User's Manual

Important Notice

FCC Information to User

Safety and Care Instructions

No matter what your level of experience with computers, please make sure you read the safety and care instructions. This information can help protect you and your computer from possible harm.

Radio and television interference

Warning: Use the specified shielded power cord and shielded signal cables with this computer, so as not to interfere with radio and television reception. If you use other cables, it may cause interference with radio and television reception.

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 not 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 your computer dealer or an experienced radio/television technician for help.

You may find helpful the following booklet, prepared by the Federal Communications Commission: Interference Handbook (stock number 004-000-00345-4). This booklet is available from the U.S. Government Printing Office, Washington, DC20402

Warning: The user must not modify or change this computer without approval. Modification could void authority to this equipment.

Canadian Department of Communications Compliance Statement

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

Avis de conformite aux normes du ministére des Communications du Canada

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

VCCI Statement for class B ITE

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。

Power cord and power adapter specifications

UL specifications for the power cord

The power adapter can use either 115V or 230V AC without any need to make adjustment. The power cord used with the adapter will depend on the source voltage.

115V AC

Use a UL listed cord set consisting of a minimum 18 AWG, Type SVT or SJT three conductor cord, a maximum of 15 feet in length and a parallel blade, grounding type attachment plug rated 15A, 125V.

230V AC (U.S.A.):

Use a UL listed cord set consisting of minimum 18 AWG, Type SVT or SJT three conductor cord a maximum of 15 feet in length and a parallel blade, grounding type attachment plug rated 15A, 230V.

230V AC (Outside of U.S.A.):

Use a cord set consisting of a minimum 18 AWG and a grounding type attachment plug rated 15A, 250V. The cord set should have the appropriate safety approvals for the country in which the computer will be installed, and be marked HAR.

TüV specifications for the power adapter

- Output should not exceed the output rating marked on the unit.

- The unit is to be provided with a power adapter cord set which includes a H05VV-F cord which has a minimum 0.75 sq.mm conductors, provided with an IEC-320 receptacle and a male plug suitable for country of installation.

iv

- This unit is intended for indoor use only.

- The power adapter is intended to be operated from a 6 Ampere branch circuit in Europe.

- The power adapter can be operated at the maximum rated load at an ambient temperature of up to 25 degrees Celsius. A higher ambient temperature may be used if the output is derated.

Important safety and care instructions

For your own safety and that of your equipment, read and follow all the instructions in this section.

Warning

- Electrical equipment may be hazardous if misused. Use this computer only as directed in this book.

- Do not attempt to open the computer's case. Do not attempt to service this computer, its power adapter, or any of its other equipment by yourself. There are no user-serviceable parts inside. If necessary, take the computer to your dealer for servicing.

- Do not use the computer in or near water.

- Do not use the power adapter if its power cord is frayed or otherwise damaged. Do not allow anything to rest on the power cord, or place it where persons might walk on it. To connect or disconnect it, hold the power cord by its plug, not the cable.

- Do not plug the power adapter into a non-grounding power outlet. The power adapter's AC cord has a 3-pin grounding-type plug that will only fit into a three-hole grounding socket.

- Always handle the computer's battery with care.

- Do not drop, puncture, disassemble, mutilate, or incinerate the battery.

- Recharge the battery only as described in this manual, and only in ventilated areas.

- Do not short-circuit the battery terminals, by allowing a metal object (such as a paper clip or a key) from touching them. Doing so may cause an explosion or a fire.

- Do not leave the battery in hot locations (such as the trunk of a car).

Caution

- Do not drop or jar the computer.

- Do not place heavy objects on the computer.

- Use only the power adapter and battery supplied with your computer. Adapters or batteries designed for other electronic devices may look similar, but they may not work with your equipment and may damage the computer.

- Do not plug the power adapter into a power source other than the type indicated by the label on the bottom of the adapter. If you are not sure of the type of power available, consult your local power company.

- To keep the computer from over-heating:

Do not block or obstruct the ventilation openings on the computer. Do not place it on a bed, sofa, rug or other similar surface that may block or obstruct the ventilation openings.

Do not place the computer near or over a radiator or any other heat producing device.

- Keep the computer from extreme temperatures. Only operate the computer between 10^0C and +40^0C. Store the computer between 0^0C and +50^0C.

- If the computer has been in a cold place for several hours, let it warm up to room temperature before using it.

- Do not use the computer in wet or dusty environments. Keep dust and liquids away from the keyboard, the pointing device, and the ports.

- If the computer requires cleaning, unplug it from the wall outlet first. Clean only the outside surfaces of your computer with a damp (not wet) cloth or paper towel.

- Clean the LCD screen with a soft, lint-free cloth and a mild glass cleaner. Do not spray the glass cleaner (or any other liquid) directly on the screen.

- Do not force a connector into a port. Make sure that the connector matches the port and that it is right side up. If the connector does not connect to the port easily, they do not match.

- Do not touch the screen with any sharp or pointed objects.

If something goes wrong

Unplug the computer from the wall outlet and take it for servicing to your dealer if

- the power cord or plug is damaged or frayed

- rain or any other liquid has fallen on or into the computer

- the computer has been dropped or the case has been damaged

- the computer doesn't work properly or exhibits any changes that may indicate a possible need for service

The following section provides important information in German for the benefit of German speakers.

TüV Spezifikationen des Zwischensteckers

- Die Leistung soll die leistungsrate die auf der Einheit gekennzeichnet ist, nicht erschreiten.

- Die Einheit kann mit einer Stranggarnitur f Power Adapter festgestellt werden, dise schließ teinen HO5VV-F Strang ein, der einen 0.75 SQ MM Leiter besitzt und ausgestattet ist mit einem IEC-320

- Emfänger und einem "male" Stecker der passend für die, Installation in dem beliebigen Land.

- Die Einheit ist nur für den Gebrauch im Haushalt bestimmt.

- Die Power Adapter ist für die Funktion in einem europäischen Stromkreis bestimmt, der 6 Amper stark ist.

- Die Power Adapter kann bei maximaler Belastung und Umgebungstemperatur bis auf 25°C in Betrieb genommen werden, eine here Temperatur darf nur vorkommen wenn die Leistung herabgesetzt ist.

Wichtige Informationen für deutsche Sprecher

Wichtige Sicherheitshinuweise

- Diese Hinweise solten vollstdig durchgelesen werden.

- Diese Hinweise für einen speren Gebrauch aufbewahren.

- Allen auf dem Gerät angebrachten Warnungen und Hinweisen folgen.

- Vor dem Reingen des Netsgerätes Netzstecker ziehen. Kleine Flüssigreiniger oder Sprühreiniger verwenden. Zum Reinigen ein angefeuchtetes Tuch benutzen.

- Das Netgerät nicht in geuchten Rmen verwenden.

- Auf der oberseite des Gehäuses des Netzgerätes befinden sich Belüftungsöffnungen. Für einen sicheren Betrieb und zum Schutz vor überhitzung ist sicherzustellen, daß diese Öffnungen nicht abgedeckt werden.

- Das Netgerät nur mit der auf Aufkleber bezeichneten Netzspannung betreiben. Bei Fragen über die Art der Netzspannung sollte der Händler oder das Energiversorgungsunternehmen zu Rate gezogen werden.

- Das Netzgerät ist mit einem dreiadrigen Netzstecker mit Erdung ausgestattet. Der geerdete Netzstecker bietet einen sicheren Schutzleiteranschluß für das Gerät Dies ist eine Sicherheitsmaßnahme. Falls der Stecker nicht in die alte Steckdose gegen eine neue austauschen. Nicht den Sicherheitszweck des geerdeten Netzsteckers umgehen.

- Der Stecker des Netzkabels wird zum Abtrennen des Geres von der Stromversorgung verwendet. Die Steckdose sollte in der Nähe des Gerätes installiert und einfach zugäanglish sein.

- Die Batterie des computes ist nur durch eine vom gleichen Type zu ersetzen, wie vom Hersteller empfohlen. Die Verwendung einer anderen Batterie kann Feuer oder Explosion zur Folge haben, Die Batterie sollte vom Kundendienst augewechselt werden.

- Warnung: Die Batterie kann bei falscher Handhabung explodieren. Nicht aufladen, zerlegen oder in offenes Feuer werfen. Von Kindern fernhalten und gebrauchte Batterien sofort beseitigen.

- Dieses Gerät enthält Nickel-Cadmium-Akkus. Im Interesse des Umweltschutzes bitte nicht am Ende seiner Lebensdauer mit dem Hausml entsorgen. Eine Entsorgung kann er eine Kundendienststelle oder entsprechende Sammetstellen—nach nationalen Vorschriften—erfolgen.

- Der computer ist mit dem vom Hersteller angegebenem Netzgerät zu betreiben.

- Der Arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 Teil 1000 beträgt 70 dB (A) oder weniger.

CAUTION (UL)

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

ATTENTION (CSA)

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

VORSICHT (TUV)

Explosionsgetahr bei unsachgemäßen Aussausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.
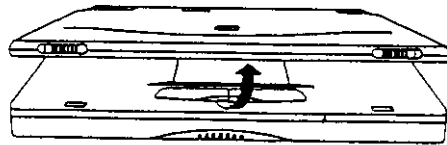
Main Features

- Support Intel Pentium II 233/266/300 MMO modules

- Support 256K or 512K synchronous pipeline SRAM for L2 cache (on MMO module)

- Provide two standard 144-pin S.O.DIMM sockets for DRAM/SDRAM to expand memory to 128MB

- Support mixed-type DRAM (EDO and SDRAM)

- 256KB Flash BIOS EEPROM for BIOS upgrade

- Built-in PointPad as pointing device

- Support LCD up to 14.1-inch XGA TFT

- Display with LCD/CRT/SimulScan switching

- Support VGA-to-TV conversion to display computer screen on TV

- Built-in two PCMCIA sockets for two type II cards or one type III card

- Support ZV-port for video/audio PCMCIA cards in both sockets

- Magic bay for swappable CD-ROM, DVD ROM second battery and ZIP

- Onboard 16-bit stereo sound with 3D sound effect and software wavetable

- Support EPP parallel port to enhance transfer rate

- Built-in two speakers and one microphone

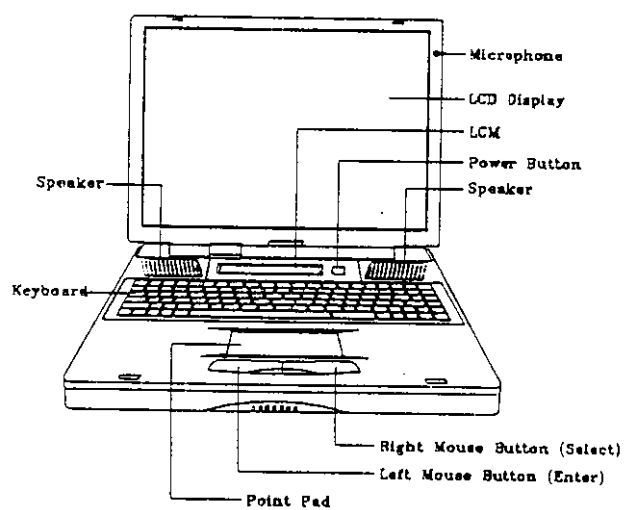- Internal have option modem card 56k model No:FM300 module.

- Support phone jacks for external speakers and microphone , Line In

- Support one FIR port and two USB ports

- Support Smart Bus Battery

- Support port replicator

- Support APM 1.2 in DOS, ACPI 1.0 and Windows applications

Opening the Computer

A release latch located on the front panel secures the display. Push the latch outward, you can open and lift the display to the best viewing angle.
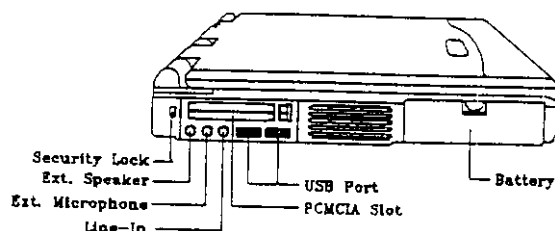
Your Computer at a Glance

The Left Panel

The left panel contains a PCMCIA slot with two eject buttons, a Speaker Out Port and a MIC jack as well as a removable battery. Refer to the figure below for their respective locations.

Security Lock
Ext. Speaker ──────── USB Port ──── Battery
Ext. Microphone ──────── PCMCIA Slot
Line-In ────

PCMCIA Slot

The PCMCIA socket gives you the option of using one type III PCMCIA card or two type II cards. Both sockets support a ZV port interface which allows you to run multimedia video/audio applications by inserting PCMCIA cards such as MPEG playback card, video capture card and TV-tuner card. The eject buttons are located to the right of the socket.

Speaker Out port

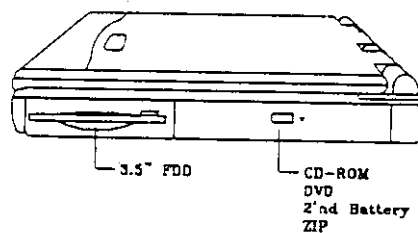You may connect an external speaker to this port.

MIC-In Port

You may connect any condense-type microphone to this sound input port.

Removable Battery

It is a rechargeable NiMH or Li-Ion battery. A depleted NiMH/Li-Ion battery can be fully charged in 2/4 hours with the system powered off.

The Right Panel

The right panel contains a floppy disk drive module and a CD-ROM drive module.
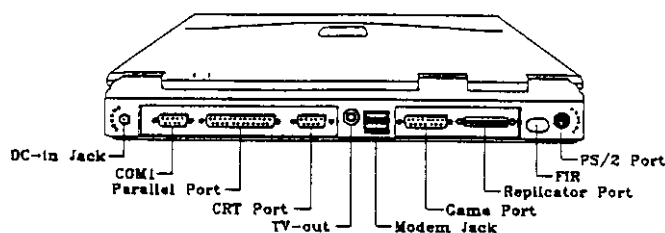

Floppy Disk Drive Module

It is a 3.5-inch 1.44MB 3-mode floppy disk drive.

CD-ROM Module

It is an enhanced IDE 5.35-inch CD-ROM /DVD-ROM drive. You can also install a second battery or ZIP to replace the CD-ROM.

The Rear Panel

The rear panel contains a DC-In jack, an external keyboard port, a COM1 port, a parallel port, a CRT port, an Video Out Port, two USB ports, a replicator port and a FIR port.


```
DC-In Jack
  COM1
  Parallel Port
      CRT Port
      TV-out
                Modem Jack
                Game Port
              Replicator Port
            FIR
          PS/2 Port
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DC-In Jack

This is the power input port for the AC adapter. The AC adapter converts local AC power (100V ~ 240V) into a DC supply for use by the system. The AC power supply is used to power the system and also to recharge the NiMH or LiIon battery.

External Keyboard Port (PS/2)

This is a 6-pin mini-DIN keyboard connector. It connects a full-sized 101- and 102-key external keyboard or an external keypad via an adapter cable for typing comfort. You can use the built-in and the external keyboard at the same time. You can also connect a PS/2 mouse to this connector.

COM1 Port

It is a standard 9-pin male D-shell connector. It allows the system to connect with peripheral devices which use serial communications. Also connects I/O devices such as a serial printer, serial mouse, pen tablet, serial fax or data modem.

Parallel (Printer) Port

It is a D-Shell, 25-pin, female connector which supports the EPP mode. This port allows you to connect a standard parallel device, a bi-directional parallel device, an EPP and ECP device.

CRT Port

This port connects your external VGA monitor here (labeled CRT). The external monitor connector is a 15-pin female D-shell connector used to connect the system to an external analog VGA monitor. When being used as a desktop machine, you can enjoy the full power of the system's VGA graphics capability by connecting an analog monitor through this port.

The system's VGA controller also supports simultaneous display output on the system's LCD and on an external monitor connected to the system.

Fan

This fan is used for ventilation or to remove the heat generated inside the notebook.

TV- Out Port

Connects to an external TV.

USB Port

For connection to USB devices.

Replicator Port

Connects to an optional replicator.

Fast Infrared (FIR) Port

Connects to any IrDA compliant device (such as another IrDA computer or printer) without the use of a cord or cable. Transmits up to 4 Megabits per second. Its operating distance can be up to one meter.

The System's Interior

LCD Display

The system supports the large TFT and dualscan STN color displays with a maximum of 64K colors. The supported displays are: 13.3-inch XGA TFT, and 14.1-inch XGA TFT panels. They support LCD-only, CRT only and simultaneous LCD/CRT display modes. You can select the display mode in the Setup menu or press <Fn+F4> at any time.
It also supports the following external monitors: 640 x 480 x 24bit colors, 1024 x 768 x 16/24 bit colors, and 800 x 600 x 24bit colors. Test high resolution/H-sync is (1024 x 768/65kHz) mode

The LCD screen can be tilted to a maximum of 180 degrees from horizontal. You can tilt and adjust it to the best viewing angle.

Backlight

The backlight goes on automatically when the computer is turned on. To conserve battery power, the backlight goes off after a period of inactivity of the system (the time-out period has been set for you in the power management menu). If the system is in sleep mode, press any key on the keyboard turns the backlight on again.

Audio System

A 16-bit CD-quality sound system compatible with Sound Blaster/Pro cards is built into your system. It is complete with two internal stereo speakers, an internal microphone, a sound input port and a sound output port.

Keyboard

The keyboard has 88/89 full-sized membrane type keys with an embedded numeric keypad on it. It is Windows 95 compatible and is designed with inverted-T arrow keys for easy control of cursor movements.

You can also connect the system to a standard 101/102-key keyboard via the external keyboard jack on the rear panel.

Embedded numeric keypad

The embedded numeric keypad consists of 16 keys located central to the right side of the keyboard. It serves as a numeric keypad, cursor and screen-control, and as part of the normal keyboard.

The <Num Lock> key is used to invoke the numeric keypad, the set of alphanumeric keys marked with blue numbers or characters on their front face. By default, the Num Lock indicator is off when you power on your system. To turn on the Num Lock indicator and activate the embedded numeric keypad, press the <Fn +Num Lock> keys simultaneously.

If no external keyboard is attached, the function of this embedded numeric keypad will follow the status of the NumLock key:

NumLock OFF: The embedded numeric keypad acts as a normal keyboard and the NumLock LED is turned off.

NumLock ON: The embedded numeric keypad acts as a numeric keypad and the NumLock LED is turned on.

When an external keyboard is attached to the system, the status of the NumLock keys of the internal and external keyboard will track each other. That is, when the NumLock of the internal keyboard is ON, the NumLock of the external keyboard will also be on and vice versa. The function of the embedded numeric keypad and the external numeric keypad will still follow the status of the NumLock key:

NumLock OFF:

(1) The embedded numeric keypad acts as a normal keyboard and the NumLock LED is turned off.

(2) The external numeric keypad acts as a cursor pad and the NumLock LED of the external keyboard is turned off.

NumLock ON:

(1) The embedded numeric keypad acts as a numeric keypad and the NumLock LED is turned on.

(2) The external numeric keypad acts as a numeric keypad and the NumLock LED of the external keyboard is turned on.

NOTE: The <Shift> and <Caps Lock> keys are both toggles; that is, they reverse whatever is presently in effect.

Windows 95 Keys

The keyboard also has two Windows 95 -specific keys that allow you to perform special functions under Windows 95.

Windows logo key: Start button. Combinations with this key perform special functions. The following are a few examples:

Windows logo key + Tab: Activates next Taskbar button

Windows logo key + E: Explore my computer

Windows logo key + F: Find Document

Windows logo key + M: Minimize all

Windows logo key + R: Displays Run dialog box

Application key: Displays the application's context menu (same as a right-click)

Power Button

Turns the system on and off.

Pointing Device

The system supports the following pointing devices:
(1) The system has a built-in PS/2 interface PointPad, which is normally used as the pointing device of the system.
(2) You can connect a PS/2 mouse to the keyboard/mouse connector and use the internal PointPad simultaneously.
(3) You can also use a serial mouse as the pointing device by connecting it to the serial port.

On-screen Display Buttons

These buttons enable you to adjust the Contrast and Brightness of the LCD display, as well as sound Volume and Battery capacity.

Press the middle button once to display Contrast Control. Press the same button a second time to display Brightness Control. Press it a third time to display Volume Control. Press it a fourth time to display Battery capacity.   Press the right button to increase Contrast, Brightness or sound Volume. Press the left button to decrease Contrast, Brightness or sound Volume.

Audio Subsystem

Speakers

The system has two internal 0.5W speakers for stereo sound generation.

Digital Audio Function

The system supports Sound Blaster Pro and Windows sound system compatible digital audio capability with the following features:

- Windows 3.1 Waveform Audio Compatible and OLE compliant
- Support 32-bit stereo digital audio sound record and playback
- Support 22-voice stereo FM music synthesizer: nine sounds or six melody sounds and five rhythm sounds per channel
- Programmable sampling rate from 4.0KHz to 44.1KHz
- Programmable volume control for both record and playback
- Onboard 1.0W/channel power amplifier for sound output
- Built-in 3D sound processor to support 3D sound effect
- Support full-Duplex mode to record and playback sound at the same time

Audio Ports

The system supports one external microphone jack and one external speaker jack, one Line –In Jack.
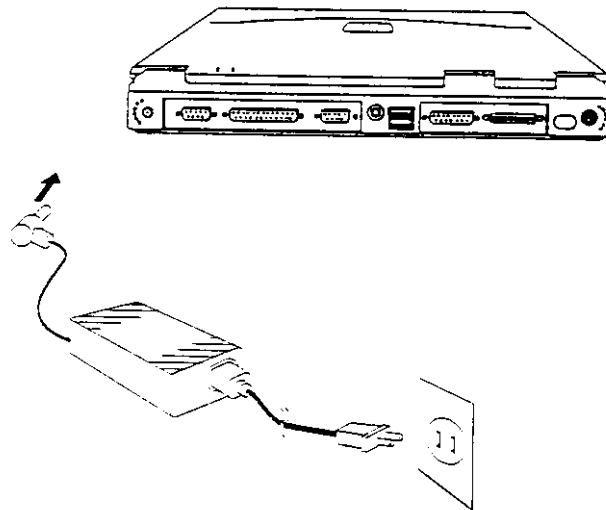
Power Supply

Your system is designed to run from either AC domestic power supply or battery input. Charging starts for the battery when you connect the AC adapter to your computer.

The system runs on battery power when the AC adapter is disconnected. You can extend your working hours by using the power saving features in the power management menu.

The AC Adapter

The AC Adapter comes in two pieces: a shrink-sized adapter block with attached connecting cable, and the power cord.

The AC adapter converts alternating current (AC) to direct current (DC) for use in your notebook computer. It provides the system a 19V DC output power from an input AC voltage ranging from 100 to 240 VAC. When connected to the system unit, the AC adapter automatically charges the battery pack. Therefore, when using the computer for the first time, use the AC adapter to power up the system and at the same time, charge the battery.

The Power indicator lights orange when the AC adapter is connected and turns off when disconnected.

Battery Pack

The system supports both the NiMH and Li-Ion batteries.

Charging the Battery

Use the factory-supplied AC adapter only to charge your battery. When the system is connected to the AC adapter, the system will recharge the battery. To fully charge a depleted NiMH/Li-Ion battery takes approximately 2/4 hours when the system is off. The battery must not exceed 60 degrees Celsius during the charge time.

Battery Properties

You do not have to worry about battery power as long as the AC adapter is in use. And you do not have to worry about overcharging either since a thermosensor is built in the battery pack to prevent it.

To fully charge the battery, you are recommended to turn off the system while charging.

This chapter shows you how to install some optional peripherals. Remember to run Setup after installing the options.

Adding memory

Your system is designed with 0MB onboard memory. However, two 144-pin S.O.DIMM sockets are built in on the motherboard for EDO and S DRAMs. Each of the SODIMM sockets composes of a 64-bit wide memory bank. They support mixed-type DRAM operation. For instance, the DRAM used in Socket 0 can be EDO DRAM while that used in Socket 1 can be SDRAM. Both one inch and 1.5-inch SODIMM modules can be installed in the socket 0. But only one inch wide SODIMM modules can be installed in socket 1.
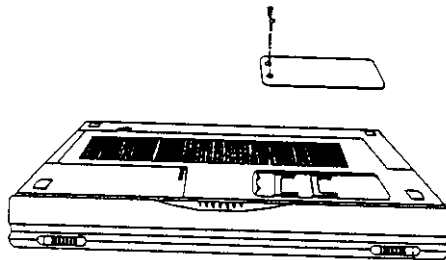
CAUTION: Only 3.3V S.O.DIMM can be used.

The following table shows the permitted memory configurations:

Socket 0	Socket 1	Total Memory Capacity
16 MB	16 MB	32 MB
0 MB	32 MB	32 MB
32 MB	0 MB	32 MB
16 MB	32 MB	48 MB
32 MB	16 MB	48 MB
32 MB	32 MB	64 MB
32 MB	64 MB	96 MB
64 MB	32 MB	96 MB
64 MB	64 MB	128 MB

You are advised to consult your dealer for adding memory to your system.   However, the following steps are provided for your reference.

.1.   Turn off the system power.

2.   Turn the computer over with the bottom facing up.

3.   To remove the access cover, loosen and remove the screw and lift the cover.

4.   To install the memory board, align the board notched end with the socket corresponding end and firmly insert the board into the Socket 0 at an angle.   Install another memory board into Socket 1.

5.   Reinstall the access cover.

6.   Turn on the system.

7. Run Setup, select <Exit> to "Save Changes & exit" and reboot. Your system will then automatically detect the new memory values.

Hard disk drive

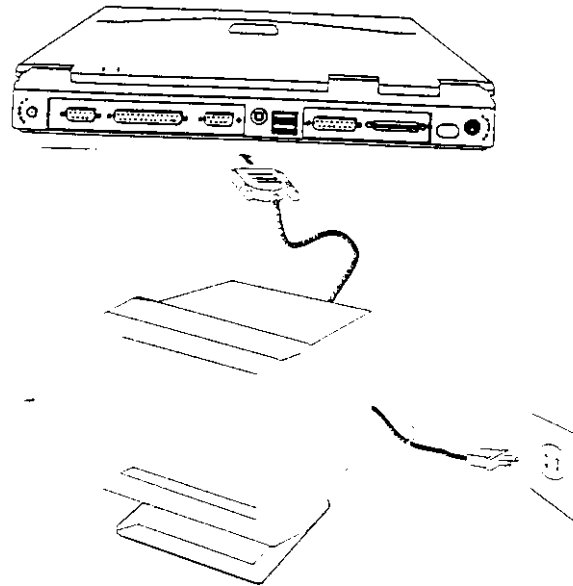To replace a hard disk drive, consult your dealer.

CPU

To replace a CPU, consult your dealer.

External monitors

You can connect all VGA-CRT monitors to the computer via a 15-pin D-shell connector.

To connect an external monitor, proceed as follows:

1. Turn off the power to the system and to the external monitor.

2. Unlock and open the left rear panel cover to expose the CRT port.

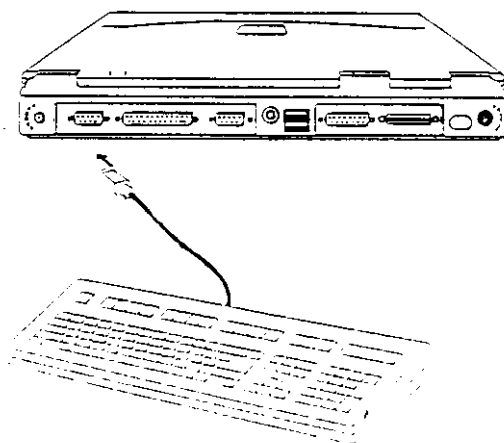3. Attach a ferrite core to the monitor cable.

4. Connect the 15-pin male connector of the external monitor cable to the CRT port. And connect the other monitor cable to a mains supply.

5. Turn on the power to the monitor, then turn on the power to the system.

External keyboard (or external keypad)

The system supports a PS/2 mouse port which will be used for an external keyboard or keypad. It supports all AT-compatible keyboards. The system BIOS can sense which type of keyboard is being used and adjust to accommodate the specific keyboard. The internal keyboard remains active when an external keyboard is attached.

To install an external keyboard. proceed as follows.

1. Turn off the system power.

2. Locate the external keyboard jack on the rear panel.

3. Connect the external keyboard (or keypad) adapter cable to the external keyboard cable connector. Then plug the male connector of the external keyboard adapter into the keyboard jack of your computer.

Mice

To connect a mouse to COM1. proceed as follows:

1. Turn off the system power.

2. Unlock and open the rear panel cover to expose the COM1 port.

3. Connect the mouse to the COM1 port.

4. Turn on the system and install the mouse driver.

5. Run Setup Configuration Utility to disable the PS/2 mouse port.