Vectra CS Personal Computer

Setting Up Your Computer

HEWLETT PACKARD

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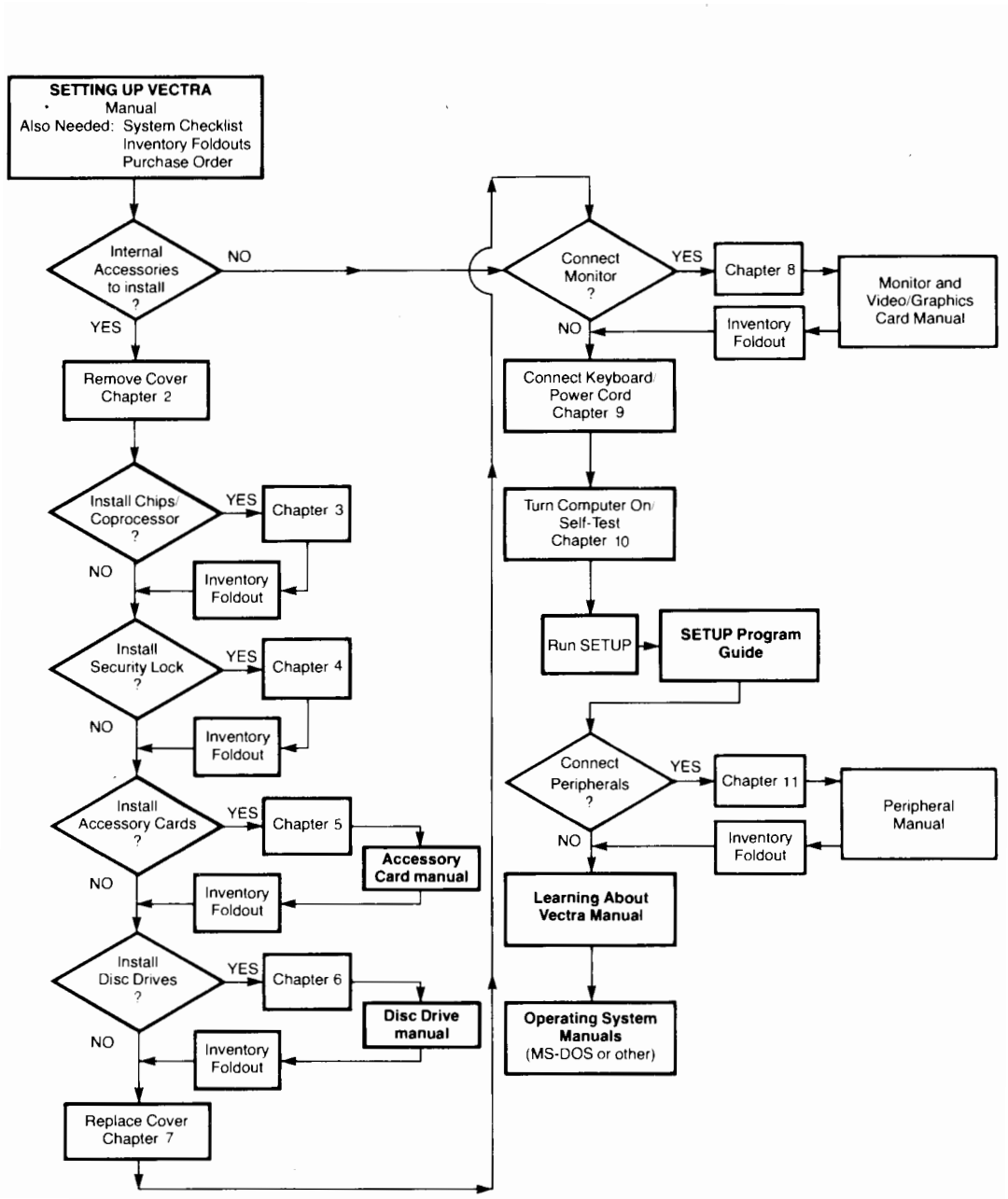
SETTING UP VECTRA
Manual
Also Needed: System Checklist
Inventory Foldouts
Purchase Order
Internal Accessories to install ?
NO
YES
Remove Cover Chapter 2
Install Chips/ Coprocessor ?
YES
Chapter 3
NO
Inventory Foldout
Install Security Lock ?
YES
Chapter 4
NO
Inventory Foldout
Install Accessory Cards ?
YES
Chapter 5
Accessory Card manual
NO
Inventory Foldout
Install Disc Drives ?
YES
Chapter 6
Disc Drive manual
NO
Inventory Foldout
Replace Cover Chapter 7
Connect Monitor ?
YES
Chapter 8
Monitor and Video/Graphics Card Manual
NO
Inventory Foldout
Connect Keyboard/ Power Cord Chapter 9
Turn Computer On/ Self-Test Chapter 10
Run SETUP
SETUP Program Guide
Connect Peripherals ?
YES
Chapter 11
Peripheral Manual
NO
Inventory Foldout
Learning About Vectra Manual
Operating System Manuals
(MS-DOS or other)

FCC Statement

Federal Communications Commission Radio Frequency Interference Statement

Warning

This equipment has been certified to comply with the limits for a Class B computing device, pursuant to Subpart J of Part 15 of FCC Rules. Only peripherals (computer input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this computer. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

More About Radio and Television Interference

Because your HP Vectra CS computer generates and uses radio frequency energy, it may cause interference with radio and television reception in a residential installation.

Hewlett-Packard's system certification tests were conducted with HP-supported peripheral devices and HP shielded cables, such as those you receive with your system.

The HP Vectra CS computer meets the requirements for a Class B computing device in accordance with the specifications of Part 15, Subpart J, of FCC rules. These rules are designed to provide reasonable protection against interference with radio and television reception in a residential installation.

Hewlett-Packard provides instructions for using this computer in manuals covering setup, connection of peripheral devices, operation, service, and technical reference.

Installing and using the computer in strict accordance with the instructions in this manual will minimize the chances that your HP Vectra CS computer will cause radio or television interference. However, Hewlett-Packard does not guarantee that the computer will not interfere with radio and television reception.

If you think your computer is causing interference, turn it off to see if the radio or TV reception improves. If the reception does not improve, your computer is not causing the problem.

To correct interference, take one or more of the following steps:

- Relocate the radio or TV antenna.
- Move the computer away from the radio or television.
- Plug the computer into a different electrical outlet, so that the computer and the radio or television are on separate electrical circuits.
- Make sure that all of your peripheral devices are certified Class B by the FCC.
- Make sure you use only shielded cables to connect peripheral devices to your computer.
- Consult your computer dealer, Hewlett-Packard, or an experienced radio/television technician for other suggestions.
- Order the FCC booklet called *How to Identify and Resolve Radio-TV Interference Problems* from the U.S. Government Printing Office, Washington, D.C. 20402. The stock number of this booklet is 004-000-00345-4.

Warning: Electrical Safety

For the user's safety, the power cords supplied with this product have grounded plugs. The power cords should be used with properly grounded (3-hole) wall outlets to avoid electrical shock. (You can also use multiple-outlet strips that have their own circuit breakers.)

Warning: Batteries

This computer uses lithium batteries, which may explode if mistreated. DO NOT recharge, disassemble, or dispose of in fire. When the battery pack needs replacement (every 3 to 5 years), use only a lithium battery, HP Part No. 45935-60008, available from your Hewlett-Packard dealer. Use of any other battery may present a risk of fire or explosion. (Refer to Appendix B "Changing the Battery" for instructions on replacing the batteries.)

New HP Vectra CS Computer Information

The latest information about your HP Vectra CS computer is provided through *The HP PC Communicator* magazine. A recent copy is included with your system. To stay up-to-date, we recommend that you order a subscription (HP Product Number 45530).

Contents

Chapter 5 Installing Accessory Cards

Chapter 6 Installing Internal Disc Drives

Chapter 7 Replacing the Cover

Read This First

Gather these items and place them in front of you:

- *Purchase Order* (usually attached to the "Vectra CS Personal Computer" box)
- *System Checklist* (located inside the "Vectra CS Personal Computer" box in a plastic packet with other documentation)
- *Setup Inventory Foldout* (located in this binder)

You will refer to these items during the installation process.

1

Setup Order

When going through this manual, this is the order to install or connect things to the computer. You can skip instructions for things you don't have or things that have already been installed for you.

1. When installing things that go inside your computer, you should:
   a. Remove the cover (chapter 2).
   b. Install a coprocessor (chapter 3).
   c. Install a security lock (chapter 4).
   d. Install accessory cards (adapters/interfaces) (chapter 5).
   e. Install an internal hard disc drive (chapter 6).
   f. Install an internal flexible disc drive (chapter 6).
   g. Replace the cover (chapter 7).
2. Connect a display (chapter 8).
3. Connect the keyboard and plug in the computer (chapter 9).
4. Turn on your computer and run the SETUP program (chapter 10).
5. Connect a peripheral (printer, plotter) (chapter 11).
6. Record peripheral information as described at the end of chapter 11.

Note During the course of setting up, you may have to leave this manual to complete some tasks. After completing those tasks, *always return to this manual for further instructions.*

Tools Needed

- Small flat-blade screwdriver.
- Medium flat-blade screwdriver.
- Pen to record setup and peripheral information.

Unpacking

Carefully unpack the box marked "Vectra CS Personal Computer." Don't unpack any other boxes until you are directed to unpack them.

2

Removing the Cover

Who Should Read This Chapter

Look at your purchase order or the boxes that came with your computer. Do you have any of the following items to install in your computer?

- Coprocessor.
- Security lock.
- Accessory cards (adapters/interfaces).
- Internal hard disc drive.
- Internal flexible disc drive.

- **NO.** Skip to chapter 8, "Connecting a Display," in this manual.
- **YES.** Read on.

2 Before Removing the Cover

Are you setting up the computer for the first time?

- **YES.** Skip to the "Removing the Cover" section of this chapter.
- **NO.** Read on.

1. If you have an internal hard disc already installed, be sure to run **Option 3** (Prepare Internal Hard Disc for Moving) of the SETUP program before you begin. (This is described in the *SETUP Program Guide* in this binder.)
2. Turn off your computer and display.
3. Turn off all printers, plotters, disc drives, and other externally attached devices.
4. If you have a security lock installed, turn the key counter-clockwise as far as possible and remove the key.
5. Unplug the computer power cord from the wall outlet.
6. Unplug the display power cord from the wall outlet.
7. Move the display from its position if it is on top of the computer.

Warning **You may damage the computer or injure yourself if you do not unplug the computer and display power cords before removing the cover.**

Removing the Cover

1. Remove the three cover mounting screws at the rear of the computer. Set the screws aside. You will need them when you are ready to replace the cover.

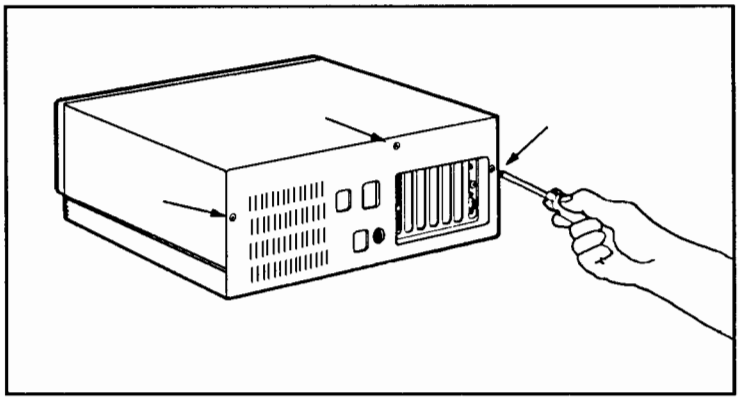

Figure 2-1. Removing the Cover Mounting Screws

2. Remove the cover by pulling it towards the front of the computer and then lifting up.

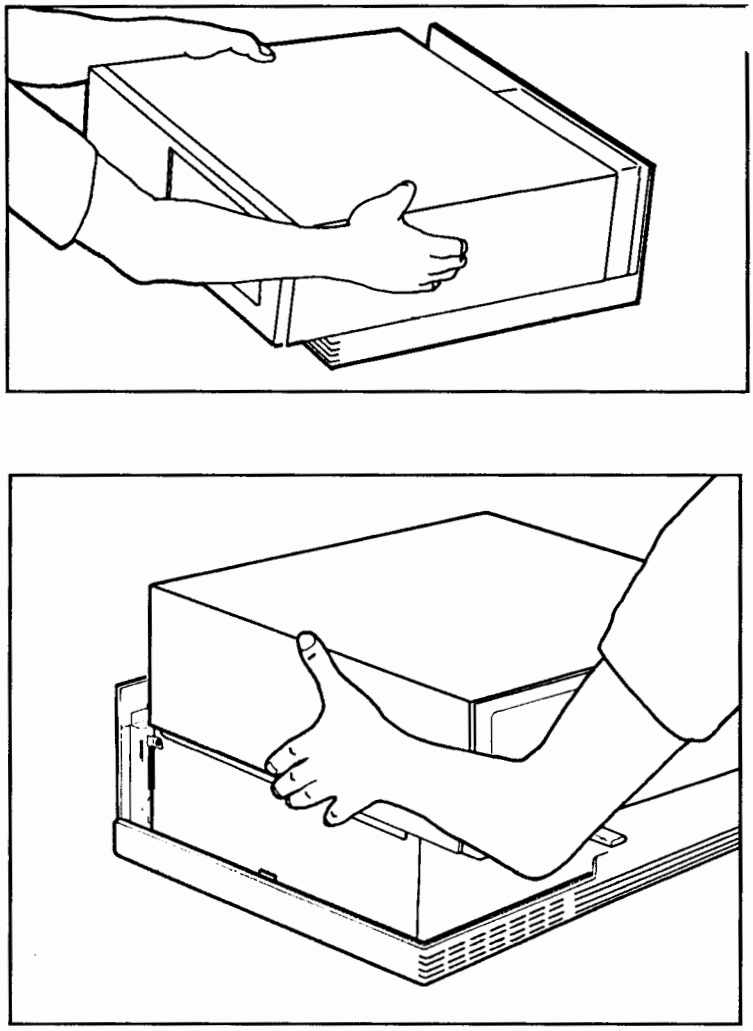

Figure 2-2. Removing the Cover

Removing the Power Switch Shaft

Look at your purchase order or the boxes that came with your computer. Do you have either of the following items to install?

- Coprocessor
- Security Lock

- **NO.** Skip to chapter 5, "Installing Accessory Cards," in this manual.
- **YES.** Read on.

1. Pull the power switch shaft toward you as far as it will go.

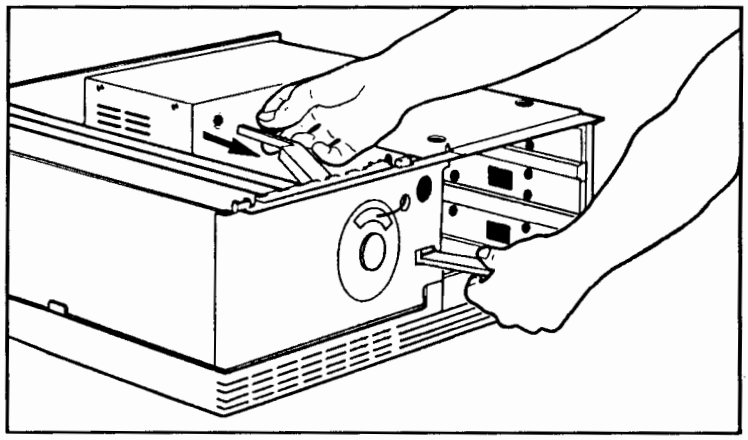

Figure 2-3. Disengaging the Power Switch Shaft

2. With your other hand, grasp the back end of the power switch shaft, lift up, and slide it towards the rear of the computer.

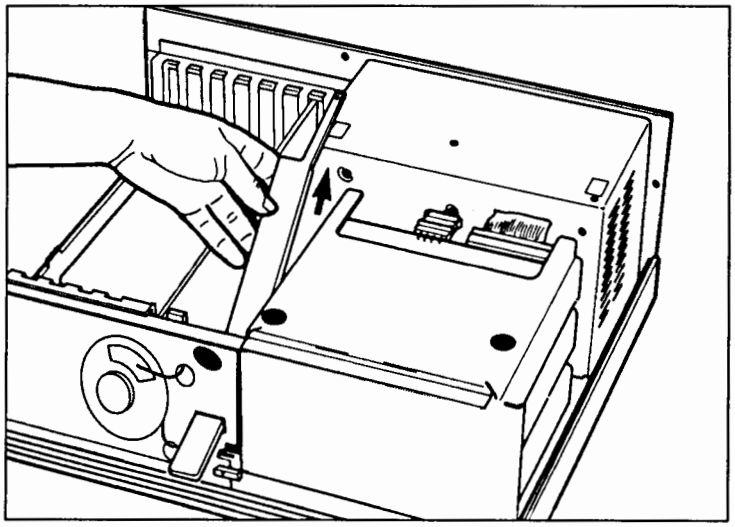

Figure 2-4. Removing the Power Switch Shaft

3. Put the power switch shaft safely aside. You will replace it later.

3

Installing a Coprocessor

Who Should Read This Chapter

Look at your purchase order or the boxes that came with your computer. Do you have a coprocessor to install in your computer?

- **NO.** Skip to chapter 4, "Installing a Security Lock," in this manual.
- **YES.** Read on.

What Should Be Done Already

- The computer should be turned off and unplugged.
- The computer's cover should be removed.
- The power switch shaft should be removed.

Installing a Coprocessor

In your computer, the 40-pin coprocessor chip socket is located in the middle of the processor card, as shown in figure 3-1.

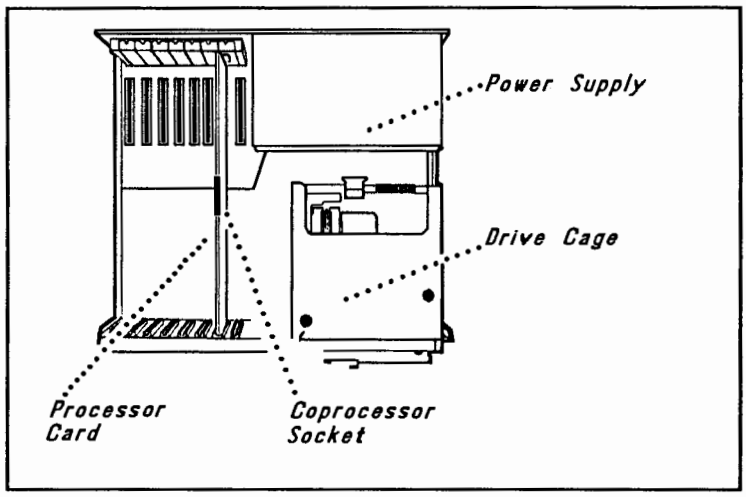

Figure 3-1. Coprocessor Socket Location

Locate the coprocessor chip socket on the processor card. Then install the coprocessor using the manual that came with it. You may need to remove the processor card to install the chip (refer to the procedure in appendix G for instructions to do this). When you are done installing the chip, come back and proceed to the next section, "Recording Information."

Recording Information

Record the fact that you installed a coprocessor in the *Setup Inventory Foldout* in this binder.

4

Installing a Security Lock

Who Should Read This Chapter

Look at your purchase order or the boxes that came with your computer. Do you have a security lock to install in your computer?

- **NO.** Skip to chapter 5, "Installing Accessory Cards," in this manual.
- **YES.** Read on.

What Should Be Done Already

- The computer should be turned off and unplugged.
- The computer's cover should be removed.
- The power switch shaft should be removed.

Installing a Security Lock

1. Insert the security lock barrel (from inside the computer) through the oval hole in the front of the computer's frame as shown below.

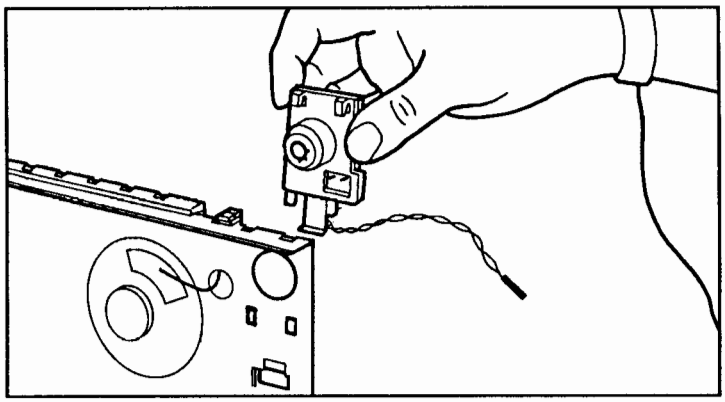

Figure 4-1. Inserting the Security Lock

2. Make sure the four hook-tabs are positioned in their holes in the computer's frame. Then, push down on the security lock assembly.

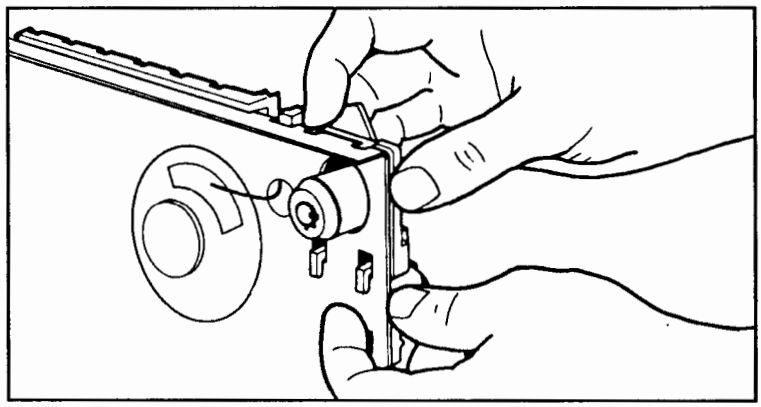

Figure 4-2. Installing the Security Lock

3. To enable you to replace the computer cover later, insert the key into the security lock and turn it counterclockwise to the "cover unlocked" position.

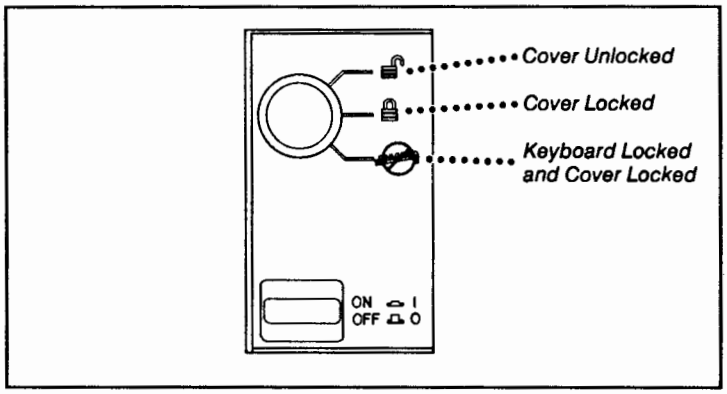

Figure 4-3. Security Lock Positions

4. Plug the security lock wire into the connector pins provided for it on the processor card. Press it firmly into place (if necessary, use a pair of long-nosed pliers to help you). See the following illustration.

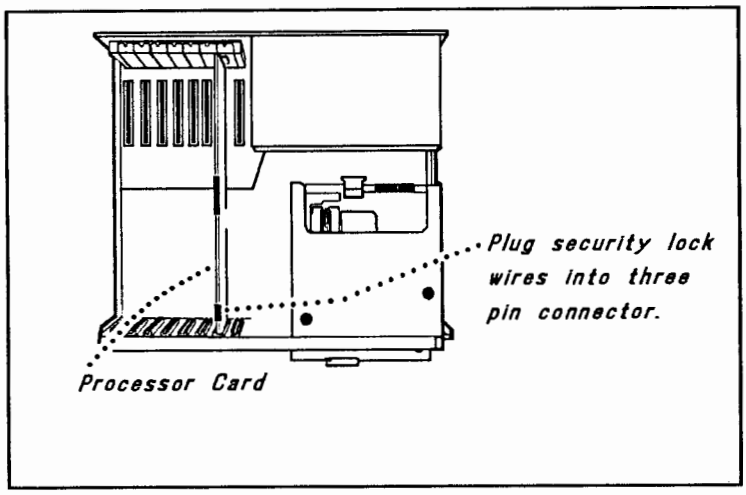

Figure 4-4. Finding the Security Lock Connector

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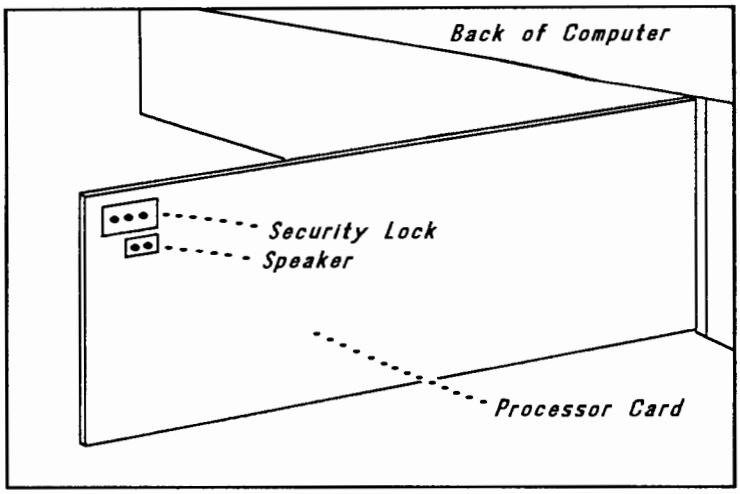


Figure 4-5. Connecting the Security Lock Wire

5. Turn the computer's cover upside down.
6. If a disc drive panel is in place in the computer's cover, remove it by pressing one of the locking tabs and lifting the panel out.

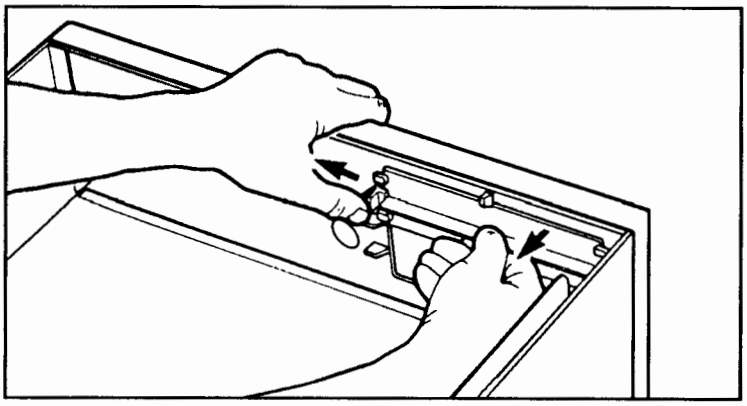


Figure 4-6. Removing the Disc Drive Panel

7. Slide the old power button panel over and lift out as shown in the next illustration. Save it, in case you ever need it again.

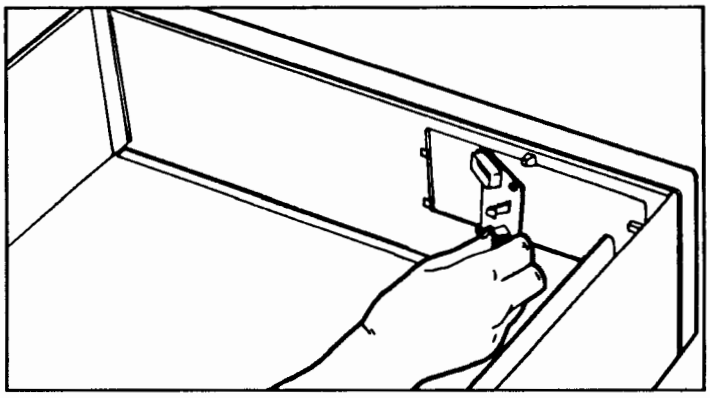


Figure 4-7. Removing the Power Button Panel

8. Slide the new security lock power button panel into place as shown.

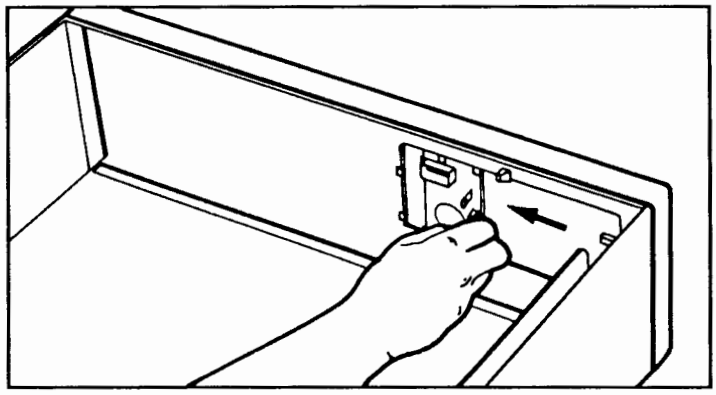


Figure 4-8. Installing the Power Button Panel

9. If you removed the disc drive panel in step 6, replace it as follows:

- Insert the clip on one end of the disc drive panel under the edge of one of the locking tabs in the computer's front panel.
- Press the disc drive panel into place.

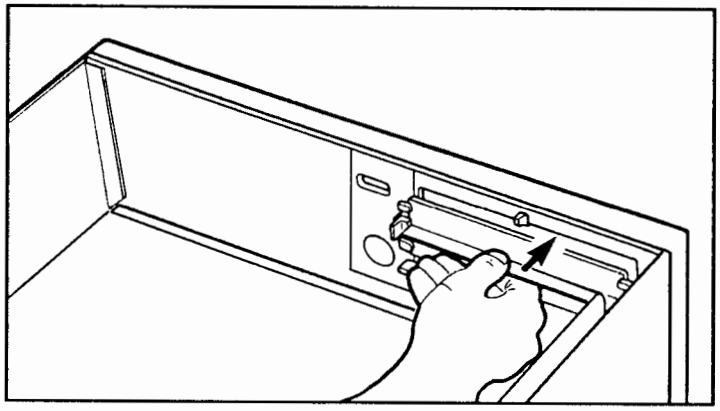


Figure 4-9. Replacing the Disc Drive Panel

Recording Information

Record the following information about your security lock in the *Setup Inventory Foldout* in this binder:

- the serial number on the key (in case you ever need to replace it).

5

Installing Accessory Cards

Who Should Read This Chapter

Look at your purchase order or boxes that came with your computer. Do you have accessory cards (also called "Adapters" and "Interfaces") to install in your computer?

- **NO.** Skip to chapter 6, "Installing Internal Disc Drives," in this manual.
- **YES.** Read on.

What Should Be Done Already

- The computer should be turned off and unplugged.
- The computer's cover should be removed.

Handling Accessory Cards Safely

- **Handle gently.** Do not drop or handle roughly. Take care when unpacking and handling.
- **Protect from static electricity.** Accessory cards contain electrical components that are easily damaged by small amounts of static electricity. Whenever you handle cards:
  - Leave the accessory card in its anti-static bag until you are ready to install it.
  - If possible, use an anti-static wrist strap and a grounding mat such as those included in the Electrically Conductive Field Service Grounding Kit (HP part number 9300-0933).
  - If you don't have a grounding kit, touch any unpainted metal surface of the computer before handling any accessory cards to help discharge static electricity.
  - Before you remove the accessory card from the anti-static bag, touch the surfaces of the bag first to help discharge static electricity.
- When you remove the accessory card from the anti-static bag, handle it only by its edges or by the metal support bracket. **DO NOT TOUCH** the card's gold edge connector(s) or any electrical components.

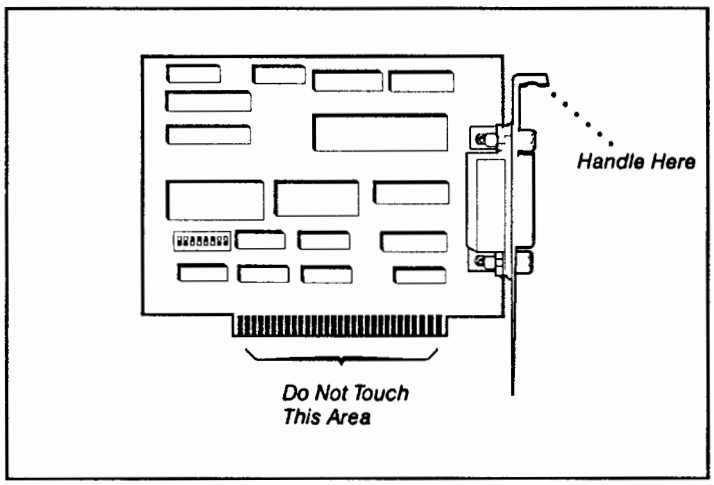


Figure 5-1. Handling Accessory Cards Safely

- If you accidentally touch the edge connectors on a card, clean them before installing the card. Use a clean, lint-free cloth or a disc drive head cleaning swab (cotton tip wrapped in foam) dipped in isopropyl alcohol.
- Save the anti-static bag so you can protect the accessory card if you remove it from the computer.
- Handle cards as little as possible.

Types of Cards

Accessory cards come in several different lengths. Two of the most common are shown in the figure below.

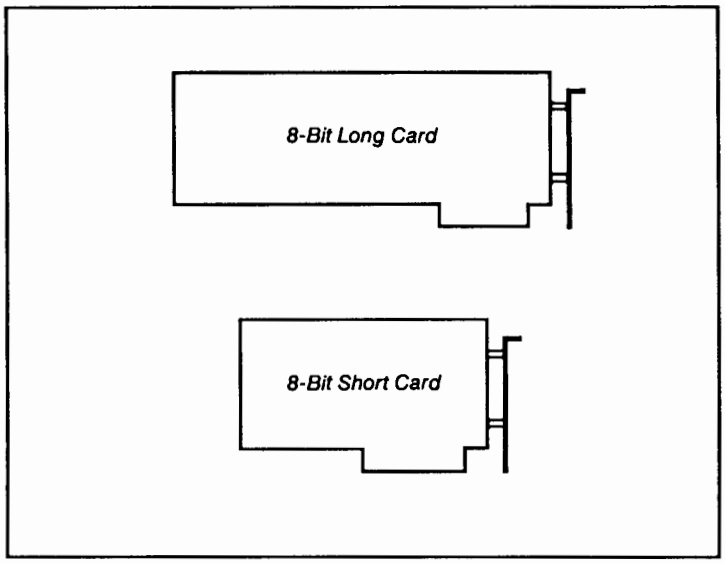


Figure 5-2. 8-bit Accessory Cards

Where Cards Are Installed

Six slots are available in your computer for accessories. Slot 7 is reserved for the processor card, which is installed at the factory. Slot 8 is reserved for an optional HP Hard Disc Controller Card, which is part of an optional hard disc subsystem. The HP Hard Disc Controller Card may have been installed at the factory.

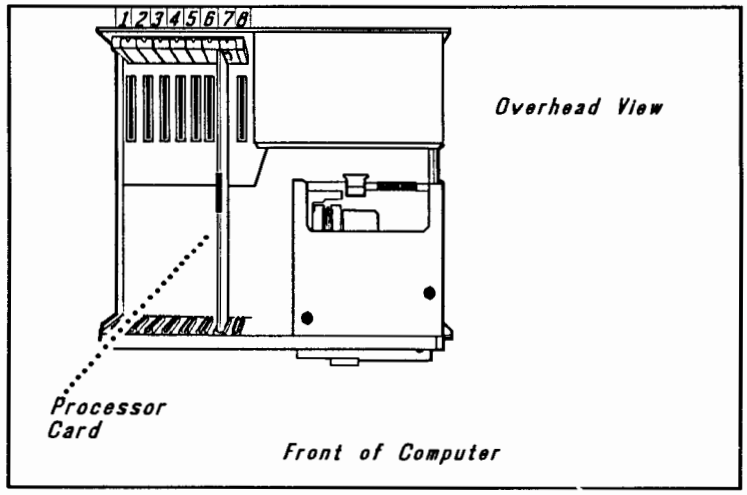


Figure 5-3. Accessory Card Slots

Note The processor card is installed in the seventh slot at the factory. It contains the central processing unit (CPU) and supporting circuitry, including a flexible disc controller, a 9-pin serial connector configured as Serial Port1 (COM1), and a 25-pin parallel connector configured as Parallel Port1 (LPT1).

Card Installation Order

- A video/graphics adapter card must be installed in slot 1.
- Other cards can go in free slots, but try to leave an empty slot between cards to make it easier to connect cables to the cards later.

  Only one parallel port and two serial ports may be used with the Vectra CS personal computer. If you're installing an interface card (such as a dual serial interface card), you must avoid configuring it so that the ports are the same as for the processor card (Serial Port1/COM1 and Parallel Port1/LPT1). If you are unable to change the configuration on your interface card, you can change the configuration on the processor card. To do this, refer to appendix G, "Processor Card."
- As mentioned, the seventh slot is occupied by the processor card.
- The eighth slot is reserved for an HP Hard Disc Controller Card. DO NOT attempt to install any other card in this slot. Refer to the documentation that came with the hard disc to install this card. For additional information on the Hard Disc Controller Card, refer to appendix D, "Overview of Installing an Internal Hard Disc Drive."

Installing Accessory Cards

You are now ready to install your accessory cards. Do you feel you need an overview of how cards are typically installed before you actually install them?

- YES. Read appendix C, "Overview of Installing Cards," in this manual. Then, install your cards using the manual that came with each one. When you are done, proceed to the "Recording Information" section of this chapter.
- NO. Install your cards using the manual that came with each one. Then, come back and proceed to the "Recording Information" section of this chapter.

Note If your card didn't come with a manual, the information presented in appendix C, "Overview of Installing Cards," should help.

Recording Information

Record the following information about the accessory cards in the *Setup Inventory Foldout* in this binder:

- the types of cards you installed (adapter, interface, memory, etc.),
- the slot each card is installed in (1 through 6),
- how the card is configured (if it's an interface card, like a dual serial card, record which is Port1 and which is Port2, etc.). Refer to the manual that came with the card for this information.

Note Be sure to keep the manuals that came with the cards. If they are not already installed in this binder, three-hole punch them and insert them at the back of this binder in the section marked *Accessory Guides*.

6

Installing Internal Disc Drives

Who Should Read This Chapter

Look at your purchase order or the boxes that came with your computer. Do you have any internal flexible disc drives or hard disc drives to install?

- **NO.** Skip to chapter 7, "Replacing the Cover," in this manual.
- **YES.** Read on.

What Should Be Done Already

- The computer should be turned off and unplugged.
- The computer's cover should be removed.

Handling Disc Drives Safely

- **Handle gently.** A one-inch (2.5 cm) drop can destroy a hard disc drive! Take care unpacking and handling during installation.
- **Leave the disc drive as is.** Do not remove the disc drive frame or handle any internal parts.
- **Protect from static electricity.** Disc drives contain electrical components that are easily damaged by small amounts of static electricity. Whenever you handle a disc drive, take the following precautions:
  - Leave the disc drive in its anti-static bag until you are ready to install it.
  - If possible, use an anti-static wrist strap and a grounding mat such as those in the Electrically Conductive Field Service Grounding Kit (HP part number 9300-0933).
  - If you don't have a grounding kit, touch an unpainted metal surface on the computer before installing the disc drive.
  - When you remove the disc drive from the anti-static bag, handle it only by the frame. **DO NOT TOUCH** electrical components.
  - Save the anti-static bag to protect the disc drive if you remove it from the computer.
- **Handle disc drives as little as possible.**

The Disc Drive Cage

The disc drive cage in your computer has three slots available for drives. Internal flexible disc drives can be installed in the top and middle slots of the drive cage. The four illustrations that follow show the most common arrangements. Figure 6-1 shows a flexible disc drive in the top slot, figure 6-2 shows flexible disc drives in both the top and middle slots. Figure 6-3 shows a flexible disc drive in the top slot and a half-height hard disc drive in the bottom slot. Figure 6-4 shows flexible disc drives in the top and middle slots, and a half-height hard disc drive in the bottom slot.

Typical Internal Disc Drive Arrangements

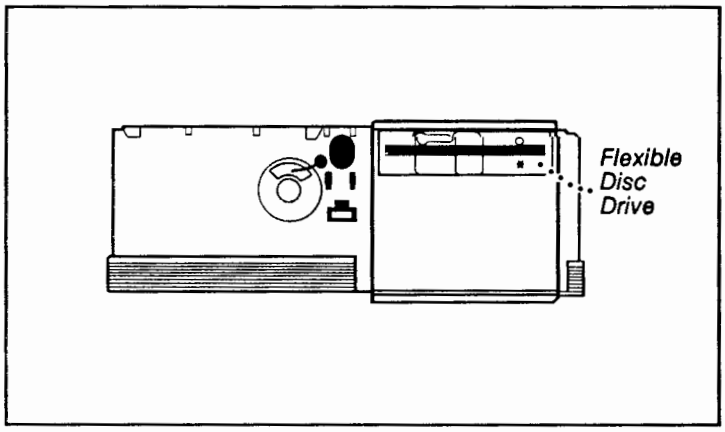


Figure 6-1. One Flexible Disc Drive

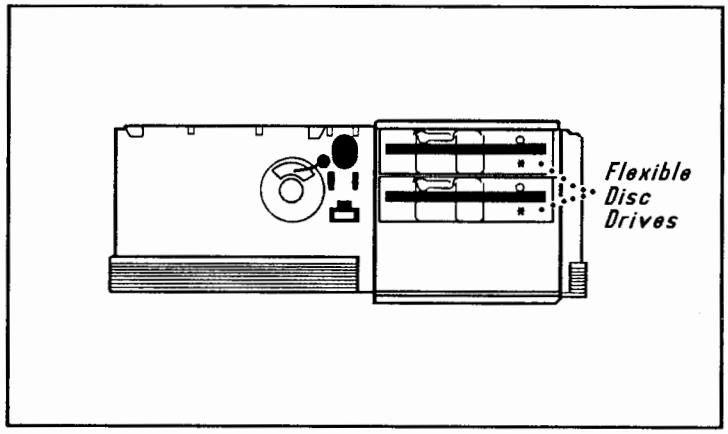


Figure 6-2. Two Flexible Disc Drives

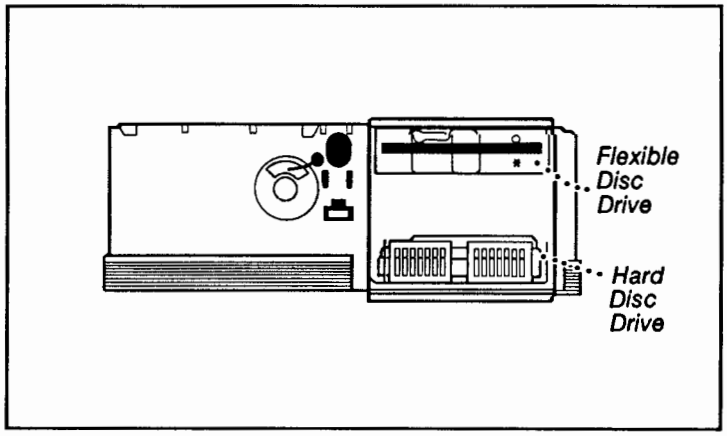


Figure 6-3. One Flexible and One Hard Disc Drive

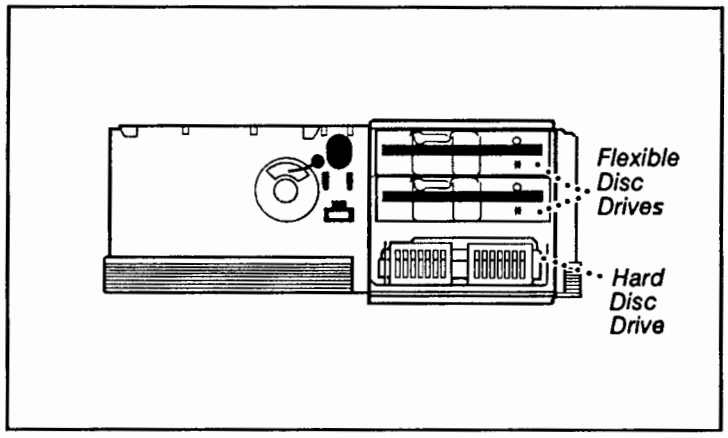


Figure 6-4. Two Flexible and One Hard Disc Drive

Types of Flexible Disc Drives

Two types of flexible disc drives can be used on the Vectra CS computer:

- 360 Kb 5.25-inch drive
- 1.44 Mb 3.5-inch drive

A 360 Kb 5.25-inch drive has a drive lever that you turn down after you insert a flexible disc. In addition, it has an asterisk (*) embossed on the front of it. A 1.44 Mb 3.5-inch drive doesn't have a drive lever; instead, it has an eject button. Also, the flexible disc opening on the 3.5-inch drive is smaller.

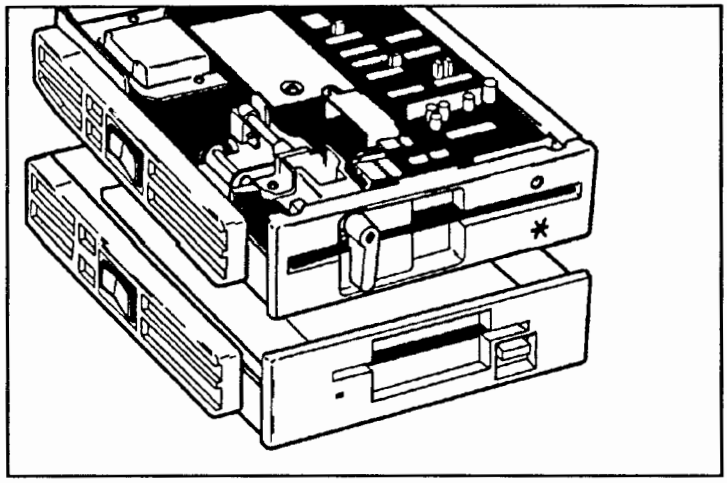


Figure 6-5. The Two Types of Flexible Disc Drives

Internal Disc Drive Installation Order

Your computer comes with a flexible disc drive installed in the top slot. Because of the way internal drives are stacked in your computer's disc drive cage, the order in which you install other internal drives is important. We recommend that you do the following:

1. Remove or partially remove the flexible disc drive from the top slot.
2. If you have a *hard disc drive*, install it in the bottom slot **first.**
3. If you have a second *flexible disc drive*, install it in the middle slot **second.**
4. Reinstall the original flexible disc drive in the top slot.

Installing an Internal Hard Disc Drive

Do you need to install an internal hard disc drive?

- **NO.** Skip to the "Installing an Internal Flexible Disc Drive" section of this chapter.
- **YES.** Read on.

Your computer may come with a hard disc controller. If so, the HP Hard Disc Controller Card is located in slot 8. An optional hard disc drive subsystem may be added later if none was installed at the factory. The hard disc drive subsystem includes both the disc drive and an HP Hard Disc Controller Card. The Hard Disc Controller Card must be installed in slot 8, as slot 8 requires a special mounting bracket.

Do you feel that you need an overview of how an internal hard disc drive is typically installed before you install one?

- **YES.** Read appendix D, "Overview of Installing an Internal Hard Disc Drive." Then, install your hard disc drive using the manual that came with it. When you are done, come back and proceed to the "Installing an Internal Flexible Disc Drive" section of this chapter.

- **NO.** Install your internal hard disc drive using the manual that came with it. Then, come back and proceed to the "Installing an Internal Flexible Disc Drive" section in this chapter.

Note If no manual came with your internal hard disc drive, the information presented in appendix D "Overview of Installing an Internal Hard Disc Drive" should help.

Installing an Internal Flexible Disc Drive

Do you need to install an internal flexible disc drive?

- **NO.** Skip to the "Recording Information" section of this chapter.
- **YES.** Read on.

Do you feel you need an overview of how an internal flexible disc drive is typically installed before you install one?

- **YES.** Read appendix E, "Overview of Installing an Internal Flexible Disc Drive," in this manual. Then, install your flexible disc drive using the manual that came with it. When you are done, come back and proceed to the "Recording Information" section of this chapter.
- **NO.** Install your internal flexible disc drive using the manual that came with it. Then, come back and proceed to the "Recording Information" section of this chapter.

Note If no manual came with your internal flexible disc drive, the information in appendix E "Overview of Installing an Internal Flexible Disc Drive" should help.

Recording Information

Record the following information about the internal drives in the *Setup Inventory Foldout* in this binder:

- the Hard Disc Drive Type of the hard disc drive you installed. It is most likely to be either Type 2 or Type 44. Typically, the hard disc drive type is located on the front of the drive or in the manual that came with it. (The hard disc drive type is NOT the number of megabytes on the drive.)
- the type of internal flexible disc drive you installed

Note A flexible disc drive installed in the top slot of the drive cage is called drive A:; a flexible disc drive installed in the middle slot is called drive B:.

A hard disc drive installed in the bottom slot is called drive C:.

Note Keep the manuals that came with your drives. If they are not already installed in this binder, three-hole punch them and insert them at the back of this binder in the section marked *Accessory Guides*.

7

Replacing the Cover

What Should Be Done Already

- The computer should be turned off and unplugged.
- All internal accessories should be installed.
- Cables inside the computer should be pushed down so they won't get pinched when you replace the cover. If you have a hard disc drive, make sure that the cable used to light the hard disc activity light is connected. If this cable is loose, connect the end of the cable with the light into the end of the tube leading to the activity light; the other end of this cable connects to the Hard Disc Controller Card.

Replacing the Power Switch Shaft

Did you remove the power switch shaft when you installed accessories in your computer?

- **NO.** Skip to the "Replacing the Cover" section of this chapter.
- **YES.** Read on.

1. From inside the computer, use one hand to insert the front end of the power switch shaft through the slot in the computer's front panel.

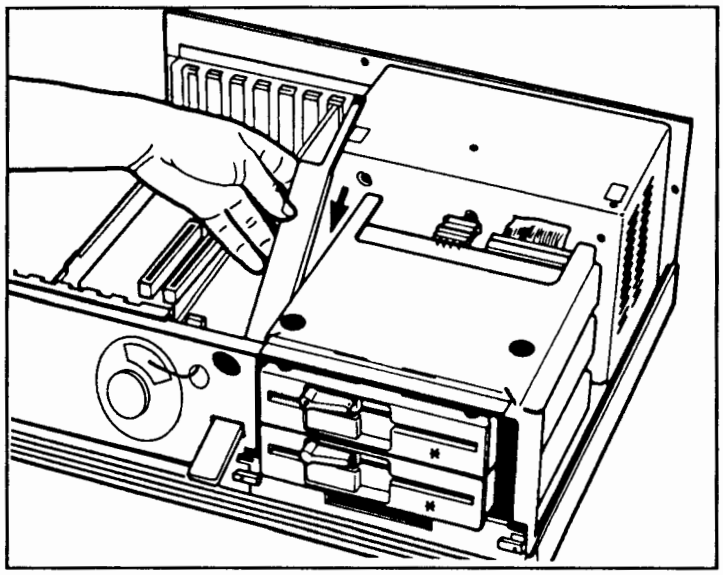


Figure 7-1. Inserting the Shaft in the Front Panel

2. Now insert the back end of the power switch shaft into the square opening in the power supply, and push the shaft in firmly until it clicks into place.

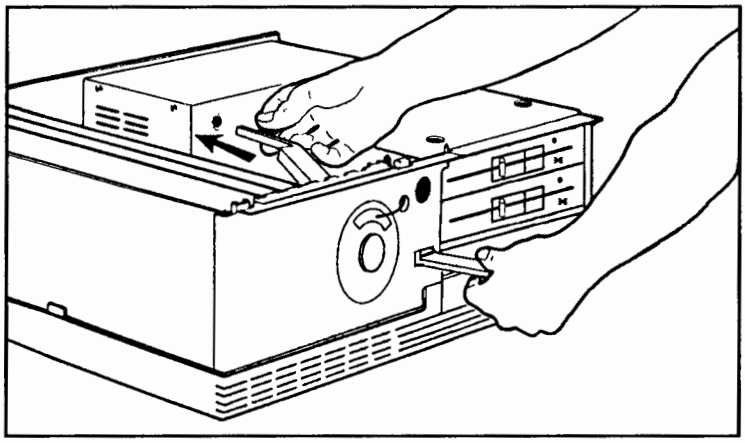


Figure 7-2. Inserting the Shaft in the Power Supply

3. Make sure the power switch shaft is secure (you will feel resistance if you attempt to pull the shaft out again).

   If it's not secure, repeat steps 1 and 2.

Replacing the Cover

Did you install an internal *flexible* disc drive in the middle slot of the disc drive cage?

- **NO.** Skip to step 4.
- **YES.** Read on.

1. Turn the computer's cover upside down and find the disc drive cover panel covering the *middle* slot.

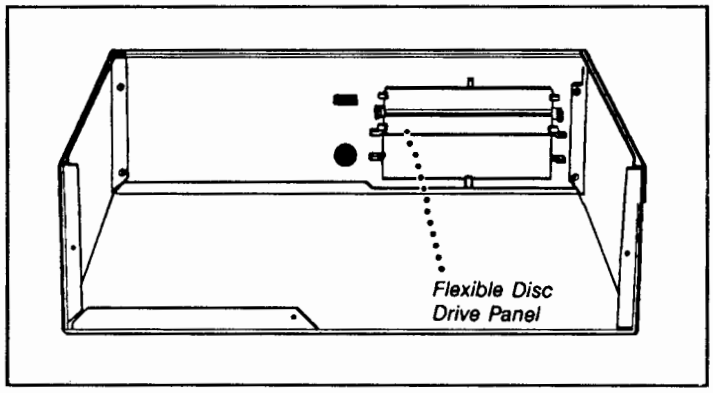


Figure 7-3. Disc Drive Cover Panel

2. Press one of the locking tabs and lift the panel out.

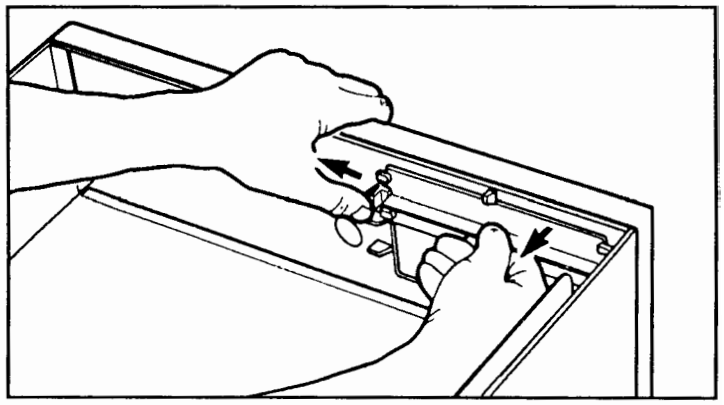


Figure 7-4. Removing the Disc Drive Cover Panel

3. Put the disc drive cover panel safely away. You will need to replace it if you remove the disc drive from the computer.

4. Lower the cover onto the computer so that the back of the cover is about 1 1/2 inches (3.8 cm) from the rear of the computer.

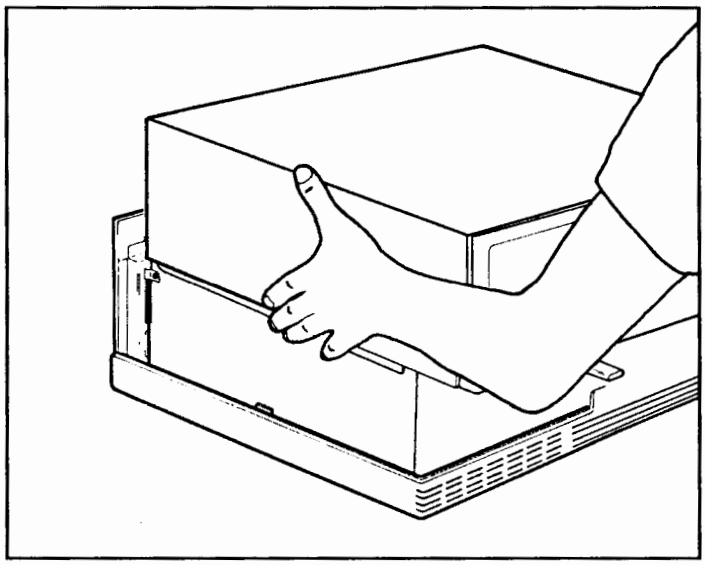


Figure 7-5. Lowering the Cover onto the Computer

5. Push the cover back firmly until it is flush with the back of the computer. (Make sure that the power switch shaft protrudes through the hole provided for it on the front of the cover.)

6. Reinstall the three cover mounting screws.

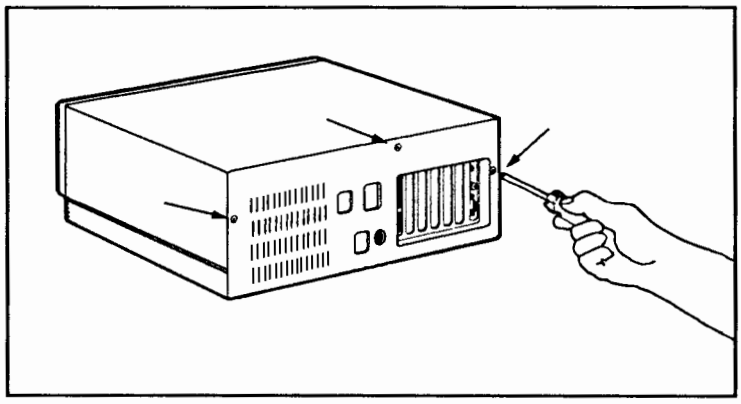


Figure 7-6. Replacing the Cover Mounting Screws

8

Connecting a Display

Who Should Read This Chapter

Do you have a display ("monitor") to connect to your computer?

- **NO.** Skip to the next chapter, "Connecting a Keyboard and the Computer's Power Cord."
- **YES.** Read on.

What Should Be Done Already

- The computer should be turned off and unplugged.
- Any video/graphics adapter card required for the display should be installed in slot 1.

Connecting a Display

You are now ready to connect the display to your computer. Do you feel you need an overview of how displays are typically connected before you actually connect one?

- **YES.** Read appendix F, "Overview of Connecting a Display," in this manual. Then, connect your display using the manuals that came with *both* the display and the video/graphics adapter card. When you are done, come back and proceed to the "Recording Information" section of this chapter.
- **NO.** Connect your display ("monitor") using the manuals that came with *both* the display and the video/graphics adapter card. Then, come back and proceed to the "Recording Information" section of this chapter.

Note If no manual came with your display or video/graphics adapter card, appendix F "Overview of Connecting Displays" should help.

Caution DO NOT PUT PERIPHERALS (PRINTERS, PLOTTERS, ETC.) OR OTHER ELECTRICAL EQUIPMENT ON TOP OF THE DISPLAY! This could result in reliability problems, magnetic interference, or damage to the equipment. We recommend that you keep the top of the display clear at all times.

The Multimode Video Adapter

The Multimode Video Adapter normally emulates the IBM Color/Graphics Adapter (GCA), which has maximum display resolutions of 640 by 200 for graphics and 25 lines for text. When the HP-HIL Accessory Interface is also installed, certain applications can use the Multimode Video Adapter to Display higher resolutions. Drawing Gallery, Charting Gallery, Executive MemoMaker, AdvanceLink, and the HP Terminal Program can then display graphics at a resolution of 640 by 400. AdvanceLink and the HP Terminal Program can show 26 lines of characters (24 for text and two for soft keys).

Recording Information

Record the following information about your display in the *Setup Inventory Foldout* in this binder:

- the type of display you have (monochrome, Multimode, color, EGA, etc.). Write it on the line marked "Primary Display."
- the serial number.

Note Keep the manual that came with the display. If it is not already installed in this binder, three-hole punch the manual and insert it at the back of this binder in the section marked *Accessory Guides*.

9

Connecting the Keyboard and the Computer's Power Cord

Connecting the Keyboard

1. Examine the keyboard cable. The round end plugs into the computer; the other end plugs into the keyboard.

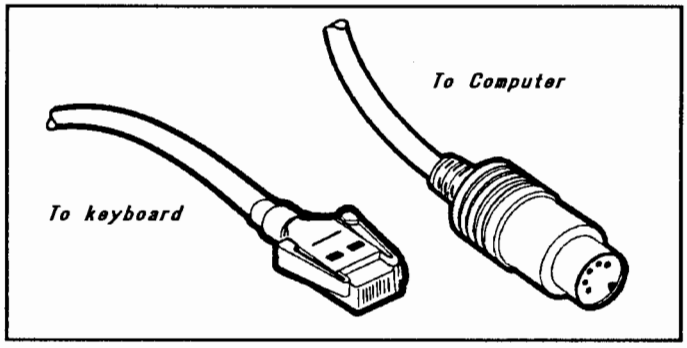


Figure 9-1. The Keyboard Cable

2. Plug the round end of the keyboard cable into the round connector on the back of your computer.

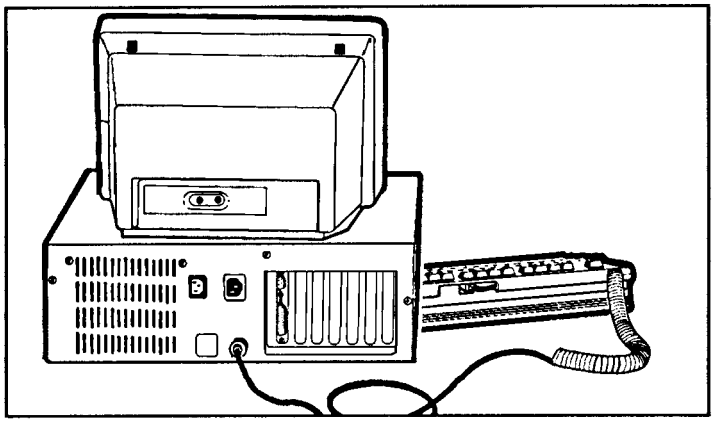


Figure 9-2. Connecting the Cable to the Computer

3. Plug the other end of the keyboard cable into the connector on the back of the keyboard.

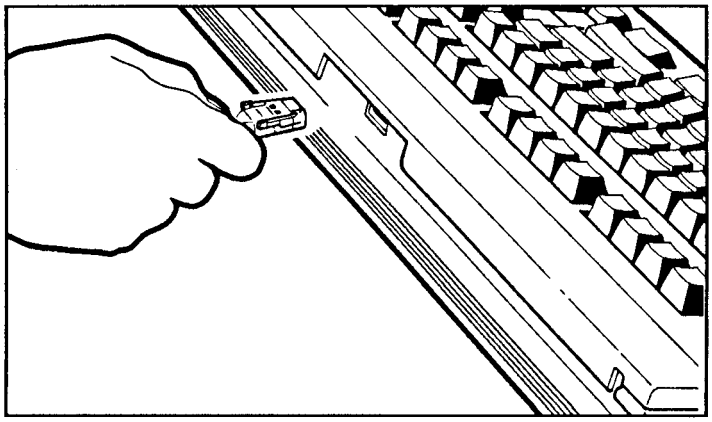


Figure 9-3. Connecting the Cable to the Keyboard

4. Slide the straight section of the cable under the cable retainer and to the right (as you face the rear of the keyboard). Make sure it feeds out the notch at the end of the cable retainer.

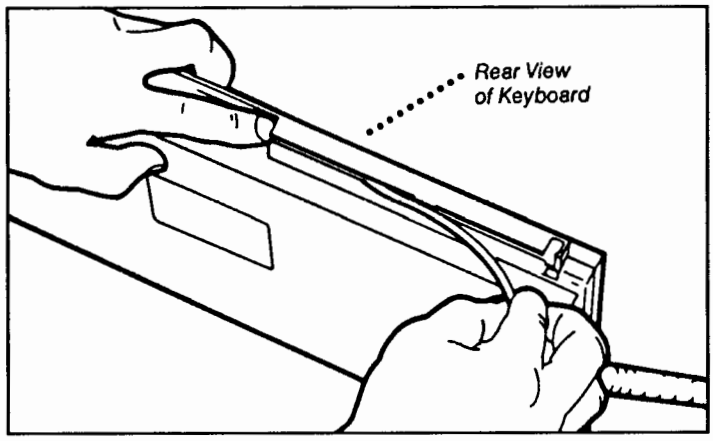


Figure 9-4. Placing the Cable in the Retainer

Computer
Museum

5. Flip out the built-in keyboard stand to tilt your keyboard up for more comfortable typing.

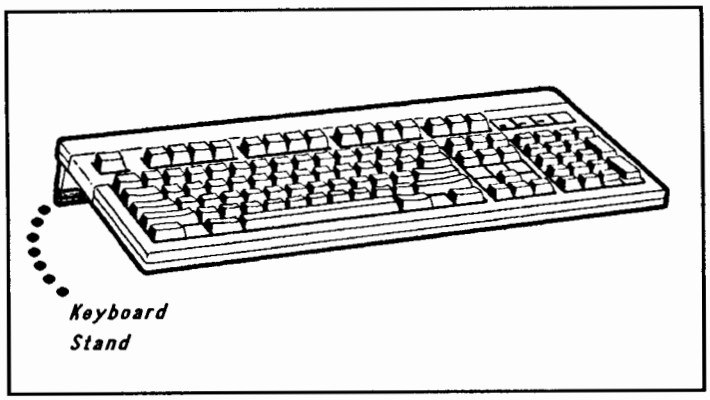


Figure 9-5. Using the Keyboard Stand

If You Have HP Touch

Do you have the HP Touch accessory? (If you don't know, check your purchase order or the boxes that came with your computer.)

- **NO.** Skip to the "Connecting the Computer's Power Cord" section of this chapter.
- **YES.** Read on.

1. If you have not already done so, install the HP-HIL D1171A (Human Interface Link) card using the document that came with it. The HP-HIL interface card must be installed for HP Touch to work.
2. Plug the one-dot end of the HP-HIL cable into the one-dot connector on the back of the display.

3. Plug the two-dot end of the HP-HIL cable into the two-dot connector on the back of HIL card installed in the computer.

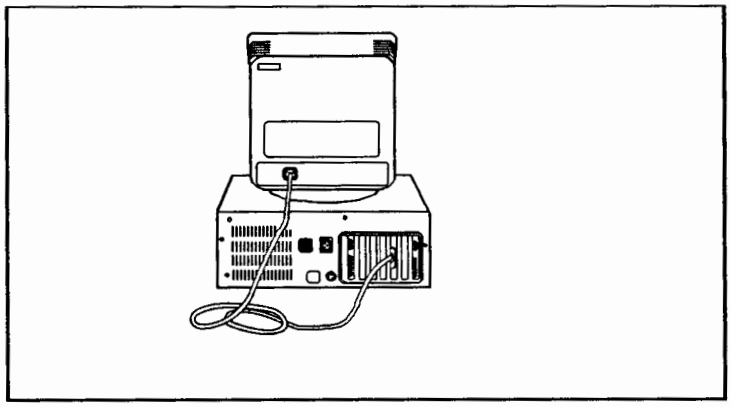


Figure 9-6. Connecting the HP-HIL Cable

Note For information on installing and maintaining HP Touch, refer to the document that came with it.

Connecting the Computer's Power Cord

1. Before connecting the computer's power cord, make sure that:
   a. the computer's cover and the three cover mounting screws are securely tightened.
   b. the keyboard is connected to the computer.
   c. the display's video cable is connected to the computer.
   d. the display's power cord is plugged in.
   e. the display is turned OFF.
   f. the computer is turned OFF (using the button at the front of the computer).
   g. any other devices connected to the computer are turned OFF.

Warning **For your own safety and to avoid damage to the computer:**

- **Use ONLY the power cord that came with the computer.**
- **ONLY plug the power cord into a grounded (three-hole) wall outlet or a multiple-outlet strip that contains a circuit breaker.**
- **NEVER plug in the computer with the cover OFF.**

2. FIRST, connect the computer power cord to the computer.

3. THEN, plug the power cord into a grounded (three-hole) AC outlet (see figure below).

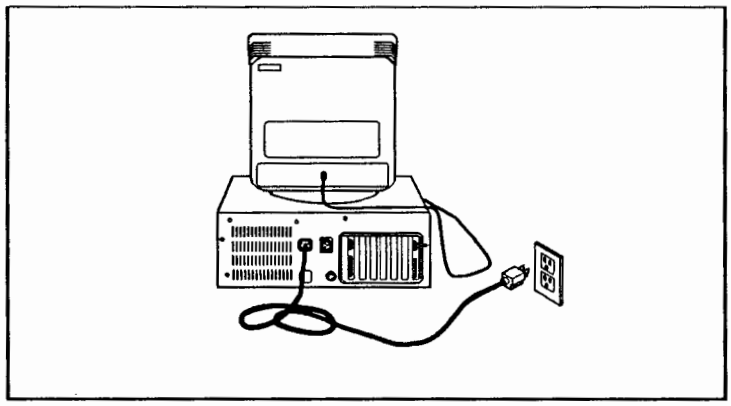


Figure 9-7. Connecting the Computer Power Cord

You are now ready to turn on your computer and configure it with the SETUP program. The SETUP program must be used to initialize a hard disc, if you installed one, and to set the time and date.

10

Turning On the Computer and Running the SETUP Program

What Should Be Done Already

- All setup tasks (such as installing accessories, the display, the keyboard, etc.) should be done as described in the previous chapters.
- The computer and display should be plugged in, but turned OFF.

Turning On the Computer

1. Turn on the display.
2. Remove any cardboard or plastic shipping inserts from the flexible disc drive(s). Do this by rotating the drive lever(s) to the open position or by pressing the eject button and sliding the insert out.
3. *Without* inserting any discs, turn on the computer.
4. The computer's Power-On Self Test runs. If you see an error number 0300 or a flashing icon of a broken computer after the Power-On Self Test, plug in the keyboard or verify that the connection to the keyboard is secure. The icons that may appear after your computer executes its Power-On Self Test are described in appendix H, "Troubleshooting Your Problems."

5. Do you see the ticking clock icon on the screen or an icon that shows a disc being inserted into drive A:?
   - **NO.** Go to "Other Messages and Screens" in this chapter.
   - **YES.** Read on.

What you do next depends on whether your computer has a hard disc or not. Read the next section that best describes your computer (with an internal hard disc or without).

Computers with an Internal Hard Disc

Locate the *Setup Program Guide* in this binder. Read the "Using the SETUP Program Guide" section. Then run Option 4, "Initialize Internal Hard Disc" of the SETUP program. You should also run Option 1, "Set Time and Date."

When you are done, come back and proceed to chapter 11.

Computers without an Internal Hard Disc

Locate the *Setup Program Guide* in this binder. Read the "Using the SETUP Program Guide" section and then run Option 1, "Set Time and Date."

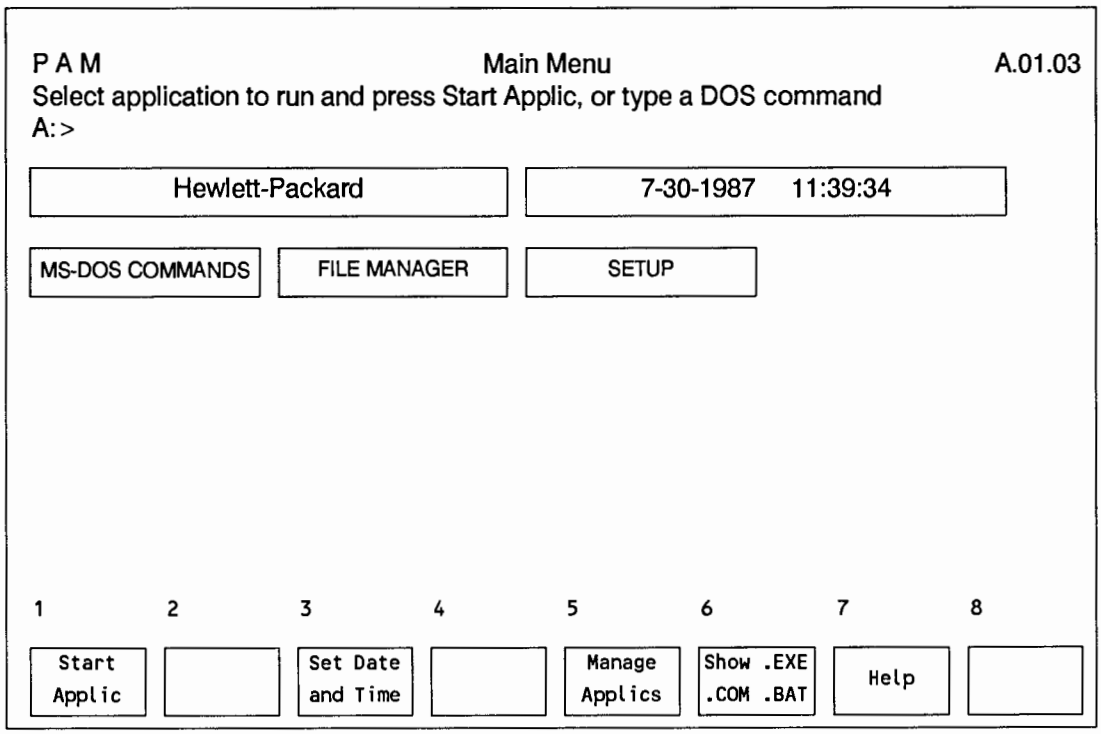
When you are done, come back and proceed to chapter 11.

Other Messages and Screens

If you have an internal hard disc, your dealer may have already prepared it for you to use. If, when you turn your computer on, you see the first screen of your operating system (*MS-DOS* or other), your computer is ready for use. Examples of two typical screens for MS-DOS follow.

Example 1

Your operating system is loaded and you see a screen similar to this:



Your computer is ready for use. If you have a peripheral to connect, proceed to chapter 11. If not, proceed to the *Learning About Your Computer* manual in this binder.

Example 2

Your operating system is loaded and you see a screen similar to this:

```
ROM BIOS (C)Copyright Hewlett-Packard 1987
Compatibility Software (C)Copyright 1984, 1985 Phoenix Software Associates, Ltd.
Version A.01.01

RAM BIOS (c)Copyright Hewlett-Packard 1986, 1987
Compatibility Software (c) Copyright 1985, 1986, 1987 Phoenix Technologies, Ltd.
Version B.01.01

MS-DOS version 3.20
(C)Copyright 1981-1987 Microsoft Corp
Command v3.20 (C)Copyright Microsoft Corp 1981, 1985

A:>
```

Your computer is ready for use. If you have a peripheral to connect, proceed to chapter 11. If not, proceed to the *Learning About Your Computer* manual in this binder.

If you see an error indicator or nothing at all, your computer may have a problem. Read the next section.

If the Computer Doesn't Work

If, after turning on your computer and display and waiting a few minutes, an error indicator appears or there is no error indicator but the computer doesn't work, read through the following:

If an Error Indicator Appears

If an Icon Appears. An icon will be displayed if there is a failure of the Power-On Self Test. Some failures will allow you to continue using the computer; others will not. If an icon is displayed on the screen and will not go away, refer to Appendix H, "Troubleshooting Your Problems," for more information.

For HP Vectra CS personal computers with non-factory installed internal hard discs, the most commonly displayed icon is the icon that instructs you to insert a system disc and then press [F1]. If this occurs, either the computer cannot recognize your internal hard disc or the hard disc has malfunctioned. You should:

- Run Option 4 "Initialize Internal Hard Disc" of the SETUP program.

More information about the SETUP program can be found in the *SETUP Program Guide*. If an error message is displayed, follow the instructions below.

If an Error Message Appears. When you get an error message every time you turn on the computer, do the following:

1. Copy the message on a piece of paper.
2. Turn off and unplug the display and the computer.
3. Refer to the section called "Where To Go for More Help" further on in this chapter.

If No Error Indicator but the Computer Doesn't Work

If the computer does not seem to be working properly and no coded error message appears on the screen:

1. Try adjusting the contrast and brightness controls of the display.
2. Make sure that all cables and power cords are firmly plugged into their proper receptacles.
3. If the computer still doesn't work, turn off the display, the computer, and all external devices. Unplug all power cords and cables, noting or sketching their positions. Then:
   a. Remove the cover.
   b. Check that all accessory cards are firmly seated in their slots.
   c. Check that all cables are connected and firmly attached.
   d. Verify that any switches and jumpers on the cards are properly set (refer to the manuals that came with each card).
   e. Replace the cover.
   f. Replace all cables.
   g. Turn on the display.
   h. Turn on the computer.

Where To Go for More Help

If you have problems during the setup, call the person from whom you bought your computer. You may also refer to the article "Answers to Your Questions" in *The HP PC Communicator* included in an envelope in the PC Starter Kit box.

11

Connecting Peripherals and HP-HIL Input Devices

This chapter provides information for physically connecting peripherals (such as printers and plotters) and HP-HIL input devices (such as the HP Mouse and Graphics Tablet) to your computer.

Do you have a serial (RS-232C), parallel, or HP-IB peripheral, or an HP-HIL input device to connect to your computer?

- **NO.** Skip to the *Learning About Your Computer* manual that is also included in this binder.
- **YES.** Read on.

What Should Be Done Already

- The interface card (HP-HIL, parallel, serial, or HP-IB) should already be installed.

Note If your interface card was installed at the factory, look at the *System Checklist* that came packaged in the "Vectra CS Personal Computer" box to find out what it is and which slot it is in.

- You should have the correct cable to connect between your computer and peripheral (if not, talk to your dealer or HP sales representative about which one you should buy).
- The computer should have passed the Power-On Self Test as described in chapter 10.

11 Connecting Serial or Parallel Peripherals

Are you connecting a serial (RS-232C) or parallel (Centronics type) peripheral (printer or plotter) to your computer? (Check your peripheral manual if you don't know.)

- **NO.** Skip to the "Connecting HP-IB Peripherals" section of this chapter.
- **YES.** Read on.

If you have purchased a dual serial interface card and have installed it in the computer, there are two possible types of connectors on a dual serial interface card:

- 9-pin serial connector
- 25-pin serial connector

The connectors on the dual serial interfac card look like this:

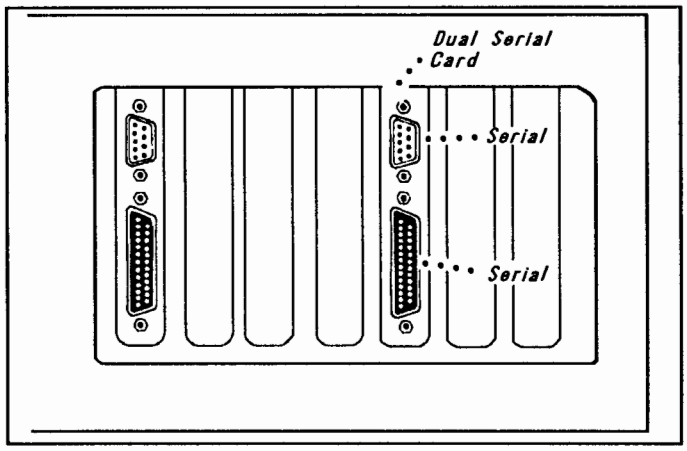


Figure 11-1. Dual Serial Card Connectors

Your computer comes with a processor card in slot 7. This card contains a 9-pin serial connector and a 25-pin parallel connector. The serial connector is configured as Serial Port1 (COM1), and the parallel connector is configured as Parallel Port1 (LPT1).

From the rear of your computer, the connectors on the processor card look like this:

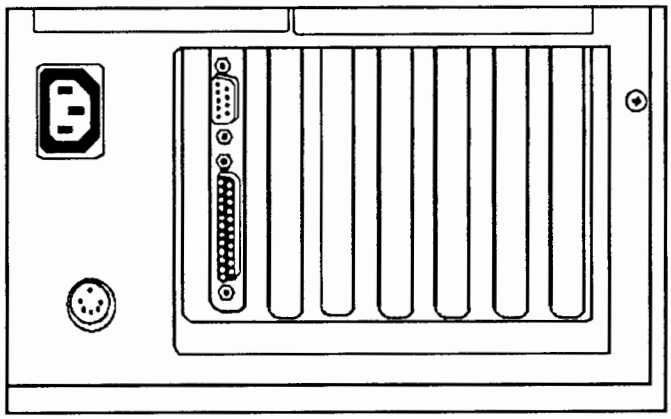


Figure 11-2. Processor Card Connectors

Appendix G, "Processor Card," contains additional information regarding the processor card.

When connecting a peripheral to a serial or parallel connector, be sure you know which connector serial and which is parallel. Also, be sure you know how the connectors are configured, that is, Port1 (COM1), Port2 (COM2), etc. You need to know this information if you have an application program that allows you to select a printer.

Note The manual that comes with your interface card gives you all the information you need to know. If the card was installed at the factory, either look at the *System Checklist* or in the documentation packet that came with your computer for information about the card.

The following two sections show how to connect cables to 9-pin and 25-pin connectors. Read the section(s) that apply to you.

Cabling to a 9-Pin Connector

1. Plug the 9-pin (female) end of the cable into the 9-pin (male) connector at the rear of your computer.

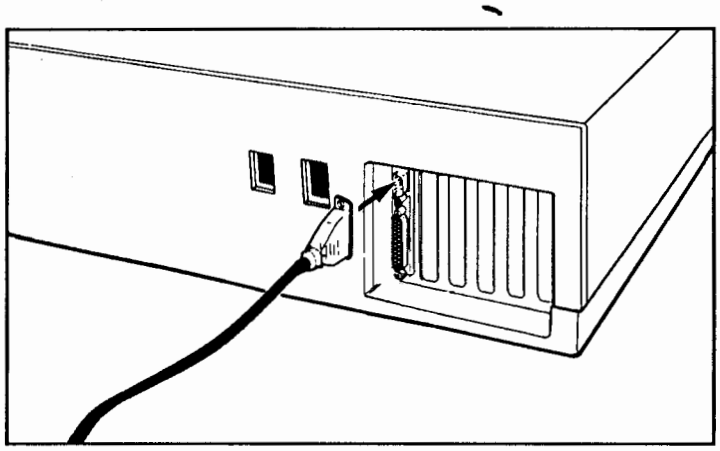


Figure 11-3. Connecting the 9-Pin Cable End

2. Tighten the cable screws to secure it to the computer.
3. Go set up your peripheral using the manual that came with it. Then, connect the free end of the cable to the peripheral. When you are done, come back and proceed to the "Connecting HP- IB Peripherals" section of this chapter.

Cabling to a 25-Pin Connector

1. Plug the 25-pin (male) end of the cable into the 25-pin (female) connector at the rear of your computer.

Caution Some 25-pin serial connectors look exactly like 25-pin parallel connectors. Before plugging the cable into the 25-pin connector at the rear of the computer, check to be sure you are plugging into the right type of connector for your peripheral.

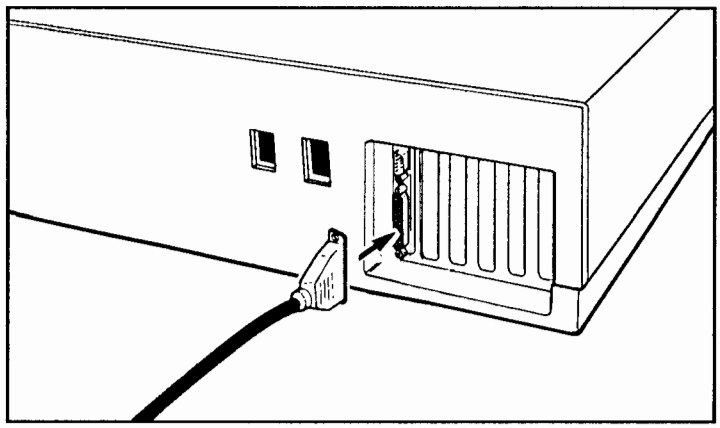


Figure 11-4. Connecting the 25-Pin Cable End

2. Tighten the cable screws to secure it to the computer.
3. Go set up your peripheral using the manual that came with it. Then, connect the free end of the cable to the peripheral. When you are done, come back and proceed to the "Connecting HP- IB Peripherals" section of this chapter.

11 Connecting HP-IB Peripherals

Are you connecting an HP-IB peripheral (printer, plotter, external hard disc, etc.) to your computer? (If you don't know, refer to the manual that came with your peripheral.)

- **NO.** Skip to the "Connecting HP-HIL Input Devices" section of this chapter.
- **YES.** Read on.

There is typically only one connector on a HP-IB (Hewlett-Packard Interface Bus) interface card to which you can cable an HP-IB peripheral. However, some HP-IB accessory cards may not specifically work with printers and plotters. Consult with your dealer or HP sales representative to make sure that you buy the right card for your needs.

When the card is installed, this is what you see at the rear of the computer:

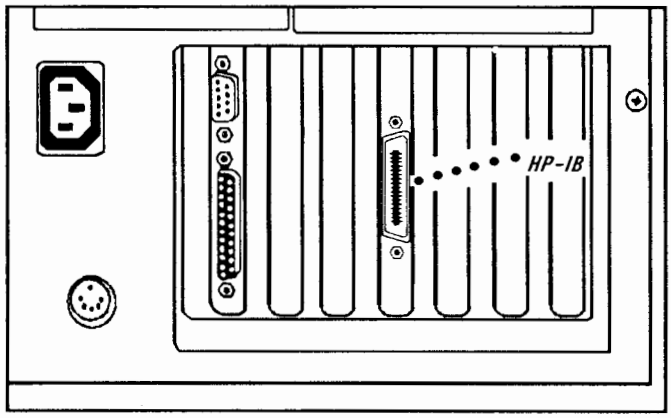


Figure 11-5. HP-IB Interface Card Connector

1. Plug one end of the cable into the connector at the rear of the computer.

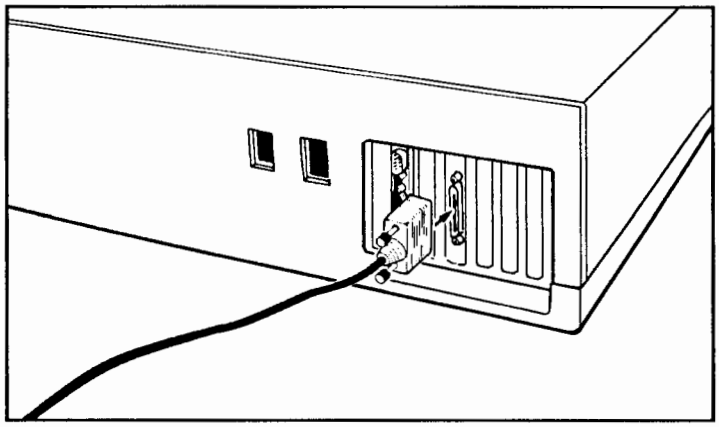


Figure 11-6. Connecting the Cable to the Computer

2. Hand tighten the cable's screws to secure it to the computer. HP-IB peripherals are designed so that you can connect several together in a daisy chain. Typically, you can connect up to seven peripherals together as long as each device has a separate *HP-IB address* (for example, if you have a peripheral set at address 1, then the next device you attach would have to be set to a higher address: 2 or 3 or 4 etc.). The following illustration shows a typical HP-IB daisy chain.

Note Be sure to read the manual that comes with each HP-IB device to find out how to set the *HP-IB address*.

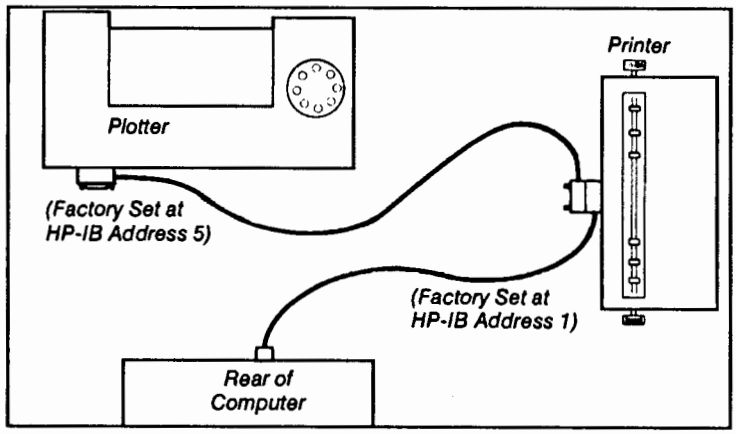


Figure 11-7. Connecting an HP-IB Daisy Chain

3. Go set up your HP-IB peripheral using the manual that came with it. When you are done, come back and proceed to the "Connecting HP-HIL Input Devices" section of this chapter.

Connecting HP-HIL Input Devices

Are you connecting an HP-HIL input device (mouse, graphics tablet, etc.) to your computer? (If you don't know, refer to the manual that came with your peripheral.)

- **NO.** Skip to the "Recording Information" section of this chapter.
- **YES.** Read on.

If you have not already done so, install the HP-HIL D1171A (Human Interface Link) card using the document that came with it.

There are two connectors on a typical HP-HIL device, such as a graphics tablet, to which you may connect (in a link) several HP-HIL input devices.

The two connectors are coded with "dots" such as those shown at the rear of this HP-HIL graphics tablet:

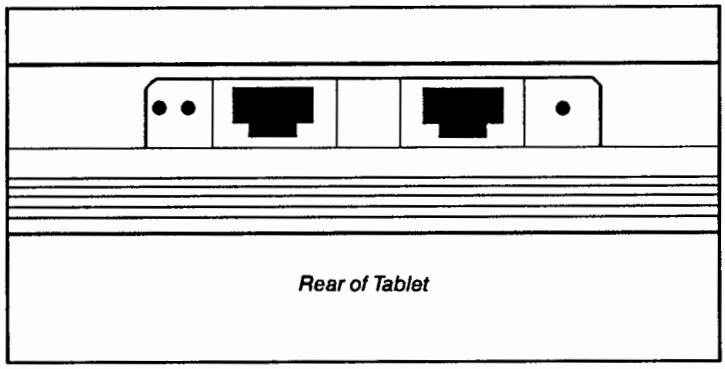


Figure 11-8. Typical HP-HIL Connectors

HP-HIL devices must be connected in a link. Inspect the two ends of an HP-HIL cable and you will find an end with one black dot, and an end with two black dots. The two-dot end is always plugged into the two-dot connector of the device you are linking from, while the one-dot end is always plugged into the one-dot connector of the device you are linking to.

The illustration below shows several HP-HIL devices linked together in a typical fashion:

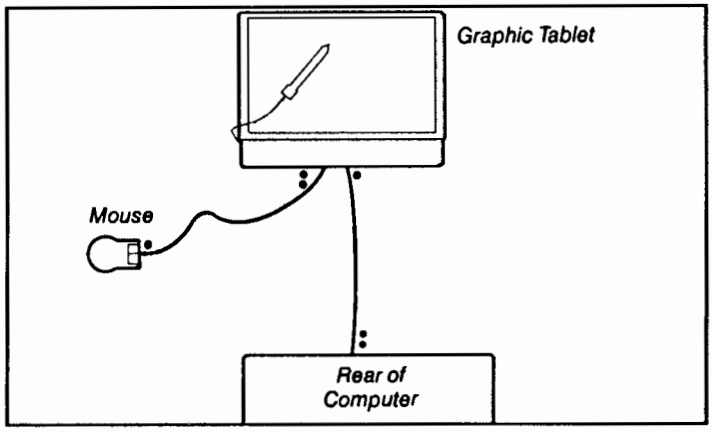


Figure 11-9. Connecting HP-HIL Devices in a Link

To connect an HP-HIL device (figure 12-9 shows a graphics tablet connected to the computer), do the following:

1. Plug the one-dot end of the cable that came with the device into the one-dot connector on the device. (This is the device you are linking to.)
2. Plug the two-dot end of the cable into the two-dot connector on the rear of the HIL card installed in the computer. (This is the device you are linking from.) Then, come back and proceed to the "Recording Information" section of this chapter.

Recording Information

Record the following information about your peripheral(s) in the *Peripheral Inventory Foldout* in this binder:

- the peripheral's model number,
- the peripheral's serial number,
- the interface type (serial, parallel, etc.),
- where the peripheral (primary and secondary) is connected to the computer. For example, your primary serial printer may be connected to the computer at Serial Port1 (COM1) and your secondary serial printer connected at Serial Port2 (COM2). You can find this information in one or more of the following places:
  - your *System Checklist*,
  - your *Setup Inventory Foldout*,
  - the manual that came with your interface card.
- If you connected HP-IB peripherals, what address each is set to.

When you are done, proceed to the next section of this chapter, "A Word About Configuration."

11 A Word About Configuration

Printing or plotting from an application program (like WordStar or Lotus 1-2-3) is only possible when the application, your computer, and your printer or plotter ALL have matching configurations. Since there are a variety of ways to configure your system for printing or plotting, you want to select the way that best suits your needs.

The different ways to get your peripherals working with the computer are explained in the manuals that come with your application program, your peripheral, your interface card, or operating system (*MS-DOS* or other) manuals that come with your computer.

Note When possible, use the specific configuration instructions for the Vectra CS personal computer. If none are present, you may use those for an IBM PC/XT.

Where To Go Next

To learn about care and maintenance of your computer, proceed to appendix A. Then, go to the *Learning About Your Computer* manual, also in this binder, for a description of your computer's basic features.

A

Caring for Your Computer

Your computer is remarkably sturdy, but reasonable care and periodic maintenance will assure a long and trouble-free life.

The biggest enemies of your computer are dust and cigarette smoke. You should keep your computer in a relatively dust and smoke-free environment. If your work area is excessively dusty, cover your computer when you aren't using it. It's also a good idea to wipe the display's screen regularly with a soft static-free cloth to remove dust build up. Try to keep the keyboard free of dust as well.

Other enemies to be aware of are static electricity and power surges. An anti-static mat under your chair is usually sufficient protection against static electricity. If your power supply is subject to fluctuations, you should consider obtaining a surge protector. These items are available at most computer stores.

A

B

Changing the Battery Pack

The batteries in your computer keep the accurate date and time, even when your computer is turned off.

When your batteries wear out (every 2 to 3 years), the ticking clock icon will be displayed on your screen when you turn on the computer.

You can continue to use your computer with bad batteries, but you will have to run the SETUP Program each time you turn your computer on to reset the clock. Normally, you should change your batteries as soon as they wear out.

Warning **Your computer uses lithium batteries, which may explode if mishandled. DO NOT recharge or disassemble them, and DO NOT dispose of them by burning. Also, when the batteries need replacement, use only lithium batteries (HP part number 45935-60008), available from your dealer or HP sales representative. Use of any other batteries risks explosion or fire.**

To change the battery pack, follow the steps below.

1. Remove both the cover and the power switch shaft as described in chapter 2, "Removing the Cover."
2. Refer to the section called "Handling Accessory Cards Safely" on pages 5-2 and 5-3 of this manual for precautions that can prevent accidental damage to the card.
3. Remove the screw that holds the processor card in slot 7. If a card or a slot cover is installed in slot 6, remove it after first removing its retaining screw.

4. Remove the flexible disc drive connector from the processor card. Move the connector and cable out of the way.
5. Disconnect the speaker cable from its two-pin connector. Also remove the keylock cable (if a security lock is installed) from its three-pin connector.
6. Remove the processor card from slot 7 by first reaching in and gently disconnecting it from its socket and then lifting the card upward.
7. Press down on the plastic latch at the top of the battery holder. Then, lift up on the battery holder to detach it from the side of the power supply.

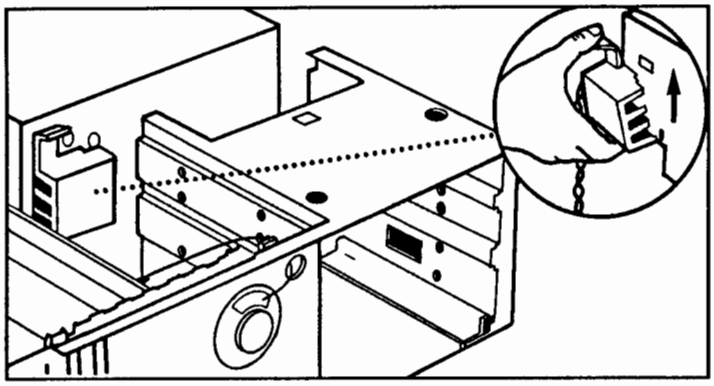


Figure B-1. Detaching the Battery Holder

8. Press the connector locking clip outward and pull up firmly on the battery wire connector. This will disconnect the battery wires from the processor card.

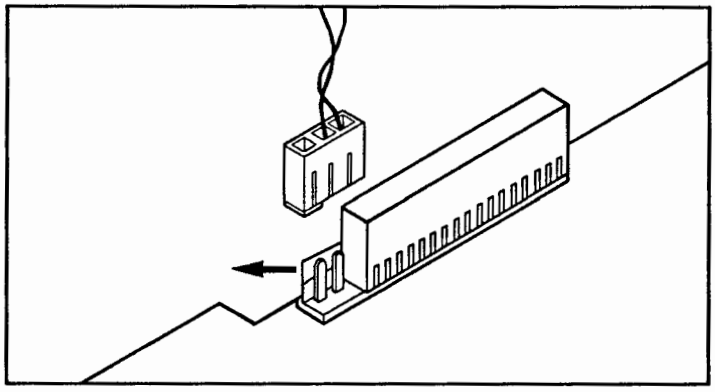


Figure B-2. Disconnecting the Battery Wires

9. Remove the old battery pack from the battery holder.
10. Insert the new battery pack into the battery holder. Make sure the battery pack label faces in.

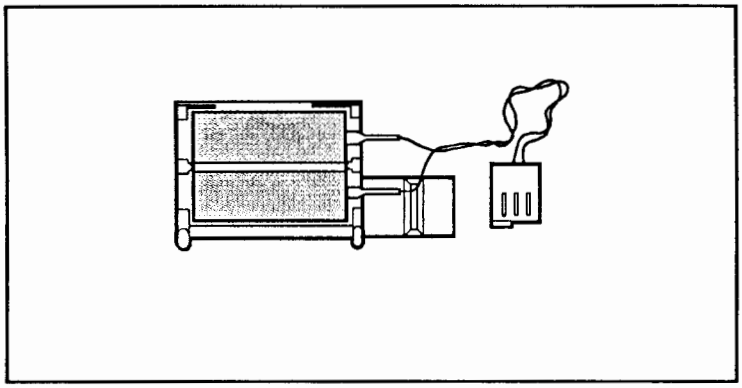


Figure B-3. Replacing the Battery

11. Reconnect the battery wires to the processor card. The connector attaches to the two pins at the end of connector J-5.

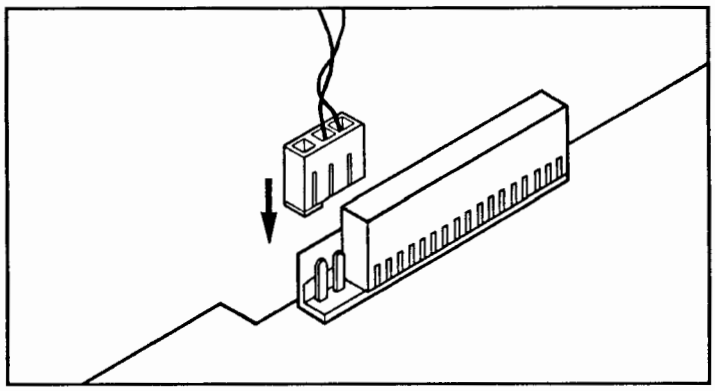


Figure B-4. Reconnecting the Battery Wires

12. Reattach the battery holder to the side of the power supply.

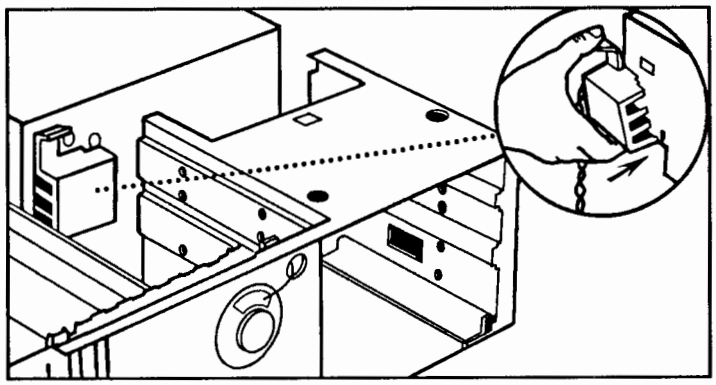


Figure B-5. Reattaching the Battery Holder

13. Reinstall the processor card in slot 7.
14. Reinstall any card or slot cover you removed from slot 6.
15. Reconnect the flexible disc drive connector.
16. Reconnect the speaker cable. Also reconnect the keylock cable, if it was removed.
17. Reinstall the screw that holds the processor card in place.
17. Replace both the power switch shaft and the cover as described in chapter 7, "Replacing the Cover."
18. Run Option 1, "Set Time and Date" of the SETUP Program. The SETUP Program is described in the *SETUP Program Guide* in this binder. The information you need to run Option 1 is located in the *Setup Inventory Foldout* or the *System Checklist*.

C

Overview of Installing Cards

Note REMEMBER, THE FOLLOWING IS AN OVERVIEW. DO NOT USE THIS OVERVIEW AS A REPLACEMENT FOR THE SPECIFIC INSTRUCTIONS THAT COME PACKAGED WITH EACH ACCESSORY CARD!

1. Remove the slot cover screw and slot cover. (Save the screw to secure the accessory card after installation.)

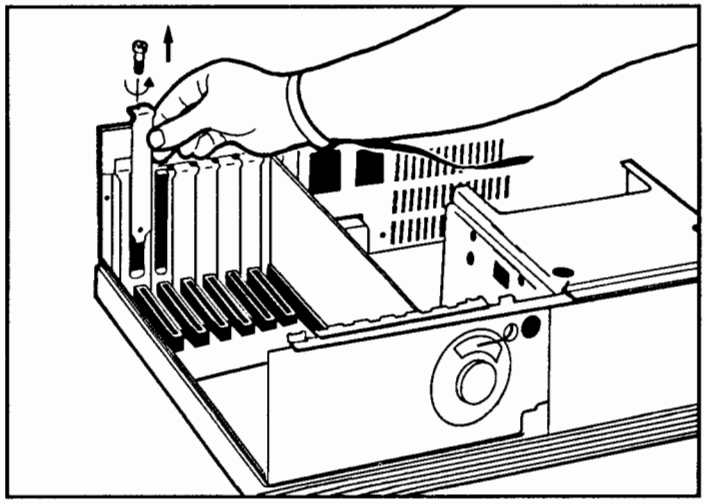


Figure C-1. Removing the Slot Cover

2. Check the card's jumpers and switches as explained in the manual that came with the card to be sure they are set correctly.
3. Align the card with the slot in the computer by aligning the end of the card (with the metal piece attached) with the accessory slot you have chosen for the card. If you have a long card, align the other end with the computer's plastic card guide.

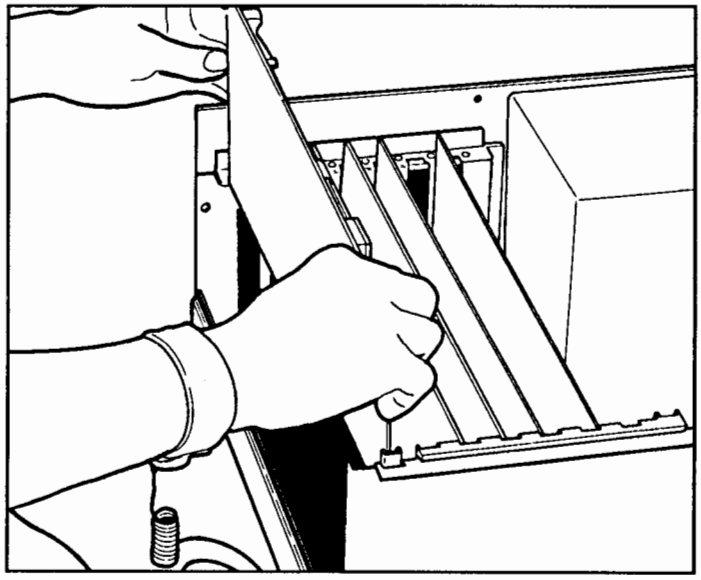


Figure C-2. Aligning the Accessory Card

Note The installation of some accessory cards can be hindered by the card guides in the accessory slots around them. If you encounter a problem while installing an accessory card, remove the necessary card guide(s) in the following manner:

a. Use pliers to grasp the middle of the card guide and gently pull it toward you.

b. At the same time, put your finger on the bottom of the card guide and push up.

c. Save the card guide in case you need it later.

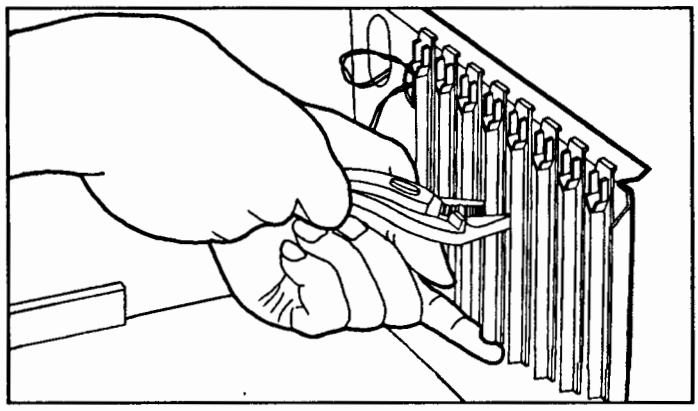
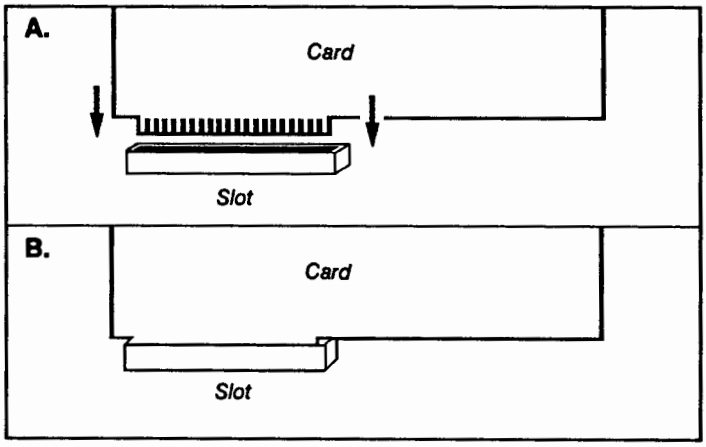


Figure C-3. Removing a Card Guide

4. Press the card down firmly so that the card's gold edge connector **completely** engages with the computer's slot.



C

Figure C-4. Plugging in the Accessory Card

5. Secure the card with the screw that you removed earlier.

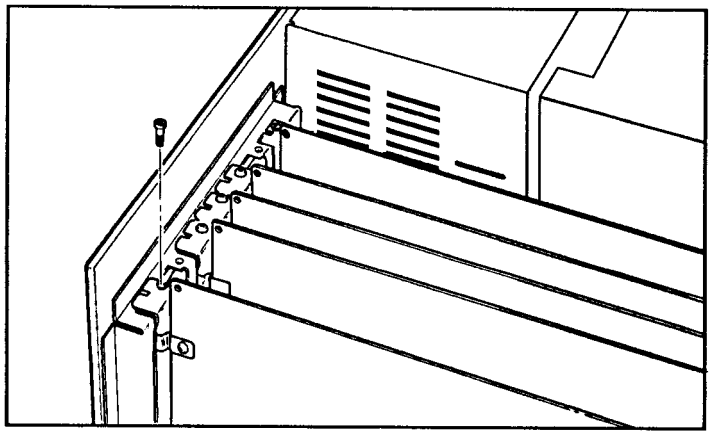


Figure C-5. Replacing the Slot Cover Screw

Install your cards now. Then record information about them as described in the "Recording Information" section of chapter 5.

D

Overview of Installing an Internal Hard Disc Drive

Note REMEMBER, THE FOLLOWING IS AN OVERVIEW. DO NOT USE THIS OVERVIEW AS A REPLACEMENT FOR THE SPECIFIC INSTRUCTIONS THAT COME PACKAGED WITH EACH HARD DISC DRIVE!

If you have an internal hard disc drive to install, you must install it in the bottom slot of the disc drive cage.

1. If the cover is not removed, use the instructions in chapter 2 of *"Setting Up Your Computer,"* to remove the cover.
2. If you have not already done so, install the HP Hard Disc Controller Card using the document that came with it. Refer to chapter 5 for information regarding the installation of accessory cards in the Vectra CS computer. Notice the cable arrangement used to light the hard disc activity light. The end of the cable with the light fits into the end of a tube leading to the activity light; the other end of this cable connects to the HP Hard Disc Controller Card.

3. Remove the disc drive cover panel from the bottom slot of the disc drive cage. (The panel will be reinstalled later.)

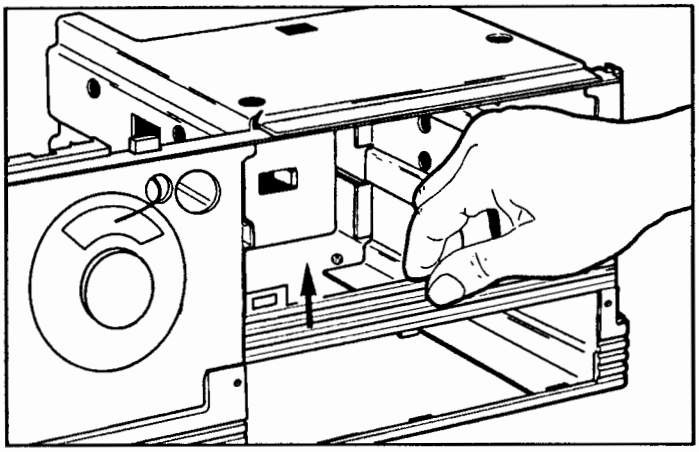


Figure D-1. Removing the Disc Drive Cover Panel

4. Press in the two locking tabs on the side of the flexible disc drive and slide the flexible disc drive 1/4 of the way out of the *top* slot.

D

Caution Handle the hard disc drive with care, as a one-inch (2.5 cm) drop can destroy a hard disc drive!

---

5. Slide the hard disc drive (holding it upright and by its front end) 3/4 of the way into the *bottom* slot.

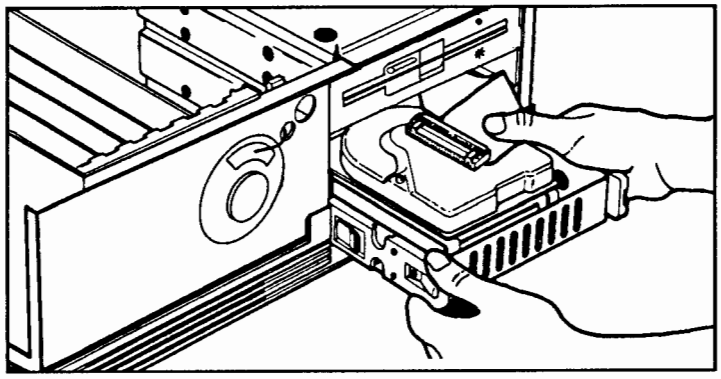
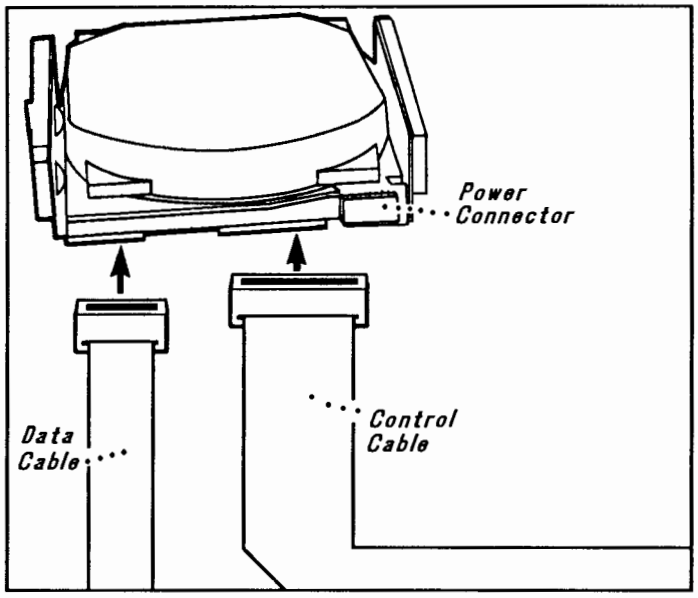


Figure D-2. Inserting the Drive in the Bottom Slot

6. Detach the data cable from the flexible disc drive by removing the connector from the back of the flexible disc drive. Move the data cable out of the way.

7. Plug both the data cable (wide cable) and the control cable (narrow cable) into the rear of the hard disc drive.



D

Figure D-3. Connecting Cables to the Drive

8. Plug any one of the computer's three drive power cables into the rear of the hard disc drive. Push the connector in gently to avoid flexing the card.

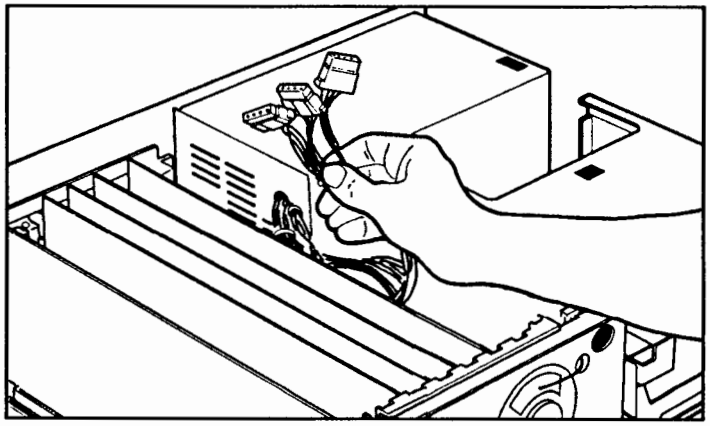


Figure D-4. Internal Drive Power Cables

9. Reconnect the data cable for the flexible disc drive.
10. Gently slide both the hard disc drive and the flexible disc drive all the way into the drive cage. They should snap into place.
11. Reinstall the disc drive cover panel.
12. Detach the data cable that goes to the top of the processor card and move it out of the way.

13. Install the connectors for both the data cable and the control cable onto the HP Hard Disc Controller Card.

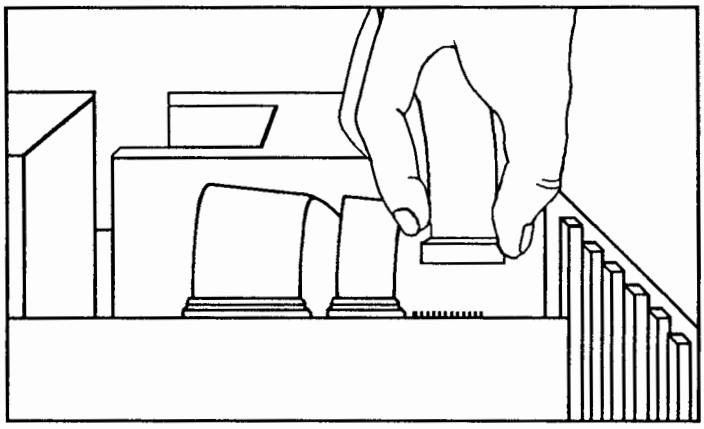


Figure D-5. Connecting Cables to the Controller Card

14. Gently slide the card into slot 8, next to the processor card.
15. Install the screw that holds the HP Hard Disc Controller Card into place.
16. Replace the data cable that goes to the processor card.
17. Reinstall the cover, following the instructions in chapter 7, *Replacing the Cover*.
18. Initialize your hard disc drive now by following the instructions in chapter 4 of the *SETUP Program Guide*. Then, record information about it in the "Recording Information" section of chapter 6 of this manual.

E

Overview of Installing an Internal Flexible Disc Drive

Note REMEMBER, THE FOLLOWING IS AN OVERVIEW. DO NOT USE THIS OVERVIEW AS A REPLACEMENT FOR THE SPECIFIC INSTRUCTIONS THAT COME PACKAGED WITH EACH FLEXIBLE DISC DRIVE!

Your computer comes with an internal flexible disc drive installed in the top slot of the disc drive cage. If you have a second internal flexible disc drive to install, you must install it in the middle slot of the drive cage.

1. If the cover is not removed, use the instructions in chapter 2 of *"Setting Up Your Computer,"* to remove the cover.
2. Slide the flexible disc drive 1/4 of the way out of the *top* slot of the disc drive cage.
3. Detach the data cable from the flexible disc drive by removing the connector from the back of the flexible disc drive. Move the data cable out of the way.

4. Side the second drive 3/4 of the way into the *middle* slot.

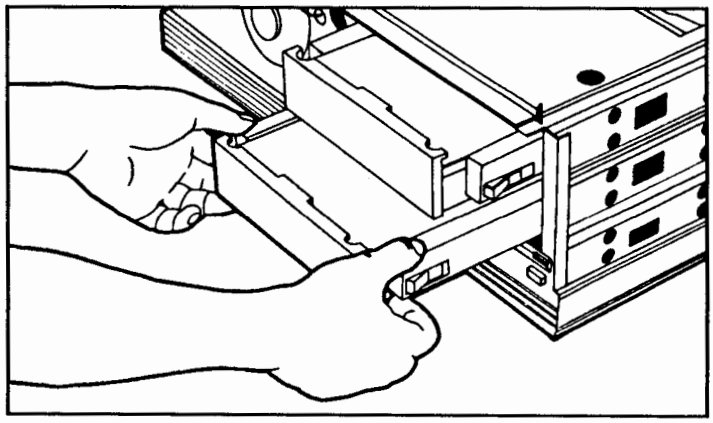


Figure E-1. Inserting the Drive into the Middle Slot

5. Plug the middle connector on the internal flexible disc drive data cable into the rear of the second drive.

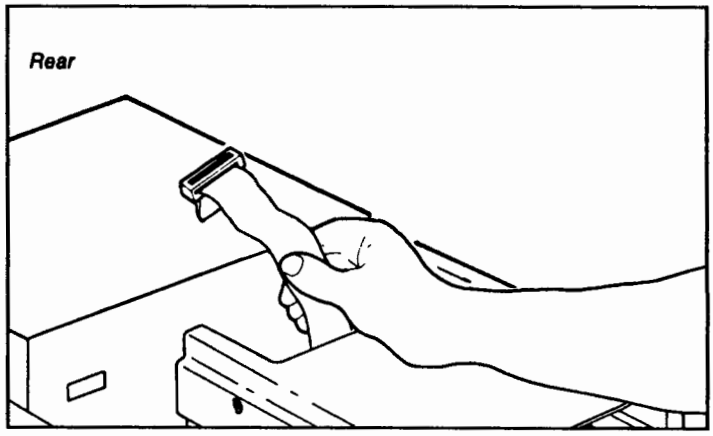


Figure E-2. Internal Flexible Disc Drive Data Cable

E-2 Overview of Installing an Internal Flexible Disc Drive

6. Plug any one of your computer's three drive power cables into the rear of the second drive.

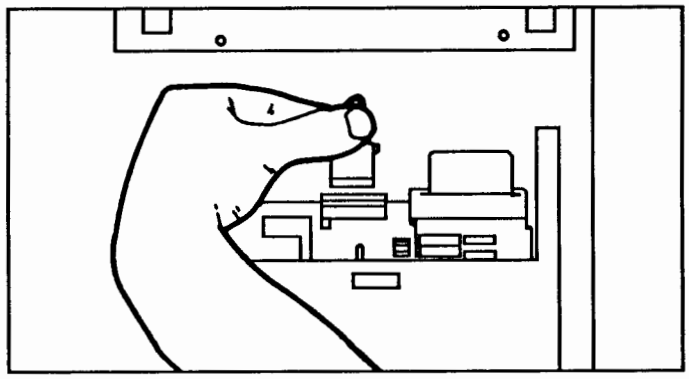


Figure E-3. Internal Drive Power Cables

7. Connect the top connector of the data cable to the rear of the first drive in slot 1.
8. Slide both flexible disc drives all the way into the drive cage. They should snap into place.

9. Replace both the power switch shaft and the cover as described in chapter 7, "Replacing the Cover."

10. Remove the second drive's shipping insert by rotating the drive's lever to the open position or pressing the eject button and sliding the insert out.

Caution If you turn on your computer without first removing the drive's shipping insert, you can damage the drive.

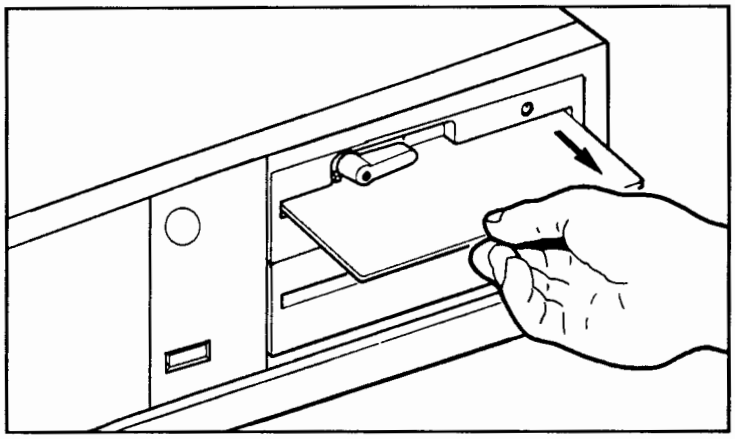


Figure E-4. Removing the Drive's Shipping Insert

Record information about the second flexible disc drive in the "Recording Information" section of chapter 6.

Overview of Connecting a Display

Note REMEMBER, THE FOLLOWING IS AN OVERVIEW. DO NOT USE THIS OVERVIEW AS A REPLACEMENT FOR THE SPECIFIC INSTRUCTIONS THAT COME PACKAGED WITH EACH DISPLAY AND VIDEO/GRAPHICS ADAPTER CARD!

1. Unpack the display.
2. Put the display on top of the computer, or on a flat sturdy surface. (Keep the top of display clear for air to flow through the ventilation holes.)
3. Many displays have a voltage select switch that can set the display for either 115 volts (used in the U.S. and Canada) or 230 volts (used in Europe). If your display has a switch, set it to your local voltage as described in the manual that came with your display.
4. Find the display's video cable. Some displays have video cables already attached, some do not. If yours does not, the instructions that came with the display shows you where to plug it in.

5. Plug the free end of the video cable into the appropriate connector at the rear of the computer (into one of the connectors of the video/graphics adapter card already installed into the computer).

   If you are unsure as to which connector of the video/graphics adapter card to use, refer to the instructions that come with the card for an explanation of each. Or, if your video/graphics adapter card was installed at the factory, find the manual for it in a plastic packet in the "Vectra CS Personal Computer" box.

6. Find the display's power cord. Some displays have a power cord already attached, some do not. If yours doesn't, you have these choices in plugging one in:

   a. Connect the power cord that came in the display box from the display to an AC wall outlet, or a multiple-outlet strip with its own circuit breaker.

   or

   b. Connect the convenience power cord (found in the computer's PC Kit box) from the display to the auxiliary AC outlet at the back of the computer.

   The following figures show both ways of supplying power to the display.

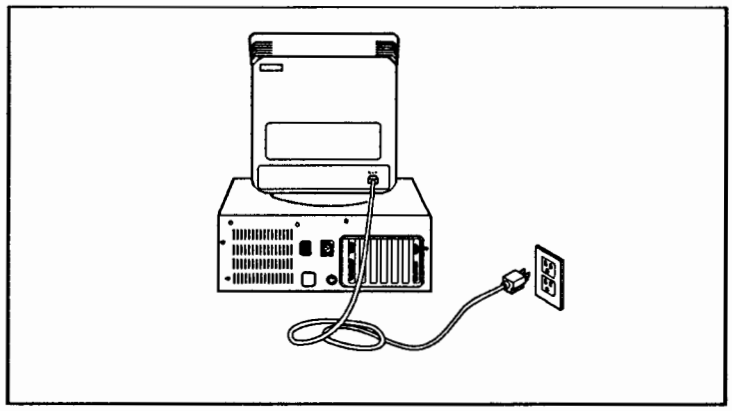


Figure F-1. Connecting the Display Power Cord

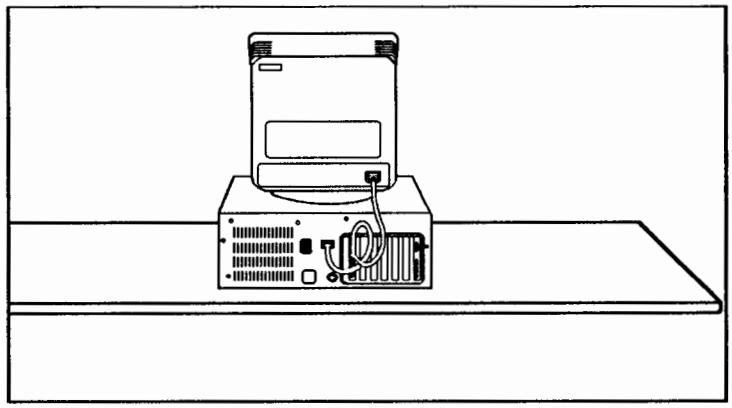


Figure F-2. Connecting the Convenience Power Cord

F

G

Processor Card

Your computer comes with its processor card installed in accessory slot 7. This card contains a central processing unit (CPU) and supporting circuitry, including a flexible disc controller, a serial connector, and a parallel connector configured as follows:

- Both serial and parallel ports are enabled. The parallel connector is set to Parallel Port1 (LPT1).
- The flexible disc controller is set for the type of drive already installed in drive A:. Drive B: is set for a 360 Kb drive.
- The serial connector is set to Serial Port1 (COM1).
- The XT mode is selected for the serial port.

Jumper Settings on the Processor Card

You can change the configurations described above by changing the jumpers associated with them. The procedures at the end of this appendix should be used to remove the processor card and change a jumper setting. The jumper locations are shown in figure G-1.

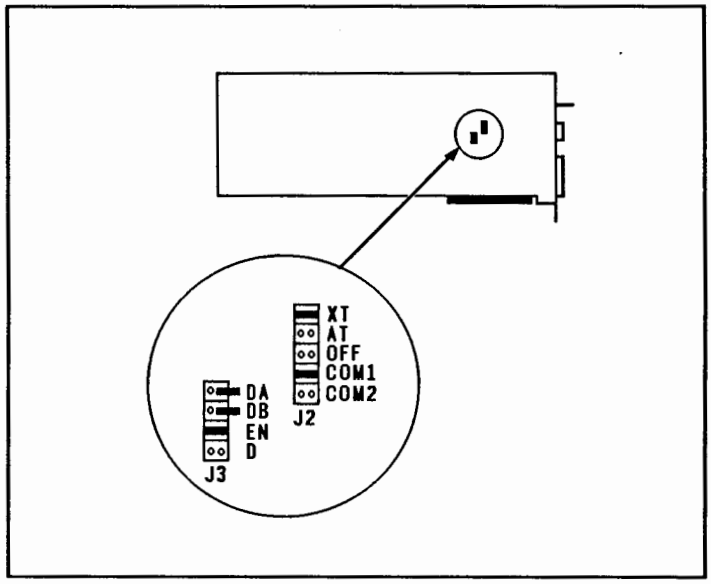


Figure G-1. Jumpers on the Processor Card

Notice the two connectors J3 and J2. Connector J3 allows you to set the flexible disc drive type and to enable and disable both parallel and serial communication. The setting changes when you move the jumper so that it covers different pins.

The setting of the top two pairs of pins of J3 determines which type of flexible disc drive will be used. The setting of the jumper on the bottom two pairs of pins determines whether parallel and serial communication will be enabled or disabled.

Flexible Disc Controller

The flexible disc controller on the processor card can be set so that your computer can use a 360 Kb 5.25-inch disc or a 1.44 Mb 3.5-inch disc.

The top pair of pins on connector J3 is used to specify the flexible disc drive type. The flexible disc controller is set for the type of drive already installed in drive A:. Drive B: is set for a 360 Kb drive. A 360 Kb 5.25-inch drive is specified if only one pin (the righthand one) of a pair is covered. A 1.44 Mb 3.5-inch drive is specified if both pins of a pair are covered.

The pair of pins labeled DA specifies the drive type for drive A:, and the pair of pins labeled DB specifies the drive type for drive B:. The following examples show typical settings for flexible disc drives.

Example 1 (Jumper J3).

3.5 " 1.44 Mb drive on top	• •	DA
5.25" 360 Kb drive on bottom	• •	DB
Enable	• •	EN
Disable	• •	D

Example 2 (Jumper J3).

5.25" 360 Kb drive on top	• •	DA
3.5 " 1.44 Mb drive on bottom	• •	DB
Enable	• •	EN
Disable	• •	D

Parallel and Serial Communication Enable/Disable

The setting of the bottom two pairs of pins on connector J3 determines whether parallel and serial ports are enabled or disabled. If the top pair of pins, labeled EN, is covered, both parallel and serial ports are enabled. If the bottom pair of pins, labeled D, is covered, both parallel and serial lines are disabled.

Your computer is set at the factory so that parallel and serial communication are both enabled.

The parallel connector on the processor card is always configured as LPT1 if this jumper is in the EN position. The configuration of the serial connector on the processor card depends on the setting of jumpers on connector J2 (see *Serial Port Configuration*, below).

AT/XT Mode

The setting of the top two pairs of pins on connector J2 determines whether the XT or AT mode is selected for serial communication. Your computer is set at the factory so that XT mode is selected. Most computer programs will work with the switch at the XT setting.

To switch to AT mode, the jumper cover would be moved so that it covers the second pair of pins, labeled AT.

Serial Port Configuration

The jumper setting of the bottom three pairs of pins determines which serial ports are enabled, provided serial communication is enabled (EN) from the serial and parallel communication enable/disable jumper on J3.

The serial connector on the processor card can be configured as Serial Port1 (COM1) or Serial Port2 (COM2), or disabled. Your computer is configured at the factory for Serial Port1 (COM1).

If the first pair of pins, labeled OFF, is covered, serial communication from the processor card is disabled.

If the second pair of pins, labeled COM1, is covered, the serial connector is configured as Serial Port1 (COM1).

If the third pair of pins, labeled COM2, is covered, the serial connector is configured as Serial Port2 (COM2).

Figure G-2 shows Serial Port1 (COM1) enabled and configured. This is the default setting.

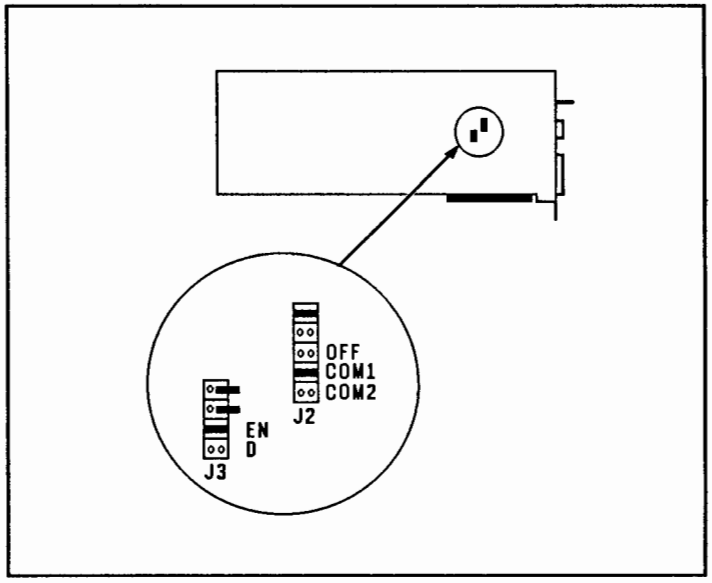


Figure G-2. Serial Port1 (COM1) Configured

Removing the Processor Card

Use the following procedure to remove the processor card from the computer.

1. Remove both the cover and the power switch shaft as described in chapter 2, "Removing the Cover."
2. Refer to the section called "Handling Accessory Cards Safely" on pages 5-2 and 5-3 of this manual for precautions that can prevent accidental damage to the card.
3. Remove the screw that holds the processor card in slot 7. If a card or a slot cover is installled in slot 6, remove it after first removing its retaining screw.
4. Remove the flexible disc drive connector from the processor card. Move the connector and cable out of the way.
5. Disconnect the speaker cable from its two-pin connector. Also remove the keylock cable (if a security lock is installed) from its three-pin connector.
6. Remove the processor card from slot 7 by first reaching in and gently disconnecting it from its socket and then lifting the card upward.

Changing the Jumper Setting

Once you have removed the processor card (previous procedure), use this procedure to change a jumper setting.

1. Locate the applicable jumper by referring to figure G-1. Determine the correct jumper and position by referring to the descriptions in the beginning of this chapter. Move the jumper cap as needed to change a setting.
2. Reinstall the processor card in slot 7.
3. Reinstall any card or slot cover you removed from slot 6.
4. Reconnect the flexible disc drive connector.
5. Reconnect the speaker cable. Also reconnect the keylock cable, if it was removed.
6. Reinstall the screw that holds the processor card in place.
7. Replace both the power switch shaft and the cover as described in chapter 7, "Replacing the Cover."
8. Record the new jumper settings in the *Setup Inventory Foldout* in this binder:

H

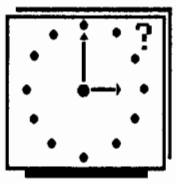
Troubleshooting Your Problems

This appendix covers three topics:

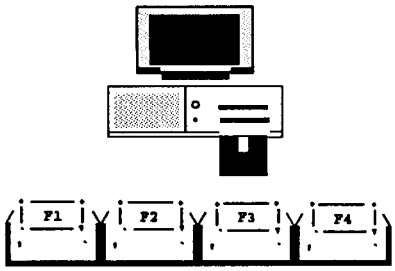
- The Power-On Self Test (POST).
- Helpful hints on how to overcome common problems.
- What to do when all else fails.

The Power-On Self Test (POST)

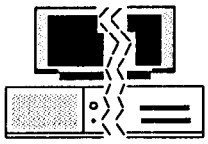
Whenever you turn your computer on, it performs a set of diagnostic checks on the hardware. These checks together form the Power-On Self Test (POST). If a POST failure occurs, one of the following *icons* is displayed on the screen.



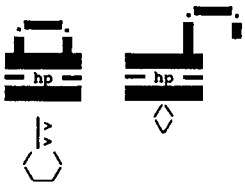
System Clock Not Set. This icon indicates the system clock's date or time is invalid. When you see this, you need to run Option 1, "Set Time and Date," of the SETUP program to reset the clock. This icon is displayed for 10 seconds, then the computer tries to load the operating system. (Press any key to skip the 10-second delay.)



Operating System Failed to Load. This icon indicates that the computer was unable to load the operating system. If you are setting up your computer for the first time, the disc you will insert in the top disc drive is the SETUP Program Disc, located in this binder. Insert the disk and press F1. If you are not setting up your computer for the first time, insert your system disc (the disc with the operating system) in the top disc drive and then press F1.



Machine Broken. This icon indicates either that the keyboard is not connected to the computer or that there has been a hardware failure. Some failures will not allow you to continue using the machine; some will allow you to press F1 and continue. When you see this icon, check first to make sure that both ends of the keyboard cable are securely connected. If you inadvertently held down any key during the POST, the computer assumes the keyboard is disconnected; in this case, the icon can be ignored. If connecting the keyboard or pressing F1 does not make this icon go away, you need to have your computer serviced.



Security Lock Locked. This icon indicates that the optional security lock is in the locked position and that the computer will ignore any keyboard input. Turn the key counterclockwise as far as it will go to unlock the security lock.

Problems and Solutions

Scan the **bold**, alphabetical entries to see if your problem is covered. Then, read and follow the accompanying solution(s). If your problem isn't covered here, see the next section in this appendix, "When all Else Fails...".

Display is blank or hard to read. Try the following:

1. Make sure the computer is turned on. The computer's fan should be audible.
2. Make sure that the monitor is properly connected and turned on. Adjust the contrast if necessary.

Keyboard doesn't work. Try the following:

1. Verify that the keyboard is properly connected.
2. Make sure that the optional security lock (if present) is unlocked. Turn the key counterclockwise as far as it will go to unlock the security lock.
3. Reset the computer by turning it off and then on again.

Peripheral devices don't work. Try the following:

1. Make sure that both the computer and the peripheral are turned on.
2. Make sure that all cables are connected properly.
3. The adapter that the peripheral is connected to may require special software to be loaded before it functions properly. If you are unsure as to whether this has been done, check the adapter owner's manual for information on how to do it.
4. For those peripherals that have one, run the self test or diagnostic utility to verify that the device itself is operating properly. See the peripheral documentation for information.

When All Else Fails...

If you have a problem with your computer system and can't seem to solve it yourself, it's time to go to *The HP PC Communicator* that came in an envelope in the PC Starter Kit box. The article "Answers to Your Questions" contains specific instructions to follow and, if necessary, phone numbers to call to ensure that you get prompt and effective attention to your problem.

HEWLETT PACKARD

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