Nikon Film Scanner

SUPER COOLSCAN 8000 ED

User's Manual

Product Documentation

The documentation for this product includes the manuals listed below. Please be sure to read all instructions thoroughly to get the most from your Nikon scanner.

User's Manual (this manual)
This manual provides instructions for setting up and using your scanner.

Nikon Scan Software Manual (on CD)
This electronic manual provides complete operating instructions for the software that makes your scanner run, Nikon Scan 3.1. It is available on the reference CD provided with your scanner, where it can be viewed using Adobe Acrobat Reader 4.0 (available on the reference CD) or later. Installation and viewing instructions are included in the *User's Manual.*

Notices

- No part of the manuals included with this product may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form, by any means, without Nikon's prior written permission.
- Nikon reserves the right to change the specifications of the hardware and software described in these manuals at any time and without prior notice.
- Nikon will not be held liable for any damages to film or film rolls resulting from the use of this product.
- While every effort has been made to ensure that the information in these manuals is accurate and complete, we would appreciate it were you to bring any errors or omissions to the attention of the Nikon representative in your area (address provided separately).

Notice for customers in the U.S.A.

Federal Communications Commission (FCC) Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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 or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Nikon 8000 ED

Tested To Comply With FCC Standards

FOR HOME OR OFFICE USE

CAUTIONS

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Nikon Corporation may void the user's authority to operate the equipment.

Interface Cables

Use the interface cables sold or provided by Nikon for your equipment. Using other interface cables may exceed the limits of Class B Part 15 of the FCC rules.

Nikon Inc.,
1300 Walt Whitman Road, Melville, New York
11747-3064, U.S.A.
Tel.: 631-547-4200

Notice for customers in Canada

CAUTION
This class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations.

ATTENTION
Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Notice Concerning Prohibition of Copying or Reproduction

Note that simply being in possession of material that has been digitally copied or reproduced by means of a scanner, digital camera or other device is punishable by law.

• **Items prohibited by law from being copied or reproduced**
  Do not copy or reproduce paper money, coins, securities, government bonds, or local government bonds, even if such copies or reproductions are stamped "Sample."

  The copying or reproduction of paper money, coins, or securities which are circulated in a foreign country is prohibited.

  Unless the prior permission of the government has been obtained, the copying or reproduction of unused postage stamps or post cards issued by the government is prohibited.

  The copying or reproduction of stamps issued by the government and of certified documents stipulated by law is prohibited.

• **Cautions on certain copies and reproductions**
  The government has issued cautions on copies or reproductions of securities issued by private companies (shares, bills, checks, gift certificates, etc.), commuter passes, or coupon tickets, except when a minimum of necessary copies are to be provided for business use by a company. Also, do not copy or reproduce passports issued by the government, licenses issued by public agencies and private groups, ID cards, and tickets, such as passes and meal coupons.

• **Comply with copyright notices**
  The copying or reproduction of copyrighted creative works such as books, music, paintings, woodcut prints, maps, drawings, movies, and photographs is prohibited except when it is done for personal use at home or for similar restricted and non-commercial use.

Trademark Information

For Your Safety

To prevent damage to your scanner or injury to yourself or to others, read the following safety precautions in their entirety before using this equipment. Keep these safety instructions where all those who use the product will read them.

The consequences that could result from failure to observe the precautions listed in this section are indicated by the following symbols:

⚠️ This icon marks warnings, information that should be read before using the scanner to prevent possible serious injury or death.

✅ This icon marks cautions, information that you should read before using the scanner to prevent damage to the equipment or injury to yourself or to others.

⚠️ WARNINGS

Do not disassemble or modify
- The interior of the scanner contains areas of high voltage. Removing the scanner's cover could result in fire or electric shock. Contact your dealer or Nikon service office for inspection or repair.
- Do not modify. Modification could result in fire or electric shock.

Do not touch exposed parts
Should the product break open as the result of a fall or other accident, do not touch the exposed parts. Failure to observe this precaution could result in injury or electric shock. Unplug the power cable and take the product to a Nikon-authorized service center for inspection.

Unplug the equipment immediately should you notice anything out of the ordinary
- Should you notice an unusual noise, smell, or smoke coming from the equipment, turn the scanner off at once and unplug the power cable. Continued use could cause fire or electric shock. After ensuring that the equipment is no longer smoking, contact your dealer or Nikon service representative for information on replacement or repair. Do NOT attempt repairs yourself, as this would be extremely dangerous.
- In the event of damage to the equipment, turn the scanner off at once and unplug the power cable, then contact your dealer or Nikon service representative for information on replacement or repair. Continued use could result in fire or electric shock.

Do not allow foreign objects to enter the scanner
- Do not place vases, flowerpots, cups, cosmetics, vessels containing chemicals or water, or small metal articles on top of the equipment. Should such articles or their contents fall into the equipment, fire, electric shock or malfunction could result.
- In the event that foreign substances or water should find their way into the equipment, turn the scanner off immediately, unplug the power cord and contact your dealer or nearest Nikon service representative. Continued use could result in fire, electric shock or malfunction. Particular care is advised in households with small children.

Do not use in the presence of flammable gas or dust
Failure to observe this precaution could result in explosion or fire.

Keep small objects out of reach of children
Particular care should be taken to prevent infants from putting small parts of the equipment into their mouths. In the event that a child should swallow part of the equipment, contact a physician immediately.

Do not handle the power cable during thunderstorms
Operating the equipment during thunderstorms could result in electric shock. Do not go near the equipment or handle the power cable until after the thunderstorm has passed.

Use an appropriate power supply
Use an AC power supply of 50/60Hz and a voltage of from 100V–240V. Use a power cord rated for the appropriate voltage.

At voltages of over AC 125V:
Use a power cord that complies with the safety standards of the country in which it is used, that has a plug rated for AC 250V, 15A (NEMA 6P-15) and insulation of SVT type or better, and that is more than AWG18 in thickness.

At voltages of AC 125V or less:
Use a power cord that complies with the safety standards of the country in which it is used, that has a plug rated for AC 125V, 10A and insulation of SVT type or better, and that is more than AWG18 in thickness.

Observe appropriate precautions when handling the power cable
- Do not damage or modify the power cable. Fire or electric shock could result if the cable is placed under heavy objects, exposed to heat or flame, or forcibly tugged or bent.
- In the event that the insulation is damaged and the wires become exposed, contact your retailer or Nikon service office for information on repair or replacement. Continued use could result in fire or electric shock.
- Do not handle the plug when your hands are wet. Doing so could cause electric shock.
- Should you notice dust on or near the metal parts of the plug, remove it with a dry cloth. Continued use could result in fire or electric shock.

Do not play CD-ROM disks on audio CD players
The CDs provided with this product should not be played back on audio CD equipment. Playing CD-ROMs on an audio CD player could cause hearing loss or damage the equipment.

☑CAUTIONS

Do not handle the equipment when your hands are wet
Failure to observe this precaution could result in electric shock.

Keep equipment out of reach of children
Failure to observe this precaution could result in injury.

Install the scanner only as directed in this manual
Failure to observe this precaution could block the scanner's vents and cause the power source to overheat, possibly resulting in fire.

Place on a stable surface
- Do not use the equipment on an unstable surface or on a surface that is not level. The equipment could fall, resulting in injury or in damage to the scanner.
- The scanner contains glass parts. Caution is advised in the event of breakage to prevent injury from broken glass.

Do not place heavy objects on the equipment
Do not place heavy objects on the equipment, as either the objects or the equipment could overbalance or fall, causing injury.

Unplug the equipment before cleaning
For your safety, turn off and unplug the scanner when cleaning the equipment.

Save where indicated otherwise, do not put your fingers into the equipment
Failure to observe this precaution could result in injury.

Unplug the equipment when not in use
For your safety, turn off and unplug the scanner when you do not intend to use it for an extended period. Failure to observe this precaution could result in fire.

Observe appropriate precautions when handling the power cable
- Do not place the power cable in the vicinity of a stove or heater, as this could melt the insulation, resulting in fire or electric shock.
- Unplug the cable by the plug, never by pulling on the cord itself. Failure to observe this precaution could damage the cord, resulting in fire or electric shock.
- Do not plug the power cable into an extension cord or multi-outlet adapter, as this could cause fire or malfunction.

Ground the equipment
- The outlet into which the power cable is plugged must be grounded. Failure to ground the power supply could result in electric shock.
- Do not ground the outlet to a gas or water pipe or a dedicated telephone system earth connector. Failure to observe this precaution could result in fire or electric shock.

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Overview

Thank you for your purchase of a Nikon 8000 ED (SUPER COOLSCAN 8000 ED) film scanner. This manual provides information on safety precautions, scanner setup, and operation for your Nikon film scanner. Please read these instructions before using your scanner, and keep this manual where all those who use the device will read it.

Reading This Manual

This manual is divided into the following chapters:

Getting the Most from Your Scanner
This chapter contains tips to ensure that you always get the best possible results when using your scanner. Be sure to read this section before using your Nikon product.

Setup Guide
This chapter provides instructions on setting up your scanner, and takes you step-by-step through the process of making your first scan.

Nikon Scan Quick Reference
This section gives a brief overview of the driver software for your scanner, Nikon Scan 3.1. More detailed information on using Nikon Scan may be found in the Nikon Scan Reference Manual, which is available in electronic format on the reference CD included with your scanner.

Reference
This chapter provides troubleshooting instructions and information on caring for your scanner.

Appendices
The appendix contains instructions on installing the IEEE 1394/Firewire interface board provided with your scanner and on updating the Windows IEEE 1394 drivers when using your scanner under Windows 98 Second Edition (SE).

✎ Illustrations

The majority of the windows and dialogs for Nikon Scan shown in this manual are those for the Windows version when run under Windows 98SE. Save where otherwise noted, the operations described apply to both the Windows and Macintosh versions of Nikon Scan.

To make it easier to find the information you need, the following symbols and conventions are used:

✔ This icon marks cautions, information that you should read before using your Nikon scanner to prevent damage to the device.

✎ This icon marks notes, information that you should read before using your Nikon scanner.

This icon marks tips, additional information you may find helpful when using your Nikon scanner.

This icon indicates that more information is available elsewhere in this manual or in other documentation.

This symbol indicates that the cross-reference marked with the icon is to the 8000 ED User's Manual (this manual).

This symbol indicates that the cross-reference marked with the icon is to the Nikon Scan Software Manual (on CD).

Life-Long Learning

As part of Nikon's "Life-Long Learning" commitment to ongoing product support and education, continually updated information is available on-line at www.nikon-euro.com. Visit this site to keep up-to-date with the latest product information, tips, answers to frequently asked questions (FAQs), and general advice on digital imaging and photography.

# Getting the Most from Your Scanner

The information in this chapter will help ensure that you always get the best possible results when using your scanner. Be sure to read this section before using your Nikon product.

Keep the Holder Slot Closed

In order to ensure that your scanner always produces the best possible results, remove any holders and close the holder slot cover when the scanner is not in use.
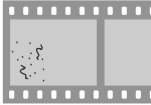
✓ Cautions

Never remove a holder from the scanner without first checking that the status LED on the front of the scanner is glowing steadily. Do not insert or remove holders or turn the scanner off while the LED is blinking.

After using the scanner, eject the holder and turn the scanner off, then close the sliding cover to prevent dirt and dust from accumulating in the scanner.

Power switch

Sliding cover

Status LED
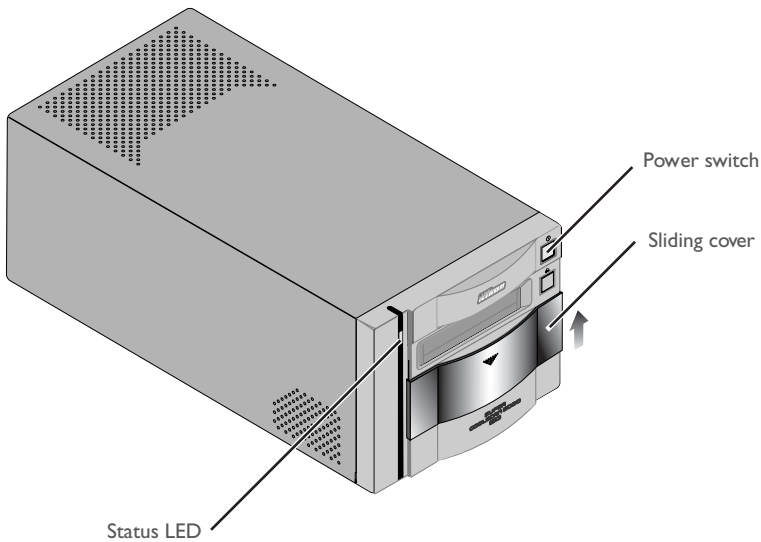
Protect Your Film

The Digital ICE photo retouch function built into your Nikon scanner can be used to eliminate the effects of dust, scratches, and surface defects on your film. To ensure the best possible results and to prevent damage to slides or film, however, be sure to protect your film from dust, fingerprints, and condensation as described below.

☑ **Cautions**

- *Before inserting film in a holder, remove dirt and dust with a blower to protect the surface of the film from scratches. Dirt and dust can also interfere with the operation of the scanner, causing scanning errors or malfunctions.*

- *Fingerprints can be removed with a soft, dry cloth. Be careful not to scratch the surface of the film when removing fingerprints.*

- *The film base and emulsion will deteriorate if exposed to high temperatures or humidity. Use the scanner at the temperature and humidity given in the specifications (see below).*

- *Sudden changes in temperature and humidity, even when within the limits given in the specifications, can cause condensation on the film. Before using film, check to be sure that no condensation is present.*

- *If condensation is present on the film, leave the film out until it dries. Condensation can cause damage when film is inserted in the scanner.*

- *The operating temperature and humidity for your scanner are:*

   Temperature: +10 – +35°C (+50 – +95°F)

   Humidity: 20 – 60%

Using Your Scanner with Other Devices

When using the scanner with other devices connected to the same bus, observe the precaution below.

✓ Cautions

When using the scanner with other IEEE 1394/Firewire devices, do not:

- *operate the devices*
- *turn the devices on or off*
- *disconnect or reconnect interface cables connected to the devices*

while the status LED on the front of the scanner is blinking. Failure to observe this precaution could interfere with the operation of Nikon Scan.

Connecting IEEE 1394/Firewire Devices

When using the scanner with other devices connected to the same bus, observe the precautions below.

- *Connect the scanner directly to the computer. The scanner may not function as expected when connected to a hub.*
- *The scanner may not function as expected when used together with other IEEE 1394/Firewire devices. Should you experience difficulties operating the scanner, we recommend that you disconnect all other devices on the same bus and reconnect the scanner and computer.*
- *Do not connect two or more scanners of the same type to the same computer simultaneously.*
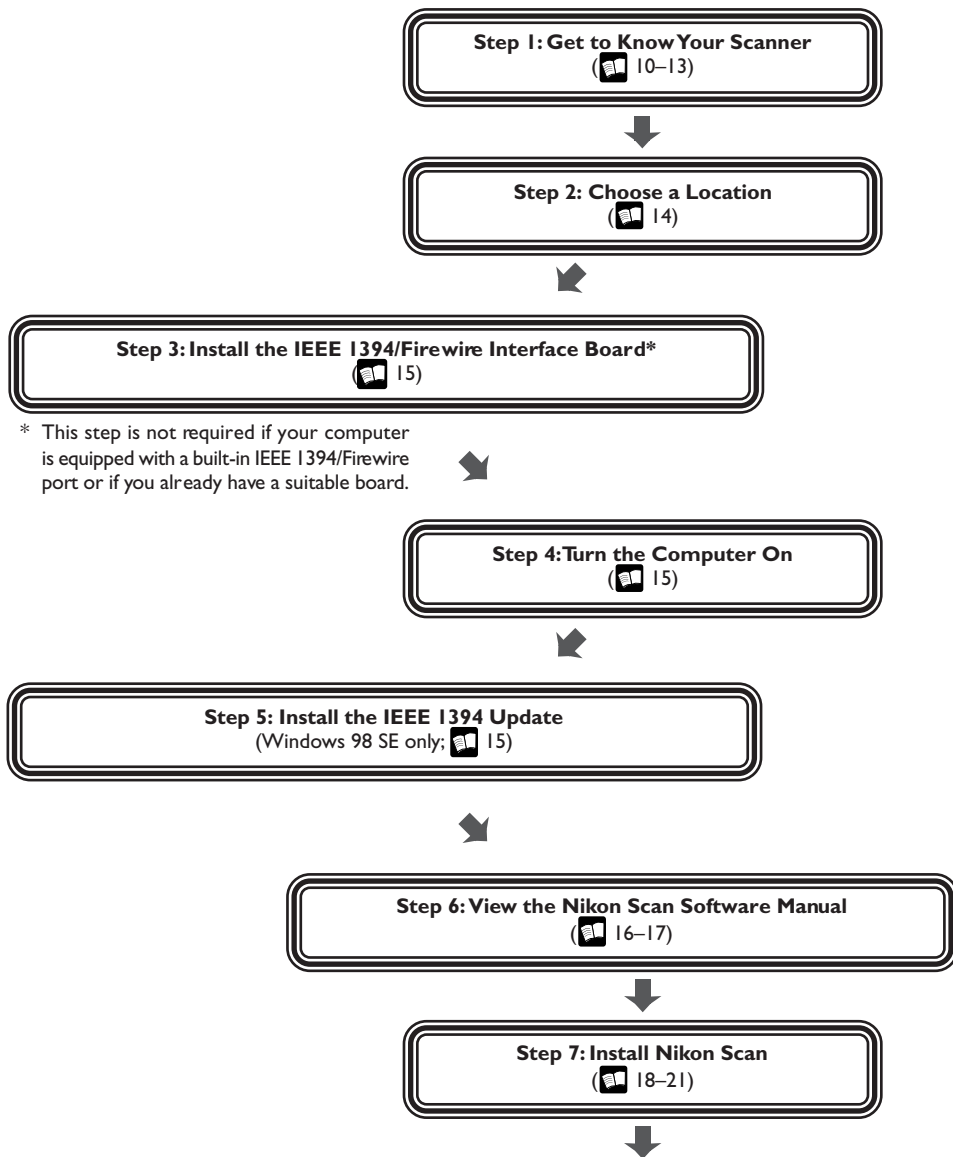

The description in this manual follows the order of steps you will take when setting up the scanner for the first time, with the result that the instructions on turning the scanner on follow those on cable connection. Please note, however, that as an IEEE 1394/Firewire device, your Nikon scanner can be connected or disconnected while on and can be used immediately following connection. There is no need to turn off or restart the device each time it is connected.
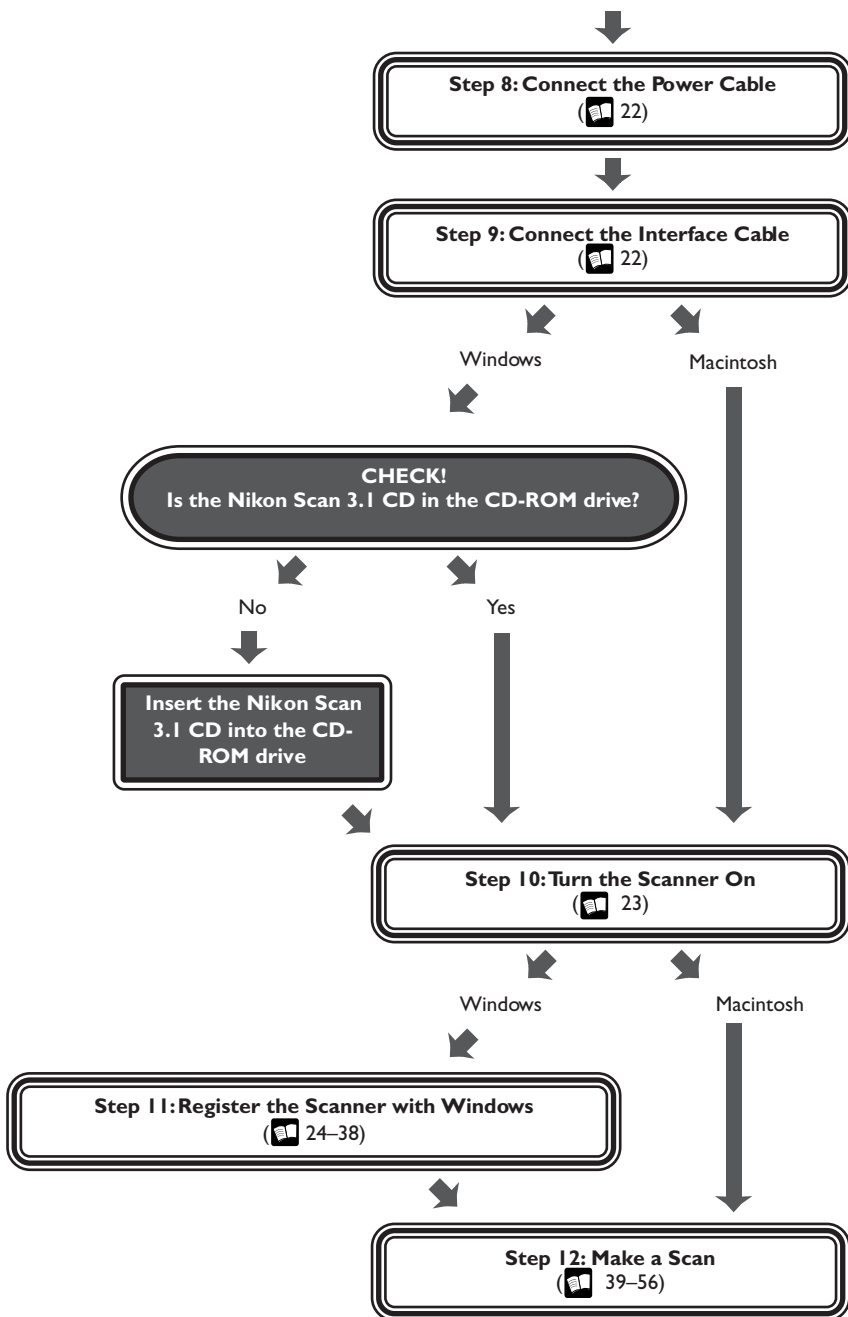
After disconnecting the interface cable, wait a few seconds before plugging it in again.

Setup Guide

This chapter takes you step-by-step through the process of setting up your scanner and making your first scans.

The process of setting up and using your scanner for the first time involves the steps shown below.

Step 1: Get to Know Your Scanner
(📖 10–13)

⬇

Step 2: Choose a Location
(📖 14)

⬇

Step 3: Install the IEEE 1394/Firewire Interface Board*
(📖 15)

* This step is not required if your computer
is equipped with a built-in IEEE 1394/Firewire
port or if you already have a suitable board.

⬇

Step 4: Turn the Computer On
(📖 15)

⬇

Step 5: Install the IEEE 1394 Update
(Windows 98 SE only; 📖 15)

⬇

Step 6: View the Nikon Scan Software Manual
(📖 16–17)

⬇

Step 7: Install Nikon Scan
(📖 18–21)

⬇

Step 8: Connect the Power Cable
(📖 22)

Step 9: Connect the Interface Cable
(📖 22)

Windows

Macintosh

CHECK!
Is the Nikon Scan 3.1 CD in the CD-ROM drive?

No

Yes

Insert the Nikon Scan 3.1 CD into the CD-ROM drive

Step 10: Turn the Scanner On
(📖 23)

Windows

Macintosh

Step 11: Register the Scanner with Windows
(📖 24–38)

Step 12: Make a Scan
(📖 39–56)

Step 1: Get to Know Your Scanner

Take a few moments to familiarize yourself with your scanner and its parts.

Your Scanner

1. Status LED

   This LED blinks slowly (roughly twice every three seconds) when the scanner is in operation. Do not turn the scanner off, or remove or insert holders until the LED has stopped blinking and is glowing steadily. If the LED flashes rapidly (about five times a second), a communications error has occurred or there is a problem with the scanner. Turn the scanner off, wait for at least five seconds, and then turn it back on.

2. Power switch

   Press this switch to turn the scanner on and off.

3. Eject button

   Use this button to eject holders from the scanner.

4. Holder slot

   This is where you put holders for different types of film. Don't put anything in this slot except an approved Nikon holder.

5. Sliding cover

   Slide the cover down before inserting a holder. To protect your scanner from dust and other foreign objects, be sure ALWAYS to close the cover when no holder is in place.
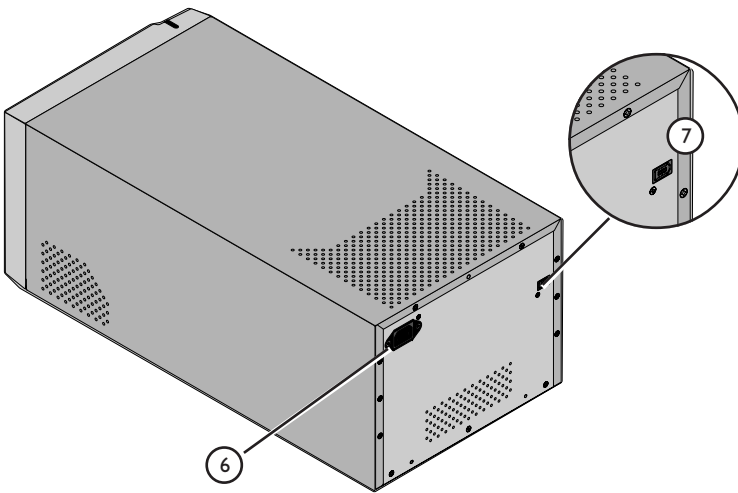
6. AC connector

   Connect the female end of the power cable here.

7. IEEE 1394/Firewire interface connector
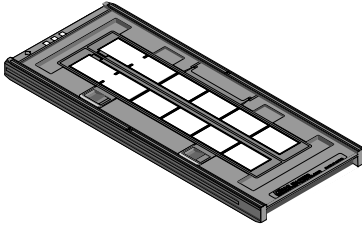
   Connect the IEEE 1394/Firewire interface cable here.
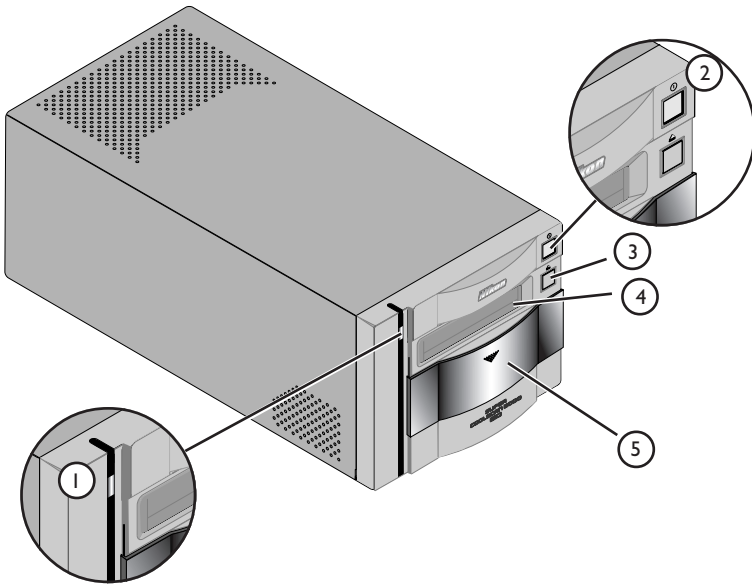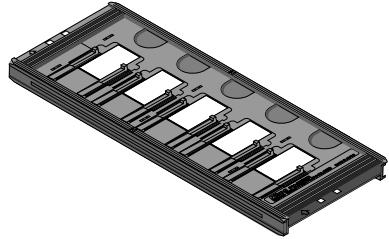
Front View

Rear View

Accessories

After unpacking the scanner, check that the package contains all the items listed below. Contact your retailer immediately should you find that anything is missing or damaged.
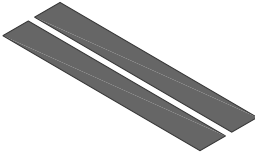

FH-835S 35-mm strip film holder (1)
This holder is used to scan up to two strips of 35-mm film up to six frames in length.
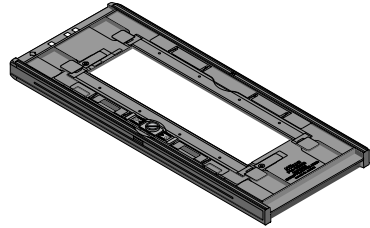

FH-835M 35-mm slide mount holder (1)
Use this holder to scan up to five mounted 35-mm slides.

Masking sheet (2)
Masking sheets are used with the FH-835S 35-mm strip film holder when scanning a single of strip of film or two strips of unequal lengths.
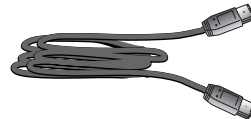

FH-869S medium-format strip-film holder (1)
Use this holder to scan medium format (Brownie or 120/220) film strips or 59 mm ¥ 82 mm film for electron microscopes. The number of frames that can be scanned depends on the type of film:

6×4.5:	Up to four frames
6×6:	Up to three frames
$6 \times 7 - 6 \times 9$:	Up to two frames
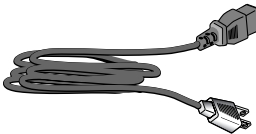
Power cable (1)
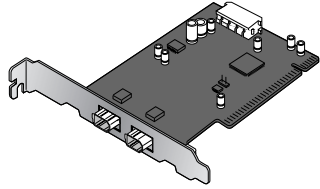(shape of cable depends on country of sale)

IEEE 1394/Firewire interface cable (1)
Use this cable to connect the scanner to your computer.

Nikon Scan 3.1 CD-ROM (1)

This CD contains driver software for your Nikon scanner. Depending on the country of sale, it may also include a variety of sample software.

IEEE 1394/Firewire interface board (1)
(for Windows and Macintosh; includes user's manual)
If you are using a Windows or old-model (beige) Macintosh G3 desktop computer, you may need to install this PCI board before you will be able to connect your scanner to your computer. This board can not be used with laptop computers or computers not equipped with a PCI slot, and is not required in the case of Macintosh computers with built-in Firewire ports.
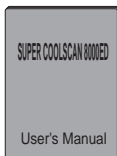

Reference CD (1)

This CD contains a reference manual for the Nikon Scan driver software, together with installers for Adobe Acrobat Reader, the software used to view the manual.

Open me first

Nikon

"Open me first" envelope (1)

This envelope contains a packing list, user registration cards, and other important documents.


SUPER COOLSCAN 8000ED

User's Manual

User's Manual (this manual) (1)

Step 2: Choose a Location

Before connecting the power and interface cables, choose a flat, stable location for your scanner close to the computer and to a suitable power outlet. Do not install your scanner where:

- it would be exposed to direct or reflected sunlight
- it would be subject to condensation or to drastic changes in temperature
- it would be exposed to dust or smoke
- it would be exposed to water vapor from a humidifier
- it would be exposed to radio interference from other electronic devices
- the temperature exceeds 35°C (95°F) or falls below 10°C (50°F)
- other objects would block the scanner's vents

Leave enough space around the scanner to ensure ease of operation: at least 5 cm (2″) above and on either side of the scanner, 10 cm (4″) behind, and 50 cm (20″) in front.
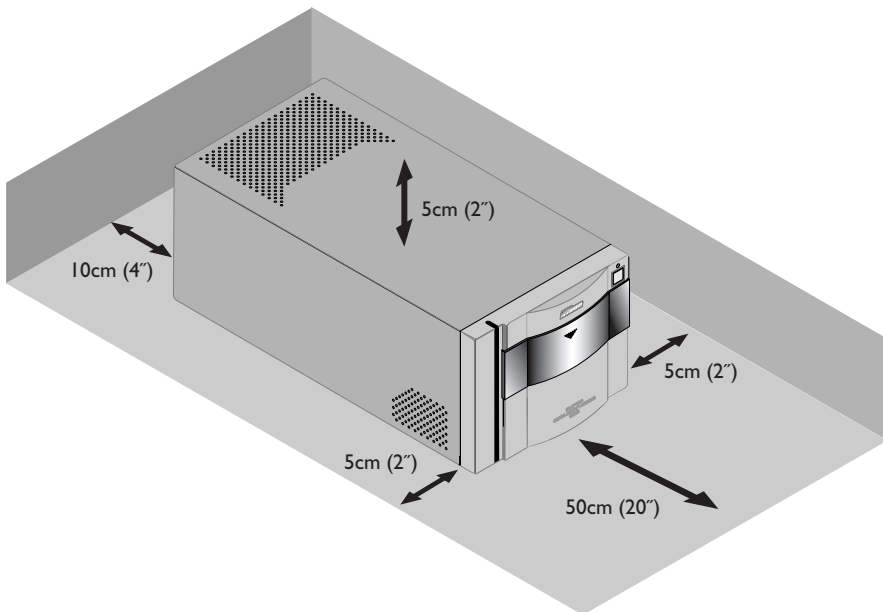
✅ Caution

When the scanner is not being used, remove any film holders and close the slot cover.

Step 3: Install the IEEE 1394/Firewire Interface Board

Installing an IEEE 1394/Firewire Interface

If you are using a desktop computer that is not equipped with a built-in IEEE 1394/Firewire port, or if your existing IEEE 1394/Firewire board is not one of the models tested and approved by Nikon for use with your scanner (see list provided separately), you will need to install the IEEE 1394 interface board included with your scanner. Installation instructions are given in Appendix A, "Installing the IEEE 1394/ Firewire Interface Expansion Board." Note that the IEEE 1394 interface board can not be installed in laptop computers; if your laptop is not one of the models with a built-in IEEE 1394 or Firewire port that has been tested and approved by Nikon for use with the your scanner, you will need to purchase and install one of the IEEE 1394/Firewire PCMCIA cards recommended by Nikon before you can use your scanner. The IEEE 1394/Firewire interface board is not required in the case of Macintosh G3 and G4 computers with built-in Firewire ports.

Step 4: Turn the Computer On

Preparing Your Computer

With the scanner off, turn on your computer. Wait until the operating system has finished starting up before proceeding to the next step.

Step 5: Install the IEEE 1394 Update for Windows 98 SE

Updating the Windows 98 Second Edition IEEE 1394 Drivers

If you will be using the scanner under Windows 98 Second Edition (SE), before you will be able to use the device you will need to install the IEEE 1394 update as described in Appendix B, "Installing the IEEE 1394 Update for Windows 98 Second Edition." Users of other operating systems can proceed to Step 6.

👁 *Pg.*   ***For more information on:***

📖 A-2   Installing the IEEE 1394/Firewire interface expansion board

📖 A-8   Installing the IEEE 1394 update for Windows 98 SE

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Step 6: View the *Nikon Scan Software Manual*

Your Nikon scanner is controlled using Nikon Scan driver software, which must be installed before you can use your scanner. The operating manual for Nikon Scan may be found on the reference CD provided with your scanner, where it is stored in Adobe Acrobat Portable Document Format (pdf). To view the manual, you will require Adobe Acrobat Reader 4.0 or later. English, German, Spanish, French, Italian, Japanese, and Dutch versions of Adobe Acrobat Reader 4.0 can be found on the reference CD. To install Acrobat Reader, follow the instructions below.

6-1
Insert the reference CD in the CD-ROM drive. Macintosh users can proceed to Step 6-3.

6-2 (Windows only)
Double-click the **My Computer** icon. In the My Computer window, double-click the CD-ROM drive labeled "Nikon."

6-3
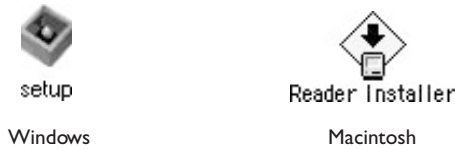The Nikon window will open on the desktop. Double-click the folder for the language of your choice.
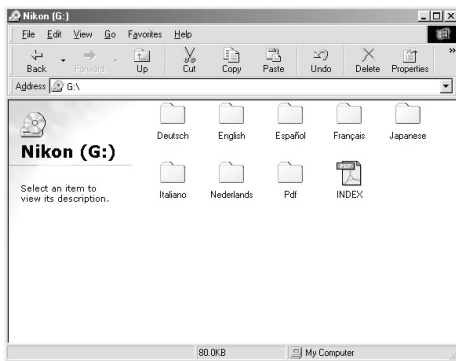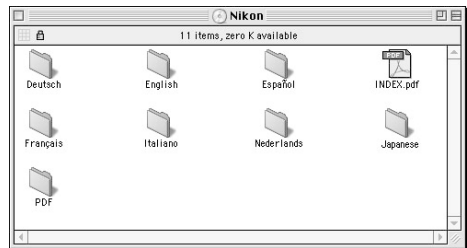
Windows   Macintosh

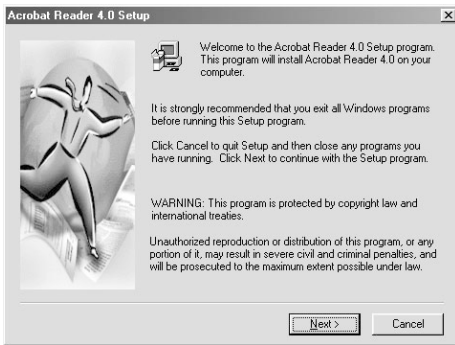To get the most from your scanner, please read the documentation provided.

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6-4

Double-click the Setup (Windows) or installer (Macintosh) icon.

Windows

Macintosh

6-5

Follow the on-screen instructions to complete installation.

Windows

Macintosh

Once installation is complete, you will be able to view the Nikon Scan Software Manualby double-clicking the **INDEX.pdf** icon in the root directory of the reference CD and choosing a language from the menu that appears.

☑ **Important**

When installing Nikon Scan, be sure to exit all other programs, including virus-checking software and Adobe Acrobat Reader. If desired, before installing Nikon Scan you can print the "Getting Started" section of the software manual, which details the installation process.

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Step 7: Install Nikon Scan 3.1

Before using your Nikon Scanner, you will need to install Nikon Scan 3.1 driver software, which acts as an interface between the scanner and your computer. To install Nikon Scan, follow the steps below. Windows users can start from Step 7-1 immediately below, Macintosh users from Step 7-6. For detailed installation instructions, see the *Nikon Scan Software Manual*.

Installing Nikon Scan 3.1 under Windows

7-1

Before installing Nikon Scan, be sure that:
• Your computer meets the system requirements for Nikon Scan
• You have turned off any virus-checking software that may be running
• You have exited all other applications
After checking the above points, insert the Nikon Scan 3.1 CD in the CD-ROM drive.

7-2

The Welcome window will be displayed. Click **Nikon Scan 3.1**.

Depending on where you purchased your scanner, you may be prompted to select the language in which Nikon Scan's menus and dialogs will be displayed. Choose a language from the list provided.

✎ **What to do when the CD-ROM does not start automatically.**

If the Welcome dialog does not appear when the CD-ROM is inserted in the drive:
1. Double click the **My Computer** icon
2. In the My Computer window, click on the CD-ROM drive icon with the right mouse button
3. Select Autorun from the menu that appears

✔ **Important**

Log into the Administrator account when installing Nikon Scan under Windows 2000.


👁 *Pg.   For more information on:*

💿   5   System requirements for Nikon Scan

💿   7   Installing Nikon Scan

7-3

The Install Shield wizard will start. Click **Next** to display the Nikon Scan software license agreement. After accepting the agreement, you will be prompted to choose a location for the software. Installation will begin after you have chosen a location and clicked **Next** to close the Choose Destination Location dialog.
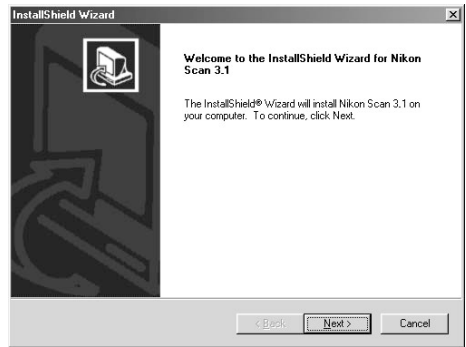
7-4

After the Nikon Scan program files have been copied to disk, a color-space selection wizard will appear, where you can select the color-space profile used as the default for the RGB color model. To have the wizard assist you in selecting a profile, click **Use Wizard**. To choose a profile from a list, click **Use name list**. If you are unsure as to what profile to choose, we recommend that you select **Use Wizard** and choose the profile suggested by the Wizard. The color-space profile selected during installation can be changed at any time as detailed in the "Preferences" section of the *Nikon Scan Software Manual*.

Choosing the correct color-space profile is very important if the scanner is to be used in a professional setting, for example as a part of a production workflow. The *Nikon Scan Software Manual* contains information about the color management system used in Nikon Scan. Please take time to study the explanations and advice provided. If you have questions about any aspect of color management, we suggest that you contact your national Nikon office, which may be able to provide or recommend training resources.

7-5

Once you have chosen a profile and clicked **OK**, the Installation Complete dialog will be displayed. Click **Finish** to exit the InstallShield wizard and view the ReadMe file, which may contain important information that could not be included in this manual.
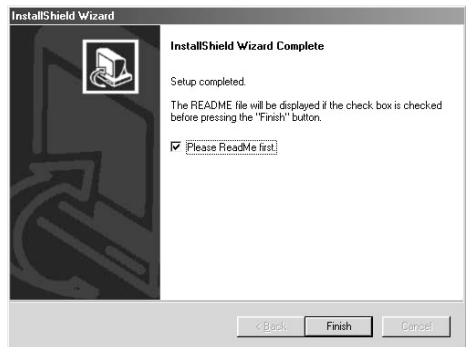
👁 *Pg.*   *For more information on:*

💿 115   Color-space profiles

7-6

Before installing Nikon Scan, be sure that:
• Your computer meets the system requirements for Nikon Scan
• You have turned off any virus-checking software that may be running
• You have exited all other applications
After checking the above points, insert the Nikon Scan 3.1 CD in the CD-ROM drive.

7-7

The Nikon Scan 3.1 window will open on the desktop. Double-click the installer icon for the language of your choice.
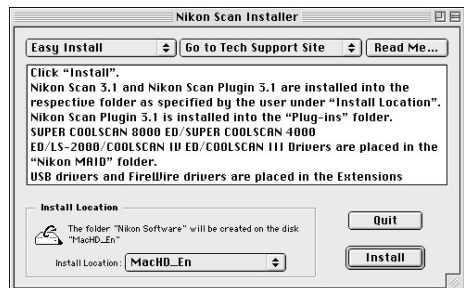

Nikon Scan Installer

7-8

Click **Continue…** in the dialog shown at right. A license agreement will be displayed; click **Accept** to continue installation. The ReadMe file will then be displayed; take a few moments to view this file, which may contain important information that could not be included in the manuals. After reading the file, click **Continue…** to proceed with installation.
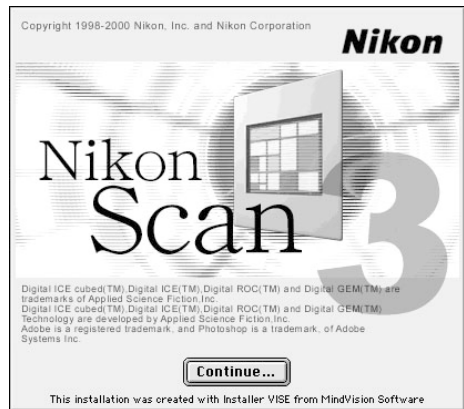
7-9

After confirming that **Easy Install** is selected in the pop-up menu at the top left corner of the installer dialog, choose a location for Nikon Scan from the **Install Location** pop-up menu. Click **Install** to install Nikon Scan to the specified location.

Depending on where you purchased your scanner, the Nikon Scan 3.1 CD will contain installers for from one to four language versions of Nikon Scan: English (EN), French (FR), German (DE), and Spanish (ES). Where installers for more than one language version are available, the installers may be found in separate folders; open the folder for the language of your choice and double-click the installer icon.
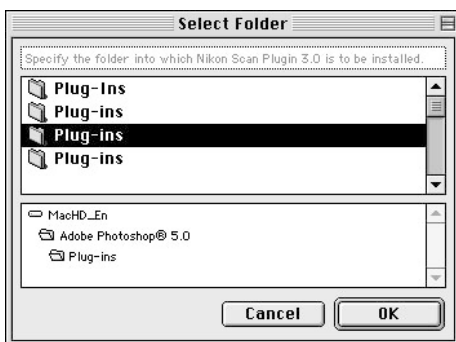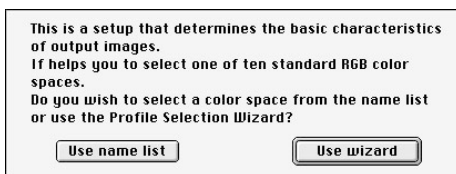

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7-10

After the Nikon Scan program files have been copied to disk, a color-space selection wizard will appear, where you can select the color-space profile used as the default for the RGB color model. To have the wizard assist you in selecting a profile, click **Use Wizard**. To choose a profile from a list, click **Use name list**. If you are unsure as to what profile to choose, we recommend that you

This is a setup that determines the basic characteristics of output images.
If helps you to select one of ten standard RGB color spaces.
Do you wish to select a color space from the name list or use the Profile Selection Wizard?

[Use name list]   [Use wizard]

select **Use Wizard** and choose the profile suggested by the Wizard. The color-space profile selected during installation can be changed at any time as detailed in the "Preferences" section of the *Nikon Scan Software Manual.*

Choosing the correct color-space profile is very important if the scanner is to be used in a professional setting, for example as a part of a production workflow. The *Nikon Scan Software Manual* contains information about the color management system used in Nikon Scan. Please take time to study the explanations and advice provided. If you have questions about any aspect of color management, we suggest that you contact your national Nikon office, which may be able to provide or recommend training resources.

7-11

If desired, you can open Nikon Scan from any application that supports Adobe Photoshop 5.0 acquire plug-ins and scan images directly into the application. Once you have chosen a profile and clicked **OK**, the installer will display a list of the plug-in folders for the applications on local disks. Choose the folders for the applications with which you want to use Nikon Scan and click **OK**. The plug-in can be copied into several folders, allowing multiple applications access to Nikon Scan.

Select Folder

Specify the folder into which Nikon Scan Plugin 3.0 is to be installed.

📁 Plug-Ins
📁 Plug-ins
📁 Plug-ins
📁 Plug-ins

MacHD_En
　Adobe Photoshop® 5.0
　　Plug-ins

[Cancel]   [OK]

7-12

Once installation is complete, the dialog shown at right will be displayed. Click **Restart** to exit the installer and restart your Macintosh.
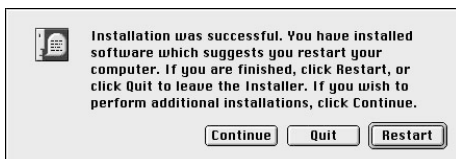
Installation was successful. You have installed software which suggests you restart your computer. If you are finished, click Restart, or click Quit to leave the Installer. If you wish to perform additional installations, click Continue.

[Continue] [Quit] [Restart]

👁 *Pg.   For more information on:*

21
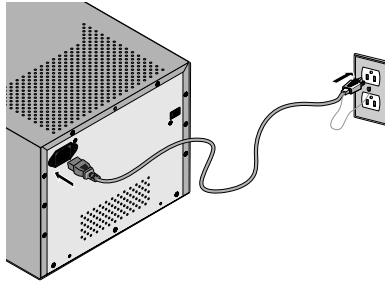
Step 8: Connect the Power Cable

Connecting the Scanner to a Power Source

Before connecting the power cables, be sure the scanner is off. Attach the female end of the power cable to the AC connector on the rear of the scanner and insert the male end into a general-purpose (AC 100–240 V, 50/60 Hz) household outlet.
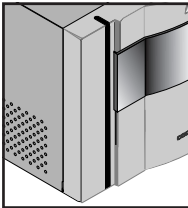
Step 9: Connect the Interface Cable
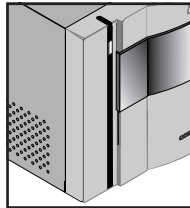
Connecting the Scanner to a Computer

With the scanner off, connect one end of the 6-pin–6-pin IEEE 1394 cable (provided) to the scanner's interface connector, then connect the other end to your computer's IEEE 1394/Firewire connector.

Status LED off   Status LED on

Power off   Power on
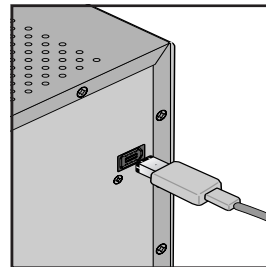
✓ Important

If you are using a computer with a 4-pin DV connector (such as SONY VAIO laptop computers), you will need to purchase a 6-pin–4-pin cable or 6-pin–4-pin adapter.

Step 10: Turn the Scanner On

Before turning the scanner on for the first time, confirm that the Nikon Scan 3.1 CD is in your computer's CD-ROM drive. Press the power switch to turn the scanner on. When the scanner is turned on, the status LED will blink for a few seconds while the scanner initializes and then glow steadily.
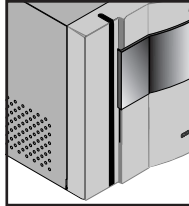
Power switch off
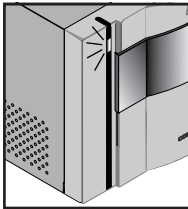
Status LED blinks   Status LED glows steadily
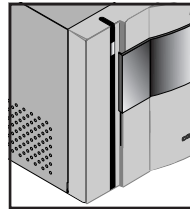
Power switch on

When turning the scanner on, be sure that no holder is inserted. Leaving a holder in place can prevent the scanner from initializing normally.

The status LED should blink slowly (about twice every three seconds) while the scanner initializes. If the LED flashes rapidly (about five times a second), there may be a problem with the scanner or with the connection to your computer. Try turning the scanner off, waiting for five seconds, and then turning the scanner on again.

👁 ***Pg.   For more information on:***

📖 107   What to do when the status LED flashes rapidly

23

Step 11: Register the Scanner with Windows

Users of Windows 98 Second Edition (SE), Windows Me, and Windows 2000 will need to register their scanner with the system the first time the scanner is connected. Macintosh users can proceed directly to Step 12.

The process of registering your scanner varies with the operating system used.

Registering the Scanner with Windows 98 SE

Before beginning device registration, be sure that you have completed the IEEE 1394 update described in Step 5.

Please read the following steps very carefully. The procedure varies depending on your computer and the OS version.

11-1
The first time the scanner is connected, Windows will display a message stating that new hardware has been detected.

11-2
Turn on your scanner and wait for the first dialog box to be displayed on your screen.

- If you see the dialog box that asks you to insert the disk labeled "Windows 98 Second Edition CD-ROM", (shown at the right) please proceed to step 11-3-a in this section.

- If you see a dialog box that states "new hardware has been detected" (shown at the right), press the "Next" button in the dialog box, and jump to step 11-3-b to 11-8 of this document.

- If you wait 60 seconds and nothing is displayed, please jump to section *Updating the Device Driver (Windows 98SE)* (🔲 34) of this document.

When you insert the Nikon Scan 3.1 CD into the CD-ROM drive, the installer Welcome program may start automatically. Click **Exit** to exit the Welcome program.

11-3-a

Do not insert the Windows 98 CD in the CD drive. Click "OK" leaving your CD drive empty. The following dialog box will be presented. Press the **Browse** button.

Now you need to navigate to "C:\windows\system32\drivers". First, use the "Drives" menu to select the "C:" drive.

Scroll down until the "windows" directory appears, and double click on it. This will present the directories within the "C:\windows" directory. Scroll down until the "system32" directory appears, and double click on it. This will present the "drivers" directory.

After double clicking on the "drivers" directory, you will notice that the "ntmap.sys" is presented and windows has automatically selected it. To complete the 1394 driver update, click **OK**.

After completing device registration, check that the Windows device drivers are installed and functioning normally (33).
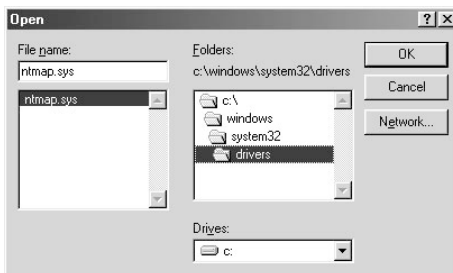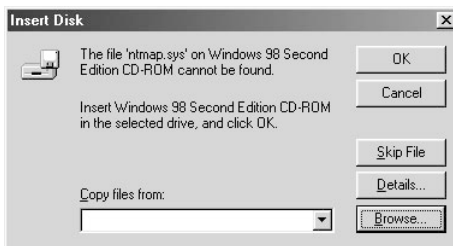
11-3-b

A dialog will be displayed asking where you want Windows to search for a driver. Be sure that the Nikon Scan 3.1 CD is inserted in the CD-ROM drive. If the CD is not in the CD-ROM drive, insert the disk while holding down the shift key to prevent the Nikon Scan installer from starting automatically.

11-4

Select **Specify a location** and click **Browse**.

11-5

In the Browse for Folder dialog, select the **Win98SE** folder from under **Nkscan** > **INF** > **LS8000** and click **OK**.
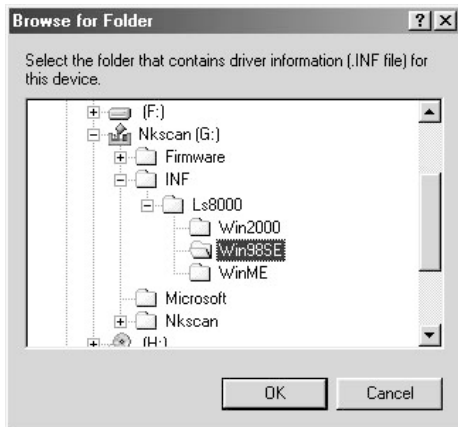
When you insert the Nikon Scan 3.1 CD into the CD-ROM drive, the installer Welcome program may start automatically. Click **Exit** to exit the Welcome program.

11-6

After confirming that "D:\INF\LS8000\Win98SE" is displayed in the text box under **Specify a location** (for "D" substitute the drive letter of the CD-ROM drive containing the Nikon Scan 3 CD), click **Next**.

11-7

The dialog shown at right will be displayed. Click **Next**.

11-8

A dialog will be displayed announcing that registration is complete. Click **Finish**.

After completing device registration, check that the Windows device drivers are installed and functioning normally (🖱 33).

11-1

The first time the scanner is connected, Windows will display a message stating that new hardware has been detected.

11-2

After a short pause, a dialog will be displayed asking whether you want to search for a driver automatically or specify a location. Be sure that the Nikon Scan 3.1 CD is inserted in the CD-ROM drive. If the CD is not in the CD-ROM drive, insert the disk while holding down the shift key to prevent the Nikon Scan installer from starting automatically.

11-3

Select **Automatic search for a better driver** and click **Next**.

11-4

You will be prompted to choose one of the drivers shown at right. Select the driver with the path ending in "8000EDME.INF" and click **OK**.

When you insert the Nikon Scan 3.1 CD into the CD-ROM drive, the installer Welcome program may start automatically. Click **Exit** to exit the Welcome program.

11-5

The dialog shown at right will be displayed. Click **Finish**.


11-6

The dialog shown at right may be displayed; click **Yes** to restart your computer.

After completing device registration, check that the Windows device drivers are installed and functioning normally (35).
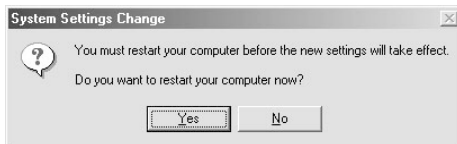
Registering the Scanner with Windows 2000

11-1

The first time the scanner is connected, Windows will display a message stating that new hardware has been detected.

11-2

After a short pause, the message will be replaced by the opening dialog for the Windows hardware wizard. Click **Next**.

11-3

A dialog will be displayed asking whether you want to search for a driver or select one from a list. Be sure that the Nikon Scan 3.1 CD is inserted in the CD-ROM drive. If the CD is not in the CD-ROM drive, insert the disk while holding down the shift key to prevent the Nikon Scan installer from starting automatically.

11-4

Select the search option and click **Next**.

✓ Important

Log into the Administrator account when registering the scanner with Windows 2000.

When you insert the Nikon Scan 3.1 CD into the CD-ROM drive, the installer Welcome program may start automatically. Click **Exit** to exit the Welcome program.

11-5

You will be prompted to choose the location of the driver files. Select **Specify a location** and click **Next**.

11-6

The dialog shown at right will be displayed; click **Browse**.

11-7

In the Locate File dialog, select the CD-ROM drive containing the Nikon Scan 3.1 CD (Nkscan) from the **Look in** pop-up menu and double-click the **INF** folder. Open the **Win2000** folder under the **8000ED** folder and click **Open**. This will return you to the dialog shown in Step 11-6; click **OK**.
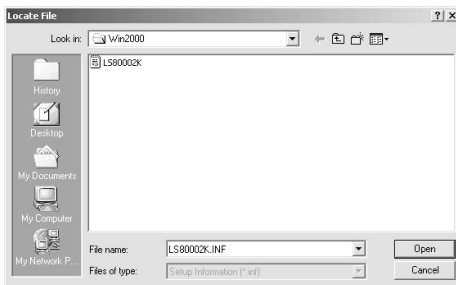
11-8

The dialog shown at right will be displayed once Windows has located the information it needs to register the scanner. Click **Next**.
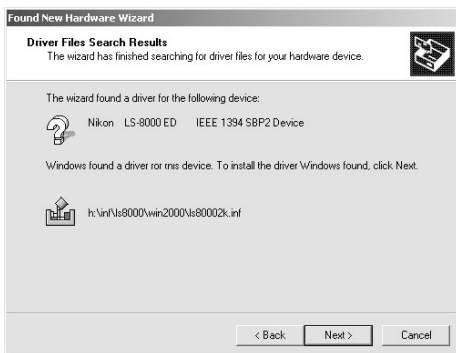
11-9

The dialog shown at right will be displayed. Click **Yes**.
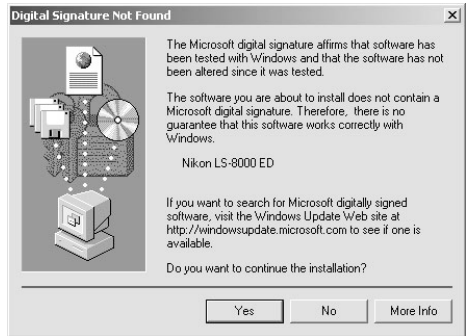
11-10

The dialog shown at right will be displayed while Windows registers the scanner.

11-11

A dialog will be displayed announcing that registration is complete. Click **Finish**.

11-12

The dialog shown at right may be displayed; click **Yes** to restart your computer.

After completing device registration, check that the Windows device drivers are installed and functioning normally (🖼 37).

1 Make sure that your scanner is connected to your computer and turned on.

2 From the **Start** menu, select **Settings** > **Control Panel.** Double-click the **System** icon in the window that appears.

3 The System Properties dialog will be displayed. Click the Device Manager tab.

4 Your Nikon Scanner should be listed as an imaging device. If an "Imaging Device" item appears, click the "+" mark next to the item to view a list of imaging devices.

5 Double-click the listing for your scanner. If your scanner is not listed as an imaging device, proceed to "Updating the Device Driver (Windows 98SE)."

6 The properties window for your scanner will be displayed. If "This device is working properly" appears under "Device status" in the General tab, the device driver for your scanner is installed and functioning normally. If a message such as, "The drivers for this device are not installed" appears, proceed to "Updating the Device Driver (Windows 98SE)."
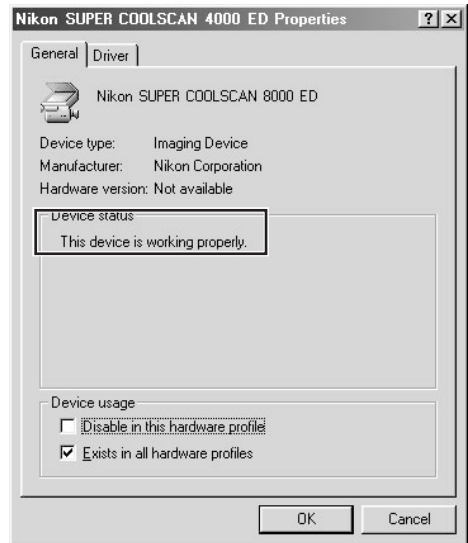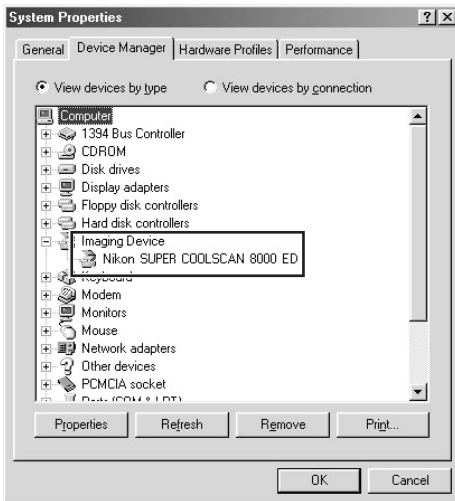
Updating the Device Driver (Windows 98SE)

1 Open the Device Manager as instructed in steps 1–3 of "Confirming That the Device Driver Is Correctly Installed (Windows 98SE)."

2 If your scanner is listed under "Unknown devices" or "Other devices," or appears next to a "?" "!" or "×," double-click the scanner icon to open the properties window for the device.

3 Click **Reinstall driver…** in the General tab of the properties window.

4 The Update Device Driver Wizard dialog will appear. Click **Next**.

5 Select **Search for a better driver than the one your device is using now** and click **Next**.

6 With the shift key held down to prevent the installer from starting automatically, insert the Nikon Scan 3.1 CD into a CD-ROM drive. Select **Specify a location** in the dialog below and click **Browse**. (If the Welcome dialog appears when the CD is inserted in the drive, click **Exit** and proceed with driver installation.)

7 In the Browse for Folder dialog, select the following folder on the Nikon Scan 3.1 CD (Nkscan):

\INF\8000ED\Win98SE

Click **OK**. This will return you to the dialog shown above; click **Next**.

8 The Update Device Driver Wizard will announce that it has found the drivers for your scanner; click **Next**.

9 When a message is displayed indicating that driver installation is complete, click **Finish** to exit the wizard.

Confirming That the Device Driver Is Correctly Installed (Windows Me)

1 Make sure that your scanner is connected to your computer and turned on.

2 From the **Start** menu, select **Settings** > **Control Panel**. Double-click the **System** icon in the window that appears.

3 The System Properties dialog will be displayed. Click the Device Manager tab.

4 Your Nikon Scanner should be listed as an imaging device. If an "Imaging Device" item appears, click the "+" mark next to the item to view a list of imaging devices.

5 Double-click the listing for your scanner. If your scanner is not listed as an imaging device, proceed to "Updating the Device Driver (Windows Me)."
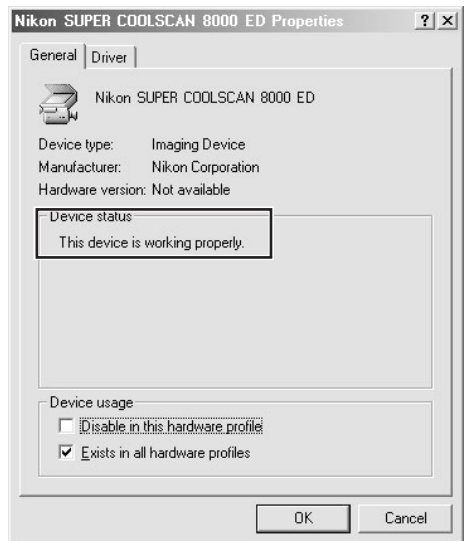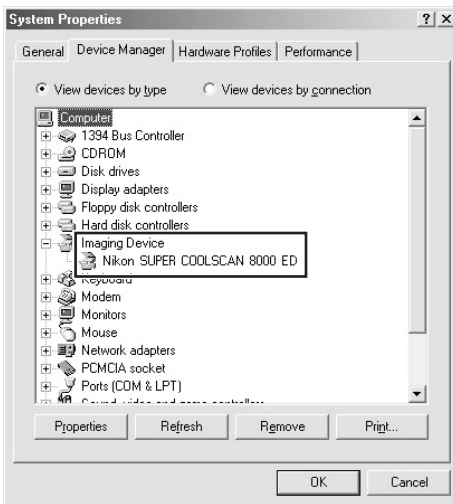
6 The properties window for your scanner will be displayed. If "This device is working properly" appears under "Device status" in the General tab, the device driver for your scanner is installed and functioning normally. If a message such as, "The drivers for this device are not installed" appears, proceed to "Updating the Device Driver (Windows Me)."

1 Open the Device Manager as instructed in Steps 1–3 of "Confirming That the Device Driver Is Correctly Installed (Windows Me)."

2 If your scanner is listed under "Unknown devices" or "Other devices," or appears next to a "?" "!" or "x," double-click the scanner icon to open the properties window for the device.

3 Open the Driver tab and click **Update Driver…**.

4 The Update Device Driver Wizard dialog will appear. With the shift key held down to prevent the installer from starting automatically, insert the Nikon Scan 3.1 CD into a CD-ROM drive (if the Welcome dialog appears when the CD is inserted in the drive, click **Exit** and proceed with driver installation).

5 The wizard will prompt you to choose from a list of drivers; choose the driver with the path ending in "8000EDME.INF" and click **Next**.

6 The Update Device Driver Wizard will announce that it has found the drivers for your scanner; click **Finish** to exit the wizard. If you are prompted to restart your computer, click **Yes** to restart Windows.

1 Make sure that your scanner is connected to your computer and turned on.

2 From the **Start** menu, select **Settings** > **Control Panel**. Double-click the **System** icon in the window that appears.

3 The System Properties dialog will be displayed. Open the Hardware tab and click the **Device Manager…** button.
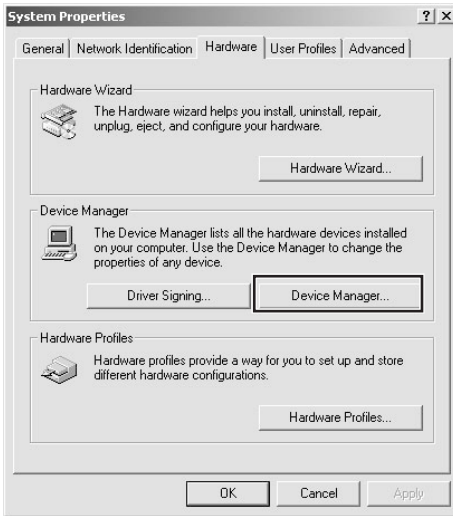
4 Your Nikon Scanner should be listed as an imaging device. If an "Imaging devices" item appears, click the "+" mark next to the item to view a list of imaging devices.

5 Double-click the listing for your scanner. If your scanner is not listed as an imaging device, proceed to "Updating the Device Driver (Windows 2000)."

6 The properties window for your scanner will be displayed. If "This device is working properly" appears under Device Status in the General tab, the device driver for your scanner is installed and functioning normally. If a message such as, "This device is not working properly" appears, proceed to "Updating the Device Driver (Windows 2000)."

Updating the Device Driver (Windows 2000)

1 Open the Device Manager as instructed in Steps 1–3 of "Confirming That the Device Driver Is Correctly Installed (Windows 2000)."

2 If your scanner is listed under "Unknown devices" or "Other devices," or appears next to a "?" "!" or "x," double-click the scanner icon to open the properties window for the device.

3 Open the Driver tab and click **Update Driver…**.

4 The Welcome to the Upgrade Device Driver Wizard dialog will appear. Click **Next**.

5 Select **Search for a suitable driver for my device (recommended)** and click **Next**.

6 Insert the Nikon Scan 3.1 CD in a CD-ROM drive (if the Welcome dialog appears when the CD is inserted in the drive, click **Exit** and proceed with driver installation). Follow the instructions in steps 11-5 to 11-10 of "Registering the Scanner with Windows 2000" to specify the location of the device driver.

7 When a message is displayed indicating that driver installation is complete, click **Finish** to exit the wizard. If you are prompted to restart your computer, click **Yes** to restart Windows.

Step 12: Make a Scan

This step introduces basic scanning procedures. For details of using Nikon Scan to scan images, see the *Nikon Scan Software Manual*.

Nikon Scan can be used to scan images into third-party host applications such as Adobe Photoshop, or it can be used as a "stand-alone" application for scanning images and saving them to disk. The following steps assume that Nikon Scan is used as a stand-alone application. To use Nikon Scan with a third-party host application:

Windows: Select Nikon Scan as the TWAIN source from the application's list of "acquire" or "import" sources.

Macintosh: Before starting the application, copy the Nikon Scan 3.1 plug-in into the application's plug-ins folder (see the application manual for details). You can then select the plug-in from the application's list of "acquire" or "import" sources.

📎 **Important**

When Nikon Scan is started up, the LED on the scanner will blink, and it may take some time for the Nikon Scan window to appear on the screen. This is part of the normal initializing procedure, and does not indicate a malfunction.

To use Nikon Scan as a "stand-alone" application:

Windows

Click the **Start** button and select **Nikon Scan 3.1** from **Programs** > **Nikon Scan 3.1**.
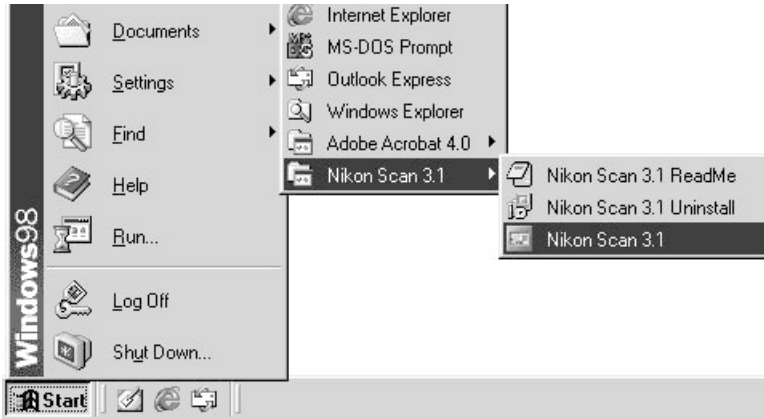
Macintosh

Open the folder to which you installed Nikon Scan (the default location is in the path Nikon Software : Nikon Scan 3.1 on the start-up disk) and double-click the **Nikon Scan 3.1** icon.

Nikon Scan 3.1

12-2

Place film in the holder. The kind of film that can be used depends on the holder; the scanning process is illustrated in this section using the FH-835S strip-film holder provided with your scanner. For information on inserting film in the holder, see "Reference: Holders" (68).

After confirming that the status LED is glowing steadily and that the sliding cover on the front of the scanner is fully open, slide a holder into the holder slot as shown below, with the insertion guide up and pointing toward the scanner. Do not insert the holder at an angle. Once the holder has been inserted as far as the insertion guide, the scanner's loading mechanism will be activated and the holder will be fed into the scanner automatically. Remove your hands from the holder when loading starts.

Insertion guide
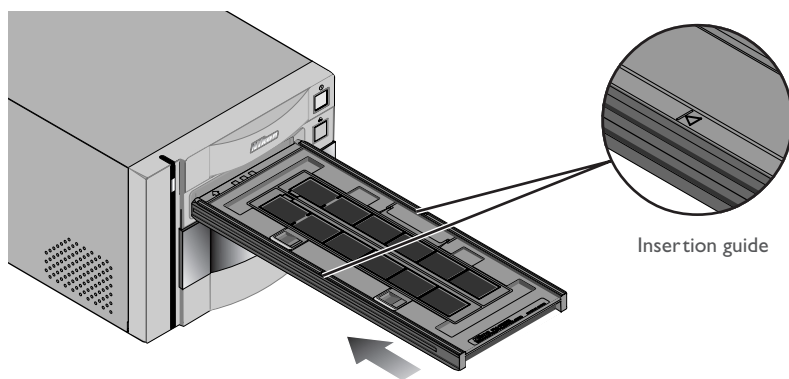
Loading will stop when the holder is in scanning position.

☑ Caption

Holders can not be inserted into the scanner if the sliding cover is not fully open.

When inserting holders in the scanner, do not use force. When a holder is inserted, the scanner readies the loading mechanism. Removing the holder or otherwise interfering with loading can cause scanning errors. Do not attempt to forcibly remove the holder during or after loading. When ejecting the holder, always use the button on the front of the scanner or the eject button in the Nikon Scan scan window.

If the holder does not load automatically when inserted, remove the holder and try again. Before insertion, remove any dust or lint with a blower.

Choose the type of film to be scanned from the Nikon Scan media-type menu.
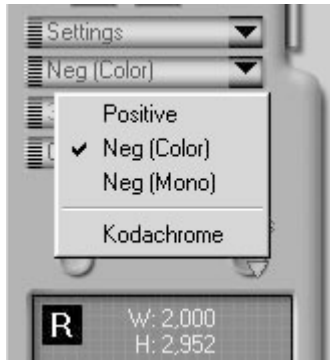
Choose a color model from the color-model menu. **Calibrated RGB** is the best choice in most circumstances. The **Grayscale** option is for use when scanning black-and-white (monochrome) film, while **CMYK** is intended for professionals who wish to create a file ready for printing on an industrial four-color printer.
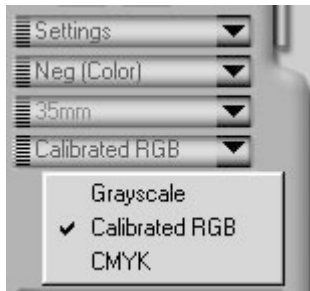

👁️ *Pg.*   *For more information on:*

💿   26   Making a scan

42

Unless you are using the FH-869GR glass-covered rotating film holder (available separately), you can choose the frames to be scanned from the thumbnail drawer. Click the thumbnail drawer tab to open the thumbnail drawer.

Thumbnail drawer tab
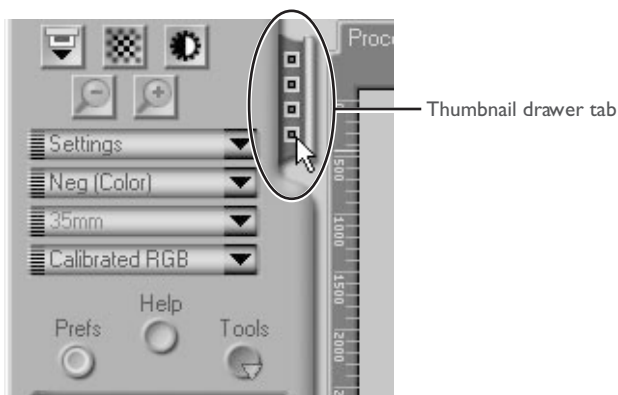
By default, frames are identified by number only. To view a small preview image (thumbnail) for each frame, click the ⬚ button. The button icon will change to ▣ ; click the button again to return to a frame number display.

Click here to display and hide thumbnails

If the thumbnail drawer is too small to display all the frames at once, you can enlarge the drawer by dragging its lower right corner or use the scroll slider to view frames that do not fit it in the drawer.

Scroll slider

Drag here to enlarge thumbnail area

The frame to be scanned can be selected by clicking the associated frame number or thumbnail. To select multiple frames, click each frame in turn while holding down the control (Windows) or command (Macintosh) key, or hold down the shift key while clicking two images to select the images and all frames between them.
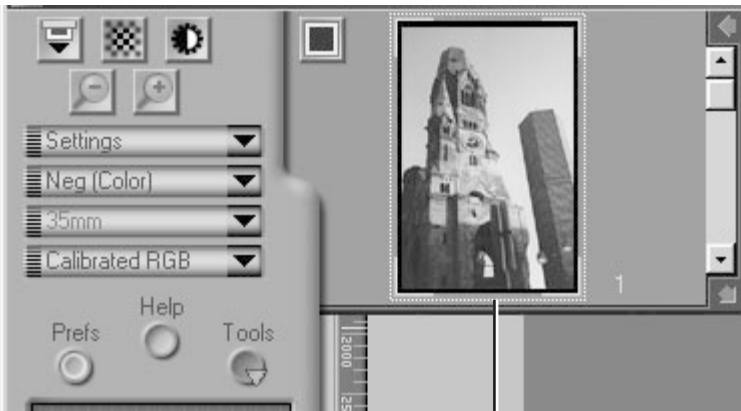
Selected thumbnail

Click the **Preview** button to create a preview of the image to be scanned. You can also create a preview by double-clicking the desired frame in the thumbnail drawer.

The preview will be displayed in the preview area.

Steps 12-9 through 12-13 involve the "Tool Chest." The Tool Chest, new to Nikon Scan 3.1, is a set of tool palettes, each containing an information display or controls for a specific task. If the Tool Chest is not already open on the desktop, you can open the Tool Chest by clicking the **Tools** button in the scan window and selecting **Tool Palette 1** from the menu that appears. To open a tool palette within the Tool Chest, click on the triangle to the left of the palette's title.
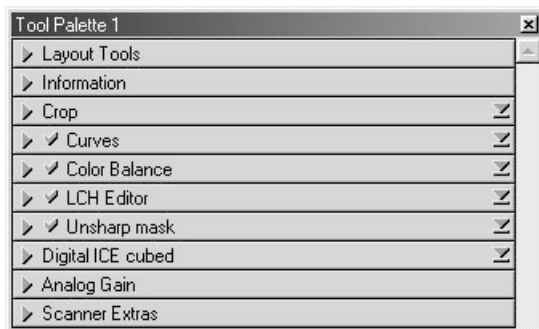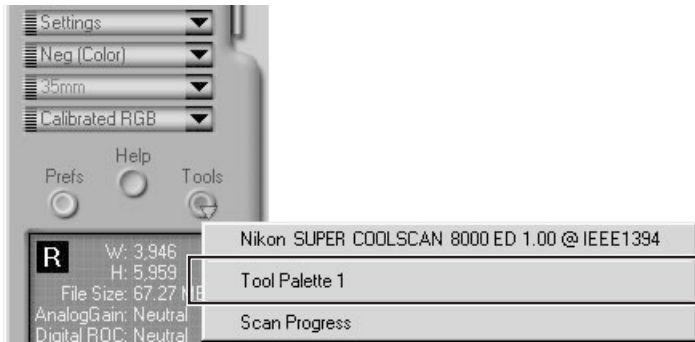
Tool Palette 1

👁 *Pg.* *For more information on:*

◉ 40   The Tool Chest

If necessary, you can rotate or flip the preview image. Click the triangle at the top left corner of the Layout Tools palette in the Tool Chest to display the Layout Tools palette.

Click —
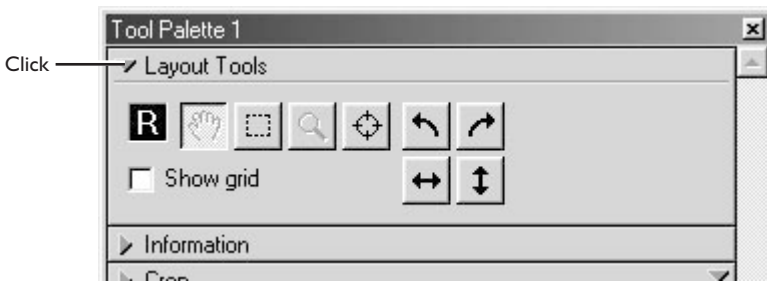
The image in the preview area can be rotated and flipped using the following four buttons:

↗	Rotate the image ninety degrees to the right
↖	Rotate the image ninety degrees to the left
↔	Flip the image horizontally
↕	Flip the image vertically

Any flips and rotations performed on the image are reflected in the orientation of the letter "R" in the Layout Tools palette.

👁 *Pg.* **For more information on:**

💿 43   The Layout Tools palette

If desired, you can process the image digitally to remove dust and scratches or to reduce the effects of fading and film grain. Open the Digital ICE Cubed palette by clicking the triangle at its top left corner.

Click ——

☑ Digital ICE cubed	↗
☐ Enable Digital ICE Normal ▾	
☐ Enable Post Processing	
Digital ROC: ◀ ┃━━━━━━ ▶ 0	
Digital GEM: ◀ ┃━━━━━━ ▶ 0	
Redraw	
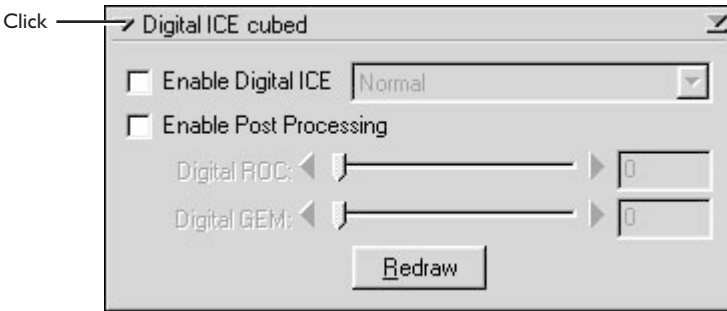
To remove dust and scratches from the image, check Enable **Digital ICE** and select **Normal** or **Fine** from Digital ICE menu. A setting of Fine can be used to remove very fine scratches or barely visible dust, although this may sometimes result in reduced sharpness. To restore faded colors or reduce the effects of film grain, first check **Enable Post Processing**. Faded colors can be restored adjusting the **Digital ROC** slider, while the image can be processed to minimize grain using the **Digital GEM** slider. Moving the sliders to the right increases the effects of Digital ICE[3]. To view the effects of Digital ROC or Digital GEM in the preview image, click the **Redraw** button.

📎 **Important**

Because of the complexity of the processing involved, Digital ICE[3] operations require additional time to perform. The time required is determined in part by the processing power of your computer and in part by the size of the image.

👁 *Pg.   For more information on:*

🔘 51   Digital ICE[3]

12-11
Choose the area to be scanned by dragging the mouse over the image in the preview area.

Selected area ("crop")

Drag the
mouse
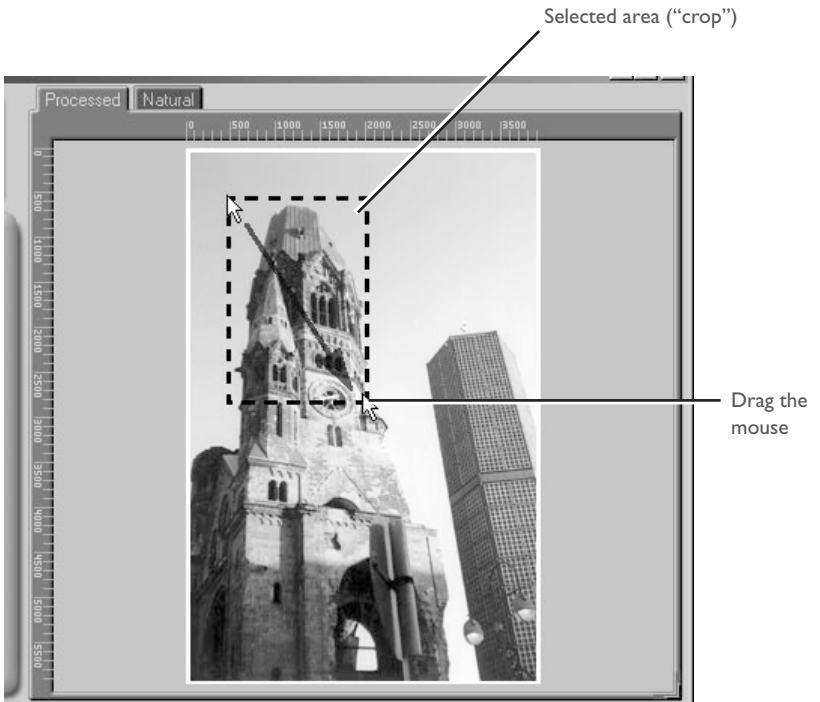
The size of the crop can be changed by dragging its boundaries. To change the position of the crop, place the cursor inside the selected area and drag it to a new location.

12-12

Using the tools in the Crop palette, specify the resolution and size at which the image will be printed or displayed on a monitor after scanning (the "output" resolution and size). Open the Crop palette by clicking the triangle at its top left corner.

Click ——

Tool Palette 1	
▷ Layout Tools	
▷ Information	
▷ Crop	
▷ ✓ Curves	
▷ ✓ Color Balance	
▷ ✓ LCH Editor	
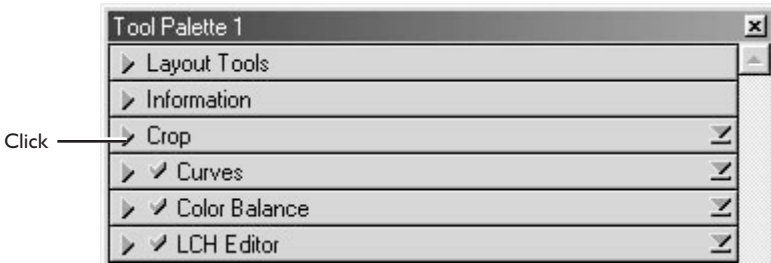
The Crop palette contains three options for determining output size: **Keep this crop**, **Keep this output size**, and **Keep this file size**.

▼ Crop

○ Keep this crop
W: 3,946   H: 5,959   Pixels ▼

○ Keep this output size
Output size text boxes —— W: 0.99   H: 1.49   Inches ▼ —— Output units menu

○ Keep this file size
File size text box —— 67.27   MBytes ▼

Scale: ◀ ———————— ▶ 100 % —— Scale slider

Resolution text box —— Resolution: 4,000   Pixels/Inch ▼

Custom ▼ —— Output resolution menu
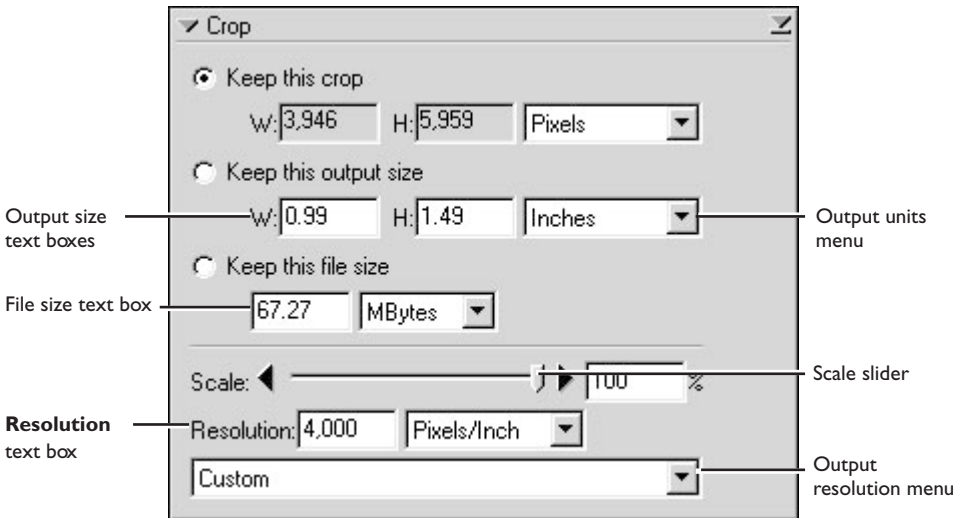
👁 *Pg.*   *For more information on:*

💿 46   The Crop palette

- **Keep this crop**

  Choose **Keep this crop** when you want to select the precise area to be scanned using the mouse, then adjust the output resolution and size according to how the image will be used. Enter a value for resolution suited to the device on which the image will be printed or displayed in the **Resolution** text box, or select a resolution that matches the device from the options listed in the output resolution menu. You can then choose the units for output size from the output units menu and enter a value for either **W**idth or **H**eight in the output size text boxes. The other dimension will be adjusted automatically to maintain the crop selected in the preview area.

- **Keep this output size**

  Choose this option when you want to select the general area to be scanned using the mouse, then specify the exact dimensions of the image to fit it into a pre-determined space, for example in a magazine or on a web page. Follow the directions above to select the output resolution and output units, then enter the desired values for **W**idth and **H**eight in the output size text boxes. The crop selected in the preview area will automatically be adjusted to maintain the crop at these proportions.

- **Keep this file size**

  Choose this option when you want to select the general area to be scanned using the mouse and then specify the exact file size of the final image, for example to keep file sizes to a minimum for storage or electronic transfer, or because you have been asked for a file of a certain size. Enter a value for file size in the file size text box and select the units for file size from the menu to its right.

If desired, color, contrast, sharpness, and image quality can be adjusted using the following tool palettes:

Curves
The Curves palette makes it possible to adjust color balance and contrast in specific portions of the tone range. For example, you can selectively enhance detail in dark portions of the image (shadow), brighten mid-tones, or bring out details in highlights. Changes can be made to all the component colors in the image or only to specific color components (channels).

Color Balance
The Color Balance palette can be used to adjust brightness, contrast, and color balance over the entire tone range.

LCH Editor
The LCH Editor is used to adjust brightness and contrast in specific portions of the tone range, edit chroma to modify color saturation, or "vividness," and change one set of hues (or colors) in the image to a different color.

Unsharp Mask
The tools in the Unsharp Mask palette sharpen outlines, either throughout the image or only where specific colors predominate.

To open any of the above palettes, click the triangle at its top left corner.

Click
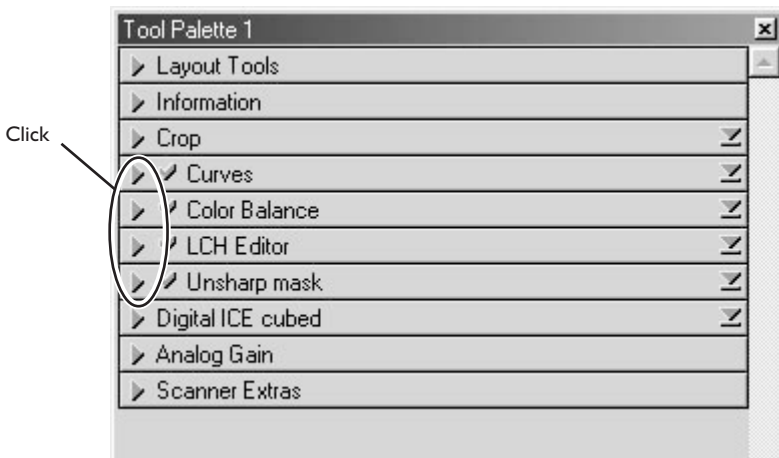
Pg.	**For more information on:**
63	Curves
76	Color Balance
78	The LCH Editor
85	Unsharp Mask

To view the effects of any changes that have been made and compare them with the original, use the Processed and Natural tabs in the preview area to switch back and forth between the processed and original image. The image produced when you click the **Scan** button to open the image in the host application will be the same as the image in the Processed tab.

When using Nikon Scan as a stand-alone application, you can use the Ctrl-T (Windows) or ⌘-T (Macintosh) keyboard shortcut to switch between the Processed and Natural tabs.

To scan the image, click the **Scan** button.

The scanned image will be opened in an independent image window, where it can be saved to disk.
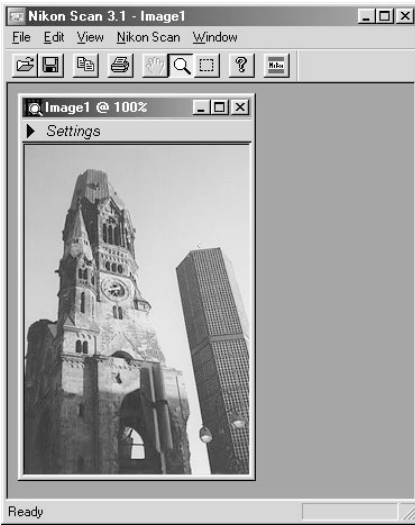
Windows
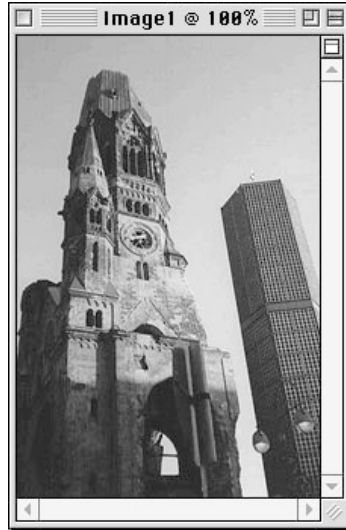
Macintosh

Scanned images can be saved and reopened for editing in another application, such as Photoshop.

To scan additional images, click the scan window to activate it. If you have closed the scan window, you can open it again by selecting **Open TWAIN Source** from the **File** menu (Windows) or selecting the scanner from the devices listed in the **Tools** sub-menu under the **Nikon Scan** menu. If you are using Nikon Scan as a TWAIN source or acquire plug-in for a third-party application such as Adobe Photoshop, you can re-open the scan window by selecting Nikon Scan from the application's list of import or acquire sources. Once the scan window has been re-opened, a new crop can be scanned as outlined in steps 12-5 through 12-14, or the holder can be ejected and new film inserted and previewed. To eject the holder, press the eject button on the front of the scanner, or click the eject button in the scan window.

Eject button
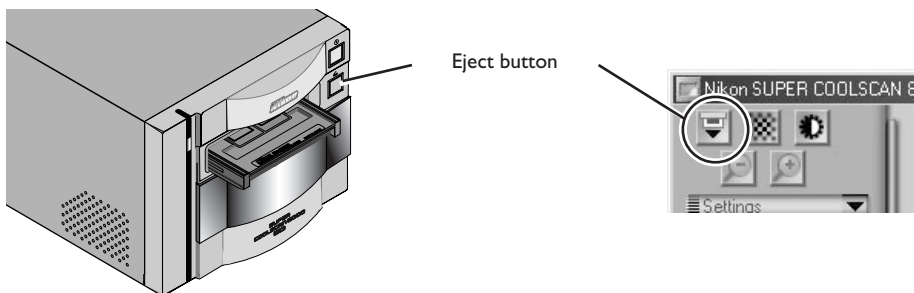
📎 **Important**

The holder will automatically be ejected if you turn the scanner off and then on again.

✅ **Caution**

Do not, under any circumstances, touch the holder as it is being ejected from the scanner. Wait for the holder to be fully ejected and the remove the holder from the scanner.

The holder will not be ejected if the eject button in the scan window is clicked when the sliding cover on the front of the scanner is not fully open. Open the slot cover fully before clicking the eject button.

Once you have finished scanning, exit Nikon Scan by selecting **Exit** (Windows) or **Quit** (Macintosh) from the **File** menu (if you are using Nikon Scan as a TWAIN source or acquire plug-in for another application, close the scan window by clicking the close box) and follow the steps below to turn the scanner off.

1. Remove the holder from the scanner (see Step 12-15).

2. Close the sliding cover.

3. After checking that the status LED is glowing steadily, press the power switch to turn the scanner off.

Status LED blinks   Status LED glows steadily
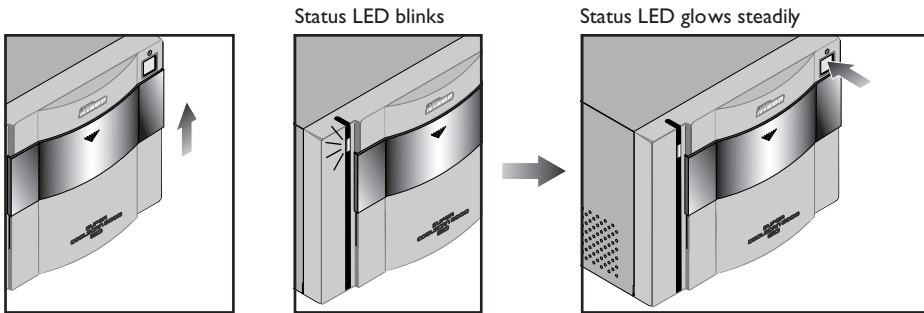
✎ Important (Windows)

When using a computer running Windows 98 SE or Windows Me, before turning the scanner off you will need to remove the scanner from the system. Click the "Unplug or Eject Hardware" icon in the task bar with the left mouse button and select **Stop Nikon SUPER COOLSCAN 8000 ED IEEE 1394 SBP2 Device** from the menu that appears. When the message to the effect that the scanner can be safely removed from the system appears, click **OK** and turn the scanner off. The computer will automatically recognize the scanner the next time the scanner is turned on.

If you fail to remove the scanner from the system before disconnecting the device or turning it off, the error message shown below will be displayed. Click **OK** to clear the message from the screen.

Nikon Scan Quick Reference

This chapter provides a quick guide to the centerpiece of the Nikon Scan interface, the scan window. For more complete information on installing and using Nikon Scan, see the *Nikon Scan Software Manual* (on CD).

Ⓐ **Ⓕ** **Ⓖ** **Ⓗ**

Nikon SUPER COOLSCAN 8000 ED 1.00 @ IEEE1394

Processed | Natural

|0 |500 |1000 |1500 |2000 |2500 |3000

Settings
Neg (Color)
35mm
Calibrated RGB

Prefs   Help   Tool

Tool Palette 1

▷ Layout Tools
▷ Information
▷ Crop
▷ ✓ Curves
▷ ✓ Color Balance
▷ ✓ LCH Editor
▷ ✓ Unsharp mask
▷ Digital ICE cubed
▷ Analog Gain
▷ Scanner Extras

Ⓑ

R   W: 3,946
     H: 5,959
     File Size: 67.27 MB
AnalogGain: Neutral
Digital ROC: Neutral
Digital GEM: Neutral
Digital ICE: Off
MultiSample: 1x
Bit Depth: 8

R   G   B

Preview   Scan

Scan Progress

Performing item 1 of 1

[/////////////]   Stop

▷

Ⓒ **Ⓓ** **Ⓔ** **Ⓘ**

A **Control area**

Contains the most frequently used scanning and preview controls.

B **Information panel**

Provides information on current scan settings.

C **Preview button**

Click to preview the frame to be scanned. The preview shows how the image will look when it is scanned.

D **Scan button**

Click to scan the selected portion of the image into the host application.

E **Interactive help**

Gives a brief tip about the control under the mouse cursor.

F **Thumbnail drawer tab**

Click to select frames to be scanned from multi-frame film.

G **Preview area**

The preview image is displayed here.

H **Tool chest**

Contains tools for:

- setting the image orientation and choosing the portion of the image to be scanned
- controlling the physical dimensions and file size of the image when opened in the host application
- enhancing color, contrast, and sharpness
- removing the effects of scratches, dust, fading, and film grain
- controlling scanner settings

I **Scan Progress window**

Shows what actions are being performed, and gives a log of automated tasks.

The Control Area

Eject Button

Ejects the holder from the scanner.

Autofocus Button

Click to focus the scanner on the center of the image, or control-click (Windows) or option-click (Macintosh) to select a new focus point.

Autoexposure Button

Before scanning, the scanner needs to gather information about the image to adjust exposure for best results. Click this button to adjust exposure.

Zoom Buttons

Click the 🔍 button to zoom in on the current crop, enlarging it to fill the preview area. Click the 🔍 button to zoom out.

Settings Menu

Using the options in this menu, you can reset the scanner to default settings, or save scanner settings suited to particular scanning conditions and recall them as desired.

Color Model Menu

Select a color model according to the capacities of your image editing software and whether the image is destined for output on a commercial four-color printing press or display on a monitor.

The Control Area

Media Type Menu 1

When using the FH-869S or optional FH-869G or FH-869GR holders for medium format film, choose a setting that matches the media in the scanner (6 × 4.5, 6 × 6, 6 × 7, 6 × 8, 6 × 9, etc.)

Media Type Menu 2

Adjusts scanner settings to match the media in the scanner.

Window Buttons

- **Prefs**: click to open the preferences dialog

- **Help**: click to open the Nikon Scan help file

- **Tools**: open the Tool Chest or Scan Progress windows

The Information Panel

Orientation
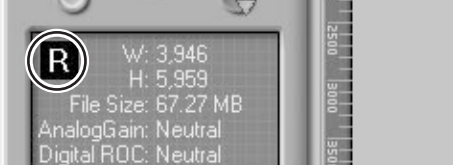
Shows the orientation of the preview image relative to the original, reflecting any flips or rotations that have been performed.

Dimensions/File Size
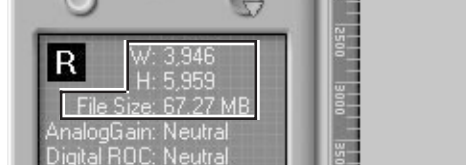
Gives the height and width of the current crop in pixels, and the size of the file that will result if the crop is scanned at the current output size and resolution.

Image Enhancement
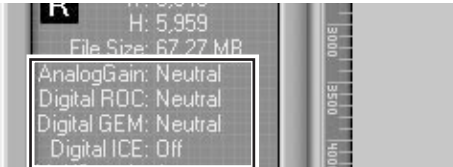
Indicates whether Digital ICE[3] and analog gain are in effect. Remember to use Digital ICE[3] only when needed, as turning Digital ICE3 on can substantially increase scanning times.

Scanner Extras
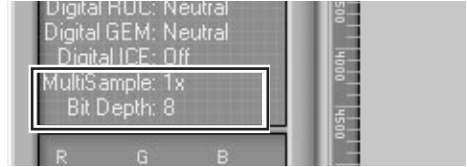
Indicates the current bit depth (which determines the maximum number of colors in the image), whether multi-sample scanning is in effect, and the selected scanning mode (single or three line).

Color Values
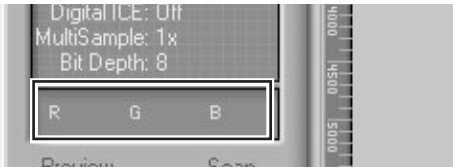
Gives the color values for the pixel under the cursor in the Natural tab (top row) or Processed tab (bottom row).

The Preview Button

Clicking this button displays a preview of the image to be scanned (if multiple frames are selected in the thumbnail drawer, a preview will be performed for each frame). You will need to create a new preview after changing the media type or using the zoom buttons.

The Scan Button

Scans the image and opens it in the host application (if multiple frames are selected in the thumbnail drawer, each frame will be scanned and opened in a separate window).

The Thumbnail Drawer Tab
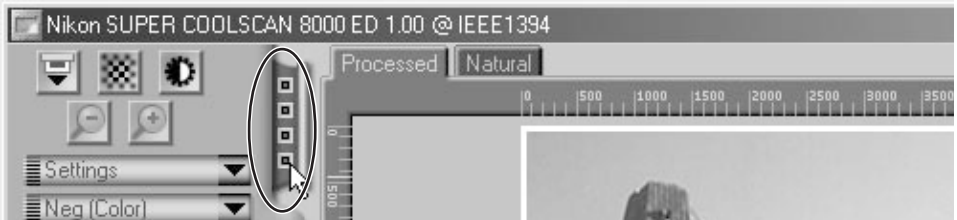
Clicking this tab opens the thumbnail drawer, where you can select the frame to be scanned by clicking the associated frame number. To view the frames as small previews (thumbnails), click the button. Multiple frames can be selected by clicking each frame in turn while holding down the control (Windows) or command (Macintosh) key, or by holding down the shift key while clicking two frames to select these frames and all the frames between them.

The Natural/Processed Tabs

These tabs allow for a quick "before-and-after" comparison showing the effects of any changes made to the image using the tools in the Tool Chest. The Natural tab shows how the image looked before processing, the Processed tab how the image will look when scanned at current settings.

The Tool Chest

Layout Tools

Tool Palette 1
> Layout Tools
> Information
> Crop
> Curves
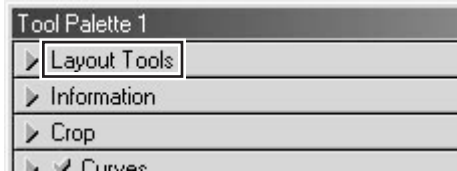
Use these tools to select the portion of the image to be scanned (the "crop") and to rotate and flip the image prior to scanning. You can also select a new focus area and scroll images that have been opened in Nikon Scan after scanning.

Information

Tool Palette 1
> Layout Tools
> Information
> Crop
> Curves

Gives the height and width of the current crop and the coordinates of its top left corner. The color value display shows the color of the pixel under the cursor before and after processing.

Crop

Tool Palette 1
> Layout Tools
> Information
> Crop
> Curves
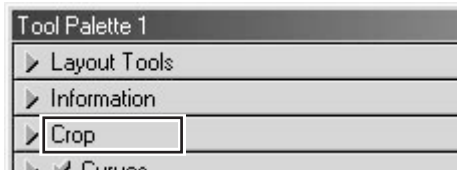
This is where you adjust the resolution and size of the image according to the output device (printer or monitor) on which the image will be displayed.

Curves

> Crop
> Curves
> Color Balance
> LCH Editor
> Unsharp mask

One of three color editing tools offered by Nikon Scan, the curves tool is useful when adjusting contrast and making changes to color balance that effect only a specific portion of the tone range (shadows, mid-tones, or highlights).

Color Balance

> Crop
> Curves
> Color Balance
> LCH Editor
> Unsharp mask
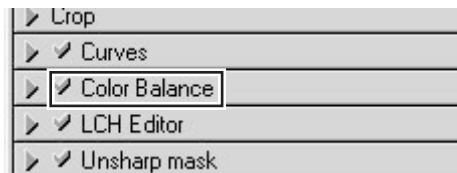
Use the color balance tools to make adjustments to brightness, contrast, and color balance that affect the entire image.

LCH Editor

> Crop
> Curves
> Color Balance
> LCH Editor
> Unsharp mask
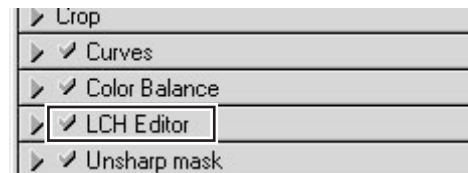
Like the Curves tool, the LCH editor can be used to adjust brightness and contrast in shadows, mid-tones, and highlights. It also incorporates hue and chroma editors, which provide extremely flexible tools for adjusting color.

The Tool Chest (continued)

Unsharp Mask
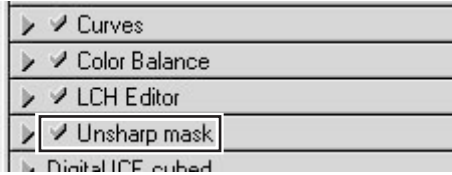
Unsharp mask increases the sharpness of the image by making edges more distinct, either over the entire image or in areas where specific colors are prominent.

Digital ICE Cubed

Three tools are available:

- **Digital ICE**: reduces the effects of dust and scratches

- **Digital ROC**: restores colors lost through fading

- **Digital GEM**: reduces the effect of film grain

Analog Gain

Using analog gain, you can adjust colors by directly altering the exposure value for each of the colored elements in the scanner's light source.

Scanner Extras
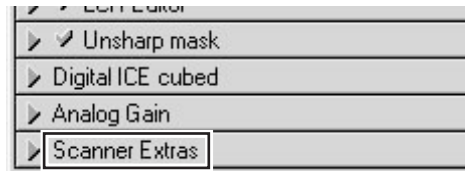
These tools offer control over features specific to your scanner.

This window shows the progress of preview and scan operations. The current task can be cancelled by clicking the **Stop** button. Tasks that have yet to be performed are listed in the Queue tab and can be cancelled by selecting the task and clicking the 🗑 icon. When performing multiple (batch) scans, the tasks completed are listed in the Log tab.

Reference
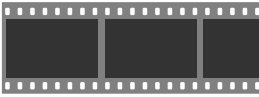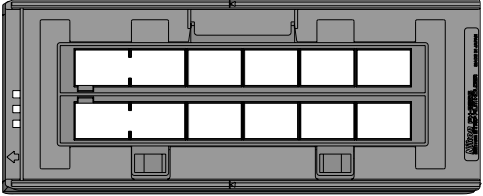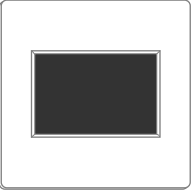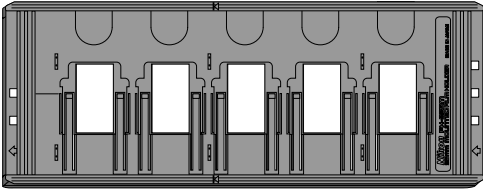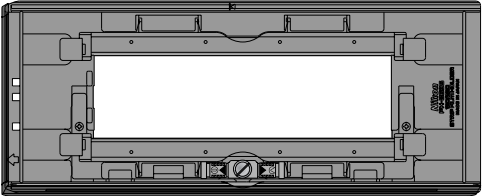
This chapter provides information on:
- Using the holders provided with your scanner
- Using optional holders
- What to do if your scanner will not scan
- Caring for your scanner
- Specifications for your scanner, holders, and optional accessories

Holders

This section describes how to use the holders provided with your scanner and optional holders available for separate purchase.

Holders Provided with Your Scanner

Three holders are provided with your scanner, each for use with a different type of film.

When scanning	Use
35-mm film strips up to six frames in length	FH-835S holder for 35-mm film strips The FH-835S can be used to scan two strips of film up to six frames in length.
Mounted 35-mm slides	FH-835M holder for mounted 35-mm slides The FH-835M can be used to scan up to five slides at a time.
Medium-format (120/220) film strips	FH-869S holder for Brownie film The FH-869S can be used to scan strips of 120/220 film or 59 × 82 mm film for electron microscopes.

Using the FH-835S Holder for 35-mm Film Strips

The FH-835S is used when scanning strips of 35-mm film up to six frames in length. Up to two film strips can be placed in the holder at a time. When scanning a single film strip, or when scanning two strips of different lengths, use the masking sheet to mask the unused apertures in the holder.

Masking sheets
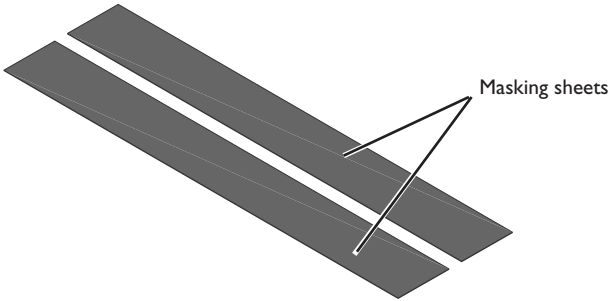
With the holder oriented so that the insertion guide is to the left, insert your fingers into the holes in the lower portion holder to unlatch the hooks holding the upper cover in place, then open the holder.

Insertion guide

Upper cover

Hooks (× 2)

Place the film to be scanned in the holder with the matte emulsion surface down (the shiny surface up) and the frames aligned with the apertures in the lower portion of the holder.

Apertures
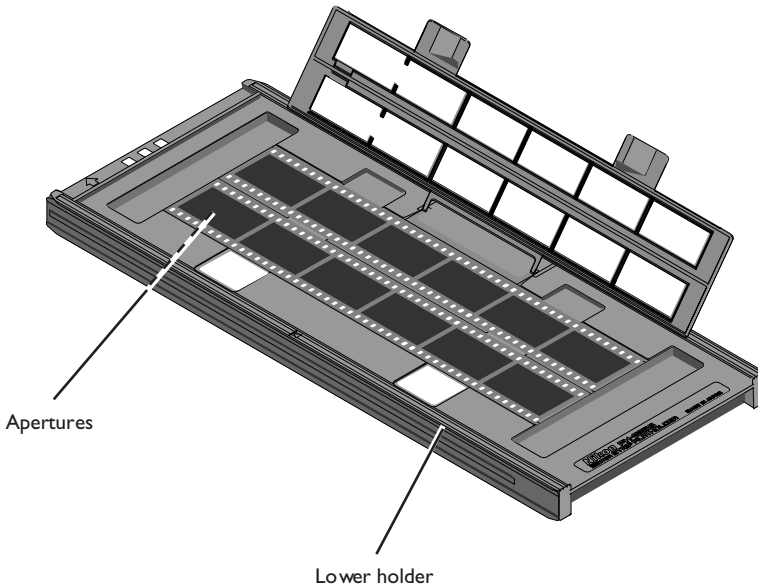
Lower holder

Openings are provided in the upper cover to allow you to adjust the position of film before latching the cover closed. Using these openings, insert a pointed object, such as a pen, in the film perforations and adjust the position of the film so that the frames are aligned with the apertures in the holder.
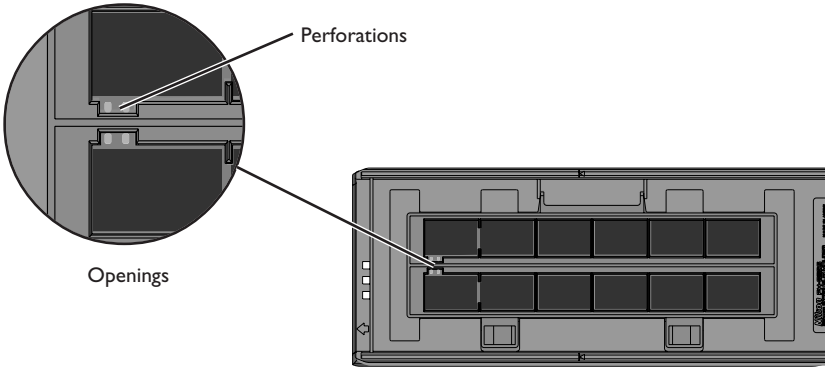
Perforations

Openings

Close the upper cover so that the latches click into place.

Thumbnails are displayed in the thumbnail drawer in the scan window in the order shown below.

Direction of insertion
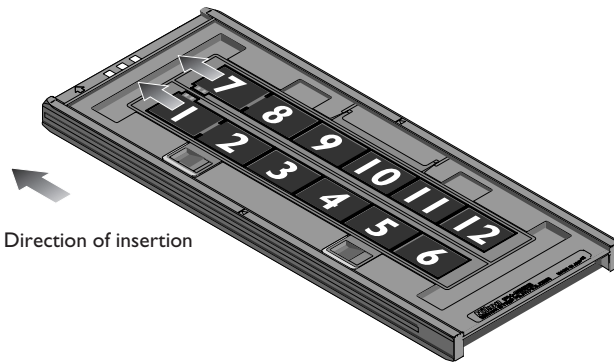
☑ Caution

When adjusting the position of the film, care should be observed to avoid damaging the perforations. Do not attempt to adjust the position of the film when the holder is latched. Failure to observe this precaution could result in damage to the film.

When scanning film strips one at a time, be sure to cover the remaining apertures with a masking sheet.

Make sure to place the film strip on the left side and the mask strip of the right side with respect to the direction of insertion as shown below.
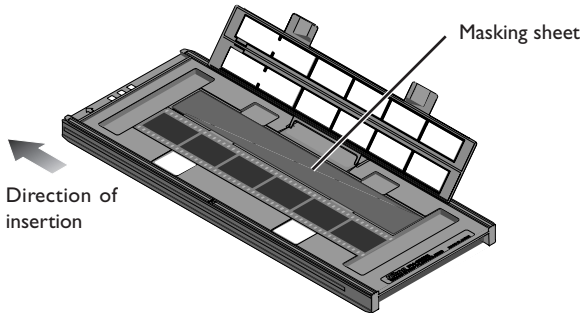
Masking sheet

Direction of insertion

When scanning two strips of different lengths, cover any open apertures by cutting a masking sheet into the appropriate lengths and placing it over the apertures. Leaving apertures open when scanning film of different lengths can interfere with accurate color reproduction.

Masking sheet
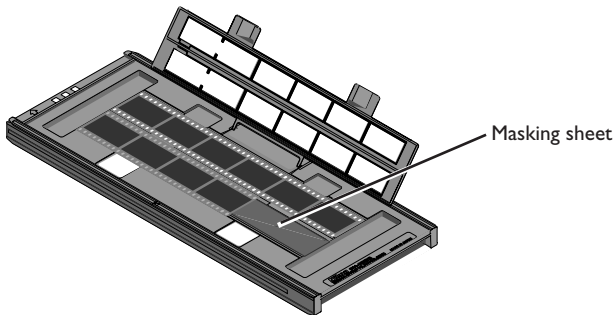
When scanning two film strips containing less than six frames but of equal length, place the film so that it covers the apertures at the end of the holder that will be inserted in the scanner.

Direction of insertion
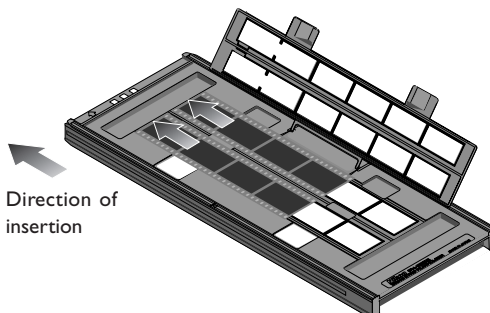
Leaving the apertures at the front of the holder uncovered can interfere with accurate color reproduction.

Once scanning is complete, press the eject button on the front of the scanner or click the eject button in the scan window to eject the holder. Remove the holder and close the sliding cover.

Eject button

Sliding cover
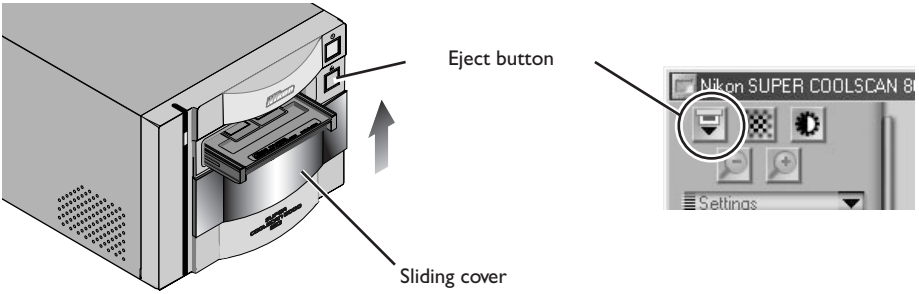
Removing Film from the Holder

Open the holder as described above and remove the film. Insert your fingers in the holes in the lower holder and pick the film up by its edges. If the edges of the film are not accessible, tilt the holder so that the film slides to the edge of the depression at the end of the lower holder and then remove the film.

Depression

Holes
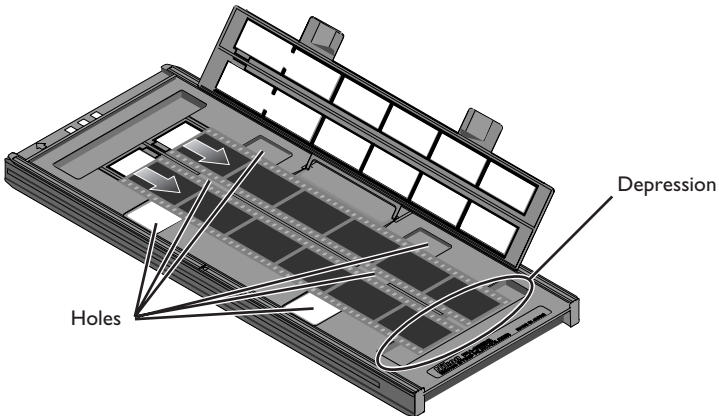
Using the FH-835M Holder for Mounted 35-mm Slides

The FH-835M is used when scanning mounted 35-mm slides. Up to five slides can be placed in the holder at a time. Insert the slides with the matte emulsion surface down (the shiny surface up). Slide the mounts into place between the guides, oriented to match the apertures in the holder. Stop when the slide comes into contact with the base of the clips.

Mount guides

Thumbnails are displayed in the thumbnail drawer in the scan window in the order shown below.

Direction of insertion
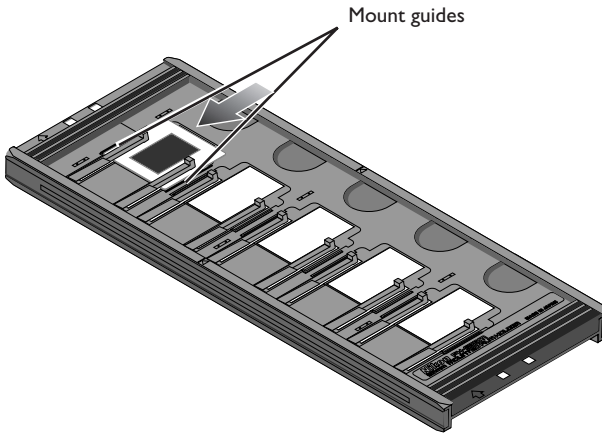
☑ **Cautions**

Mounts must be 1.0–3.2 mm in thickness. Other mounts can not be used.

Do not use force when inserting slides. Failure to observe this precaution could damage the clips that hold the mounts in place. Should you encounter resistance, try inserting the slides at a slight angle.

Be sure to insert slides between the guides. The scanner may not be able to adjust focus correctly if slides are placed on top of the guides. Inserting the slides on top of the guides could also damage the clips that hold the mounts in place.

Do not leave slides in the holder for extended periods. Failure to observe this precaution could deform the clips that hold the slides in place.

To avoid damaging the film, use a blower to remove dust and lint from the film and holder. Leaving dust, lint, or other foreign objects on the film or holder during scanning could result in reduced image quality or in damage to the film.

Once scanning is complete, press the eject button on the front of the scanner or click the eject button in the scan window to eject the holder. Remove the holder and close the sliding cover.

Eject button

Sliding cover

Removing Slides from the Holder
Slide the mounts out from under the clips that hold them in place.
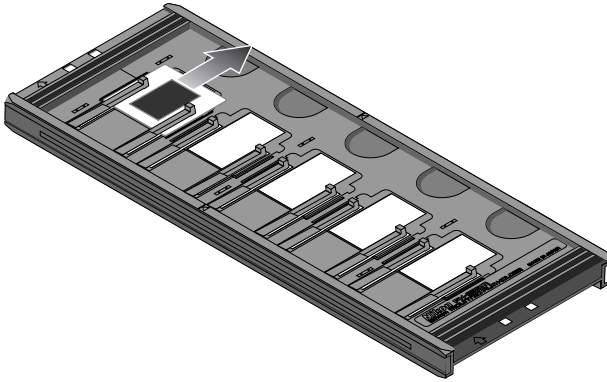
✅ **Cautions**

Do not use force when removing the slides. Failure to observe this precaution could result in damage to the clips that hold the slides in place. Do not lift the slides up until they have been fully removed from the clips.

Using the FH-869S Holder for Brownie Film

The FH-835M is used when scanning medium-format (120/220) or 59 mm × 82 mm film for electron microscopes. The number of frames that can be scanned depends on the type of film:

6 × 4.5:   up to four frames

6 × 9:   up to three frames

6 × 7–6 × 9: up to two frames

Insert your fingers in the depressions and unlatch the hooks, then open the upper holders.
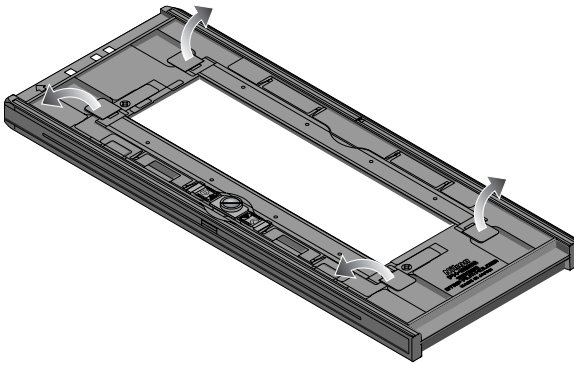
✓ Cautions

Use only one type of film at a time. Do not place negative and positive film in the holder at the same time.

Be sure to place the end of the film against the stop. Leaving a gap between the film and the stop could interfere with accurate color reproduction.

To avoid damaging the film, use a blower to remove dust and lint from the film and holder. Leaving dust, lint, or other foreign objects on the film or holder during scanning could result in reduced image quality or in damage to the film.

Insert the film with the matte emulsion surface down (the shiny surface up), with the end of the film against the stop, then lower the upper holders until they click into place.
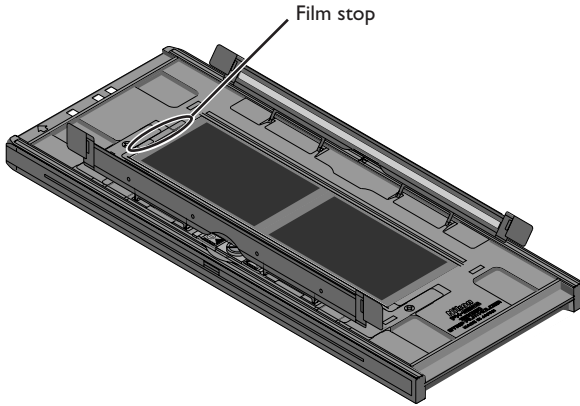
Film stop

Thumbnails are displayed in the thumbnail drawer in the scan window in the order shown below.

1

2

Direction of insertion
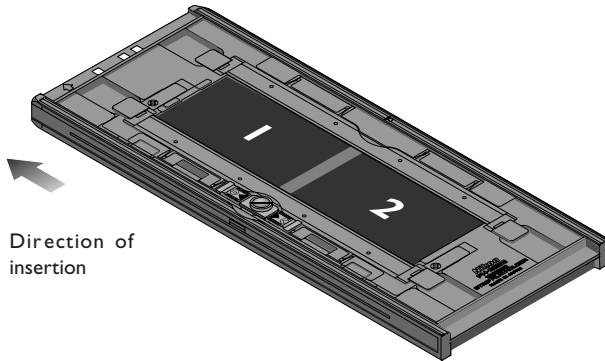
☝ **Curled Film**

Follow the steps below to remove curl from medium-format film.

1. Slide the latch in the direction indicated by the arrow.

Latch
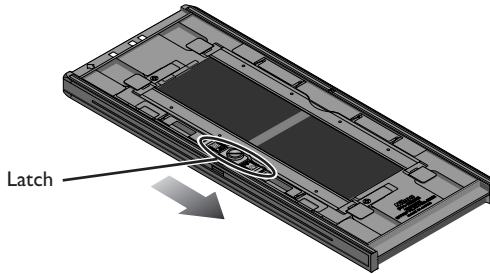
2. Slide the movable base outwards by pushing the grips lightly with your fingers to remove curl from the film. Do not apply excessive force, as this could push the film out of alignment (to prevent this, press the upper holder slightly downwards before sliding it outwards).
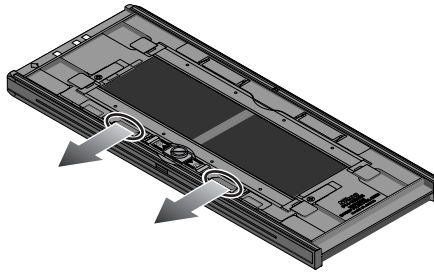
3. After adjusting the position of the movable base, turn the locking screw clockwise to tighten it.
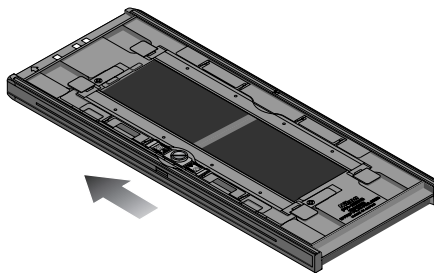
Film that has more than 10 mm of curl can not be used. Use the optional FH-869G glass-covered brownie film holder or optional FH-869GR glass-covered rotating brownie film holder.

Do not leave the film in the holder for extended periods, as it may leave marks in the film.

Once scanning is complete, press the eject button on the front of the scanner or click the eject button in the scan window to eject the holder. Remove the holder and close the sliding cover.
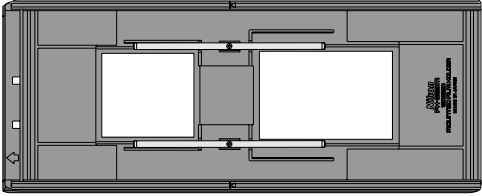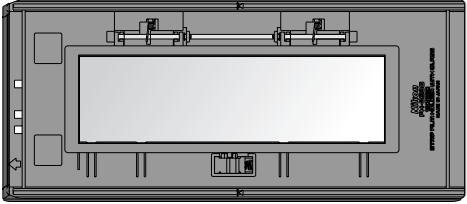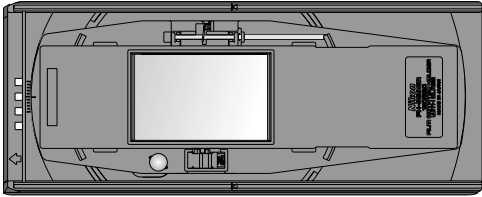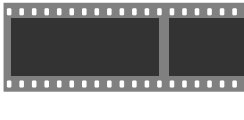

Eject button

Sliding cover
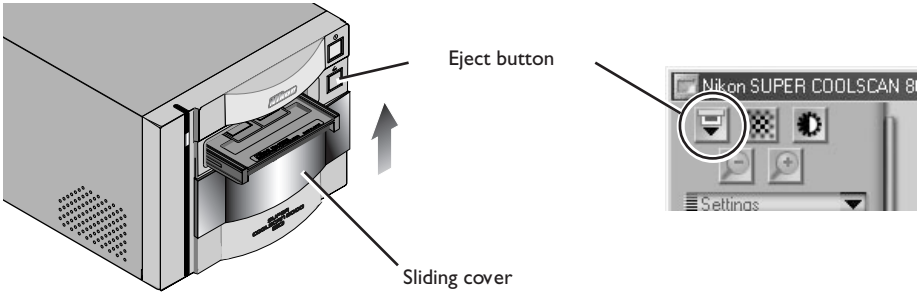
Removing Film from the Holder

Open the upper cover and take hold of the film by the edge at the rear of the holder.
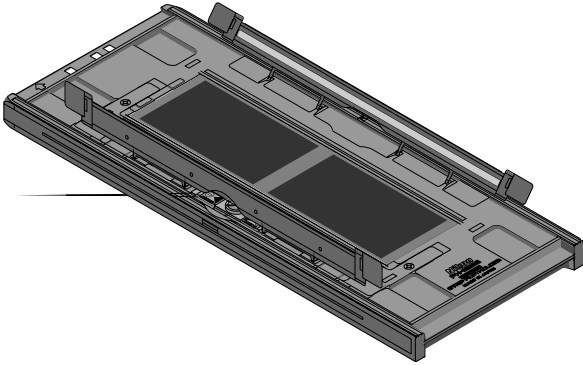
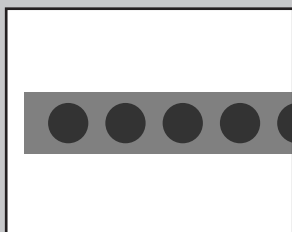## Optional Holders

Five types of holder are available for separate purchase, each for use with a different type of film.
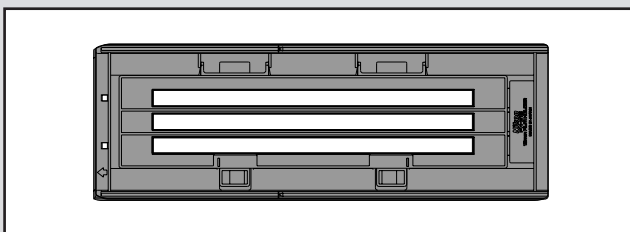
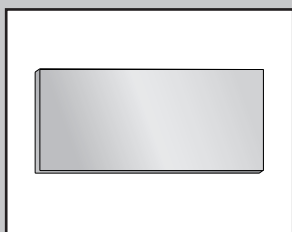| When scanning	Use
Mounted medium-format film	FH-869M holder for mounted Brownie film The FH-869M can be used to scan 6 × 4.5, 6 × 6, 6 × 7, or 6 × 9 slides.
Medium-format film strips	FH-869G glass-covered holder for Brownie film strips The FH-869G can be used to scan strips of medium-format (120/220) film or 59 mm × 82 mm electron microscope film.
Medium-format film strips Panorama film	FH-869GR glass-covered rotating holder for Brownie film The FH-869GR can be used to scan medium-format (120/220) film, 59 mm × 82 mm film for electron microscopes, or frames of panorama film 24 × 58 mm or 24 × 65 mm in size.

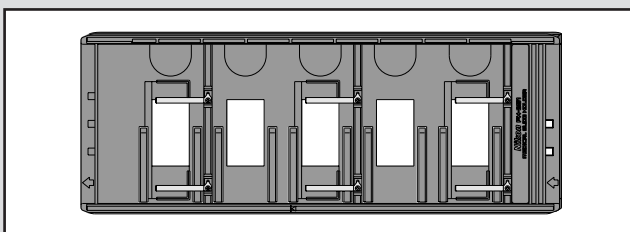| When scanning	Use
16-mm film strips up to twenty frames in length	FH-816 16-mm film holder The FH-816 can be used to scan from one to three strips of 16-mm film up to twenty frames in length
Glass 26 mm × 76 mm micro-scope slides of prepared tissue samples	FH-8G1 medical holder The FH-8G1 can be used to scan up to three prepared glass 26 mm × 76 mm microscope slides

Using the FH-869M Holder for Mounted Brownie Film

The FH-869M is used when scanning mounted medium-format (Brownie) film. It can be used to scan up to two slides, one 6 × 4.5 or 6 × 6, the other 6 × 7, 6 × 8, or 6 × 9. Place the 6 × 4.5 or 6 × 6 slide at the front of the holder, the 6 × 7, 6 × 8, or 6 × 9 slide at the back. Insert the slides with the matte emulsion surface down (the shiny surface up). Slide the mounts into place between the guides, oriented to match the apertures in the holder. Stop when the slide comes into contact with the base of the guides.
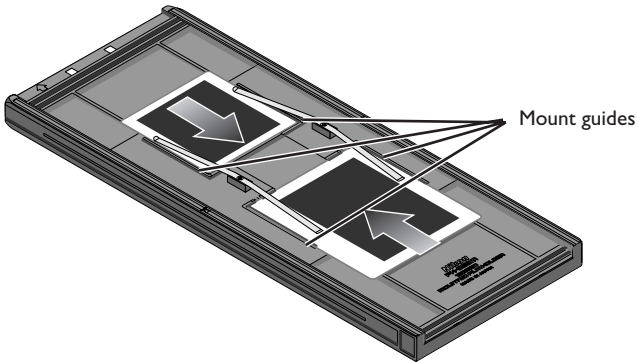
Mount guides

Thumbnails are displayed in the thumbnail drawer in the scan window in the order shown below.

Direction of insertion
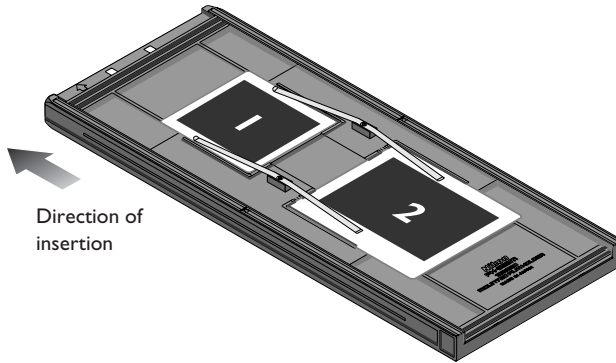
✓ **Cautions**

*Do not place negative and positive film in the holder at the same time.*

To avoid damaging the film, use a blower to remove dust and lint from the film and holder. Leaving dust, lint, or other foreign objects on the film or holder during scanning could result in reduced image quality or in damage to the film.

Mounts must be 1.0–3.2 mm in thickness. Other mounts can not be used.

Do not use force when inserting slides. Failure to observe this precaution could damage the clips that hold the mounts in place. Should you encounter resistance, try inserting the slides at a slight angle.

Be sure to insert slides between the guides. The scanner may not be able to adjust focus correctly if slides are placed on top of the guides. Inserting the slides on top of the guides could also damage the clips that hold the mounts in place.

Once scanning is complete, press the eject button on the front of the scanner or click the eject button in the scan window to eject the holder. Remove the holder and close the sliding cover.

Eject button

Sliding cover
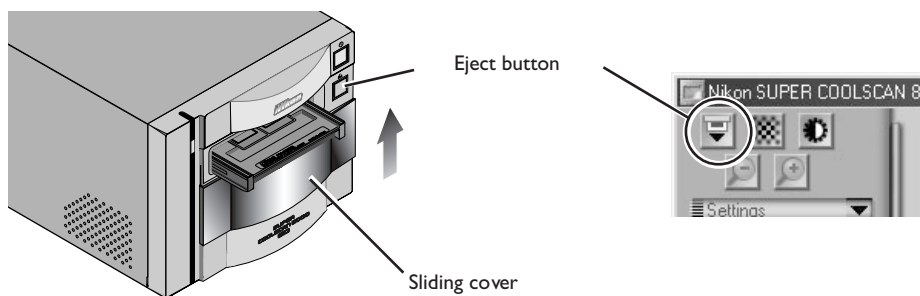
Removing Slides from the Holder
Slide the mounts out from under the clips that hold them in place.
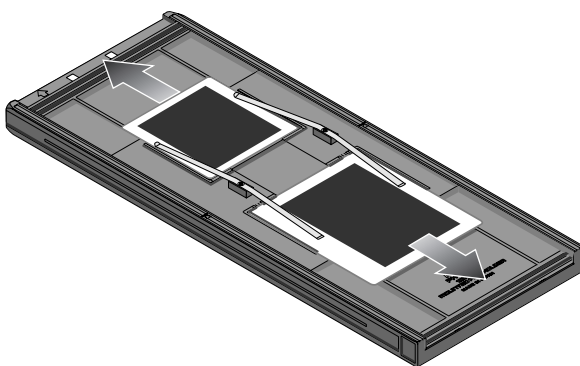
☑ **Cautions**

Do not leave the film in the holder for extended periods, as it may deform the clips that hold the slide mounts in place.

Do not use force when removing slides from the clips. Failure to observe this precaution could result in damage to the clips. Lift the slides up only once they are clear of the clips.

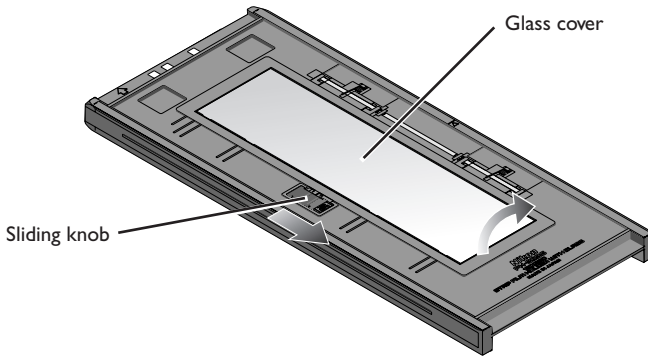## Using the FH-869G Glass-Covered Holder for Brownie Film

The FH-835G is used when scanning medium-format (120/220) or 59 mm × 82 mm film for electron microscopes. The number of frames that can be scanned depends on the type of film:

6 × 4.5:   up to four frames

6 × 6:   up to three frames

6 × 7–6 × 9: up to two frames

Slide the knob in the direction shown below and open the glass cover.

Glass cover

Sliding knob

✓ Cautions

Use only one type of film at a time. Do not place negative and positive film in the holder at the same time.

Be sure to align the end of the film with the film line on the holder. Leaving a gap between the film and the line could interfere with accurate color reproduction.

Multiple single-frame strips of film can be inserted in the holder at the same time, but be sure not to mix positive and negative film.

The glass in the lower portion of the holder has been treated to prevent interference. Avoid leaving fingerprints or other stains on the glass.

To avoid damaging the film, use a blower to remove dust and lint from the film and holder. Leaving dust, lint, or other foreign objects on the film or holder during scanning could result in reduced image quality or in damage to the film.

A "Newton ring" interference pattern may appear when scanning film that has been folded or otherwise deformed. This can be prevented by placing a masking sheet under the film.

✐ Masking Sheets

Newton's rings (a radial interference pattern), may appear when scanning film that has been bent out of shape or otherwise distorted. In these cases, attach seals to the matte emulsion side of the film, between each pair of images, with the exception of the first and second pair. Set the film on top of the masking sheet with the matte emulsion side face down. (Shiny side face up). Seals may be reused.
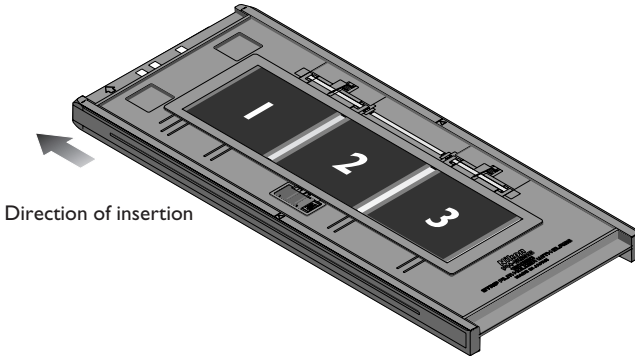
Film

Seals

Masking sheet
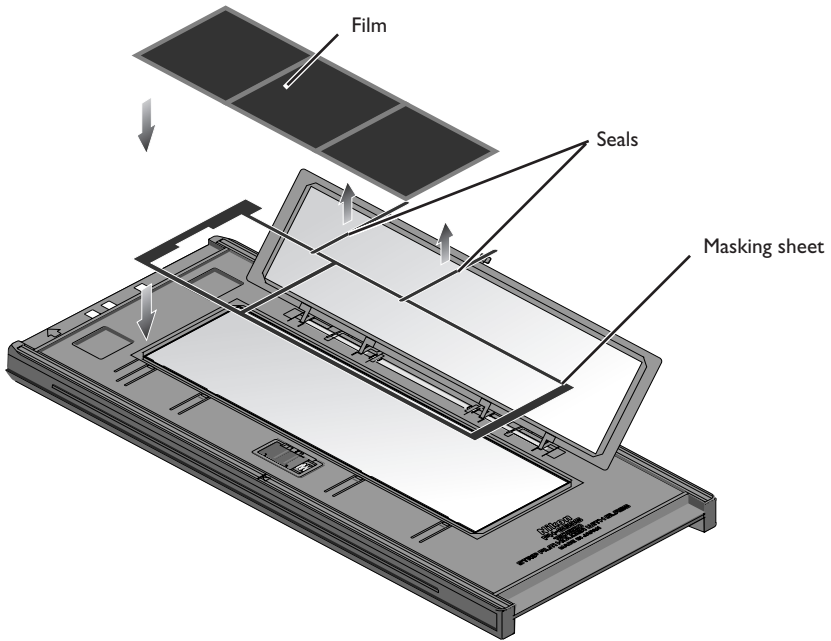
Place the film to be scanned between the film guides with the matte emulsion surface down (the shiny surface up) and the end of the film aligned with the film line.

Film guides

Film line
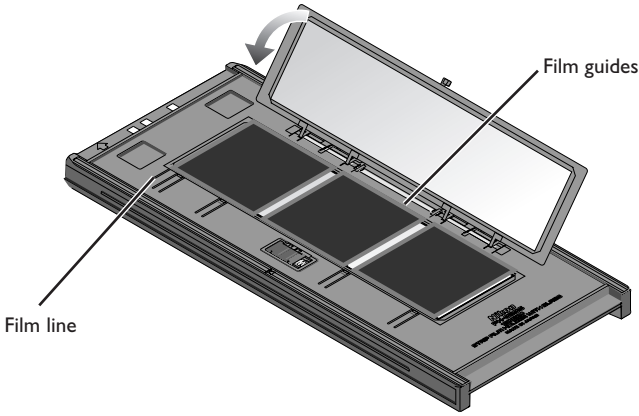
Close the cover so that the latches click into place.

Thumbnails are displayed in the thumbnail drawer in the scan window in the order shown below.

Direction of insertion

Once scanning is complete, press the eject button on the front of the scanner or click the eject button in the scan window to eject the holder. Remove the holder and close the sliding cover.

Eject button

Sliding cover
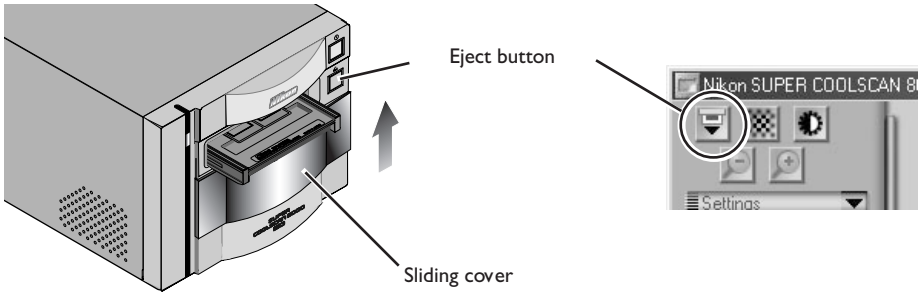
Removing Film from the Holder
Open the glass cover and tilt the holder so that the film slides to the depressions in the lower holder, then insert your fingers in the depressions and remove the film.
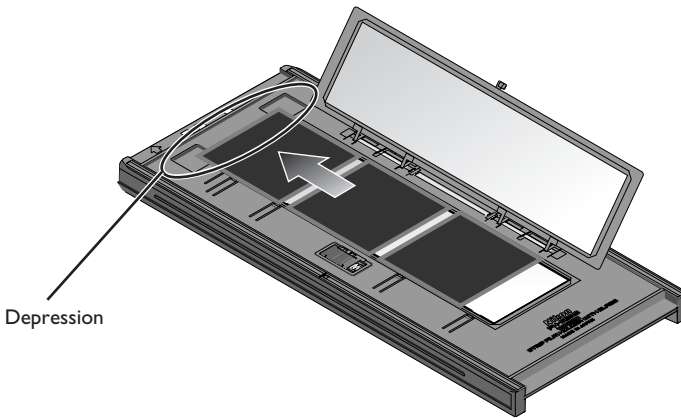
Depression

Using the FH-869GR Glass-Covered Rotating Holder for Brownie Film

The FH-835G is used when scanning medium-format (120/220) film, 59 mm × 82 mm film for electron microscopes, or 24 × 65 panorama film. Film can be adjusted by ±5° to compensate for camera angle. Multi-frame strips can be scanned one frame at a time without cutting the film into strips one frame long.

Slide the knob in the direction shown below and open the upper cover.

Glass cover

Sliding knob
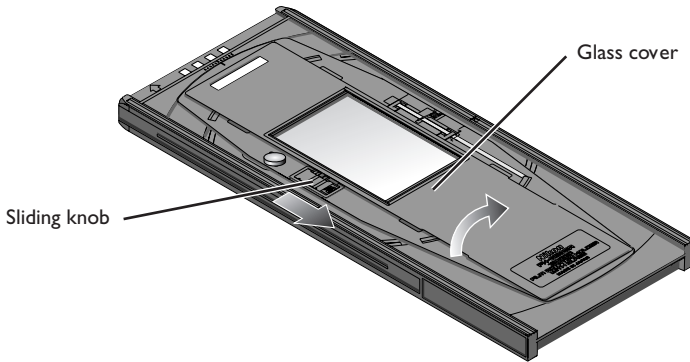
Place a masking sheet appropriate to the size of film to be scanned in the holder, aligning the holes in the masking sheet with the guide pins in the holder. Place the film between the guide rails, with the matte emulsion surface down (shiny side up). Align the frame to be scanned with the aperture in the masking sheet. Close the upper cover so that the latch clicks into place.
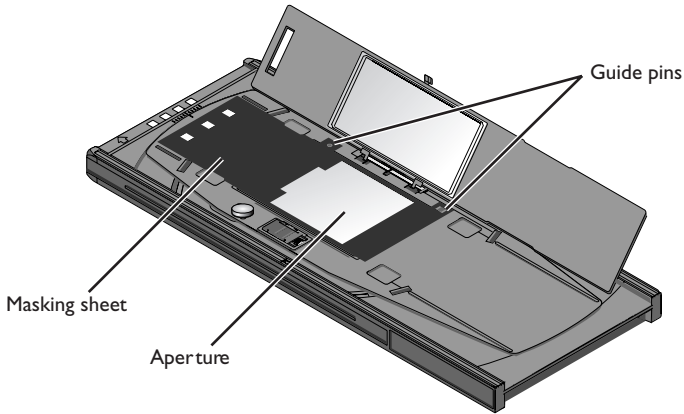

Guide pins
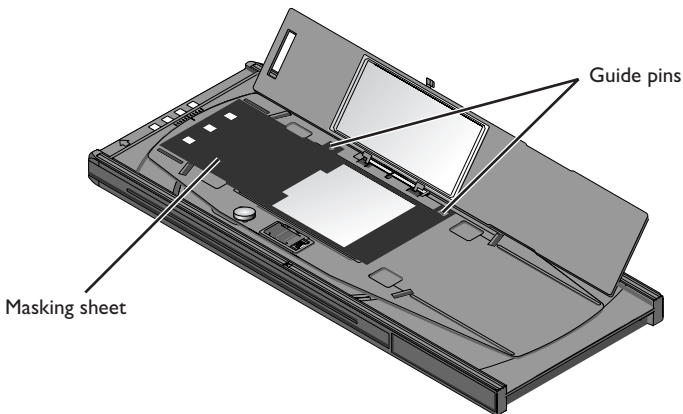
Masking sheet

✐ Masking Sheets

When scanning with the FH-869R, be sure to use a mask suited to the film to be scanned and to align the frame to be scanned with the aperture in the masking sheet.

When using a 59mm by 82 mm electron microscope film, a 6 by 9 masking sheet should be used.

Guide pins

Masking sheet

Aperture

The film angle can be adjusted up to ±5°. Loosen the locking screw by rotating it counter-clockwise and adjust the film angle, using the marks at the front of the holder as a guide (each mark is equivalent to 1°). Once you have adjusted the film to your satisfaction, rotate the locking screw clockwise to tighten it.
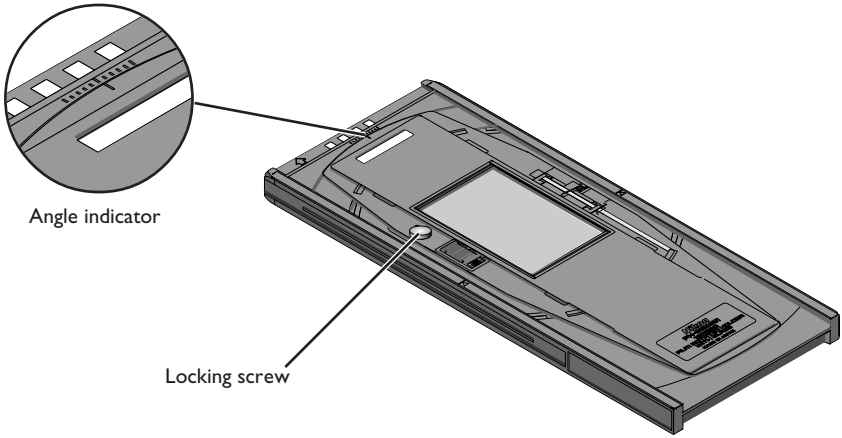

Angle indicator

Locking screw

☑ Cautions

Use only one type of film at a time. Do not place negative and positive film in the holder at the same time.

Use a mask that matches the film scanned. Failure to observe this precaution could interfere with accurate color reproduction.

To avoid damaging the film, use a blower to remove dust and lint from the film and holder. Leaving dust, lint, or other foreign objects on the film or holder during scanning could result in reduced image quality or in damage to the film.

Once scanning is complete, press the eject button on the front of the scanner or click the eject button in the scan window to eject the holder. Remove the holder and close the sliding cover.

Eject button

Sliding cover
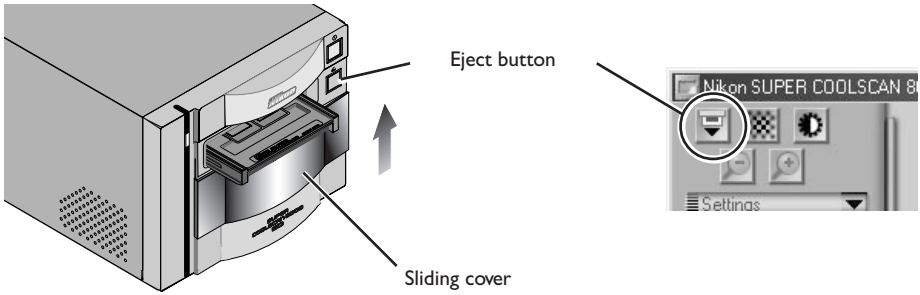
Removing Film from the Holder
Open the glass cover and insert your fingers in the depressions in the lower holder to pick the film up by its edges.


Depressions
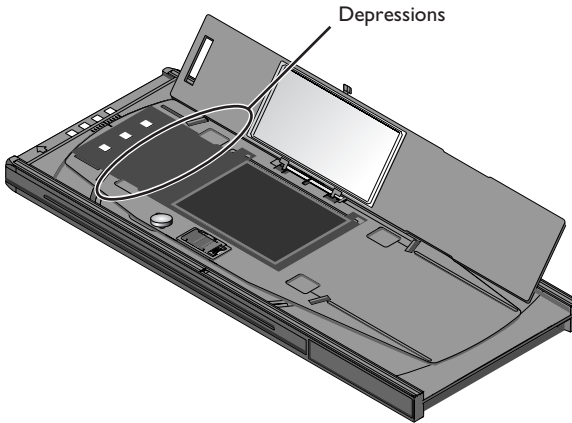
✅ **Caution**

The glass in the lower portion of the holder has been treated to prevent interference. Avoid leaving fingerprints or other stains on the glass.


Using the FH-816 Holder for 16-mm Film Strips

The FH-835S is used when scanning strips of 16-mm film up to twenty frames in length. Up to three film strips can be placed in the holder at a time.

Insert your fingers into the holes in the lower portion holder to unlatch the hooks holding the upper cover in place, then open the holder.

Upper cover

Hooks (× 2)
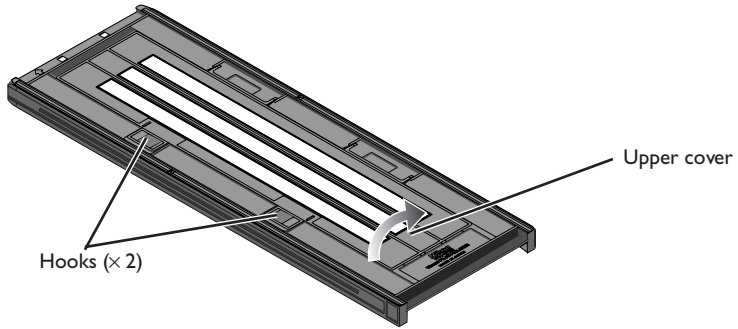
Place the film to be scanned in the holder with the matte emulsion surface down (the shiny surface up) and the frames aligned with the apertures in the lower portion of the holder. Close the upper cover so that the latches click into place.
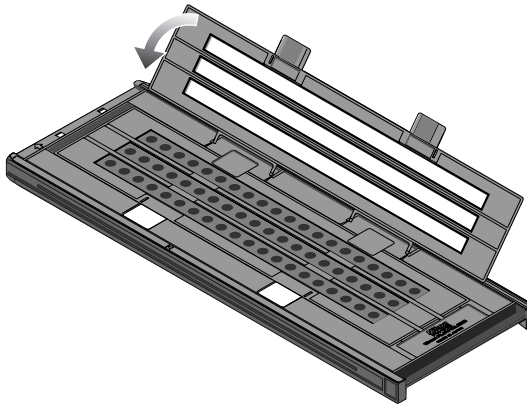

✔ Cautions

Use only one type of film at a time. Do not place negative and positive film in the holder at the same time.

To avoid damaging the film, use a blower to remove dust and lint from the film and holder. Leaving dust, lint, or other foreign objects on the film or holder during scanning could result in reduced image quality or in damage to the film.

🖉 Masking Sheets

When scanning film one or two strips at a time, be sure to cover the remaining apertures with a masking sheet.
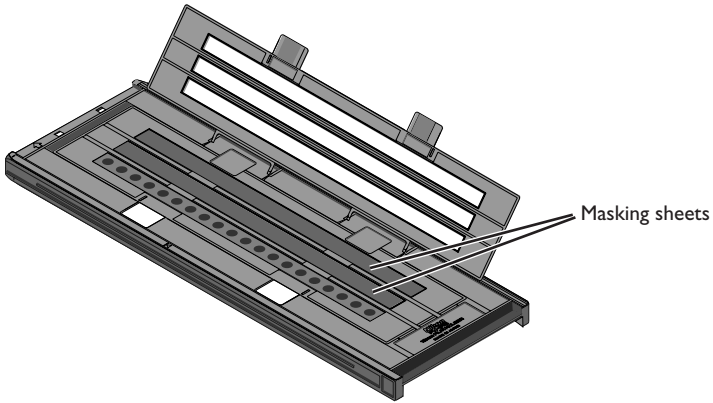

Masking sheets

When scanning two or three strips of different lengths, cover any open apertures by cutting a masking sheet into the appropriate lengths and placing it over the apertures. Leaving apertures open when scanning film of different lengths can interfere with accurate color reproduction.
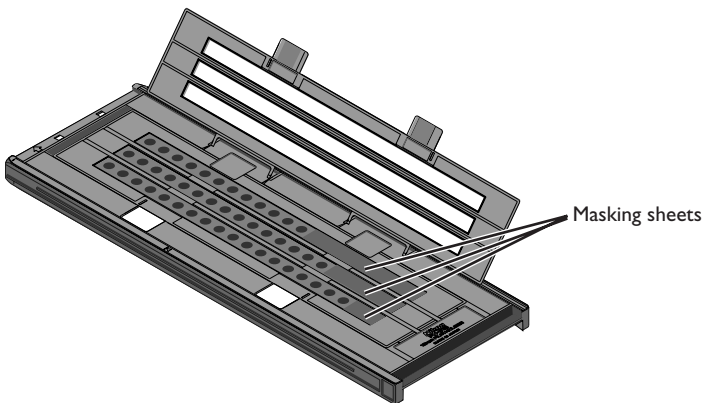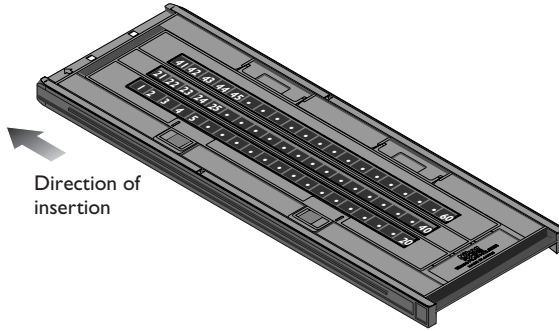

Masking sheets

When scanning three film strips containing less than twenty frames but of equal length, place the film so that it covers the apertures at the end of the holder that will be inserted in the scanner.

Direction of insertion
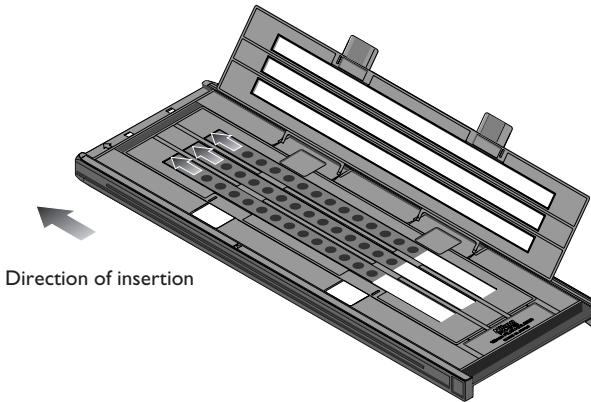
Leaving the apertures at the end of the holder that will be inserted in the scanner uncovered can interfere with accurate color reproduction.

Thumbnails are displayed in the thumbnail drawer in the scan window in the order shown below.

Direction of insertion

Once scanning is complete, press the eject button on the front of the scanner or click the eject button in the scan window to eject the holder. Remove the holder and close the sliding cover.

Eject button

Sliding cover

Removing Film from the Holder

Open the holder as described above and remove the film. Insert your fingers in the holes in the lower holder and pick the film up by its edges. If the edges of the film are not accessible, tilt the holder so that the film slides to the edge of the depression at the end of the lower holder.

Depression
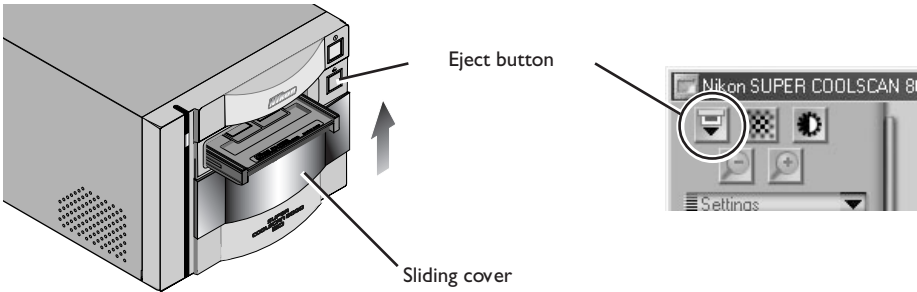
Holes
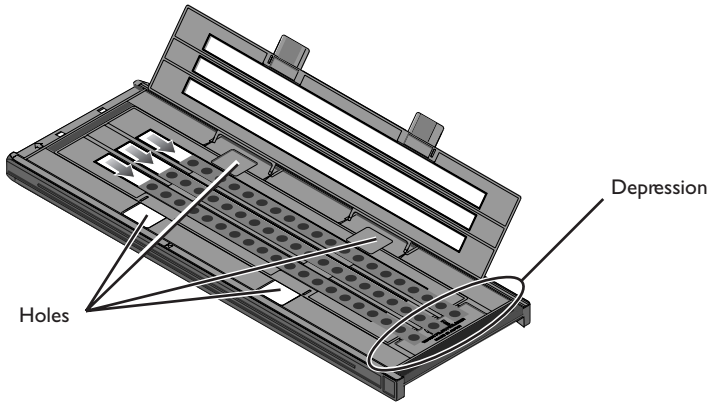
Using the FH-8G1 Medical Holder

The FH-835M is used when scanning 26 mm × 76 mm glass microscope slides containing prepared tissue samples. Up to three slides can be placed in the holder at a time. Slides must conform to the following specifications:

Total thickness: 2 mm or less

Dimensions (slide):   width 26 mm, length 76 mm, thickness 0.8–1.5 mm

Dimensions (cover): width 25 mm or less, length 60 mm or less, thickness 0.18 mm or less

Insert the slides under the clips. Slides should be inserted between the guides, with the cover facing upwards. Stop when the slide comes into contact with the base of the clips.
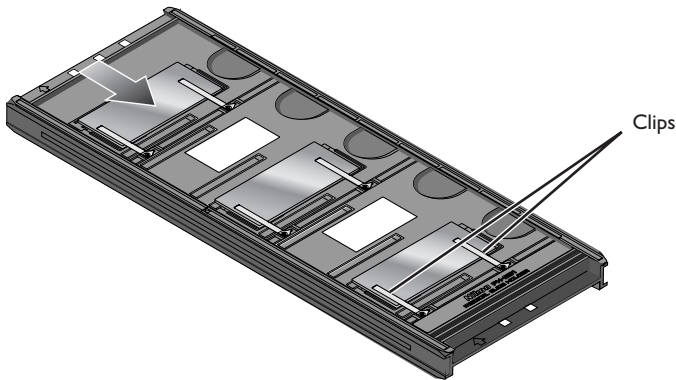
Clips

☑ **Cautions**

Do not use force when inserting slides. Failure to observe this precaution could damage the clips that hold the mounts in place. Should you encounter resistance, try inserting the slides at a slight angle.

Be sure to insert slides between the guides. The scanner may not be able to adjust focus correctly if slides are placed on top of the guides. Inserting the slides on top of the guides could also damage the clips that hold the mounts in place.

Do not leave the slides in the holder for extended periods, as it may deform the clips that hold the slide mounts in place.

Use a blower to remove dust and lint from the slides and holder. Leaving dust, lint, or other foreign objects on the slides or holder during scanning could result in reduced image quality.

Do not use Digital ICE3 when scanning microscope slides. When Digital ICE3 is used, noise may appear in the preview image or final scan.

The FH-8G1 can also be used to scan mounted 35-mm film. You should not, however, place microscope slides and 35-mm slides in the holder at the same time.

Thumbnails are displayed in the thumbnail drawer in the scan window in the order shown below.


Direction of insertion

Once scanning is complete, press the eject button on the front of the scanner or click the eject button in the scan window to eject the holder. Remove the holder and close the sliding cover.

Eject button

Sliding cover

Nikon SUPER COOLSCAN 8

Settings
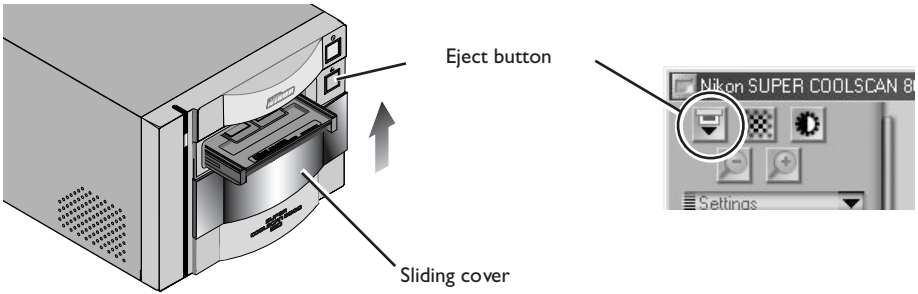
Removing Slides from the Holder
Slide the mounts out from under the clips that hold them in place.
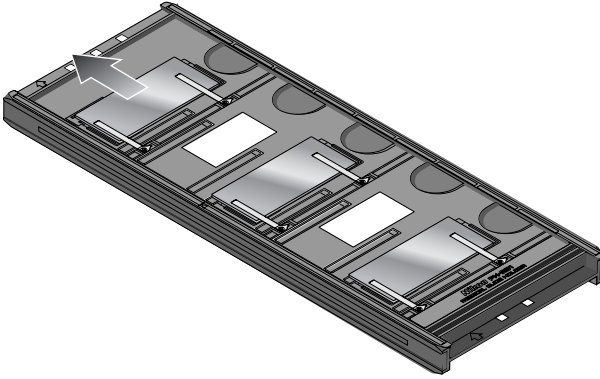
✓ **Cautions**

Do not use force when removing slides from the clips. Failure to observe this precaution could result in damage to the clips. Lift the slides only once they are clear of the clips.

Maintenance

Cleaning, Storage, and Transport

Caring for Your Scanner

Storing the Scanner
When not using the scanner, turn it off, remove any holders from the scanner, and slide the cover closed as shown below.
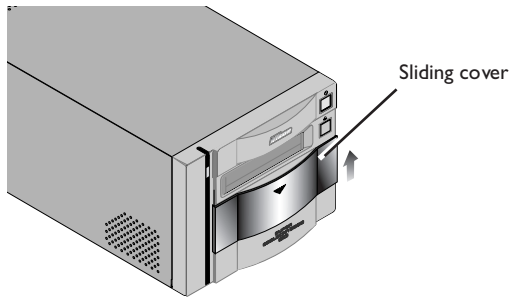

Sliding cover

If you will not be using the scanner for an extended period, turn off and unplug the scanner. Store the scanner where:
• the temperature is between minus twenty and plus sixty degrees Centigrade (–4°F – +140°F)
• the humidity is between twenty and ninety percent (no condensation)

✎ Servicing Your Scanner

Your scanner is a precision machine. We recommend that you take the scanner and holders to an authorized Nikon service representative once every one to two years for inspection, and once every three to five years for servicing (a fee is charged for these services). Frequent inspection and servicing are particularly recommended in the case of scanners used in commercial applications.

✔ Caution

When not using the scanner, close the cover to prevent the accumulation of dust inside the device.

Cleaning the Scanner

Before cleaning the scanner, turn it off and unplug the power cord. The front of the scanner is made of plastic, and consequently cannot be cleaned with volatile cleaners such as alcohol or paint thinner. Use a blower to blow off dust or wipe the surface with a dry cloth. Remove dirt from the metal rear panel of the scanner using a soft, dry cloth. If this is not sufficient to remove all dirt, clean with a cloth that has been slightly dampened with a neutral detergent or liquid soap.

Transporting the Scanner

Follow the steps below to prepare the scanner for transport.

1. Turn the scanner on and remove any holders.

2. Close the sliding cover.

3. Wait for the status LED on the front of the scanner to stop blinking.

4. Turn the scanner off.

5. Disconnect the power and interface cables.

6. Package the scanner in the original packing materials.

☑ **Caution**

Nikon scanners are certified for use in the country or region of sale. Transportation and use outside the country or region of sale are at the user's own risk and responsibility.

☑ **Caution**

Where the original packing materials are not available, package the scanner carefully in materials at least as shock resistant as the originals.

Caring for Holders

Storage
When not using the holders, remove them from the scanner. If you will not be using a holder for an extended period, store it where:

• the temperature is between minus twenty and plus sixty degrees Centigrade (–4°F – +140°F)

• the humidity is between twenty and ninety percent (no condensation)

Cleaning
When cleaning the holder, do not use volatile cleaners such as alcohol or paint thinner. Use a blower to remove dust. Clean dirt from the holder with a soft dry cloth, or dampen the cloth with a neutral detergent to remove particularly stubborn stains, drying once cleaning is complete.

Transport
Package the holder in the original packing materials for transport.

✓ **Caution**

Where the original packing materials are not available, package the holder carefully in materials at least as shock resistant as the originals.

✓ **Caution**

Work with the holder and scanner on a table or other flat, stable surface. The holder or scanner could be damaged should either fall to the floor.

Troubleshooting

What to Do When the Scanner Does Not Function as Expected

Should you encounter problems with your scanner, refer to the following section and the troubleshooting section in the Nikon Scan Reference Manual before consulting your retailer or Nikon representative.

What to Do When the Scanner Will Not Scan

Problem	Possible Cause	👁
The scanner does not turn on (the status LED does not light)	• **The power cable is not properly connected** After confirming that the scanner is off, reconnect the power cable. • **The scanner is off** Turn the scanner on. • **The power supply to scanner has been interrupted** Try plugging a different device into the outlet used by the scanner to determine whether the problem is caused by a failed fuse or circuit breaker.	📖 22 📖 23 –
Holders can not be inserted or removed	• **The sliding cover is not fully open** Slide the cover down until it is fully open.	📖 14
The status LED flashes rapidly (scanner not connected to computer or computer off)	• **A scanner hardware malfunction has occurred** Turn the scanner off and disconnect it from the computer. Wait five seconds, then turn the scanner on again. If the problem persists, contact your retailer or Nikon service representative for advice.	–

Problem	Possible Cause	👁

The status LED flashes rapidly (scanner connected to computer)	• **A connection error or scanner hardware malfunction has occurred**
	Turn the scanner and computer off and disconnect the scanner from the computer. Wait five seconds, then turn the scanner on again. If the status LED flashes rapidly, a hardware malfunction has occurred. Contact your retailer or Nikon service representative for advice. If the status LED blinks slowly at first and then glows steadily, turn the scanner off and reconnect it to your computer, then start your computer and turn the scanner on. If the status LED flashes rapidly after the scanner is reconnected and turned on, there may be a problem with the interface between the scanner and the computer. Try the following measures to resolve the problem:
	   • Disconnect all other devices that use same interface as the scanner
	   • Re-install Nikon Scan
	   • Update the device drivers for IEEE 1394/Firewire interface (Windows only)
	   • Update the device drivers for your scanner (Windows only)
		📖 6
		⊙ 148
		–
		📖 34

The quality of scanned images is poor	• **The film is not properly placed in the holder** Eject the holder and reposition the film. • **The holder was moved during scanning or scanner was subjected to shock or vibration** Do not use the scanner where it will be subject to shock or vibration. Failure to observe this precaution could result in malfunction. • **Settings are improperly adjusted in Nikon Scan** Refer to the Nikon Scan Reference Manual for information on adjusting scanner settings, or try resetting scanner settings to factory defaults. • **The glass in the optional glass-covered holder (available separately) requires cleaning** Remove dust from the glass with a blower and wipe off any stains with a soft cloth.	📖 66 📖 14 ⊙ 88 📖 87

Problem	Possible Cause	👁
	• **The scanner is off** Turn the scanner on.	📖 23
	• **The interface cable is not properly connected** After confirming that the scanner is off, reconnect the cable.	📖 23
	• **The scanner was turned on with a holder inserted** After removing the holder and turn the scanner off and then on again.	📖 22
	• **Another device or program using the same interface conflicts with the scanner or Nikon Scan** Remove all other hardware connected to the same bus as the scanner. If the scanner is connected to a hub, extension cable, or other adapter, disconnect the adapter and connect the scanner directly to the computer. If this does not solve the problem, uninstall other software that uses the same interface and re-install Nikon Scan.	💿 148
Your computer does not recognize the scanner	• **Your computer system does not meet the minimum system requirements** See the Nikon Scan Reference Manual for more information on system requirements.	💿 5
	• **The interface board is not compatible with Nikon Scan** Check the compatibility information provided with your scanner to determine whether the IEEE 1394/Firewire board you are using is compatible with Nikon Scan (if you are using Windows computer with a built-in IEEE 1394 port, check the make and model number of your computer). Updated compatibility information may also be available on the Nikon support web site for your area. If your IEEE 1394/Firewire board is not compatible with Nikon Scan, install the REX-PFW2W IEEE 1394 interface board included with your scanner (desktop computers) or purchase one of the recommended PCMCIA interface cards (laptop computers).	📖 15
	• **The interface board is not correctly installed** Check the documentation for your IEEE 1394 or Firewire interface board.	📖 A-2
	• **The device driver for your scanner is missing or corrupted (Windows only)** Check that the driver is correctly installed	📖 33
	• **Nikon Scan is not correctly installed** Uninstall and re-install the software.	💿 148

Specifications

Scanner Specifications

SUPER COOLSCAN 8000 ED (LS-8000 ED)

Film	• **35-mm film:**	Positive and negative film, both color and monochrome, may be used. Film may be scanned in one or two strips of up to six frames or as 35-mm slides using mounts 1.0–3.2 mm thick. Up to three frames of panorama film with frame sizes of 24×58 mm or 24×65 mm can also be scanned.
	• Medium-format (Brownie) film:	
		Positive or negative, 6×4.5, 6×6, 6×7, 6×8, or 6×9 film may be used, either in strips of four (6×4.5), three (6×6), or two (6×7, 6×8, or 6×9) frames or as mounted slides 1.0–3.2 mm thick.
	• **16-mm film:**	Positive and negative film, both color and monochrome, may be used.
	• Prepared slides:	
		Prepared slides 26×76 mm in size can be scanned.

Aperture and scan range

25.4×37.5 mm, $4{,}000 \times 5{,}904$ pixels (35-mm film scanned using FH-835S)

37.5×25.6 mm, $5{,}095 \times 4{,}032$ pixels (35-mm slides scanned using FH-835M)

56.9×42.5 mm, $8{,}964 \times 6{,}696$ pixels (6×4.5 Brownie film*)

56.9×56.9 mm, $8{,}964 \times 8{,}964$ pixels (6×6 Brownie film*)

56.9×70.0 mm, $8{,}964 \times 11{,}016$ pixels (6×7 Brownie film*)

56.9×77.5 mm, $8{,}964 \times 12{,}204$ pixels (6×8 Brownie film*)

56.9×83.7 mm, $8{,}964 \times 13{,}176$ pixels (6×9 Brownie film*)

56.9×83.7 mm, $8{,}964 \times 13{,}176$ pixels (film for electron microscopes*)

* When scanned using the FH-869S or optional FH-869G

Scanning system	Fixed-optical, movable-media parallel single-pass scanning-system
Light source	Three (R, G, B) LEDs
	Slit (transmitted) light source with rod and disperser
Sensor	10,000-pixel, three-line, monochrome linear CCD image sensor
Color separation	Performed by RGB color LEDs
Optical resolution	Maximum 4,000 pixels per inch

Analog-to-digital (A/D) conversion

14 bits per color (RGB)

Focus	Autofocus

Scanning time   Duration of Scanning on processes

Scanning time when using FH-835M holder for mounted 35-mm slide film			
ICE	ROC	GEM	Scan, single frame
—	—	—	55 s
✔	—	—	1 m 20 s
—	✔	—	1 m 15 s
—	—	✔	2 m 50 s
—	✔	✔	2 m 25 s
✔	✔	—	1 m 35 s
✔	—	✔	3 m 00 s
✔	✔	✔	2 m 40 s

FH-869S holder for Brownie film (6 x 9)			
ICE	ROC	GEM	Scan, single frame
—	—	—	2 m 50 s
✔	—	—	6 m 50 s
—	✔	—	5 m 30 s
—	—	✔	14 m 20 s
—	✔	✔	12 m 15 s
✔	✔	—	9 m 10 s
✔	—	✔	17 m 55 s
✔	✔	✔	15 m 35 s

Computer: FMV715GTX6 (Pentium 4, 1.5 GHz)
RAM: 1 GB
OS: Windows 2000
Interface board: IEEE 1394 interface board provided with scanner
Input resolution: 4000 dpi
Scan bit depth: 8 bit
CMS: On
Media: Positive

Interface   IEEE1394

Power supply   AC 100–240V, 50/60 Hz

Operating environment • **Temperature:** +10 – +35°C (+50 – +95°F)

• **Humidity:**   20–60%

Dimensions   245 × 485 × 200 mm/9.64″ × 19.09″ × 7.87″ (W × D × H)

Holder Specifications

FH-835S Holder for 35-mm Strip Film

Film	One to two strips of 35-mm film containing a maximum of six frames each
Dimensions	130 × 320 × 17 mm/5.12″ × 12.60″ × 0.67″ (W × D × H)
Weight	Approximately 200 g/7.1 oz

FH-835M Holder for 35-mm Slide Mounts

Film	One to five mounted 35 mm slides, 1.0–3.2 mm in thickness and 49.0–50.8 mm in width
Dimensions	130 × 345 × 17 mm/5.12″ × 13.58″ × 0.67″ (W × D × H)
Weight	Approximately 180 g/6.4 oz

FH-869S Holder for Brownie Strip Film

Film	6 × 4.5:	1–4 frames
	6 × 6:	1–3 frames
	6 × 7, 6 × 8, 6 × 9:	1–2 frames
	5.9 × 8.2 cm film for electron microscopes	
Dimensions	130 × 320 × 17 mm/5.12″ × 12.60″ × 0.67″ (W × D × H)	
Weight	Approximately 290 g/10.4 oz	

Specifications for Optional Holders

FH-869G Glass-Covered Holder for Brownie Film

Film	6 × 4.5:	1–4 frames
	6 × 6:	1–3 frames
	6 × 7, 6 × 8, 6 × 9:	1–2 frames
	5.9 × 8.2 cm film for electron microscopes	
Dimensions	130 × 300 × 17 mm/5.12″ × 11.81″ × 0.67″ (W × D × H)	
Weight	Approximately 300 g/10.7 oz	

FH-869GR Glass-Covered Rotating Holder for Brownie Film

Film	6 × 4.5:	1–4 frames
	6 × 6:	1–3 frames
	6 × 7, 6 × 8, 6 × 9:	1–2 frames
	5.9 × 8.2 cm film for electron microscopes	
	35-mm panorama film (frame size 24 × 58.24 or 24 × 65 mm)	
Angle adjustment	±5°	
Dimensions	130 × 320 × 17 mm/5.12″ × 12.60″ × 0.67″ (W × D × H)	
Weight	Approximately 330 g/11.8 oz	

FH-869M Holder for Brownie Slide Mounts

Film	Up to two medium-format mounts, one 6× 4.5 or 6 × 6, the other 6 × 7, 6 × 8, or 6 × 9
Dimensions	130 × 320 × 17 mm/5.12″ × 12.60″ × 0.67″ (W × D × H)
Weight	Approximately 170 g/6.1 oz

FH-816 Holder for 16-mm Film

Film	One to three strips of 16-mm film containing a maximum of twenty frames each
Dimensions	130 × 375 × 17 mm/5.12″ × 14.76″ × 0.67″ (W × D × H)
Weight	Approximately 250 g/8.9 oz

FH-8G1 Medical Holder

Media	Up to three prepared glass microscope slides of the dimensions listed below, totaling no more than 2 mm in thickness including slide glass, cover glass, and cement	
	Slide glass:	26 × 76 × 0.8–1.5 mm/1.02″ × 2.99″ × 0.03″–0.06″ (W × D × H)
	Cover glass:	25 × 60 × 0.18 mm/0.98″ × 2.36″ × 0.01″ or less
Dimensions	130 × 345 × 17 mm/5.12″ × 13.58″ × 0.67″ (W × D × H)	
Weight	Approximately 190 g/6.8 oz	

Appendices

Appendix A describes how to install the IEEE 1394/Firewire interface board provided with your scanner. Appendix B provides instructions for installing the IEEE 1394 update for Windows 98 Second Edition included on the Nikon Scan CD.

Appendix A:
Installing the IEEE 1394/Firewire Interface Board

This section describes how to install the IEEE 1394/Firewire interface board provided with your scanner (for details, see the manual provided with the board).

Do I Need to Install the IEEE 1394/Firewire Interface Board?

You will need to install the IEEE 1394/Firewire interface board provided with the scanner if:
• they are using a Windows or old-model (beige) Macintosh G3 desktop computer not equipped with a built-in IEEE 1394/Firewire interface (check the documentation provided with your computer if you are not sure whether your computer is equipped with an IEEE 1394/Firewire port)
• their existing IEEE 1394/Firewire interface board is not one of the models tested and approved by Nikon (see list provided separately)

The IEEE 1394/Firewire interface board provided with the scanner can not be installed in laptop computers or in computers not equipped with a PCI bus. If your laptop is not equipped with a built-in IEEE 1394/Firewire port, or if your laptop is equipped with a built-in IEEE 1394/Firewire port but is not one of the models listed as being tested and approved by Nikon (see list provided separately), before you will be able to use your scanner you will need to purchase and install one of the IEEE 1394/Firewire PCMCIA interface cards recommended by Nikon.
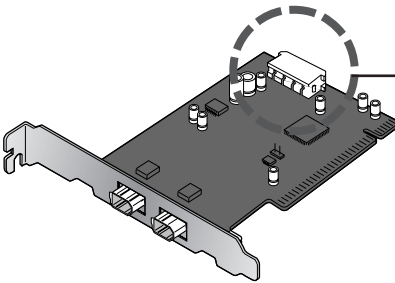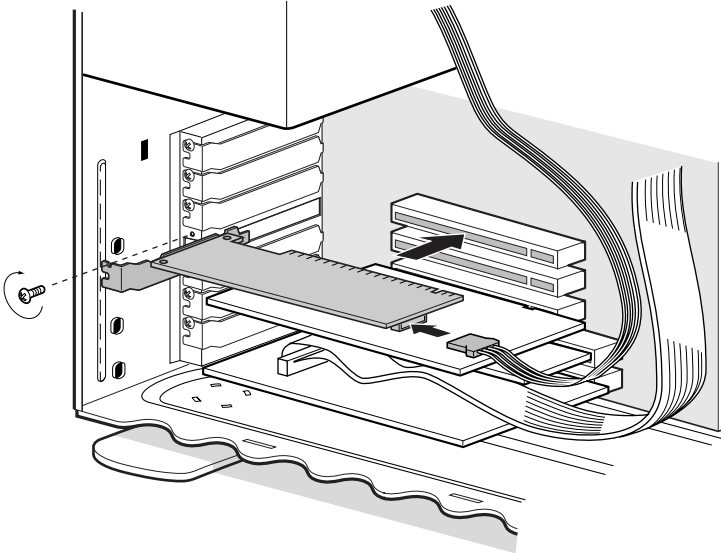
Installing the IEEE 1394/Firewire Interface Board

Installation of the IEEE 1394/Firewire interface board involves the following two steps:

1. Installing the board in your computer's PCI slot

2. Installing the board drivers (Windows only)
    • Users of Windows 98 Second Edition (SE) will need the Nikon Scan 3 CD, and may also require the Windows 98 Second Edition CD-ROM provided with their computer
    • If you are using Windows 2000 and Windows Me, the drivers will be installed automatically

Installing the IEEE 1394/Firewire Interface Board in a PCI Slot

After turning the computer off and disconnecting all cables, insert the interface board in one of the computer's PCI slots as shown below. For information on the location of the PCI slots and on installing PCI boards, see the documentation provided with your computer.

If you will be using the interface board with devices that require power to be supplied by the computer, you will need to connect the board to the computer's power supply. You will not need to connect the power supply if you will only be using the 8000 ED, which receives power from an external source.

Do not use force when installing the interface board. Excessive force could damage the computer or the board.

Installing the Drivers for the IEEE 1394/Firewire Interface Board (Windows Only)

After installing the interface board in a PCI slot, closing the computer's case, and reconnecting the cables, turn the computer on and install the board drivers as described below.

Windows 98 SE

Step 1

The first time the computer is powered on with the board in place, the dialog shown at right will be displayed. Click **Next**.

Step 2

Select **Search for the best driver for your device (Recommended)** and click **Next**.

Step 3

The dialog shown at right will be displayed. After making sure that none of the options are selected, click **Next**.

Step 4
Select **The updated driver (Recommended) NEC Firewarden OHCI Compliant IEEE 1394 Host Controller** and click **Next**.

Step 5
The dialog shown at right will be displayed. Click **Next**.

Step 6
If the Insert Disk dialog is displayed, insert the Windows 98 Second Edition CD into the CD-ROM drive and click **OK**. If the computer displays the message, "The file (file name) on Windows 98 Second Edition CD-ROM could not be found," enter **D:\WIN98** (substitute the drive letter of your CD-ROM drive for "D") in the Copy files from text box and click **OK**.
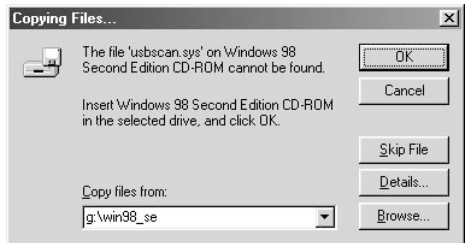
Step 7
The dialog shown at right will be displayed. Click **Finish**. After the installation has been completed, refer to the "Installing the IEEE 1394 Update for Windows 98 Second Edition" (A-8) and install the update program.

Windows 2000

The first time the computer is powered on with the board in place, Windows 2000 will automatically install the board drivers. To confirm that the drivers are installed and functioning normally:

Step 1

Click on the **My Computer** icon with the right mouse button and select **Properties** from the menu that appears.

Step 2

In the System Properties window, open the Hardware tab and click the **Device Manager** button.

Step 3

Check that "NEC Firewarden OHCI Compliant IEEE 1394 Host Controller" appears in the Device Manager under "IEEE 1394 Bus host controllers."

Windows Me

The first time the computer is powered on with the board in place, Windows Me will automatically install the board drivers. To confirm that the drivers are installed and functioning normally:

Step 1

The dialog shown at right will be displayed. Click **Yes** to restart your computer.
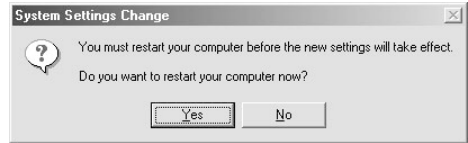
Step 2

Click on the **My Computer** icon with the right mouse button and select **Properties** from the menu that appears.
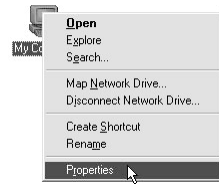
Step 3

In the System Properties window, click the Device Manager tab. Check that "NEC Firewarden OHCI Compliant IEEE 1394 Host Controller" appears in the Device Manager under "1394 Bus Controller."
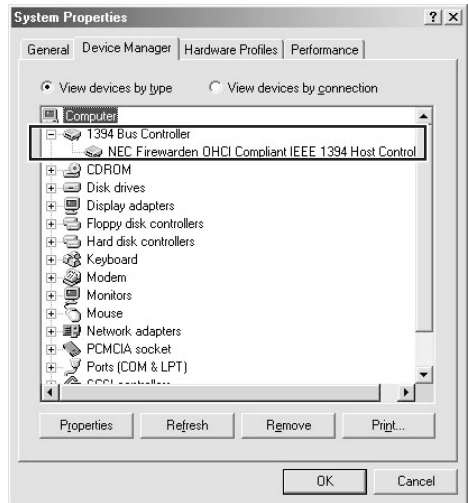
Appendix B: Installing the IEEE 1394 Update for Windows 98 Second Edition

This section describes how to install the IEEE 1394 update required when using the scanner under Windows 98 Second Edition (SE). Macintosh users will not need to perform this update.

Your computer must have at least one IEEE 1394 connector for your new scanner. If your computer does not have this interface, you need to install the interface card that shipped with your scanner. To install the interface card, please refer to the IEEE 1394 interface card manual. This interface card uses the PCI bus interface to communicate with your computer.

Please consult your computer manufacturer's technical support, if your computer is not compatible with the PCI card bus interface.

Installing Updated IEEE 1394 Driver

Step 1
Turn on your computer and insert the Nikon Scan 3.1 CD in the CD-ROM drive.

Step 2
Double click on the **My Computer** icon and open the CD-ROM drive.

Step 3
Next click on the Nikon Scan 3.1 CD with the right mouse button and select **Explore**. When the Microsoft directory opens, double click the 242975USA8(.EXE) file.

Step 4
When the dialog shown at right is displayed, re-move the CD from the CD-ROM drive and then click **Yes** to restart your computer.
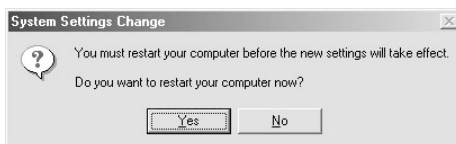

When you insert the Nikon Scan 3.1 CD into the CD-ROM drive, the installer Welcome program may start automatically. Click **Exit** to exit the Welcome program.
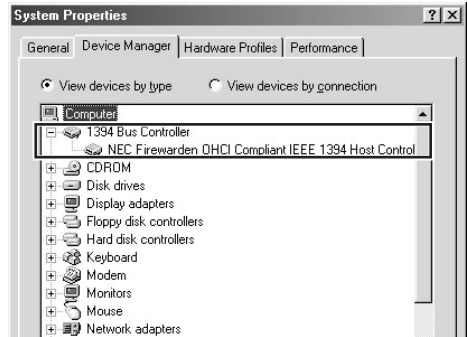
Step 5

Once the computer has restarted, check that the drivers for the interface board have been installed and are functioning normally. Click on the **My Computer** icon with the right mouse button and select **Properties** from the menu that appears.
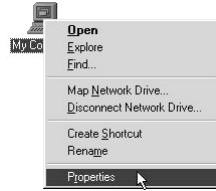
Step 6

In the System Properties window, click the Device Manager tab. Check that "NEC Firewarden OHCI Compliant IEEE 1394 Host Controller" appears in the Device Manager under "1394 Bus Controller."

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