Chapter 1

GETTING STARTED

Introduction to the System

This high performance system is based on a highly integrated system board, packing in a host of multimedia and networking features into a compact form factor, while still allowing room for future expansion. Built around a high-speed, multimedia CPU with integrated audio and sound, and with built-in microphone and TV jacks, the system is ideal for running demanding multimedia applications. In addition, you can customize the system for networking and data transfer tasks with the optional LAN module, and the optional internal fax/modem lets you use the system for connecting to the Internet and running e-mail and fax communication programs.

The system comes with a full range of I/O ports including two serial ports; COM1, COM2, sound output, one parallel port, one game port, two USB ports, and one VGA port allowing you to connect the computer to a wide range of input/output devices.

The system also features support for highly-sophisticated IR technology (optional), which allows bi-directional and cordless data transactions with other IrDA compliant computers and peripheral devices using infrared as a medium. This transmission is carried out in either Full Duplex Mode or Half Duplex Mode. The former allows simultaneous data transmission and reception, while the latter disables the reception when transmission occurs.

Unpacking The System

Before unpacking the system, prepare a suitable workspace for the computer. You will need a steady, level and clean surface, near a wall outlet. If using a Fax/Modem, make sure that the workspace is located near a telephone jack. Also ensure that the computer has enough space around it to allow for airflow, especially at the rear of the computer near the fan. If the computer does not have enough ventilation, internal components can become overheated and may become damaged.

NOTE : Using a computer for extended periods of time, a poor workstation set-up, and incorrect work habits can create health problems. The science of *ergonomics* studies the relationship between health and a suitable work environment. There is a section on ergonomics at the end of Chapter 3 in this manual. For more information on ergonomics, contact the nearest computer bookstore, or local library.

When opening the box of the computer, make sure not to damage the box. You may need it in the future for shipping or storing the system.

Upon unpacking the computer, make sure the following items are included in the box and are in good condition. If you find that any of these items are missing or appear damaged contact the system dealer immediately.

☑ System Unit

☑ AC Power Cord

☑ Keyboard (future option)

☑ Mouse (future option)

☑ This User's Manual

☑ Support Software Drivers and Utilities

Remove the items from the shipping carton and protective packaging. Do not throw away the packing material or shipping carton in case you need to ship or store the components of the computer in the future.

A Look at the Front of the Computer

Refer to the following illustration to identify components located at the front of the System.
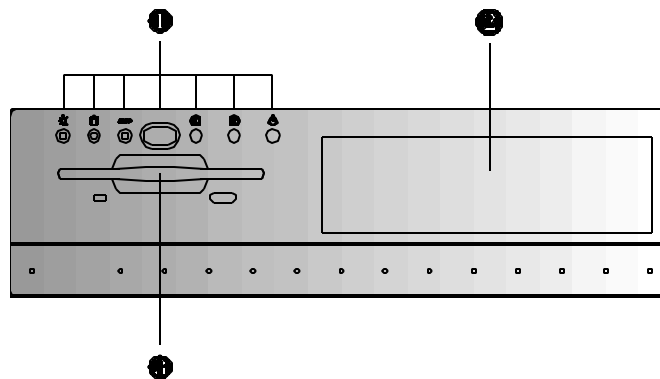

Figure 1-1: Front View of the System

NOTE: The above figure is for reference only, your system may or may not have the IR lens.

1. **Indicators, Reset and Suspend Mode Buttons**
   The indicator lights show power-on status, hard disk drive in use status, and power suspend status.
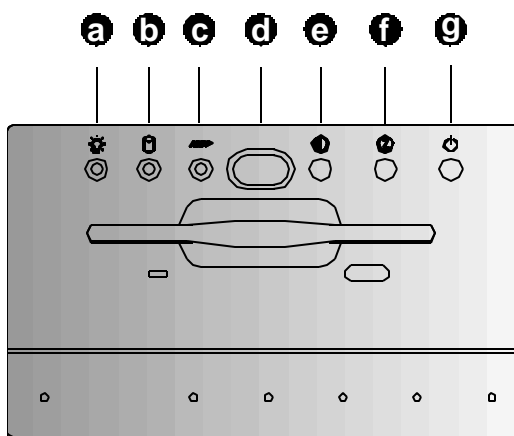

Figure 1-2: The Computer Indicators and Push Buttons

a. **Power LED** ☼
   When jumper JP3 is set at 1-2 (see Page 45) and the system enters Suspend Mode upon pressing the Suspend button, this green LED will flicker alternatively with the Suspend LED light, indicating that system is in Suspend Mode.
   When jumper JP3 is set at 2-3, this LED remains lit indicating that power is on.

b. **Hard Disk Drive Access LED** 🖥
   When this green LED is lit, it indicates that the Hard Disk Drive is activated.

c. **Suspend/LAN LED** ◢◢◢▶
   When jumper JP3 is set at 1-2 (see Page 45) and the system enters Suspend Mode upon pressing the Suspend button, this yellow LED will flicker alternatively with the Power LED light, indicating that

system is in Suspend Mode.
When jumper JP3 is set at 2-3, this LED will flicker indicating that the system is ready for LAN activity.

d. **IR Lens** (optional)
This lens allows bi-directional and cordless data transactions with other IrDA compliant computers and peripheral devices using infra-red as a medium.
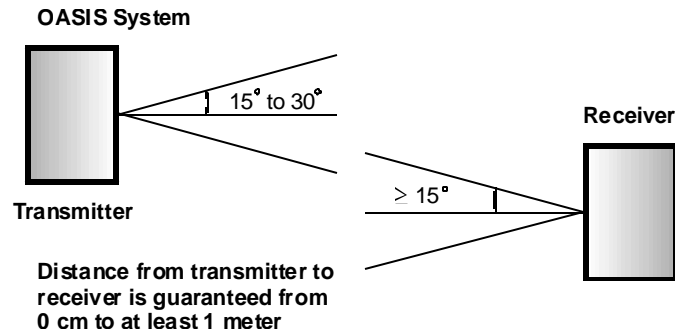

Figure 1-3. IrDA Viewing Angle and Distance
(conforms to HP-Hewlett Packard specifications)

NOTE : Even though the system comes with an IR Lens, the LED board may or may not support this feature.

e. **Reset Button** ⬭
When this button is pressed, it allows you to reset the system.

f. **Suspend Button** ⬡
When this button is pressed, it places the system in Suspend Mode.

g. **Power Button** ⬭
When this button is pressed, it forces the system power to turn on or off.

2. **CD-ROM Drive Bay**
The 5.25" CD-ROM drive bay is located on the right side of the front panel.

3. **Floppy Disk Drive**
   The 3.5" floppy disk drive (FDD) unit is located beside the CD-ROM drive. (For complete details about the features, maintenance, and operating instructions of the FDD please refer to Chapter 3.)

A Look at the Rear of the Computer

The rear of the system is where you connect power, peripheral devices such as a fax/modem or printer, input devices such as a keyboard, and output devices such as the display monitor. Please refer to the following figures for the location of each of the rear components:
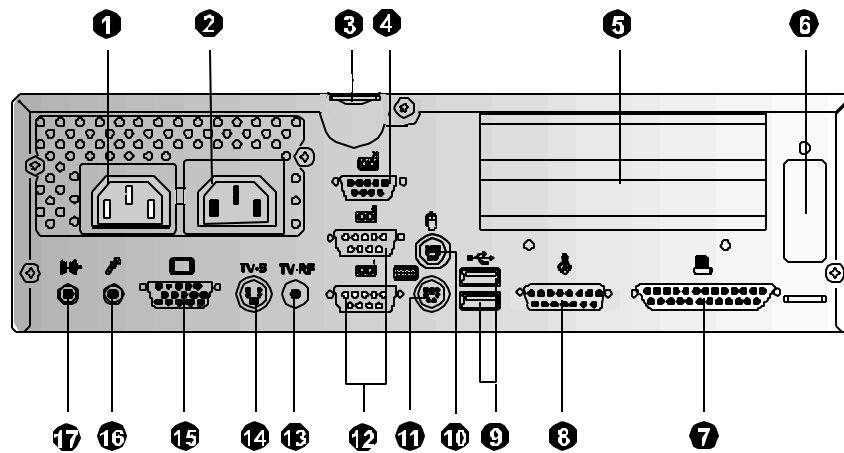
Rear of the System

Figure 1-4: The Rear of the System

1. **AC-In Socket**
   Connect the computer's AC power cord to this socket. Ensure that the power cord is connected to a stable AC power source.

2. **AC-Out Socket**
   This socket serves as an AC power source for the display monitor.

3. **System Securing Ring**
   Use the securing ring to lock the chassis cover to the main chassis to prevent theft of internal components. Use any ordinary padlock.
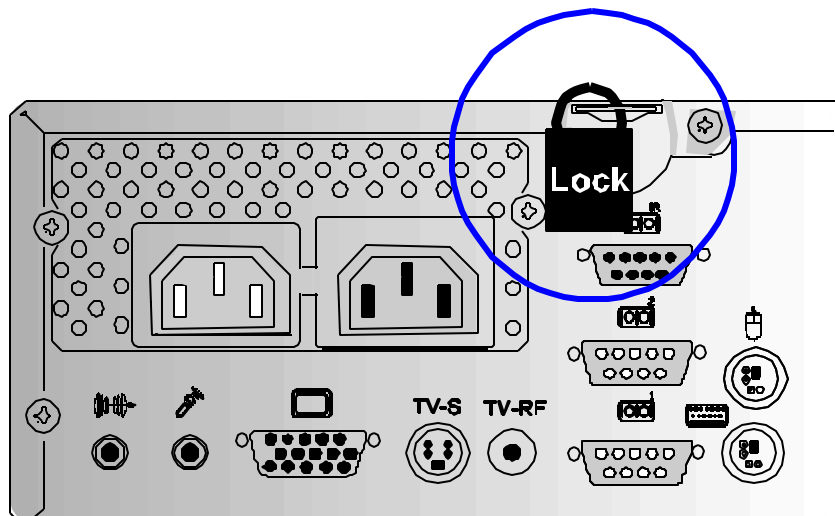
Figure 1-5: Securing the Chassis Cover

4. **IR Port**

Connect the IR device to this port.

5. **Adapter Panels**

Behind the two panels are the expansion slots where the adapter or add-on cards can be installed.

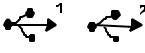**6.** **LAN Module or Fax-Modem Module Panel**

Behind this panel is the expansion slot where a LAN module or fax-modem module can be installed. Refer to page 80 for a list of recommended LAN cards.

7. **Printer Port**

Connect a parallel device such as a printer to this port.

8. **Game Port**

Connect the joystick to this port. It is recommended that Analog-type joysticks be used.

9. USB Sockets

Connect the USB peripheral devices to these two sockets. The following table lists the recommended USB keyboards and USB mouse.

USB Device	BRAND (MAKE)
USB Keyboard	Chicony KU-8933-1
	Silitek SK-6000
USB Mouse	Cypress CY7C63000
	Microsoft

10. PS/2 Mouse Connector

Connect the PS/2 mouse to this connector.

11. PS/2 Keyboard Connector

Connect the PS/2 keyboard to this connector.

12. COM1 and COM2 Ports

Connect the serial devices to these two ports.

13. TV-RF Connector

Connect to the TV set's Video port.

14. TV-S (i.e., S-Video) Connector

Connect to the TV set's S-Video port.

15. VGA Port

Connect the display monitor to this port.

16. Microphone Jack

Plug the microphone to this jack.

17. Line-Out Jack

Connect audio devices, such as a speaker, to this port.

This concludes Chapter 1. Chapter 2 covers connecting power and peripherals to the system.

*C*hapter *2*

GETTING READY TO GO

Setting Up the System

This chapter provides the information and instructions you need to set up the system. This chapter also guides you through starting up the computer for the first time. Setting up the computer involves the following steps:

- Connecting the keyboard to the computer

- Connecting the mouse to the computer

- Connecting a printer to the computer

- Connecting a display monitor to the computer

- Connecting audio devices to the computer

- Connecting a TV set to the computer

- Connecting a joystick to the computer

- Connecting IrDA compliant (SIR) peripheral devices to the computer

- Plugging in and turning on the computer

Connecting a Keyboard to the Computer

The system features an enhanced keyboard with a spill resistant membrane and tactile feedback. Before turning on the computer you need to connect the key-board to the keyboard port. Follow the instructions listed below and refer to Figure 2-1 for information on connecting the keyboard to the computer.
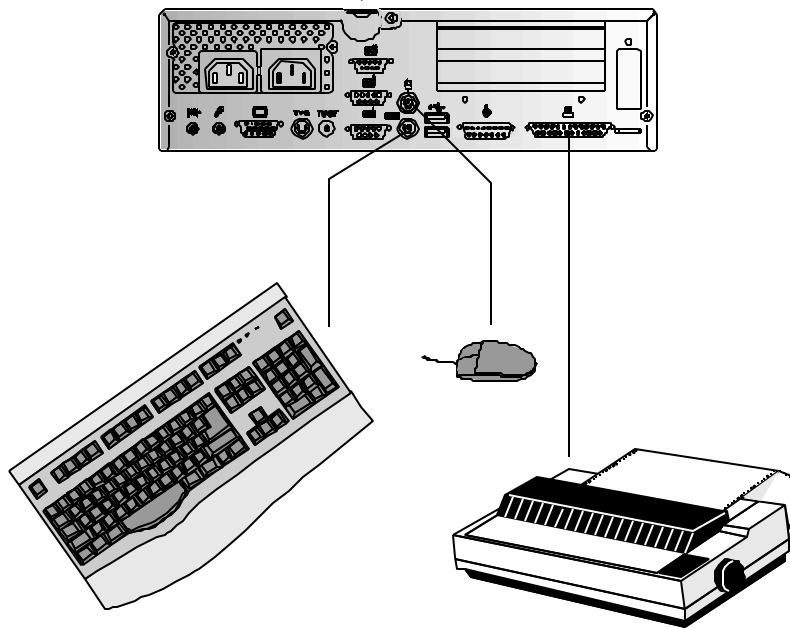

Figure 2-1: Connecting a Keyboard, Mouse, and Printer to the Computer

1. Make sure the computer's power switch is in the "Off" position. It is al-ways a good idea to shut down the computer before connecting any external devices to it.

2. Refer to Figure 2-1 to locate the keyboard port at the back of the com-puter.

3. Gently push the connector into the keyboard port. If you are not able to connect it easily, you probably do not have the pins on the head lined up with the receptacles in the port. Twist it around a bit until it slides in easily. Do not try to force it in as you may end up bending the pins on the keyboard's cable head.

4. Turn the keyboard over and locate the two adjustable tilt legs at each end of the keyboard. These legs can be adjusted to either of two positions for typing comfort. For a more natural typing angle, pull the legs back until they lock in the open position.

If you turn the computer on without first properly connecting the keyboard, the system will prompt you with a keyboard error message. If you get such a message, turn off the computer and check that the keyboard is properly connected.

Connecting a Mouse to the Computer

The system is packaged with a two-button mouse. All Windows applications and many DOS programs employ the mouse as a pointing device. Follow the instructions listed below and refer to Figure 2-1 for information on connecting the mouse to your computer.

1. Make sure the computer's power switch is in the "Off" position. It is always a good idea to shut down the computer before connecting any external devices to it.

2. Refer to Figure 2-1 to locate the mouse port at the back of the computer.

3. Gently push the connector into the mouse port. If you are not able to connect it easily, you probably do not have the pins on the head lined up with the receptacles in the port. Twist it around a bit until it slides in easily. Do not try to force it in as you may end up bending the pins on the mouse's cable head.

Refer to Chapter 3 of this manual for instructions on how to use a mouse.

Connecting a Printer to the Computer

Most computer users have a printer connected to the parallel port. To connect a printer to the computer, follow these steps and refer to Figure 2-1:

1. Make sure the computer's power switch is in the "Off " position. It is always a good idea to shut down the computer before connecting any external devices to it.

2. Locate the parallel port on the back of the computer. It is near the VGA port, and has a printer icon located beside it.

3. Align the pins of the printer's connector with the receptacles of the parallel port. Insert the connector into the port.

Refer to the printer's user's manual for instructions on how to set up the printer.

Connecting a Display Monitor to the Computer

Please refer to the following instructions and Figure 2-2 for information on connecting a display monitor to the computer:
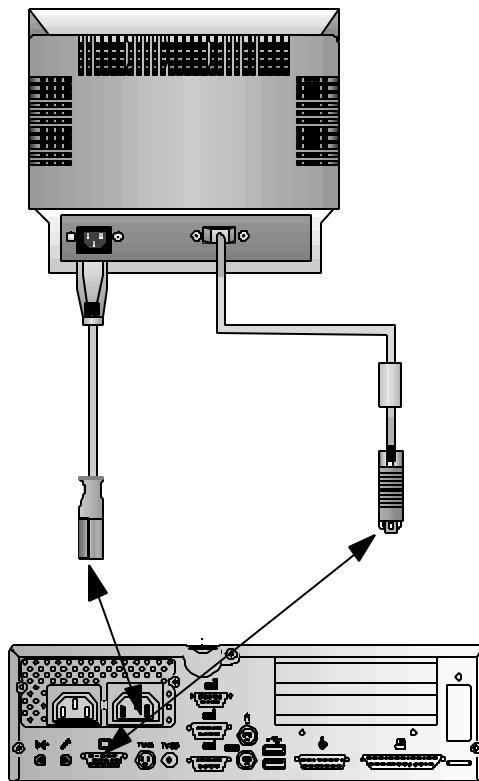

Figure 2-2: Connecting a Display Monitor to the Computer

  1. Plug one end of the monitor's power cord into the receptacle at the rear of the display monitor.

  2. Plug the other end of the monitor's power cord into the AC-OUT socket at the rear of the computer.

Note: *If the display monitor uses an independent power source and the system is in suspend mode, turn off the power for the display monitor.*

3. Connect the display monitor's VGA cable to the VGA port on the computer.

Resolution Table

RESOLUTION	COLORS	REFRESH RATE (Hz)	DOT CLOCK (MHz)	PCLK (MHz)	GRAPHICS PORT WIDTH (Bits)
640x480	8 BPP 256 colors *	60	25.175	25.175	8
		72	31.5	31.5	8
		75	31.5	31.5	8
	16 BPP 64K colors RGB 5-6-5	60	25.175	50.35	8
				25.175	16
		72	31.5	63.0	8
				31.5	16
800x600	8 BPP 256 colors *	60	40.0	40.0	8
		72	50.0	50.0	8
		75	49.5	49.5	8
	16 BPP 64K colors RGB 5-6-5	60	40.0	80.0	8
				40.0	16
		72	50.0	100	8
				50.0	16
		75	49.5	99.0	8
				49.5	16
1024x768	8 BPP 256 colors *	60	65.0	65.0	8
		70	75.0	75.0	8
		75	78.5	78.5	8
	16 BPP 64K colors RGB 5-6-5	60	65.0	65.0	16
		70	75.0	75.0	16
		75	78.5	78.5	16
1280x1024	8 BPP 256 colors *	60	108.0	108.0	8
				54.0	16
		75	135.0	67.5	16

* Out of a palette of 256K colors

Connecting Audio Devices to the Computer

The system comes with integrated 3D audio allowing you to take advantage of a wide array of educational and entertainment multimedia software available on the market. Refer to the following figure for instructions on how to connect audio devices to the computer:
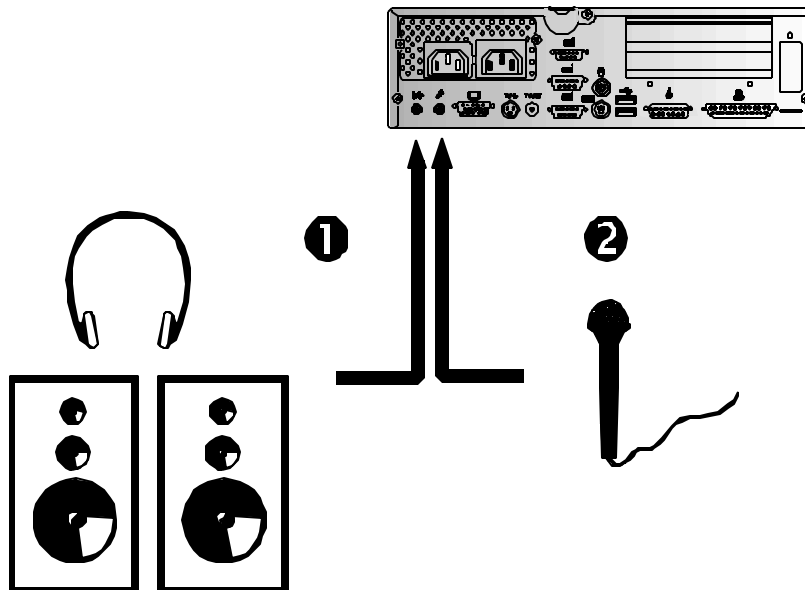

Figure 2-3: Connecting Audio Devices to the Computer

1. **Line Out Jack**
   Connect stereo headphones or speakers to this jack.

2. **Microphone Jack**
   Connect a microphone to this port.

Connecting a TV Set to the Computer

In addition to a standard display monitor, you can also connect the system to a TV set, as shown in Figure 2-4:
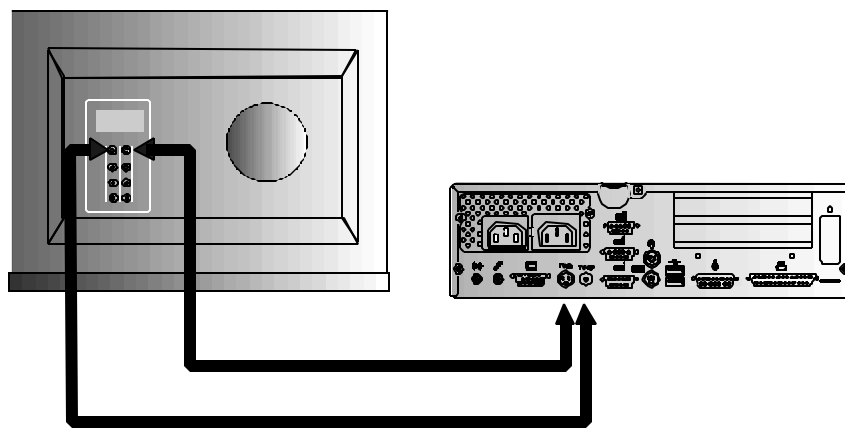

Figure 2-4: Connecting a TV Set to the Computer

The system allows connection to the TV-RF or the TV-S jack. The TV-S jack, which uses the digital signal, will give a better video output compared to the TV-RF jack, which uses the analog signal. Verify if the TV set you are using has either the TV-RF or the TV-S jack, or both. Connect the television set's TV-RF jack to the computer's TV-RF port or, alternatively, connect the television set's TV-S jack to the computer's TV-S port.

Connecting a Joystick to the Computer

Please refer to the following instructions and Figure 2-5 for information on connecting a joystick to the computer:
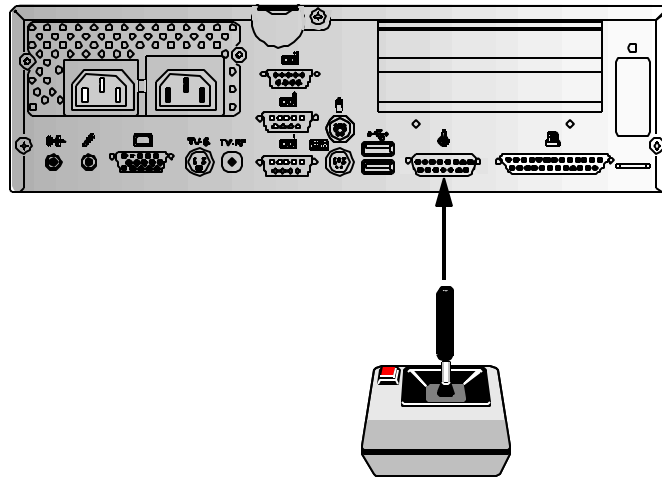

Figure 2-5: Connecting a Joystick to the Computer

Connect the joystick to the game port of the computer. It is recommended that Analog-type joysticks be used.

Connecting IrDA Compliant (FIR/SIR) Peripheral Devices to the Computer

Make the following adjustments to the system settings:

1. Under *Settings* of the Windows 95/NT *Start* menu, use the mouse to click on the item *Control Panel*.

2. Double-click on the *Add New Hardware* icon to enter the *Add New Hardware Wizard* screen.

3. Click on the *Next>* button to allow Windows to search for new hardware.

4. With the *Yes* button highlighted, click on the *Next>* button. On the next screen, click on the *Next>* button to continue. Allow Windows some time to search for new hardware.

5. A new window listing the *Hardware types*: is shown on screen. Click on the item *Infrared* to highlight it then click on the *Next>* button. On the next screen, click on the *Next>* button to continue.

6. On the next screen, a window listing the different *Manufacturers:* and *Models:* is shown, make sure that *(Standard infrared devices)* and *Built-in Infrared port on laptop or desktop* is selected, then click on the *Nex*t> button.

7. On the next screen with the window *Select the port that this infrared device is physically connected to:* click on *Communications Port (COM2)* to select it, then click on the *Next>* button.

8. On the next screen, make sure that *Use default ports* button is activated, then click on the *Next>* button.

9. You will be asked to insert the disk labeled *Windows 95 CD-ROM* then click on the *OK* button. Allow Windows some time to copy the necessary files into the system.

10. Exit the whole process by clicking on the *Finish* button.

Plugging In and Turning On

Now that you have connected the keyboard, the display monitor, the mouse, and other devices that were introduced above, you are ready to plug in and turn on the computer. For plugging in and turning on the computer, refer to Figure 2-6 and follow the instructions listed below:

1. Make sure the computer's power is off.

2. Insert the power lead into the computer's power socket. Make sure the connector head is locked firmly into the socket.
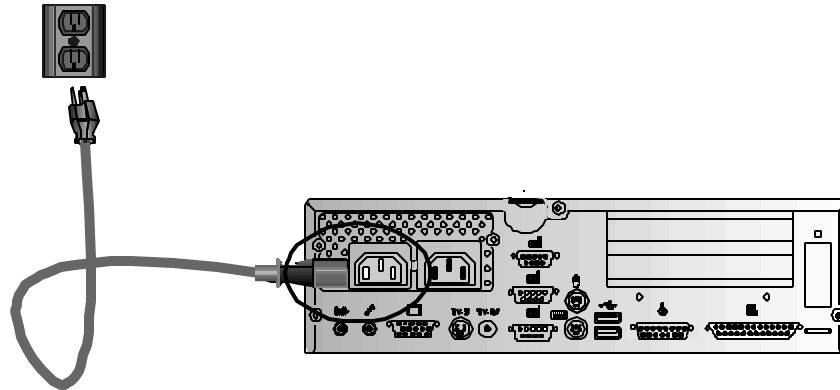

Figure 2-6: Connecting AC Power to the Computer

3. Plug the power cable into a three-holed grounded wall socket or power strip. DO NOT remove the grounding plug (third prong) to accommodate a two-holed socket or power strip.

4. Press the power button. You should hear a beep when the computer comes on and the computer's hard disk drive's LED should light.

5. The computer's sign-on message should appear on the screen. The memory test then appears until all the system memory installed is tested. If you cannot see the sign-on message after turning on the computer, try adjusting the brightness and contrast controls.

Note.

DO NOT remove the grounding plug (the third prong). For additional protection, we recommend that you use a surge protector device plugged between the AC power cable and the electrical wall outlet to prevent the effects of sudden current variations from reaching the computer. These sudden peaks of electric current are not good for the computer's electronic circuitry.

This concludes Chapter 2. Chapter 3 covers operation of the system.

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*C*hapter *3*

OPERATION

Overview

This chapter provides information and instructions covering the operation of
the system's various hardware devices and software features. Hardware devices
such as the display monitor, the keyboard, hard drive, and CPU are comprised
of either electronics or mechanical components or both. The system employs
the most sophisticated hardware technology available. This hardware is useless
however without the proper software to control it. The software features are
the programs, operating system, and applications that control the computer's
hardware. The system comes with the operating system already installed on the
hard disk.

This chapter begins with a tour of the system enhanced keyboard. The second
section of the chapter covers operation of the mouse. The third and fourth sec-
tions will cover operation of the CD-ROM drive and the floppy disk drive
(FDD).
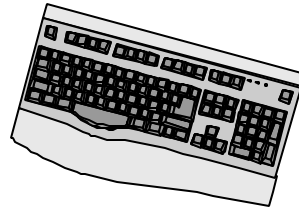
A Tour of the Keyboard

The system features a full-size 105 key enhanced layout keyboard including function keys and a numeric keypad. The keyboard is ergonomically designed for maximum comfort and ease of use. This section covers the keyboard and identifies several keys which are commonly used when working with either the Disk Operating System or application software.

The alphabet letters located on the keyboard are in the same position as those found on a standard typewriter. The usage for these alphabet keys is straightforward. But several other keys located on the computer's keyboard have special functions which you may be unfamiliar with. Two of the keys are specifically for use with the Windows 95 operating system. This section identifies some of the special computer keys on the keyboard and discusses their functions when used with either the Disk Operating System or other application software, such as word processors, spread sheet applications, or database management programs. In addition, the twelve function keys located directly above the keyboard and how they relate to application software are covered. Try locating these keys on the keyboard itself. The following figure shows the keyboard layout.
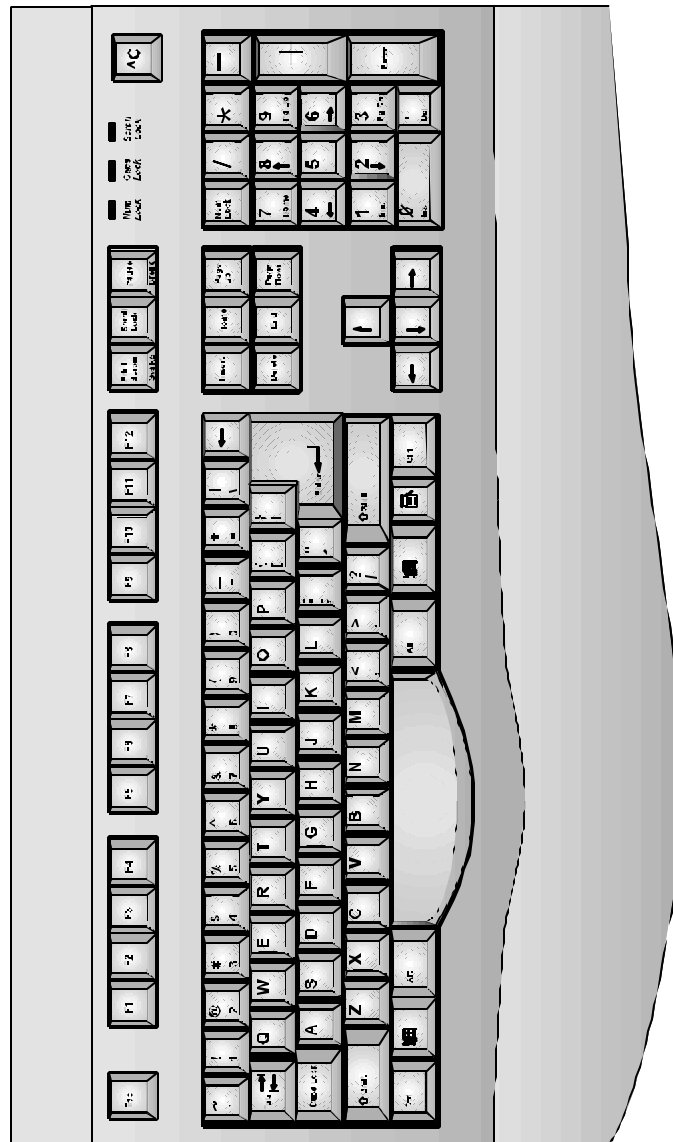
Figure 3-1: The System Keyboard Layout

Using the Mouse

This section covers fundamental mouse operation techniques for those who have never used a mouse before. The programs you use must support mouse operation in order for the mouse to work. Since all graphic user interface (GUI) programs like Microsoft Windows employ the mouse as a pointing device, you may want to run Windows for practicing the techniques listed below.

Place the mouse in the center of the mouse pad. Hold the mouse so that the cable is pointing away from you. Now slowly move the mouse in any direction. Notice that the small arrow (or pointer) on the screen moves in the same direction. Now move the mouse quickly in a different direction. Notice that not only the *direction* but also the *speed* of the pointer's movement directly corresponds to that of the mouse.

The mouse is equipped with two buttons. In application programs, the left button is usually used to make selections. The function of the right button varies widely with application software. Some applications allow you to assign various functions to the right mouse button. Refer to the application's user's manuals for specific information on the mouse button functions.

To select an object, first move the pointer over the object you want to select, and then press the left button once then release it.

Double-clicking is a common technique for selecting objects or launching programs from icons. Once you have moved the pointer over the object you wish to select, rapidly press the left button two times. This action is commonly referred to as "double-clicking on an object."

When working with programs that employ a graphical user interface (GUI), *dragging* objects from one point on the screen to another is a technique you will have to master. To drag an object, first move the pointer over the object, then press and hold down the left button. Now without releasing the button, move the object to a new location on the screen. Once the object is in the desired position, release the button to drop the object in its new position.

How to Clean the Mouse

After extended periods of use, you may notice that the cursor no longer moves in smooth coordination with the mouse but occasionally skips awkwardly across the screen. This is a common occurrence with mice and other pointing devices. It is caused by a natural build-up of particles such as dust and lint around the ball and tracking mechanism. To ensure efficient operation of the mouse, it is recommended that cleaning be done on a regular basis.

Refer to the following illustration and the instructions listed below to clean the mouse.
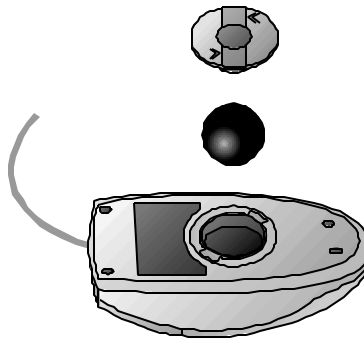

Figure 3-2: Cleaning the Mouse

1. Turn off the computer.

2. Turn the mouse over. You will see a ball housing cover with arrows indicating the direction to unlock it.

3. Rotate the ball housing cover counterclockwise until it unlocks.

4. Now remove both the housing cover and the ball.

5. Remove dust or other particles that has accumulated on the ball. Use a lint-free cloth to thoroughly dry the ball.

6. Use a cotton swab and a rubbing alcohol cleaning solution to remove any dust or lint clinging to the rollers of the tracking mechanism.

7. Replace the ball and the housing cover.

8. Rotate the ball housing cover clockwise until it locks in place.

Identifying the Parts of the Floppy Disk Drive (FDD)

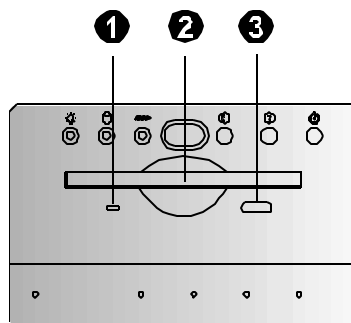Please refer to the following illustration for information on using the FDD.

Figure 3-3: The System's Floppy Disk Drive

1. **FDD Busy LED**
When this LED is lit, it indicates that the floppy drive is being accessed.

2. **Floppy Drive**
Insert the floppy diskette into this slot.

3. **Floppy Disk Eject Button**
Use this button to eject the floppy disk.

Inserting and Removing Diskettes

To insert a floppy diskette into the floppy drive, refer to Figure 3-4 and carry out these steps:

1. Hold the diskette with the drive wheel facing down and the metal shutter end with the arrow towards the floppy drive.
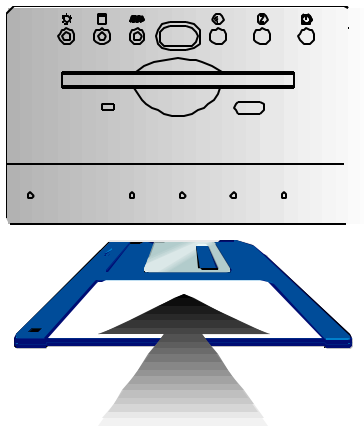

Figure 3-4: Inserting a Floppy Diskette

2. Insert the diskette into the drive slot and gently push it into the drive.

3. When the diskette clicks into place the eject button will pop out. The diskette is now ready.

New diskettes must be formatted by the disk operating system (DOS) before they can be used for storing data. Use the mouse to double click on the "My Computer" icon, click on the "3½ Floppy (A:)" icon, and then select "Format . . ." to format a floppy diskette.

To remove a diskette from the drive, follow these steps:

1. Ensure that the drive activity light is not lit. Never remove a diskette from the drive when the activity light is on as this may damage both the diskette and the floppy drive read/write head.

2. Push the diskette eject button.

3. When the diskette pops out, remove it from the drive slot and store it in a cool, dry place.

Do not try to eject the floppy disk when the FDD busy LED is lit. You could damage the FDD and the information on the disk.

A Word about Ergonomics

Ergonomics is the study of how people with their different physical characteristics and ways of functioning relate to their working environment. The goal of Ergonomics is to incorporate efficiency and safety into the design of keyboards, desks, chairs, and other items to prevent physical health problems in the working environment.

Because more and more people spend large amounts of time in front of computer monitors, scientists from many fields including anatomy, psychology, and occupational safety are involved in the study of ergonomically sound work environments.

If budget permits, buy furniture that fit your physical characteristics and work methods. Most furniture manufacturers have not considered the particular shape of the human body when designing workstations. When sitting for extended periods of time, an ergonomically designed chair may well be worth the extra expense. You can, however, create an ergonomically improved workstation without spending much money. Following are a few tips to help you work effectively without a lot of physical discomfort:

1. Place the display monitor a little *above* eye level to prevent neck strain.

2. Try to place the display monitor so that there is little glare from the sun on it.

3. Place a piece of plywood on the arms of the chair to rest your elbows. This will reduce strain in the arms and neck and allow you to touch type more comfortably.

4. Use a thick book as a foot rest.

5. Walk around the room every hour.

6. Every half hour look away from the monitor screen for a few minutes.

7. Place everything that you need to work within easy reach.

This concludes Chapter 3. Chapter 4 shows how to upgrade key components including upgrading the hard disk drive and CD-ROM drive.

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*C*hapter *4*

MAKING UPGRADES EASY

Before You Begin

Make sure you have a stable and clean working environment. Dust and dirt can get into computer components and cause malfunction. Use containers to keep small components separated. Many of the screws on the computer are of different sizes; if you put them together you may spend a lot of time trying to track down the correct screw when you put the computer back together. Also, putting all small components in a safe container keeps them from getting lost. Having adequate lighting and using proper tools can prevent you from accidentally damaging the internal components. Most of the procedures that follow require only a few simple tools, including the following:

- A Philips Screwdriver

- A flat tipped screwdriver

- A set of jeweler's screwdriver

- A multimeter (not always required)

- A grounding strap

Most of the electrical connections can be disconnected by using your fingers. It is recommended that you do not use needle nosed pliers to disconnect connections as these can damage the soft metal or plastic parts of the connectors. Many connectors have tabs to keep them secure. After the tabs are disengaged the connector should easily slide out. You can use a small screwdriver to gently pry some of the connectors loose. If the connector does not come out easily, make sure that nothing is obstructing it and, gently rock it back and forth in its slot until it loosens enough to come out. Do not force it!

Before working on internal components, make sure that the computer's power is off. Ground yourself before touching any internal components by touching a metal object. Static electricity can damage many of the computer's electronic components. Humid environments tend to have less static electricity than dry environments. A grounding strap is warranted whenever danger of static electricity exists.

Removing the Chassis Cover

Before doing any internal upgrades, remove the chassis cover. Refer to the following figure for information on removing the cover:
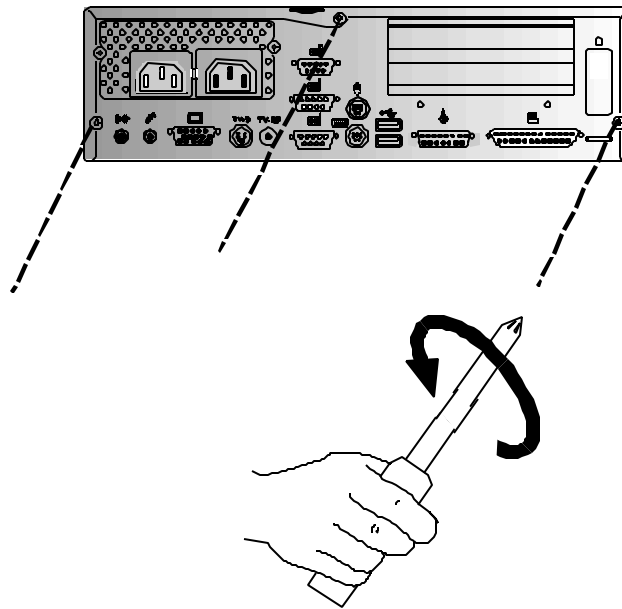
Figure 4-1: Removing the System Chassis Cover

1. Locate the securing screw at the rear of the computer.

2. Turn the screw counterclockwise to release the cover.

3. Pull the chassis cover towards you and then upwards. It should slide out easily. If it does not, move it back and forth until it is clear of the chassis.

Familiarity with Major Components

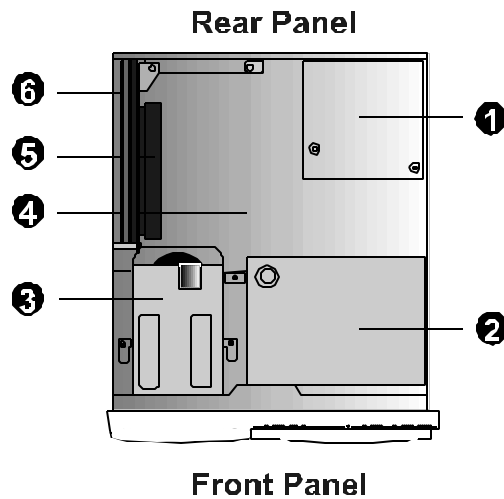Figure 4-2 shows the major components of the system.

Figure 4-2: Major Components of the System

1. Power Supply

2. CD-ROM Drive Holder

3. Hard Disk Drive (HDD)/Floppy Disk Drive (FDD) Holder

4. Mainboard

5. Riser Card for Add-On Card

6. LAN or Fax-Modem Module

Removing the Front Panel Chassis

Before upgrading the HDD/FDD and CD-ROM drive, remove the front panel chassis. Please refer to Figure 4-3 and follow the steps listed below:
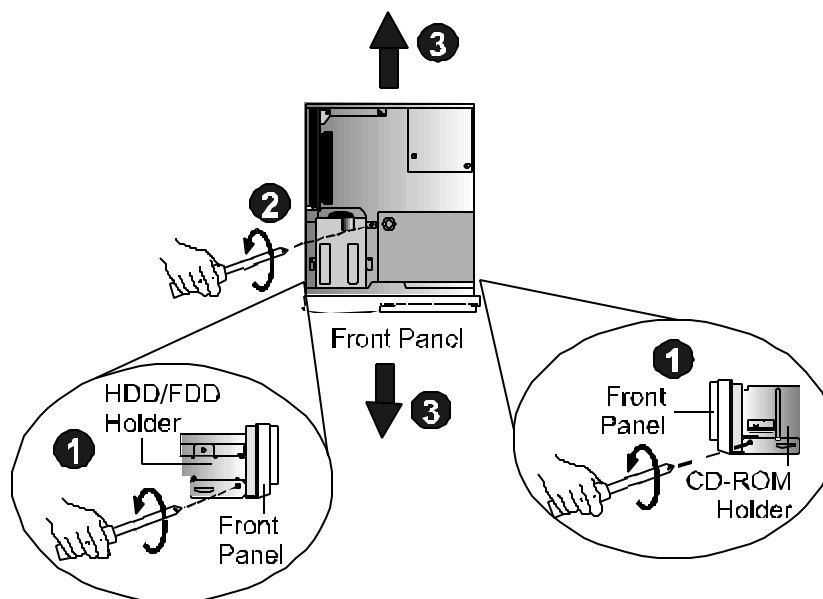

Figure 4-3: Removing the Front Panel Chassis

1. Loosen the two screws that affix both sides of the front chassis on the main body of the system.

2. Loosen the screw that affixes the front panel chassis on the main body of the system.

3. Remove the front panel chassis away from the main body of the system.

4. Disconnect all the connecting wires and cables.

Upgrading the Hard Disk Drive (HDD)

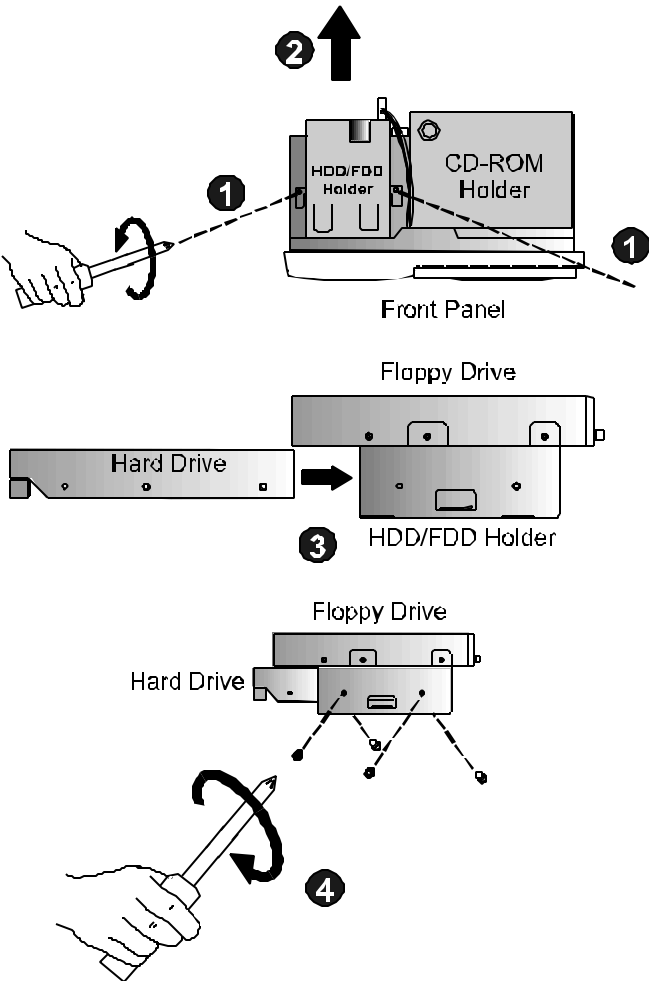To upgrade the HDD, please refer to Figure 4-4 and follow the steps listed below:

Figure 4-4: Upgrading the Hard Disk Drive

1. Loosen the two screws that affix the HDD/FDD holder on the front panel chassis.

2. Remove the HDD/FDD holder from the front panel chassis.

3. Place the HDD drive into the HDD/FDD holder.

4. Fasten the HDD drive on the holder by two screws on each side of the holder.

Upgrading the CD-ROM Drive

To upgrade the CD-ROM drive, please refer to Figure 4-5 and the follow the steps listed below:
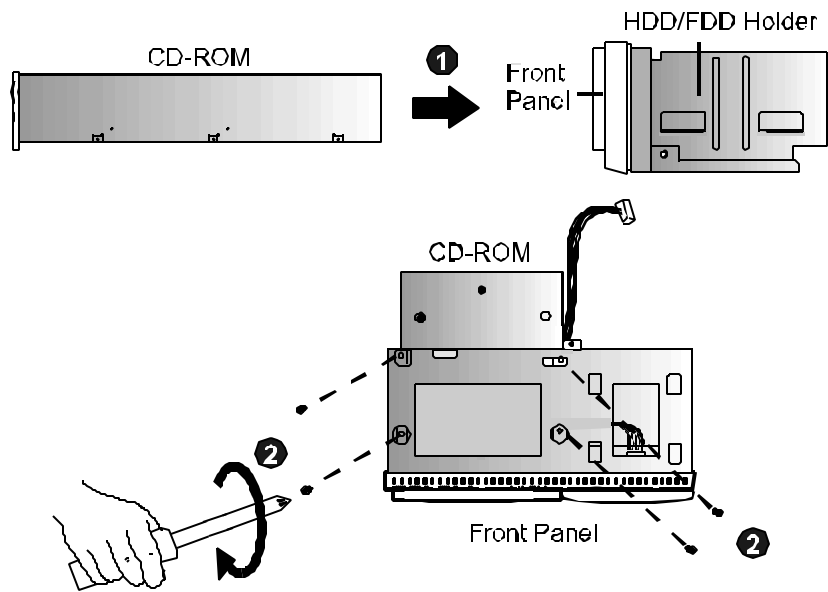

Figure 4-5: Upgrading the CD-ROM Drive

1. Place the CD-ROM drive into the CD-ROM holder.

2. Affix the CD-ROM drive on the holder by securing four screws on the bottom of the front panel chassis.
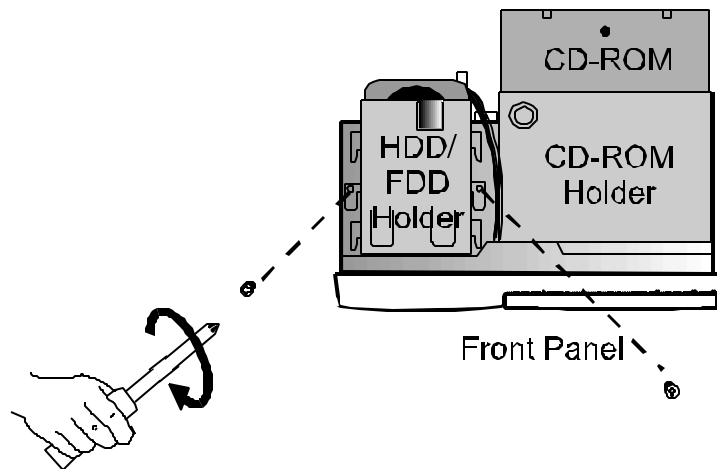
Installing the HDD/FDD Holder

Figure 4-6: Affixing the HDD/FDD Holder

Affix the HDD/FDD holder on the front panel chassis by securing the two screws on each side of the holder as shown above.

Installing an Expansion Card

Various upgrades can be made to the system by installing the expansion cards on the riser card as shown in Figure 4-7. The system supports two add-on cards; either two PCI cards, or one PCI card and one ISA card. The table below lists the maximum sizes of the add-on cards, please take note of it before purchasing.

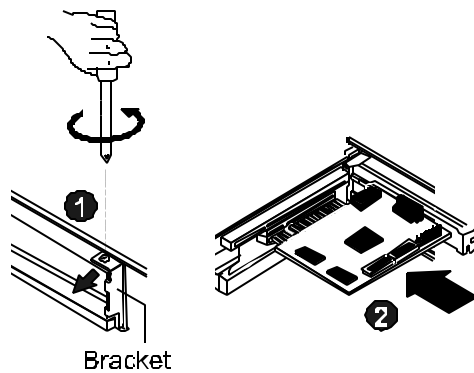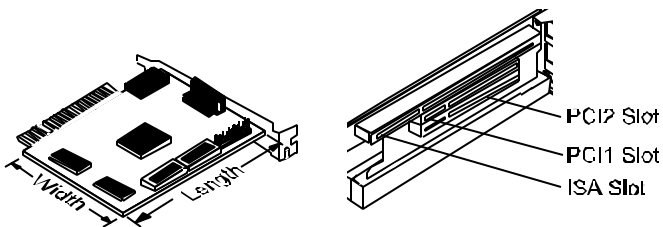| CARD	WIDTH	LENGHT
ISA	must not exceed 90mm	must not exceed 170mm
PCI1	must not exceed 90mm	must not exceed 160mm
PCI2	must not exceed 90mm	must not exceed 135mm

Figure 4-7: Installing an Expansion Card

NOTE: Check with your dealer if the system you are using supports the MPEG2 decoder card (DVD) and Creative Voodoo II card (3D game graphics card).

1. Loosen the screw that affixes the bracket.

2. Insert the expansion card so that it is firmly seated in it's slot.

3. Affix the expansion card by securing the screw on the bracket.
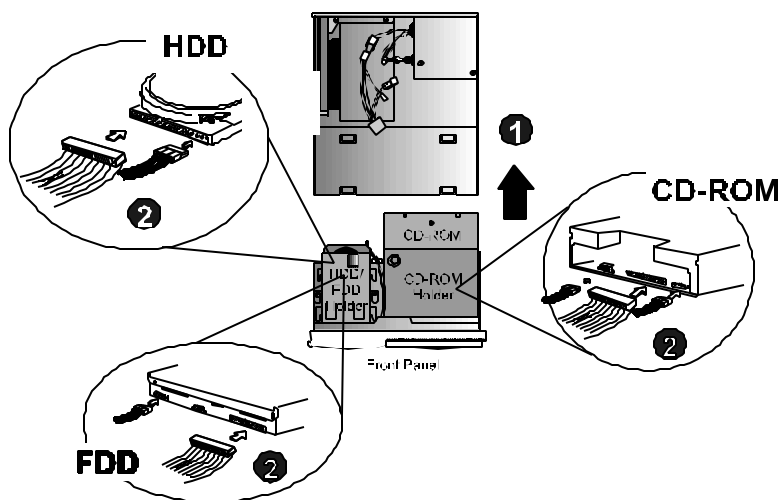
Re-installing the Front Panel Chassis

Figure 4-8: Reinstalling the Front Panel Chassis

To reinstall the front panel chassis, follow these steps:

1. Slide the front panel chassis onto the main body of the system.

2. Connect all the wires and cables to the appropriate drives. To connect the wires to the Audio CD-IN connector on the mainboard with the CD-ROM drive, please refer to Pages 49 and 50.

Tighten the front panel chassis with the main body of the system by the three screws that are mentioned in Figure 4-3.