

READ THIS FIRST!

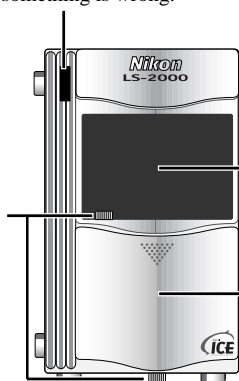
# Nikon LS-2000 35mm Film Scanner

## Fast Track Guide

### Getting Started

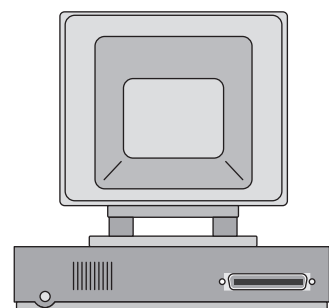
This LED blinks when the scanner is initializing and during a scan. It glows steadily when the scanner is ready. If it flashes rapidly, something is wrong.

There are two locking screws to secure the mechanism during transport. Remove them before use and put them in the holes provided on the rear of the scanner so that you will have them if you need to transport your scanner at a later time.



Don't put anything in this hole except an approved Nikon film adapter.

This cover slides down. Nikon film adapters go in the hole.



Each SCSI device has a unique number. Your computer is probably "0" or "7." CD-ROM drives are often "3." This dial must be set to a number that is not being used by other equipment.

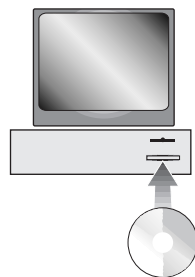
Connect the power cable here

Set this switch to ON if one of the SCSI connectors is left free.

This is where your scanner connects to your computer by a SCSI interface. Use either connector.

Use the other connector if you have other SCSI devices in your system.

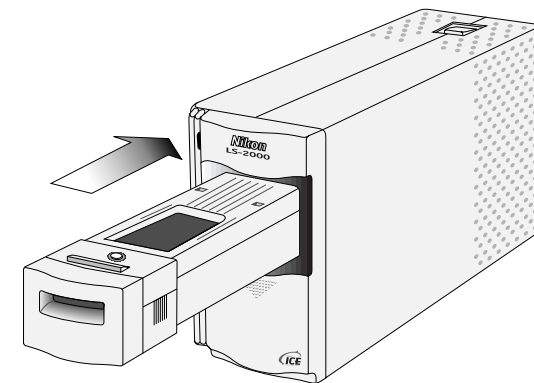
Your scanner needs software to make it work. It may be supplied with Nikon's own software, Nikon Scan. Nikon Scan is available for free download from Nikon's Technical Support web-site at <http://www.nikon-euro.com/support>



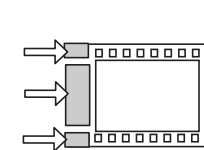
Nikon software will run under Mac OS®, Windows® 95 or Windows NT™.

### About Film

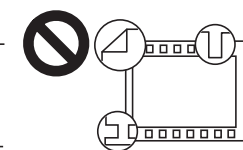
Your Nikon scanner will accept 35mm film in strips or as individual mounts. An adapter for scanning IX240 film is available separately. A multiple slide feeder is also available for up to fifty mounted slides. In total, there are four adapters available for your Nikon scanner. Film adapters are inserted into the scanner as shown. The film adapter can be changed while the scanner is on (hot swap).



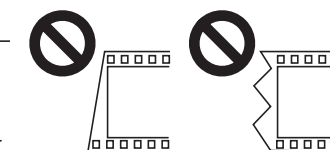
Your film is valuable! Please observe the following precautions when handling film



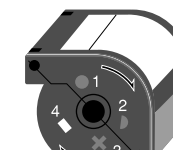
Adhesive tape must be removed



Perforations must not be torn

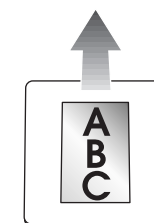


Strip film must be flat and the ends should be cut straight across



IX240 film must be developed and exposed

Slides go in face up, with the short side of the aperture facing the scanner



Film should be free of dust and fingerprints

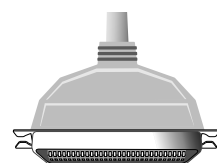
Take out film before switching the scanner off. Remove all film before switching the scanner on.

Wait until the green light glows steadily before inserting or removing adapters or film.

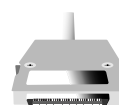
### SCSI

Your scanner uses a standard called SCSI to connect to your computer. Mac OS computers have SCSI built in. Nearly all Windows computers require an expansion card which provides the SCSI interface. In order to ensure maximum reliability, Nikon scanners are tested and approved for use with Adaptec SCSI cards and require ASPI 32-bit software for Windows NT 4.0 (a list of approved adapters is provided separately).

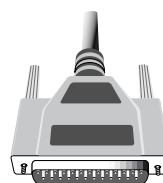
A SCSI connection is a high-speed data link and is vulnerable to disturbance. You must use high-quality cables that are as short as possible. The ends of the SCSI chain must be terminated. Your Nikon scanner has a switch to set termination if it is the last device in your SCSI chain. The other end will probably be your SCSI adapter card, or a hard-disk or CD-ROM drive inside your computer. If you have a SCSI hard disk in your computer, you may need to remove termination from the SCSI card as it will be in the middle of the chain when you connect your scanner.



A Centronics 50-pin SCSI-1 connector

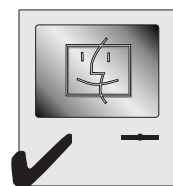


A half-pitch SCSI-2 connector, found on modern high-speed SCSI adapters and your scanner



A DB 25-pin SCSI connector, found on Mac OS computers

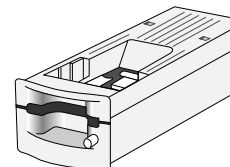
Mac OS computer (built-in SCSI)



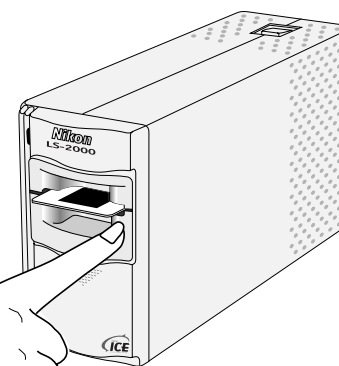
Windows computer (requires SCSI adapter) SCSI adapters must be configured for your system. See the information provided with your SCSI adapter

Your Nikon scanner comes with adapters for mounted slides and strip film. Additional adapters are available for IX240 film and consecutive scanning of slide mounts.

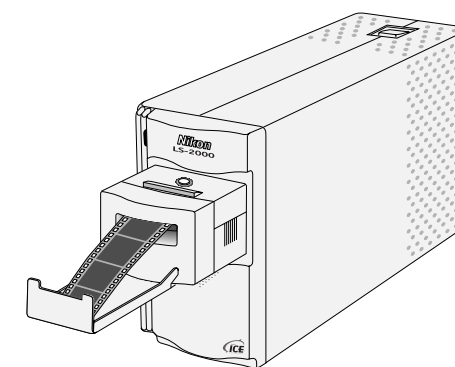
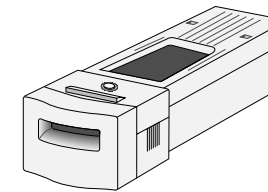
MA-20 adapter for 35mm slide mounts



Insert slides by hand. Press button to eject.

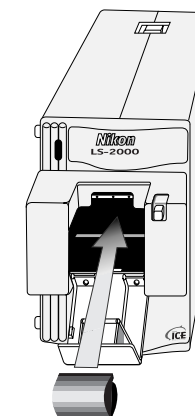


SA-20 35mm strip-film adapter

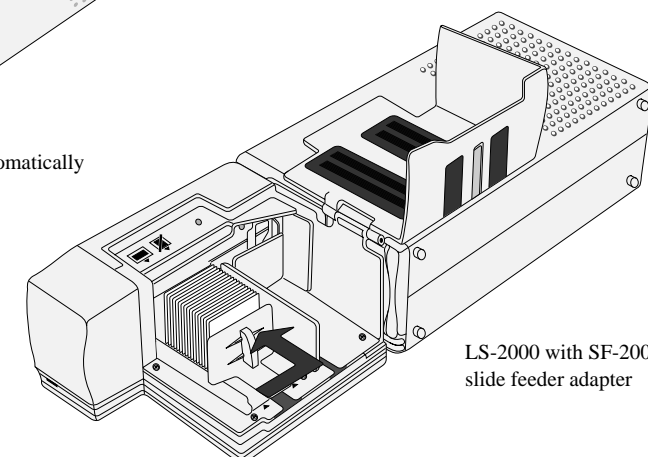


Film will be fed into the adapter automatically when inserted a short distance

IA-20 adapter for IX240 film



Press eject button to open cover. Insert film as shown.



LS-2000 with SF-200 slide feeder adapter

# Nikon Scan

## Fast Track Guide

### Starting Nikon Scan

Click the Nikon Scan icon

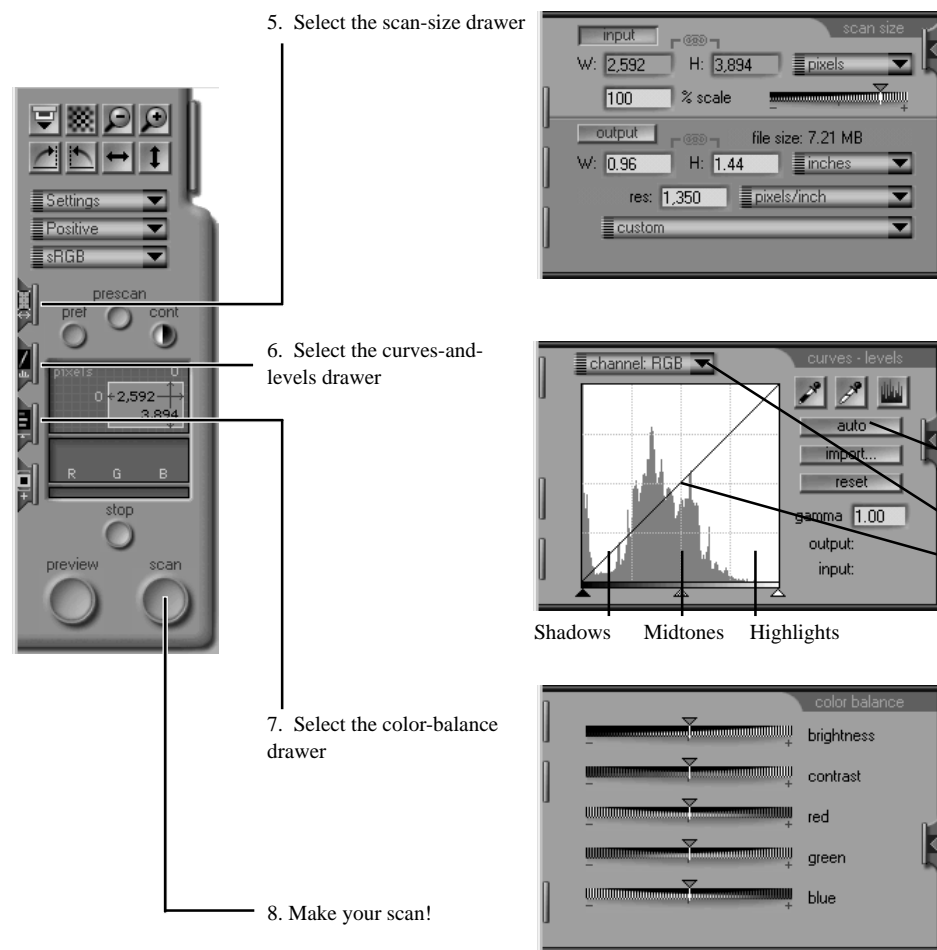
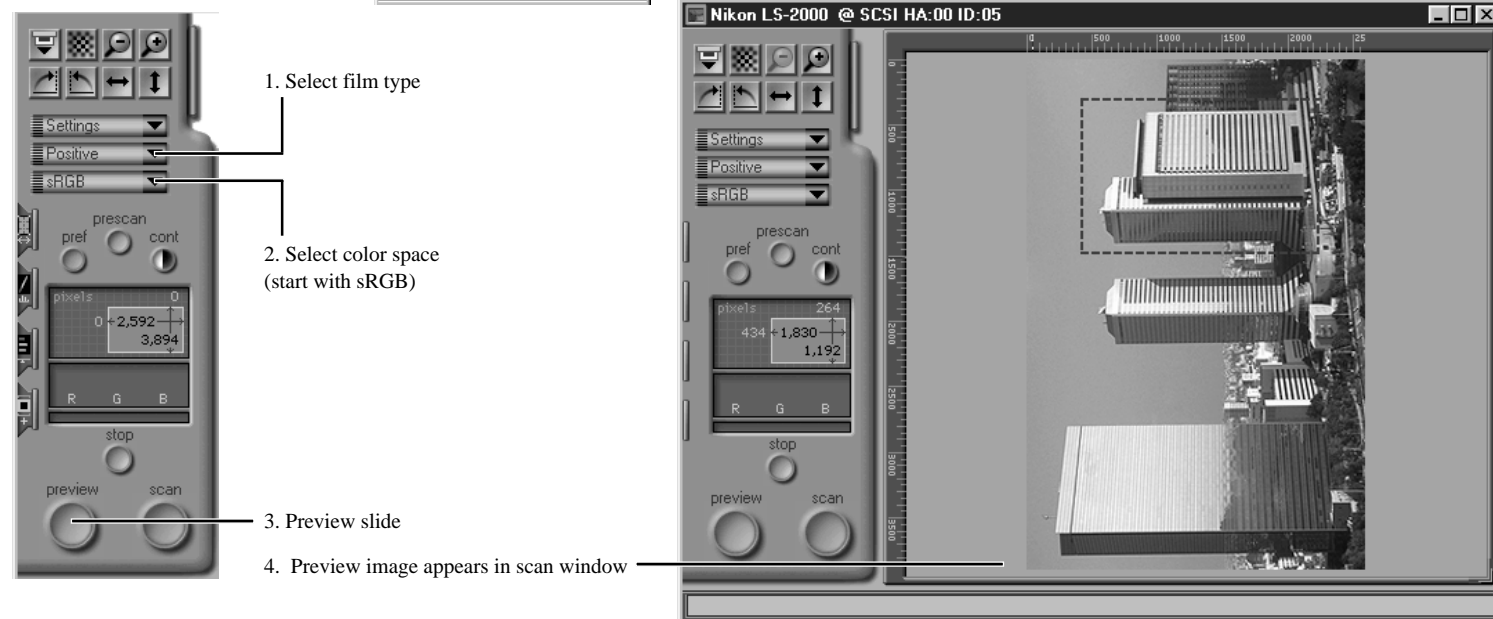


Choose **Open Twain Source** from the **File** menu (Windows) or select the scanner from the **Devices** submenu of the **Nikon Scan** menu (Macintosh)



Don't want to use the Nikon Scan applet?

You can launch the Nikon Scan driver from Photoshop™ or from a TWAIN-compliant PC application (see below, at right).



**The scan-size drawer**  
Use this drawer to control the size and resolution of the scanned image. To scan to a given output size, click the **output** lock button, specify a size (W and H) and output resolution, and drag the mouse over the preview image to define the area to be scanned. For archive and general use, click the **input** lock button and adjust the slider to alter the scale. File size and resolution can be read in the output field. (Hint: enter a new value for **resolution** if the desired file size cannot be obtained using the slider.) Drag the mouse over the preview image to define the area to be scanned.

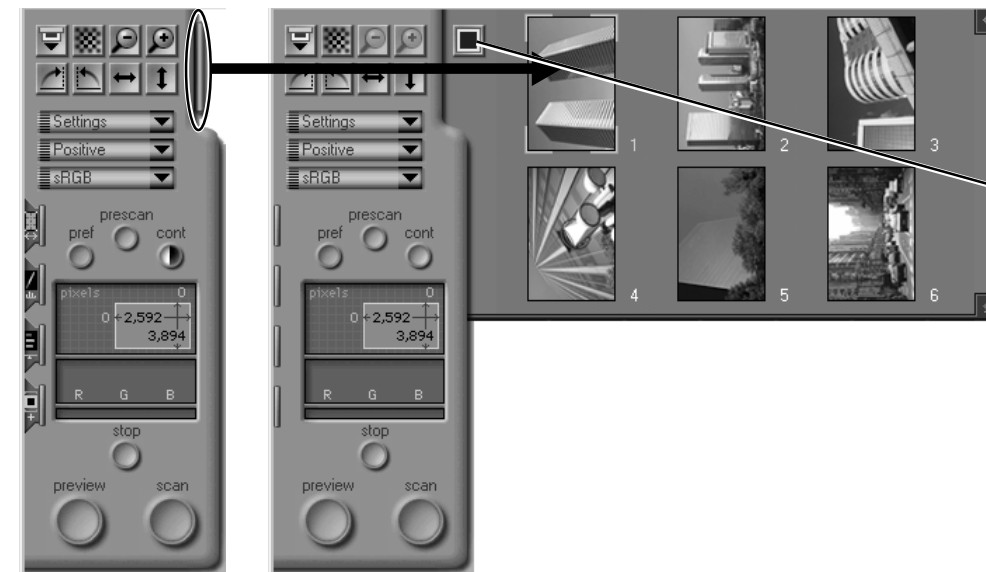
**The curves-and-levels drawer**  
This drawer sets the overall tone range (lightest point to darkest point) and controls color balance within the specified range.

1. Set the darkest and brightest points automatically.
2. Check color balance and contrast in the preview image.
3. Select an individual color, or all colors at once.
4. Click on the line and drag to adjust details of highlights, midtones, and shadows.

**The color-balance drawer**  
This drawer is used to change the overall appearance of the scanned image. The sliders control the brightness, contrast, and general color balance of the image. Experiment with the controls to obtain a pleasing result.

**Putting drawers away**  
All drawers are closed by clicking this button.

### Multiple Images

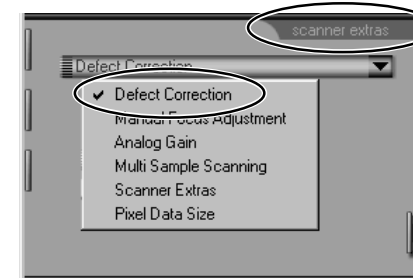


When scanning with the IX240 or film-strip adapters, thumbnail images can be scanned before you commit yourself to a full preview scan.

Click the drawer-tab and the thumbnail drawer appears. To save time, images can be displayed by frame number only. Click here to toggle between thumbnail and frame-number display.

Double-click any thumbnail or frame number to display the image in the preview window.

### Cleaning Images



Use the Defect Correction control to remove surface scratches, dust, and other film defects.

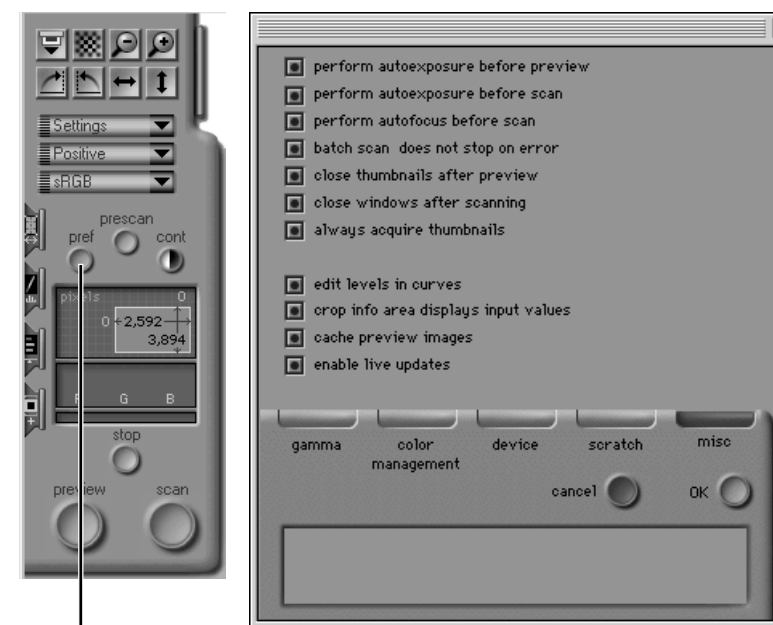
### Auto Focus



The auto-focus control is located at the top of the control panel.

### Preferences

These settings allow you to change the way the scanner operates. You may need to alter them to suit your particular scanning requirements.



The Preferences dialog is accessed from the scan window. Click here to open the Preferences dialog. Refer to the reference manuals for your platform for more details.

### Nikon Scan 2.0—Technical Information

Nikon Scan 2.0 consists of a mini-application ("applet") and a driver. The driver for Windows is a TWAIN source, the driver for the Macintosh an Adobe® Photoshop™ plug-in.

During the pre-scan and scanning phases of operation, the driver controls all scanner functions, including color balance, scan size, and focus. After scanning, the driver quits, leaving the image as an image file in a window in the host application. It is therefore not necessary to save the file using a scanning application and open it in a graphics application; the image is delivered directly to the host.

If you prefer not to use the Nikon Scan mini-application to launch the driver, you can launch the driver from any TWAIN-compliant application (under Windows) or from applications that support Photoshop-compatible plug-ins (Macintosh).

#### Windows Users

The term TWAIN applies to a program which can be run within another host application to control an imaging device. TWAIN programs are called "TWAIN sources." The host application is able to choose an installed TWAIN source as a means of connecting to a particular scanner, digital camera, or other TWAIN-controlled device.

If Nikon Scan is your only TWAIN source, it will automatically be available to your TWAIN-compliant imaging applications. If you have more than one TWAIN source, before launching the TWAIN driver (usually through the menu sequence **File:Acquire (or Import):TWAIN**) you will have to select it as the default TWAIN source, usually through the **File** or **Preferences** menu of the host application.

#### Mac OS Users

A Photoshop plug-in is a software program used by Photoshop or compatible applications to extend the functionality of the original application. In the case of imaging devices, this means allowing the application to communicate with a scanner and acquire images. In order for the Nikon Scan Photoshop plug-in to appear in the menu **File:Acquire:Nikon Scan**, the Nikon Scan plug-in must be located in the correct folder on your computer. It should be copied to the **Import/Export** folder in the **Plugins** folder of the host application.