

# HEWLETT-PACKARD



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*ScanJet* User's Guide

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## ***ScanJet* User's Guide**



**April, 1987**

**Manual Part No.  
09190-90005**

# Introduction

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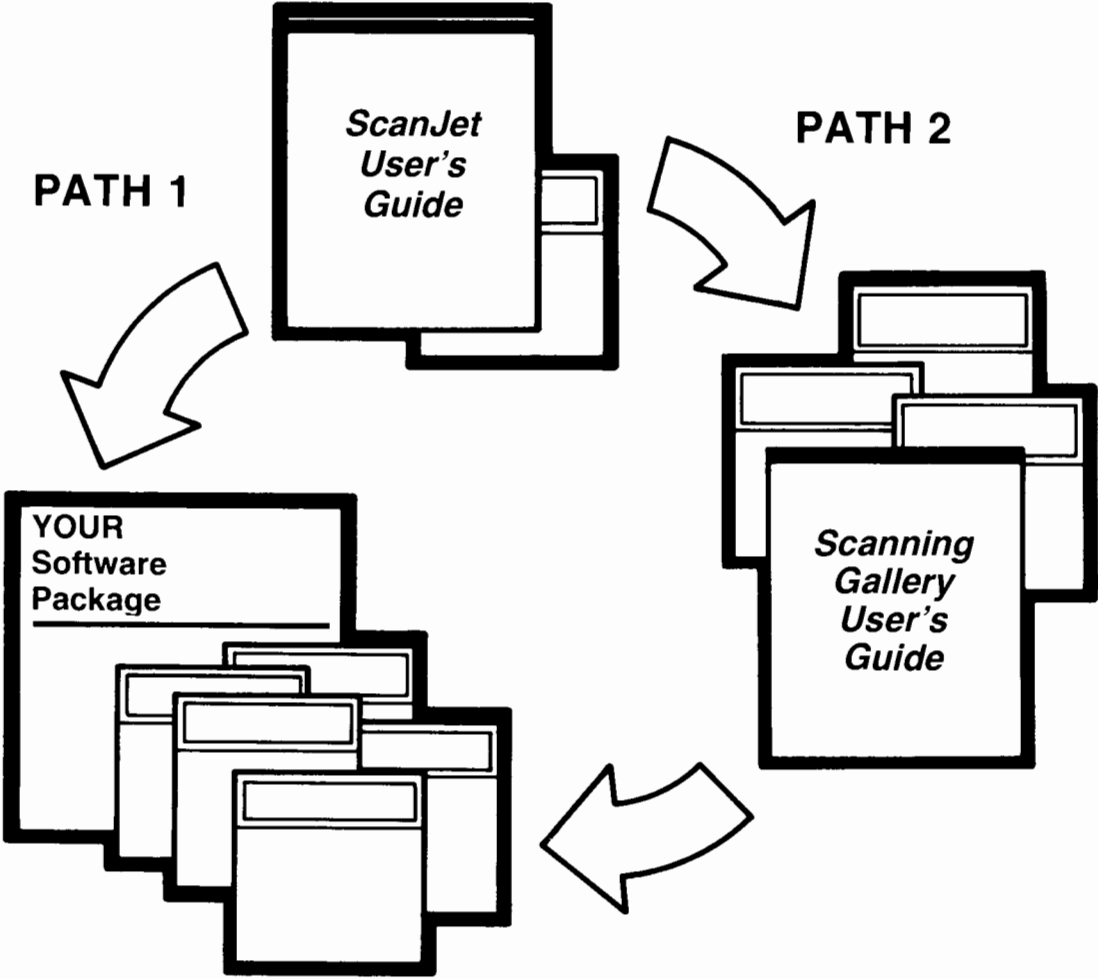
Welcome to Hewlett-Packard's ScanJet Desktop Scanner, a valuable addition to your desktop publishing system. With the help of a compatible software package, ScanJet lets you scan images and integrate them into documents and presentations. You now have the scanning capability you need *plus* Hewlett-Packard's commitment to quality and service.

This guide explains how to install and maintain ScanJet and the optional HP Automatic Document Feeder. You'll find set-up essentials in the front chapters, and reference information in the later chapters and appendices. After completing instructions in this guide, you will have installed ScanJet and can begin scanning images using the *Scanning Gallery* software provided by HP. If you have a question or concern about ScanJet that is not addressed in this guide, refer to **Appendix B, Where to Find Help**.

The *Scanning Gallery* software supplied by HP scans and edits images. To integrate images into documents, you need an additional software package. Many different software packages are available to use with ScanJet, each requiring ScanJet to work in a specific way.

The following figure is an overview illustrating how your HP documentation and software can be used to prepare for various software packages. **Chapter 3** explains which path to choose.

# Documentation Overview



## Summary

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- Chapter 1** **Getting Acquainted With ScanJet** provides unpacking instructions and introduces you to ScanJet.
- Chapter 2** **Setting Up ScanJet** explains how to select a good site for ScanJet and how to install the interface card in your computer. It also describes how to use the *ScanJet Software* disc accompanying your card.
- Chapter 3** **Preparing For Your Software Package** helps you choose Path 1 or Path 2 (see Documentation Overview, page iii). It then describes how to place a document on ScanJet's copyboard glass for scanning.
- Chapter 4** **Installing the Automatic Document Feeder (ADF)** offers installation and operating instructions for the optional ADF.
- Chapter 5** **Maintaining ScanJet and the ADF** provides cleaning and maintenance instructions for both ScanJet and the ADF.
- Appendix A** **Reconfiguring Your Card** explains how to reset configuration switches on your interface card if you need *an alternate setting for your system*.
- Appendix B** **Where To Find Help** offers problem-solving and ordering information.
- Appendix C** **Warranty and Service Information** provides warranty, service and regulatory statements.
- Appendix D** **Specifications** provides technical information about ScanJet and the ADF.

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## Printing History

New editions are complete revisions of the manual. Update packages, which may be issued between editions, contain additional and replacement pages to be merged into the manual by the customer. The dates of the title page change only when a new edition is published.

A software code may be printed before the date; this indicates the version level of the software product at the time the manual or update was issued. Many product updates and corrections do not require manual changes, and conversely, manual corrections may be done without accompanying product changes. Therefore, do not expect a one-to-one correspondance between product updates and manual updates.

Edition 1	.....	MARCH 1987
Edition 2	.....	APRIL 1987



## Customer Support

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If you have a problem with your ScanJet Desktop Scanner, Hewlett-Packard offers several support services. Follow these suggestions to get the help you need.

### **This Manual**

The information in this manual may help you solve the problem on your own. You'll find instructions to re-configure the interface card in Appendix A, problem-solving hints in Appendix B, and warranty and service information in Appendix C.

### **Your Dealer**

If you're unable to find what you need in this manual, call the person who sold you your ScanJet. Your salesman is familiar with your software and equipment and should understand your particular needs.

### **ScanJet Customer Assistance**

If your dealer can't help you, you're a phone call away from Hewlett-Packard's Customer Assistance, available from 7 a.m. to 4 p.m. (MST), Monday through Friday. The staff can answer questions on topics such as ScanJet installation and setup and can help you find software solutions that meet your desktop publishing needs.

Before you call, make sure you've checked the manual and have asked your dealer for help. If you still have problems, please list all of the equipment you are using before calling. Understanding your particular situation will help us identify your problem.

- computer \_\_\_\_\_
- monitor \_\_\_\_\_
- graphics adapter card \_\_\_\_\_
- other installed cards \_\_\_\_\_
- printer \_\_\_\_\_
- software \_\_\_\_\_ rev. \_\_\_\_\_  
\_\_\_\_\_ rev. \_\_\_\_\_  
\_\_\_\_\_ rev. \_\_\_\_\_  
\_\_\_\_\_ rev. \_\_\_\_\_

After gathering this information, call this number:  
**(208) 323-2551**

## Notes

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## ***Essential Information***

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# 1

## Getting Acquainted with ScanJet

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### Preview

This chapter introduces you to ScanJet. It explains how to unpack ScanJet and what to do if you find that anything has been damaged in shipment.

It also tells you what items you should find in the boxes. ScanJet components are shipped in two boxes: one box has ScanJet and a power cord; the other has the interface card, an interface cable, *ScanJet User's Guide*, and *Scanning Gallery User's Guide*. You may also have a third box if you ordered the HP Automatic Document Feeder (ADF).

### Unpacking and Inspecting

After opening the ScanJet and interface card boxes, check the contents for damage. If you notice any damage, notify the dealer or the HP sales office where you purchased ScanJet and file a claim with the carrier.

If you have received the *ScanJet Installation Guide*, disregard it. All installation instructions for installing and using ScanJet and the ADF are included here in the *ScanJet User's Guide*. (The *ScanJet Installation Guide* is intended for users who did not order the HP 88290A interface card.)

Save the shipping and packaging materials in case you want to transport ScanJet in the future.

You should find the following items in the scanner box:

- ScanJet
- Packing list
- Power cord

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You should find the following items in the interface card box:

- Interface card
- Customer survey card
- Packing list
- *ScanJet User's Guide*  
with one software disc
- *Scanning Gallery User's Guide*  
with five software discs
- *ScanJet Application Notes*
- Interface cable

**The above lists are subject to change. Refer to the packing lists in both boxes for the most accurate description of contents. See Appendix B for a list of accessory part numbers.**

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## **CAUTION**

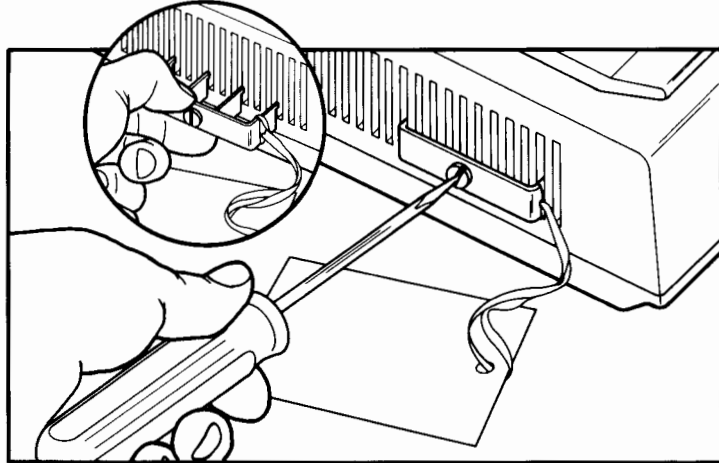
You must remove the shipping retainer before use. Refer to the instructions below to remove the retainer.

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After identifying the contents of each box, follow these steps:

- 1.** Remove all packaging materials from ScanJet, including the tape from the copyboard cover and any paper between the copyboard glass and the copyboard cover. If you need help identifying these parts of the scanner, see Figure 1-3.
- 2.** Locate the shipping retainer on the left side of the scanner body. This retainer secures and protects ScanJet's mirror assembly during shipment.

**3.** As illustrated in Figure 1-1, remove the screw from the retainer and pull the retainer away from the scanner body. **Save the retainer and screw in case you ever need to transport ScanJet.**



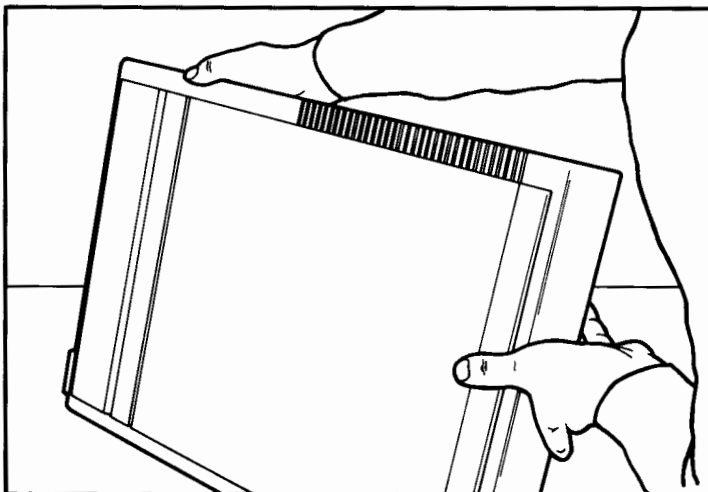
**Figure 1-1. Removing the Shipping Retainer**

**4.** The mirror assembly inside the scanner must be released from its shipping position to function correctly during operation.

**a.** To release the mirror assembly, turn ScanJet so that you are facing its front.

**b.** As illustrated in Figure 1-2, place your right hand underneath ScanJet, and carefully lift it to a perpendicular position. The mirror assembly will move from its shipping position into its operating position. (You probably will be unaware of any change after performing this step.)





**Figure 1-2. Repositioning the Mirror Assembly**

## About ScanJet

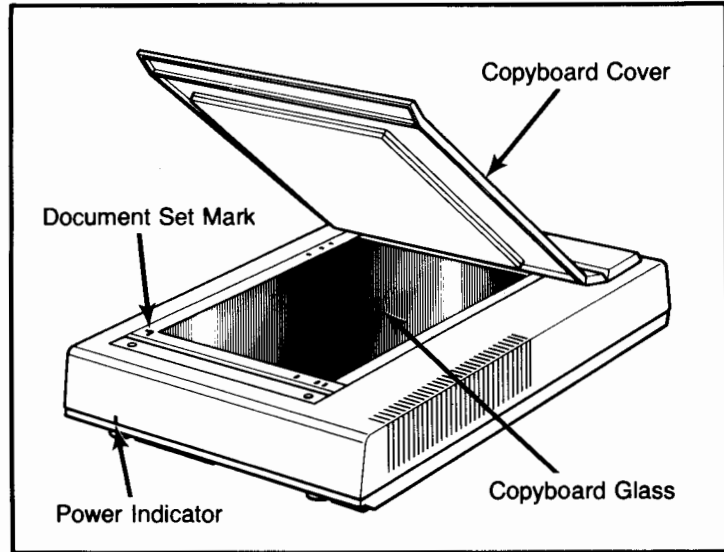
To become more familiar with ScanJet and the HP 88290A interface card, review Figures 1-3, 1-4, and 1-5. You may want to refer to these three figures while following instructions in this guide.

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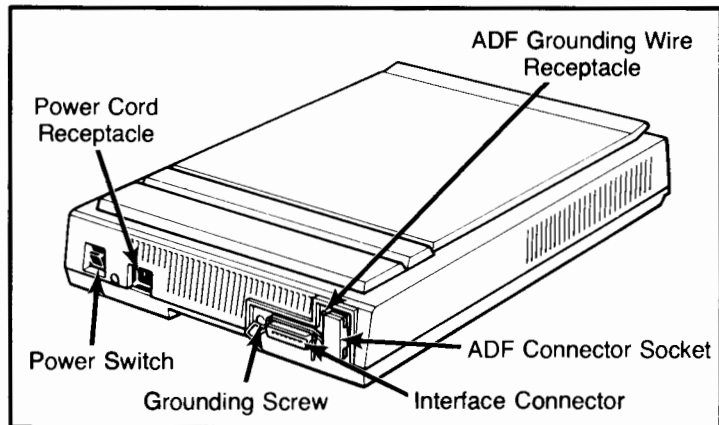
### **WARNING**

To avoid electrical shock, do not remove the copyboard glass for any reason. If the glass breaks, unplug ScanJet immediately.

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**Figure 1-3. Identifying ScanJet Parts, Front View**



**Figure 1-4. Identifying ScanJet Parts, Rear View**

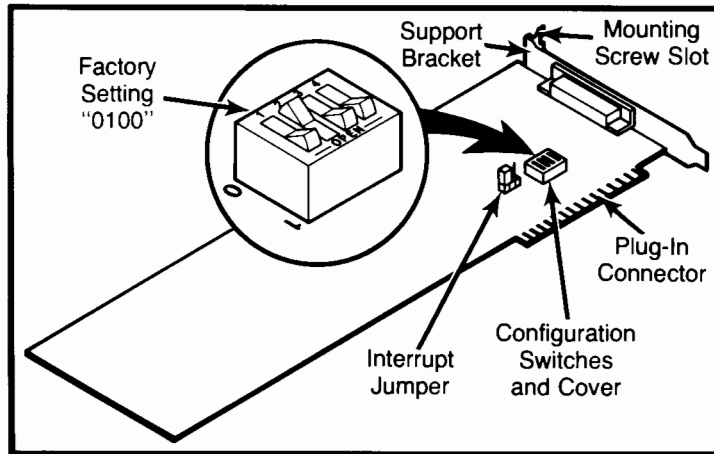


Figure 1-5. Identifying HP 88290A Parts

# 2

## Setting Up ScanJet

### Preview

This chapter helps you select a good site for ScanJet. If you are setting it up in an office, you should have few problems finding a suitable site.

After selecting a site, you'll install the HP 88290A interface card which allows ScanJet to talk with your computer. Then, you'll learn how to install the drivers and utilities in your computer system using the *ScanJet Software* disc accompanying the interface card. This software also verifies your installation of the HP 88290A card and ScanJet.

### Choosing a Site

Choose a site for ScanJet which meets the environmental and power requirements listed in **Appendix D**. If you are setting up ScanJet in an office,

- Use ScanJet within normal temperature and humidity ranges.
- Set ScanJet on a flat surface away from direct sunlight.
- Avoid locations where a quick change in temperature might cause condensation inside the scanner. (As with all scanners, condensation degrades ScanJet performance; however, after the condensation evaporates, ScanJet's normal performance resumes.)

## Installing the Interface Card

ScanJet requires an interface card to work with your computer. The one you have purchased, the HP 88290A, is designed for the HP Vectra PC and the IBM AT/XT/PC. Do not remove the interface card from its package until you read the cautions in Step 5.

Follow these directions to install the interface card in your computer:

1. Turn off and unplug your computer system.

### WARNING

To avoid electric shock, unplug all power cords from your computer system before installing the HP 88290A interface card.

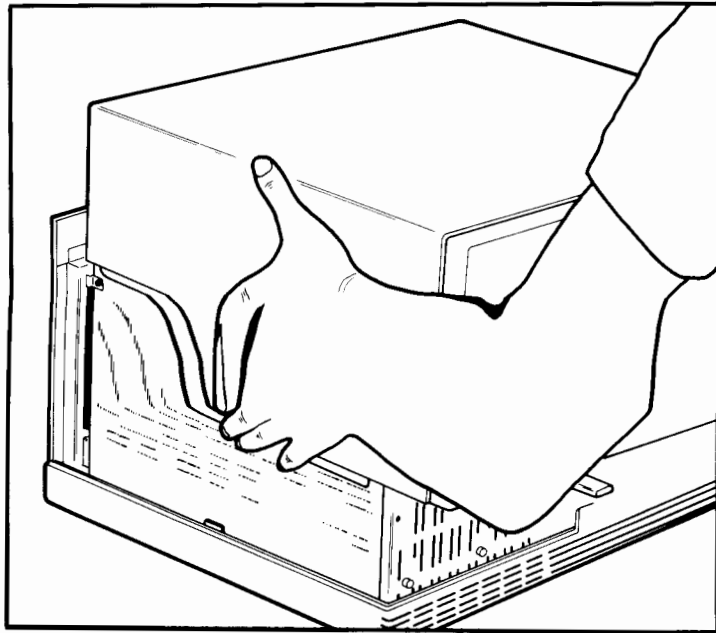
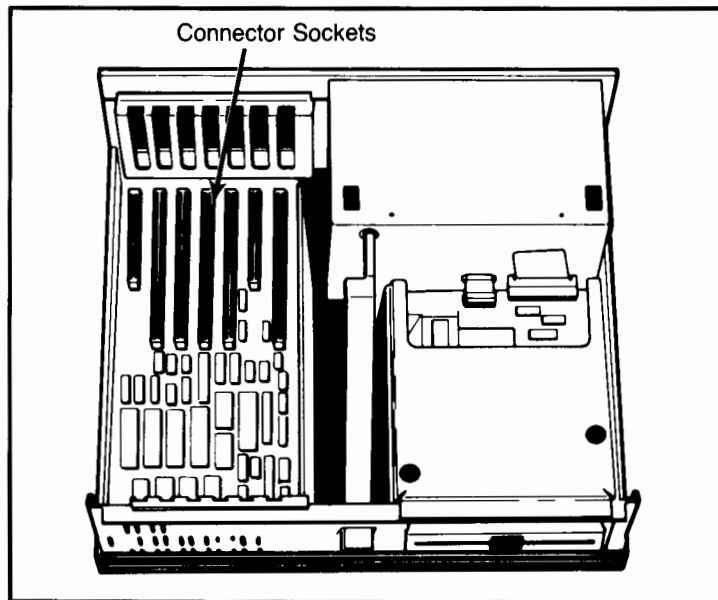


Figure 2-1. Removing the Cover

**2.** Remove the top cover of your computer. (You may need to refer to your computer user's manual.) See Figure 2-1.

**3.** Choose any empty card slot (see Figure 2-2), but preferably one with a short connector socket. The HP 88290A card is a full-length card, but requires only a short connector socket. Save the longer connector sockets for cards which require them.



**Figure 2-2. Accessory Card Slots**

**4.** Remove the slot cover from the back of your computer by removing the screw which holds the slot cover in place. See Figure 2-3. Save the screw—you will use it to secure the interface card in this slot.

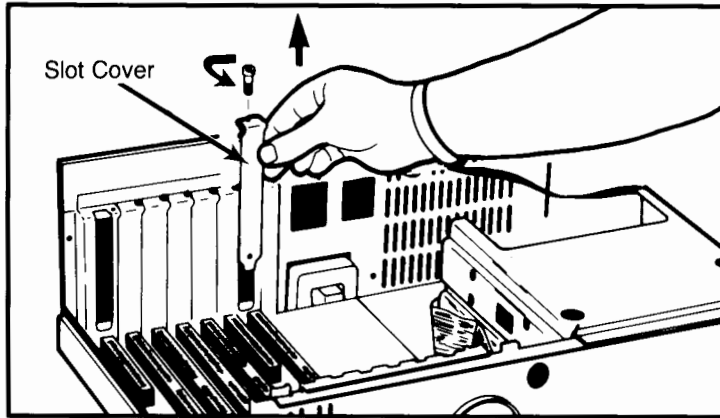


Figure 2-3. Removing the Slot Cover Screw

5. All interface cards (and all electronic components) are sensitive to static electricity. Before installing the interface card, read these general cautions:

- **Handle the card gently.** Do not drop or handle roughly.
- **Hold the card by its edges.** Do not touch electrical parts or connections.
- **Protect the card from static electricity.** If possible, use anti-static equipment such as a grounding mat and wrist strap when installing the card. If you do not have access to this equipment, discharge your electrostatic energy by momentarily touching a large metal object *just before* handling the card.

For protection, the card is packed in an anti-static bag. Leave the card in its anti-static bag until you are ready to install it. Save the bag in case you ever remove the card from the computer.

Remove the interface card from the anti-static bag, holding it by its top edge.

6. Each peripheral device in your computer system is assigned an address which designates the location of system memory dedicated for its use. Configuration switches on the HP 88290A interface card set the system address for ScanJet; see Figure 2-4. Hewlett-Packard sets the configuration switches at the factory to an address which will work for most systems.

Check the configuration switches on your interface card to make sure they are set as shown in Figure 2-4. You need not change the interrupt jumper setting.

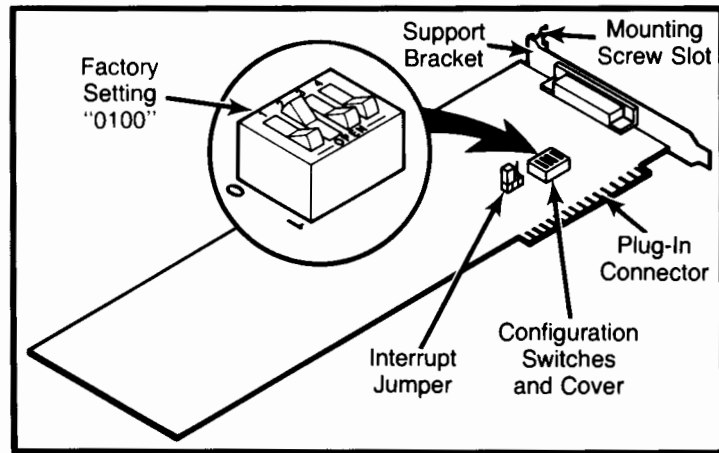


Figure 2-4. Configuration Switches

In the next section, you will find out whether the factory setting will work for your system.

If the factory setting conflicts with a device in your present system configuration, **Appendix A** provides instructions for finding a setting which *will* work for you.



7. Position the interface card as shown in Figure 2-5. Insert the card into the slot and press the card down firmly as shown in Figure 2-5. Make sure the plug-in connector is fully seated into the slot socket. If you are having difficulty fitting the card in the slot, you may need to adjust the position of an adjacent slot cover or support bracket to allow more room for the card.

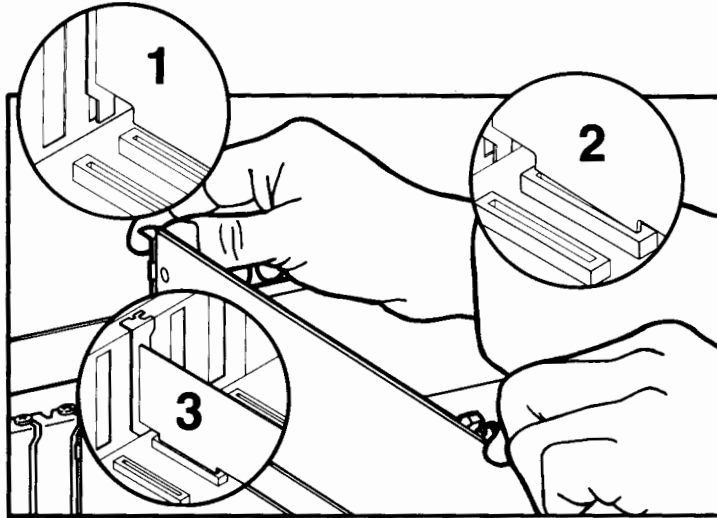


Figure 2-5. Installing the Interface Card

8. Use the screw (from Step 4) to secure the card to your computer's back panel, as shown in Figure 2-6.
9. Replace the computer top cover.
10. Reconnect the power plug.

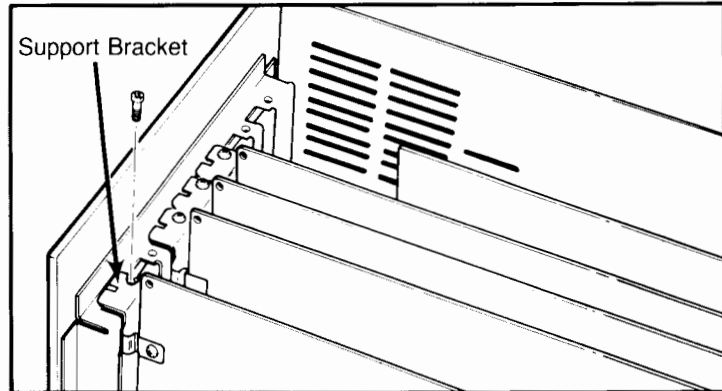


Figure 2-6. Replacing the Slot Cover Screw

## Connecting ScanJet to Your Computer

To connect ScanJet to your computer,

1. Attach the smaller end of the interface cable to the connector on the HP 88290A interface card in your computer. Tighten the screws on the cable. The interface cable should extend straight out from the back of the computer. See Figure 2-7.

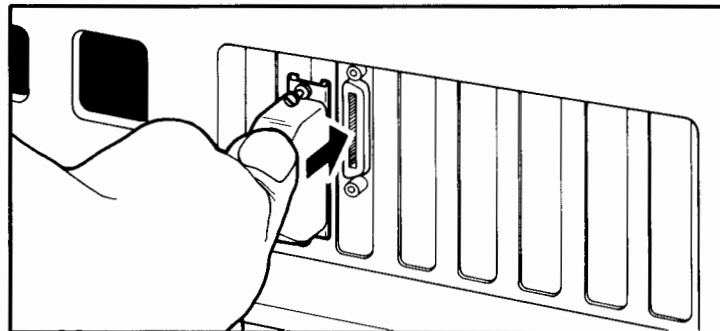
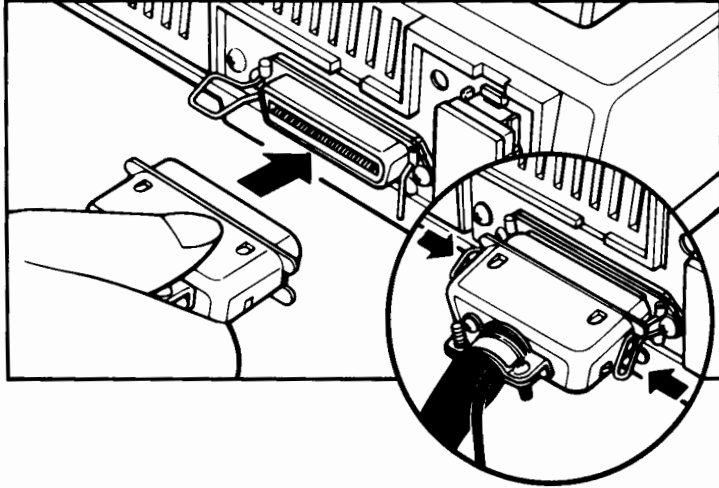


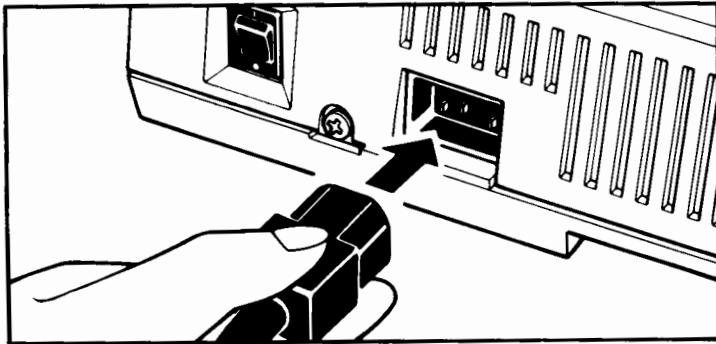
Figure 2-7. Connecting the Interface Cable to Your Computer

**2.** Attach the other end of the interface cable onto the interface connector on the back of ScanJet. See Figure 2-8.



**Figure 2-8.** Connecting the Interface Cable to ScanJet

**3.** Attach the power cord to ScanJet. See Figure 2-9.



**Figure 2-9.** Connecting the Power Cord to ScanJet

4. Plug the power cord into an alternating current (AC) outlet. Plug in the rest of your computer system.

5. Turn ScanJet's power switch on. See Figure 2-10. The power indicator on the front of ScanJet should be lit.

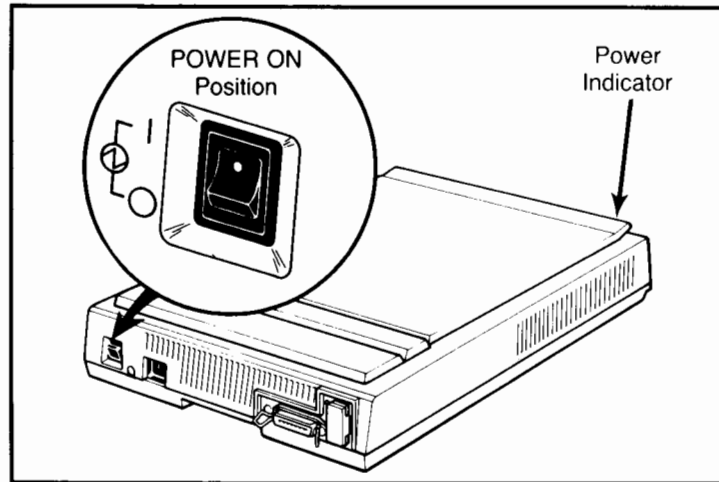


Figure 2-10. Turning on ScanJet

6. Turn your computer power switch on. (If you have a separate switch for your computer screen, turn it on too.)

If your screen begins showing its usual start-up messages, and soon displays its normal system prompt (`C>` or `A>`), proceed to the next section, **Installing the Scanner Driver**.

If your screen:

- displays error messages or unexpected messages

OR

- fails to display its usual system prompt or start-up messages within a minute

you may have to reset the configuration switches on the card.

Before you begin reconfiguring, however, check to be sure:

- connections are secure between your computer and ScanJet.
- your computer is plugged into an AC outlet.
- your computer and ScanJet power switches are on.
- ScanJet is connected to the HP 88290A card (not to another card).

If these connections and switches are correct, go to **Appendix A, Reconfiguring the Interface Card.**


## Installing the Scanner Driver

Before ScanJet can be used by any applications program, a special piece of software, a device driver, must be installed onto your computer's system disc. The driver and a program to install it (*SJInstall*) are included on the *ScanJet Software* disc accompanying the interface card.

### NOTES

A program on this disc alters your CONFIG.SYS file by adding two lines. If this is unacceptable, refer to **Appendix A, Reconfiguring the Interface Card**, to install the scanner driver manually.

The following instructions assume drive **C** contains your operating system. If your operating system is located on a different drive, substitute its name for **C**.

In the following pages you are instructed to press the **ENTER** key. If you are using an IBM keyboard, press the  key instead.

---

To use the *SJInstal* program:

**1.** Insert the *ScanJet Software* disc in flexible disc drive *A* and close the drive door.

**2.** Make sure you have an *A>* prompt on your screen. If you have any other *DOS* prompt, such as *C>*, type **A:**.

Press **ENTER**. An *A>* will appear on your screen.

---

**HINT**

If you are having difficulty getting an *A>* prompt, be sure you are typing both **A** and **:** before pressing **ENTER**.

---

**3.** Type **SJINSTAL FROM A: TO C:**. Press **ENTER**.

---

**NOTE**

**FOR ADVANCED USERS**

If you would like to put the *ScanJet Software* into a sub-directory, type:

**SJINSTAL FROM A: TO C: \ sub-directory name**

Press **ENTER**.

---

**4.** Remove the *ScanJet Software* disc from drive *A*.

**5.** Re-boot your operating system by either turning your computer system off and back on, or pressing the **CNTL**, **ALT**, and **DEL** keys at the same time.

## Testing Your Installation

You are ready to run the program which tests whether the interface card and ScanJet have been correctly installed.

To run the program, insert the *ScanJet Software* disc in drive A and close the drive door. Make sure you have an *A>* prompt on your screen. (If you have any other *DOS* prompt, type *A:*. Press **ENTER**.)

After the *A>* prompt, type:

**SJTEST**

Press **ENTER**.

You should see a menu screen. Using the arrow keys or a mouse, choose the *Help* screen first. Follow the instructions given on your screen to test your installation.

If your system passes all tests, you have a successful installation. Exit from the *SJTEST* program. Remove the *ScanJet Software* disc from drive A.

If your installation fails a test, messages on your screen will direct you to instructions in this guide to correct your problem. If problems persist, contact your HP dealer or HP Sales Office.

Although this test checks ScanJet's installation and configuration, it does not check everything. The best test is

a visual check of output from your computer printer.

**Chapter 3** will help you get ScanJet ready for a visual check.

If you have an extended or expanded memory card in your computer, you should test the extra memory after installing the card. Conflicts between a memory card and the HP 88290A card appear only with the *use* of the memory. Refer to **Appendix A** to resolve card conflicts.

# 3

## Preparing for Your Software Package

### Preview

If you are like most people, you want to begin scanning *NOW!*

Because HP provides the *Scanning Gallery* software (discs are inside the *Scanning Gallery* manual), you may begin scanning images now without using additional software packages. (To integrate images into documents, you *will* need an additional software package.) *Scanning Gallery* software allows you to scan an image, store it, and send it to a printer. The *Scanning Gallery* manual helps you install the software and gets you started scanning.

This chapter explains how to set a document on ScanJet's copyboard glass so, after installing the *Scanning Gallery* software, you can begin scanning without returning here for instructions.

### Setting Documents On the Copyboard Glass

1. Raise the copyboard cover.
2. Find the document set mark > at the bottom left of the copyboard glass.
3. Place a document face down on the copyboard glass along the scale on your left. Make sure *the top* of the document faces down and is aligned with the document set mark >, as illustrated in Figure 3-1.
4. For best results, close the copyboard cover while scanning.



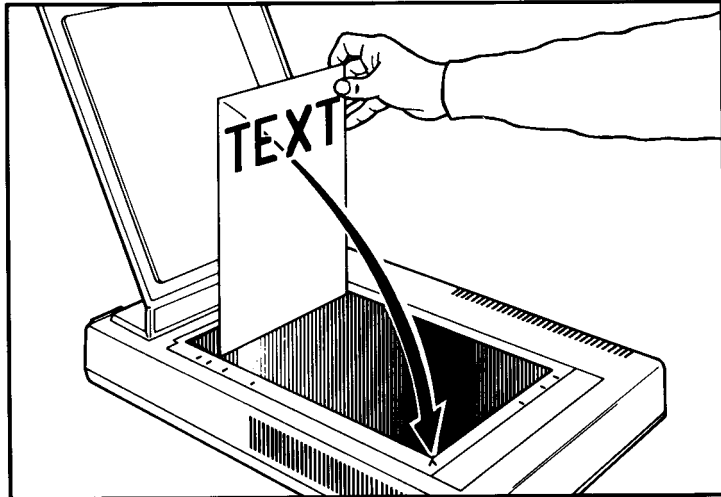


Figure 3-1. Setting Documents On the Glass

## Before You Go

You are now ready to begin using the *Scanning Gallery* manual. As mentioned earlier, *Scanning Gallery* software allows you to scan an image, store it, and send it to a printer. It also allows you to take a scanned image and convert it to a different file format. Consequently, a file can be used by many desktop publishing software packages. For example, *Scanning Gallery's* TIFF file format can be converted to *MSPaint* or *PC PaintBrush* by using a screen in

*Scanning Gallery*. Refer to the *Scanning Gallery* manual for more information.

Some desktop publishing software packages can work directly with ScanJet without using *Scanning Gallery* software because the scanning and filing functions are built in. If you have a desktop publishing package of that type, install it now without *Scanning Gallery*. (If you are not sure about your software package, go ahead and install *Scanning Gallery*.)

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The remainder of this guide provides installation and operating information for the ADF, and maintenance and reference information for ScanJet and the ADF.

Now, begin reading the *Scanning Gallery* manual so you can start scanning.



# 4

## Installing the Automatic Document Feeder

### Preview



If you purchased the HP Automatic Document Feeder (ADF) to use with ScanJet, this chapter will help you unpack and install it.

This chapter also explains how to use the ADF, fix paper jams, and remove the ADF from ScanJet.

### Unpacking and Inspecting

Check for damage while unpacking the ADF. If you notice any damage, notify the dealer or the HP sales office where you purchased the ADF, and file a claim with the carrier.

If you have received the *ADF Installation Guide*, disregard it. All instructions for installing and using the ADF are included here. (The *ADF Installation Guide* is intended for users who did not order the HP 88290A Interface Card.)

In the ADF shipping box, you should find the following items:

- Automatic document feeder
- Warranty sheet
- Packing list
- Replacement Mylar guide

Save the ADF's box and packaging materials in case you ever need to transport the ADF.

Identify the contents of the ADF package using the packing list. Parts of the ADF are illustrated in Figure 4-1.

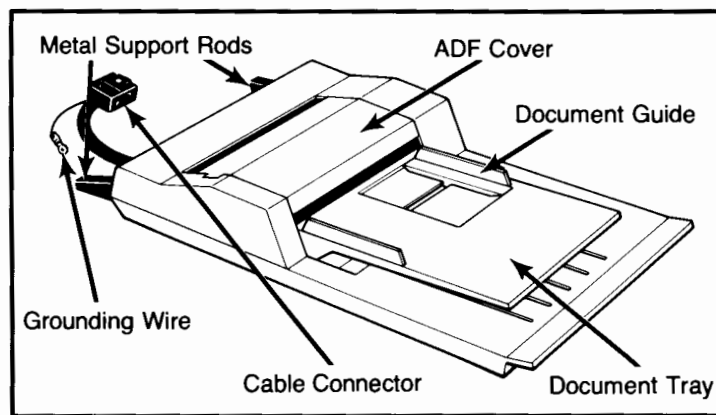
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**NOTES**

A screw and a washer are in a bag taped to the ADF packaging. You'll need them to attach a grounding wire from the ADF to ScanJet.

The ADF's Mylar guide is replaceable. For more information, see **Chapter 5, Maintaining ScanJet and the ADF**. Use the Mylar guide in the shipping container as a replacement after the original guide becomes scratched or worn.

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**Figure 4-1. Identifying ADF Parts**

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**WARNING**

To avoid electrical shock, unplug ScanJet's power plug before installing the ADF.

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## Installing the ADF

1. Unplug ScanJet's power plug. Push the copyboard cover in the direction of the arrow until it stops. See Figure 4-2.

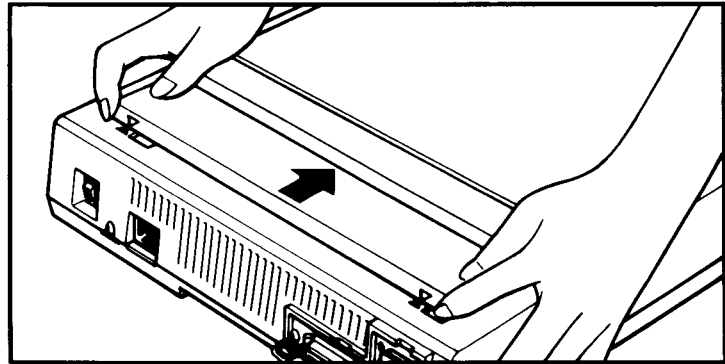


Figure 4-2. Pushing the Cover Forward

2. Lift and remove the copyboard cover. Save the cover in case you want to use it later. See Figure 4-3.

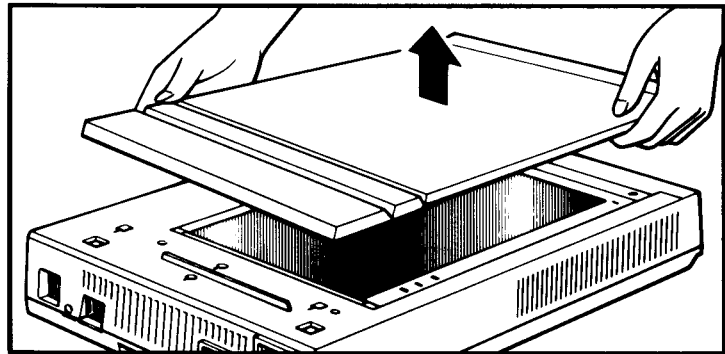
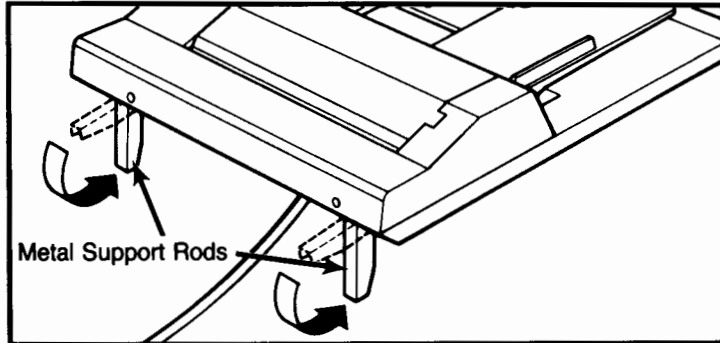


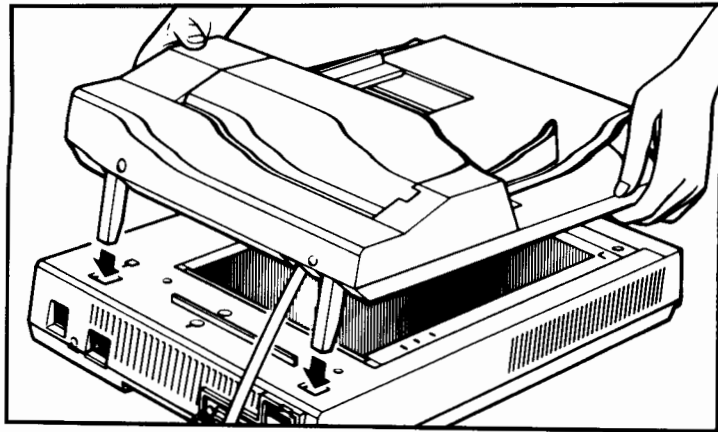
Figure 4-3. Removing the Cover

**3.** Rotate the ADF metal rods until they are in the position indicated in Figure 4-4. (If the metal rods lock in one position, do not try to release them – just install the ADF with the rods in that position.)



**Figure 4-4. Rotating the Metal Rods**

**4.** Secure the ADF into place by inserting its metal rods into the corresponding holes on the scanner body. See Figure 4-5.



**Figure 4-5. Inserting the Metal Rods**

5. Remove the plastic connector socket cover, and attach the ADF connector ground wire to the scanner body. See Figure 4-6. Save the connector socket cover.

**NOTE**

Place the washer as illustrated. See inset drawing.

Firmly attach the ADF cable connector to the scanner body. The connector release button should be facing up.

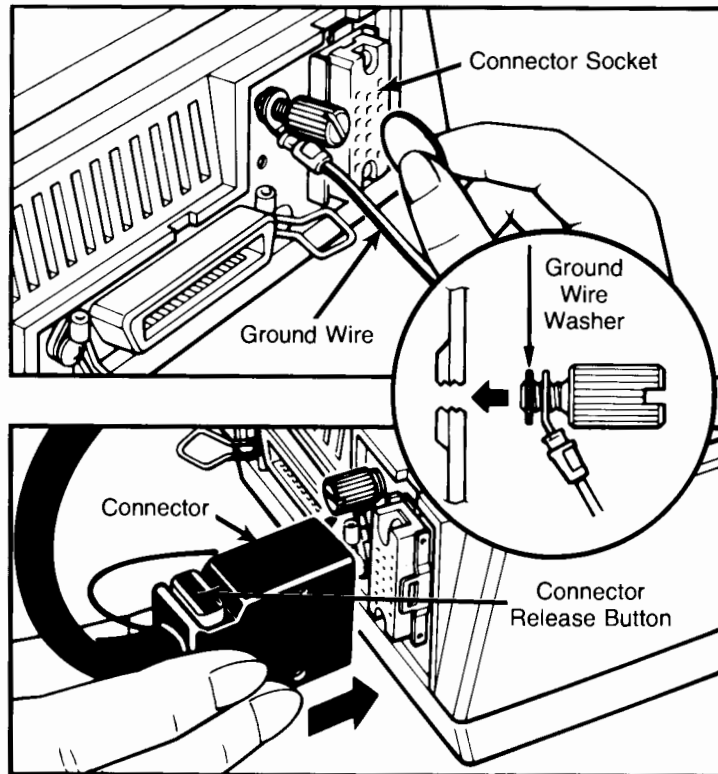


Figure 4-6. Connecting the ADF Cable



## Using the ADF

1. Place a document face up on the document tray, making sure the top of the document is closest to the ADF cover, as illustrated in Figure 4-7.
2. Adjust the copy guide to the size of the document, and make sure the ADF cover is closed.
3. Perform a scan in the usual way. (ScanJet realizes paper is in the ADF and actuates the feeding mechanism.)

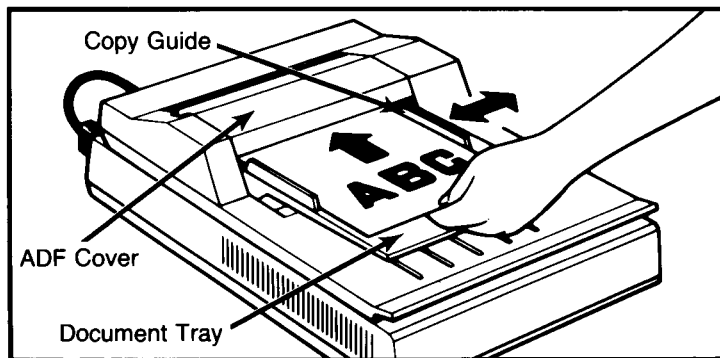
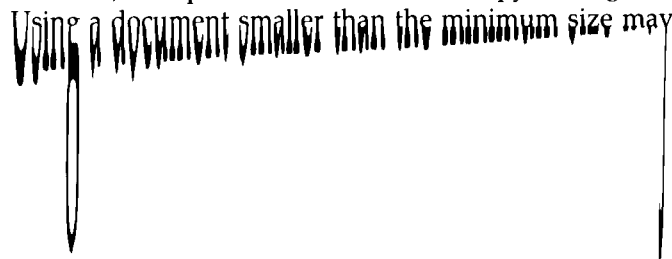


Figure 4-7. Using the ADF

The sizes of paper that can be stacked and fed by the ADF are listed below. If a piece of paper is too small or large for the ADF, lift up the ADF and use the copyboard glass.

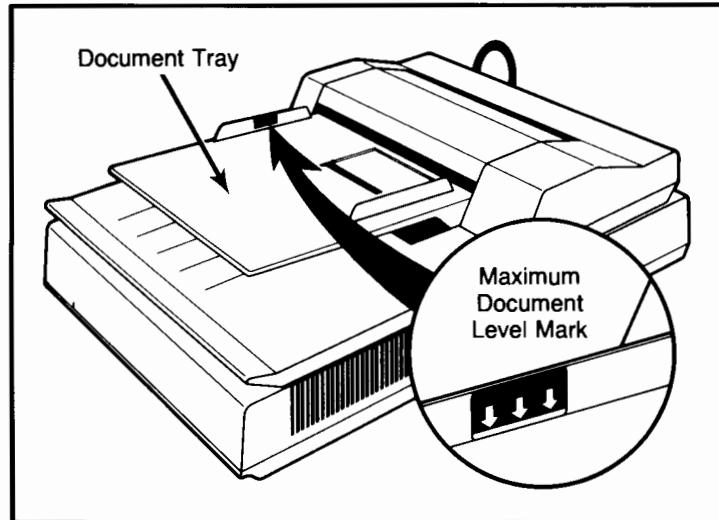
*Using a document smaller than the minimum size may*



cause a paper jam.

	Length	Width
Maximum size	14 inches (356 mm)	8.5 inches (216 mm)
Best size	10.1 inches (257 mm)	7.2 inches (182 mm)
Minimum size	5.5 inches (140 mm)	5.5 inches (140 mm)

When using heavy or light-weight documents, scan them using the copyboard glass instead of the ADF. (See **Appendix D, Specifications**, for the exact weight allowed in the ADF.)



**Figure 4-8. Maximum Document Level Mark**

**Follow these guidelines and precautions while using the ADF:**

- Make sure paper has been removed from the copyboard glass before using the ADF.
- Straighten any curls or wrinkles from documents before setting them on the document tray, or place them on the copyboard glass.
- Remove staples, paper clips, and any other materials from documents.
- Do not use magazine-pages, carbons, transparencies, or gummed-back documents in the ADF.

- You may notice increased noise when using glossy paper in the ADF; however, performance will not be affected.
- Do not stack documents higher than the maximum level marked on the ADF's document guide. See Figure 4-8.

## Clearing Paper Jams

If the ADF jams while you are using it, fix the jam as follows:

- **If the jam occurs at the start of scanning**

Lift the ADF cover and remove the jammed paper. See Figure 4-9.

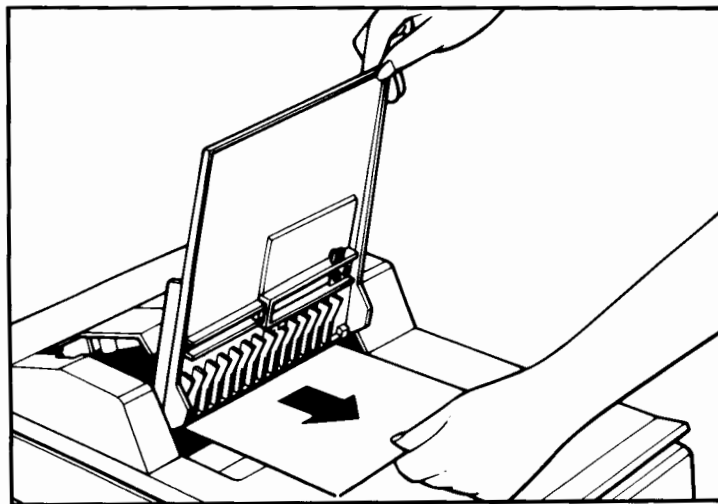
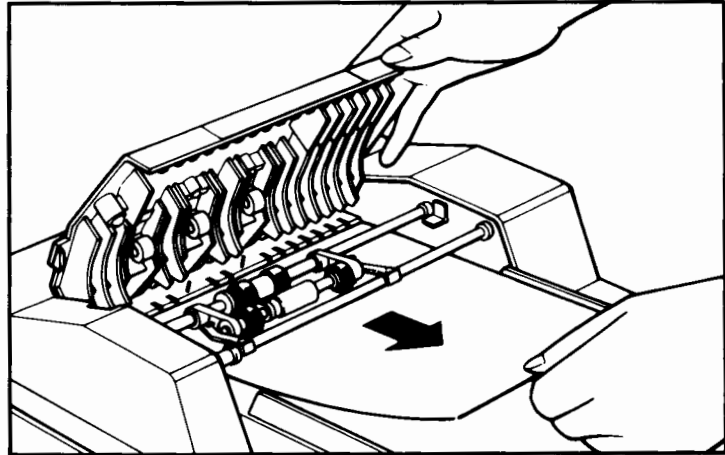


Figure 4-9. Removing a Paper Jam

- **If the jam occurs at the end of scanning**

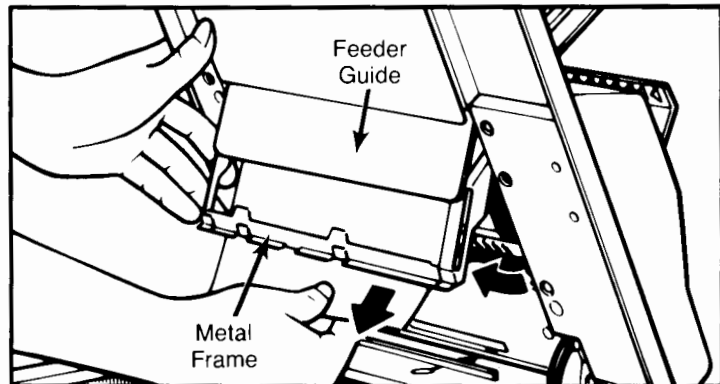
Raise the ADF cover and lift up the document tray. Remove the jammed paper. See Figure 4-10.



**Figure 4-10. Removing a Paper Jam**

■ **If the jam occurs inside the ADF**

Raise the ADF cover. Lift up the ADF and open the feeder guide by lifting the metal frame. Remove the jammed paper. See Figure 4-11.



**Figure 4-11. Removing a Paper Jam**

## Removing the ADF

Follow these instructions to remove the ADF from ScanJet:

1. Unscrew the ADF connector cable ground wire. Then, while pressing the ADF connector release button, disconnect the cable. See Figure 4-12.

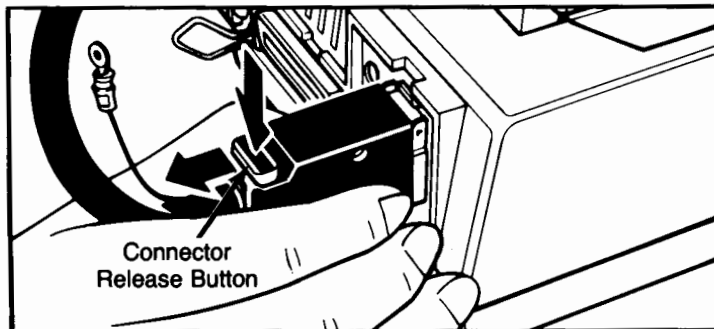


Figure 4-12. Removing the ADF Connector

2. Remove the ADF. Recover the socket on ScanJet. See Figure 4-13.

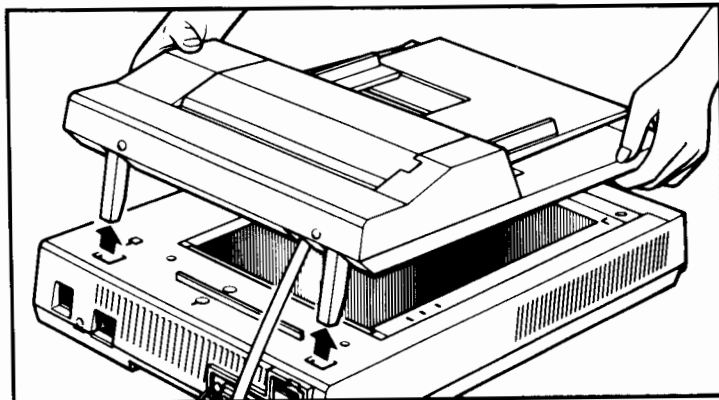
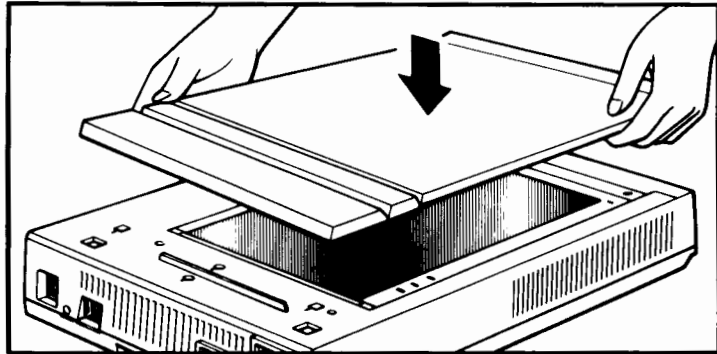


Figure 4-13. Removing the ADF

**3.** Replace the copyboard cover. See Figure 4-14. Put the ADF back in its original box to protect it.



**Figure 4-14. Replacing the Copyboard Cover**



# 5

## Maintaining ScanJet and the ADF

### Preview

This chapter explains how to clean and maintain ScanJet and the ADF. One of the most important maintenance tasks is keeping the copyboard glass clean because dirty glass impairs the quality of scanned images. This chapter also provides instructions to replace the Mylar (plastic) guide in the ADF if it becomes scratched or worn.

### Cleaning and Maintenance

Clean the copyboard glass whenever necessary, using the following steps. You may also use these procedures to clean the exterior of the ScanJet and the ADF.

1. Turn off the power switch, and unplug ScanJet.
2. Clean the copyboard glass using a damp cloth and a mild detergent. See Figures 5-1 and 5-2. Avoid spraying or misting directly on the glass as the spray could penetrate below the glass and contaminate internal mirrors and lenses.

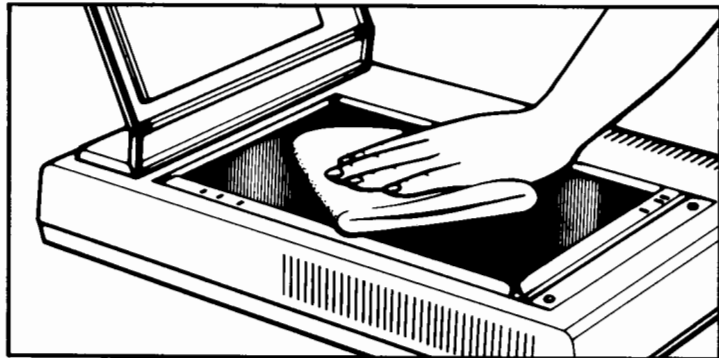
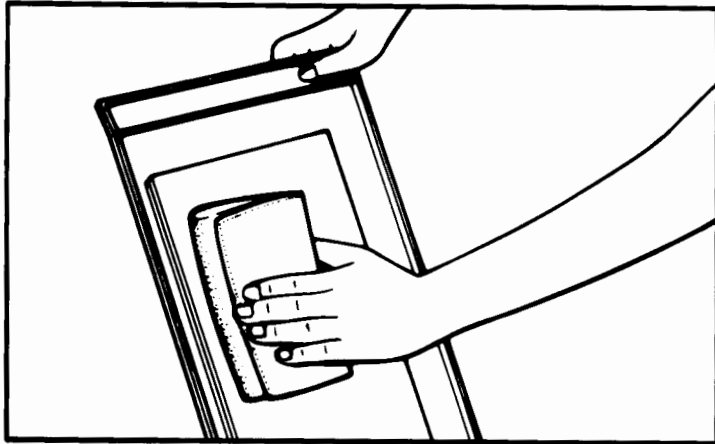


Figure 5-1. Cleaning the Copyboard Glass





**Figure 5-2. Cleaning the Copyboard Cover**

**3. Dry with a clean cloth.**

To keep ScanJet and the ADF performing well, follow these guidelines:

- Turn ScanJet off when it is not in use.
- Do not disassemble nor lubricate any parts.
- Keep objects off the ScanJet copyboard cover.
- Do not press on the ScanJet copyboard cover.
- Do not use spray misters when cleaning the copyboard glass.

## Replacing the Mylar Guide

The ADF comes with a replaceable plastic sheet called a Mylar guide, which guides documents through the ADF. After 10,000 scans, this piece usually needs replacing.

A replacement guide is shipped in the box. If you need additional guides, order HP part number 88190-44100 from your HP dealer or sales representative.

### CAUTION

Do not remove the Mylar guide unless you have another one available to replace it. (Removing it may damage it.)



The Mylar guide has two metal clips which attach to the ADF and hold the guide in place. To replace the Mylar guide, follow these steps:

1. Raise the ADF from the scanner body. Lift up the metal frame holding the Mylar sheet.
2. To remove the guide, grasp the two metal clips and push down as illustrated in Figure 5-3.

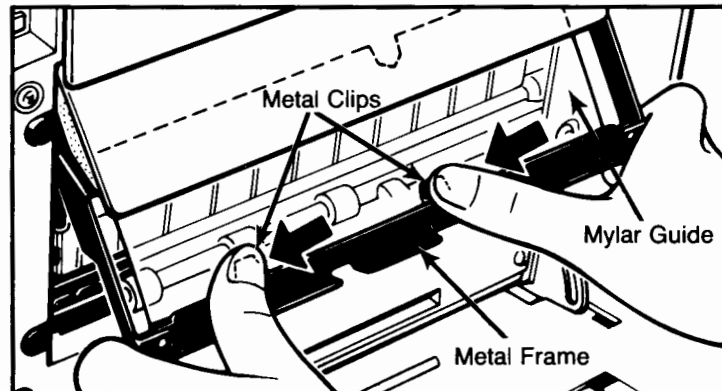
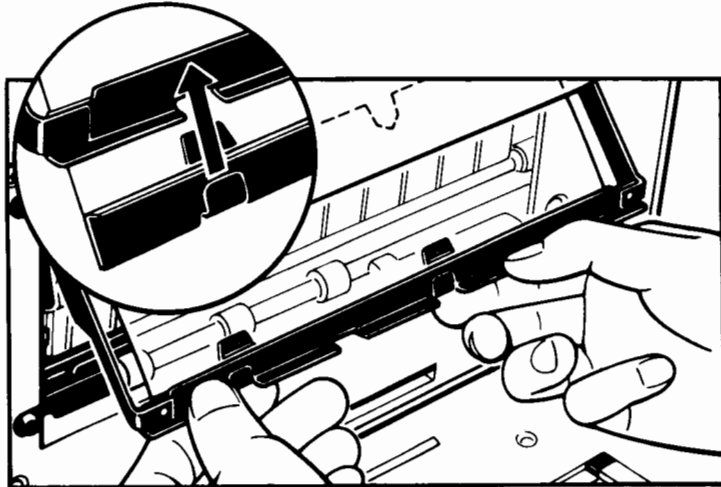


Figure 5-3. Removing the Mylar Guide

**3.** With the metal frame lifted, insert the new Mylar sheet. Make sure the new sheet is placed behind the white plastic sheet.

**4.** Attach the new Mylar sheet's metal clips directly to the metal frame as illustrated in Figure 5-4. Be sure to attach the clips securely.



**Figure 5-4.** Installing the Mylar Guide

## ***Reference Information***

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# A

## Reconfiguring the Interface Card

### Preview

This appendix has two sections. The first section explains how to select a new configuration setting that will work in your system and how to reset the switches. The second section of this appendix explains how to add the scanner driver to your computer system if you chose not to use the *SJInstal* program provided on the *ScanJet Software* disc.

Two levels of instructions are provided in the first section so that you can match your level of computer expertise to the appropriate instructions.

Shaded paragraphs in this appendix are directed at the experienced user. If you are a novice user, you may want to skip over those portions or read them only for background information.

### Resetting the Configuration Switches

If your computer boots up improperly or not at all, or if you see error messages, an address conflict may be causing the problem. An addressing conflict occurs when two cards occupy the same memory location. Follow these instructions to eliminate the problem.

#### Removing the Card

1. Turn off ScanJet.
2. Turn off your computer system.
3. Unplug your computer.
4. Disconnect the ScanJet interface cable from the back of your computer.
5. Remove the top cover of your computer.
6. Remove the mounting screw holding the interface card.

7. Carefully remove the card from its slot using the cautions listed in Step 5, **Chapter 2, Installing the Interface Card**.

### **Resetting the Switches**

Remove the plastic cover from the configuration switches. Change the position of the switches to a new setting as described in the following paragraphs. See Figure A-1.

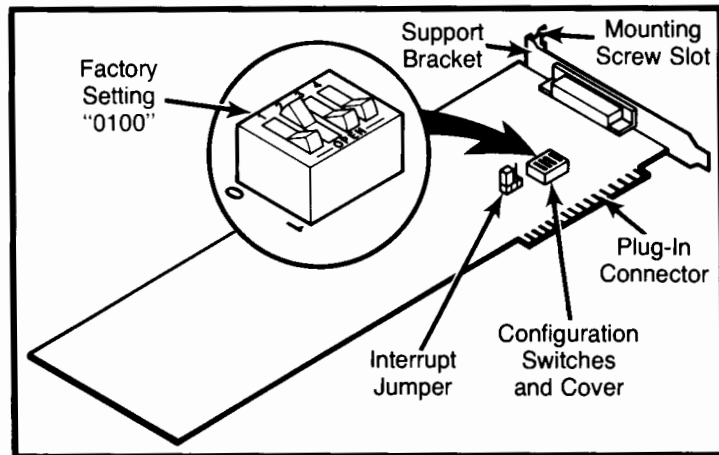


Figure A-1. HP 88290A Interface Card

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### **NOTE**

If you are a novice user, you may want to skip the shaded sections of this appendix. The shaded sections provide an advanced method for solving addressing conflicts.

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### **Background Information**

Your computer has two different types of address space: memory space and I/O space. Within the memory space is a section called Expansion ROM memory space. Most computer cards use addresses located in either I/O space or Expansion ROM space, or both. If two cards are configured to use the same address locations, a conflict occurs and your computer system does not operate correctly.

Most cards, including the HP 88290A interface card, have switches which determine the locations in the computer address space that the card will occupy. Addressing problems can be resolved by changing the switches on one of the conflicting cards to choose a new location within the computer address space.

The HP 88290A interface card uses eight bytes of computer I/O space and 16 kilobytes of Expansion ROM memory space. The exact address locations used by the card are determined by the settings of the configuration switches.

Switch 1 on the HP 88290A determines which one of two starting addresses in the computer I/O space is used by the card. Switches 2, 3, and 4 determine which of the eight possible starting addresses is used in the computer Expansion ROM memory space.

Figure A-1 shows where the configuration switches are located on the interface card. Notice that the switch positions 1 and 0 are written upside down to the left of the configuration switch module (when the card is held as illustrated in the drawing). Each configuration switch can be set by pushing one end of it—bottom for position 1 and



top for position 0. The factory setting is illustrated in Figure A-1.

**Selecting I/O Switch Position.** Switch 1 is used to select the I/O address for the card, with position 0 selecting addresses 278H through 27FH and position 1 selecting addresses 268H through 26FH. Change Switch 1 from the factory-set position 0 to position 1 *only* if a parallel printer port is configured as Port 2 in your computer system.

See Table A-1 to find the situation that applies to you. Then, select the correct position for Switch 1. If you decide to change Switch 1 from the factory setting to position 1, make sure no other card in your system occupies addresses 268H through 26FH.

Other Parallel Ports		HP 88290A	
Quantity	Port Assignment	Switch 1 Setting	Addresses
None	None	"0"	278H – 27FH
1	Port 1	"0"	
1	Port 2	"1"	268H – 26FH
2	Port 1 & Port 2	"1"	

Table A-1. I/O Table

**Selecting ROM Switch Positions.** Switches 2, 3, and 4 select the Expansion ROM location for the card. Table A-2 shows all possible settings of these switches with corresponding Expansion ROM locations and their standard uses. The factory-settings for switches 2, 3, and 4 are **1, 0, and 0**, respectively (addresses C4000-C7FFF).

Expansion ROM Address (Hexadecimal)	Configuration Switch Setting			Common Usage
	2	3	4	
C0000-C3FFF	0	0	0	EGA Cards
C4000-C7FFF Factory Setting HP 88290A	1	0	0	
C8000-CBFFF	0	1	0	IBM/XT Controller Card
CC000-CFFFF	1	1	0	IBM/PC Network Card
D000-D3FFF	0	0	1	
D4000-D7FFF	1	0	1	
D8000-DBFFF	0	1	1	IBM/PC Cluster Card
DC000-DFFFF	1	1	1	

**Table A-2. Commonly Used Addresses**

As shown in the **USAGE** section of Table A-2, the factory-set address of the HP 88290A card is usually available. However, because of the large number of cards on the market, a conflict is possible. Some cards do not have a specific address assignment, but *self-select* (using a computer program) the first unused address or addresses available in the computer Expansion ROM space.

Expansion ROM Address (Hexadecimal)	Configuration Switch Setting			C H E C K  ✓	Your Cards
	2	3	4		
C0000-C3FFF	0	0	0	<input type="checkbox"/>	_____
C4000-C7FFF Factory Setting HP 88290A	1	0	0	<input type="checkbox"/>	_____
C8000-CBFFF	0	1	0	<input type="checkbox"/>	_____
CC000-CFFFF	1	1	0	<input type="checkbox"/>	_____
D0000-D3FFF	0	0	1	<input type="checkbox"/>	_____
D4000-D7FFF	1	0	1	<input type="checkbox"/>	_____
D8000-DBFFF	0	1	1	<input type="checkbox"/>	_____
DC000-DFFFF	1	1	1	<input type="checkbox"/>	_____

**Table A-3. Address Check List**

Use Table A-3 to list the addresses of cards used in your system. Determine which of the eight Expansion ROM locations are available for the HP 88290A card. Then, set the switches on the card for one of the available addresses. Re-insert the card and test it using instructions in **Chapter 2**.

If you find that you've already used all the available Expansion ROM locations, you must remove a card from your system to allow for installation of the HP 88290A card.

### **Using a Systematic Approach**

Here is a simple, systematic method to find a switch setting that works for your system. As demonstrated by Table A-4, only 16 switch combinations are possible using the four switches. You should have already tried the factory-setting, so only 15 other switch combinations are possible.

**Success by Trial and Error.** Start with the top setting (after the factory-setting) given in Table A-4, and, if you're unsuccessful, move down the list until you select a setting that works in your system. Use the boxes provided in Table A-4 to check off each configuration setting as you move down the list. The settings most likely to succeed are at the top; the settings least likely to succeed are at the bottom.

Check the setting 0 1 0 0 now (the factory setting) as you have already tried it. Follow the instructions in the next section to replace the card in your computer. If your computer boots up properly, then the new setting works. If it doesn't, keep trying!

If you find that all 15 locations are already being used in your system, remove a card to allow for installation of the HP 88290A.

1	2	3	4	✓	NOTES
0	1	0	0	<input type="checkbox"/>	Factory Setting
1	0	0	1	<input type="checkbox"/>	_____
1	1	0	1	<input type="checkbox"/>	_____
1	1	1	1	<input type="checkbox"/>	_____
1	0	1	1	<input type="checkbox"/>	_____
1	1	1	0	<input type="checkbox"/>	_____
1	0	1	0	<input type="checkbox"/>	_____
1	1	0	0	<input type="checkbox"/>	_____
1	0	0	0	<input type="checkbox"/>	_____
0	0	0	1	<input type="checkbox"/>	_____
0	1	0	1	<input type="checkbox"/>	_____
0	1	1	1	<input type="checkbox"/>	_____
0	0	1	1	<input type="checkbox"/>	_____
0	1	1	0	<input type="checkbox"/>	_____
0	0	1	0	<input type="checkbox"/>	_____
0	0	0	0	<input type="checkbox"/>	_____

**Table A-4. Possible Configuration Switch Settings**

## Replacing the Card

After selecting a new configuration switch setting, replace the card using the following instructions:

1. Snap the plastic cover back onto the configuration switch module.
2. Replace the card in its slot in the computer.
3. Replace the mounting screw holding the interface card.
4. Re-attach the computer top cover.
5. Connect the ScanJet interface cable to the HP 88290A interface card.
6. Plug the computer into an AC outlet.
7. Turn on the computer system.
8. Turn on ScanJet.

If the computer does not boot up correctly, return to Step 1 at the beginning of this appendix (**Resetting the Configuration Switch**). Otherwise, if you have not yet installed the *ScanJet Software*, return to **Installing the Scanner Driver in Chapter 2**. If you have already installed the scanner driver, return to the last section of **Chapter 2, Testing Your Installation**.

If the confidence test at the end of **Chapter 2** is successful, and you do not have an expanded or extended memory card in your system, then the installation process is complete. However, if you have an extended or expanded memory card in your computer, you should test the memory because conflicts between a memory card and a scanner card appear only with *use* of the memory.

If the memory test reveals that the HP 88290A and the memory card are using the same Expansion ROM space, re-install one of the cards using a different Expansion ROM location. If no location is available, you may need to remove a card from your computer.

If you have Expansion ROM locations available in your computer, and the HP 88290A card does not work when set to that address, call your dealer or HP Sales Office for assistance.

## Changing the CONFIG.SYS File

If you choose not to use the *SJInstal* program on the *ScanJet Software* disc, you can install the scanner driver manually by following the steps below:

1. Save a copy of your current CONFIG.SYS file under another name before starting this procedure. To do this, get into the main (root) directory of your system's start-up (boot) disc by typing: C: or the letter of your boot disc.

2. Then type: CD \

Press ENTER.

3. Now, type:

**COPY CONFIG.SYS CONFIG.BAK**

Press ENTER.

You now have a copy of your current CONFIG.SYS file called CONFIG.BAK, in case you make a mistake when doing the following steps.

4. To add the scanner driver to CONFIG.SYS, type:

**COPY CONFIG.SYS + CON: CONFIG.SYS**

Press ENTER. Your screen now displays:

CONFIG.SYS

CON

5. You can now add lines from your CONsole to your CONFIG.SYS file. Type:

**DEVICE = SJDRIVER.SYS**

Press ENTER.

---

6. Now, type:

**BUFFERS = 20**

Press **ENTER**.

7. Complete this procedure by pressing **CTRL** and **Z** simultaneously. Press **ENTER**.

8. From the **C>** prompt, insert the *ScanJet Software* disc into drive A and close the door. Copy the ScanJet driver file from the *ScanJet Software* disc by typing:

**COPY A:SJDRIVER.SYS C: \**

Press **ENTER**.

9. Remove the *ScanJet Software* disc from drive A. Reboot your system to activate the scanner driver. Remember, your old **CONFIG.SYS** file has been saved as **CONFIG.BAK**.

10. Return to **Chapter 2, Testing Your Installation**.



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**NOTE**

If you make other changes or corrections to your **CONFIG.SYS** file, use the *MS-DOS* line editor *EDLIN* or another editor.

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# B

## Where to Find Help

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### Problem-Solving

*If your computer boots improperly or not at all*, you probably need to reset the configuration switches on your interface card. See **Appendix A** for detailed instructions.

*If you would like to confirm that you've installed the ScanJet driver correctly*, read **Installing the ScanJet Driver** in **Chapter 2**.

*If you would like to change your CONFIG.SYS file manually* (and not use the *SJInstal* program), refer to **Appendix A** for instructions.

*If paper jams in your ADF or you have any other problems with the feeder*, see **Chapter 4**.

*If you would like to learn about dithering and grayscale*, consult the glossary and *Using Scanning Gallery* before moving on to your software package.

*If you have trouble scanning images*, refer to *Using Scanning Gallery* and your software package manual for instructions.

*If you think ScanJet has a problem, or if you would like to find out more about maintenance and service programs*, read **Appendix C, Warranty and Service Information**.

*To replace a Mylar guide*, read **Chapter 5**.

*To find corrections and updates to documentation*, review the *HP Communicator* magazine, HP product number 45530.

## Finding Software Packages for ScanJet

New software packages will be developed and introduced by software companies after this user's guide is printed. Check with your sales representative to find which packages are available today.

## Ordering Supplies

Order supplies for your system by contacting your sales representative or HP dealer.

The part numbers below are listed for your convenience. For a complete list of accessories, ask your sales representative or HP dealer.

Description	HP Part Number
5 1/4-inch flexible discs (360 KByte, blank)	92190A
ScanJet User's Guide	09190-90005
Scanning Gallery User's Guide and accompanying discs	68357F
Interface cable	88290-61600
Automatic document feeder	88190A
Mylar Guide	88190-44100
Power Cord *	See footnote
Shipping Retainer	RA1-4705-000CN
Shipping Material	
HP 9190A Box	09190-84405
HP 9190AB Box	09190-84406
Foam Insert	09190-84408

\* Power cord part numbers are dependent on your location. Please consult your sales representative if you need to order a power cord.

## If Your Question is Not Answered Here

If we haven't addressed your problem in this user's guide or in the software manual, you may get assistance from your dealer, Hewlett-Packard, or your own organization. **Appendix C**, contains a list of Hewlett-Packard Worldwide Sales and Support Offices.



## Warranty and Service Information

### One-Year Limited Hardware Warranty

Hewlett-Packard warrants this peripheral/accessory against defects in materials and workmanship for a period of one year from receipt by the end user unless an alternate warranty coverage is selected by the purchaser. Contact your HP Sales Office for details of other warranty options available. For example, it is possible to choose a warranty option which matches that for an entire HP system. If HP receives notice of such defects during the warranty period, HP will either, at its option, repair or replace products which prove to be defective.

Should HP be unable to repair or replace the product within a reasonable amount of time, the customer's alternate remedy shall be a refund of the purchase price upon return of the product.

### Exclusions

The above warranty shall not apply to defects resulting from improper or inadequate maintenance by the customer, customer-supplied software or interfacing, unauthorized modification or misuse, operation outside of the environmental specifications for the product, or improper site preparation and maintenance.

The selection and use of media, supplies, and consumables is the customer's responsibility. Hewlett-Packard reserves the right to exclude from the warranty or service agreement any repairs for damage to HP products which HP reasonably determines or believes were caused by use of non-HP media or cleaning supplies. HP will, upon request, repair such damage on a time and material basis.

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## **Obtaining Warranty Service**

To obtain warranty service, products must be returned to a service facility designated by HP. Hewlett-Packard may repair on-site at the option of the customer. The customer is responsible for travel charges when on-site repair is requested. Warranty service for products purchased as part of a system will be subject to service in accordance with the system services.

Customers shall prepay shipping charges for products returned to HP for warranty service and HP shall pay for return of the products to customer. However, customers shall pay all shipping charges, duties, and taxes for products returned to HP from another country.

## **Warranty Limitations**

HP makes no other warranty, either expressed or implied, with respect to this product. HP specifically disclaims the implied warranties of merchantability or fitness for a particular purpose. Some states or provinces do not allow limitations on the duration of an implied warranty, so the above limitation or exclusion may not apply to you. However, any implied warranty of merchantability or fitness is limited to the one-year duration of the written warranty.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state, or province to province.

## **Exclusive Remedies**

The remedies provided herein are the customer's sole and exclusive remedies. In no event shall HP be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory. Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.



## Hardware Maintenance

### Maintenance by Hewlett-Packard

HP offers complete service and maintenance worldwide. Maintenance agreements are available for HP peripheral products. Advantages of these agreements to the customer include a fixed annual cost, individualized cost-effective contracts, and a choice of response times. Current rates can be determined by contacting your local HP Sales Office.

Because mechanical parts do wear and electronic devices occasionally need service, HP Personal Computer Dealer Repair Centers and the worldwide network of HP Sales and Service Offices are available to help you. Larger organizations may elect to perform their own maintenance, backed up by HP parts and expertise.

There are several HP service options available to customers.

*A Field Repair Center Maintenance Agreement* allows you to send ScanJet to a nearby HP Field Repair Center, where it is repaired within three working days. This contract is priced below the average cost of per-incident service. In addition, you get higher priority service, and your costs are pre-budgeted, with no chance of unexpected expenses.

*On-Site Maintenance Agreements* are available with several levels of response time and coverage so that you may select the support level best suited to your system usage. For example, if you are within 100 miles of a primary service office, next week day support is available.

For organizations with several scanners, a *Volume On-Site Maintenance Agreement* provides weekly repair visits at your central location if you are within 100 miles of an HP Service Office. A contract can be written for any combination of 25 or more work-station products--processors, discs, printers, or plotters--all at low Field Repair Center Agreement rates.

HP repair locations are located worldwide. If you can not find a repair center in your area, contact an HP Sales and Service Office for assistance--ask for *Computer Customer Engineering*.

### **Maintenance by Your Local Dealer**

The HP dealer sites designated as Personal Computer Dealer Repair Centers provide maintenance at their locations. Many also offer maintenance contracts which include additional services such as pickup and delivery or loaner equipment.

To find the nearest Dealer Repair Center:

- In the U.S., call (800) 835-HPHP
- In other countries, call your HP Sales and Service Office, and ask for *Personal Computer Dealer Sales*.

### **Maintenance by Your Own Personnel**

If yours is a large organization, cooperative support may be the most economical alternative. Self-paced maintenance courses, service manuals, parts, exchange assemblies, and technical assistance are available from HP.

### **Obtaining Service During the Warranty Period**

If your ScanJet or ADF should fail during the warranty period, bring them to an authorized HP Personal Computer Dealer Repair Center, or bring the equipment to one of the HP Field Repair Centers.

### **Obtaining Service After the Warranty Period**

If your hardware should fail after the warranty period, contact an authorized HP Personal Computer Dealer Repair Center--or request service from your HP Field Repair Center. If you do not have a maintenance agreement, arrange for either repair center service or on-site service on a per-incident basis.

## Worldwide Sales and Support Offices

Hewlett-Packard products are sold and supported worldwide through Hewlett-Packard Sales and Service Offices and through dealers.

- *To contact Hewlett-Packard:* There are more than 240 Hewlett-Packard Sales and Service Offices worldwide. To locate the one nearest you, use your telephone directory or contact one of the major Hewlett-Packard offices listed.
- *To contact a dealer:* Call 800/FOR-HPPC in the U.S. or call your local Hewlett-Packard Sales and Service Office. Ask for "Personal Computer Dealer Sales."

### **Argentina**

- \* Buenos Aires  
Phone: 781-4059/69

### **Australia**

- \* North Ryde, N.S.W.  
Phone: 888-4444
- \* Blackburn, Victoria  
Phone: 895-2895
- \* The Gap, Queensland  
Phone: 30-4133

### **Austria**

- \* Vienna  
Phone: 0222/2500-0

### **Belgium**

- \* **Supplies: 02/762-3200**
- \* Brussels  
Phone: 02/762-3200

### **Brazil**

- \* Alphaville, Barueri  
Phone: 011/421-1311

### **Canada**

- \* **Software Assistance:**  
**1-800/267-6115**  
**(in English and French)**
- \* **Supplies: 514/697-4232**
- \* Edmonton, Alberta  
Phone: 403/486-6666
- \* Richmond, British Columbia  
Phone: 604/270-2277
- \* Mississauga, Ontario  
Phone: 416/678-9430

### **Chile**

- HP Distributor:  
Olympia (Chile)  
Santiago  
Phone: 225-5044

### **Denmark**

- \* Birkerød  
Phone: 02/81-66-40

### **El Salvador**

- HP Distributor  
IPESA  
San Salvador  
Phone: 503/26-6858

### **Egypt**

- \* Cairo  
Phone: 706-440

### **Finland**

- \* Espoo  
Phone: 00358-0-88721

### **France**

#### **Supplies: 6/928-32-64**

- \* Rennes  
Phone: 99/51-42-44
- \* Toulouse  
Phone: 61/40-11-12

### **German Federal Republic**

- \* Böblingen  
Phone: 07031/645-0

### **Guatemala**

- HP Distributor:  
IPESA  
Guatemala City  
Phone: 316627

### **Hong Kong**

- \* Wanchai  
Phone: 5/200922

### **Italy**

- \* Cernusco Sul Naviglio  
Phone: 02/923691

### **Japan**

- Yokogawa-Hewlett-Packard Ltd.
- \* Osaka  
Phone: 06/304-6021
- \* Sagamihara  
Phone: 0427/59-1311
- \* Tokyo  
Phone: 03/331-6111

### **Korea**

- \* Seoul  
Phone: 784-4666

### **Malaysia**

- \* Kuala Lumpur  
Phone: 2986555

### **Mexico**

- \* Mexico, D.F.  
Phone: 5-40-62-28



**The Netherlands**  
**Supplies: 020/47-06-39**

- \* Amstelveen  
Phone: 020/547-6911

**New Zealand**  
Auckland  
Phone: 687-159

**Norway**

- \* Oeøsteraas  
Phone: 0047/2/24-60-90

**Puerto Rico**  
Hato Rey  
Phone: 809/754-7800

**Saudi Arabia**  
\* HP Distributor:  
Modern Electronics  
Jeddah  
Phone: 644-96-28

**Singapore**  
\* Singapore  
Phone: 473-1788

**South Africa**  
**Supplies: 802-5111**  
**53-7954**

- \* Sandton, Transvaal  
Phone: 802-5111

**Spain**  
\* H.P. Española, S.A.  
Carretera Nacional  
Vi, Km. 16,400  
Las Rozas (Madrid)  
Phone: 637 00 11

**Sweden**

- \* Spanga  
Phone: 08/750-2000

**Switzerland**  
**Supplies: 057/31-22-54**  
**or 31-22-59**

- \* Widen  
Phone: 0041/57-31-21-11

- \* Meyrin  
Phone: 0041/22-83-11-11

**Taiwan**

- \* Taipei  
Phone: 02/712-0404

**United Kingdom**  
**Supplies: 0734/79-2868**  
**or 0734/79-2959**

- \* Uxbridge, Middlesex  
Phone: 895-720-20
- \* Winnersh, Wokingham  
Phone: 0734/784774

**United States**

**For assistance before  
your purchase, to locate  
an HP dealer, or to obtain  
your local Phone-in  
Software Assistance  
number: 800/FOR-HPPC**  
**Hardware maintenance  
information or Dealer  
Repair Center locations:  
800/835-HPHP**

**Computer Supplies:**  
**-All states except  
California, Alaska, and  
Hawaii:**  
**800/538-8787**

**-In California, Alaska,  
and Hawaii:**

**408/738-4133 (collect)**

- \* Los Angeles, California  
Phone: 213/337-8000
- \* Santa Clara, California  
Phone: 408/988-7000
- \* Englewood, Colorado  
Phone: 303/649-5000
- \* Atlanta, Georgia  
Phone: 404/955-1500
- \* Rolling Meadows,  
Illinois  
Phone: 312/255-9800
- \* Rockville, Maryland  
Phone: 301/948-6370
- \* Andover, Massachusetts  
Phone: 617/682-1500
- \* Novi, Michigan  
Phone: 313/349-9200
- \* St. Paul, Minnesota  
Phone: 612/644-1100
- \* Paramus, New Jersey  
Phone: 201/265-5000
- \* Valley Forge,  
Pennsylvania  
Phone: 215/666-9000
- \* Richardson, Texas  
Phone: 214/231-6101
- \* Bellevue, Washington  
Phone: 206/643-4000

**Venezuela**

- \* Caracas  
Phone: 582/239-4133

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\* Full Field Repair Center  
capabilities.

## Regulatory Statements

### Federal Communications Commission Radio Frequency Interference Statement (USA Only)

This equipment generates and uses radio frequency energy and may, if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, cause interference to radio and television reception.

It has been type-tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. Shielded data cables were used during the type test; therefore, properly shielded and terminated data cables should be used to reduce potential interference. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- reorient the receiving antenna
- relocate the computer with respect to the receiver
- move the computer away from the receiver
- plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

## **Funkentstörung Deutschland**

### **Herstellerbescheinigung**

Hiermit wird bescheinigt, daß das Gerät HP 9190A/AB in Übereinstimmung mit den Bestimmungen von Postverfügung 1046/84 funkentstört ist.

Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Wird das Gerät innerhalb einer Anlage betrieben,

- so muß bei Inanspruchnahme der Allgemeinen Genehmigung FTZ 1046/84 die gesamte Anlage der oben genannten Genehmigung entsprechen.
- die mit einer FTZ-Serienprüfnummer gekennzeichnet ist, und für die eine Betriebsgenehmigung vorliegt oder beantragt wird, so sind in der Regel keine weiteren Schritte notwendig.

## **Electromagnetic Interference Regulations**

### **Manufacturer's Declaration (English Translation)**

This is to certify that the HP 9190A/AB is in accordance with the Radio Interference Requirements of Directive FTZ 1046/84. The German Bundespost was notified that this equipment was put into circulation; the right to check the series for compliance with the requirements was granted.

If this equipment is to be operated with a system

- and if the General License is being claimed, the complete system has to comply with the General Licensing requirements.
- which has its own FTZ-Serial License, and for which an operating license has been granted or requested, usually no further steps are necessary.

# D

## Specifications

### ScanJet Specifications

Optical resolution:	2550 dots (yielding 300 dpi)
Document size:	Max: 8.5 X 11.7 in. 216 X 297 mm
Scanning speed:	20.4 sec. at 300 dots per inch (dpi)
Output resolution:	38-600 dpi, selectable in one dpi increments (software dependent)
Power supply:	AC 90-125.6 or 220-240 V
Power consumption:	Maximum 120 W
Operating temperature:	41 to 95°F 5 to 35°C
Operating humidity:	5 to 95% relative humidity
Size:	14.5 X 22.4 X 3.3 in.* 368 X 570 X 83 mm
Drop-out color:	Yellow
Weight:	22.8 lbs. 10.4 kg
Inclination:	Proper operation occurs when tilted less than 2 degrees from horizontal reference.

\* Depth includes top of the spring lock. Height is measured to copyboard glass.

## ScanJet Features

Scanner type:	Flatbed
Scanning element:	Charge-coupled device image sensor
Light source:	Halogen lamp (50 V, 42.5W)
Interface:	Bidirectional Centronics
Density adjustment:	Auto background control, manual
Mode selection:	Binary, dithered, grayscale
Grayscale:	16 level (4 bit) per picture element
Scaling:	7-1578% The available scaling range is dependent on the selected resolution. For example, a 300 dpi dithered image can be scaled from 13 to 200%
Other functions:	Scan area selection (window) negative/positive reversal

## Optional ADF Specifications

Maximum paper size:	8.5 X 14 in. 216 X 356 mm
Minimum paper size:	5.5 X 5.5 in. (without paper skew) 140 X 140 mm
Maximum paper weight:	29 lbs 110 g/m <sup>2</sup>
Minimum paper weight:	16 lbs 60 g/m <sup>2</sup>
Paper tray capacity:	.08 in. 2 mm (approx. 20 sheets)
Size:	14.5 X 19.8 X 2.9 in. 368 X 504 X 73 mm
Weight:	9.25 lbs 4.3 kg
Operating Temperature:	41 to 95°F 5 to 35°C
Operating Humidity:	5 to 95% relative humidity

## Power Considerations

Use ScanJet within the following power range:

HP 9190A: 90 – 126.5 V (115 VAC)

HP 9190AB: 198 – 264 V (220/240 VAC)

Supply frequency: 50 – 60 Hz

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### CAUTION



Make sure to use a power cord (including extension cord) less than 16.5 feet (5 meters). Using a longer cord may result in reduced voltage and malfunction.

Install a voltage regulator or a similar device if the power source is not stable.

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## Environmental Considerations

Use ScanJet within the following temperature and humidity ranges:

Ambient temperature: 41 – 95°F (5 – 35°C)

Ambient humidity: 5 – 95% RH

Avoid direct sunlight, and place ScanJet in a cool location.

Do not install ScanJet near devices containing or generating magnetic fields.

Place ScanJet on a flat, even surface.

Do not install ScanJet in a dusty place or where ammonia gas is present.

If you are moving ScanJet from a warm area to a cool area or vice-versa, allow it to adjust to its new environment before using it. If you use ScanJet immediately after moving it, condensation may occur inside the unit and reduce performance. Normal performance resumes when condensation evaporates.



## Glossary

### A

**Address:** A number that identifies the location of a peripheral device. Each device in your system must have its own address.

### B

**Binary:** A numbering system used with computers in which each bit is represented as a series of 0's and 1's.

**Binary Mode:** A method of scanning an image in which each pixel is determined to be black or white. Binary mode should be used to scan text and line art.

**Bit:** Contraction of "binary digit"; the smallest unit of information in a binary system. A bit represents the choice between a 1 and a 0.

**Booting:** Puts your computer in a ready-to-run condition. The computer "pulls itself up by its bootstraps" and gets ready to operate.

**Byte:** A group of eight bits used to represent one character, such as a letter, number, or other symbol.

### C

**Cable:** Provides the connection between computers and peripherals (printers, plotters, scanners, and disc or tape drives).

**Card Configuration:** The method by which a peripheral device's configuration and address are set by using switches on the interface card.



**Config.Sys File:** A file which contains special *DOS* commands which are executed when booting.

## D

**Directory:** The table of contents of the files stored on disc or tape.

**Dithering:** A method of varying patterns of identically shaped dots (a dither pattern) to simulate grayscale. Using dithering, areas which are black will have as many dots as possible, whereas lighter areas will have fewer dots. The dots are the same size.

**DOS:** The Disc Operating System.

**DPI:** (Dots Per Inch) a measurement of the resolution of a scanned image.

**Driver:** A program that allows the operating system to communicate with a peripheral.

## F

**Flexible Disc:** Also called a floppy; a circular plate of magnetically coated material used to store computer information. The disc is similar to a stereo record that records data instead of music. A flexible disc can be removed from your disc drive and is called flexible because it is made from a flexible piece of synthetic material.

## G

**Grayscale:** Measures the grayness of any portion of a picture. When a picture is scanned, the gray level of each area is determined and sent to a computer. This means each dot will require several bits to represent the grayscale.

## H

**Halftoning:** A method of simulating grayscale by varying the sizes of the dots printed. Black areas are comprised of large black dots, while lighter areas are comprised of smaller black dots.

**Hardware:** The physical parts of the computer system – the computer and the peripheral devices.

**Hard Disc:** A storage device; also called a “fixed” or “Winchester” disc. A hard disc (as opposed to a flexible disc) is made from rigid aluminum.

## I



**Image Sensor:** An optical sensor which converts light reflected from a document into electrical signals.

**Interface Cable:** A cable that connects an interface card to a peripheral device.

**Interface Card:** A printed circuit board inserted into your computer which allows specific devices to talk to your computer.

## L

**Load:** To move (read) programs into the computer memory.

## M

**Mylar Guide:** A plastic sheet on the ADF which guides paper over the scanning bar.

## O

**Operating System:** A set of programs that controls a computer's operations.

## P

**Program:** A set of instructions or steps telling the computer how to perform a problem or task.

**R**

**Resolution:** A measure of how many dots per inch (dpi) or pixels per inch (ppi) are either scanned or printed. The higher the resolution, the higher the quality of the picture. The resolution of the picture is limited by the quality of the output device (printer or terminal) and the input device (the scanner). For example, if an image is scanned at 300 dpi and is printed at 150 dpi, the best possible resolution is 150 dpi.

**S**

**Scaling:** Sizing; a method of enlarging or reducing the size of a scanned image.

**Software:** A computer program or set of programs loaded from a disc into the computer.

**U**

**Utility:** A program that performs a common task.

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