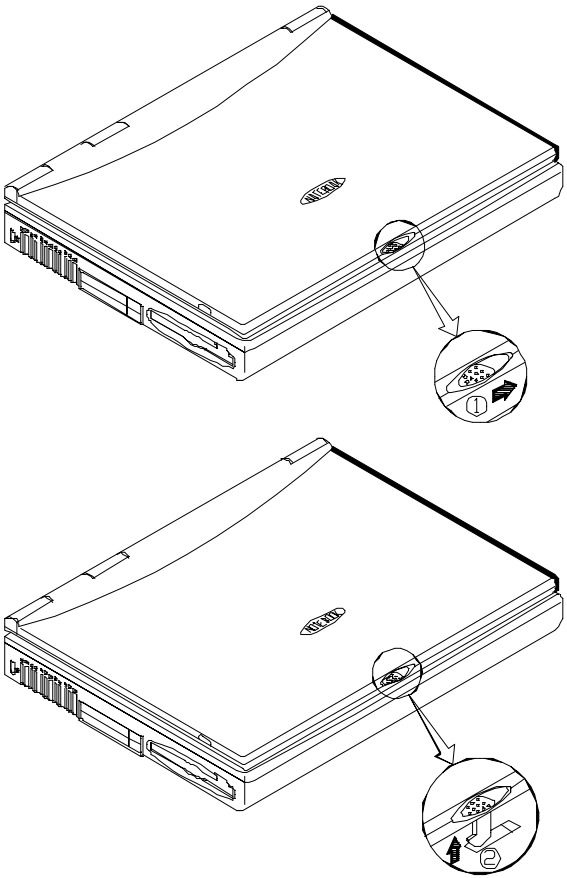
Modem cover

The optional modem or LAN card is installed beneath this cover.



Opening the LCD display

1) Move the cover latch to the right to release the top cover.
2) Lift the top cover to reveal the LCD panel and keyboard.
3) Adjust the LCD panel to a comfortable viewing angle.
4) Press the power button to power up the system.



Top view with display open

LCD Display

The Notebook has a LCD (Liquid Crystal Display) panel. Depending upon the model you have purchased, the display screen can be a 13.3" or 14.1" XGA TFT color panel. The notebook's LCD panel supports up to 1024 × 768 × 16M resolution. The LCD panel is driven by a AGP bus video controller with 8 MB video memory.

Power Button

Pressing this button turns your notebook computer on or off.

After proper configuration with the System Configuration Utility (SCU), the Power Button can also be used as a Suspend/ Resume hot button (refer to Chapter 6: BIOS Utilities, Power Menu for more information.

Note: *After turning your notebook computer off, wait a few seconds before turning it on again.*

LED power indicators

These indicators display the current power source of the computer. For more information please refer to Chapter 3 LED power indicators.

Stereo Speakers

Two built-in speakers provide rich, stereo sound.

Trackpad and Buttons

The pointing device features a sensitive glide pad for precise movements. It functions the same as a two-button mouse. The right trackpad button is the same as a right mouse button; the left trackpad button is the same as a left mouse button.

Keyboard

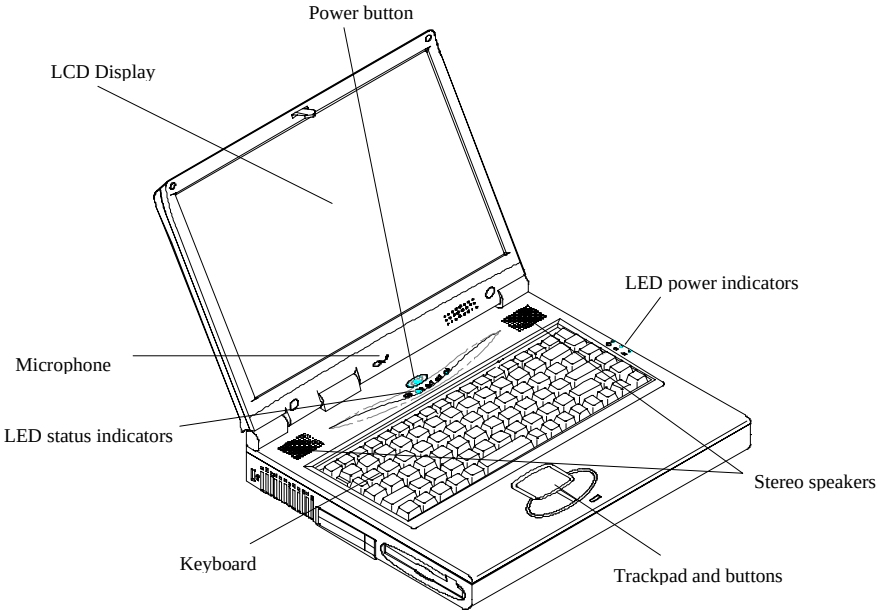
This 88 key keyboard has an embedded numeric keypad and can be used with Windows 95 or Windows 98. It also has many of the same features as a full-size desktop keyboard and can easily be replaced with non-English keyboards.

LED status indicators

These LED indicators display the system's operational status. Refer to Chapter 3 LED status indicators for more information.

Microphone

With the built-in microphone you can record on your notebook computer.



Chapter 3: Using your new computer

Your notebook computer can be used almost anywhere, in the home, office, or on the road. To learn more about how to operate your computer, the features available and how to power your computer please read this chapter.

The power sources

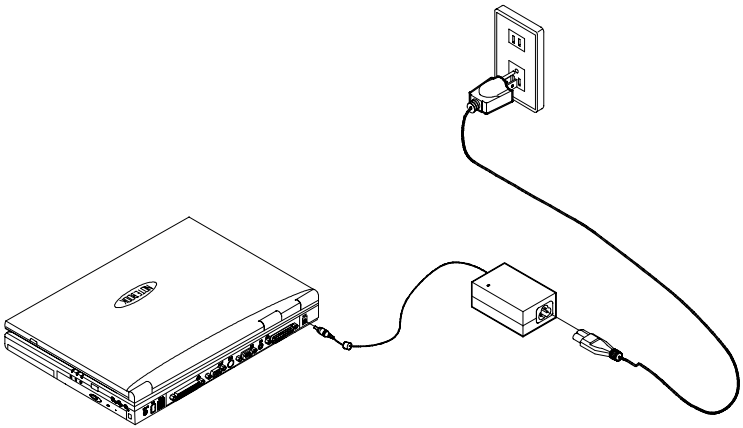
It can be powered by either an AC adapter or battery pack depending on where you want to use it.

AC Power Adapter

1) Plug the power adapter cord into the AC-in socket on the rear panel of the computer.

2) Connect the power adapter with the power cord.

3) Plug the power cord into a properly grounded outlet.



Note: *Use only the power adapter that comes with your computer. An incorrect type of power adapter will damage the computer and its components.*

Battery pack

The battery pack allows you to use your notebook computer when an electrical outlet is unavailable or inconvenient. Battery life depends on the application and the configuration you're using.

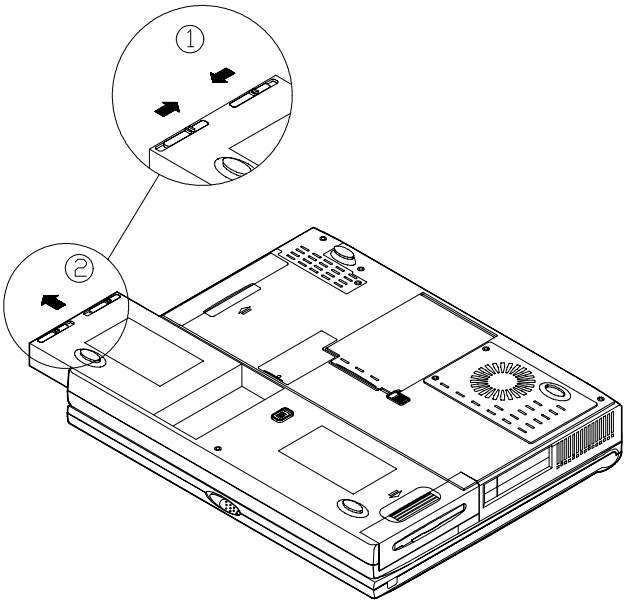
Note: *To increase battery life, let the battery discharge completely before recharging.*

Removing the battery pack

1) Turn the computer over.

2) Squeeze the latches together with your left hand ①.

3) With your right hand gently grasp the battery pack on the ridge below the latches and lift it out of the bay ②.



Inserting the battery pack

1) Turn the computer over.
2) Place the battery in its bay.
3) Push down on the side with the latches until it clicks into place.

Recharging by AC Power

The battery pack will automatically recharge when it is in its bay in the computer and the computer is plugged into an AC power supply.

While the battery is recharging, you can still use the computer.

It will take several hours to fully recharge the battery and slightly longer if you are using the computer while the battery is recharging.

Please refer to LED power indicators in Chapter 3 for more information on the battery charge status.

Note:

– The second battery indicator light will blink when the battery overheats or there is a problem with the battery. Should this happen, remove the battery and allow it to cool down. If the indicator light still blinks contact your vendor about a possible battery problem.

– The battery has protection design to detect the temperature while recharging or discharging. To ensure the battery can be recharged, while discharging wait until the battery returns to normal temperature, then recharge the battery

– For better battery life:

1) Fully discharge the battery before recharging.

2) Recharge the battery to full capacity each time you recharge it.

Proper Handling of the Battery Pack

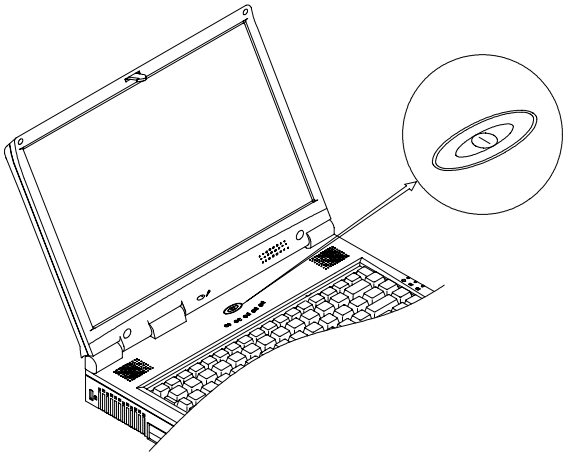
Do not disassemble the battery pack under any circumstances.

Do not expose the battery to fire or high temperatures, it may explode.

Do not connect the metal terminals (+, -) together.

Turning on your notebook computer

Now you are ready to begin using your new notebook computer. To turn it on simply press the power button in the middle top of the front panel.

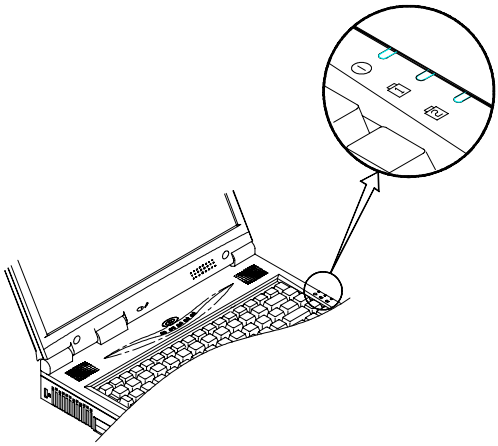


Pressing the power button turns your notebook computer on or off.

After proper configuration with the System Configuration Utility (SCU), the Power Button can also be used as a Suspend/Resume hot button (refer to Chapter 6, BIOS Utilities, Power Menu for more information.

LED indicators

There are two sets of LED indicators on your computer to display information which is helpful to you.



LED Power indicators

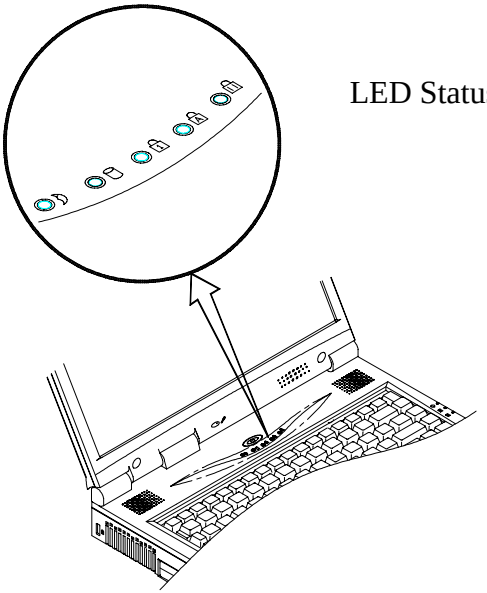
The LED power indicators located on the right side display the power status.

Icons	Color	Description
	Green	Battery power is being used.
	Red	AC power is being used.
	Blinking Red	Battery power is critically low.
	Red	The battery is being charged.
	Green	The battery is fully charged.
	Blinking Green **	The battery is overheated The battery is malfunctioning.

*** Should this happen, remove the battery and allow it to cool down. If the indicator light still blinks contact your vendor about a possible battery problem.*

LED Status indicators

Once your computer is on and in use the LED status indicators will display the system's operating status.



LED Status indicators

Icon	Color	Description
	Green	The system has entered the configured suspend mode.
	Green	The hard disk is being accessed
	Green	Num lock is activated
	Green	Cap Lock is activated.
	Green	Scroll Lock is activated.

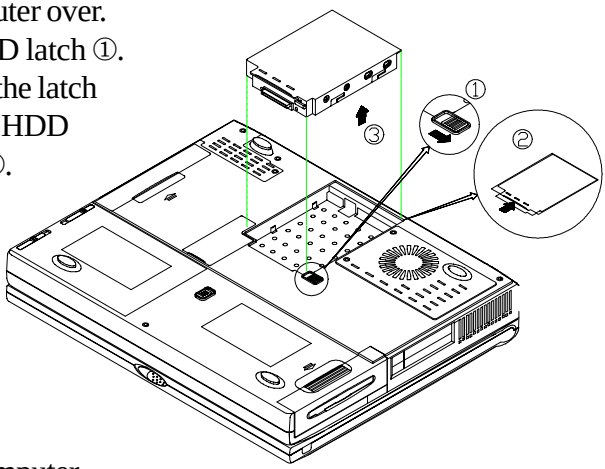
The Hard Disk Drive (HDD)

About the HDD

The hard disk drive is used to store your data internally in the notebook computer. It is mounted in a removable case and can be taken out to accommodate other 2.5" IDE hard disk drives with a height of 12.7 mm or 9.5 mm. The system supports PIO mode 4, Master mode IDE, LBA mode and provides a high performance data transfer rate at speeds up to 33 MBytes/second (ATA-33). For data security you can easily remove the HDD.

Removing the HDD

1) Turn the computer off.
2) Turn the computer over.
3) Locate the HDD latch ①.
4) Slide and hold the latch forward then slide the HDD out of the computer ②.
5) Lift the hard disk drive out of the computer ③ .



Inserting the HDD

1) Turn off the computer.
2) Turn the computer over.
3) Place the HDD case into the computer.
4) Slide the HDD in until you hear a click.

The Floppy Disk Drive (FDD)

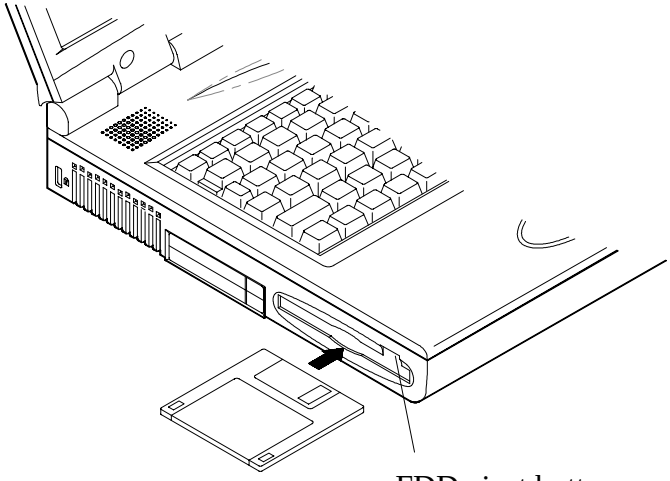
About the FDD

The computer is equipped with a removable 1.44 MB, 3.5" floppy disk drive module. It is usually designated drive A by default and can be used as a boot device if properly set in the SCU (please refer to Chapter 6, BIOS Utilities). You may replace the floppy disk drive module with a 120 MB LS-120 drive (12.7 mm height) or a 12.7 mm high 2.5" hard disk drive. Contact your dealer for details.

Using the FDD

Inserting/Removing Diskettes

When using the floppy drive, always insert your floppy diskette label-side up. To remove your diskette, press the eject button on the top-right corner of the floppy drive.



FDD eject button

The CD-ROM

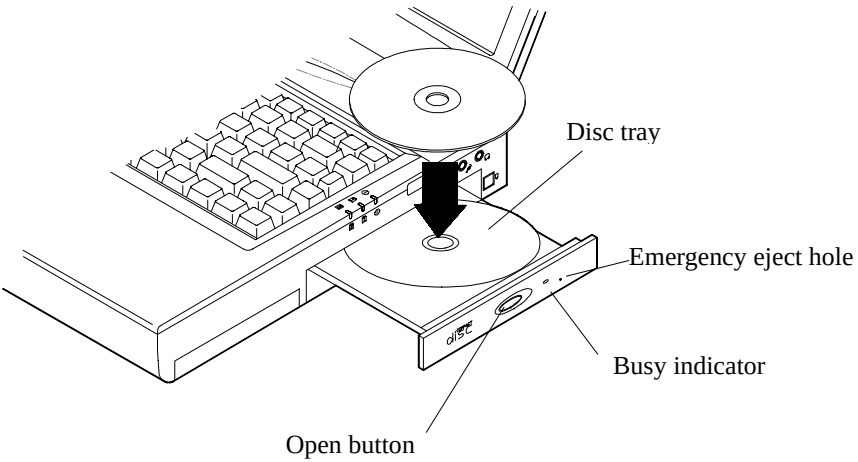
About the CD-ROM

The notebook computer comes standard with a 24 speed removable 5.25" CD-ROM drive. It is labeled drive D and may be used as a boot device if properly set in the System Configuration Utility. The removable CD-ROM drive can be replaced with optional drive units, such as a 12.7 mm high DVD-ROM drive.

Loading Compact Discs

To insert a CD, press the Open Button and carefully place a CD into the Disc tray with label-side facing up (see below). Push the CD tray in and you are ready to start. The Busy Indicator will light up while data is being accessed or while an audio CD is playing. When power is unexpectedly interrupted, insert an object such as a straightened paper clip into the Emergency Eject hole to open the tray.

Note: *When manually ejecting a CD, DO NOT use a sharpened pencil or similar object that may break and become lodged in the hole.*

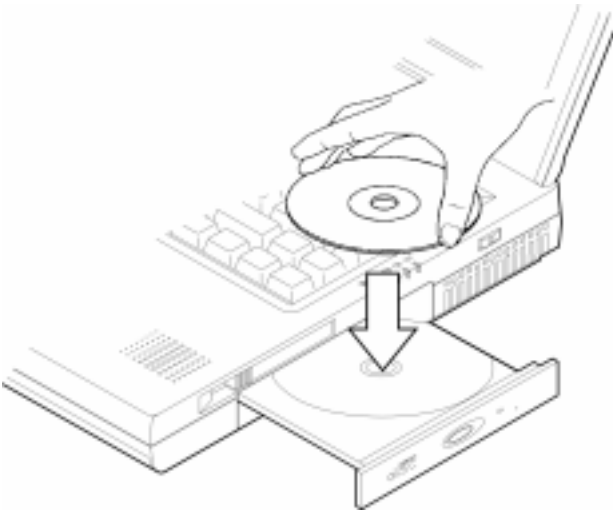


Handling Compact Discs

Proper handling of your CDs will prevent them from being damaged. Please follow the advice listed below to make sure that the data stored on your CD-ROMs can be accessed.

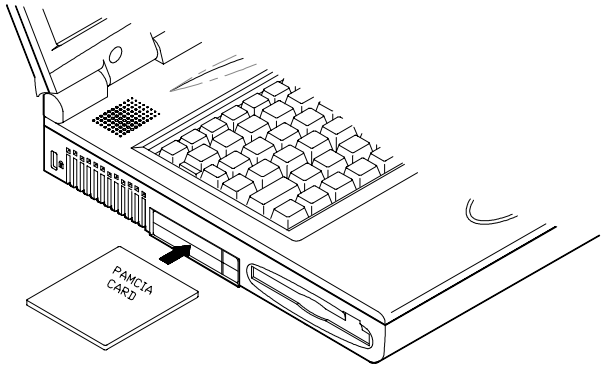
Remember to:

- Hold the CD by the edges; do not touch the surface of the disc.
- Use a clean, soft, dry cloth to remove dust or fingerprints.
- Do not write on the surface with a pen.
- Do not attach paper or other materials to the surface of the disk.
- Do not store or place the CD in high-temperature areas.
- Do not use benzene, thinners, or other cleaners to clean the CD.
- Do not bend the compact disc.
- Do not drop or subject the CD to shock.



The PC Card Sockets

The computer is equipped with two PC card sockets (previously referred to as PCMCIA). Both sockets support two 3.3V/5V type II or one type III PC card or two 3.3V CardBus cards. PC card Socket A is on the top and Socket B is on the bottom. Socket A can also support a Zoomed Video Port.

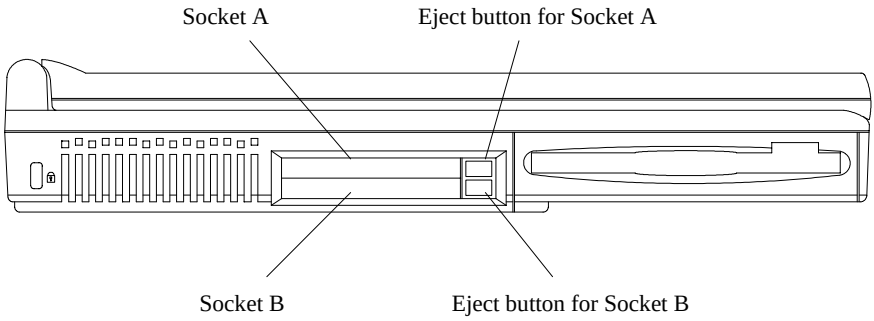


Inserting PC Cards

Align the PC card with the slot and push the card in until it locks into place.

Removing PC Cards

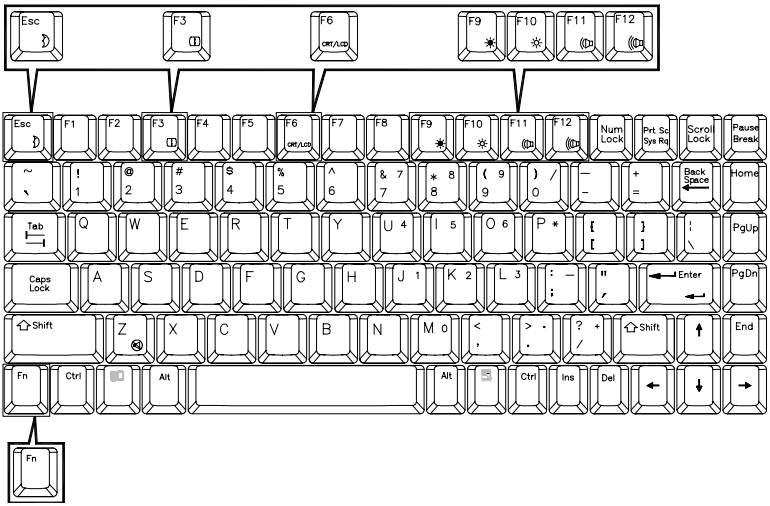
To remove a PC card, simply press the eject button next to the slot.



The Hot Keys

Located on the bottom-left of the keyboard is the Fn key or Function key. The Fn key allows you to change operational features instantly (Hot Keys).

When you use the following functions, press and hold the Fn key; then press the appropriate function key (F1, F2, F3, etc....) located at the top of your keyboard.



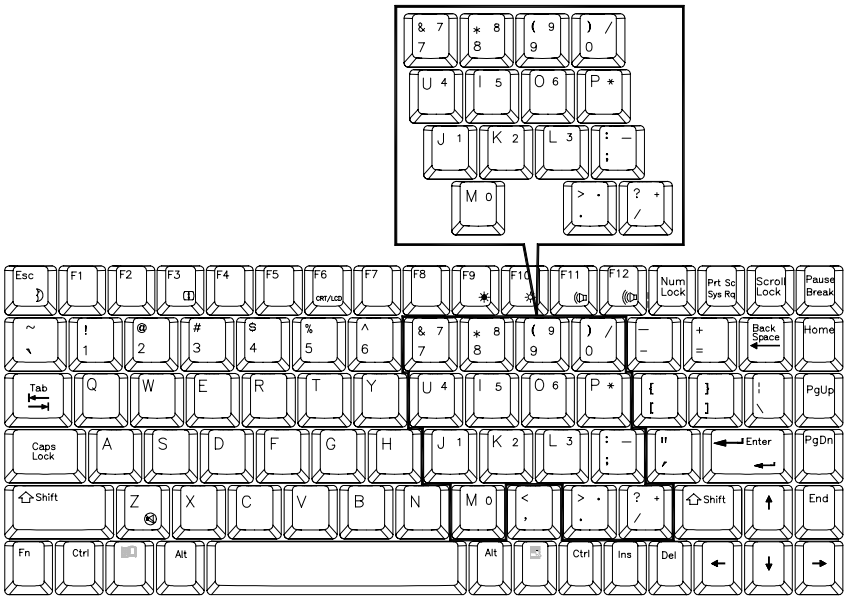
Fn + F3 Expand LCD display
Fn + F6 Toggle between CRT / LCD / LCD+CRT
Fn + F9 Decrease LCD brightness
Fn + F10 Increase LCD brightness
Fn + F11 Decrease audio volume
Fn + F12 Increase audio volume
Fn + Z Toggle audio on/off
Fn + Esc Suspend/resume

The Numeric Keypad

A numeric keypad is integrated into the keyboard for easy numeric data input. The keypad stands out by its blue typeface.

To use the keypad simply:

- Activate the Num Lock feature (press the Num Lock key).
- Press and hold down the Fn key.
- Press the desired number keys.

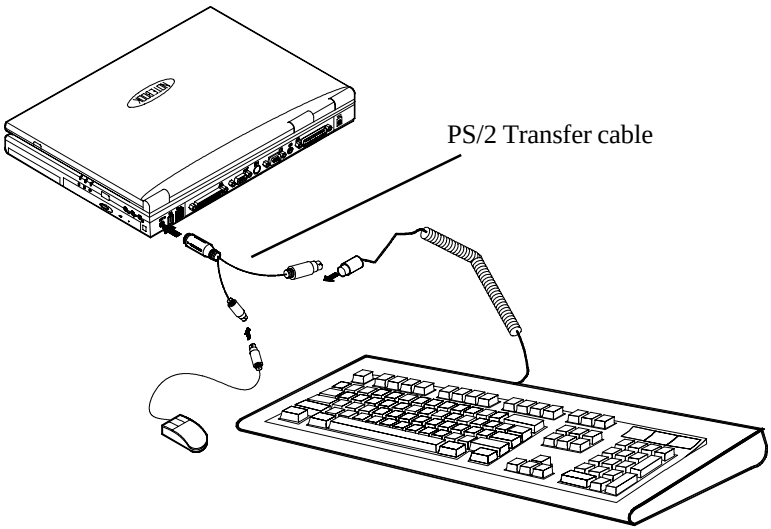


Chapter 4: Adding peripherals

To enhance your computer's capabilities, you can attach peripheral devices to the computer using the ports or jacks located on the rear panel of the computer. The computer can support the following peripheral devices:

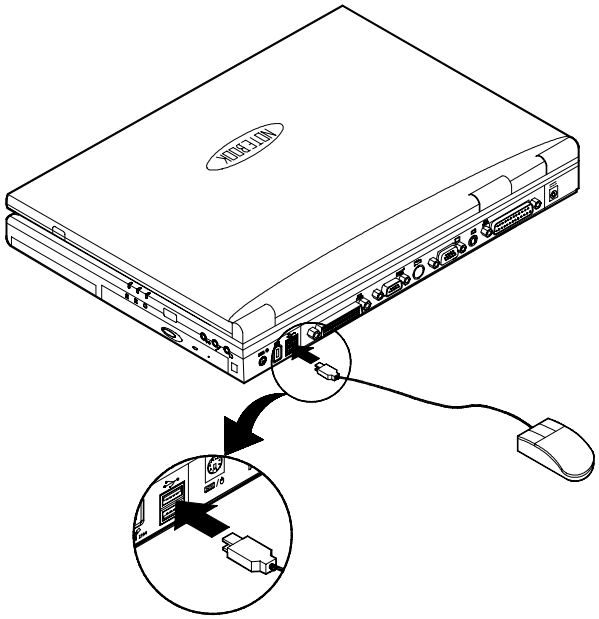
PS/2 Keyboard or Mouse

The computer can use a PS/2 keyboard or mouse attached by a PS/2 transfer cable that comes with your notebook computer. Attach the external keyboard or mouse to the PS/2 port as shown below.



USB compatible Device

The computer has a dual USB port for connecting one or two USB compatible devices such as a keyboard, mouse, or other USB device. Simply plug the device into the USB port as shown below.

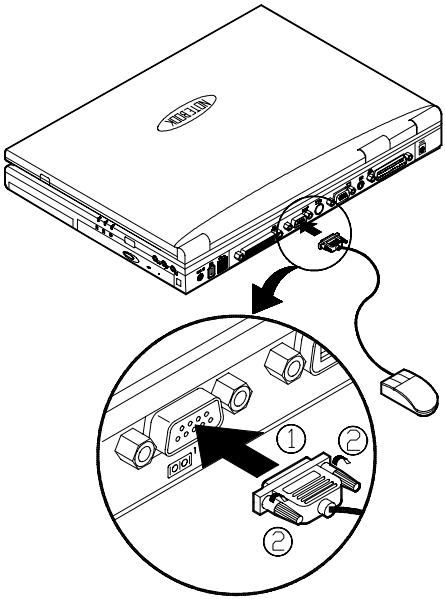


Serial Mouse

The serial port features a 9 pin connector. You can connect any serial device such as a mouse to this port.

To connect a serial device you must:

1) Turn off the computer.
2) Connect the cable to the serial port on the rear of the computer.
3) Tighten the screws that fasten the cable to the serial port.
4) Turn on the computer.



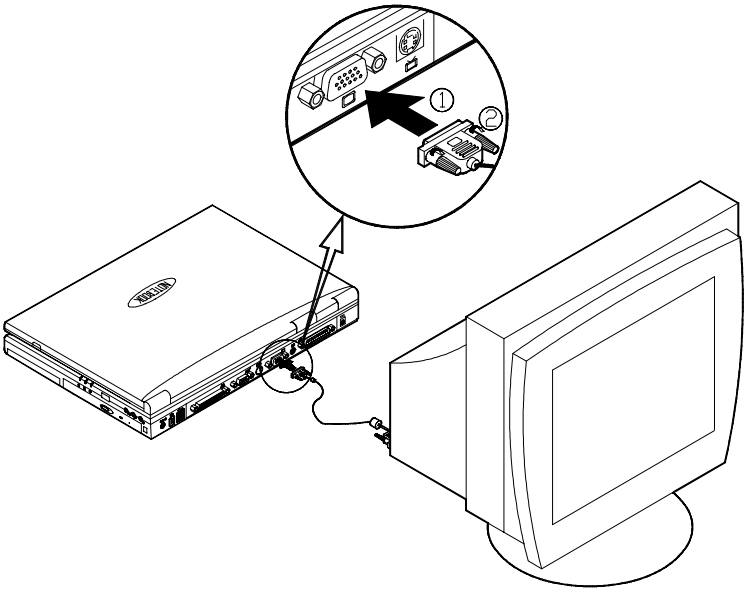
Note: *In addition, you may need to install the manufacturer-supplied driver for the serial mouse. Refer to the device's user guide for more information.*

External Monitor (CRT)

The computer can support an XGA compatible external monitor. The external monitor can be used simultaneously with the LCD display turned on or off. You can setup your computer to use an external monitor by entering the System Configuration Utility (SCU) and selecting the appropriate parameters or using the Fn + F6 keys (refer to The Hot Keys in Chapter 3).

To install an external monitor you simply:

1) Turn off the computer.
2) Connect the cable to the CRT port on the rear of the computer.
3) Tighten the screws that fasten the cable to the CRT.
4) Insert the other end of the cable to the external monitor.
5) Turn on the computer.

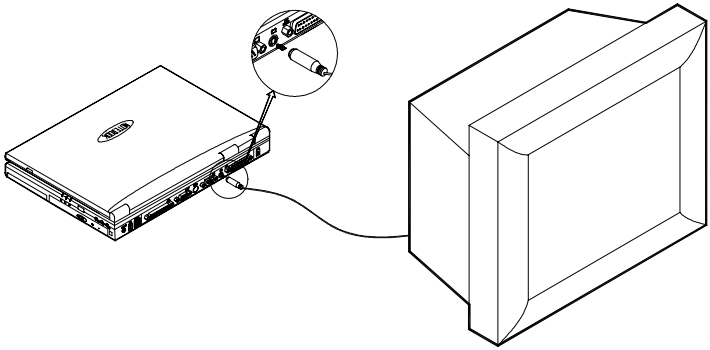


TV Set

The S-Video jack on the rear panel of the computer is used for transmitting video signals to a TV set. To add a TV set simply plug the TV set cable into the S-Video jack as shown below.

Also with Windows 98 you can use your computer display and TV simultaneously.

Note: *You may need to select the video standard for video display. To do so, enter the System Configuration Utility (SCU) Components Menu and select the appropriate TV standard.*



Using Windows 98 for simultaneous display to a TV

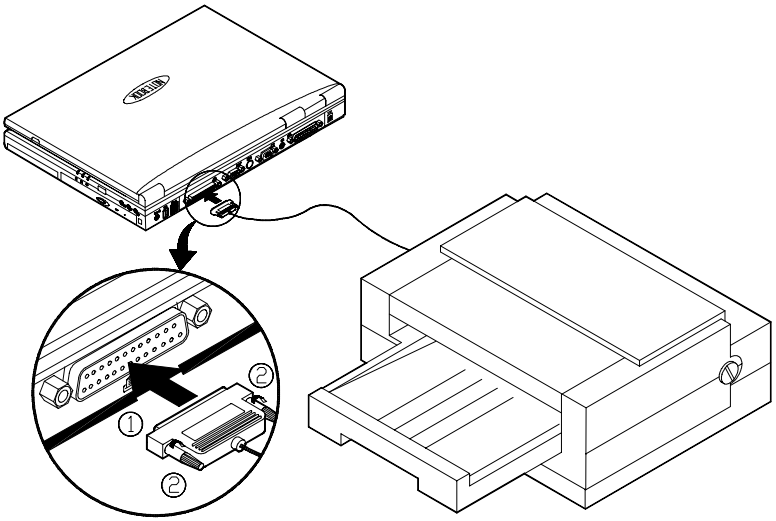
Click on the START button
Click Settings
Click Control Panel
Double click on the Display icon
In the Display Properties window select Settings
Click Advanced
In the Rage LT PRO AGP 2x Properties window select Displays
Click TV
Click OK

Parallel Printer

You can connect any standard Centronics parallel printer to your computer using the parallel port.

To connect a printer simply:

1) Turn off the computer.
2) Connect the cable to the parallel port on the rear of the computer.
3) Tighten the screws that fasten the cable to the parallel port.
4) Insert the other end of the cable to the printer's connector.
5) Fasten the cable's connector.
6) Turn on the printer and computer.

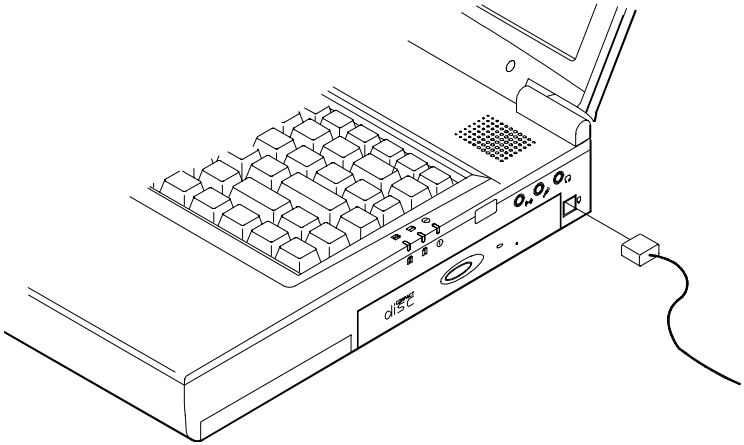


Note: *You may also need to install the manufacturer-supplied driver for the printer. Refer to the device's user guide for more information. If the connected printer supports Enhanced Parallel Port (EPP) or Extended Capabilities Port (ECP) mode, please enter the System Configuration Utility (SCU) to configure the required setting.*

Attaching a Phone Line (optional)

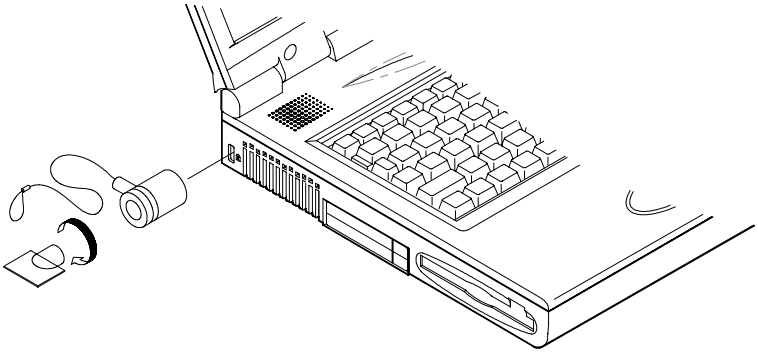
The notebook has a phone jack for connecting to a phone line or a local area network (LAN). The notebook doesn't come with a modem or LAN card, so if you want to use this jack you must first install a modem or LAN card on the mainboard. Once the modem or LAN card is installed you simply attach a phone cord to the jack. For more information on this please contact your dealer for the appropriate modem or LAN card and instructions.

Once you have installed the modem or LAN card you can then punch out the plastic covering your computer's phone jack.



Security Lock

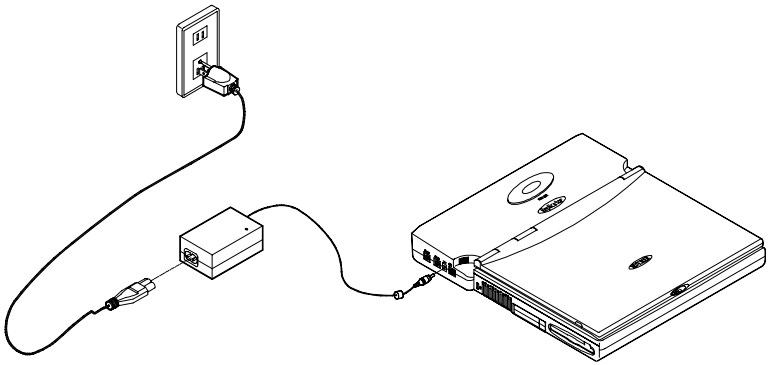
A security lock can be installed on your notebook computer to help prevent theft. To install the security lock, wrap the cable around a desk or other immovable object, then insert the locking device in the slot located on the left side of your notebook computer.



Attaching a Proprietary Port Replicator

The Proprietary Port Replicator gives you access to numerous peripherals without having to connect cables to the back of your notebook. The peripherals are attached to the proprietary port replicator and all you have to do is dock your notebook into the replicator.

Please contact your dealer for more information.

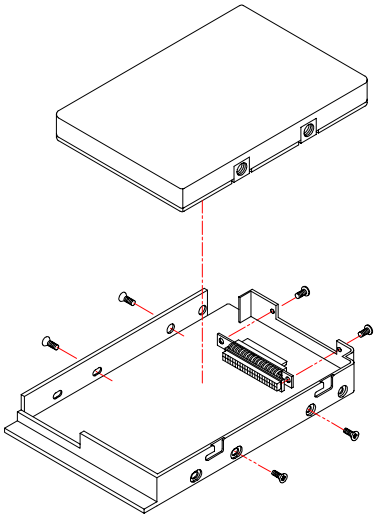


Chapter 5: Upgrading your notebook computer

Before you begin you will need:

- A small crosshead or Phillips screwdriver.
- A small regular screw driver.
- An antistatic wrist strap

Note: *Make sure you wear an antistatic wrist strap to ground yourself before working with or repairing the internal components. Static electricity may damage the components.*

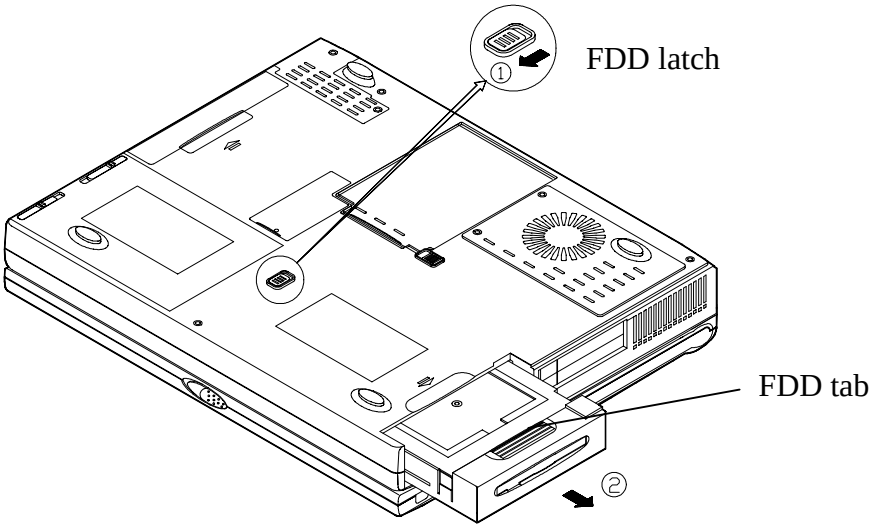


Replacing the HDD

1) Remove the HDD case from the computer (refer to **Removing the HDD** in Chapter 3 for details).
2) Remove the two screws on each side of the case (The location of the screws depends on the hard disk model).
3) Slowly remove the HDD from the case until you see the connecting cable.
4) Gently disconnect the cable from the HDD being careful not to bend any pins or crimp the cable.
5) Connect a new HDD to the cable being careful not to bend any pins or crimp the cable.
6) Slowly place the HDD back into the case.
7) Hold the HDD firmly in place with two screws on each side.
8) Insert the HDD into the computer (refer to **Inserting the HDD** in Chapter 3 for details.)

Removing the Floppy Disk Drive (FDD)

1) Turn off the computer.
2) Turn the computer over.
3) Slide the and hold the FDD latch to unlock the FDD module.
4) Grasp the FDD tab and pull the FDD out of the computer.

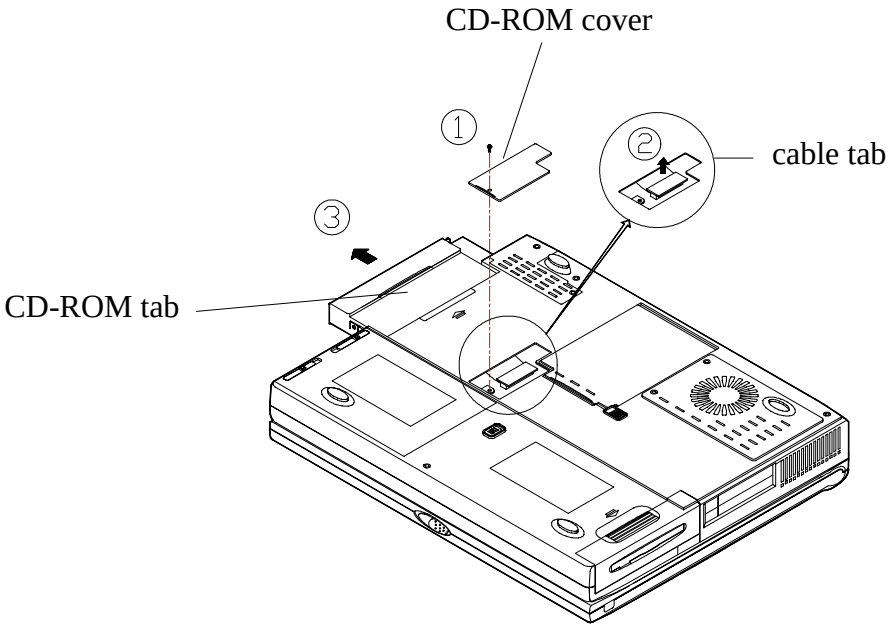


Inserting the Floppy Disk Drive (FDD)

Follow the instructions for removing the FDD in reverse order.

Removing the CD-ROM module

1) Turn off the computer.
2) Turn the computer over.
3) Locate the CD-ROM cover.
4) Unscrew and remove the cover ①.
5) Locate the cable tab.
6) Gently pull the cable tab upward to disconnect the CD-ROM from the computer mainboard ②.
7) Grasp the CD-ROM tab and gently PULL the CD-ROM out of the computer ③.



Inserting the CD-ROM module

Refer to removing the CD-ROM and follow the instructions in reverse order.

Installing a Modem or LAN Card

If you choose to install the optional modem or LAN card please contact a registered dealer for the card and installation instructions.

Upgrading the Memory

Memory can be expanded up to 256 MB. To upgrade the memory you will need 3.3v, PC-100 compliant 144 pin SODIMM (Small Outline Dual In-line Memory Module) modules.

Memory can be expanded with the following combinations:

Bank 0 (64-bit)	Bank 1 (64-bit)	Power	Total Size
32 MB	Empty	3.3V	32 MB
32 MB	32 MB		64 MB
64 MB	Empty		64 MB
64 MB	32 MB		96 MB
64 MB	64 MB		128 MB
128 MB	Empty		128 MB
128 MB	32 MB		160 MB
128 MB	64 MB		192 MB
128 MB	128 MB		256 MB

Once a new module is installed the memory size is automatically detected by the POST routines when you turn on your computer.

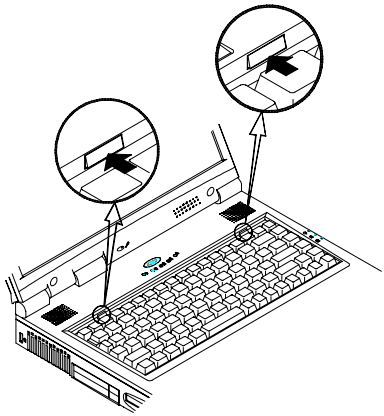
Installing a Memory Module

1) Turn off the computer.

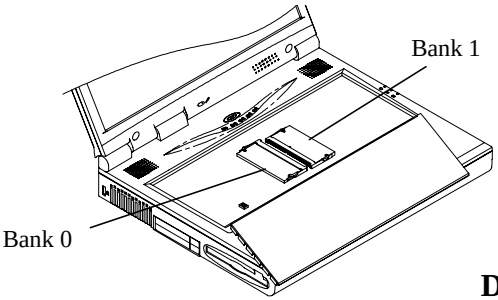
2) Press the two keyboard latches at the top of the keyboard to elevate the keyboard from its normal position.

3) Carefully lift the keyboard assembly out to expose the mainboard.

4) Locate the memory banks, Bank 0 is on the left and Bank 1 is on the right.



Drawing 5-1



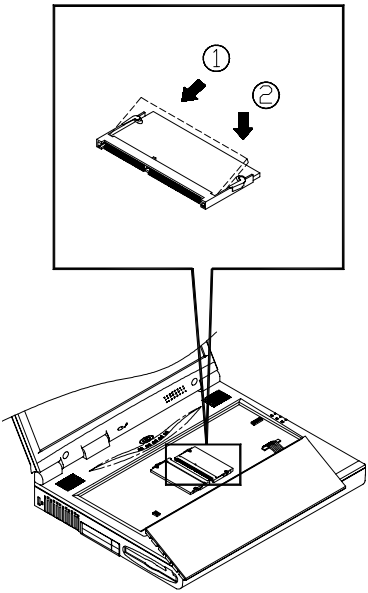
Drawing 5-2

Note: *Only use Bank 0 if you have one memory module. If you are using two memory modules always use the larger module in Bank 0.*

5) Insert the memory module at a slight angle about 45° and fit its connectors firmly into the bank ① .

6) Press down the two edges of the memory module and lock it into place ②.

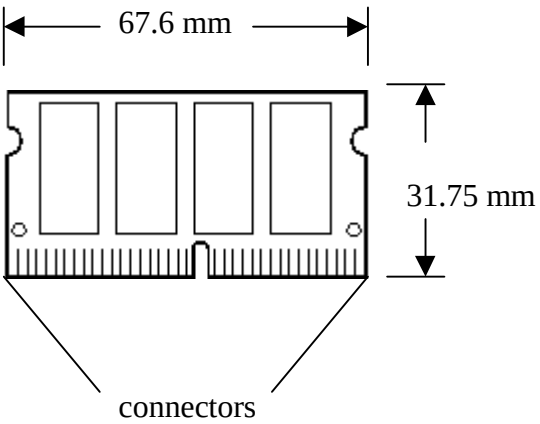
7) Put the keyboard back into place.



Note:

Make sure the connectors go into the bank.

You must use a RAM module that complies with Intel unbuffered SODIMM (67.6 mm x 31.75 mm). Please consult your dealer for the details.



Removing a Memory Module

1) Turn off the computer.

2) Press the two keyboard latches to elevate the keyboard from its normal position (refer to **Drawing 5-1**)

3) Carefully lift the keyboard assembly out to expose the mainboard.

4) Locate the memory sockets. Bank 0 is on the left and Bank 1 is on the right. (refer to **Drawing 5-2**)

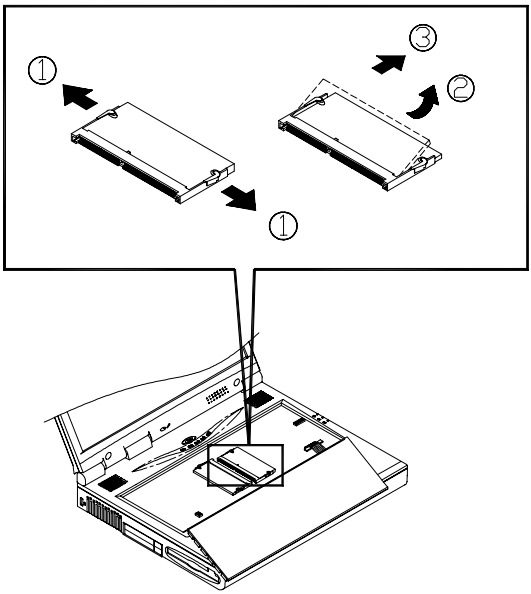
5) Gently pull the two latches outward on both ends of the module ①.

6) The module will pop up ②.

7) Remove the memory module ③.

8) Install a new memory module if desired (refer to Installing a Memory Module).

9) Put the keyboard back into place.



Adding or replacing the Processor

The mainboard can support a Intel®Pentium !!! FC-PGA370 processor or a Intel®Celeron PPGA 370 type processor. Unlike the earlier Pentium processors, these processors lock into the mainboard. To open and close the CPU lock you will need a special tool which is not supplied with your notebook computer.

If you would like to upgrade your existing processor, please contact your vendor for the complete upgrade instructions and the necessary tool.

When you contact the vendor please specify whether you will use a FC-PGA370 or PPGA370 type processor.

Flash ROM BIOS update

In order to keep up with the latest system BIOS, your notebook may be upgraded. Consult your dealer for further information.

Chapter 6: BIOS Utilities

In this chapter you will learn about the Power On Self Test (POST) and how to configure the system parameters using the System Configuration Utility (SCU).

Power on Self Test (POST)

The system BIOS (Basic Input/Output System) performs a series of tests on the system memory and key computer components every time the computer is powered on. These tests are called the Power On Self Test (POST). Should an error exist, the POST routine may halt execution (depending on the problem). If no error exists, the POST will initialize the BIOS configuration, and boot (start) the operating system.

POST Message: Normal Operation
You will see the following message if no error exists after the POST is performed

SystemSoft BIOS MobilePRO BIOS Version 1.01 (2482-00)-(R1.XX)
Copyright 1983-1996 SystemSoft Corp. All Rights Reserved

300 MHz Celeron with MMX CPU
L2 Cache: 128 KB Installed
8 MB Video RAM
SystemSoft Plug-n-Play BIOS ver1.17.01

Base Memory 000640 Kb
Extended Memory 130048 Kb
Total Memory 131072 Kb

Auto Detecting IDE Devices[Done]
Press <CTRL-ALT-S> to enter System Configuration Utility

Note: *You may press the* ***Spacebar*** *key to skip the memory test.*

POST Message: Error Detected
If an error is detected, you will see the following WARNING message. You may press the **F1** key to continue, or press the **Ctrl**-**Alt**-**S** keys simultaneously to enter the System Configuration Utility.

SystemSoft BIOS MobilePRO BIOS Version 1.01 (2482-00)-(R1.XX)
Copyright 1983-1996 SystemSoft Corp. All Rights Reserved

300 MHz Celeron with MMX CPU
L2 Cache: 128 KB Installed
8 MB Video RAM
SystemSoft Plug-n-Play BIOS ver1.17.01

Base Memory 000640 Kb
Extended Memory 130048 Kb
Total Memory 131072 Kb

WARNING - HARD DISK CONTROLLER 1 FAILURE
Auto Detecting IDE Devices[Done]

Press <CTRL-ALT-S> to enter System Configuration Utility
Press F1 to Continue

System Configuration Utility

The System Configuration Utility (SCU) can be used to set your notebook's system parameters. Things like the date and time or what your computer will do if it is turned on but not used are what you set in the SCU.

The settings are stored in a nonvolatile battery-backed CMOS RAM. This simply means that your settings are saved even when the notebook is turned off.

Information in the System Configuration Utility

Here is a list of the system settings which may be changed within the System Configuration Utility.

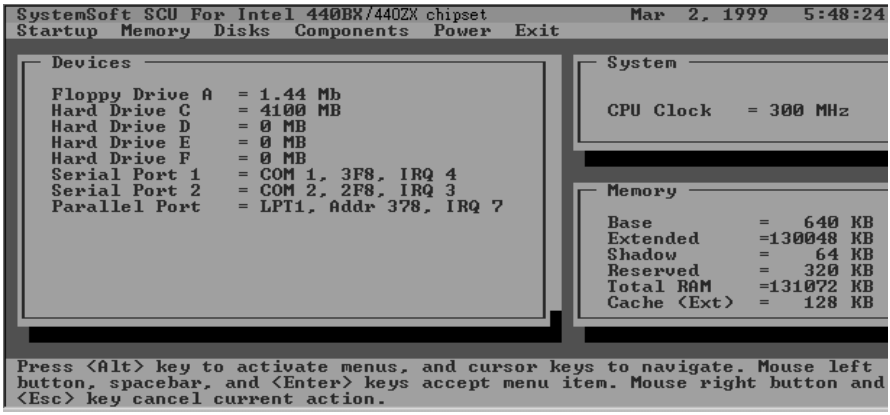
This menu bar choice:	Allows you to set or change:
Startup	Date and Time, Fast Boot, Boot Device, Display, Enable Battery Low Beep, Enable LCD expand Mode, Enable Power On Beep, Enable PNP OS Support, Boot Password, SCU Password.
Memory	Cache Systems.
Disks	Enable LS120/ZIP 100 Drive, Diskette Drives, IDE Settings.
Components	COM Ports, LPT Port, PS/2 Mouse Port, Keyboard Numlock, Keyboard Repeat, TV Mode
Power	Enable Power Saving, Low Power Saving, Medium Power Saving, High Power Saving, Customize, Suspend Controls, Resume Timer, Enable MODEM Ring Resume, Enable Battery Low Suspend.
Exit	Save and Exit, Exit (No Save), Default Settings, Restore Settings, Version Info.

Initiating the System Configuration Utility

The System Configuration Utility (SCU) can be accessed by pressing the Ctrl, Alt, and S keys simultaneously when you turn on your computer and see this message:

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

This message lasts only a few seconds and if you don't respond in time, the computer will initiate the boot process. If you were unable to enter the SCU you must reboot the system and try again.



Working with the Menu Bar

Use these keys to begin working in the SCU.

Keys	Action
Alt	Highlights the menu bar
Left arrow (←) Right arrow (→) Highlighted letters	Selects a menu bar option.
Left mouse button Down arrow (↓) Spacebar Enter	Opens the menu bar option.
Right mouse button Esc	Cancels current action

Working with the Pull-down Menu

Once your desired menu bar item is highlighted, press Enter or the down arrow to see the pull-down menu items. You move about the pull-down menu with these keys:

Keys	**Action**
Down/Up arrows (↓) (↑) Highlighted letters	Select a pull-down menu item.
Enter	Enable/disable the specified function. A (√) indicates, the function is on.
Esc	Close the pull-down menu and Save the changes.

Some Pull-Down menu options have an arrow to the left of the entry. Choose these options by pressing Enter and another screen will be displayed. Navigate the new screen with the following keys:

Keys	**Action**
Tab	Move from one record to another.
Down/Up arrows (↓)(↑)	Change the value of a field.
Spacebar	Select a field
Enter	Choose <OK> to save any changes. <Cancel> to ignore any changes.
Esc	Quit

Features of the System Configuration Utility

Startup Menu

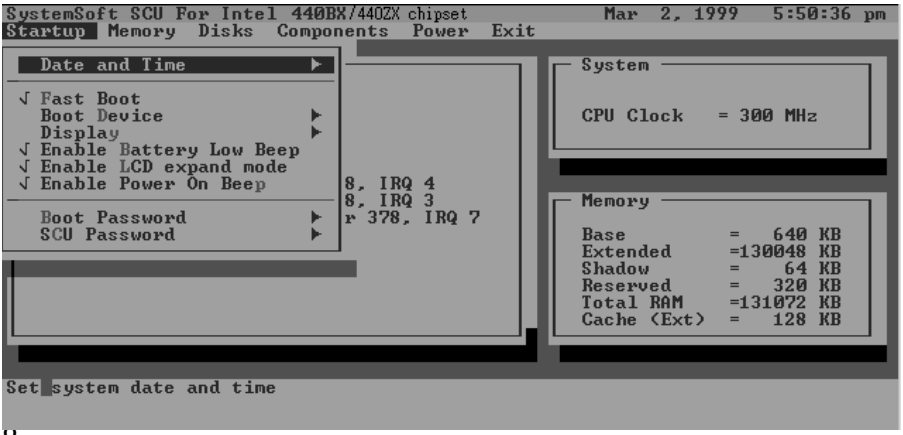
Item	Setting/Option		Function
Date and Time	Day/Month/Year Hour/Minute/Second		Set the date and time.
Fast Boot	Enable		Initialize and quickly boot the system by skipping certain diagnostic tests.
	Disable		Disable the Fast Boot.
Boot Device	1st Boot Device	Hard Disk C	Specify the system's 1st choice for the boot drive.
		CD-ROM Drive	
		Diskette A	
	2nd Boot Device	Hard Disk C	Specify the system's 2nd choice for the boot drive.
		CD-ROM Drive	
		Diskette A	
	3rd Boot Device	Hard Disk C	Specify the system's 3rd choice for the boot drive.
		CD-ROM Drive	
		Diskette A	

Item	Setting/Option	Function
Display	LCD	Activate the system's LCD panel.
	CRT	Activate an external monitor.
	LCD + CRT	Activate both the LCD and the CRT.
	TV	Activate an external TV.
	CRT + TV	Activate both the CRT and the TV.
Enable Battery Low Beep	Enable	A series of warning beeps will sound when the battery power is low.
	Disable	Disable the above.
Enable LCD Expand Mode	Enable	Stretch the display to fill the entire area of the LCD panel.
	Disable	Disable the above.
Enable Power On Beep	Enable	Enable or Disable Power On Beep.
	Disable	
Enable PNP OS Support	Enable	Enable or disable PNP OS Support
	Disable	

Caution: ***If you choose to set a boot password, NEVER forget your password, the consequences could be serious. If you cannot remember your boot password you must contact your vendor and you may lose all of the information on your HDD.***

Item	Setting/Option	Function
Boot Password	Enter old Power-On Password	Set a password for booting the computer. Only users who enter a correct password can boot the system.
	Enter new Power-On Password	
	Verify new Power-On Password	
	Enable Password to Power-On	
SCU Password	Enter old Setup Password	Set a password for modifying the SCU. Only users who enter the correct password can change the SCU.
	Enter new Setup Password	
	Verify new Setup Password	
	Enable Setup Password	

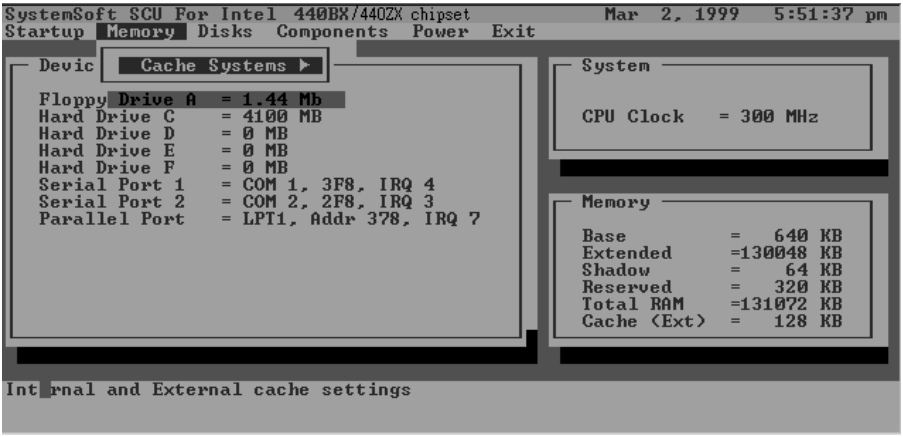
Startup Screen



Memory Menu

Item	Setting/Option		Function
Cache Systems	L1 Cache	Disabled	Disable the processor's internal cache.
		Write Back	Enable the Processor's internal write-back cache. Write back cache improves performance, because a write to the high-speed cache is faster than to normal RAM.
	L2 Cache	Disabled	Disable the L2 cache controller.
		Write Back	Enable the L2 write-back cache. Write back cache improves performance, because a write to the high-speed cache is faster than to normal RAM.
	BIOS Shadow	Cached	*Shadowing* copies instructions from system BIOS into RAM to improve system performance.
		Not Cached	Disable the above.
	Video Shadow	Cached	*Shadowing* copies instructions from the video BIOS into the RAM to improve system performance.
		Not Cached	Disable the above.

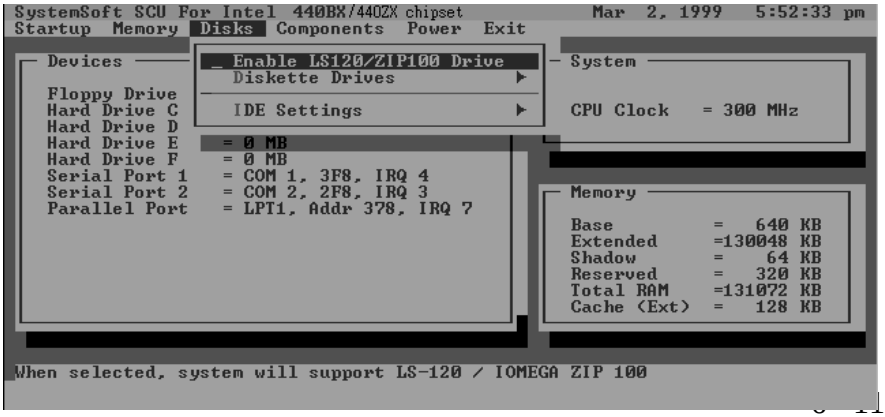
Memory Screen



Disks Menu

Item	Setting/Option		Function
Enable LS120/ ZIP100 Drive	Enable		Enable the LS120 or ZIP100 drive.
	Disable		Disable the LS120 or ZIP100 drive.
Diskette Drives	Drive A	None	Specify the drive type for the diskette drive A.
		1.44 MB	
		2.88 MB	
IDE Settings	Primary HDD	Drive Enabled	Enable enhanced IDE settings.
		Multiple Sector Mode	
		PIO Mode	
	CD-ROM / DVD-ROM	Drive Enabled	
		PIO Mode	
	LS120 / ZIP / 2nd HDD	Drive Enabled	
		PIO Mode	
	IDE UDMA-33 Function: Enable (default)		
	IDE 32 Bit I/O: Enable (default)		

Disks Menu Screen



Components Menu

Item	Setting/Option		Function
COM Ports	COM A I/O Settings	None	Specify the COM A configuration. (COM3 & COM4 Only for DOS mode and Non-PnP OS.)
		COM1, 3F8, IRQ4	
		COM2, 2F8, IRQ3	
		COM3, 3E8, IRQ10	
		COM4, 2E8, IRQ11	
	COM B I/O Settings	None	Specify the COM B configuration. (COM3 & COM4 Only for DOS mode and Non-PnP OS.)
		COM1, 3F8, IRQ4	
		COM2, 2F8, IRQ3	
		COM3, 3E8, IRQ10	
		COM4, 2E8, IRQ11	
	Mode Setting for COM B	IrDA (HPSIR)	Define the COM B hardware.
		ASK IR	
	DMA Setting for Fast IR	DMA 0	Specify the Fast IR DMA configuration.
		DMA 1	
		DMA 3	

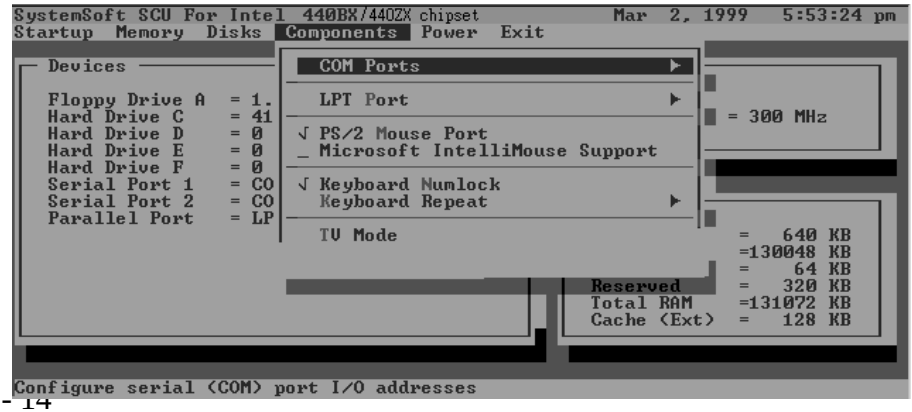
Components Menu (continued)

Item	Setting/Option		Function
LPT Port	Port Address	None	Specify the LPT port and IRQ configuration.
		LPT1, Addr 378, IRQ7	
		LPT2, Addr 278, IRQ5	
		LPT3, Addr 3BC, IRQ7	
		Standard AT (Centronics)	
	Port Definition	Standard AT (Centronics)	
		Bi-directional (PS-2)	
		Enhanced Parallel (EPP)	
		Extended Capabilities (ECP)	
	DMA Setting For ECP Mode	DMA 1	Specify the ECP DMA configuration.
		DMA 3	
	EPP Type	EPP 1.7	Specify the EPP type.
		EPP 1.9	
PS/2 Mouse Port	Enable		Enable the system's trackpad or an external PS/2 mouse.
	Disable		Disable the trackpad or PS/2 mouse if an external mouse is connected to COM A port.

Components Menu (continued)

Item	Setting/Option		Function
Keyboard Numlock	Enable		Specify whether Num Lock is on or off at system boot time.
	Disable		
Keyboard Repeat	Key Repeat Rate	2 cps	The rate (characters per second) at which a key repeats while pressed.
		6 cps	
		10 cps	
		15 cps	
		20 cps	
		30 cps	
	Key Delay	1/4 sec	The amount of time (seconds) that will pass after a pressed key starts to repeat.
		1/2 sec	
		3/4 sec	
		1 sec	
TV Mode	NTSC		Specify the TV mode
	PAL		

Components Menu Screen



Power Menu

Item	Setting/Option		Function
Enable Power Saving	Enable		Enable/Disable all power saving features.
	Disable		
Low Power Saving	Enable		This setting gives maximum performance but the shortest battery life.
	Disable		
Medium Power Saving	Enable		This setting results in moderate performance and battery life.
	Disable		
High Power Saving	Enable		This setting results in minimum performance and the longest battery life.
	Disable		
Customize	Disk Standby	5 sec	The hard disk will enter standby mode if it is not accessed within the specified period. Hard disk power will be restored when the disk drive is accessed.
		10 sec	
		15 sec	
		20 sec	
		30 sec	
		Always on	
	Global Timeout	1 min	System power will be reduced if the system has been idle over the specified period. System power will be restored when any system activity is detected.
		2 min	
		4 min	
		6 min	
		8 min	
		12 min	
		16 min	
		Always on	

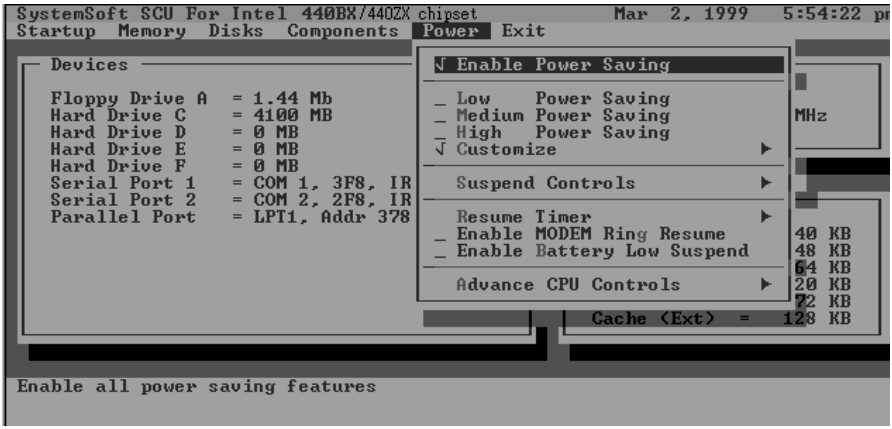
Item	Setting/Option		Function
Suspend Controls	Power Button Function	Power On/Off	The power button is used to turn the system on or off.
		Suspend/ Resume	The power button acts as a suspend/resume button for switching the system between a working state and the suspend mode.
			Pressing the power button for more than four seconds will generate a power button over-ride event to switch the system from a working state to the Soft-Off state.
	Suspend Type	Suspend to Disk	Specify the suspend mode for power management.
		Suspend to RAM	
		Powered on Suspend	
	Suspend Timeout	1 min	If the system has been idle for the specified period, the system will enter user-defined suspend.
		5 min	
		10 min	
		20 min	
		30 min	
		Never	
Resume Timer	Alarm Resume	Enable	System resumes from the configured suspend mode when the resume alarm timer expires.
		Disable	Disable the above
	Resume Month/Day/Hour/ Minute		The system will resume at the specified time (month, day, hour and minute).

Power Menu (continued)

Item	Setting/Option		Function
Enable MODEM Ring Resume	Enable		Resume the system from STR or POS mode when a modem ring (an incoming call to the modem) is detected.
	Disable		Disable the above.
Enable Battery Low Suspend	Enable		Automatically suspend the system to disk when the battery is low.
	Disable		Disable the above.
Advance CPU controls	Clock Control Mechanism	Full Mode	Specify the processor clock control
		Doze Mode	

Note: *For more detailed information on the different types of power management, please refer to the Power Management section at the end of this chapter.*
Note: *Advance CPU controls are only available with 366MHz or slower processors or mobile processors.*

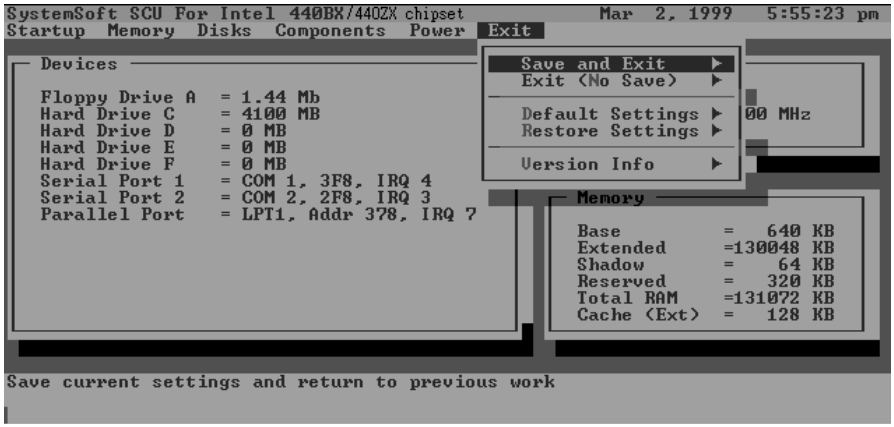
Power Menu Screen



Exit Menu

Item	Function
Save and Exit	Save the current settings and reboot the system.
Exit (No Save)	Exit without saving any changes.
Default Settings	Restore the default settings (the original ones found in ROM).
Restore Settings	Restore the current setup to the previous ones.
Version Info	Show the current BIOS version information.

Exit Menu Screen



Power Management

You can manage power consumption while maintaining system performance by setting your computer to one of the available power management modes. Information on the various types of power management are listed below. If you want information on how to set the power management options please refer to the Power Menu in this chapter.

Advanced Power Management (APM 1.2)

To reduce power consumption, the system provides built-in Advanced Power Management (APM 1.2). The APM function varies depending on your operating system (OS). Some operating systems, such as Windows NT do not support APM.

Global Standby

In Global Standby mode, the CPU clock will stop and most controllable peripheral devices will be powered off. If the idle timer expires before any system activity is detected, the system will change from Standby mode into Suspend mode.

Hard Disk Standby

The computer's hard disk drive motor will be turned off if the hard drive has not been accessed for a specified period of time. If the system reads or writes data the hard disk motor will be turned back on.

Suspend and Resume

With this function you can stop an operation and restart where you left off. The hard disk is turned off, and the CPU is made to idle at its slowest

speed. All open applications are retained in memory. This system features two suspend mode levels: Powered On Suspend (POS) and Suspend to Disk (SD).

Caution: *Do not enter suspend mode when you are:*

1. Accessing any of the disk drives, such as the HDD, FDD or CD-ROM drives.
2. Using any audio or video applications.
3. Playing a DOS game.

Powered On Suspend (POS)

Powered On Suspend saves the least amount of power, but takes the shortest time to return to full operation. When you are not using your computer for a certain length of time, which you specify in the SCU Power Menu, it will enter POS mode to save power.

Resume from POS Mode

The system can resume from POS mode by:

· Pressing any keyboard key.
· Pressing the power button (if configured as a Suspend/Resume function under SCU)
· An incoming call to your modem.
· Alarm resume is enabled and expires.

Suspend To RAM (STR)

Suspend-To-RAM is the middle level of system power management and it suspends your system to the DRAM. It is similar to the POS, but uses less power and is not as fast in resuming.

Resume from STR Mode

The system will resume from Suspend-To RAM mode by:
· Pressing the power button (if configured as a Suspend/Resume

function under SCU)

· Opening the display lid (only if the suspend mode is initiated by closing the display lid)

· An incoming ring from a modem

· Alarm resume is enabled and expires.

Suspend to Disk

Suspend to Disk uses no power and saves all of your information on a part of the HDD. It saves the maximum power but takes the longest time to return to full operation. You can set your notebook to automatically enter Suspend to Disk mode when the battery power is almost depleted. This prevents losing any data due to loss of power. To set this feature go to the SCU Power Menu and choose Enable Battery Low Suspend.

In order to use Suspend to Disk, you must partition your Hard Disk Drive, the instructions are as follows:

1) Use your operating system's FDISK program to delete all hard disk partitions if any already exist on the target drive.

2) Boot the system and run the 0VMAKFIL.EXE Utility to create the Suspend to Disk partition on the hard disk. The size of the Suspend to Disk partition will be the installed DRAM (n) plus 8 MB integrated video RAM.

:\>**0VMAKFIL** -Pn

For example, if the system DRAM is 32 MB, 0VMAKFIL will create a partition size of approximately 40 MB.

:\>**0VMAKFIL** -P32

Resume from Suspend to Disk Mode

The system will resume from Suspend-to-Disk mode by:

· Pressing the power button.

· Alarm resume (month/day/hour/minute)

Chapter 7: Installing drivers

This chapter provides step-by-step instruction for installing device drivers and utilities, for more detailed information please refer to your operating system's manual or the product manual supplied with the device you wish to install. The information here has been designed for users with basic computer knowledge though inexperienced users may also find this section helpful.

This chapter includes:

Installing Windows 98 SE
Installing Drivers in Windows 98 SE
Installing Drivers in Windows NT 4.0

Getting you new notebook computer ready:

1. Use a bootable floppy disk to start the system.
2. Run the FDISK utility from DOS to create a bootable partition (See the DOS manual for operational details.)
3. Format the hard disk. Use the command "**Format C:/S**" to create a bootable hard disk and create a system boot file. (C:/S copies system files to the formatted disk)
4. Run the program CDINST.COM from the "CD-ROM Drive Installation Diskette" This will install a CD-ROM driver device automatically.
5. Restart the system.

Installing Windows 98 SE (For Reference)

1. Start DOS.
2. Insert the Windows 98 CD-ROM.
3. Type "**setup**", then press [**Enter**].
4. Follow the instructions on the screen and choose the recommended option.

5. The Windows 98 setup program will check the hard disk drive automatically.
6. When the setup initializes, click "Continue".
7. Choose "License Agreement" to agree to the contract.
8. Click "Next" to type the product ID number.
9. Click "Next" . The program will automatically check the system.
10. Choose the directory for your computer. Select the path of "C:\Windows", or type another path if you pefer.
11. For reinstallation, choose "Yes" (recommended) to keep the files.
12. Select your location.
13. To create a Win98 Startup disk, insert a floppy disk into drive A. To create the startup disk later, choose "cancel".
14. Press "Next". The program will copy files to your computer's hard disk.
15. At the same time, the screen will show relevent Win98 information and the items being installed.
16. After the setup stops, restart the computer.

Installing Drivers in Windows 98 SE

Step 1: Installing VGA Driver

- Click "Start".
- Click "Run".
- Select the file "Setup.exe" from the CD-ROM (The path is : \VGA\Win98.)
- Click "OK".

Step 2: Installing an Audio Driver

- Click "Start".
- Select "Settings".
- Click "Control Panel"/"System"/Device Manager".
- Select "Other Devices".
- Remove "PCI Multimedia Audio Device".
- Click "OK", then restart the system.

· After entering into Win98 system. The program will automatically go to the "Add New Hardware Wizard" (PCI Multimedia Audio Device).

· Click "Next", and then select "search for the best driver for your device".

· Click "Next".

· Select "specify a location".

· Click "Browse" to locate the audio driver from the CD-ROM. (The path is :\Audio\Win98)

· Click "Next"/"Finish" to set up the audio driver.

· Click "Next", and then click "Finish" to set up the first audio driver.

Installing Drivers in Windows NT 4.0

Note: *After installing Windows NT 4.0, please install Service Pack to enhance Windows NT functions. Download the latest Service Pack version from the Microsoft web site.*

Step 1: Installing a VGA Driver

· Click "Start".

· Select " "Settings".

· Click "Control Panel".

· Select "Display".

· Click "Settings".

· Select " Display Type", and then select "Change".

· Click "Have Disk".

· Select "Browse" to specify the location.

· Open the path "D:\VGA\NT4.0".

· Click "OK". (All appropriate files are then copied to the hard disk.)

· Restart WinNT 4.0.

Step 2: Installing an Audio Driver

· Click "Start".
· Select "Settings".
· Click "Control Panel"/"Multimedia".
· Select "Devices".
· Click "Add".
· Select "Unlisted or Updated Driver".
· Click "OK".
· Click "Browse" to locate the audio driver from the CD-ROM. (The path is :\Audio\NT4.0)
· Click "OK".
· Restart the system.

Chapter 8: Troubleshooting

Should you have any problems with your computer, before consulting the computer vendor, you may want to try to solve the problem yourself. This chapter lists some common problems and their possible solutions.

Audio

Problem: The speaker cannot be heard.

Solution: The volume might be set too low, please check the volume control.

Problem: The volume is too high (or too low).

Solution: The volume is not correctly set, please check the volume control.

Problem: The headphone doesn't work.

Solution 1: The volume level is not correctly set, please check the volume control.

Solution 2: The headphone is plugged into the wrong jack.

Solution 3: There is no audio source.

Battery

Problem: The battery pack will not charge.

Solution 1: The battery pack is exposed to an excessively hot or cold environment. Place the battery in a suitable environment and after it returns to normal temperature try again.

Solution 2: The battery may be bad and may need to be replaced, call your vendor for more details.

Problem: The battery pack will not charge and the charge indicator light is off.

Solution 1: The battery is already fully charged and the indicator light is broken.

Solution 2: The battery pack is exposed to an excessively hot or cold environment. Place the battery in a suitable environment and after it returns to a suitable temperature try again.

Solution 3: The battery may be defective and may need to be replaced, call your vendor for more details.

Problem: A beeping sound is heard and the low-battery indicator is on.

Solution: The battery power is nearly used up. Connect the AC adapter to your computer or press the Fn + Esc keys to enter suspend mode.

Problem: A beep isn't heard when the low-battery indicator turns on and the gauge indicates power is less than 10%.

Solution: The battery power is nearly used up and the volume control may be turned down. Please adjust the volume control and connect the computer with the AC adapter.

Problem: Actual battery operating time is shorter than expected.

Solution 1: The battery is exposed to excessively high or low temperatures. Suitable operating conditions are between 32°F and 113°F (0°C and 45°C) while the ideal temperature for battery operation is between 50°F and 95°F (10°C and 35°C).

Solution 2: Make sure the battery is fully discharged and recharge it completely before reusing.

Solution 3: Power management has been turned off, turn the power management back on.

Solution 4: A peripheral device or PC card is consuming a lot of power. Turn off the unused device to save power.

Solution 5: Previously the battery was given only a partial charge. Always fully charge the battery after it has been totally used up.

Note: *Make sure the battery is totally discharged before recharging and make sure you recharge the battery to full capacity each time you recharge it.*

Problem: When the battery is being charged and the temperature is over 60 ºC, the LED indicators blink green.

Solution 1: The battery may be too hot, so remove the battery and let it cool down, afterwards recharge it.

Solution 2: The computer may be too hot. Turn off the computer and let it cool down. Afterwards turn on the notebook computer and recharge the battery.

Boot Password

Problem: You forget the boot password.

Solution: If you forget the password, you may have to delete the memory and you could lose all of the data on your computer. Call your vendor for help.

CD

Problem: The compact disk tray will not open when there is a disk in the tray.

Solution: The compact disk is not correctly placed in the tray, gently try to remove the disk using the eject hole.

Problem: The compact disk cannot be read.

Solution 1: The compact disk is not correctly placed in the tray.

Solution 2: The compact disk is dirty. Please clean it with a CD-ROM cleaner kit.

Problem: An audio compact disk can be read while a data disk can not.

Solution: There may be a problem with the disk hardware or software. Refer to your operating system manual for more information on the software and make sure you have the correct software installed for running video compact disks. If the proper software is properly installed and a problem still exists, contact your vendor about a possible hardware problem.

Problem: All compact disks cannot be read.

Solution 1: The Windows system does not recognize the CD-ROM drive or the CD-ROM drive is not compatible with other devices. Make sure you have the CD-ROM drive properly installed and configured.

Solution 2: The CD-ROM drive is dirty, please clean it with a CD-ROM cleaner kit.

Solution 3: There may be a problem with the disk hardware or software.

Refer to your operating system manual for more information on the software and make sure you have the proper software installed for using compact disks. If the correct software is properly installed, contact your vendor about a possible hardware problem.

ATI DVD Play Station (optional)
Problem: When the DVD station is playing, after pressing any Hot keys (Fn keys), the DVD station stops running.

Solution: Avoid pressing the Hot keys too rapidly. For example, when using the Fn key for volume control press the Fn key, stopping for a second before pressing it again.

You may also adjust the volume and other functions without using the Hot keys should the problem persist.

Floppy Disk drive (FDD)
Problem: The floppy disk drive will not write data to disk.

Solution 1: The floppy disk is not formatted, format the disk.

Solution 2: The floppy disk is write-protected. Undo the protection.

Solution 3: You specified an incorrect disk drive.

Solution 4: There is not enough unused space available on the disk. Please use a new disk or delete any unneeded data.

Problem: The disk drive will not read the disk.

Solution 1: The disk is not formatted.

Solution 2: The disk is damaged.

Solution 3: An incorrect type of disk is being used.

Hard Disk Drive (HDD)

Problem: The message "Non-system disk" appears.

Solution: The computer is trying to boot from an incorrect floppy disk. Please remove the floppy and insert a correct one before restarting the computer.

Problem: The computer takes longer during START UP.

Solution 1: Data saved on the hard disk drive may be lost or damaged. Please operate the disk scan or disk defragmenter to check for any lost or damaged data.

Solution 2: As in low battery status, the computer is waking up from the suspend mode.

Hardware Installation

Problem: The computer will not recognize the device as part of the system.

Solution 1: The new device is not powered on, please power on the device, then restart the computer.

Solution 2: You did not properly configure the system for the new device or you didn't properly install the device. Try reconfiguring the device or reinstalling the device using the device manual and drivers.

Solution 3: The computer is not properly connected to the device. Please make sure the device is properly connected with the computer.

Solution 4: You did not properly configure the system for the new device. Please reconfigure the system according to the instructions which came with the new device.

LCD Panel

Problem: The fonts are too dark.

Solution: The brightness or contrast is not correctly set. Use Fn + F9 or Fn + F10 keys to adjust the brightness.

Problem: The screen is blank.

Solution 1: The screen saver is activated, please press any key or touch the trackpad to return to your display.

Solution 2: The system is in suspend mode. Please press any key or touch the trackpad to wake up the computer.

Solution 3: The brightness or contrast needs to be adjusted. Please press the Fn + F7 or Fn + F8 key combination (only with a DSTN panel) to adjust the contrast. Use Fn + F9 or Fn + F10 to adjust the brightness control.

Solution 4: The panel may be set for an external monitor, please reset your computer to LCD panel display using the hot keys.

Problem: The LCD panel displays incorrect fonts or blinks when the computer is connected with an external monitor.

Solution: The external monitor resolution exceeds what the LCD panel can support. Please disconnect the external monitor and restart the computer.

Memory Module

Problem: The computer will not boot.

Solution: An incorrect type of memory module is installed, make sure

a correct module is installed.

Problem: The memory capacity is insufficient.

Solution: The memory is not correctly configured for the application, make sure the memory is correctly configured for the application.

Problem: The detected memory capacity is not correct.

Solution: A memory module is not correctly installed or not compatible with your computer.

Problem: The message "out of memory" is displayed.

Solution: The memory configuration is not correctly set or the memory is not enough to run the application.

Problem: The message "insufficient memory" is displayed.

Solution: The application cannot be operated since all the memory is used up.

PC Card

Problem: The PC card cannot be configured.

Solution: The PC card is not supported.

Problem: The system cannot recognize the PC card.

Solution 1: The PC card is not inserted into the socket or inserted incorrectly.

Solution 2: The PC card driver is not installed.

Solution 3: The PC card or card driver is not compatible with the computer.

Problem: A beep sound is not heard while the PC card is inserted.
Solution: The beep sound control is closed.

Power
Problem: The computer will not boot when the battery pack is not inserted.

Solution 1: The power cord is not correctly connected with the AC adapter. Make sure the power cord is firmly plugged into a grounded outlet and the computer.

Solution 2: The outlet does not work, use another outlet.

Problem: The system has automatically entered suspend mode.

Solution 1: The system's temperature is too high, let it cool before using.

Solution 2: The system has entered suspend mode after a specified period of time. Press any key or touch the trackpad to wake up the computer.

Printer
Problem: The printer cannot be added to the system.

Solution: The printer power is off or the printer is not correctly connected to the computer.

Problem: The printer will not work.

Solution 1: The printer is not turned on, please turn on the printer.

Solution 2: The printer is not properly connected. Please make sure the printer is properly connected.

Solution 3: There is no paper in the printer. Please put more paper in the printer.

Solution 4: The printer driver is not installed or is configured incorrectly. Please check to see that the printer is properly installed and configured.

Solution 5: The printer is a network printer and it is not properly connected to the network.

Problem: The printer prints incorrect data.

Solution 1: The printer driver is not installed or configured correctly.

Solution 2: The printer connector is not correctly connected.

Appendix A: Specifications

The following are the features and specifications of the notebook computer:

Processor

- Intel® Pentium !!! (FC-PGA 370) 500, 550, 600, 650, 700, 750 MHz processor with 256KB integrated full speed L2 cache packaged in a 370 pin PGA socket

- Intel® Celeron (PPGA 370) 300A, 333, 360, 400 and 433 MHz with 128 KB integrated full speed L2 cache packaged in a 370 pin PGA socket

Memory

- Provides 64-bit data bus system memory
- Two 144 pin SODIMM sockets, supports 3.3V, PC-100 compliant, Sync DRAM SODIMM
- Expandable memory up to 256 MB, depends on 32 / 64/ 128 MB SODIMM Module

System BIOS

- One 256KB Flash ROM
- SystemSoft BIOS with Smart Battery
- Plug and Play (1.0a)

Display

- XGA TFT flat panel 13.3" / 14.1" LCD screen
- AGP 2X
- Complete 64 bit hardware 2D / 3D Accelerator Graphics Engine Motion Compensation
- High quality TV-out (6 Line buffer quality) with MacroVision®

- V7.01 anti-copy technology
- 8MB display memory SGRAM type (100MHz)
- Vertically Interpolate 720V x 480H pixel wide video source
- Supports TFT panel resolution up to 1024x768x16M
- CRT resolution up to 1280x1024x16M (non-interlaced)
- TV resolution 1024x768
- Tri-view™ for triple display devices, TV, CRT and LCD
- DuoView™ display capability under Windows 98
- Supports Zoomed Video Port
- Supports Software MPEG II

Storage

- One removable intelligent bay for 3.5" 3-mode FDD / 12.7mm(h) LS-120/2.5" 12.7mm(h) 2nd HDD
- One easy change bay for DVD-ROM(12.7mm) / CD-ROM (24X speed or higher)
- Removable 2.5" 12.7mm (h) or 9.5mm (h) HDD, supports LBA mode
- Supports DMA mode 2/ PIO mode 4/ ATA-33 (Ultra DMA) IDE

Audio

- 3D stereo enhancement sound system
- Full duplex support
- Compatible with Sound-Blaster PRO™ version 3.01
- Built in microphone
- 2 built in speakers
- Hardware Wavetable

PC Card Sockets

- Two (PCI) PCMCIA 3.3V/5V sockets , 2 type II or 1 type III
- Supports Zoom Video Port (Socket A)
- Supports CardBus (PC Card95)

Input / Output

- Built in Trackpad (PS/2)
- Dual USB ports
- One serial port
- One parallel port (LPT1)
- One Infrared (FIR) file transfer
- One external CRT monitor
- One S-Video jack for TV output
- One External keyboard / Mouse (PS/2 type) port
- One line-in jack
- One headphone jack
- One microphone jack
- One RJ-11 jack for 56K S/W Modem (optional) or one RJ-45 jack for 10M/ 100M LAN Module (optional)
- One (120 pins) connector for Port Replicator DC-in jack

Communication

- Wireless Infrared: 4M bps data rate/ 1cm ~1M operating distance, and compliant with IrDA 1.1 or ASKIR (SHARP standard)

Power Management

- Supports APM v1.2
- CPU Over Temperature Protection
- Device Power Management for all devices
- Supports suspend to disk (APCI mode excluded)
- Battery low suspend
- Resume from alarm time/modem ring (Com Port only)

Power

- Full Range AC adapter - AC in 100~240V,47~63Hz.
- Supports one pack removable Smart Lithium-Ion Battery or Dumb Ni-MH Battery

Size & Weight

- 316 mm (w) x 256 mm (d) x 38.5 mm (h)

3.5 kg

Keyboard

- A4 size Win 95 keyboard

Optional

- 3001S Lithium-Ion smart battery pack
- 3002D Ni-MH battery pack
- 2005 Car Adapter
- 3006 Port Replicator
- 3007 LS-120 120 MB Floppy Drive Kit
- 1008A S/W MPEG II
- 300D DVD-ROM Drive Kit
- 300F 10M/ 100M LAN Module

Appendix B: I/O Port Pin Assignments

Parallel Port

Pin	Description	Pin	Description
1	Strobe#	2	Data 0
3	Data 1	4	Data 2
5	Data 3	6	Data 4
7	Data 5	8	Data 6
9	Data 7	10	ACK#
11	Busy	12	Paper Empty
13	Select	14	Auto Feed#
15	Error#	16	Initialize#
17	Select In	18	Ground
19	Ground	20	Ground
21	Ground	22	Ground
23	Ground	24	Ground
25	Ground		

RS-232C Serial Port

Pin	Description
1	DCD (DATA Carrier Detect)
2	RXD (Received Data)
3	TXD (Transmitted Data)
4	DTR (Data Terminal Ready)
5	GND (Signal Ground)
6	DSR (Data Set Ready)
7	RTS (Request To Send)
8	CTS (Clear To Send)
9	RI (Ring Indicator)

External Monitor Port

Pin	Description	Pin	Description	Pin	Description
1	RED	6	GND	11	NC
2	GREEN	7	GND	12	DDCDA
3	BLUE	8	GND	13	HSYNC
4	NC	9	NC	14	VSYNC
5	GND	10	GND	15	DDCLK

PS/2 Type Port

Pin	Description
1	EKDA
2	EMDK
3	GND
4	VCC
5	EKCLK
6	EMCLK
7	GND
8	GND
9	GND

S-Video jack

Pin	Description
1	GND
2	COMP
3	XLUMA
4	XCRMA

USB Ports:

Port A

Pin	Description
1	USB_VCCA
2	USBP0-
3	USBP0+
4	GND

Port B

Pin	Description
1	USB_VCCB
2	USBP1-
3	USBP1+
4	GND

PC Card Sockets
Socket A

Pin	Description		Pin	Description	
	CardBus	16Bit Card		CardBus	16Bit Card
A1	GND	GND	A40	A__VPP2	A__VPP2
A2	GND	GND	A41	A__CCLK	A__A16
A3	A__CAD0	A__D3	A42	GND	GND
A4	A__CCD1#	A__CD1#	A43	A__CTRDY#	A__A22
A5	A__CAD14	A__D4	A44	A__CIRDY#	A__A15
A6	A__CAD2	A__D11	A45	A__CFRAME#	A__A23
A7	A__CAD3	A__D5	A46	A__CC/BE2#	A__A12
A8	A__CAD4	A__D12	A47	A__CAD17	A__A24
A9	GND	GND	A48	A__CAD18	A__A7
A10	A__CAD5	A__D6	A49	GND	GND
A11	A__CAD6	A__D13	A50	A__CAD19	A__A25
A12	A__CAD7	A__D7	A51	A__CAD20	A__A6
A13	RFU	A__D14	A52	A__CVS2	A__VS2#
A14	A__CC/BE0#	A__CE1#	A53	A__CAD21	A__A5
A15	A__CAD9	A__D15	A54	A__CRST	A__RESET
A16	A__CAD10	GND	A55	A__CAD22	A__A4
A17	A__CAD9	A__A10	A56	A__CSERR#	A__WAIT#
A18	A__CAD10	A__CE2#	A57	GND	GND
A19	A__CAD11	A__OE#	A58	A__CAD23	A__A3
A20	A__CVS1	A__VS1#	A59	A__CREQ#	A__INPACK
A21	A__CAD12	A__A11	A60	A__CAD24	A__A2
A22	GND	GND	A61	A__CC/BE3#	A__REG#
A23	A__CAD13	A__IORD#	A62	A__CAD25	A__A1
A24	A__CAD14	A__A9	A63	A__CAUDIO#	A__BVD2
A25	A__CAD15	A__IOWR#	A64	A__CAD26	A__A0
A26	A__CC/BE1#	A__A8	A65	GND	GND

continued on next page

Socket A continued

Pin	Description		Pin	Description	
	CardBus	**16Bit Card**		**CardBus**	**16Bit Card**
A27	A__CAD16	A__CAD16	A66	A__CSTSCHG	A__BVD1
A28	GND	GND	A67	A__CAD27	A__D0
A29	A__CPAR	A__A13	A68	A__CAD28	A__D8
A30	RFU	A__A18	A69	A__CAD29	A__D1
A31	A__CPERR#	A__A14	A70	A__CAD30	A__D9
A32	A__CBLOCK#	A__A19	A71	RFU	A__D2
A33	A__CGNT#	A__WE#	A72	A__CAD31	A__D10
A35	A__CINT#	A__CINT#	A73	GND	GND
A36	A__CDEVSEK#	A__CDEVSEL#	A74	A__CCLKRUN#	A__WP
A37	A__VCC	A__VCC	A75	A__CCD2#	A__CD2#
A38	A__VCC	A__VCC	A76	GND	GND
A39	A__VPP1	A__VPP1	A77	GND	GND

Socket B:

Pin	Description		Pin	Description	
	CardBus	**16Bit Card**		**CardBus**	**16Bit Card**
B1	GND	GND	B40	B__VPP2	B__VPP2
B2	GND	GND	B41	B__CCLK	B__A16
B3	B__CAD0	B__D3	B42	GND	GND
B4	B__CCD1#	B__CD1#	B43	B__CTRDY#	B__A22
B5	B__CAD14	B__D4	B44	B__CIRDY#	B__A15
B6	B__CAD2	B__D11	B45	B__CFRAME#	B__A23
B7	B__CAD3	B__D5	B46	B__CC/BE2#	B__A12
B8	B__CAD4	B__D12	B47	B__CAD17	B__A24
B9	GND	GND	B48	B__CAD18	B__A7
B10	B__CAD5	B__D6	B49	GND	GND
B11	B__CAD6	B__D13	B50	B__CAD19	B__A25
B12	B__CAD7	B__D7	B51	B__CAD20	B__A6
B13	RFU	B__D14	B52	B__CVS2	B__VS2#
B14	B__CC/BE0#	B__CE1#	B53	B__CAD21	B__A5
B15	B__CAD9	B__D15	B54	B__CRST	B__RESET
B16	B__CAD10	GND	B55	B__CAD22	B__A4

continued on next page

Socket B continued

Pin	Description		Pin	Description	
	CardBus	**16Bit Card**		**CardBus**	**16Bit Card**
B17	B__CAD9	B__A10	B56	B__CSERR#	B__WAIT#
B18	B__CAD10	B__CE2#	B57	GND	GND
B19	B__CAD11	B__OE#	B58	B__CAD23	B__A3
B20	B__CVS1	B__VS1#	B59	B__CREQ#	B__INPACK
B21	B__CAD12	B__A11	B60	B__CAD24	B__A2
B22	GND	GND	B61	B__CC/BE3#	B__REG#
B23	B__CAD13	B__IORD#	B62	B__CAD25	B__A1
B24	B__CAD14	B__A9	B63	B__CAUDIO#	B__BVD2
B25	B__CAD15	B__IOWR#	B64	B__CAD26	B__A0
B26	B__CC/BE1#	B__A8	B65	GND	GND
B27	B__CAD16	B__CAD16	B66	B__CSTSCHG	B__BVD1
B28	GND	GND	B67	B__CAD27	B__D0
B29	B__CPAR	B__A13	B68	B__CAD28	B__D8
B30	RFU	B__A18	B69	B__CAD29	B__D1
B31	B__CPERR#	B__A14	B70	B__CAD30	B__D9
B32	B__CBLOCK#	B__A19	B71	RFU	B__D2
B33	B__CGNT#	B__WE#	B72	B__CAD31	B__D10
B35	B__CINT#	B__CINT#	B73	GND	GND
B36	B__CDEVSEK#	B__CDEVSEL#	B74	B__CCLKRUN#	B__WP
B37	B__VCC	B__VCC	B75	B__CCD2#	B__CD2#
B38	B__VCC	B__VCC	B76	GND	GND
B39	B__VPP1	B__VPP1	B77	GND	GND

Appendix C: Battery Information

Please follow these simple guidelines to get the best use out of your battery.

New battery:

Always use a new battery before recharging it.

Battery life:

Battery life may be shortened through improper maintenance. To optimize the life and improve the performance of your battery, fully discharge and recharge the battery at least once every 30 days.

Battery gauge:

The battery has an internal gauge which measures the battery life. The gauge relies on a battery's "memory" to determine the level it must stop charging or discharging the battery. This "memory" will become distorted if you partially charge or partially discharge the battery too often.

To increase the accuracy of the gauge, you must fully discharge and then fully recharge the battery at least once every 30 days or after about 20 partial discharges.

How do I completely discharge the battery ?

Use the computer with battery power until it shuts down due to a low battery. Don't turn off the computer by yourself even when you see a message or hear beeps that indicate the battery is critically low, just let the computer use up all of the battery power and shut down on its own.

How do I fully charge the battery ?

When charging the battery, don't stop until the battery LED indicator light is green.

How do I maintain the battery ?

Completely discharge and charge the battery at least once every 30 days or after about 20 partial discharges.

Conserving battery power:

Advanced Power Management:

Your notebook computer has Advanced Power Management (APM) features which slow down the speed of the processor and components. Using these features will help conserve battery power.

Display brightness:

The LCD display consumes a lot of power, so setting the brightness level to low will save power.

Applications and external devices:

Different applications and external devices consume battery power even when they are not being used.

To conserve battery power we recommend:

· Closing modem or communication applications when they are not being used.

· Removing any unused PC Cards from the computer.

PC Cards quickly use up battery power even if the system enters Suspend mode.

· Removing any unnecessary external devices from the computer.

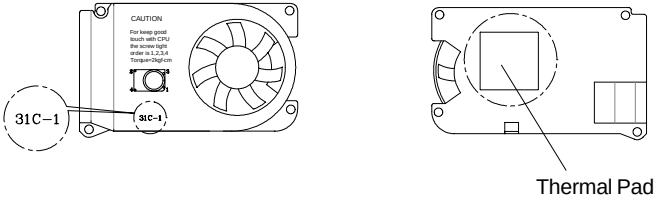
Appendix D: Technical Changes

The model has been upgraded to support Pentium™ !!! *650 MHz* up to *750MHz*. For the NEWLY UPGRADED computers, some technical changes are made and listed as below:

1. New Heat Sink

This heat sink will be labeled as "*31C-1*" and its thermal pad will be changed from the blue thermal pad (0.5mm thick) to black one (0.1mm thick).

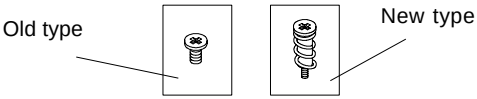
Part No.	PPGA	FC-PGA
Old Heat Sink	31-31B0N-052	31-31B0N-052
New Heat Sink	31-31B0N-053	31-31B0N-053



2. New Screws for Heat Sink

The four screws to install the heat sink are also changed. The screws, with a height of 12mm, will be circled with a roll of spring.

Part No.	PPGA	FC-PGA
Old	35-B4125-4RA	35-B4125-4RA
New	35-41125-120	35-41125-120



3. New Hex Studs

The four hex studs on the motherboard are changed as below:

Part No.	PPGA	FC-PGA
Old	34-31C0N-04A (*black, 7.7mm height*)	34-31C0N-05A (*silver, 6.5mm height*)
New	34-31C0N-01A (*silver, 5.5mm height*)	34-8500S-03A (*light blue, 4.2mm height*)

4. New Version of BIOS

The BIOS version must be updated to R 1.25 or later.

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