

PowerLook II

Color Flatbed Scanner

Operation Manual

FOR MACINTOSH AND PC USERS

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UMAX DATA SYSTEMS, INC.

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PowerLook II

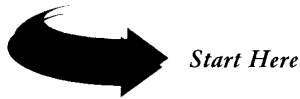
Quick Start Guide

This fold-out sheet serves as a quick reference to the connection and installation procedures for the PowerLook II scanner. The Start-up Steps consist of the following instructions:

- ❑ Unpack the scanner
- ❑ Unlock the scanner optical assembly
- ❑ Become familiar with scanner system
- ❑ Prepare scanner for connection
- ❑ Connect scanner to computer system
 - Macintosh connection
 - IBM PC connection
- ❑ Install application software

Installing the UMAX Scanner is Easy and Fun!

You can operate it in 10 steps or less!



2

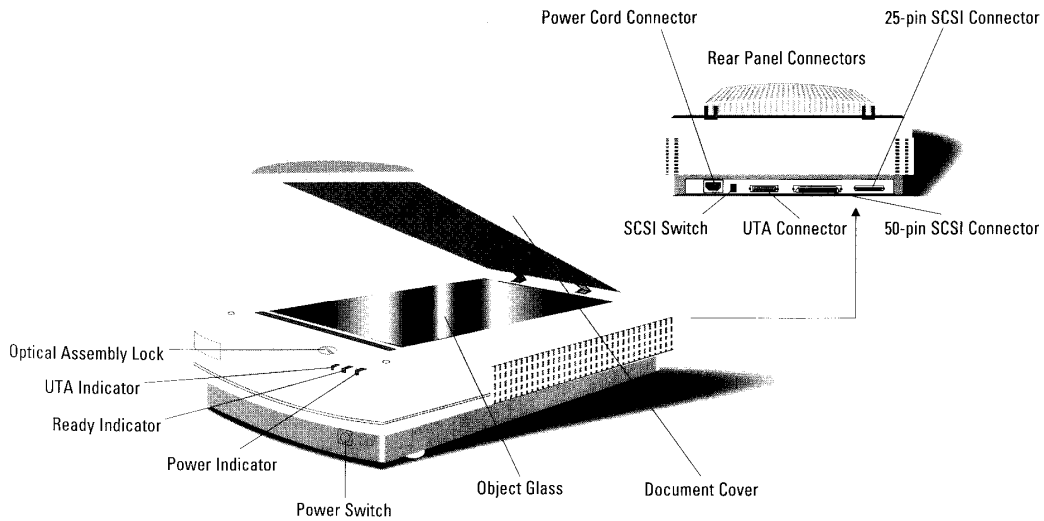
Unlock the scanner system by turning the *optical assembly lock* counterclockwise with a coin.

1

Unpack your scanner. Make sure that all the scanner system hardware, software, cabling and documentation items indicated on the packing list are present.

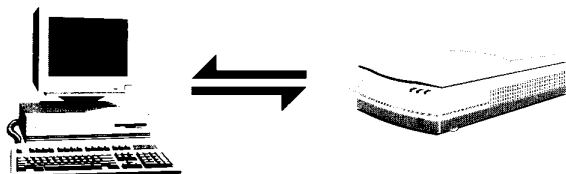
3

Familiarize yourself with the basic parts of the scanner. See Figure below:



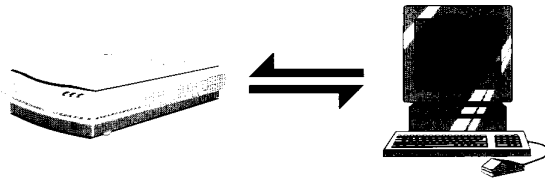
4

Prepare your scanner for connection.



Items for ***PC Installation***

1. Scanner
2. Scanner Power Cable
3. SCSI Interface Card
4. SCSI Cable
5. *MagicScan for PC* Diskettes



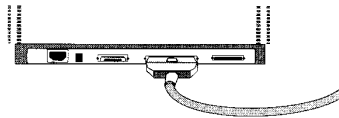
Items for ***Macintosh Installation***

1. Scanner
2. Scanner Power Cable
3. SCSI Cable
4. *MagicScan for Macintosh* diskettes

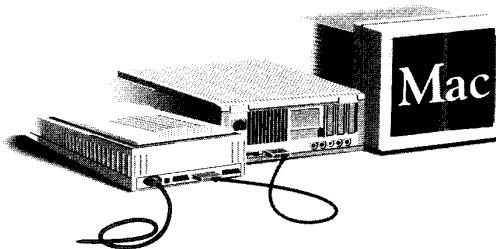
The UMAX Express Connection

Macintosh Connection

- 5 Ensure that no device is connected to your Macintosh computer's SCSI ID number 5 port. Connect the scanner to your Macintosh using the supplied SCSI cable. Connect the other end of the SCSI cable to your scanner.



- 6 Connect the power cord to the scanner. Turn the scanner power on. Turn the Macintosh computer power on.



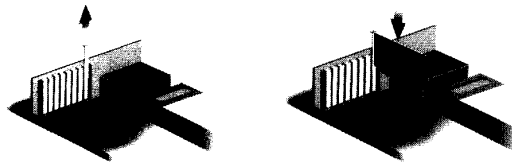
- 7 To use your scanner, you must install Adobe's *Photoshop* and UMAX's *MagicScan* software. Refer to the supplied software manuals for installation instructions.

IBM PC Connection

- 5** Connect the appropriate end of the power cord to the scanner and the other end to a grounded power outlet. Run the scanner POST (Power On SELF TEST) by turning the scanner power on. When POST is completed, the power and ready indicators glow steadily.

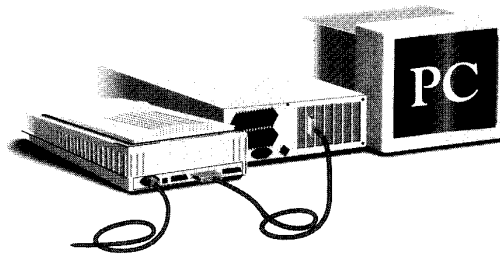
- 6** Take the SCSI scanner interface card. Note its factory pre-set I/O base address of 300H. Ensure that this address is not used by other previously installed interface cards in your PC. In case of base address conflict, refer to your scanner's Operation Manual to know how to reset the address setting.

- 7** Install the scanner interface card into one of the vacant expansion slots of your PC.

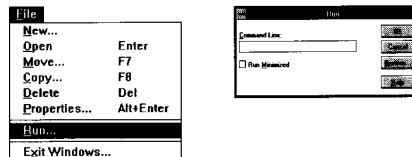


IBM PC Connection (cont.)

- 8** Replace the system cover of your PC. With the supplied SCSI cable, connect the scanner to the interface card connector at the rear or adapter panel of your PC.



- 9** Start your PC. Run the **UMAX Setup** by placing the *MagicScan for PC* disk in your PC. Open the Windows program, choose the File/Run command. Follow the on-screen instructions that tell you how to install the *MagicScan* software.



- 10** After the **UMAX Setup** finishes installing the software, refer to the *MagicScan for PC* manual for information on using *MagicScan*.

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CHAPTER 1

INTRODUCTION

Thank you for purchasing the UMAX PowerLook II color flatbed scanner.

Your scanner advances color flatbed scanners to a new level. It provides a more cost-effective and convenient alternative to drum scanners, while delivering a wide range of image scanning and preprocessing capabilities.

With its high-speed, high density range, high-resolution and easy-to-use utility driver, your scanner is designed to boost your productivity to the maximum. With resolutions up to 9600 dpi, it can produce image data in line-art, grayscale, and color modes. It offers great flexibility for all your imaging and optical character recognition (OCR) needs.

A cut above the rest is your scanner's intelligent, user-interface called **MagicScan** that brings out the fullest advantages and capabilities of your scanner.

Completing the picture are the bundled award-winning and tested software packages such as *Adobe Photoshop*. With such superior features and capabilities, your scanner enables you to breeze through a wide range of scanning tasks.

Overview of Features and Functions

Your *PowerLook II* scanner is loaded with the following features and functions:

High Resolution and Density Range

High resolution and density range define a high-end flatbed scanner. Your scanner offers an ultra high maximum resolution of 9600 dpi and a 2.0 density range (the density range will be 3.3, if scan through a transparency adapter), producing better gamma transformation, and a more accurate detection of highlight and shadow details thereby allowing even distribution of colors.

High Scanning Speed, Low Acoustic Noise

Your scanner can complete a color preview in just *7 seconds*. Compared to drum scanners, your PowerLook II scanner is much easier and convenient to use. Drum scanners require mounting to hold the original in place. As for PowerLook II, all you need to do is place the original face down and scan. Moreover, PowerLook's micro stepping technology greatly increases scanning speed and at the same time reduces noise level.

Intelligent Scanning Control Interface called *MagicScan*

MagicScan provides the most comprehensive of scanning control functions for high-end flatbed scanners. These functions include:

- Reflective, transmissive and negative scanning modes that allow scanning from a variety of image originals
- Multiple scan and batch scan, for scanning several images at once
- User-selectable levels of unsharp mask for correction
- Simplified histogram and tone curves for correction
- Provides descreen to remove moiré patterns found in scans of printed originals
- Auto-density for automatic detection of highlight and shadow
- Interactive preview window that allows users to view the scanned result before an

- Supports the ColorSync standard in the Mac environment
- Allows scans in 256 colors for color drawings
- Provides Network capability so that a group of PC users can effectively share PowerLook II from their own desktops within a networking environment
- Selectable output range to match printer range

❑ **MagicMatch Color Calibration**

MagicMatch is a superior calibration system that delivers the right colors to every scan and limits color shifts in the scanner. *MagicMatch* calibrates your scanner to a standard color calibration target and adopts a color space mapping algorithm that ensures accurate and consistent color matching in every scan.

❑ **Optional Transparency Adapter**

An optional feature of the PowerLook II is a transparency adapter that allows you to scan films, slides and transparencies. Users can easily mount the Transparency adapter without using any tools. And a special hinge design allows the transparency adapter to remain stationary at any angle between 30° to 70°.

❑ **Proprietary Image Noise Reduction**

Your scanner uses a sealed optical system design that blocks dust particles and excess reflections from penetrating the optical unit, thereby overcoming image and optical noise and ensuring sharp, true-to-life images.

About This Manual

The UMAX Operation Manual has been provided to assist you in becoming familiar with the startup and use of your scanner.

This manual is divided into chapters and appendices. The chapters give instructions on all aspects of installation, troubleshooting, and basic scanner maintenance. The appendices contain relevant technical information for your reference.

Introduction 1-4

- QuickStart* gives experienced users instructions on quickly setting up the scanner and installing the software.
- Chapter 1* gives an overview of scanner features and functions.
- Chapter 2* gives instructions on scanner preparation, tips on handling, and routine scanner maintenance
- Chapter 3* gives instructions on connecting the scanner to a Macintosh computer and installing the corresponding software.
- Chapter 4* gives instructions on connecting the scanner to an IBM PC and installing the corresponding software.
- Appendix A* gives troubleshooting tips for possible problems with the scanner.
- Appendix B* gives instructions for installing an ASPI-compatible Interface Card.
- Appendix C* gives instructions for configuring the I/O Address setting switches on a UMAX Interface Card.
- Appendix D* gives PowerLook II Scanner specifications.
- Appendix E* provides a glossary of technical terms and definitions.

CHAPTER 2

GETTING STARTED

Your PowerLook II scanner is extremely user-friendly. Hardware connection and software installation can be completed in a few steps. In minutes you can start operating your scanner to see for yourself the kind of quality scanned images it can produce.

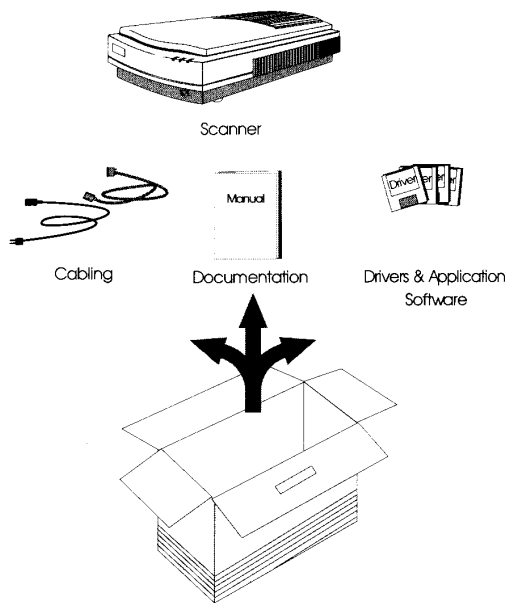
This chapter tells you how to prepare your scanner for connection and installation. It also gives some handling precautions and general care measures to ensure that your scanner will stay in top condition at all times.

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Unpack your scanner	2
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A Glance at Your Scanner	3
Preparation	4
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Test the Scanner	5
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Care and Maintenance Tips	6

Before You Begin ...

Unpack your scanner



Ensure that your package contains all the hardware, software, cabling and documentation you ordered. Check for any damage that may have occurred while package was in transit. For any missing or damaged item in your scanner package, contact your dealer or the carrier of your package immediately.

Keep the warranty card. Ask your dealer for a list of their authorized service centers in your area. Write down on a sticker label the toll-free number of their technical support division. Stick this label on the front panel of the scanner system for your easy reference.

Fill out the scanner registration form and give it to your dealer.

Handling Precautions

Static Electricity Precautions

Static electricity (in your body) can cause damage to the electronic components on the scanner's printed circuit board or the computer's interface card. Therefore, you need to discharge static build-up from your body before handling any card or component outside of its anti-static packaging.

To protect your equipment from static discharge, you are advised to observe the following procedures:

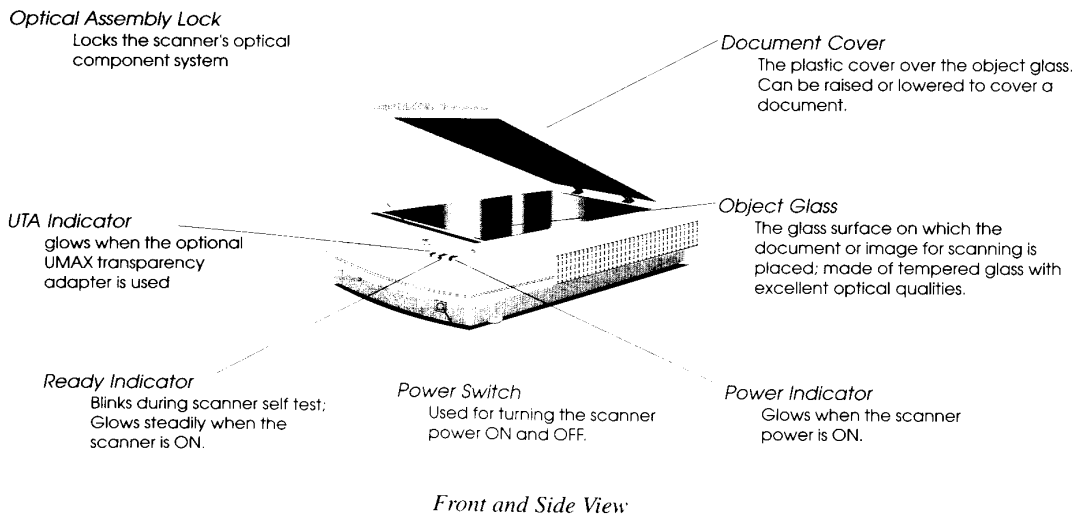
- Discharge any static build-up in your body by touching a grounded or anti-static surface (such as a large metal object or the expansion slot

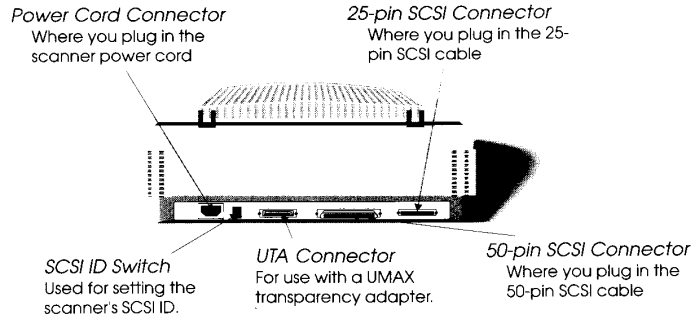
covers at the rear of your computer. Do this prior to removing any electronic components from their anti-static bags.

- When handling any electronic components, avoid touching any metal part of the component such as the gold "fingers" that plug into the expansion slot. It is best to handle system components either by their edges or by their mounting brackets.

A Glance at Your Scanner

Take a few minutes to become familiar with the different parts of the scanner. The figures below show the locations and names of the scanner parts. A brief description of each part is also given.





Rear Panel Connectors

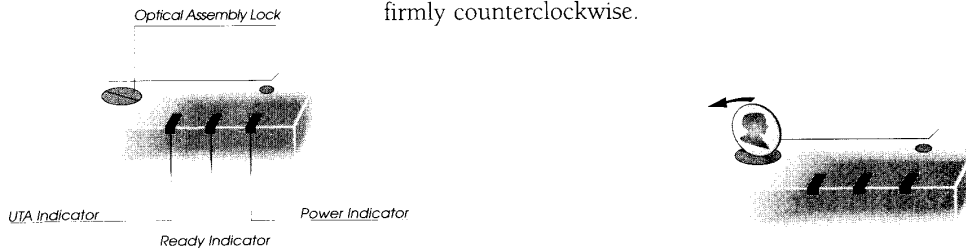
Preparation


Prepare your scanner for installation through the following simple steps:

- Unlock the optical assembly
- Check and reset (if necessary) the scanner's SCSI address
- Run the automatic scanner self-test

Unlock the Optical Assembly

Insert a coin in the thumbscrew of the *optical assembly lock* and turn it firmly counterclockwise.



 Before attempting to transport your scanner, it is important that you lock the optical assembly in place to avoid any possible damage to the scanner's optical components.

Test the Scanner

The scanner automatically performs a simple self-test each time it is turned on. This self-test checks the status of certain scanner functions.

After unpacking and unlocking, start the scanner self-test by following the steps below:

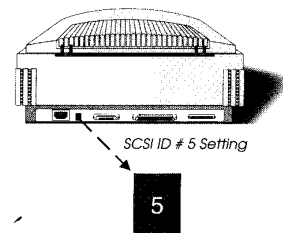
1. Connect the power cord to a wall outlet.
2. Connect the other end of the power cord to the scanner.
3. Power up the scanner.

At power-on, the front panel indicators flash once. The power indicator then glows and the ready indicator blinks. When the test is completed, the power and ready indicators glow steadily.

Change the SCSI ID Number

Your scanner's SCSI ID address setting is factory preset to # 5.

1. Check to see if this ID or address setting is used by another device connected to your computer's SCSI port.
2. If SCSI ID # 5 is not used, you do not need to change your scanner's SCSI ID number. You can directly proceed to hardware connection and software installation. For installation instructions, refer to Chapter 3 if you are



connecting to a Macintosh computer or to Chapter 4 if you are connecting to an IBM PC.

3. If you find however, that another connected device is already using SCSI ID # 5, then you must reset the SCSI ID on your scanner.

To reset the SCSI ID, do the following:

1. Make sure the scanner power is off.
2. Gently turn the SCSI ID switch until an unused number appears in the switch's notch.



Do not use SCSI ID addresses # 8 through F on your scanner. They are for factory use only.

Care and Maintenance Tips

Regularly clean the object glass to prevent dirt or smudge build-up that may reduce the quality of your scanned images. Before you clean the glass, make sure the scanner power is off and the power cord is unplugged.

Clean the object glass and document cover with a soft damp cloth and a mild detergent or alcohol.



Avoid spraying cleaning fluid directly on the Object glass. This may cause the liquid to penetrate the seams around the glass and contaminate the mirrors and lenses inside the scanner. Spray the liquid on a cleaning cloth and then wipe the glass clean.

CHAPTER 3

Macintosh Installation

Your **PowerLook II** scanner can work with a wide variety of Macintosh computers. The scanner's bundled software applications include the best image editing software, Adobe Photoshop.

This chapter describes how you can use your scanner with a Macintosh computer.

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- Before You Begin* 2
- Connect the Scanner to your Computer*2
- Install the Software*3
 - Photoshop and MagicScan Installation*3
- Install the Apple Compatible Driver*.....4
 - Application Software Installation*.....4
 - Apple Compatible Driver Installation*.....4
 - Apple Compatible Driver Removal*5
 - Apple Compatible Driver Notes*6

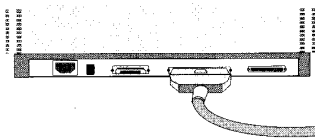
Before You Begin ...

Installing the scanner for use with a Macintosh computer is a fairly simple procedure. It involves only two major steps, namely, hardware connection and software installation, in that order.

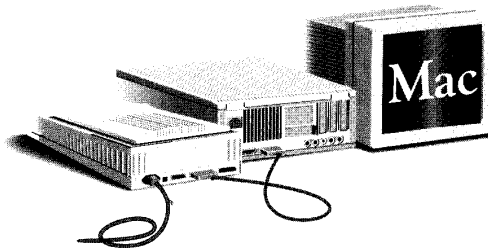
The above procedures are described with referral to the items listed below in the order that they are presented:

- Scanner
- Scanner power cable
- SCSI cable
- MagicScan for Macintosh* diskettes

Connect the Scanner to your Computer



1. Ensure that the scanner's SCSI ID is properly set. Refer to Chapter 2 for instructions on setting the scanner's SCSI ID.
2. Connect the SCSI cable to your Macintosh's SCSI port.
3. Connect the other end of the SCSI cable to the scanner.




4. Connect the power cord to the scanner. Connect the other end of the power cord to a grounded power socket.
5. Turn on the scanner power.
6. Turn on the computer power.

Install the Software

Install software in two easy steps, in the following order:

- Adobe Photoshop* Installation
- MagicScan* Installation

MagicScan is the interface used by *Adobe Photoshop* to control UMAX scanners. Its advanced controls allow precise adjustments in images even during the initial scan.

 To effect the procedures in this chapter, it is assumed that you know the operating basics of your Macintosh computer. If not, consult your Macintosh User documentation before proceeding with the instructions below.

Photoshop and MagicScan Installation


1. Install *Adobe Photoshop* first, by following the installation procedures found in the *Adobe Photoshop* Manual.
2. Install *MagicScan* by following the installation procedures found in the README file located on the *MagicScan* diskette. Also refer to this file for update information not included in printed *MagicScan* documentation.

Using MagicScan Help

The *MagicScan* help file contains information about using the menus and commands of *MagicScan*. Use the *MagicScan* help file anytime you need information on how to use a particular menu or command.



MagicScan Help Icon

 *Photoshop* does not use the Apple compatible driver. All scanner operation through *Photoshop* must be through *MagicScan*.

Install the Apple Compatible Driver


The Apple compatible driver is the interface used by various Apple scanner compatible application software to control UMAX scanners. Before you can install the Apple compatible driver however, you must first install the software application you will be using.

Application Software Installation

To install the application software, follow the installation instructions in the software manual.

Apple Compatible Driver Installation

1. Turn your Macintosh computer power on.
2. Remove all old Apple compatible scanner drivers from the System Folder.

 Refer to the appropriate manual for the removal of non-UMAX drivers.

3. Insert the *MagicScan for Macintosh* disk # 1 in the floppy drive.
4. Double-click the *MagicScan for Macintosh* icon to open the *MagicScan for Macintosh Folder*.

5. Double click on the *Apple Driver folder* to open it.
6. If you are using System 6.0.7, copy the Scanner file to the System Folder. If you are using System 7, copy the Scanner file to the Extensions Folder in the System Folder.
7. Restart the computer.
8. Run any application that supports Apple scanners.



Apple Compatible Driver Icon

For information on Apple compatible driver troubleshooting, please refer to the Troubleshooting section of this manual.

Apple Compatible Driver Removal

If for any reason, you need to remove the driver, simply drag the Scanner file to any point outside of your System Folder and restart the computer.

Apple Compatible Driver Notes

The driver does not support certain Apple scanner features. It also does not support all the scanner's capabilities. To use your scanner to its fullest capacities, use *MagicScan* with *Photoshop*.

- ☐ The driver supports both grayscale and black & white.
- ☐ The image may appear darker than it really is after some applications scale it for screen display. The actual image, without scaling, is not as dark. You can confirm this by using a 1:1 ratio to view the image.

CHAPTER 4

PC INSTALLATION

Your versatile scanner, together with its accompanying software, also works with many IBM PCs or compatible computers under the MS-Windows environment. You can scan, cut, paste, enhance images and graphics into your Windows applications.

This chapter describes how you can connect and use the **PowerLook II** scanner with your IBM PC or compatible computer.

What's in this chapter?

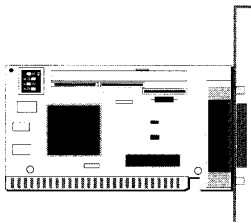
Before You Begin 2
Install the Interface Card2
Connect the Scanner to the Computer.....4
Run the UMAX Setup Program.....5

Before You Begin . . .

Installing the scanner for use with a PC is a fairly simple procedure. Hardware installation must be completed before software installation is begun. Before beginning the installation process, make sure the following items are present.

- Scanner
- Scanner Power Cable
- Interface Card
- SCSI Cable
- MagicScan for PC* Diskettes

With these items present, you can proceed with the installation.




Interface Card Installation

Before you can use your scanner with your computer, you need to install the interface card into your PC. To do this:

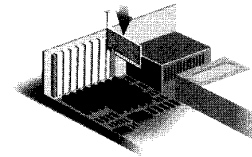
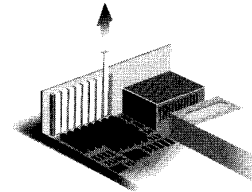
1. If your interface card is a UMAX proprietary card and has I/O Base Address dip switches on it, confirm or reset the I/O base address on the interface card. Refer to *Appendix C* for assistance in doing so if necessary. Then proceed with the instructions found in the next section for installing the card in the computer.
2. If your interface card is a switchless card (i.e. does not have dip switches on it for selecting the I/O base address), install the interface card in the computer as described in the next section.

Install the Interface Card in the Computer

To install the card into one of the computer's expansion slots, observe the following procedures:

 The interface card is sensitive to static electricity. Handle the card by its mounting bracket, particularly when removing the card from its anti-static packaging.

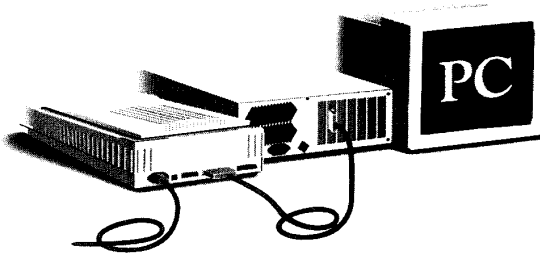
1. Turn the computer power off and unplug the power cord. Disconnect any devices connected to the computer.
2. Remove the housing cover of the computer. Follow the instructions provided in your PC's reference manual.
3. Choose a vacant expansion slot. Remove the metal cover corresponding to your chosen slot. Keep the removed screw for later reuse to fasten the interface card in place.
4. Gently insert the interface card into the slot until it is firmly seated in the slot.
5. Secure the card in place with the screw removed from the expansion slot cover in step 3 above.
6. Replace the housing cover following the instructions provided in the computer's reference manual.



Connect the Scanner to the Computer


With the interface card properly installed in your computer, you can now connect the scanner and the computer, as follows:

1. Connect the 25-pin cable connector to the interface card in the PC.
2. Connect the other end of the cable to the 50-pin connector of the scanner.
3. Connect the power cord to the scanner.
4. Turn on the scanner power.
5. Turn on the computer power.



Hardware installation is now complete.

Get ready to run the *UMAX Setup* program to install the supporting UMAX software supplied with your system.


 If you encounter intermittent problems either with the link between the scanner and your computer or with the results of your scans, you may have to install an external SCSI terminator. For more information about terminators, refer to **Appendix B**.

Run the UMAX Setup Program

The UMAX Setup program has been provided to facilitate the installation of the scanner interface and support software. Before running the Setup program, however,

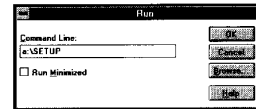
1. Verify if the application software you plan to use is TWAIN compliant.

2. If it is, there is no need to install a non-TWAIN driver.
3. However, if it is not, a non-TWAIN driver must be used.

 Non-TWAIN compliant application software packages must be installed before the drivers are installed. However, if the application software is TWAIN compliant, the installation order is unimportant.

To run UMAX Setup, it is assumed that you know the elementary concepts of MS-DOS and MS-Windows. If you are a beginner in the use of PCs, refer to your PC's operating system manuals before proceeding with the following:

1. Start MS Windows. Insert *MagicScan for PC* disk 1 into the correct floppy drive.
2. Pull down the **File menu** and select **Run**.
3. In the text entry box, enter either "A:SETUP" or "B:SETUP" depending on which drive contains the desired setup disk.
4. Follow on-screen instructions to complete the *Setup* process.



APPENDIX A

TROUBLESHOOTING TIPS

The **PowerLook II** scanner was designed to provide hassle-free installation and operation. However, should you encounter problems with your scanner, refer to the troubleshooting tips given in this chapter for help in correcting them.

For persistent problems with your computer, consult your dealer or certified service personnel.

What's in this Appendix?

General Approach 2
 Determine the Problem Cause 2
LED Indicators 4
System Hang..... 4
Apple Compatible Driver Installation Problems..... 6

General Approach


Determine the Problem Cause

In many cases, a problem will not require the service of a qualified technician. The solution may be very simple, such as correcting cabling connections and the like. The *solution* of a problem normally lies at the *source* of the problem. Therefore, it is important that you ascertain the cause of the failure or malfunction. Below is a general troubleshooting approach.

1. **Check the connections and installations.** Ensure that there are no loose connections. Ensure that the settings on the scanner and/or the interface card are correct.
2. **Check the error messages appearing on the screen.** Does the message point to a hardware problem or software problem?

If the problem is software-related, refer to the software reference manuals or on-line help. Most software manuals include a troubleshooting chapter.

If the problem is hardware-related, verify if the cause is from your computer or scanner or in some cases, your network. If it is due to your computer's malfunctioning, then consult your computer's reference manuals or a computer service technician.

 Macintosh and IBM computers and compatibles display error messages that normally tell you the cause of the problem and in some cases tell you what to check or do to solve the problem.

3. If the error message points to a problem with your scanner system, **run the scanner self-test.**

- Turn the power of your scanner on. At power on, your scanner automatically runs the scanner self-test which can detect most of the problems with your scanner.

- Observe the behavior of the LED indicators. Record all your observations.

4. **If all else fails, call your dealer.**

It is important that you try to describe as clearly and accurately as possible the problem you are experiencing. To facilitate servicing, supply your dealer with the following information:

1. Your host environment files such as your *Config.sys*, *autoexec.bat*, *win.ini*, *system.ini* and other system files.
2. Names and version of the application software you are using
3. Model and version of other SCSI devices you are using
4. TWAIN version
5. Names and versions of the drivers you are using
6. Model and version of your scanner hardware
7. Error codes or messages seen
8. Description of what you were doing at the time the malfunction or failure occurred
9. Description of what you did to attempt to solve the problem
10. Other observations that may aid the technician in identifying the problem and the solution

LED Indicators

The tables below list some of the more common specific problems you may have with your scanner. Corrective actions are also given.

Problem	Possible Causes / Solution
<i>Power Indicator fails to come on</i>	<ol style="list-style-type: none"> 1. Make sure the power cable is plugged into the scanner and the wall socket. 2. Make sure that the power switch is on. 3. If none of the above works, contact your dealer.
<i>Scanner lamp flickers, is dim, or fails to come on</i>	<ol style="list-style-type: none"> 1. The scanning lamp is failing or has failed and needs to be changed. Contact your dealer.
<i>The Power and Ready indicators come on, but the software displays a "scanner link failed" or similar message</i>	<ol style="list-style-type: none"> 1. Make sure the cable is connected properly. 2. Verify the setting of the SCSI ID number. PC users should also pay special attention to the I/O address setting. 3. Disconnect all SCSI devices and connect them one by one, beginning with the scanner, to identify the device causing the problem. 4. Check the terminators and the cables. If problem persists, contact your dealer.

System Hang

You may encounter a situation where the PC software installation appears to be stable and the scanner appears to be normal, but the system "hangs" whenever scanner operations are attempted. This problem is most often caused by another card in the system being set to address 300H. To solve the problem:

Problem	Possible Causes / Solution
System Hangs	Remove all unnecessary interface cards from the PC.
	If your interface card has I/O address setting dip switches on it, reset the switches to an unused number (not 300H). You may want to refer to Appendix C for further assistance in doing this.
	Run Windows and your TWAIN-compliant imaging software.
	Follow the instructions in the imaging software manual to start MagicScan.
	After MagicScan starts, an initialization file will be automatically written to your hard disk. When MagicScan starts, exit MagicScan, the imaging application, and Windows.
	Turn off the PC and re-install the other cards in your PC.
	When you reboot and attempt to run MagicScan, it should come up normally.
	If the above does not solve the problem, consult your dealer.

Apple Compatible Driver Installation Problems

If you have trouble installing the driver, check the following:

Problem	
<i>Conflict between the SCSI IDs.</i>	Be sure that each SCSI device has a unique ID. The SCSI ID on your scanner is factory preset to #5. Refer to Chapter 1 to know how to change the SCSI ID.
<i>Conflict between Init files or too many init files.</i>	If conflict is due to another Init file that exists in the System Folder, try removing the Init file then installing the driver.
<i>Conflict with an Apple compatible driver.</i>	Remove all Apple compatible drivers. Then install the Scanner file.
<i>Scanner file doesn't exist.</i>	Be sure the scanner file is in the System Folder.

APPENDIX B

INSTALLING AN ASPI-COMPATIBLE CARD

If you are using an ASPI-compatible SCSI interface card with your computer and scanner, refer to the installation instructions provided with the interface card.

After installing the card, do the following steps before connecting your scanner to your computer:

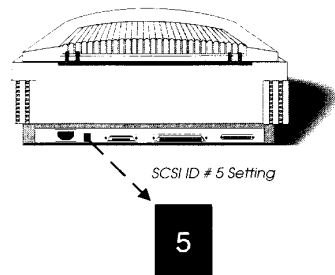
- Confirm or reset the SCSI address of the scanner.
- Check the terminators in the SCSI chain.
- Make the SCSI cable connections.

Check the SCSI Addresses

The side illustration shows the location of the SCSI address selector at the rear panel of the scanner. The selector shows the SCSI address setting of the scanner. In this case, it is #5 — the factory preset address.

After installing an ASPI-compatible SCSI interface card in your computer, proceed with the following:

1. Check the SCSI addresses of all devices on the SCSI chain. Is SCSI address #5 on the list of SCSI addresses in use?




2. If not, then you can connect your computer to the scanner with a factory preset SCSI ID of 5. You may jump to the next section, *Check the Terminators*.

Reset the Address of the Scanner

If SCSI address # 5 is in the list of SCSI addresses in use, then you must reset the SCSI address selector to another number:

1. Ensure the scanner power is off.
2. Choose any unused number in the range 0-7.

 The SCSI address selector includes options # 8 to F settings, but none of these settings can be selected and used as a SCSI address.

3. Reset the scanner's SCSI address to the number you have chosen.

Check the Terminators

There should be two terminators in a SCSI chain: it is best to place the two terminators at each end of the SCSI chain.

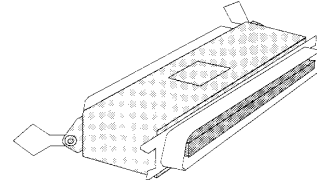
The simplest configurations for using the scanner with an ASPI compatible SCSI card are as follows:

- Connect the scanner to an ASPI compatible interface card that does not have another device attached to it.

In this situation, the card will have a built-in terminator. The card forms one end of the SCSI chain; the scanner forms the other end. Simply attach the supplied external terminator to the scanner. These will ensure that there are two terminators and that they are placed at the ends of the SCSI chain.

- ❑ Connect the scanner to an ASPI card that has another device attached to it.

In this case, check to see if the other SCSI device has a terminator. If not, attach the terminator to the scanner. If the other device has an internal terminator, simply attach the scanner to the SCSI chain. Although the terminators are not, technically speaking, placed at the ends of the chain, the scanner should work properly.



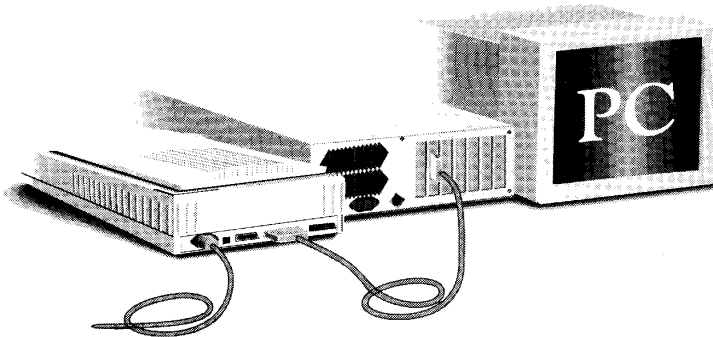
External Terminator

If you experience unreliable SCSI operation and suspect terminator problems, or would like a more thorough discussion of SCSI terminators and possible problems with SCSI termination, please consult your dealer.

Connect the Computer and Scanner

Now that the interface card has been installed and all of the settings on the scanner and card are properly set, you can connect the computer and the scanner. Once this has been done, the hardware installation will be complete. To connect the scanner and computer, do the following:


1. Connect the SCSI cable to the interface card.
2. If your SCSI configuration requires the use of the external terminator, attach the terminator to the scanner.
3. Connect the other end of the SCSI cable to the scanner.
4. Connect the power cord to the scanner.



5. Turn on the scanner power.
6. Turn on your computer power.

Run the UMAX Setup Program

The interface and support software can be quickly and easily installed using the UMAX setup program. Before running the setup program, check to see if the application software you will be using is TWAIN compliant. If it is, there is no need to install a non-TWAIN driver. However, if it is not, a non-TWAIN driver must be used.

 Non-TWAIN compliant application software packages must be installed before the drivers are installed. However, if the application software is TWAIN compliant, the installation order is unimportant.

To run UMAX Setup, do the following:

1. Insert the *MagicScan for PC* disk 1 into drive A: or B:
2. Pull down the File menu and select Run.
3. In the text entry box, enter either "A:SETUP" or "B:SETUP" depending on which drive contains the desired setup disk.
4. Follow the instructions on the screen to complete the setup.

APPENDIX C

**CONFIGURING THE SWITCHES ON A UMAX
INTERFACE CARD**

If you are using a UMAX proprietary interface card which has dip switches for setting the I/O Base Address, use the following instructions to confirm or change the address as appropriate.

Once you have completed these instructions proceed to the section *Install the Interface Card in the Computer* in *Chapter 4*.

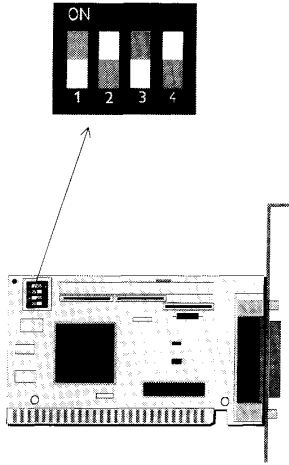
Interface Card Base Address

The DIP switches on the interface card determine the I/O base address necessary for computer and scanner communication.

The base address is preset to 300H at the factory.

1. Check to see if this base address setting is used by any other interface card installed in the computer.
2. If another card uses the address 300H, then the Interface card's I/O base address must be reset.
3. If no other card uses 300H, then the card can be installed using the default setting.

Configuring the Switches on a SCSI Card C-2



Below is a table showing all possible DIP switch settings.

I/O Base Address	Switch 1	Switch 2	Switch 3	Switch 4
280H	on	on	on	off
290H	off	on	on	off
*300H	on	off	on	off
310H	off	off	on	off
330H	on	on	off	off
340H	off	on	off	off
348H	on	off	off	off
350H	off	off	off	off

* The factory default setting

A similar table is printed on the back of the interface card. Note that the fourth dip switch is not used and is always set to OFF.


4. Confirm or change the I/O Base Address switch setting as appropriate.
5. Record the base address setting before installing the interface card into the computer. You may need this information when you install the application software or the UMAX software.
6. Refer to the section *Install the Interface Card in the Computer* in *Chapter 4* for assistance in installing the interface card.

APPENDIX D

POWERLOOK II SPECIFICATIONS

Scanner Type	Flatbed
Interface	Built-in SCSI II, one 25-pin connector and one 50-pin connector
Scan Speed	66 seconds / LT, 10.5 ms / line (600 dpi, Color Mode)
Preview Speed	3.5 sec. / A4 (Gray, Lineart Modes) 7 sec. / A4 (Color Mode)
Max. Scannable Area	212 x 297 mm (8.3" x 11.7")
Optical Resolution	600 dpi (H) x 1200 dpi (V)
Output (H/W) Resolution	600 dpi (H) x 1200 dpi (V)
Maximum Resolution	9600 dpi (H) x 9600 dpi (V)
Scanning Density	2.0 (the density range will be 3.3, if scan through a transparency adapter.)
Color Scanning Method	One pass with color CCD
Sample Depth	
Color Mode	24 or 36 bits / pixel
Grayscale Mode	8 or 12 bits / pixel
Scanner Settings	
Scaling	0% to 400% in 1% Increments at 600/1200 dpi resolution
Highlight / Shadow	1 ~ 255 steps / 0 ~ 254 steps
Contrast / Brightness	-100% ~ +100%
Gamma Curve	Downloadable Curves

Data Output	
Color Mode	36 bits (hardware) / 24 bits (system)
Grayscale Mode	12 bits (hardware) / 8 bits (system)
Power Requirements	
Voltage	100 ~ 240 V (AC)
Frequency	47Hz to 60Hz
Power Consumption	Maximum 45 Watts
Environmental Range	
Operating Temperature	10°C ~ 40°C
Relative Humidity	10% ~ 95%
Other Specifications	
Noise	Under 55dB (Operating)
Dimensions	543 x 336 x 134 mm
Net Weight	9.2 kg
Systems Supported	PC and Macintosh computers
Options	UMAX Transparency Adapter UTA-II

 *Specifications are subject to change without notice.*

APPENDIX E**GLOSSARY****A****APPLE COMPATIBLE DRIVER**

An interface software module for applications other than *Photoshop* that support Apple scanners.

APPLICATION SOFTWARE

Software that is used to perform a specific function, e.g. image processing, OCR (Optical Character Recognition), or DTP (Desktop Publishing).

ASPI

SCSI communication standard developed by Adaptec.

B**BLACK AND WHITE**

A 1-bit image file capable of displaying only black and white image data with no intermediate gray levels.

D**DIP SWITCH**

A small switch mounted in or on computer equipment that sets certain parameters.

DOCUMENT COVER

The plastic cover that is lowered over an original source document on a scanner's object glass.

E**EXPANSION SLOT COVER**

A metal or plastic plate dust cover that covers the exterior "hole" of an expansion slot.

EXPANSION SLOT

A socket inside a computer into which an expansion or interface card may be inserted to add functions to a computer system.

F

FOLDER

An electronic storage area used to store and organize files and other folders and is often represented on a computer screen by a folder-like icon.

G

GRAYSCALE

Refers to the shades of gray between black and white found in an image.

H

HALFTONE PATTERN

The pattern that is used when varying the ratio of black and white pixels in a halftone image.

HALFTONE

A 1-bit image file capable of simulating gray shades by varying the ratio of black and white pixels within a given area.

I

I/O BASE ADDRESS

An address that is used for communication between a host computer and an expansion or interface card. All cards in a computer system must be set to different I/O addresses.

ICON

The graphical representation of a computer file or piece of computer software.

INDICATOR PANEL

The part of the scanner where scanner activity lights (LED indicators) are found.

INTERFACE CARD

A card that provides additional functions or capabilities for a computer. These cards are called by various names such as *adapter*, *add-in card*, *controller card*, *expansion card*, *option card* or by the names of the function they do such as *fax/modem cards*, *network card*, *scanner card*, etc. These cards are inserted into expansion slots inside a PC.

M**MAGICSCAN**

The name of the UMAX scanner control software for PC and Macintosh computers.

N**NON-TWAIN DRIVERS**

An interfacing system that does not follow the TWAIN standard and is designed for a specific software package and a specific image input device.

O**Object Glass**

The tempered glass of the scanner where original source documents or objects to be scanned are placed.

Optical Assembly

The component system of the scanner that contains all the scanner's optical components. Sometimes referred to as a carriage or carriage assembly.

P**Peripheral device**

A device attached to a computer that adds function/s to a computer system.

Power Indicator

The indicator that glows when the scanner's power cable is connected to the scanner and a "live" outlet and the power switch is turned on.

R**Ready Indicator**

The indicator that glows when the scanner is ready to be used.

S**SCSI Chain**

Two or more SCSI devices connected to a SCSI controller.

SCSI Device

A device that uses the SCSI interface to connect to a computer.

SCSI ID Switch

The switch on most external SCSI devices which is used to set the SCSI ID.

SCSI ID

A unique number between 0 and 7 that identifies each device in a SCSI chain. The SCSI ID is set using a SCSI ID switch found on most external SCSI devices.

T

Terminator

An electronic component found in a chain of linked computer devices that absorbs stray electrical signals to ensure reliable operation.

Twain Compliant

Any software or image input device that conforms to the TWAIN standard.

TWAIN

A standardized interfacing system that allows many different software applications to access many different image input devices.

U

UTA (Umax Transparency Adapter)

An optional scanner hardware component that allows the scanning of transparent originals.

UTA INDICATOR

Glows when a transparency adapter is installed and ready for use.

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