

User's Manual

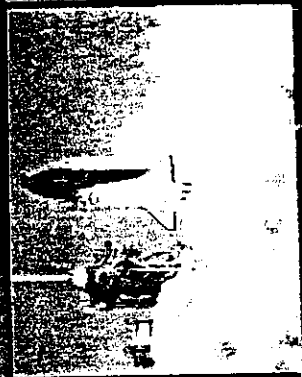
NOTEBOOK COMPUTER

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USER'S

M A N U A L



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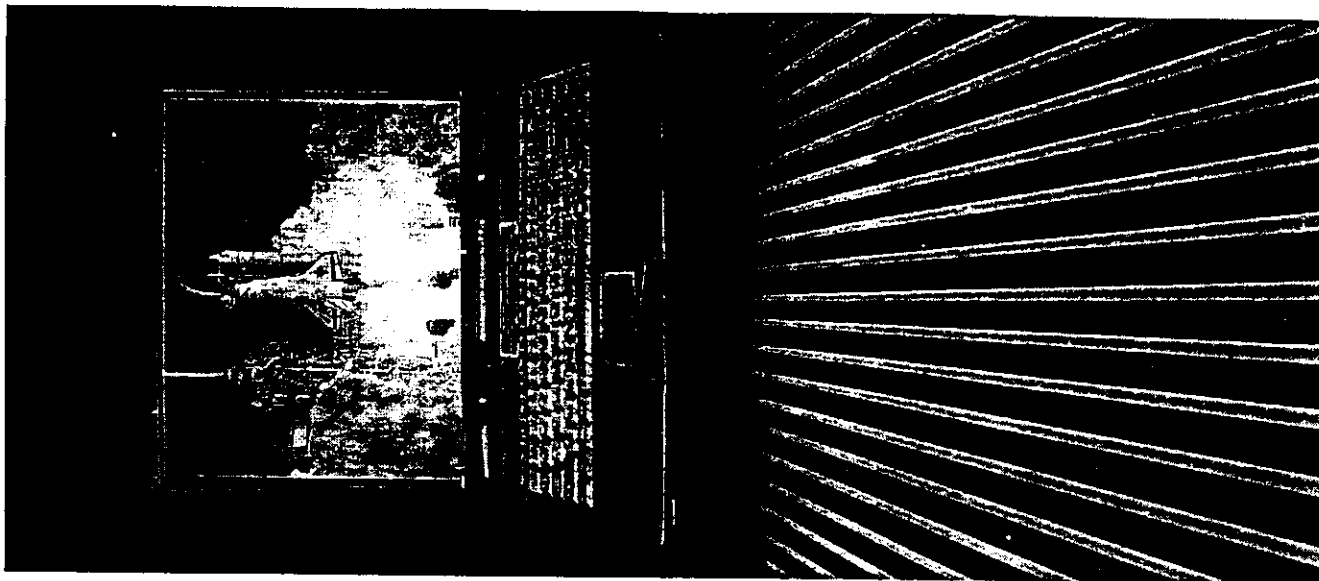
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Notebook

Computer

User's Manual



Welcome to Your User's Guide

Welcome to your Pentium Multimedia Notebook User's Guide. This manual covers everything you need to know in learning how to use your personal computer. This manual also assumes that you know the basic concept of DOS, Windows, and the PC. Begin with the first three chapters to get started immediately. Refer to the Installation Notice Card attached to this manual for install device drivers of your company. You may also look into the TXT and DOC files inside the notebook diskettes for additional information.

Note that your Pentium Multimedia Notebook comes in different configurations and options, some of the features mentioned in this manual might not be included or slightly different from the one you got. Contact your dealer for more information and latest update.

What Does This Manual Cover?

This user's manual covers the following information:

- Chapter 1 Gives you an introduction on your computer's features and parts as well as bundled accessories and available options.
- Chapter 2 Provides instructions on how to prepare your computer for immediate use.
- Chapter 3 Describes how to operate the standard features of your computer.
- Chapter 4 Introduces the PCMCIA function and how you can use PC cards on your computer.
- Chapter 5 Provides an easy guide in setting up the built-in multimedia features of your computer.
- Chapter 6 Illustrates how to connect external desktop devices to the back of your computer.
- Chapter 7 Explains how to use the System BIOS Setup program.
- Chapter 8 Offers instructions on how to maintain and troubleshoot your computer.
- Chapter 9 Provides you with some basic troubleshooting guides when encountering problems with your computer.
- Appendix A Lists the system specifications of your computer.
- Appendix B Supplementary informations about the DVD experience.

Where to Find Additional Information

To find additional information on your computer, you can contact your dealer for the BBS number or Internet website location. You can also contact call dps electronic's at (800)287-5262 x206, or see our website at "http://www.sunrex.com.tw" Internet website for direct support.

To find additional information on the software programs you're using, contact the software distributor or search the Internet worldwide web.

Accompanying Your Notebook Computer

Congratulations on having purchased your new Pentium Multimedia Notebook. You will be able to start doing a lot of fun things with your new computer. Please check inside the box to make sure you have received all of the items shown below, if anything is missing please contact your dealer.

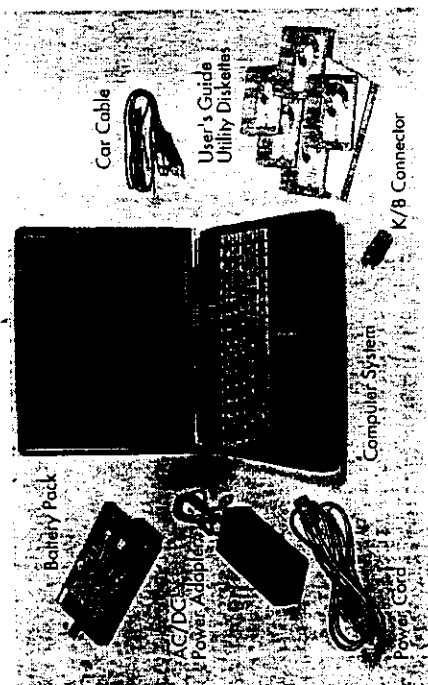


Figure 0-1 Standard Out-of-the-Box Computer Items

Utility Diskette: your diskette contains the

- CD-ROM Drivers
- VGA Drivers,
- Audio Drivers, and the
- TouchPad Drivers.

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CHAPTER 1

Getting Acquainted

This chapter provides a quick tour of the features of your Pentium Multimedia Notebook PC and identifies its important parts. Becoming familiar with these terms and locations will help as you read the rest of the manual. Refer to Appendix A for the detailed specifications of your notebook computer.

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1.1 Introduction

Your Notebook PC is a fully IBM compatible, portable, personal computer, featuring the latest in mobile computing and multimedia technology that even outperforms most of today's desktop computers. Lightweight and compact, your Notebook PC runs a wide range of general business and personal productivity applications, making it ideal for use in the office, at home, or on the road.

Designed with an advanced modular architecture, your Notebook PC also allows several levels of customization and expansion that are previously available only on desktop PCs.

1.2 Inside Features of the Notebook PC

Before we identify each part of your Notebook PC, let us first summarize other notable features found inside your computer.

Processing Unit

- (Your Notebook PC runs on Intel MMX Pentium microprocessor (CPU) with clock speed choice of up to 233MHz.) The Pentium MMX CPU includes a 32KB internal write-back cache. The clock is 60MHz.
- Incorporates Voltage Reduction Technology (VRT) that allows the CPU to run at lower voltage internally. This minimize heat dissipation and power consumption for longer battery-hours of operation.
- Fully compatible with an entire library of PC software based on operating systems such as MS-DOS, Windows 3.1, Windows for Workgroups 3.11, Windows 95, OS/2, SCO Unix, and Windows NT.

External Cache Memory

- For performance enhancement, an adequate amount of secondary cache is a must in utilizing the Pentium CPU power. Your computer includes an external 512KB synchronous (L2) pipelined-burst cache memory.

PCI Local Bus Architecture

- 128-bit PCI video local bus and Windows graphics accelerator with 2MB EDO VRAM. Supports Zoomed Video (ZV) Port technology for smooth full-screen motion picture playback capabilities.

- 32-bit PCI Enhanced IDE optimizes the data transfer between the CPU and disk drives. Support disk drives up to PIO Mode 4.
- 32-bit PCMCIA CardBus PCI technology that is also backward compatible with 16-bit PC cards.

Main Memory

- Provides two 64-bit memory slots for main system memory configuration using standard 144-pin SODIMM (Small Outline Dual Inline Memory Module) 8MB, 16MB, 32MB, and 64MB EDO/SDRAM module. User-upgradable to maximum 128MB.

VGA System

- Integrated with 2MB Video RAM and supports 3D Graphics and Video acceleration. Supports the standard multimedia expansion Zoom Video (ZV) Port that supports video capture and live video conferencing.

Audio System

- Full-duplex 16-bit stereo audio system with wavetable function and Plug-and-Play features. Sound Blaster and Sound Blaster Pro compatible.

Flash BIOS

- Flash EPROM BIOS allows you to easily upgrade the System BIOS using the Flash utility program.

Power and System Management

- Integrated SMM/SMI on system chipset shuts down components not in use to reduce power consumption. Power Management user controls on System BIOS SETUP allows you to activate and deactivate power saving features.
- The Auto Suspend button allows you to suspend the system's operation instantly and resume at the press of a key.
- System Password is included on the BIOS SETUP Program to protect data manipulation of your hard disk.

1.3 Opening the Display Cover

Open your computer's display cover by sliding the display latch to the right. Raise the cover and tilt the display screen to your desired viewing angle.

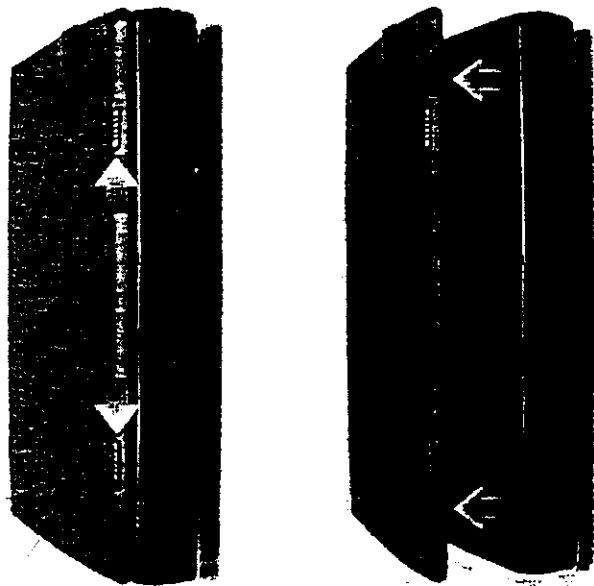


Figure 1-1 Opening the Display Cover

1.4 Front of the Computer with Display Open

Color LCD Display

- Flicker free DSTN or TFT color LCD (Liquid Crystal Display) from 14.1-inch XGA (1024 x 768). TFT screens provides sharper display compared to DSTN screens but costs more.
- Capable of displaying 64K colors (16-bit high color) on either SVGA or XGA LCD panels.

- LCD display control buttons allow you to adjust the brightness and contrast of the LCD. TFT LCD panels do not provide or require display contrast controls.
- Your notebook provides simultaneous display capability of both the internal LCD and an external desktop computer monitor.

Status LCD Indicator Panel

- Displays graphical icons representing your computer's system activity and power status.

Status LED Indicators

- The status LED indicators is used to determine the power activity of the computer.

Power Button

- For switching the computer's power on and off.

Volume Control Buttons

- For adjusting speaker volume manually.

LCD Display control Button

- For adjusting the brightness of the LCD display.

Suspend Button

- For automatically switching the computer's operation to suspend mode. Closing the display cover will also activate it. Refer to Chapter 7 for more information on the Power Management features of your computer.

Audio Speakers

- Integrated left and right mini stereo speakers for audio output.

Keyboard

- Full-sized 87 keys keyboard with Windows 95 hot-keys, embedded numeric keypad, 12 Function keys, inverted "T" cursor arrow keys, and separate page screen control keys.
- Wide extra space below the keyboard panel for your wrist or palm to rest-on comfortably during typing.

TouchPad Pointing Device

- Microsoft and IBM PS/2 mouse compatible with two select buttons. Supports tapping select and dragging functions.

Integrated Microphone

- Integrated full-duplex microphone for instant voice recording and simultaneous voice conversation.

IR Mouse Port

- Allows you to control the mouse away from the computer using the Infrared (IR) mouse remote control. Useful for group discussion and presentations.

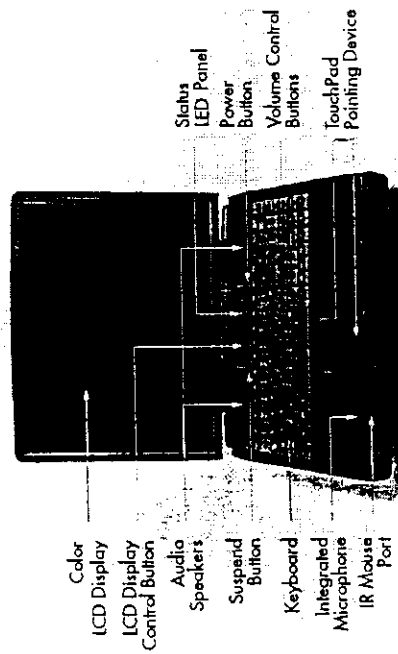


Figure 1-2 Front of the Computer with Display Open

1.5 Opening the Front Panel of the Computer

To open the computer front panel, turn off the computer power. Simply lift up the latches which is located on the both ends with your thumb nails. After lifting the latches, grab the back of the front panel which is just located between the keyboards and rare end of the front panel. Gently push the entire front panel toward you. As the front panel is shifted forward, lift up the front panel. You always need to release the front panel whenever you want to install the battery pack, CPU, and the hard disk drive.

Battery Compartment

- Where the battery pack is stored. Your computer supports the latest Smart Lithium Ion (Li-ION) battery pack for a longer lasting battery life.

Hard Disk Drive Compartment

- Removable and user-upgradable 2.5-inch Enhanced IDE hard disk drive.

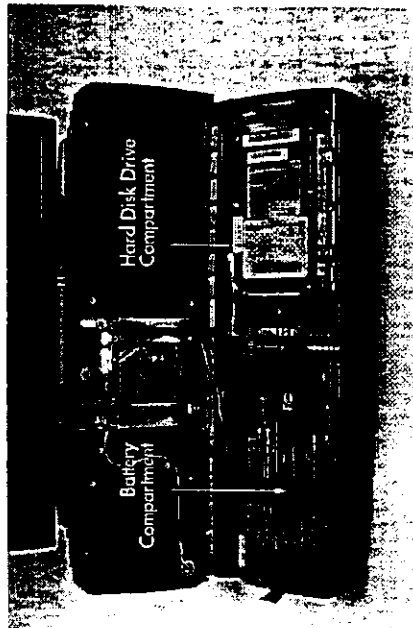


Figure 1-3 Opening the front Panel of the Computer

1.6 Left Side of the Computer

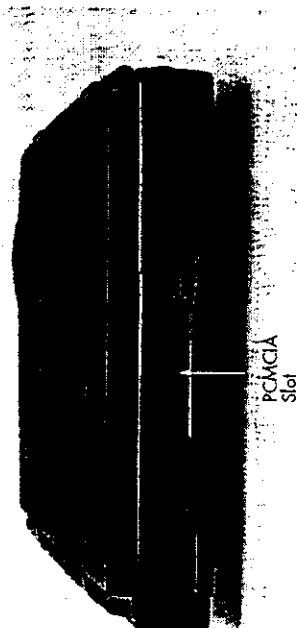


Figure 1-4 Left Side of the Computer

PCMCIA Slots

- Double-deck PCMCIA Slots that support two Type II PC cards or one Type III card.
- Supports multi-voltage 32-bit CardBus PC cards as well as Zoomed Video (ZV) PC cards and 16-bit PC cards.

Battery Compartment

- Stores the battery pack for mobile notebook operation or battery recharging.

1.7 Right Side of the Computer

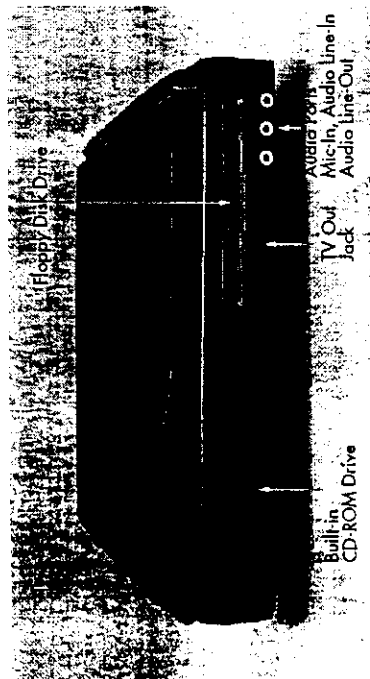


Figure 1-5 Right Side of the Computer

Built-in CD-ROM Drive

- Bootable high speed DVD/CD-ROM Drive with Enhanced IDE interface. Supports 8cm and 12cm CDs.
- Compatible with MPEG CD, Video CD, Photo CD, Karaoke CD, and Audio CD or CD-DA.
- Removable DVD/CD-ROM drive and is swappable with a secondary battery pack.
- Compatible with Windows 95, Windows NT, and OS/2 integrated IDE CD-ROM device driver.

Floppy Disk Drive

- Built-in 1.44MB 3.5-inch floppy disk drive (FDD) that coexists with the CD-ROM drive for simultaneous use.

Audio Ports

- One MIC-IN jack for connecting an external microphone.
- One Audio LINE-IN jack for connecting external CD player, tape deck, or synthesizer.
- One Audio LINE-OUT jack for connecting a two-way stereo speaker, earphone, or headphone.

TV Out Jack

- One TV Out Jack for NTSC/PAL Television connection.

1.8 Back View of the Computer

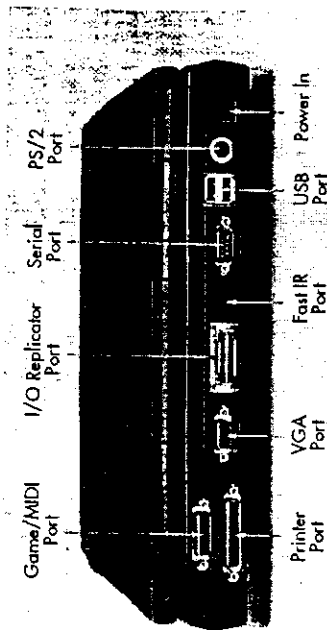


Figure 1-6 Back View of the Computer

Power In

- For connecting the AC power adapter or Car Cigarette power cable in supplying continuous power to your notebook computer.

PS/2 Port

- For connecting an external PS/2 keyboard. You can also connect an IBM PC/AT-compatible enhanced keyboard by adding the supplied keyboard adapter.

USB Port

- Built-in Universal Serial Bus (USB) port for connecting various USB devices.

Serial Port

- One 9-pin Serial Port (COM1) for connecting external pointing device and high-speed modem. Conforms to IEEE UART 16C550 standard.

Fast IR Port

- For wireless 4Mbps communication with a number of devices and infrared equipped computers and printers.

I/O Replicator Port (Option)

- Allows you to connect an I/O Replicator for that easy connection and disconnection from the I/O devices.

VGA Port

- Connects to external 15-pin VGA color desktop monitor with up to 1024 x 768 resolution at Hsync 48Khz.

Printer Port

- One 25-pin enhanced bi-directional printer LPT Port for connecting parallel devices and network adapters.

Game/MIDI Port

- Extra game and MIDI port for connecting external PC game joystick and MIDI adapter.

1.9 External Connectors and Ports Summary

The table chart below summarizes the functions of every port and connectors found on your notebook computer. This also includes the devices normally connected to it.

Connection	Function	External Devices
AC/DC Connector (Power)	For connecting external power adapter and for recharging battery.	• AC adapter • Car cigarette power cable
External PS/2 Port (Keyboard)	For connecting an external keyboard.	• PS/2 keyboards • IBM enhanced keyboards
Serial Port (Serial) - COM1	For connecting 9-pin serial devices.	• Serial Mouse • Fax/Modem
Printer Port (Parallel) - LPT1	For connecting parallel devices.	• Printers • LAN Adapters • Data Cable Transfer
Fast IR Port	For wireless transfer communication.	• Printers w/ IR • Computers w/ IR
VGA Port (VGA)	For connecting an external CRT monitor.	• VGA Color Monitor
USB Port (USB)	For connecting USB devices.	• USB devices
MIDI/Game Port	For connecting standard PC joystick and MIDI adapter.	• Joystick • MIDI Adapter
PCMCIA Slot	For connecting various PC cards.	• Modem cards • Ethernet cards • ATA cards • Video PC cards
LINE-OUT	For connecting an external speaker.	• Headphone (1/8 inch stereo phone plug) • Ext. speakers or
LINE-IN	For connecting an external audio device.	• CD Player • Tape Deck • Synthesizer
TV Out Jack	For connecting an RCA cable to your TV set.	• NSTC TV unit • PAL TV unit
MIC-IN	For connecting an external microphone.	• Microphone (600 ohm dynamic)
IR Mouse Port	For directing the IR Mouse Remote Control.	• Optional IR Mouse Remote Control

1.10 Underside of the Computer

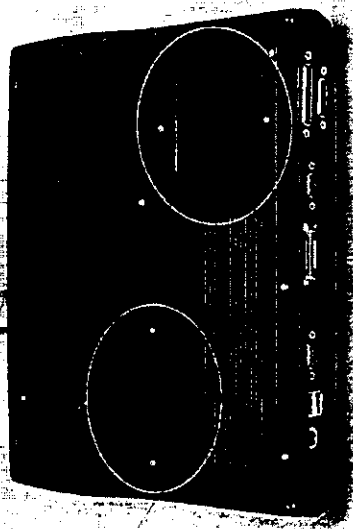


Figure 1-7 Underside of the Computer

Memory Compartment

- Contains the two 64-bit memory slots for inserting and upgrading the memory modules.

1.11 Notebook Accessories

It is also important to understand the accessories that come along with your computer and how they help make you work efficiently. This section describes briefly what these accessories can do for you and what other options you use.

AC Adapter and Power Cord

The AC Adapter supplies external power to your computer and at the same time charges the internal battery pack. The AC adapter has an auto-switching design that can connect to any 100VAC ~ 240VAC power outlets. Connect the adapter to the AC wall outlet using the power cord.

The green LED found on the AC Adapter allows you to determine whether there is power going through the AC Adapter.

Battery Pack

Aside from the AC adapter, your computer can also be powered through the internal battery pack. The battery pack uses rechargeable Nickel-Metal Hydride or NiMH battery cells that provide long computing hours when fully charged and power management enabled. You should always leave the battery inside your computer even when using the AC adapter as it also act as back-up power supply in case power from the AC adapter is cut off. It is also very important to have the battery pack always charged to prevent battery cell degradation. Read Chapter 2 on how to recharge the battery.

Keyboard Adapter

Another useful accessory that comes with your computer is the keyboard adapter. This adapter allows you to connect any standard DIN-type IBM-compatible desktop keyboard to the external PS/2 keyboard port which makes typing more easier.

Car Power Cable

This accessory allows you to power your notebook computer in your car by plugging into the cigarette socket and the other end to the DC-IN port. This however, does not charge the notebook's internal battery pack.

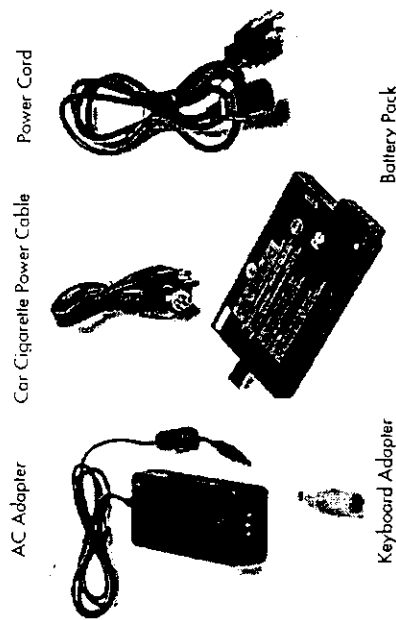


Figure 1-8 Notebook Accessories

1.12 Notebook Options

Aside from the accessories that come with your notebook PC, there are also other options that are available for your notebook.

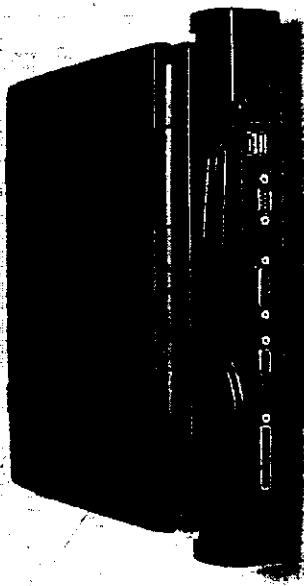


Figure 1-9 Notebook Options

Optional IR Mouse Remote Control

This mouse allows you to control your mouse pointer away from the computer. Simply direct this remote control to the IR mouse port within 9.84 ft. or 3 meters and control the mouse pointer. Useful for group discussions and presentations.

I/O Port Replicator

This option allows you to easily connect and disconnect from all of I/O devices without going through the hassle of disconnecting each of the I/O device whenever you need to take your computer with you. The I/O Port Replicator contains the same I/O ports that is found at the back of your notebook.

CHAPTER 2 Getting Started

This chapter provides quick and easy steps on setting up your computer for immediate use. It includes instructions on how to install the needed device drivers for using the built-in features of your notebook. You are advised to read through Chapters 1 and 3 first before operating the computer. Chapter 3 tells you more on how to use the basic features of your notebook computer.

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2.1 Installing the Battery Pack

The first thing you will need to do before you can use your notebook leave as is to install and recharge the battery pack. Recharging the battery starts when you connect the AC power adapter and the **CHARGE LED** on the adapter is activated. The LED will start to blink whenever the battery pack has been fully charged. Normal battery charging time is three hours when your computer is turned off.

To install the battery pack into your computer:

1. Release the two latches that are found on both ends of the front panel. Then grab the upper part of the front panel that is between the keyboard and the front panel. Push the entire front panel forward.
2. When the front panel have been shifted forward, you can lift it up.
3. Insert the battery pack with the metal contacts inserted into the connector slots of the battery pack.
4. Fasten the battery pack with the strap provided in the battery compartment to secure the battery pack.
5. Place back the front panel by pushing it over by pushing it forward (towards the keyboard) and then pressing it down to close it.
6. Push down the latches on both ends of the front panel to lock.

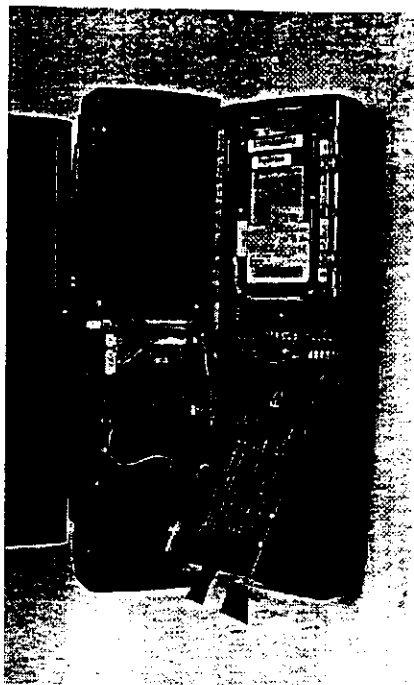
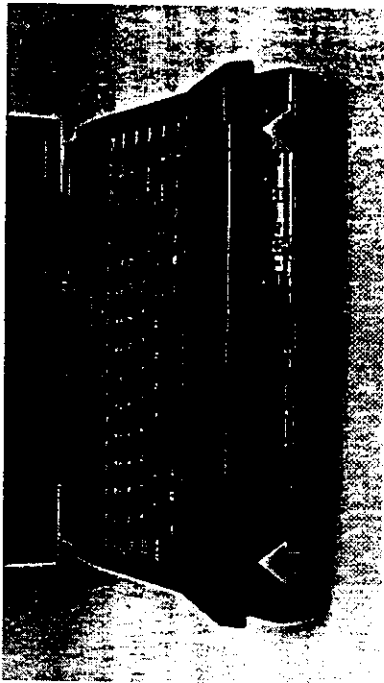
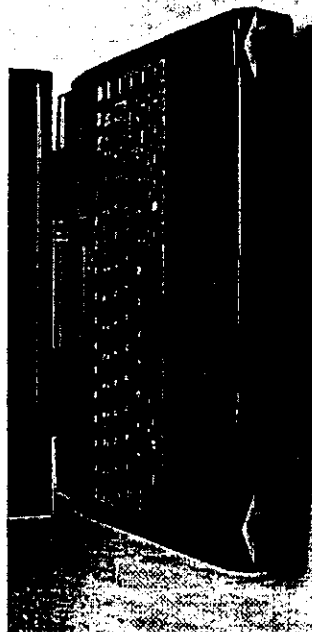


Figure 2-1 Inserting the Battery Pack

2.2 Connecting the AC Power Source

The AC adapter provides external power source to your computer and at the same time charges the internal battery pack. The AC adapter also has an auto-switching design that can connect to any 100VAC ~ 240VAC power outlets. The **POWER LED** on the AC adapter indicates if there is power output on the adapter.

To connect the power adapter:

1. Plug the AC power cord into the power socket of the AC power adapter.
2. Plug the other end of the AC power cord to a live AC wall outlet. The power LED on the power adapter should turn on.
3. Plug the connector of the AC adapter to the DC-IN port found at the back of the computer.



Figure 2-2 Connecting the AC Adapter

 *Whenever possible, it is advisable to always have the AC adapter connected to the notebook and the battery pack installed. This ensures continuous power supply and prevents any data loss incurring from sudden power breakdown.*

2.3 Starting Your Computer

The power button is found just right below the LCD panel at the under the LCD indicator panel. Press the power button to start your computer and check if the Status LCD Panel indicator turns on. The power cord graphics icon on the LCD indicator should appear indicating that the power is on and that the AC adapter is connected.

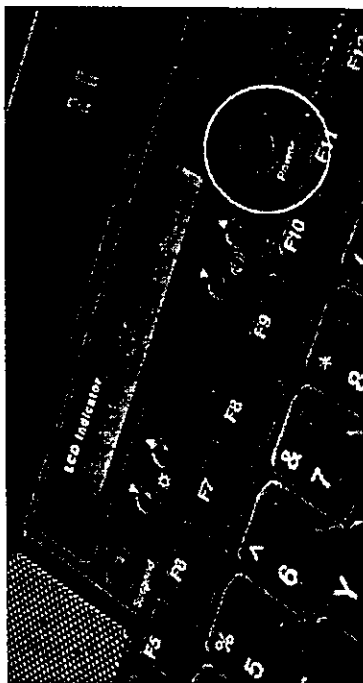


Figure 2-3 Power Button

After a few seconds, the computer's display will turn on and your computer will begin to execute the Power On Self Test or POST to check if all system components are running properly. Any errors found during the test will be displayed on the screen and may generate short beeping sound as well.

During the test, the screen will also display a message "Press the key to run SETUP program". You don't need to run this program at the moment as your dealer already made the necessary settings for your computer's optimal operation. Refer to Chapter 7 on running the SETUP program later.

After the test has completed, your computer will start to search and boot up the operating system from your hard drive. The notebook computer normally comes with a Windows 95 operating system pre-installed in your hard drive. Consult the Windows 95 manual on how to use the program. If not, contact your dealer for assistance.

2.6 Turning Off Your Computer

If you are not going to use the computer for awhile, it is best to turn off the power of the computer for longer use. Before turning off the power, you need to close first all application programs and shutdown the operating system. Then, press the power button to switch off the power of your computer.

 *Do not turn off the computer whenever the hard disk icon is activated on the Status LCD indicator panel. Close all programs first before turning off the power.*

 *After turning off the computer, make it a habit to leave the LCD cover open for a while whenever used for an extended period of time. This allows the internal parts of the computer to cool off. Closing the cover will force the heat up against the LCD screen which may degrade the LCD when done regularly. More importantly, never close the LCD cover for a long period of time when computer is on and power saving features are disabled.*

2.4 Adjusting the Display Controls

The LCD Brightness control is found under the LCD graphical indicator just right below the LCD panel. You need to adjust these controls after powering on your computer to suit your viewing pleasure.

The 2-button controls below are the Brightness controls. These adjust the brightness of the Cold Cathode Fluorescent Tube or CCFT on the LCD. The Brightness control will not set the LCD completely dark or bright; it provides sufficient lighting to the LCD to match the external lighting of the surroundings. The brighter the room, the more you may need to increase the brightness of the LCD.

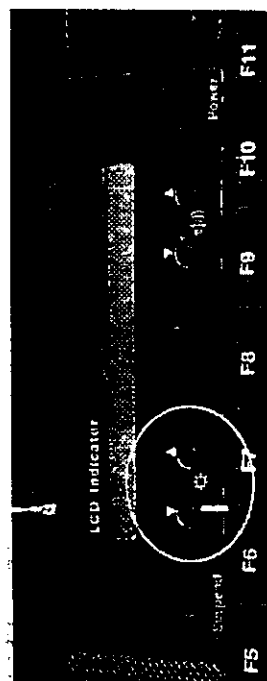


Figure 2-4 Adjusting the LCD Display

2.5 Installing the Notebook Device Drivers

If you already have an operating system like DOS or Windows installed into your notebook computer, it is best to install the needed device drivers for using the built-in devices of your computer like sound and PC card support. Before installing the drivers, check with your dealer first to see if they have already installed all the drivers along with the operating system.

The driver installation procedures or instructions are found on the Installation Quick Manual supplied with this manual. The installation card provides the procedures on how to install the supplied device drivers on the notebook diskettes. You may also check the text files found inside the notebook diskettes for more information. For additional driver support or update, you can contact your dealer.

CHAPTER 3

Learning the Basics

This chapter describes how to operate the standard built-in features of the computer that you normally would use in your day-to-day computer work. If you are new to computers and to your operating system, you also need to read the manual for the operating system on how to work with your computer. It is very important to familiarize yourself well with the operating system. The succeeding chapters show you how to go beyond the basics and try other exciting features.

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- How to Access the OPERATING / 32
- Using the Control Panel / 33
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3.1 Starting Your Operating System

The operating system is a necessary ingredient in using your computer. Without an operating system, it is like playing chess without the chessboard. It is the platform for all your software application programs to run on. The most popular operating system today is Microsoft Windows 95. You should have one installed by your dealer unless you are an expert computer user and would need a more powerful operating system. If you have an operating system already installed in your computer, you will be up and running after you power on your computer and boot up the system. Check your operating system manual on how to run it.

3.2 Knowing the Status of Your Computer

The Status LCD Panel, located at the rear center of the system, provides you with several graphical icons representing your system's activity and status. This includes power source and power management status. Look at it from time to time as you use your computer.

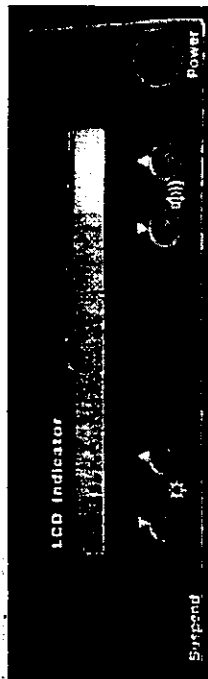


Figure 3-1 Status LCD Panel Indicator

The table below summarizes the icons shown on the LCD indicator and explains what they represent.

LCD Icon	Represents
	The small "Z" icon indicates that the CPU is in Idle or Doze mode. This is controlled by the system core logic chipset that instantly slows down the CPU clock whenever system is idle or not in use.
	The medium "Z" icon indicates that the system is in Sleep mode. Under Sleep mode, system may turn off the display and hard disk as well as slowing down further the CPU clock.

LCD Icon	Represents
	The big "Z" icon indicates that the system is in Suspend mode. Under Suspend mode, system will save your data into the memory and turn off most of the system's components.
	The power cord icon indicates that the AC power supply adapter is connected to the notebook unit and supplying power.
	The hard disk icon indicates that the system is accessing the hard disk drive.
	The CD-ROM icon indicates that the CD-ROM drive is being accessed.
	The floppy disk icon indicates that the system is accessing the floppy disk drive.
	The PC card icon indicates that the system has detected an ATA PC card inserted on the PC slot.
	The Caps Lock icon indicates that the Caps Lock key on the keyboard is activated. When activated, all alphabet keys type in upper-case or capital letters.
	The Num Lock icon indicates that the Num Lock key on the keyboard is activated. When activated, the embedded numeric keypad will be enabled.
	The Scroll Lock icon indicates that the Scroll Lock key on the keyboard is activated. The Scroll Lock key has different functions depending on the software you are using.

3.3 Understanding the Keyboard Functions

Your notebook computer is equipped with an 87-key keyboard that provides all the functionality of a full-sized 101 or 102-key IBM keyboard. Aside from the standard typewriter-layout keyboard of your computer, there are a number of extra features and function controls on the built-in keyboard including Windows 95 hot keys.

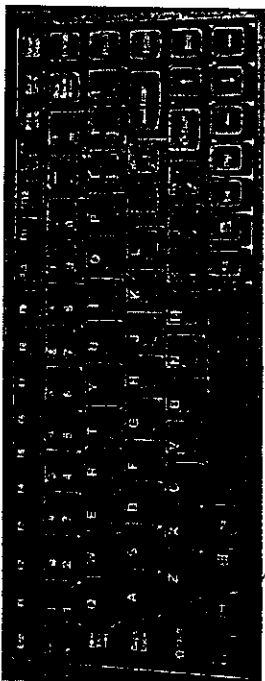


Figure 3-2 Keyboard Layout

Basic Keyboard Functions

	<Enter> key. Execute a command. Within many text editing application programs, the <Enter> key inserts a hard carriage return, just like an ordinary typewriter.
	<Esc> key. Press this key to cancel or escape from a command or function.
	<PrintSc> key. Known as the Print Screen key. Press this key to send information on the screen to a printer connected to the parallel port.
	<Pause Break> key. Press this key to temporarily halt execution of a command. Pressing any other key resumes execution of command.
	<Ins> key. Known as the Insert key. Press this key to toggle the keyboard data entry from insert to type over mode.
	 key. Known as the Delete key. Press this key to delete character to the right of the cursor, or delete marked texts or items.
	<Backspace> key. Press this key to delete the character to the left of the cursor.

	<Shift> key. Press this key in combination with alphabet letters to produce uppercase letters in typing. Use this key in combination with those two-character keys (found on the second row of the keyboard) to produce the upper marked keys. Also used in most application program in combination with other keys to execute a certain command.
	<Tab> key. Press this key to move the cursor to the next tab stop on the right. This key works much the same as in ordinary typewriter.
	<Ctrl> key. Known as the Control key. Used in most application program in combination with other keys to execute a certain command.
	<Alt> key. Known as the Alternate key. Used in most application program in combination with other keys to execute a certain command.
	<Scroll Lock> key. Used in most application program to scroll the screen without having to move the cursor.
	<Caps Lock> key. Used in most application program to always activate uppercase alphabet characters.

Cursor Control Keys

	Up arrow key. Moves the cursor up one line at a time.
	Down arrow key. Moves the cursor down one line at a time.
	Left arrow key. Moves the cursor to the left one space at a time.
	Right arrow key. Moves the cursor to the right one space at a time.

Screen Control Keys

	<PgUp> key. Moves the cursor up one screen at a time
	<PgDn> key. Moves the cursor down one screen at a time
	<Home> key. Moves the cursor to the beginning of a screen or line.
	<End> key. Moves the cursor to the end of a screen or line.

Windows 95 Hot Keys

	<Start> key. Pulls up the Windows 95 Start menu.
	<Right Click> key. Functions as the right mouse button & brings up a shortcut menu.

Special Function Keys

	<Fn> key. Special function key used in conjunction with embedded numeric keys without activating the Num Lock key. The embedded numeric keys are color coded blue. Use <Fn> + <Shift> to achieve above function.
--	--

Embedded Numeric Keypad Toggle Key

	<Num Lock> key. Activates the embedded 15-key numeric keypad. The keys are color coded blue. Toggles on and off.
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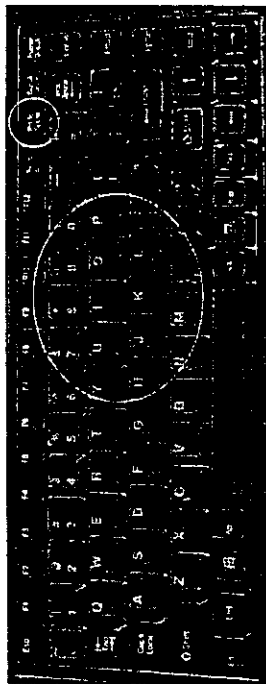


Figure 3-3 Embedded Numeric Keypad

3.4 Using the Floppy Disk Drive

The floppy disk drive is probably one of the most used devices on a computer especially when installing software programs. The other disk drives on your computer are the hard disk drive and the CD-ROM drive. Disk drives are designated with drive letters with the floppy drive usually assigned as Drive A:, and the hard drive and CD-ROM drive as Drive C: and Drive D: respectively.

The built-in floppy disk drive (FDD) of your computer is found on the right side of the unit just below the CD-ROM drive. It is a 3.5" diskette drive that can read and write to high-density 1.44MB diskettes or double-density 720KB diskettes. The diskette has an imprinted arrow on the front upper left corner, and a sliding write-protect tab on the bottom left corner of the diskette. When opened, the write-protect tab prevents any data from being written to or erased from the diskette. This also protects your diskette from getting infected by virus when used on other computers.

Insert the diskette with the arrow and label facing up and the shutter cover towards the drive. Slide the diskette into the drive until it is totally inserted and the eject button pops out. You may have to format your new blank diskettes first, using your operating system, before you can use them.

To eject or remove the diskette, make sure that the system is not accessing the diskette drive. Check the status LCD indicator panel to see if the FDD icon is activated. If not, then press the eject button on the drive to release the diskette.

3.5 Working with the Removable Hard Disk

Your notebook computer is equipped with a large capacity 2.5 inch IDE hard disk drive where you store or install your computer operating system and all application software programs. The hard disk unit is located under the front panel and allows you to remove the unit for disk drive upgrade or data security. Like floppy diskette, you also need to format a new hard disk before using. Since your computer supports different hard disk capacities, you also need to setup the disk type first on your computer BIOS SETUP program before formatting the disk drive. Your dealer should already have done all this for you. You can refer to Chapter 7 on how to run the BIOS SETUP program.

To install the hard disk unit:

1. Turn off your computer and remove the AC adapter and battery pack.
2. Release the front panel latches located on both ends by lifting it up using your thumb nails. After lifting it up, grab the rare side of the front panel which is between the keyboard and the front panel and push it forward (towards you).
3. When the front panel is already shifted forward, life gently and allow it rest leaning at about 90-degrees angle.
4. Connect the interface cable to the hard disk drive and screw on both sides to secure the hard disk drive.
5. Replace the front panel back by tilting it at about 20-degrees and pushing it towards the center (keyboard) until it touches the edge of the center panel.
6. Press down the front panel and push down the latches to lock.



Always turn off your computer first before removing the hard disk drive. Failure to do so might damage the computer and the hard disk. Avoid jarring or moving the computer while the hard disk is still being accessed.



Figure 3-4a Inserting a Floppy Diskette

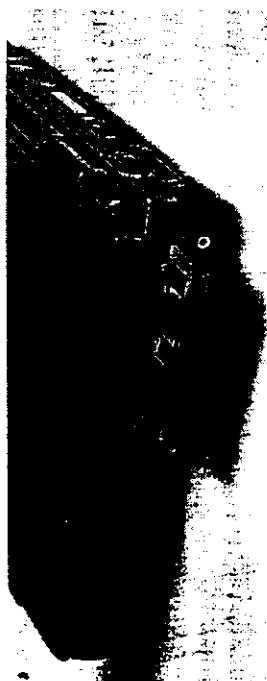


Figure 3-4b Removing the Floppy Diskette

 *Always remove the diskette whenever you are placing the notebook computer into the carrying case for transport..*

 *Always check the inserted diskette for viruses before using it.*

 *Always back up original diskette copies of your software programs.*

1. Make sure the computer is turned on. Press the eject button found on the door cover of the CD-ROM drive. The CD tray mechanism will pop-out slightly. Slowly pull the tray out.



Figure 3-6a Releasing the CD-ROM Drive Tray

2. Place the disc on top of the CD tray with the label side facing up. Gently press the compact disc onto the center spindle to secure the disc.



Figure 3-6b Placing the Compact Disc Inside

3. To remove the disc, press on the center spindle and pull up the disc from the side until the disc snaps out of the spindle lock.

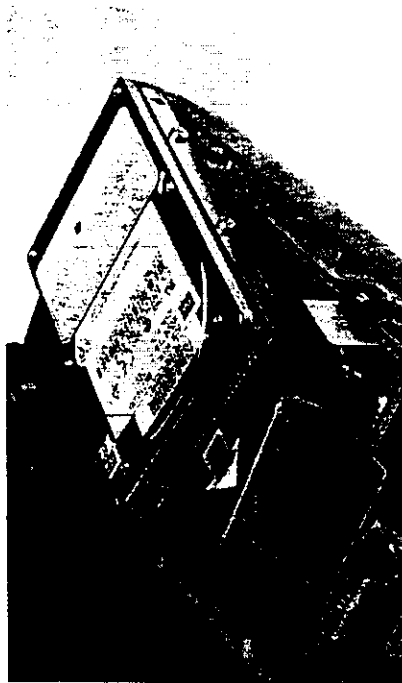


Figure 3-5 Removing the Hard Disk Unit

3.6 How to Access the CD-ROM Drive

You would normally use the CD-ROM drive for installing the operating system and software application programs. Unlike the two disk drives, you can only read from the CD-ROM drive. You also need to install first the CD-ROM device driver before being able to access it. Refer to the Installation Installation Quick Manual on how to install the driver or contact your dealer for assistance.

The CD-ROM drive module is found on the right side of the computer. To insert and remove a disc from the drive:

install the Windows operating system since it is compatible with the standard Microsoft or IBM PS/2 mouse driver that is found on the Windows operating system. However, you may want to use some of the available feature or configure your touchpad properties through using the provided touchpad driver. You can refer to the Installation Quick Manual on how to install the driver.

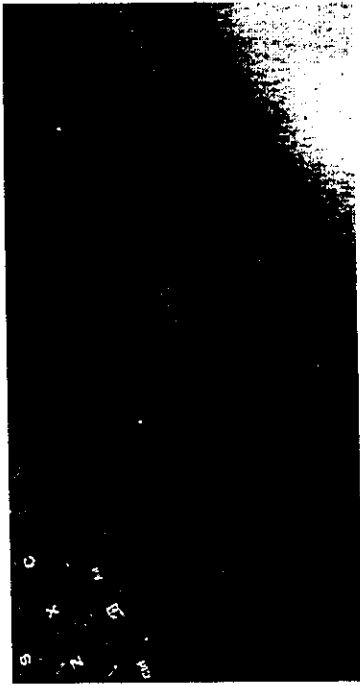


Figure 3-7 TouchPad Pointing Device

Here's how to use the touchpad pointing device:

1. The rectangular surface acts like a miniature duplicate of your display screen. To move the cursor, place the finger lightly on the sensor pad and move in the desired direction. If you reach the end of the pad, lift your finger and place it back down on the other side of the pad. If you find yourself doing this too often, configure the driver to increase the horizontal and vertical sensitivity.
2. To select an item, click on the item by pressing the left button control or by simply tapping on the surface once. A light, quick tap always works best. To execute an item, click the left button twice or do a quick double tap on the surface.
3. To simulate holding the mouse button down (dragging an icon or selection), use the tap-and-drag gesture. This feels much like a double-click, except that the finger remains on the pad after the second tap: Tap, lift, tap, hold and move. The simulated button remains held as long as the finger remains on the pad.



Figure 3-6c Removing the Compact Disc Inside

4. To close the CD-ROM drive, simply push the CD tray inside. The CD-ROM LED will activate when the disc is detected. Wait until the LED has turned off before you start to read the disc.



Figure 3-6d Closing the CD-ROM Drive Tray

3.7 Using the TouchPad Pointing Device

Your computer comes with a built-in TouchPad pointing device (see Figure 3-7) that is found on the center of the palm-rest surface. The touchpad works like a regular mouse pointing device that is used under Windows-based operating system. The touchpad will automatically work as you

1 If you swap the left and right buttons on your operating system, tapping on the TouchPad as an alternative method of pressing the left button will no longer be possible.

2 Avoid spilling any liquid on the touchpad surface and always keep the touchpad surface and pointing finger dry from sweat build-up. Also do not expose touchpad to any magnetic source object.

TouchPad Control Panel for Windows 95

If you are using Windows 95 operating system and you have installed the touchpad device driver for Windows 95, the Synaptics TouchPad Control Panel will be added on the Mouse Properties panel. This panel allows you to customize the features of the touchpad to suit your needs.

From the Start menu, select Settings, Control Panel, then Mouse to open the Mouse Properties sheet. Click the General tab, then click the Options button to bring up the Synaptics TouchPad Control Panel.

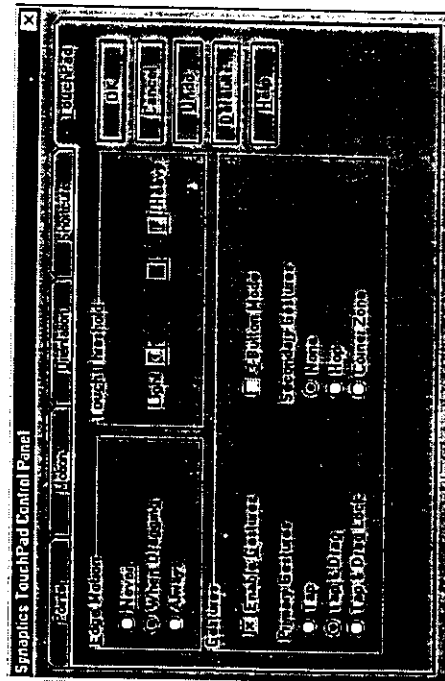


Figure 3-8 TouchPad Control Panel

TouchPad Special Features

Aside from all the controls of a regular mouse control panel, the TouchPad folder offers these unique features:

- **Edge Motion.** During a tap-and-drag movement, if your finger comes up against the edge of the pad, the cursor keeps moving as long as you hold your finger there. In the Control Panel, you can choose between no Edge Motion, Edge Motion during drags (the default), or Edge Motion all the time.
- **Touch Sensitivity.** By moving this slider, you can make the TouchPad more or less sensitive to a light touch of the finger.
- **Locking Drag.** Tap once to begin your selection, lift your finger from the pad and then tap a second time to finish your selection.
- **Corner Taps.** This is a way to simulate a two-button mouse entirely with finger movement. With Corner Taps, tapping in the upper-right corner of the pad clicks the right mouse button, and tapping anywhere else clicks the left mouse button.
- **Hop Feature.** This is an alternate two-button movement. With your finger resting on the pad, if you lift and quickly tap a good distance to the left or right, you get a right-button click instead of a left-button click. Tapping near where your finger was resting before produces the usual left-button click.
- **Three-button mode.** If you have software that requires a 3-button mouse, select this option. The TouchPad simulates a 3-button mouse where tapping gestures operate the "left" mouse button, and the two physical switches operate the "middle" and "right" mouse buttons.

3.8 Configuring Your Screen Display

The VGA display function of your notebook is based on a high performance 64-bit PCI VGA local bus controller and is fully IBM VGA compatible. This controller offers a large set of extended functions and higher resolutions which are especially useful when you are connecting an external high-resolution and high-frequency monitor (see next chapter).

You will find on the Installation Notice Card that comes with this manual the procedures on how to install the VGA device driver under Windows 95. After installing the VGA driver, you would then configure the display resolution or screen size to match your LCD display panel. This notebook computer model provides 800x600 as well as 1024x768 LCD panels. You would also probably want to set the amount of color output to display sharper images and photos.

Possible Display Configurations

The table below shows you the possible display resolution you can set when using either or both the LCD display or the external monitor (CRT):

Display	Possible Resolution	Maximum Colors
1024x768 XGA LCD	640x480	65,536 colors
	800x600	65,536 colors
	1024x768	65,536 colors
	1280x1024*	256 colors
CRT Only	640x480	16 million colors
	800x600	16 million colors
	1024x768	65,536 colors
Both	640x480	65,536 colors
	800x600	65,536 colors
	1024x768* (SVGA LCD)	65,536 colors
	1280x1024* (XGA LCD)	256 colors

 * - denotes special panning feature that allows higher resolution modes to be displayed on the LCD or CRT. This feature will show a section of a larger screen, and will automatically pan or scroll the screen horizontally and vertically when the mouse reaches the edge of the display.

 65,536 or 64K colors is also equivalent to 16-bit high color while 16 million or 16M colors is equivalent to 24-bit true color.

Changing the Display Properties under Windows 95

To change the display properties of your screen under Windows 95, just right-click on the desktop area and select Properties or go to the Control Panel and click on the Display icon. The Display Properties dialog box will appear on your screen (see Figure 3-9). Click on the Settings tab to set your desired configuration. Make sure to follow the configuration table above.

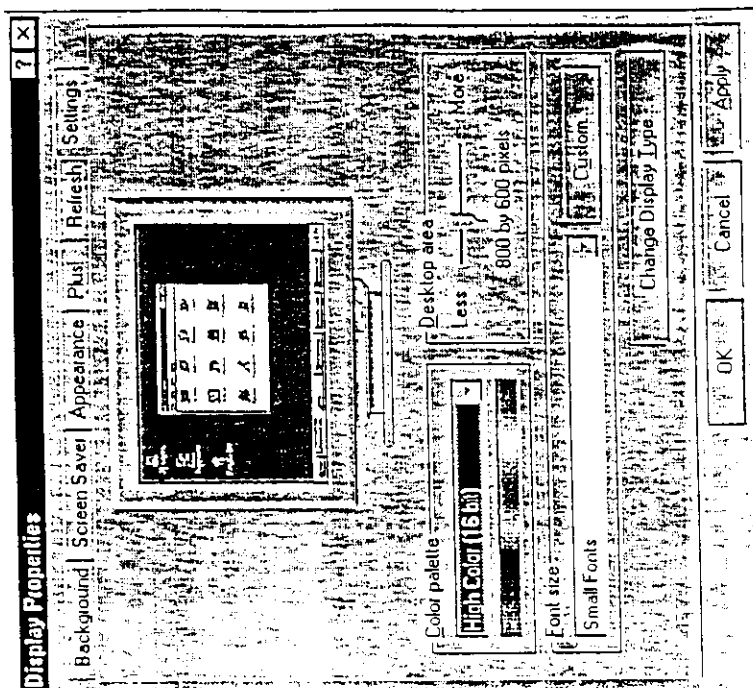


Figure 3-9 Windows 95 Display Properties

 If you cannot configure the display properties, change the display driver first as mentioned on the Installation Quick Manual. Consult your dealer for the latest Windows 95 VGA PCI driver.

3.9 Knowing the Power Saving Features

One of the great features in your notebook computer aside from its superior performance is the ability to save energy power. Your computer is designed to incorporate intelligent and advanced power management functions that turns off power to most components when the system is idle or not in use. This does not affect the performance of your system as it monitors the activity of your computer and resumes power and operating speed when

3.10 Using the Auto Suspend Button

The Suspend button (see Figure 1-2) is an added power saving feature of your computer which you can use instantly to suspend computer's operation. To activate suspend mode, just press on the suspend button or close the LCD cover. When activated, the Status LCD indicator will display a third "z" on the top to indicate so and the yellow LED indicator will start blinking. To resume your work, simply press the spacebar key at anytime or press the suspend button again.



Do not turn off the computer when your system is in Suspend mode or your data saved in memory will be lost permanently. Always check the Status LCD indicator panel if Suspend mode is activated before thinking of turning off the power of your computer.



Make sure Power Management is enabled in the BIOS Setup program to activate Suspend button.

activity is detected. This feature not only gives you longer battery life but cooler systems and components as well. For more information on how to control the power management features of your computer, refer to Chapter 7 on running the BIOS SETUP program.

There are three levels of power management that you can control on your notebook computer:

CPU Doze mode

This power saving mode allows the system to slow down the operating clock speed of the CPU when not in use. When activated, the Status LCD indicator panel will display a small "z" to indicate this mode. This does not affect the performance or speed of your computer since it monitors the CPU activity and automatically returns to normal operating speed when the CPU is needed. This dramatically saves a lot of power and prevents the CPU from generating too much heat. You can set the CPU doze mode timer and operating speed from the BIOS Setup program.

Sleep mode

This power saving mode allows the system to turn off the LCD and the hard disk drive when system is idle or not in use. When activated, the Status LCD indicator panel will display a second "z" in the middle to indicate this. The LCD display has a backlight fluorescent lamp tube that provides the brightness of the display. This tube consumes a lot of power and must be turned off when not in use. To turn on the LCD again, simply press a key to resume. You can also set the Sleep Timer for the LCD and the hard disk in the BIOS Setup program.

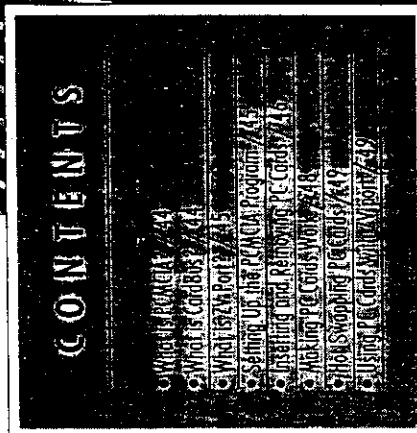
Suspend mode

This is the lowest power consumption level of your computer which saves your data temporarily on the system memory and shut off almost all components of your computer except the memory component. You must not, however, power off the computer from this mode or your data saved in the memory will be lost. You can press the keyboard at any time to resume your work. When activated, the Status LCD indicator will display a third "z" on the top to indicate so. You can also set the Suspend timer in the BIOS Setup program.

CHAPTER 4

Handy PC Cards

This chapter provides an overview of the PCMCIA technology and how to configure your notebook computer to fully support different PC cards. These cards provide you with all the features and capabilities of full-sized expansion cards in just the size of a credit card. Since each card is different, you will have to read your card's documentation as well on how to install and use them. Before buying any PC cards for your computer, it is best to contact your dealer first for any PC card compatibility problems and what card they recommend.



4.1 What is PCMCIA?

PCMCIA or Personal Computer Memory Card International Association is a non-profit trade association and standards body composed of over 500 member companies that defines the industry standard for the PC Card technology. The goal of PCMCIA is to ensure that any PC Card can work in any mobile computer built with a PCMCIA slot.

A PC Card is a peripheral device that can add a wide variety of capabilities to your computer including memory, mass-storage, LAN, fax/modem, wireless communications, and multimedia. The PCMCIA standardized PC Card is roughly the dimensions of a credit card, and has a standardized 68-pin connector at one end. The main benefits of the PC Card are its low-power consumption, small size and ruggedness.

Today, PCMCIA promotes the interpretability of PC Cards not only in mobile computers, but in such diverse products as digital cameras, cable TV, set-top boxes, and automobiles.

To allow manufacturers to add functions and technologies in the PC Card form factor, PCMCIA has defined three PC Card types:

Type	Thickness	Sample Devices
Type I	3.3 mm	Memory Cards
Type II	5.0 mm	Fax/Modem & Network Cards
Type III	10.5 mm	Hard Disks (ATA Cards)
		High-End Communication Cards

For more PCMCIA information on the Internet, visit the PCMCIA home page at <http://www.pc-card.com>.

4.2 What is CardBus?

CardBus is the next generation, high-performance 32-bit PCI bus master interface from PCMCIA. It runs up to 33MHz clock speed and operates at only 3.3V. Your notebook computer incorporates the CardBus inside with a double deck PCMCIA slot that supports two Type II cards at the same time or one Type III card. Aside from 3.3V CardBus PC cards, you can also insert existing 5V 16-bit PC cards which can also be detected

and used by your computer. Another new type of PC card that has come out with the CardBus is the Zoomed Video or ZV port card. See section below.

What is ZV Port?

ZV Port or Zoomed Video Port is an adaptation of the PCMCIA port to allow a new type of PC card called "ZV Port Card" to be inserted into your computer. The proposed ZV Port PCMCIA standard eliminates sending large amounts of multimedia (video and audio) through the CPU or system bus, allowing for much higher overall system performance during multimedia usage. ZV Port technology is the enabling platform for the implementation of multimedia capabilities on notebook PCs. These capabilities include: video playback of MPEG1 and MPEG2 full motion video, video capture and TV tuner support, and video conferencing.

ZV Port - How it Works

With a ZV Port card inserted in your computer, compressed video data flows from the hard disk, CD-ROM, LAN or other source, across the system bus to the PCMCIA CardBus controller, which passes it to the MPEG decoder in the PC Card slot, which returns uncompressed video data back to the PC Card controller. Using the ZV Port interface, the PC Card controller sends the uncompressed video stream directly to the video/graphics controller and to the audio chip, and on to the display screen and speakers. In a PC without the ZV Port interface, there is no direct connection between the PC Card controller and the graphics controller, so the uncompressed data must wind back through the system bus, and possibly through the CPU, to get from the one component to the other.

4.4 Setting Up the PCMCIA Controller

In order for your computer to identify inserted PC cards and configure them to work, you need to first make sure that you have the Card and Socket Services software loaded properly into your operating system (see fig. 4-1).

Running under Windows 95

For supporting PCMCIA CardBus controllers, you need to have at least Windows 95 B version (more popularly known as OSR2) installed on



Figure 4-1 Inserting a PC card

3. When the full length of the card is almost inside the slot, push firmly but slowly, to engage the card into the socket solidly.

Removing PC Cards

To remove a PC card from the PCMCIA slot:

1. Open the PC card slot cover on the left side of the computer (see Figure 4-3).
2. To remove the inserted PC card, push the button found on the left side of the PC slot to release the PC card. The upper left button releases the card in the top slot while the lower left button releases the card on the bottom slot.

your hard disk. Previous Windows 95 versions including ones with Service Pack 1 (A version) and Windows NT 4.0 only supports 16-bit PCMCIA controller. The PCMCIA controller on your notebook computer, however, offers backwards compatibility with 16-bit PCMCIA drivers like the Windows 95 PCIC-Compatible PCMCIA Controller. This means that if you have a Windows 95 A version installed on your hard disk, you could still use 16-bit PC cards by using the compatible driver.

To determine if you have a B version, go to the Control Panel and double-click on System. On the General folder tab, you should find the version 4.00.950 B listed under Microsoft Windows 95.

Refer to the *Installation Quick Manual* on how to configure the PCMCIA controller for both versions of Windows 95.

Refer to *Chapter 9 on solving PCMCIA problems on your computer.*

4.5 Inserting and Removing a PCMCIA Card

The double-deck PCMCIA slot built in at your computer supports either two PCMCIA Type I or Type II cards at the same time or one Type III card. The double-deck PCMCIA slot compartment includes a top socket and a bottom socket. You insert the Type III card through the bottom socket. Your computer also includes hot swapping capability that allows you to exchange cards while the computer is turn on and start using it immediately.

Inserting PC Cards

To insert a PC card into the PCMCIA slot:

1. Locate the PC card slot cover on the left side of the computer and open it.
2. Insert the side of PC card with the 68-pin socket facing into the PC slot. The face label of the card should also be facing up. If you have a Type I or a Type II card, it can be inserted into either the top or bottom slot. If you have a Type III card, you must insert it into the bottom slot.



Figure 4-2 Removing a PC card

- When the PC card has been ejected slightly out of the slot, hold the edges of the card and slowly slide it out completely.
- Close the PC card slot cover after all cards have been removed.

4.6 Making PC Cards Work

Since PC cards come in different types and brands, making every card work on your computer may not be that easy. Except for memory cards and fax/modem cards, other PC cards like network, SCSI, or multifunction cards (MFC) need additional drivers installed and system configuration to make these cards work. These additional drivers may already be built in under Windows 95 which Windows will try to detect and will prompt you if you need to install the driver. If the driver is not included under

Windows 95, you will need to insert the driver diskette provided by the PC card manufacturer into the floppy disk drive and install to Windows 95. You need to read the user's guide that comes with the PC card on how to configure and operate the card. You can also refer to Chapter 9 on solving PCMCIA problems on your computer.

4.7 Hot Swapping PC Cards

Just like floppy disk drive, your PCMCIA slot allows you to replace one PC card with another even while your computer is on. However, you need to remember that if the PC card is in use, you must not remove it. Below are some examples on how to handle PC cards when hot swapping:

- Do not remove a network card while your system is connected to the network.
- Do not remove fax/modem card while the card is transferring data into or from your computer.
- Do not remove a hard disk or ATA card while your computer is accessing the card.

To remove PC cards under Windows 95 while the computer is on, you need to stop the PC card device first under the PC Card properties box. Follow these steps:

- In the Control Panel, double-click on PC Card (PCMCIA). If there is a PC card icon on your Windows taskbar, you can also click on it to immediately go to the PC Card properties box.
- Click on the PC card you want to remove and click Stop.
- Wait until your system has prompted you that the PC card can safely be removed.

4.8 Using PC Cards with ZV Port

For using PC Cards with ZV Port function, go to the next chapter on how to run the multimedia features of your notebook computer.

CHAPTER 5

Fun with

Multimedia

This chapter lets you make full use of all the multimedia features of your computer allowing more fun and excitement during work or leisure. You will learn how to mix and match the built-in sound system, CD-ROM, and TV port technology in creating an exciting multimedia presentation.

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5.1 Notebook Multimedia Features

Your notebook computer is rich in multimedia features that makes your computing fun, and exciting yet easy to use. Exceeding the specifications set for the Multimedia Personal Computer or MPC, your computer is built to perform all multimedia tasks through the following:

- Pentium CPU with MMX technology
- 16MB EDO RAM
- High Speed CD-ROM Drive
- 128-bit PCI VGA Graphics Controller
- 16-bit Plug-and-Play Audio Sound System
- ZV Port Capability (see previous chapter)

5.2 How Does Pentium MMX CPU Differ?

The Pentium processor with MMX technology includes 57 additional powerful, new, instruction sets specifically designed to manipulate and process video, audio and graphical data more efficiently. These instruction sets dramatically accelerate multimedia and communication performance. Pentium CPU's with MMX technology offers an improved computing speed of over 60% on multimedia applications compared to standard Pentium CPU. High speed Pentium MMX processors have immediate responsiveness for the latest, most demanding software with powerful realistic graphics and the ability to run full-screen, full-motion video.

5.3 Audio Sound System Features

Your computer has a built-in 16-bit stereo sound controller that allows you to record, store, and playback voice, music and other sound effects with built-in mixer controls. An integrated full-duplex microphone and twin mini-speakers are also built-in into your computer to allow you to record and playback sound anytime and anywhere.

On the right side of your computer, you will find the audio compartment that includes the following:

- External 1/8-inch microphone jack that supports full-duplex monophonic mode or half-duplex stereo mode

- Audio output line jack for connecting external amplified speakers, headphones, or earphone set
- Audio input line jack for connecting external audio devices like CD audio player, tape deck or synthesizer
- External volume control buttons.

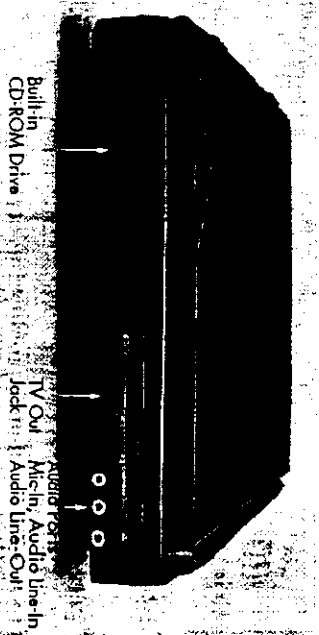


Figure 5-1 Audio Port Compartment

Setting Up the Audio Driver Properties

Before you can start using the audio capabilities of your computer, first you need to properly setup the audio driver after installing Windows 95. If you bought your computer with Windows pre-installed, it has been done by the electronic's already. If not, you must refer to the **Installation Quick Manual** on how to setup the sound drivers for Windows 95.

Your computer uses the ESS 1869 Plug-and-Play 16-bit Audio Drive controller.

Windows Multimedia Programs

Windows provides several multimedia programs which you can run with the built-in features of your computer. The Multimedia programs group is found by clicking the Start button, then pointing to Programs, then Accessories, and Multimedia.

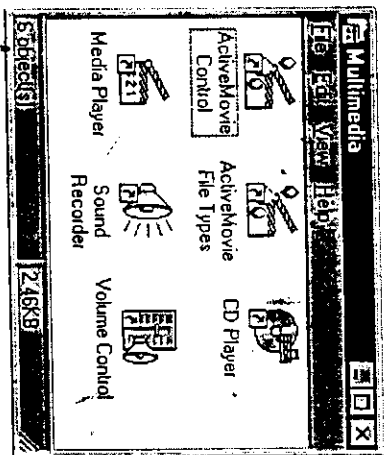


Figure 5-2 Multimedia Programs Group

The standard multimedia components are as follows:

- CD Player - for playing audio compact discs
- Media Player - for playing video and animation
- Sound Recorder - for playing and recording sounds
- Volume Control - for adjusting the volume of mixer

 The ActiveMovie Control program is included only after you have installed the Microsoft Internet Explorer.

 For more information on how to operate these multimedia components, run the program and click on the Help menu.

5.6 Recording Sounds

Your computer allows you to record voice and other sounds in several ways and store them as files on your hard disk. These voice or sound files can then be played back through the internal speaker or external line-out port using either an external speaker, headphone, or earphone set. You can also use the files as voice annotations on many applications for more real presentation. This section will describe briefly how you can record sounds under the Windows operating system.

To record sounds, you need to run the Sound Recorder program from the Multimedia program groups. The control buttons of the Sound Recorder

are simple to understand and are comprised of the Rewind, Forward, Play, Stop, and Record buttons. Click the Help menu to learn how to operate the Sound Recorder.

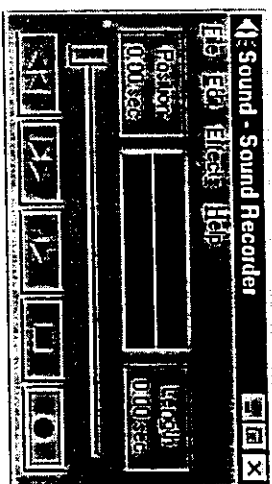


Figure 5-3 Sound Recorder

The Sound Recorder also allows you to record sound from different input audio sources such as sound:

- from the built-in microphone,
- from the external microphone,
- from the CD-ROM drive, and
- from the Line-In audio jack.

Since you can record sound from different input sources, you must first set the proper audio input recording device under the Recording Control to do this panel:

1. Double-click on the Volume Control on the taskbar or click Start button, then point to Programs, Accessories, Multimedia, and then click on Volume Control.
2. Click Options and Properties.
3. Click the round button for Recording and select to show volume controls for each component.

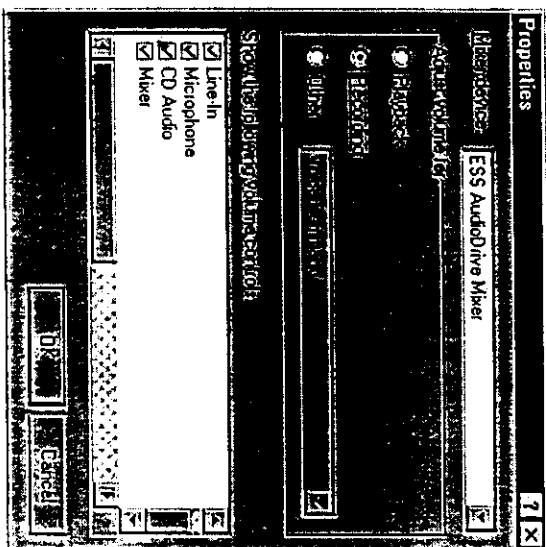


Figure 5-4 Audio Volume Properties

- Click OK and the Recording Control dialog box will appear. Here you will select the input device for the recording source. The default is the microphone which will record sound from the microphone only. If you want to record from the CD-ROM drive with audio music, you must click on CD Audio.

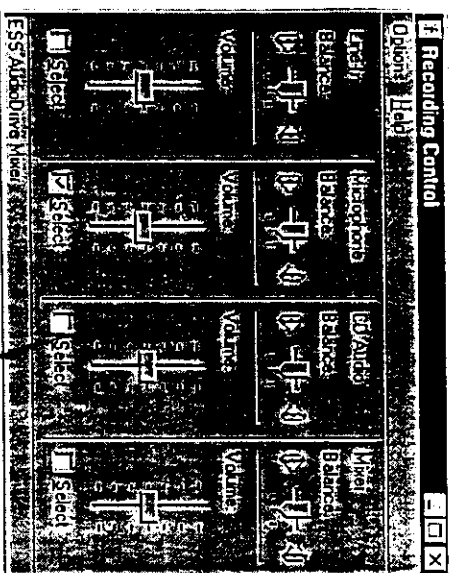


Figure 5-5 Recording Volume Control

Using the Built-in Microphone

This feature can also be used for personalized windows prompts, internet phone applications, and other voice control commands. Your computer comes with a built-in microphone located near the left side of the TouchPad button.

To start recording from the built-in microphone:

- Enable microphone volume on the Recording Control as discussed previously.
- Run the Sound Recorder program and press the Record button.
- Start to speak towards the built-in microphone and press the Stop button when you want to stop recording.
- Press the Play button to hear what you have recorded.
- To save to file, click Save from the File menu.

Using an External Microphone

Your computer also allows you to connect an external microphone for higher quality recording. The external microphone jack is found on the right side of your computer and automatically disables the built-in microphone when connected. Use only microphone with 1/8-inch mini-jack connector. Follow the same procedure as for recording voice.

Using the Built-in CD-ROM Drive

You would normally use the CD-ROM drive for recording audio music from the compact disc. Follow these steps:

- Activate CD Audio volume on the Recording Control as discussed earlier.
- Run the Sound Recorder program.
- Insert the audio CD into the CD-ROM drive. Unless you have disabled the CD auto-insertion notification for supporting Suspend mode, the CD Player should automatically run after you have inserted an audio compact disc and will start playing the audio CD.
- Click on the CD Player and press the Pause button first.

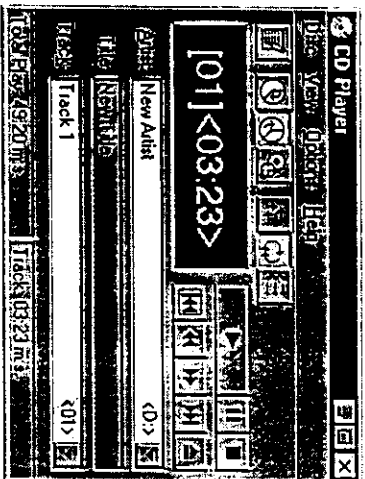


Figure 5-6 CD Player

5. Set the starting point where you want to start recording.
6. Switch to the Sound Recorder and press the Record button.
7. Switch immediately to the CD Player and press the Play button. You can adjust the volume control so you can also hear the recording.

Using an External Audio Input Device

You can also record sound from an external audio device such as stereo amplifier or tape recorder by connecting them to the Line-In audio jack on the right side of your computer.

Use the same procedure as listed above by setting the Recording Control to enable the line-in volume. Run the Sound Recorder and press the Record button. Start playing the external audio device to begin recording.

5.7 Playing Audio and Sound

Your computer has a built-in twin speaker to playback audio and sound. You can also adjust the volume manually by pressing the volume control buttons found on the right side of your computer.

For more quality sound output, you can choose to connect an external amplified speaker that connects to the Line-out jack on the right of your computer. You can also connect earphone or headphone set. Always minimize the volume first before replacing the phone set to your ear.

Using the Media Player

The easiest way to playback multimedia media files is to run the Media Player. Follow these steps:

1. Click on Start, then point to Programs, Accessories, and Multimedia.
2. Click on Media Player to start program.

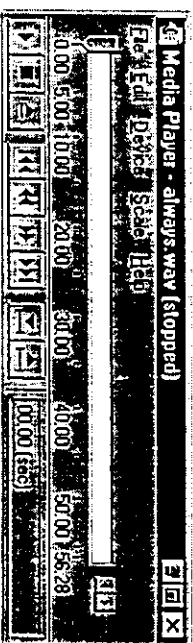


Figure 5-7 Media Player

3. Click on the Device menu to select the sound device type you want to play or you can directly open the file on the File menu.
4. When the file is recognized and open, click on the Play button to start playback.
5. For playing audio CD, it is better to run the CD Player as previously discussed.

5.8 Playing Games

Your computer's audio sound system contains virtual drivers that allows you to emulate Sound Blaster, Sound Blaster Pro, and AdLib sound cards under MS-DOS games. To be able to emulate this cards, simply execute the MS-DOS Prompt under Windows and run the game.

Your computer also provides a joystick and MIDI port to have more fun while playing games. Simply plug the game joystick at the back of the computer and configure the joystick device type under Windows Control Panel.

5.9 Playing Video and MPEG Files

Your computer is capable of running video motion files as well as MPEG (Motion Picture Expert Group) files on CD. By using a software MPEG program such as Xing MPEG Player Program, you can watch real full-

motion picture on your computer. And if you have Microsoft Internet Explorer 3.0 installed, it is most likely that it included the ActiveMovie Player under the Multimedia programs group. You may run the Media Player as well to show all media device programs.

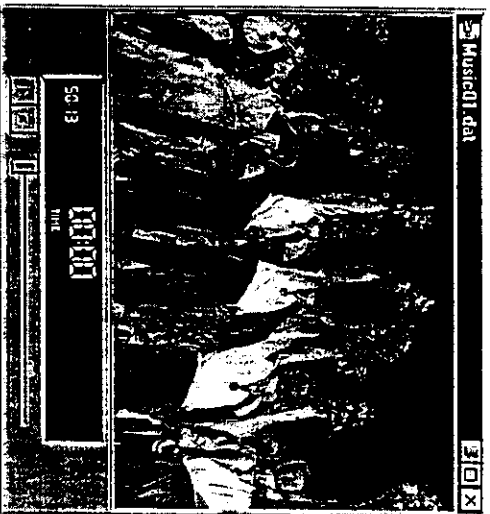


Figure 5-8 ActiveMovie Player

5.10 Using PC Cards with ZV Port

Although running software MPEG programs allows you to watch movie and video CD, the quality and speed is still not the same quality as watching a motion picture on TV or in the movie theater. Your computer is equipped with the latest ZV port technology that dramatically speeds up video playback. By inserting a ZV port-capable MPEG PC card into the PCMCIA slot, you can watch smooth full-screen motion picture just like 60 TV and read the card user's manual for installation.

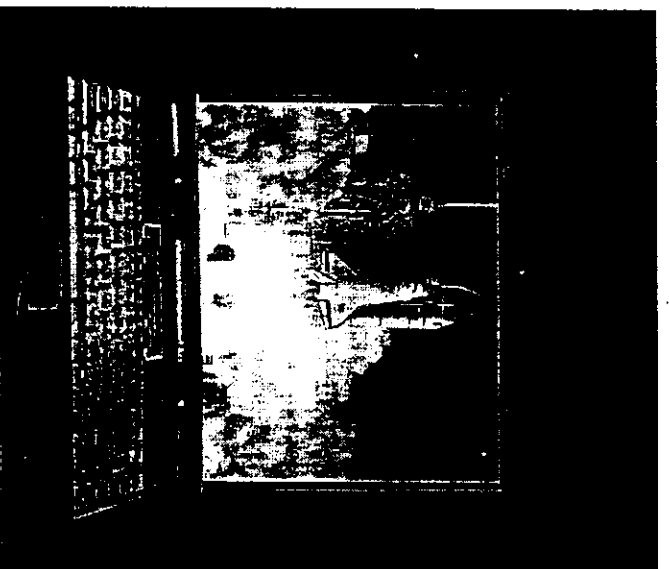
CHAPTER 6

Connecting to

Other Devices

Your notebook has been enhanced with many features making it as powerful as a desktop computer. If you prefer the feel of a desktop, the ports on the back will allow you to attach desktop peripherals such as keyboards, mice, and large monitors. This chapter shows you how to connect these devices.

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6.1 Using a Serial Mouse

Your computer has one 9-pin male serial port for connecting an external serial mouse or modem. The serial (RS232) port of your computer is normally referred to as COM1. When working with your computer on the desktop, you may want to use an external serial mouse instead of the TouchPad. If you want to use a modem as well, we recommend using a fax/modem PC card through the PCMCIA slot.

To install an external serial mouse:

1. Turn off your computer.
2. Plug the serial mouse connector to the serial port at the back of your computer.
3. Turn the computer on and run the BIOS Setup program by pressing the key during power-on self-test or POST. Refer to Chapter 7 on how to run the program.
4. Go to the Advanced CMOS Setup menu and disable the Touch Pad Support option to just use the external serial mouse or leave it enabled to use both simultaneously. Press the <Esc> key to return to the Setup main menu.
5. Select Save CMOS Settings or press <F10> to save and exit Setup program.
6. When system has rebooted, load the mouse driver to activate external serial mouse. Or if you don't have a driver for the serial mouse, Windows will automatically detect the driver for it.



Figure 6-1 Connecting a Serial Device

6.2 Using an External Keyboard

At the back of your computer, you will find the 6-pin mini-DIN PS/2 keyboard and mouse port. This port allows you to connect an external full-sized PS/2 desktop keyboard as well as an external PS/2 mouse. It is recommended to use an external external PS/2 mouse only if you are not using an external PS/2 keyboard. Otherwise, you must use the serial port for connecting a serial mouse as discussed earlier.

Your computer also comes with a keyboard adapter (see Chapter 1) that allows you to connect standard 5-pin DIN-type desktop keyboards. This type of keyboard is widely used by desktop computers compared to PS/2 type.

To connect the external keyboard:

1. Turn off your computer.
2. Connect the PS/2 keyboard directly to the PS/2 port. If you are using 5-pin DIN-type keyboard, plug the keyboard to the keyboard adapter first and then to the PS/2 port. Windows 95 keyboard are also supported.
3. Turn on your computer. Both the built-in keyboard and the external keyboard are active and can be used simultaneously.

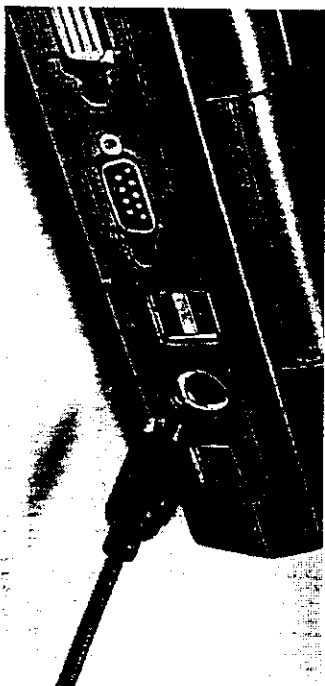


Figure 6-2 Connecting an External Keyboard

 Do not disconnect or connect the external keyboard when power is on. Turn off the computer first.

Your computer has a 15-pin VGA port for supporting any external VGA color monitor with maximum display resolution of 1024x768 at 64-bit colors.

To connect an external monitor:

1. Turn off your computer.
2. Connect the connector cable of the monitor to the VGA port at the back of your computer.
3. Turn on the power of the monitor.
4. Turn on your computer. Both the LCD panel and the monitor screen will show the display. Your computer is set at default to run at 'y' simultaneous display mode.
5. If you only want to show the display on the monitor and shut off the LCD display, you must run the BIOS Setup program (see Chapter 6) and set the Display Panel under Advanced CMOS Setup menu to CR Only.

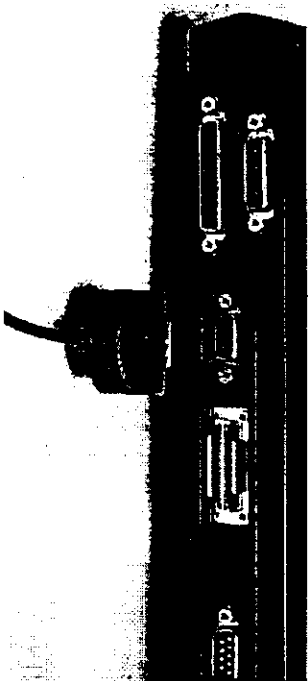


Figure 6-3 Connecting an External Monitor



Refer to Chapter 3 regarding the possible VGA resolutions and how to change the display properties.

The parallel (LPT1) port has a 25-pin female connector at the back of your computer. You would always connect to this whenever you are going to print out to a parallel printer.

To connect to a printer:

1. Connect the printer to the parallel port using the 25-pin male connector cable from the printer.
2. Power on both the computer and printer.
3. Check the printer by doing a self-test operation.
4. Set the printer driver on your software to recognize the connected printer.
5. If your printer is not listed in the software you are using, consult your printer dealer for available drivers or use a generic driver.
6. Press the Online function on the printer.

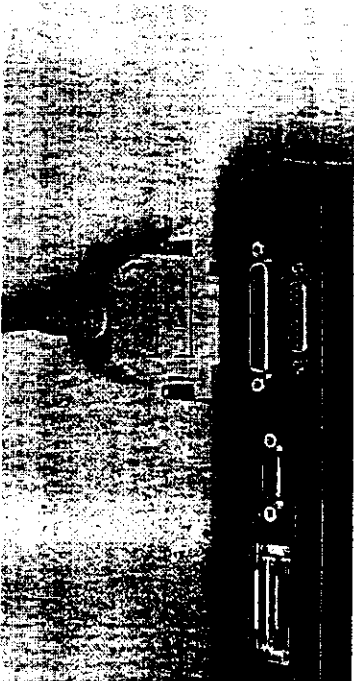


Figure 6-4 Connecting a Printer

6.5 Connecting to Your TV

Also found at the back of your computer is the VGA-to-TV port. This port allows you to connect an RCA jack cable and hook your computer to any NTSC or PAL system television set for big screen presentation of video games.

To display your computer screen on the TV:

1. Turn off your computer. Using the adapter provided to you, connect one end to the TV out jack and one end to the input video jack of your television set.
2. Turn on your computer and your television set.
3. Press the **Start** menu on the task bar and then select **Settings**.
4. Choose **Control Panel** and click on the **Display** icon.
5. Select the **Settings** folder tab and change the display resolution to 640x480.
6. Select the **NeoMagic** folder tab and click on the **Display Options**.
7. Change the **Display Mode** to **TV**.
8. After you have changed the **Display Mode** to **TV**, the **TV Options** will then be activated. Set your desired TV options.

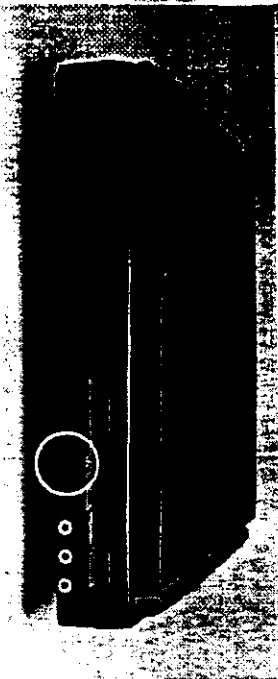


Figure 6-5 Connecting to Your TV

6.6 Using the Fast IR Port

Your computer is equipped with an industry standard Fast IR port that allows enhanced wireless connection with infrared built-in devices like PDAs, electronic organizers, printers, and portable computers. The Fast IR port make use of the second COM port or COM2 of your computer.

To connect to another IR equipped device:

1. Properly position both your computer and the target device. Place the target device in line with your notebook. They should be within 30-inches (80cm) of each other. You should refer to the User's Guide for the target device in order to enable its IR function.
2. Turn on your computer and run the BIOS Setup program. Go to the **Peripheral Setup** menu and enable the **OnBoard Serial Port2**.
3. After setting up both devices to enable IR function, run the application you wanted to use the IR port.
4. Set the transmission protocol or device to COM2. Make sure that this does not conflict with any pre-installed fax/modem PC card which is also configured at COM2.

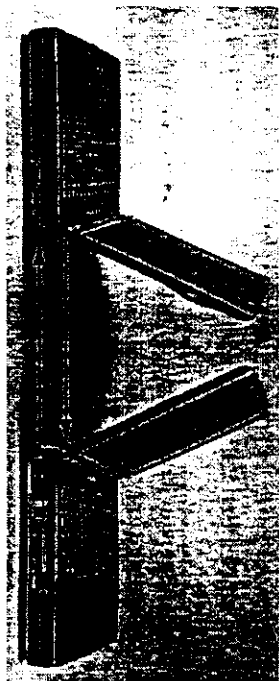


Figure 6-6 Setup for IR Data Transmission

Check out the IR driver installation procedure on your Setup & Upgrade Quick Manual. Contact your dealer or Microsoft for more information.

6.7 Using the USB Devices

USB or Universal Serial Port is a peripheral bus standard developed by Compaq, DEC, IBM, Intel, Microsoft, NEC and Northern Telecom. Personal computers equipped with USB will allow computer peripheral to automatically configure as soon as they are physically attached - without the need to reboot or run setup. USB will also allow multiple devices up to 127 ports — to run simultaneously on a computer, with peripheral such as monitors and keyboards acting as additional plug-in sites, or hubs.

Windows 95 will come equipped with the drivers that allows your PC to recognize USB peripherals. However, you may still receive a diskette with your USB peripheral containing updated driver information. Consult the manual of the USB device you are connecting for more information.

 Make sure that you have already installed the USB driver. Check the Quick Manual for the procedures.

To install a USB device:

1. Turn off the computer and connect the USB device to your computer.
2. Go to the BIOS Setup and under the Peripheral Setup, disable the Onboard Serial Port 2 and choose USB on the DVD/USB Support option.
3. Windows will automatically detect the USB device attached to the computer. Insert the diskette driver that comes from the USB device and install the device driver to finish the installation.

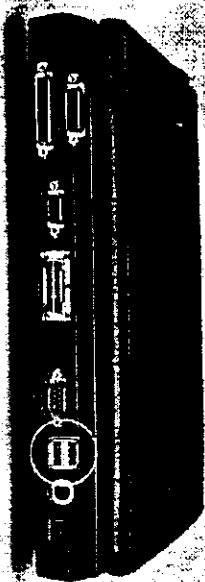


Figure 6-7 Connecting USB Devices

6.8 Connecting to the I/O Port Replicator

Your computer provides an optional I/O Port Replicator which allows you to attach and detach your computer from the I/O devices. The I/O Port Replicator provides you the same I/O ports that are found at the back of your computer.

To hook your computer to the I/O Port Replicator: (Option)

1. Turn off your computer and unplug the AC adapter connector from your computer.
2. Also remove all attached devices connected at the back of your computer. Make sure everything is clear at the back.
3. Attached your computer back to the I/O Port Replicator by hooking into the I/O replicator port found at the back of your computer.
4. You can reconnect all devices previously attached at the back of your computer to the back of the Port Replicator.
5. Connect the AC adapter connector to the back of the Port Replicator.
6. Turn on the power of the computer. Windows Plug and Play feature will automatically reconfigure the hardware settings of your computer.

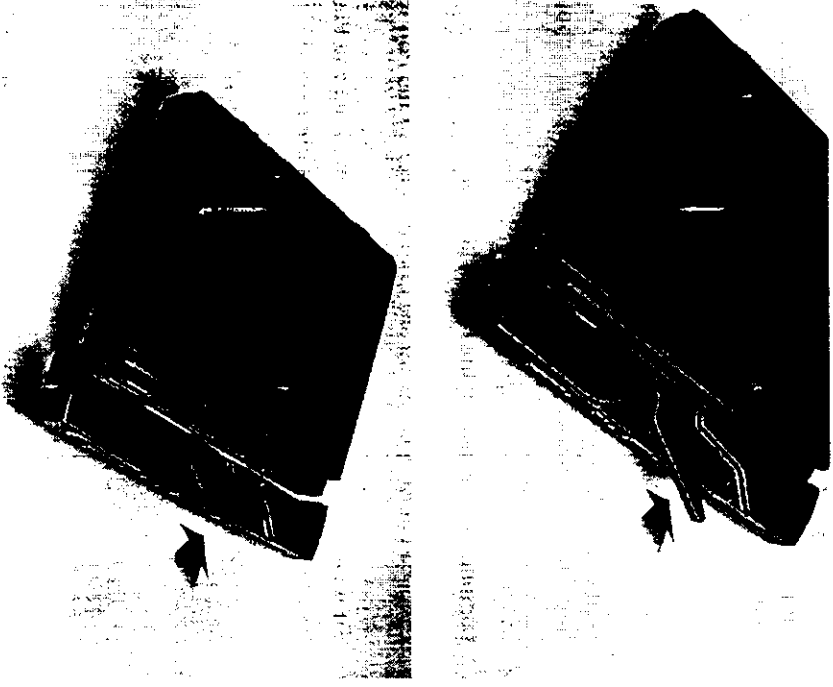
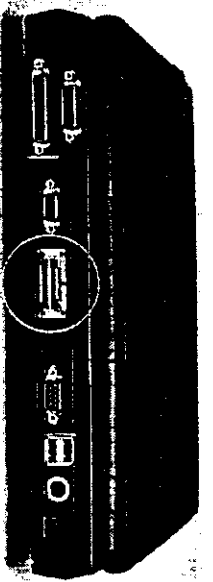


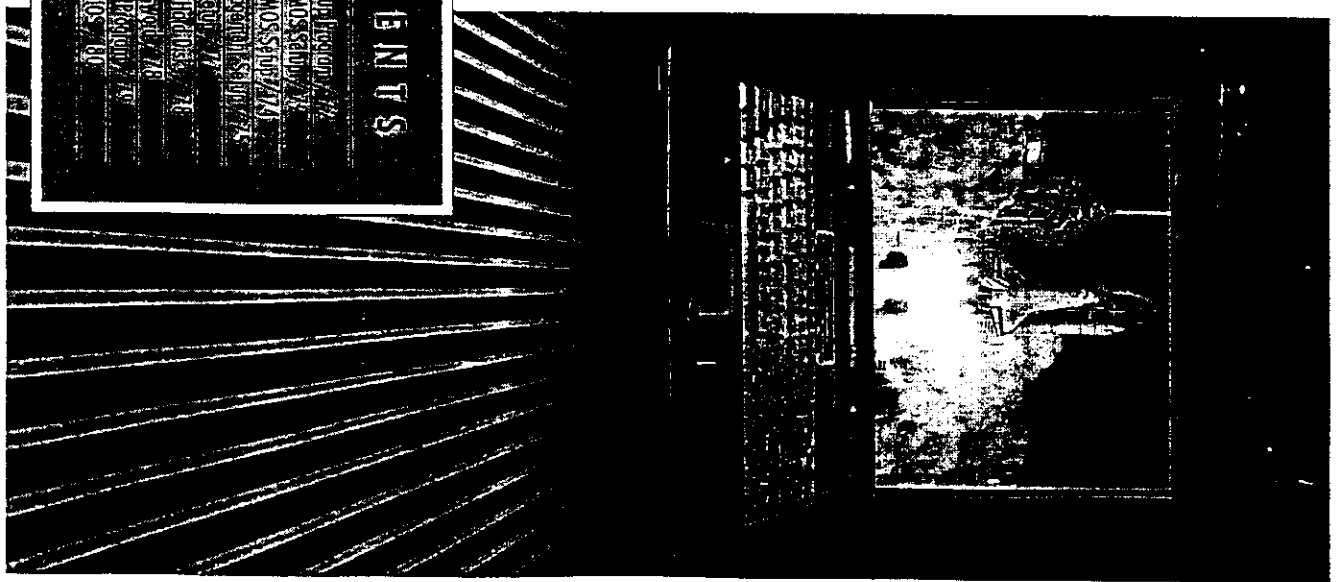
Figure 6-8 Connecting to the I/O Port Replicator

CHAPTER 7

The BIOS

Setup Program

Your computer uses the AMI BIOS Setup program that allows you to set several system configurations which will change the way your computer performs. This includes you: system date and time, disk drive configuration, I/O device controls, and power management settings. This information is then stored in the EPROM BIOS chip and will become permanent until you change it again. This chapter discusses how you can activate the BIOS Setup program and change the system configuration to suit your desired operation. You must be careful to set the configuration properly in order for your computer to run smoothly. If you are not sure about any of the settings, contact dps electronics.



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Entering the BIOS Setup Program

To enter into the AMI BIOS Setup program:

1. Turn on or reboot your computer.
2. Wait until the "Press if you want to run SETUP" message to appear on your screen and press the key on your keyboard.
3. The BIOS Setup program menu will appear on your display screen.

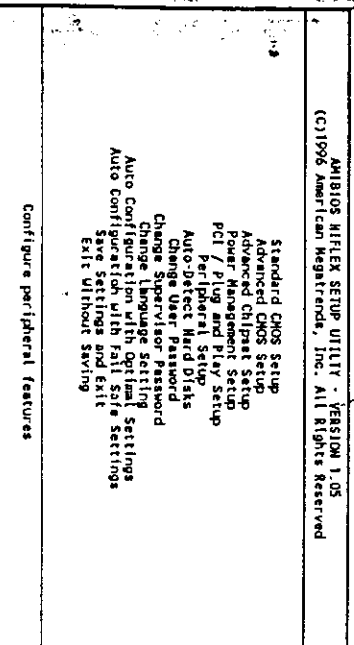


Figure 7-1 BIOS Setup Menu

4. Move the highlighted bar by selecting the option you want to run and press the <Enter> key.

The BIOS Setup program is subject to change by the manufacturer without notice so not all items mentioned inside the Setup menu are valid on your notebook. Consult your dealer or manufacturer for support.

Using the Standard CMOS Setup

The Standard CMOS Setup menu contains the settings for the time and date as well as disk drive configuration and virus boot sector protection. Use the PgUp and PgDn keys to change settings for each item.

(C)1996 American Megatrends, Inc. All Rights Reserved			
Date (mm/dd/yyyy): Tue Mar 25, 1997			
Time (hh/mm/ss): 11:36:32			
Floppy Drive A:	1.44 MB 3H	Not Installed	
Floppy Drive B:	Not Installed		
Type	Size	Cyln	Head
Pri Master : Auto	Auto	16	1
Pri Slave : Auto	Auto	16	1
Sec Master : Auto	Auto	16	1
Sec Slave : Auto	Auto	16	1
Boot Sector Virus Protection	Disabled		
Month: Jan - Dec	Day: 01 - 31	Year: 1901 - 2099	ESC:Exit F1:Sel PgUp/PgDn:Modify F2/F3:Color

Figure 7-2 Standard CMOS Setup Menu

Inside the Standard Setup menu is the following items:

Item	Function
Date	Allows you to set the system date (month, day/year) of the computer.
Time	Allows you to set the system time clock of your computer.
Floppy Drive A	This item enables or disables the internal floppy disk drive. You can also configure the disk drive capacity type.
Floppy Drive B	This item should always be set to Disabled.
Pri Master	This item defines the internal hard disk drive (Drive C:) type settings. You can set this to AUTO, let your computer automatically detect hard disk configuration or type.
Pri Slave	This item is not used by your computer and should always be set at Not Installed.
Sec Master	This item is normally reserved for the CD-ROM drive. Set this item to AUTO to let your computer detect the drive by itself during power on.
Sec Slave	This item is not used by your computer and should always be set at Not Installed.
Boot Sector Virus Protection	This item, when Enabled, will warn you of any attempt to write or change the Boot Sector. Do not enable this when installing operating system.

Using the Advanced CMOS Setup

The Advanced CMOS Setup menu contains the settings for several system functions and features.

AMIBIOS SETUP - ADVANCED CMOS SETUP (C)1996 American Megatrends, Inc. All Rights Reserved		
Bootup Sequence Touch Pad Support Password Check External Cache Display Panel TV Port	C:, A:, CDROM Enabled Setup Writeback Writeback Simultaneous Disabled	Available Options: C:, A:, CDROM A:, C:, CDROM CDROM, C:, A:
ESC:Exit 11:Sel Pupa/Pgon:Modify F2/F3:Color		

Figure 7-3 Advanced CMOS Setup Menu

The Advanced CMOS Setup menu includes the following:

Item	Function
Boot Up Sequence	This item allows you to set the search drive sequence where the system will try to boot up first. If you already have your operating system installed into your hard drive, it is recommended to set this item to C:, A:, CDROM. You save time and power if you bypass loading the floppy disk drive.
Touchpad Support	This item enables or disables the built-in touchpad pointing device.
Password Check	This item allows you to set the way your computer checks for password. Set this item to SETUP when you want your computer to check for password only when entering the BIOS Setup program. If you set this item to ALWAYS, your computer will always ask for the password every time you restart your computer.
Internal Cache	This item allows you to control the internal cache of the CPU. It is recommended to always set this item to Writeback.

7.4

Using the Power Management Setup

The Power Management Setup allows you to configure the power saving controls of your computer. See also Chapter 3 for brief description of the power management features of your computer.

Item	Function
External Cache	This item allows you to control the external cache of your computer. You may want to disable this item to slow down speed of your computer of when the external cache memory is reported to be faulty. The default is Writeback.
EDO Timing	This item allows you to set the access rate use by the memory. 8-2-2-2 is the slowest while 5-2-2-2 is the fastest. Default is 8-2-2-2.
System BIOS Cacheable	This allows you to enable or disable system BIOS caching.
Display Panel	This allows you to set the display mode (CRT, LCD, Simultaneous) during system boot up.
PS2/Mouse Mouse Select	This item allows you to select between the two options. Selecting the PS2 Mouse enables the PS2 port for external PS2 mouse connection while the Remote Mouse allows you to use their mouse option.

AMIBIOS SETUP - POWER MANAGEMENT SETUP (C)1996 American Megatrends, Inc. All Rights Reserved		
Power Management/PMN Suspend Mode Suspend Time Out Resume Alarm (5V Suspend) Resume Alarm Time Monitor Video for Suspend Display Idle Time Out Hard Disk Idle Time Out	Enabled 20 min Disabled Disabled No 5 min 3 min	Available Options: Enabled Disabled
ESC:Exit 11:Sel Pupa/Pgon:Modify F2/F3:Color		

Figure 7-4 Power Management Setup Menu

Using the Peripheral Setup

The Peripheral Setup allows you to set the configuration for the disk drive controllers as well as serial and parallel ports.

AMIBIOS SETUP - PERIPHERAL SETUP (C) 1996 American Megatrends, Inc. All Rights Reserved	
Onboard IDE Onboard FDC Onboard Serial Port1 Onboard Serial Port2(I/OA) USB Support Onboard Parallel Port Parallel Port Mode EPP Version Parallel Port 180 Parallel Port DMA Channel	Available Options: Disabled Primary Both Both Auto Auto Auto Disabled Auto Normal N/A Auto N/A
ESC:EXIT F1:Save PgUp/PgDn:Modify F2/F3:Color	

Figure 7-5 Peripheral Setup Menu

Item	Function
Power Management APM	This item allows you to enable or disable the whole power management function of your computer. The default is Enabled.
Suspend Mode	This item allows you to enable or disable the Suspend function of your computer.
Suspend Time Out	This item allows you to set the timer for the system to activate Suspend Mode.
Resume Alarm (5V Suspend)	This item allows you to enable or disable the auto resume mode function. If you enable this item, you must also set the Resume Alarm Time to the time you want to resume after system goes into suspend mode.
Resume Alarm Timer	This item allows you to set the alarm clock to which the system will resume.
Monitor Video for Suspend	This item allows your system to monitor any activity on the screen before it goes to Suspend mode.
Displayable Time Out	This item allows you to set the timer for the display to go to Sleep mode. Does not work under Windows 95.
Harddisk Idle Time Out	This item allows you to set the timer for the hard disk to go to Sleep mode.

Item	Function
OnBoard IDE	This item allows you to set the IDE controllers for the hard disk and CD-ROM drive. Always set this item to BOTH. If you want your computer to detect the hard disk only, set this item to PRIMARY.
OnBoard FDC	This item allows you to set the floppy drive controller (FDC). Always set this item to AUTO or ENABLED.
OnBoard Serial Port1	This item allows you to disable or enable set the I/O address for the serial COM1 port. Set this item to Enabled.
OnBoard Serial Port2	This item allows you to disable or enable the I/O address for the serial COM2 or IrDA port. Set this item to Enabled when using the IR communication feature.
bVD/USB Support	This item allows you to select which option you want to use depending on the features available. If you have the DVD option on your computer, you can select DVD to view DVD movies while the USB option allows you to connect USB devices connected on your USB ports.

Item	Function
Onboard Parallel Port	This item allows you to disable or set the I/O address for the Parallel LPT1 port. Set this item to AUTO to automatically settings.
Parallel Port Mode	This item allows you to select the parallel port mode. For connecting fast parallel devices, set this item to EPP or ECP. The default is NORMAL.
EPP Version	If you set the Parallel Port Mode to EPP, you need to set this item to either 1.9 or 1.7 EPP version.
Parallel Port IRQ	This item allows you to set the IRQ for the parallel LPT1 port. The default is 7.
Parallel Port DMA Channel	This item is only used when you set the Parallel Port Mode to ECP. The default is DMA channel 3.

7.6 Using the Auto-Detect Hard Disks

Running the Auto-Detect Hard Disks option allows you to bypass setting the Primary and Secondary Master disk on the Standard CMOS Setup menu. It detects all IDE disk drive types and automatically configures the required parameters. It includes detecting the fastest PIO mode supported by the disk drive as well as 32-bit disk transfer.

7.7 Using the System Password

Your computer provides two levels of system password to prevent others from accessing your system or the BIOS Setup configuration. The first level is the **User Password** which only provides standard BIOS Setup configuration and does not allow the user to modify much. The second level is the **Supervisor Password** which allows the user to access the entire BIOS Setup configuration menus and make changes.

Your computer also provides an option on the Advanced CMOS Setup menu to either check the password before system boot up every time to check the password only when accessing the BIOS SETUP program. If you set the Password Check to SETUP, then your computer will only prompt you for the password when you press the key to enter the BIOS SETUP program.

The system password works this way:

1. Upon booting your computer, the user is given three chances to enter the correct password which you have set.
2. Once the user is not able to enter the correct password, a blinking face character will appear beside the prompt and your computer halts operation.
3. If the user is able to enter the correct password, he or she may then proceed to use the computer.

 *It is important to remember the password you have set especially the Supervisor password. If you have forgotten the password, the only way to delete the password is by resetting the CMOS battery. Contact your manufacturer for assistance.*

7.8 How to Exit the Setup Program

There are two ways of leaving the SETUP program:

- Save Settings and Exit - this option saves all changes made while running the BIOS Setup program and restarts your computer. You may also press the <F10> key to activate this option.

- Exit Without Saving - this option allows you to discard all changes made while running the BIOS Setup program and restarts your computer. You may also press the <Esc> key to activate this option. When system restarts, the last saved CMOS configuration will be used.

 *When you upgrade your system memory, you may encounter a BIOS error message saying "Memory mismatch". Run the BIOS Setup program and choose Save Settings and Exit. Your computer will adjust the system memory size automatically.*

Your computer uses EPROM Flash BIOS chip that allows you to easily upgrade the BIOS program by using the **FLASH627.COM** utility program without the need to set any hardware jumper switches.

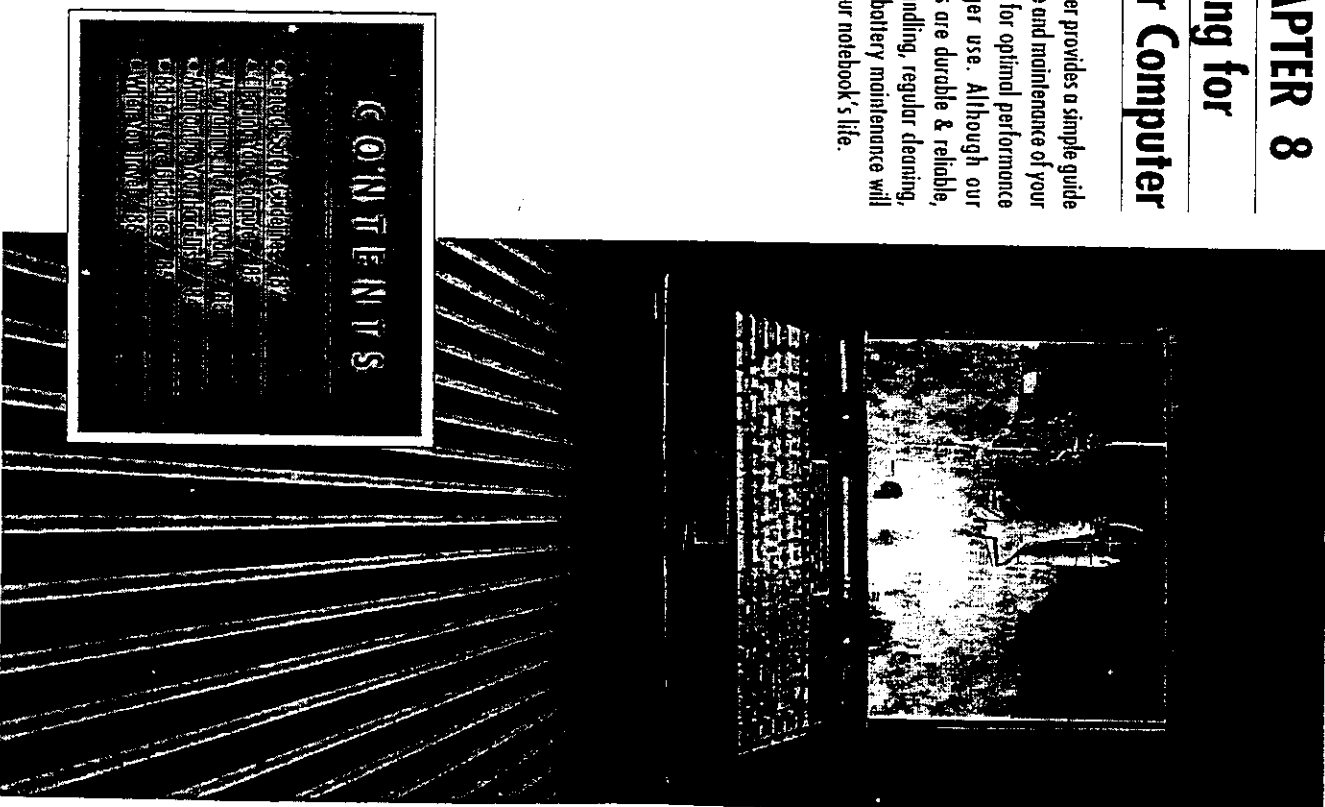
To upgrade the BIOS:

1. Boot your computer in the MS-DOS mode. Make sure that **HIMEM.SYS** is loaded. If you have Windows 95, simply press the <F5> key during system boot up to go to DOS mode.
2. Copy the **FLASH627.COM** program to your hard disk or run it from the floppy disk drive. Makes sure you also have the BIOS file you want to program.
3. On the DOS prompt, type the command:
FLASH627 <BIOSfilename>
4. The **FLASH** program will automatically prompt you if you want to continue. The process will first erase the BIOS program inside the EPROM chip and programs the new BIOS on your disk into the chip.
5. Restart your computer after the programming is finished.

CHAPTER 8

Caring for Your Computer

This chapter provides a simple guide to the care and maintenance of your computer for optimal performance and longer use. Although our computers are durable & reliable, care in handling, regular cleaning, & HDD & battery maintenance will extend your notebook's life.



8.1 General Safety Guidelines

Portable computers often take a beating with all the travel they see. You can maintain your computer's condition and performance by following a few simple guidelines:

- Follow all safety instructions and warnings that apply to your system.
- Do not attempt to open the computer's case. There are no user serviceable parts inside. Take your computer to an authorized dealer for repair or upgrade services or call the manufacturer.
- Be careful not to drop or jar your computer.
- Turn off your computer before connecting or disconnecting any peripheral devices.
- Use only the power adapters which were supplied with your computer. Others may not work with your computer and could damage the computer.
- Keep dirt and liquids away from the I/O port panel. If you spill anything onto the computer, shut it down immediately and unplug the power adapter. Depending on what you spilled and how much, you might need to bring your computer to an authorized dealer or return it to the manufacturer for checking.
- If the computer has been in a cold place for several hours, let it warm up to room temperature before using it.
- Do not expose your computer to very low (less than -20°C) or very high (more than 50°C) temperatures.
- It is wise not to have your computer in the car due to vast temperature changes.
- Do not touch the screen with a pointed or sharp object.
- Do not move the computer when you hear the hard disk spinning. When you want to shut down your computer, first close all software

programs and then shutdown the operating system, before turning off the switch.

- Power off all external devices when your computer is not in use.
- Do not place heavy objects on top of the computer.

8.2 Cleaning Your Computer

When it is necessary to clean the plastic case and keyboard, use a soft, lint-free cloth, slightly dampened with a mild detergent solution or use the contents of any commercially available computer cleaning kit.

Never use alcohol, petroleum-based solvents, or harsh detergents to clean the notebook. Also never spray any liquids directly on the computer case, keyboard, or screen. If the liquid-crystal display (LCD) screen has become smeared or dusty, clean the screen by first applying a mild glass cleaner to a soft, clean, lint-free cloth, and gently wipe the glass. Never apply liquids directly on the screen surface. Moreover, do not use paper towels to clean the display screen. Paper can scratch the display screen surface.

8.3 Maintaining the LCD Quality

When it comes to screen problems, heat plays a big part. After a good working session, the typical routine is to shut the machine and close the cover. But the display surface - no matter what type it is - and the components inside the computer radiates heat; when you close the cover, you trap the heat against the screen. Leave the computer's cover open for about ten minutes while the heat disperses. Make this a habit.

You should also enable the power management of your computer to turn off the LCD power and display when the system is in inactive for long periods of time. Adding screen savers is also acceptable.

Follow the general safety guidelines mentioned earlier on how to clean your computer.

8.4 Maintaining Your Hard Disk

Losing your data has the same consequences as a system break down. Therefore, users should make it a habit of doing hard disk maintenance every week or so. Here are some maintenance regimens you might follow:

- Always back up your data files from your hard disk.
- Install a virus detecting program to monitor virus, that could infect your files.
- Use **SCANDISK** once in a while to correct any errors found in the directory and File Allocation Table (FAT). This will also free up space from any unused sectors.
- When you want to power off your computer, first close all programs and then shutdown the operating system before turning off the switch.
- Never move or raise the computer while the hard disk is being accessed; most especially do not jar the hard disk as this may cause a hard disk crash.
- Use hard disk maintenance programs like **DEFRAG** or Norton Utilities **SPEEDISK**. These reorganize your hard disk by eliminating fragmentation and improving your hard disk access time. Always back up data files before running these types of programs.

8.5 Battery Care Guidelines

The battery pack furnished with the computer requires reasonable care and handling to ensure efficient operation and maximum life. To ensure that the battery pack endures normal life cycle, always observe the following precautions when handling the battery pack:

- Handle batteries carefully. Do not try to open them as they have battery acid inside. Be careful not to drop them either.
- Recharge batteries only as described in this manual and only in well ventilated areas. Never use an external charger other than the one supplied with your computer, as they are not compatible.
- Do not leave batteries in hot locations for more than a day or two.
- Do not leave your battery in your computer for longer than a week without plugging in the power adapter.
- Do not leave battery in storage for more than 6 months without recharging it.
- Dispose of dead batteries properly to protect the environment. These batteries contain hazardous chemicals and should not be thrown out with household or office trash.
- Discharge the battery completely before recharging to improve battery performance.

For safety and convenience when traveling, please follow these instructions:

- Back up all data files from your hard disk before travelling.
- Recharge your battery overnight to ensure full battery power before you leave.
- Do not forget to bring along the AC adapter and extra battery pack.
- Try to bring along your most important software as well as a backup.
- Check the voltage rating and the outlet type of your destination. If the power cord on the adapter is different, then you need to purchase a suitable one. Consult your dealer, or manufacturer.
- Carry your computer in its carrying case or in a briefcase. Never check in your computer as a luggage, since more laptops are stolen at the airport than anywhere else.
- Remember to apply those power saving features and techniques to save battery power.

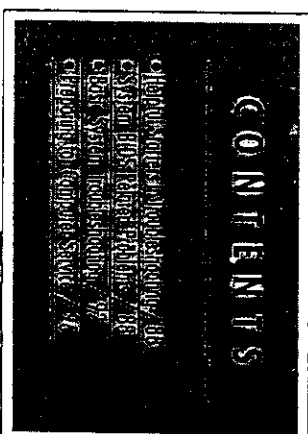
CHAPTER 9

Checking

Computer

Problems

This chapter provides you with some basic troubleshooting guidelines when encountering problems on your computer. Some problems you may encounter are relatively easy to identify and solve. Others may require help from your dealer or manufacturer. Consult your dealer or manufacturer if you cannot solve your computer's problem using this manual.



9.1 Helpful Starters in Troubleshooting

If you encounter a problem with your computer or any software application problem, go through the following list first before calling for support and service:

- Is there any external power source connected?
- Does the battery installed been fully charged?
- Is the computer turn on and the Status LCD Panel activated?
- Are all cables connected properly and securely?
- Are all needed device drivers been installed properly?
- Have you checked your AUTOEXEC.BAT and CONFIG.SYS files for errors?
- Is the Power Management function enabled under BIOS Setup? Press any key to wake up the system again.
- Is the display switched to the external monitor? Run BIOS Setup and check display panel option.

9.2 System BIOS Related Problems

This section provides you with information on how the BIOS handles errors encountered during POST (Power On Self Test) and translates them into beep codes and error messages.

POST Error Handling

One of the primary POST functions is to find and indicate any conditions in the system that may prevent operation. The POST diagnostic routines look for system errors and report them in the following manner.

When	Then
the error occurs before the display device is initialized	a series of beeps sound. Beep codes indicate that a fatal error has occurred.
the error occurs after the display device is initialized	the error message is displayed. A prompt to press <F1> also appears.

BIOS Error Messages and Beep Codes

Errors can occur during POST, which is performed every time the system is powered on. Fatal errors are made known through a series of audible beeps. Fatal errors do not allow the system to continue the boot process. Most displayed errors allow the system to continue the boot process.

BIOS Beep Codes

Beeps	Error Message	Description
1	Refresh Failure	The memory refresh circuitry is faulty.
2	Parity Error	Parity error in the base memory (the first 64 KB block of memory).
3	Base 64 KB Memory Failure	Memory failure in first 64 KB.
4	Timer Not Operational	Memory failure in the first 64 KB of memory, or Timer 1 on the motherboard is not functioning.
5	Processor error	The CPU generated an error.
6	8042 Gate A20 Failure	The keyboard controller (8042) may be bad. The BIOS cannot switch to protected mode.
7	Processor Exception Interrupt Error	The CPU generated an exception interrupt.
8	Display Memory Read/Write Error	The system video adapter is either missing or its memory is faulty. This is not a fatal error.
9	ROM Checksum Error	The ROM checksum value does not match the value encoded in the BIOS.
10	CMOS Shutdown Register Read/Write Error	The shutdown register for CMOS RAM failed.
11	Cache memory bad do not enable cache.	The cache memory test failed. Cache memory is disabled.

What to Do If the Computer Beeps

Beep Pattern	Meaning
1. The system beeps once.	Then...
2. 2 or 3 times.	re-seat the memory DIMMs. If the system still beeps, replace the memory.
3. 6 times.	keyboard controller chip is faulty. Contact your dealer.
4. 8 times.	there is a memory error on the video subsystem. Need to replace the video controller chip or the video memory RAM. Contact your dealer.
5. 9 times.	The BIOS ROM chip is bad. The system probably needs a new BIOS EPROM chip.
6. 11 times.	the cache memory maybe faulty. Contact your dealer.
7. 4, 5, 7, or 10 times.	the motherboard must be replaced.

BIOS Displayed Error Messages

Error Message	Explanation
8042 Gate A20 Error	Gate A20 on the keyboard controller (38802) is not working. Replace the 38802 or the motherboard.
Address Line Short	Error in the address decoding circuitry on the motherboard.
C Drive Error	Hard disk drive C does not respond. Run the Hard Disk Utility to correct this problem. Also, check the C hard disk type in Standard CMOS Setup to make sure that the hard disk type is correct.
C Drive Failure	Hard disk drive C does not respond. Replace the hard disk drive.
Cache Memory Bad, Do Not Enable Cache	Cache memory is defective. Replace motherboard.
CMOS Timer Error	An AT system has two timers. There is an error in timer2.

Error Message	Explanation
CMOS Battery State Low	CMOS RAM is powered by a battery. The battery power is low. Replace the battery.
CMOS Checksum Failure	CMOS RAM checksum is different than the previous value. Run AMI BIOS Setup.
CMOS System Options Not Set	The values stored in CMOS RAM are either corrupt or nonexistent. Run AMI BIOS Setup.
CMOS Display Type Mismatch	The video type in CMOS RAM does not match the type detected. Run AMI BIOS Setup.
CMOS Memory Size Mismatch	The amount of memory found by BIOS is different than the amount in CMOS RAM. Run AMI BIOS Setup. Load Defaults.
CMOS Time and Date Not Set	Run Standard Setup to set the date and time.
Disquette Boot Failure	The boot diskette in drive A cannot be used to boot the system. Use another boot diskette and follow the instructions.
DMA Error 1	Error in the DMA controller.
DMA 1 Error	Error in the first DMA channel.
DMA 2 Error	Error in the second DMA channel.
FDD Controller Failure	BIOS cannot communicate with the floppy disk drive controller. Check all appropriate connections after the system is powered down.
HDD Controller Failure	BIOS cannot communicate with the hard disk drive controller. Check all appropriate connections after the system is powered down.
INTx1 Error	Interrupt channel 1 failed POST.
INTx2 Error	Interrupt channel 2 failed POST.
Invalid Boot Diskette	BIOS can read the diskette in floppy drive A, but it cannot boot the system with it. Use another boot diskette and follow the screen instructions.
Keyboard Error	The keyboard has a timing problem. Make sure a Keyboard Controller BIOS is installed.

Error Message	Explanation
KB/Interface Error	There is an error in the keyboard controller. Try rebooting the computer. Otherwise, replace the motherboard.
No ROM BASIC	Cannot find a proper bootable sector on either drive A: or C:; BIOS cannot find ROM Basic. Insert a bootable disk and run disk partition program (FDISK).

9.3 Basic System Troubleshooting

This section provides you with some basic system troubleshooting techniques which you may apply when encountering problems with your computer. If you are using Windows 95, you can run the Help command and refer to Windows Troubleshooter.

System Power Problems

- Check if AC adapter and battery pack is inserted properly. Make sure there is power on the AC adapter by checking if the LED on the adapter is turned on.
- Make sure battery has been fully charged if AC adapter is not connected.
- Check if the battery power icon on the Status L.C. Panel is on. If not, then press the power switch button on.
- Consult your dealer or manufacturer if still not able to power on.

System Boot Problems

- If system can power on (battery power icon is on) but cannot boot, check if there are any BIOS error messages and refer to the tables on the previous section.
- If there is no display but there is beeping sound, check the BIOS error beep codes in the previous section. Also check to see if the memory modules have been properly inserted.

- If you have upgraded the CPU or memory, check if it is properly installed. Check proper jumper settings for the CPU.
- Check to see if the hard disk drive has been inserted properly. Run CMOS Setup and set the Advanced PIO Mode to Auto.

No Display Problems

- If system will boot but has no display, check to see if the display has been switched to the external monitor. Power off and run the BIOS Setup program to check the display type.
- Check also if the TV port is enabled under the BIOS Setup program.
- Check if the system is in sleep or suspend mode. Press any key to resume display and operation. Run the BIOS Setup program and go into the Power Management menu to check the settings.

PCMCIA Problems

- Make sure that the PC card is inserted properly into the computer's PC slot.
- Check if PCMCIA controller is configured properly and does not have any resource conflict. If you are using Windows, run the PC Card (PCMCIA) Troubleshooter from the Windows Help command.
- For DOS mode, refer to the README file of the DOS PCMCIA driver.
- If you are using I/O cards, you need to check for any resource conflict with the PC card. For fax/modem cards, make sure it is set to COM3 if the IR port (COM2) is enabled. For network PC cards, make sure that all network drivers and components are installed and configured properly.
- If you are using CardBus PC cards or ZV cards, you need to have Windows 95 (OSR2) or newer versions of system software.

TouchPad Problems

- Make sure that the TouchPad surface is clean and dry. Use a clean soft cloth and wipe the TouchPad surface. Also wipe your pointing finger removing any sweat or oil before operating.

- If TouchPad is not working, run BIOS Setup program and check in the Advanced CMOS Setup menu if the mouse support is enabled.

- Check that the mouse driver loaded with your software & see if it is set to IBM or Microsoft PS/2 compatible mouse driver (Standard PS/2 port mouse). If there is no mouse driver installed, then install one.

- Check for any resource conflict on the PS/2 port mouse device.

- Run Mouse control panel under Windows if mouse sensitivity and functionality is not good.

External Serial Mouse Problems

- Make sure to first disable the TouchPad mouse support in BIOS Setup program.

- Make sure that the serial mouse is properly connected to the serial port and to load the mouse driver.

- Check if the TouchPad driver is installed. Change the mouse driver of your operating system to any standard serial mouse driver. For Windows 95, run Add New Hardware.

Built-in Keyboard Problems

- Open the keyboard panel and check if the cables are loosed.

- Run diagnostic program to check keyboard function.

CD-ROM Drive Problems

- Run BIOS Setup program and go to the Peripheral Setup menu. Check to see if the OnBoard IDE option is set to **BOTH**.

- Also run **Auto-Detect Hard Disks** under the BIOS Setup program and check if the CD-ROM device is detected and configured on the Standard CMOS Setup menu.

- Check if you have properly installed the CD-ROM driver and if the CD-ROM drive is detected.

- Check the CD-ROM drive mechanism by loading and unloading CD. Check if the CD-ROM LED on its cover panel is turned on.

- Check the disc you are using to see if it is damaged. Use another disc and test again. Make sure the disc you are using corresponds to the supported format of the CD-ROM drive.

- Check also additional drivers and application programs you need to install in order to read inserted disc like audio CD or MPEG CD.

Audio Problems

- Check to see if the audio drivers are properly installed. Check IRQ and I/O address summary for any conflict with the audio drivers. Use IRQ5 and I/O address 300.

- Check to see if the volume controls are disabled. Adjust all volume controls.

IR Port Problems

- Make sure that the target device with IrDA is properly aligned to your IR port. The distance should be within 30 inches or 80cm.

- Make sure the IrDA option in BIOS Setup program is enabled.

- Check whether the transmission settings in the software program you're using are set to COM2.

- Check the settings on the target device as well.

Built-in Floppy Drive Problems

- Run BIOS Setup program and check at Standard setup menu if the floppy disk drive is enabled and set to 3.5" 1.44MB drive type.

- Make sure that the floppy diskette is not damaged or infected with a virus. Also check to see if the diskette is formatted.

- Remove the diskette and reinsert it to realign diskette to drive.

Before calling your dealer for computer service, please do the following things first:

- Back up all needed files from your hard disk if possible.
- List the problems associated with the computer's use including the operating system, external device, and software application.
- Write down what happened immediately before problem occurred.
- Make copies of your AUTOEXEC.BAT and CONFIG.SYS files.
- If you kept the original packing, place unit inside and make sure packing is secure and safe. Include a list inside the package of all accessories you have returned for service.

Owner's Record

The serial number of your computer is located at the base of the computer unit. Record the information below and refer to it whenever you call your dealer for service and support.

Model Name:	
Model Number:	
Serial Number:	
CPU Speed:	
LCD Type:	
Hard Disk Type:	
Memory RAM size:	
Date of Purchase:	
Dealer's Name:	
Place of Purchase:	

Appendix A Hardware

System

Information

This appendix gives information on the technical and hardware specifications of your computer. Please note that the information mentioned here may not be exactly the same with your computer as specification is subject to change without notice or modifying this manual.



A.1 System Specification

Processor Unit

- Supports CPU clock speed to 233MHz
- 512KB or 512KB external pipelined-burst L2 cache
- 64-bit Data Bus PCI Architecture

System Memory

- Two 64-bit 144-pin memory slot
- User-upgradable to maximum 128MB using 144-pin SODIMM 8MB, 16MB, 32MB, and 64MB module

LCD Display

- 14.1-inch XGA (1024x768) TFT or DSTN Color LCD
- Maximum 65,536 colors (64K) on all LCD display

VGA System

- 128-bit PCI Local Bus VGA Accelerator
- Includes Zoomed Video (ZV) Port Technology for supporting ZV PCMCIA cards
- 2MB EDO VRAM video memory
- Simultaneous LCD and external monitor (CRT) display
- Maximum 16 million colors on CRT only display at 800x600 resolution (Non-Interlaced)
- Maximum 1280x1024 resolution on CRT display at 256 colors

TV Out Jack

- 1 x TV Out jack for VGA output display on NTSC/PAL television (TV) sets

Disk Drives

- 32-bit PCI Enhanced IDE interface with LBA mode
- High-speed Enhanced IDE bootable CD-ROM drive module
- Removable and user-upgradable 2.5-inch IDE hard drive with choice of up to present highest capacity drive
- Built-in 3.5-inch 1.44MB FDD that coexists with CD-ROM drive

Audio System

- Full-duplex 16-bit stereo audio with wavetable support and Plug-and-Play features
- Sound Blaster Pro compatible
- Built-in dual speakers
- Integrated full-duplex microphone
- Audio input jacks for microphone (MIC) and stereo device (Line-In)
- Audio output jack for external speaker or headphone (Line-Out)
- Built-in Volume Control buttons

PCMCIA

- 32-bit CardBus PCI Local Bus PCMCIA controller
- Double-deck PCMCIA slot supports 2 x Type II or 1 x Type III PC Card
- Supports Zoomed Video (ZV) Cards, 32-bit Cardbus Cards, and 16-bit PC Cards

TouchPad

- Integrated TouchPad (PS/2 mouse) pointing device with palm-rest typing surface

Keyboard

- Full-sized 86-keys keyboard with Windows 95 hot-keys, inverted T-cursor keys, 12 function keys, and embedded numeric keypad
- Provides international language keyboard

Flash BIOS

- 256K Flash ROM BIOS for easy BIOS upgrade

I/O Ports

- 2 x Universal Serial Bus (USB)
- 1 x 9-pin RS-232 Serial (COM1)
- 1 x 25-pin Parallel (LPT1)
- 1 x 15-pin VGA (CRT)
- Mini-DIN PS/2 (keyboard)
- 1 x 15-pin Game/MIDI port
- 1 x I/O Port Replicator Connector

I/O Port Replicator (Optional)

- 2 x Universal Serial Bus (USB)
- 1 x 9-pin RS-232 Serial (COM1)
- 1 x 25-pin Parallel (LPT1)
- 1 x 15-pin VGA (CRT)
- Mini-DINPS/2 (keyboard/mouse)
- 1 x 15-pin MIDI/Game port

AC/DC Power Supply Adapter

- Universal auto-switching 50W (100V~240V) adapter

Battery

- Rechargeable Lithium Ion (Li-ION) or Nickel Metal Hydride (NiMH) battery pack with Smart Battery function
- Over 4 hours of usage
- 3 hours quick charge (with computer turned off)

Weight and Dimension

- 316 (W) x 259 (D) x 48mm (H)
- 3.4 kgs (w/ battery and CD-ROM)

Accessories Included

- Carrying Case (black leather)
- User's Guide Manual with Installation Quick Manual
- AC/DC Power Supply Adapter
- Li-ION or NiMH smart battery pack
- PS/2 Keyboard converter
- Car Power Cable

- AC Power Cord
- Utility and Drivers Diskette

Options

- IR Mouse Remote Control
- Secondary Battery Pack Module
- I/O Port Replicator

A.2 IRQ Usage Summary (Windows 95)

IRQ	Used Device
00	System Timer
01	Standard 101/102-key or Microsoft Natural Keyboard
02	Programmable Interrupt Controller
03	Communications Port (COM1)
04	Communications Port (COM1)
05	ES1869 Plug and Play Audio/Video
06	Standard Floppy Disk Controller
07	Printer Port (LPT1)
08	System CMOS/real time clock
09	Texas Instrument PCI to ISA Bridge Controller
09	IRQ Holder for PCI Steering
12	Standard PS/2 Port Mouse
13	Numeric data processor
14	Standard Dual PCI IDE Controller
14	Primary IDE Controller
15	Standard IDE/ESDI Hard Disk Controller

A.3 DMA Channel Usage Summary

DMA Channel	Used Device
01	ES1869 Plug and Play AudioDrive (default)
02	Standard Floppy Disk Controller
03	ES1869 Plug and Play AudioDrive
04	Direct memory access controller

A.4 I/O Port Usage Summary (Windows 95)

I/O Address	Used Device
0000h - 000Fh	Direct memory access controller
0020h - 002Fh	Programmable Interrupt controller
0040h - 004Fh	System timer
0060h - 006Fh	Standard 101/102-Key or Microsoft Natural Keyboard
0080h - 008Fh	System speaker
00A0h - 00A1h	Standard 101/102-Key or Microsoft Natural Keyboard
00C0h - 00C1h	System CMOS / real time clock
00E0h - 00E1h	Direct memory access controller
00F0h - 00F1h	Direct memory access controller
0100h - 010Fh	Programmable Interrupt controller
0120h - 012Fh	Direct memory access controller
0140h - 014Fh	Direct memory access controller
0160h - 016Fh	Direct memory access controller
0180h - 018Fh	Direct memory access controller
01A0h - 01A1h	Direct memory access controller
01C0h - 01C1h	Direct memory access controller
01E0h - 01E1h	Direct memory access controller
01F0h - 01F1h	Direct memory access controller
0200h - 020Fh	Direct memory access controller

I/O Address	Used Device
0220h - 022Fh	ES1869 Plug and Play AudioDrive
0240h - 024Fh	IO read data port for ISA Plug and Play enumerator
0300h - 030Fh	ES1869 Plug and Play AudioDrive
0320h - 032Fh	Standard IDE/ESDI Hard Disk Controller
0340h - 034Fh	Primary IDE Controller (single file)
0360h - 036Fh	Standard Floppy Disk Controller
0380h - 038Fh	Communications Port (COM1)
03A0h - 03A1h	ES1869 Control Interface
03C0h - 03C1h	Standard Dual PCI IDE Controller
03E0h - 03E1h	Primary IDE Controller (single file)
03F0h - 03F1h	Standard Floppy Disk Controller
0400h - 040Fh	Communications Port (COM1)
0420h - 042Fh	ES1869 Control Interface
0440h - 0441h	Standard Dual PCI IDE Controller
0460h - 046Fh	Primary IDE Controller (single file)
0480h - 048Fh	Standard Floppy Disk Controller
04A0h - 04A1h	Communications Port (COM1)
04C0h - 04C1h	ES1869 Control Interface
04E0h - 04E1h	Standard Dual PCI IDE Controller
04F0h - 04F1h	Primary IDE Controller (single file)

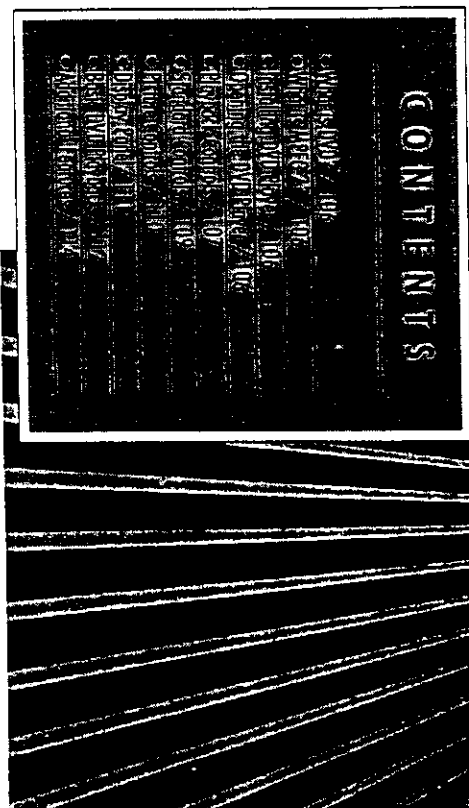
Memory Address	Used Device
00000000h - 0009FFFFh	System board extension for PNP BIOS
000A0000h - 000AFFFFh	NeoMagic MagicGraph 128XD
000B0000h - 000BFFFFh	NeoMagic MagicGraph 128XD
000C0000h - 000CBFFFh	NeoMagic MagicGraph 128XD
000CC000h - 000CCFFFh	Texas Instruments PCI-1131 CarBus Controller
000CD000h - 000CDFFFh	Texas Instruments PCI-1131 CarBus Controller
000E000h - 000EFFFFh	System board extension for PNP BIOS
000F0000h - 000FFFFFh	NeoMagic MagicGraph 128XD
00100000h - 0010FFFFh	Standard OpenHCD USB Host Controller
00110000h - 0011FFFFh	NeoMagic MagicGraph 128XD
00120000h - 0012FFFFh	NeoMagic MagicGraph 128XD

Appendix B

A DVD

Experience

Your DVD Multimedia Notebook PC is integrated with an MPEG-2 card that allows you to view your DVD movies through the built-in DVD-ROM drive. One of the best features of the DVD-ROM drive is that they are backward compatible with CD-ROMS. This means that your DVD-ROM drive can also play CD discs, such as the Video CD and Audio CD. With the DVD feature, you are on your way to experience the superb picture quality full screen, full motion home entertainment system. This chapter provides you the information on some DVD facts and how to operate the DVD player effectively to be able to use its the full feature.



B.1 What is DVD?

DVD stands for Digital Versatile Disc or Digital Video Disc. DVD is similar to an ordinary 5-inch Compact Disk in size with a far better capacity of holding a minimum of 4.7GB (Gigabytes), enough for a full-length movie. DVD can support from 4.7GB to 17GB and have an access rate from 600KBps (Kilobytes per second) to 1.3MBps. Note that a CD can only hold a capacity from 630MB (Megabytes) to 1GB.

B.2 What is MPEG-2?

DVD uses MPEG-2 (Moving Picture Experts Group) to compress the video data. It refers to a type of data compression optimized for video and audio data. By analyzing the changes between video I/Frames, an MPEG encoder is able to reduce the file size of the data by a ratio of up to 200 to 1. Which means that MPEG-2 can compress a 2-hr movie into a few Gigabytes. This remarkably efficient compression method allows full-screen and full-motion video, plus a full CD-quality audio to be stored in a relatively small size file.

B.3 Installing DVD Player

1. Insert the DVD Player diskette on the floppy drive.
2. Click **Start** on the Windows taskbar.
3. Then select **Run**.
4. Select **Browse** on the Run dialog box and Click on the **3 1/2 Floppy (A:)**.
5. Select **Setup** then click **OK**.
6. Follow the on-screen instructions to complete the installation.

B.4 Opening the DVD Player

1. Click **Start** on the Windows taskbar.
2. Select **Programs**.
3. Select **REALmagic Ventura**.
4. Click on **DVD Station**.

B.5 Playback Controls

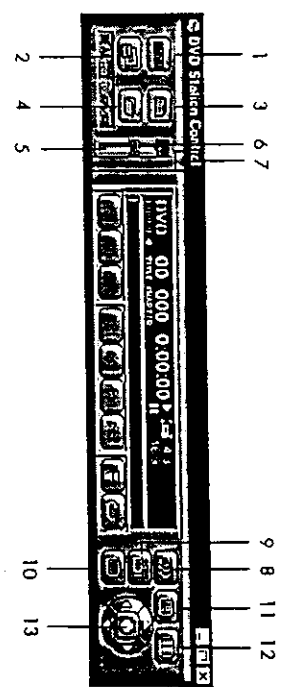


Figure B-1 Playback Control Panel

Your REALmagic Playback Control Panel display may differ, depending on the type of DVD/CD Discs being played.

(1) Time Counter Button

Clicking the Display button displays the play time of the current clip, the spoken language, and the name of the file in the upper left-hand corner of the VGA viewing window. Clicking the Display button again disables this feature.

(2) Full Screen/Window Toggle Button

Clicking the Full Screen button or double-clicking inside the Video window fits the window to your VGA screen size.

(3) Option Dialog Button

Click this button to bring up the Settings and Play List Window, which allows you to configure the REALmagic settings and create a sequential list of your favorite clips for playback.

(4) Open MPEG File Button

Clicking the Open File button allows you to open and play MPEG files from your hard disk.

(5) Volume Control Switch

Click and drag the volume bar to control the volume of the audio signal.

(6) Mute Sound Button

Click this button the disable the audio. To enable the audio, click the button once more.

(7) Picture Control Button

Click this button to toggle the display of more features.

(8) Language Sountrack Selector Button

This operation only functions with a DVD disc that contains multiple language soundtracks. Press the Audio Sountrack Language Selector during play. Move the mouse UP or DOWN to highlight the audio soundtrack language you wish to hear. Click on the language you want to hear to select the language.

(9) Camera Angle Selector Button

This operation only functions with a DVD disc that contains multiple camera angles. Press the Camera Angle Selector during play. Move the mouse UP or DOWN to highlight the camera angle you wish to view. Click on the angle you wish to view.

(10) Subtitle Button

This operation functions only with a DVD disc that contains multiple sub-titles (closed captions). Press the Sub-title Selector during play. Move the mouse UP or DOWN to highlight the preferred sub-title language. Click on the Sub-title language you wish to view.

(11) DVD Menu Button

Some DVD discs have a unique menu structure called DVD menu. For example, some discs allow you to access the multiple language soundtrack, multiple camera angles, and Sub-title options in the DVD menu. Press the Menu Selector during play. Operate the joystick to highlight the preferred option. Click on the Select button.

(12) DVD Title Selector Button

Some DVD discs, such as movies or Music Videos, have more than one title and contain a Title menu. If the disc has a Title menu, press the Title Selector during play to activate the menu. Operate the joystick to highlight the desired title. Click on the Select button or the Play button to play the title.

(13) DVD Menu Navigator Button

The joystick controller is a group of five buttons nested together. The joystick is used to navigate around the possible choices offered in the DVD menus. Click on the UP, DOWN, LEFT, or RIGHT arrows to highlight the option you wish to select, and click on the Select button in the center of the joystick to select the highlighted item.

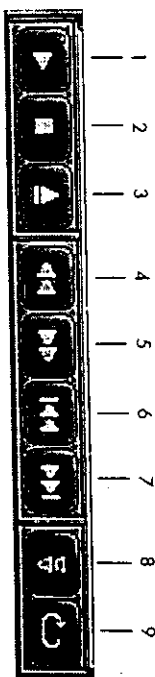
B.6 Standard Controls

Figure B-2 Standard Controls

(1) Play/Pause Button

Click this button to pause or play, to start playing the first track on the DVD or CD, or to resume play after pausing.

(2) Stop Button

Click this button to stop play.

(3) Eject Button

Click this button to operate the ejection mechanism (if supported by your DVD or CD-ROM drive).

(4) Rewind Button

Click this button to play the current track backwards at 2x and 8x speed on the second time. Click again to resume normal playback.

(5) Fast Forward Button

Click this button to fast forward the current playing track at 2x speed. Clicking this button again fast forwards at 8x speed. Clicking a third time resumes normal playback.

(6) Previous Track Button

Click this button to skip to the previous track on the CD.

(7) Next Track Button

Click this button to skip to the next track on the CD.

(8) Play Mode Button

Click this button to select from the three play modes: All, Random, and Play List. The Display Panel will show which play mode is currently active. The default play mode is All. To select Play List, you must first select a playlist. Selecting Random will cause DVD Station to play the tracks in random order.

(9) Repeat Mode Button

Click this button to toggle between Play Once and Repeat modes. The Display Panel will toggle between a straight arrow (Play Once) and a looped arrow (Repeat).



DVD-Videos does not support the Repeat Mode and Play Mode function.

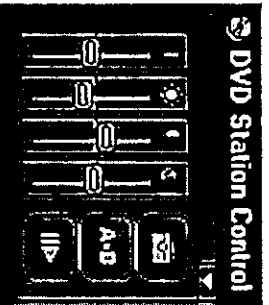
B.7**Picture Controls**

Figure B-3 Picture Control Panel

Picture Control Sliders

Move the sliders to adjust the Gamma, Brightness, Contrast, and Color Saturation of the movie window. These adjustments affect the movie

window only; they are designed so that they will not affect other VGA graphics on your computer monitor.

Image Capture Button

Clicking this button during playback allows you to take images and save it as a BMP file. Due to copyright restrictions, this feature does not work with DVD-Video titles.

Segment Play Button

This feature lets you loop playback between any two points in a movie. Click this button once during movie playback to set the start point. Click the button a second time to set the end point. The movie will now loop between the two points until you press another button (for example, Rewind or Stop).

Slow Motion Button

Click this button to play the movie back at half speed. Clicking the button a second time will play at 1/8 of the normal speed. Click the button again to return to normal playback speed.

B.8**Display Panel**

The display panel provides the specific information about the current video or audio track, such as its track number, play time, and aspect ratio.

A progress bar at the bottom indicates the advancement of the video or audio as it is being played. You can click on the progress bar and drag it to jump from one scene to another.

Type of disc being played is also displayed on the upper left corner of the display panel.

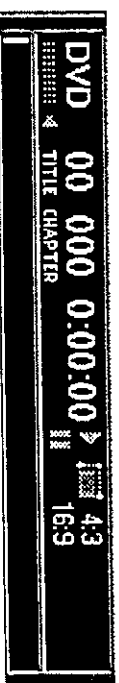


Figure B-4 Display Panel

B.9 Basic DVD Playback

1. Turn on the PC and press the eject button on the DVD ROM drive to open the disc tray.
2. Insert a DVD disc onto the tray.
3. Start DVD Station by selecting the following from the taskbar: Start\Programs\REALmagic Hollywood\DVD Station. A DVD control panel and a Video Screen should appear.
4. If the Windows95 Auto-Play Feature is enabled, the DVD-Video will automatically start playing.
5. Initially, the DVD Station Control Panel is detached from the MPEG Video screen. You can attach the DVD Station Control Panel to the MPEG Video screen by pressing the F2 key on the keyboard. Pressing F2 again will detach the DVD Station Control panel.
6. If the DVD Station is behind the MPEG Video screen and the Control panel is not visible, clicking the right mouse button will cause the DVD Station Control panel to appear.
7. If the DVD disc is a DVD Video disc, and the DVD ROM is the first logic drive after the hard disk (for example, the hard disk is drive C: and the DVD ROM is drive D:), click Play on the DVD station. The DVD Video should start.
8. If the DVD ROM is NOT the first logic drive after the hard disk, select **Option Dialog Button** on the DVD Station. From the Play List dialog box, select the drive that represents your DVD ROM drive. DVD Station will automatically search for all available DVD files on the selected drive. A DVD information file is "01_0.iifo" (for a DVD Video disc) should appear on the Title List. Click **OK** to close the dialog box.
9. Click the **Play Button** on the DVD Station Control Panel.
10. Another option to playback the DVD disc is to select **MPEG File Button** from the DVD Station Control Panel. Select the file you wish to play, close the dialog box, and click Play on the DVD station Control Panel.

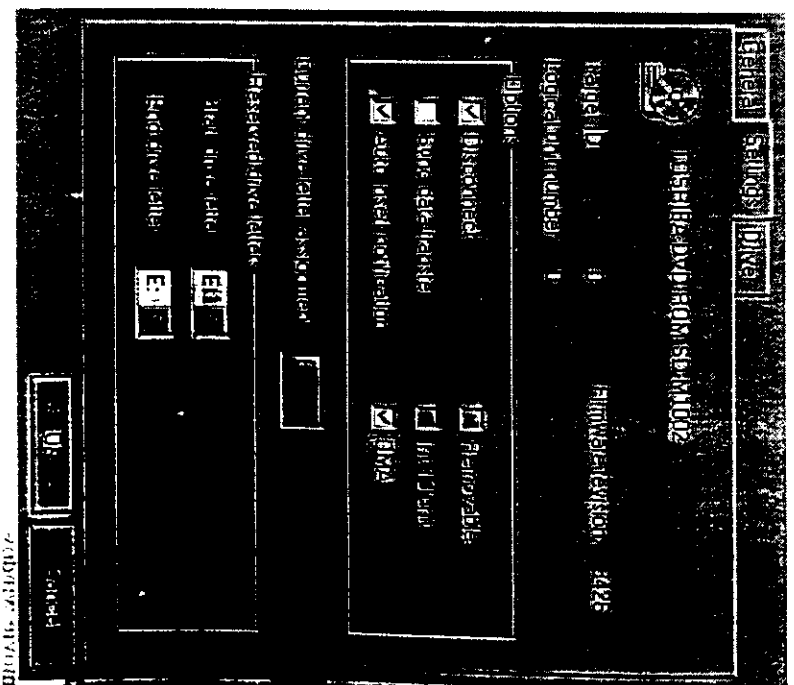


Figure B-5 DVD-ROM drive system settings dialog box

Note that the DVD Video Port may only work when playing the DVD player. To connect to an NTSC/PAL television, simply connect the AV (RCA) cable from the DVD Video Port to the Video In of the television set.

B.10 Additional Features

To display the additional feature, click the Options Dialog Button, and then click the Settings tab. Enable or disable the following features as needed.

Help-Tips

Enables pop-up Help-Tips, which displays the name of each DVD Station button. See example.

Start Detached

Displays the DVD Station Control detached from the movie window on startup. Press F2 to toggle this feature.

Keep Aspect Ratio

Maintains the movie's correct aspect ratio (either 4:3 or 16:9) when resizing a movie window. Prevents distortion of the movie. Press F4 to resize the movie window to the movie's standard (non-scaled) resolution.

Always on Top

Displays the movie window on top of all other windows. With this feature enabled, you will not be able to make other programs appear on top of the movie window.

Configure

Allows you to configure the border adjustment and color calibration of the REALmagic Hollywood Board.

About

Displays the version number of the DVD Station software.

Rating Control (Parental Lockout)

DVD-Video titles are designed to support a voluntary movie rating system. With a Parental Lockout-compatible title, this feature allows you to play an edited version of the movie, with violent and other objectionable scenes removed. For instance, a Parental Lockout-compatible title may come with R, PG-13, and PG-rated versions of the same movie.

To use this feature, you must first enter and apply a short password. You then can select the rating control of your choice. DVD Station will play only the version of the Parental Lockout-compatible movies with the rating you have chosen or lower. For example, if you select PG-13, DVD Station will play only PG-13, PG, and G-rated tracks of Parental Lockout-compatible movies.



This feature has no effect on titles that do not support the Parental Lockout feature. Most DVD-Video titles do not use this voluntary rating system. You cannot rely upon this feature to prevent your children from viewing objectionable titles. The only way to prevent children from playing such movies is to physically keep those movies out of reach of children.