

EPSON

COLOR SCANNER

EXPRESSION® 1640XL

Color Graphics Scanner User's Guide

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Welcome



The EPSON Expression® 1640XL is a 42-bit color, large-format professional scanner designed to meet the needs of graphic arts professionals and business graphics users. Using the EPSON® ColorTrue® II Imaging System, it reproduces images with amazingly accurate detail and color. Your scanner can achieve up to 1600 × 3200 dpi hardware

resolution with EPSON's proprietary Micro Step Drive™ technology, and is one of the fastest scanners in its class.

About Your Scanner

Your EPSON Expression 1640XL scanner comes with these features:

- Superior image quality with remarkable 1600 × 3200 dpi hardware resolution
- 42-bit color and 3.6 Dmax optical density
- ⏏ Start button for easy, automated scanning
- Fully automatic and manual focusing control
- USB and SCSI 2 interfaces standard, and IEEE 1394 FireWire® optional
- Optional transparency unit, automatic document feeder, and IEEE 1394 FireWire scanner interface card

About Your Software

The EPSON Expression 1640XL scanner includes these leading-edge applications for professional-quality scans:



EPSON Scan

Exclusive professional-quality scanner driver with powerful features for controlling every aspect of your scan.



Adobe® Photoshop® Elements

Edit your photos with this version of the ultimate imaging application. Add special effects, overlay titles and captions, restore old photos, and add many other creative enhancements to your photographs. For installation instructions, insert the CD-ROM and follow the on-screen instructions.



ArcSoft® Suite

The ArcSoft Suite consists of the following imaging applications:

- ArcSoft Panorama Maker™ seamlessly combines horizontal, vertical or tiled sets of images to create gorgeous panoramic photos.
- ArcSoft PhotoBase™ is a complete multimedia management application for Windows® and Macintosh®. It includes such functions as multimedia previewing, image archiving, batch image processing and full file detailing.
- ArcSoft PhotoStudio® combines simplicity with several features found in high-end graphics programs so that all users, expert and novice, can have the most rewarding digital image editing experience.



MonacoEZcolor™

Simplify the process of color management by creating customized color profiles for your scanner, monitor, and printer with this easy-to-use ICC profiling tool.



LaserSoft® SilverFast® (1640XL Graphic Arts Edition only) Professional color scanning software for use with Adobe Photoshop. This high-end scanning program uses artificial intelligence to produce the finest images available from your scanner. By matching the prescan to the final scanned image, SilverFast ensures accurate, high quality scans. SilverFast also features global and selective color correction, unsharp masking, descreening, and scan to RGB, CMYK, or CIE Lab color spaces.

System Requirements

The minimum system requirements for Windows and Macintosh are listed below. For optimum performance, a faster processor and more memory are recommended. If you're scanning high resolution images, you need more than the minimum available hard disk space.



Color and tone reproduction are subject to the display capability of your computer system, including the video card, monitor, and software. See the documentation for these products for details.

Windows

- An IBM®-compatible PC with a Pentium® processor with one of these operating systems:
 - USB: preinstalled Microsoft Windows 98, Windows 2000, Windows Me, or Windows XP
 - SCSI: preinstalled Windows 98, Windows 2000, Windows Me, or Windows XP
 - FireWire IEEE 1394: preinstalled Windows 2000, Windows Me, or Windows XP and an OHCI-compatible port or card
- 32MB RAM (64MB RAM recommended), 64MB RAM (128 MB RAM recommended) for Windows XP
- 50MB available hard disk space (350MB if all the included software applications are installed)
- CD-ROM drive
- VGA color monitor with 640 × 480 resolution (a color monitor with a resolution of 800 × 600 or higher recommended)
- 8-bit 256-color display adapter card (24-bit display adapter card with millions of colors recommended)

Macintosh

- An Apple® Power Macintosh with one of these operating systems:
 - USB: Macintosh OS X 10.1.4 to 10.2.x, or OS 8.6 to 9.x.
 - SCSI: Macintosh OS X 10.1.4 to 10.2.x, or OS 8.6 to 9.x.
 - FireWire: Macintosh OS X 10.1.4 to 10.2.x, or OS 8.6 to 9.x with FireWire Update 2.1.



Check the Apple web site for any updates for your operating system.

- Macintosh standard (built-in) SCSI or compatible PCI SCSI/SCSI 2 card, or USB interface; for IEEE 1394 FireWire connections, either a built-in IEEE 1394 FireWire port or an IEEE 1394 FireWire PCI card
- 32MB RAM (64MB RAM recommended)
- 50MB available hard disk space
- CD-ROM drive
- VGA color monitor with 640 × 480 screen resolution (a color monitor with a resolution of 800 × 600 or higher recommended)
- 8-bit 256-color display adapter card (24-bit display adapter card with millions of colors recommended)

EPSON Scan supports the Apple ColorSync™ 2.0 color management system and QuickTime™. These extensions are automatically installed during the EPSON Scan installation.

Getting More Information

There are several ways to learn more about your EPSON Expression 1640XL. In addition to the printed materials, help utilities and electronic manuals are available on your computer and CD-ROMs. Here's where to look for help:

- **EPSON Expression 1640XL Reference Guide**
Provides information about scanner maintenance and troubleshooting tips. You must have a web browser (Netscape Navigator® or Microsoft® Internet Explorer, versions 4.0 or later, or Safari™ version 1.0 or later) on your computer to read this guide. See page 7 for instructions on viewing the *Reference Guide*.
- **On-Screen Help**
Most of the applications that come with the scanner include on-screen help. For EPSON Scan, just click a Help button or select **Help** from the menu.
- **Electronic Documents**
Several of the applications that came with your scanner include electronic manuals in Adobe Acrobat® PDF format. The manuals can usually be accessed from the Start menu or product folders. See page 8 for instructions on locating and viewing your Acrobat manuals.

If none of these sources answer your questions, please see “Where To Get Help” on page 71.

Warnings, Cautions, Notes, and Tips

Please follow these guidelines as you read your documentation:



Warnings must be followed carefully to avoid bodily injury.



Cautions must be observed to avoid damage to your equipment.



Notes contain important information about your scanner.



Tips contain additional hints for great scanning.

Reading the Reference Guide

The electronic *EPSON Expression 1640XL Reference Guide* is on your EPSON Expression 1640XL Scanner Software CD-ROM. You need to install it on your hard drive to view it. See the *Start Here* poster for installation instructions.

Opening the Reference Guide

To open the *Reference Guide* in Windows or Macintosh, do the following:

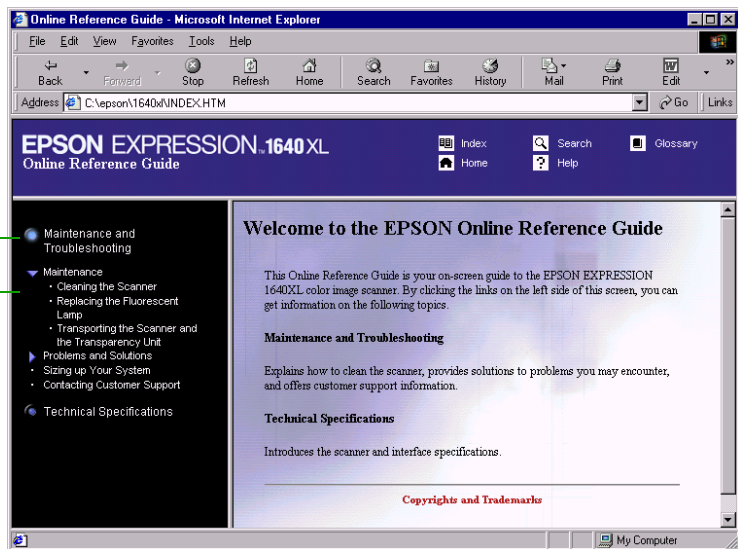
- Double-click the Exp1640XL Reference Guide icon on your desktop.

Using the Reference Guide

To use the *Reference Guide*, click topics on the left to expand the contents. Then click the subtopic you want to view.

Click a topic to expand its contents

Expanded contents list



Viewing the Photoshop Elements Manuals

To view your electronic manual for Photoshop Elements, or any other PDF manuals, you'll use Adobe Acrobat Reader. If Acrobat Reader is not already installed on your computer, you can install it from the Photoshop Elements CD.

To learn about Acrobat Reader, do one of the following:

- For Windows, select **Reader Guide** from the Acrobat Reader Help menu.
- For Macintosh, select **Reader Guide** from the Acrobat Reader Help menu. Then browse to `Help\Enu\Reader.pdf`.

To open the Photoshop Elements PDF manual, do the following:

1. Insert your Adobe Photoshop Elements CD-ROM.
2. For Windows, double-click the **My Computer** icon on your desktop (for Windows XP, click **Start, My Computer**), then right-click the **Elements CD-ROM** icon and click **Explore**. Double-click the **English** folder, then double-click the **User Guide** or **Quick Reference Guide** icon.

For Macintosh, double-click the **Adobe Photoshop Elements CD-ROM** icon on your desktop, double-click the **English** folder, then double-click the **User Guide.pdf** or **Quick Reference Guide.pdf** icon.



Your other software applications may also include PDF manuals. Check the program's folder after you install the software or check its CD-ROM.

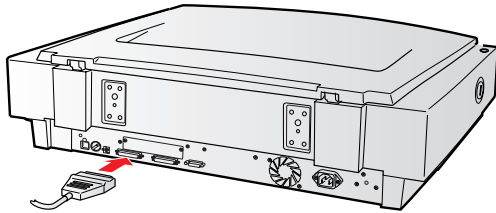
Registering

Please take a minute to complete the electronic registration form when you install your scanner software. Registering enables you to receive special information on options, new products, and software upgrades.

For registration instructions, see the installation procedure for Windows or Macintosh on the *Start Here* poster.

Chapter 1

Using a SCSI Connection



To connect the scanner to a computer using a SCSI interface, follow the instructions in this chapter.

Using a SCSI Connection to the Scanner

SCSI Cables

You can connect the scanner to the computer with a SCSI 2 cable not more than 19.7 feet (6 meters) long. If you're connecting multiple SCSI devices, the total length of the SCSI bus (cables) should not exceed 9.8 feet (3 meters).

Connecting to a SCSI Interface

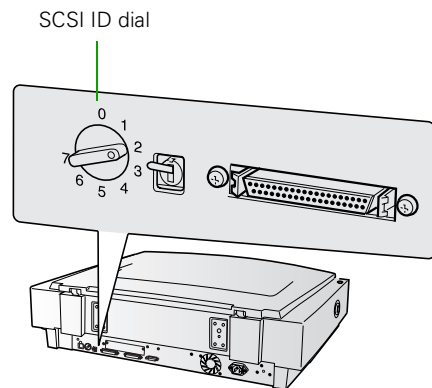
Before you connect the scanner, you must have an ASPI-compliant SCSI 2 interface board installed in your computer (Adaptec® SCSI 2 interface boards are recommended).



Adaptec Power Domain 2940UW and 2940U2W SCSI boards for the Macintosh are designed for hard drives and are not compatible with scanners.

If you purchased a SCSI board as an option for the computer, follow the manufacturer's instructions to install both the board and its driver.

You may also need to change the scanner's SCSI ID setting before you connect it to your computer. If you have another SCSI device that uses SCSI ID 2, turn the scanner off and turn the SCSI ID dial on the back of the scanner to a new number.



Choose a number that doesn't conflict with the ID number of other SCSI devices. Don't use SCSI ID 0, 1, or 7. If your Macintosh has a built-in CD-ROM, don't use SCSI ID 3.

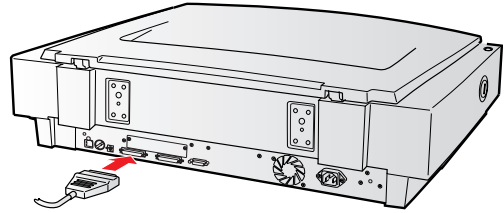
Follow these steps to connect the scanner to a SCSI interface:

1. Make sure the scanner and computer are turned off. (The scanner is off when the **OPERATE** button is out and the **ERROR** and **READY** lights are off.)



Do not connect the scanner to the computer while either is turned on, or the scanner could be damaged.

2. Squeeze the lock releases on the lock connector end of the SCSI cable, and then plug the cable into either SCSI connector on the back of the scanner. The cable is secure when both connector locks snap in.



3. Connect the pin end of the SCSI cable to the SCSI port on the computer, or to another SCSI device in the chain. Tighten the screws to secure the cable.



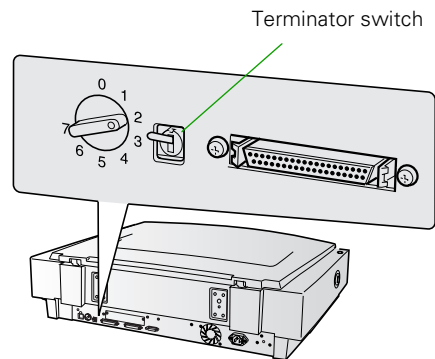
Don't use an external terminator.

4. Locate the SCSI terminator switch at the rear of the scanner.

If the scanner is the only SCSI device, or if it's the last device in a SCSI chain, leave the terminator switch turned **ON**.

If you've connected the scanner in the middle of a SCSI chain, turn the terminator switch **OFF**.

5. Plug in the power cables for the computer, scanner, and other external SCSI devices.




Chapter 2

How To Scan



This chapter gives you an overview of the scanning process and some tips for getting the best scan. It also includes step-by-step instructions for scanning with EPSON Scan.

Follow the instructions here for:

- Placing your document on the scanner's document table
- Starting EPSON Scan
- Scanning with each of the three scanning modes
- Using the Preview window to select the area of your image that you want to scan
- Selecting resolution, resizing images, and scanning color images
- Setting up the scanner's  Start button

Placing Your Original Document

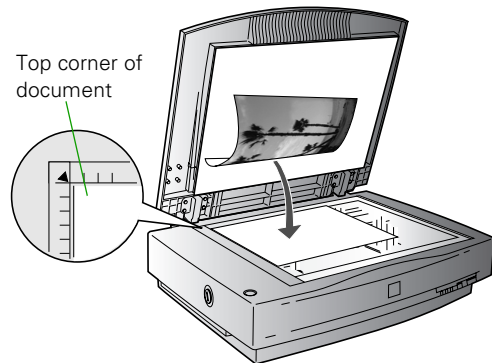
This section explains how to position a photo or single-page document for scanning.

If you're scanning film or slides, see "Using the Film Guides" on page 37 for instructions on placing your transparencies (you must have the transparency unit installed). If you're scanning a multi-page document using the optional automatic document feeder, see "Loading Paper in the Automatic Document Feeder" on page 48.



You can order the transparency unit and automatic document feeder from EPSON. See Chapter 3 for ordering information.

1. Raise the scanner cover and place your document face down on the document table.
2. Align it with the scales along the upper right corner of the document table.
3. Close the document cover slowly. Be careful not to move the document.



If the edges of your document don't scan properly, move it in one-quarter inch from the edges of the document table.

You can remove the document cover if you need to scan a thick item—such as a photo in an album—that doesn't fit under the cover. Simply lift the back of the cover straight up. When you reattach the cover, line the rods up with the positioning holes and lower the cover into place.

Using EPSON Scan

EPSON Scan provides three scanning modes to give you progressive levels of control over your scanned image:

- **Home Mode:** Makes scanning quick and easy. It includes a simple interface, automatic image adjustments, and preset configurations for various types of scans.
- **Office Mode:** Includes a basic interface with practical scan settings designed for documents. Choose either this mode or Professional Mode to scan multi-page documents on the optional automatic document feeder (see page 45). You cannot use this mode to scan film or slides, and it is not recommended for photos.
- **Professional Mode:** Lets you manually configure advanced image settings, including the histogram setting, tone, color depth, balance, saturation, brightness, and contrast.

Starting Your Scan and Choosing a Mode

You can use the import or acquire function of a TWAIN-compliant application such as Adobe Photoshop to scan images directly into your application. Or you can scan to your hard drive by starting EPSON Scan from the Windows Start menu, or the Macintosh Apple menu or Applications folder. You would then open the file in another application to print it or modify it for the screen or World Wide Web.

Follow these steps to start EPSON Scan and choose a scanning mode:

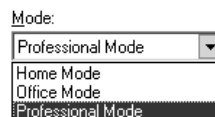
1. Choose the **Import** (or **Acquire**) option in your application and choose **EPSON Expression 1640XL**, or open EPSON Scan as follows:
 - In Windows, click **Start > Programs** or **All Programs > EPSON Scan > EPSON Scan**.
 - In Mac[®] OS X, double-click the **EPSON Scan** icon in your Applications folder.
 - In Mac OS 8.6 to 9.x, click **EPSON Scan** in the Apple menu.



If you have multiple scanners installed, you are prompted to choose your scanner. Click **EPSON Expression 1640XL** and click **OK**.

2. Choose a mode from the Mode list at the top of the EPSON Scan dialog box.

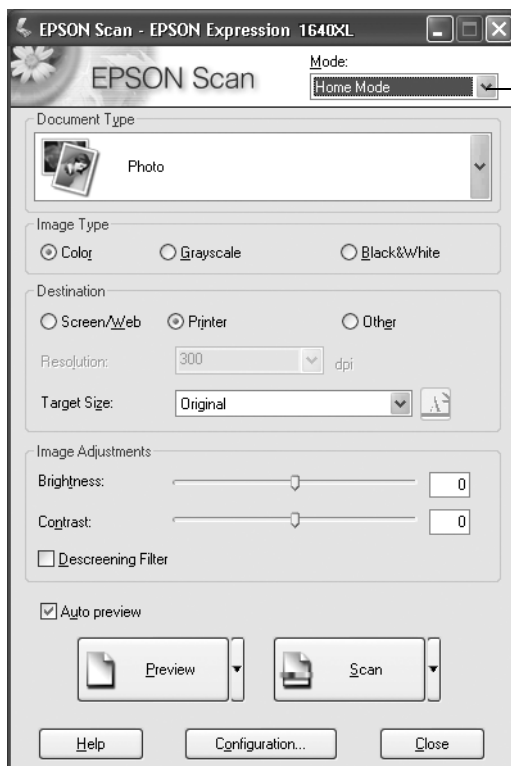
If you choose **Home Mode**, a preview scan opens automatically. (This is the default. If you don't want an automatic preview, deselect **Auto Preview** on the EPSON Scan dialog box.)




3. Continue with the instructions for your mode:
 - “Scanning With EPSON Scan in Home Mode” below
 - “Scanning With EPSON Scan in Office Mode” on page 19
 - “Scanning With EPSON Scan in Professional Mode” on page 21

Scanning With EPSON Scan in Home Mode

1. Start EPSON Scan and choose Home Mode from the Mode menu (see page 15). You see this dialog box:



Select Home Mode

2. If you don't see an automatic preview of your scan, click **Preview**.
3. Click the  Auto Detect button in the Preview window to automatically select your entire photo or document, or click and drag to create a scanning selection area (marquee). For more information on using marquees, see page 25.



If the scanned image in the Preview window has a blue box around it, you're previewing in thumbnail mode and won't be able to create a marquee. Click the arrow beside the **Preview** button in the EPSON Scan dialog box and select **Normal** from the pull-down menu. Then click the **Preview** button to preview in normal mode.

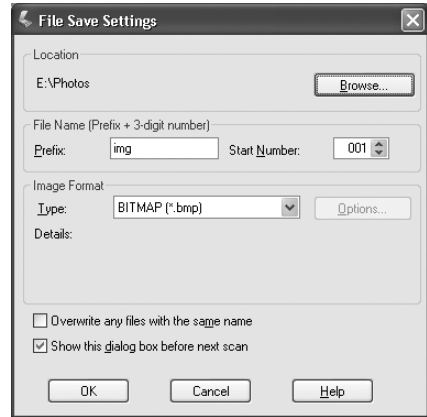
4. Choose a document type from the Document Type list.



If you're scanning film, choose **Color Negative Film**, **B&W Negative Film**, or **Positive Film**. If you're scanning slides, choose **Positive Film**.

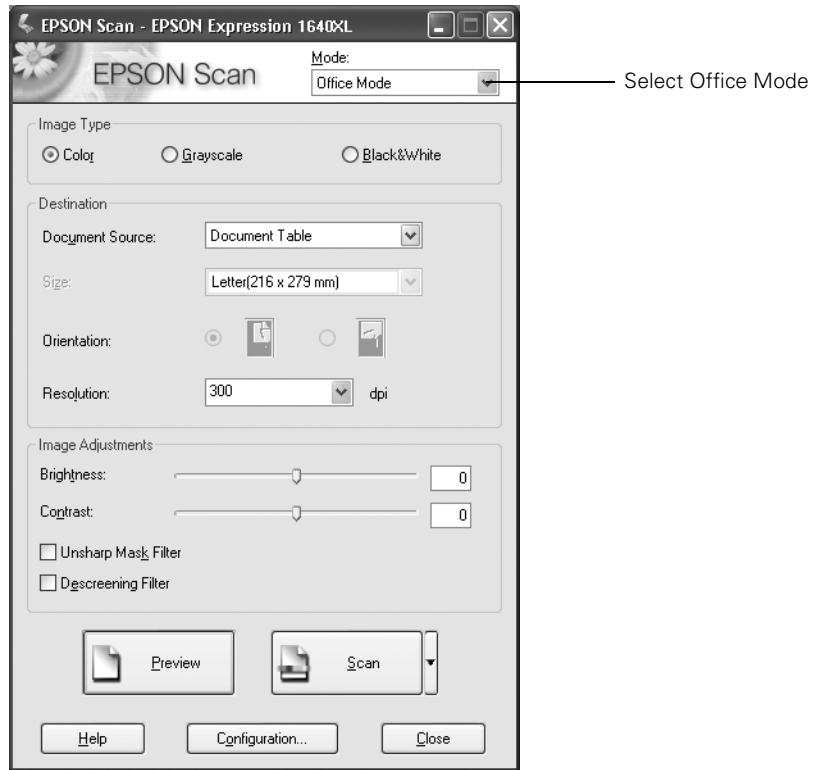
5. Choose an Image Type:
 - **Color** for color photos or documents with color
 - **Grayscale** for black-and-white photos or documents with grayscale images
 - **Black&White** for plain text documents
6. Choose a Destination setting:
 - **Printer** if you're printing the image
 - **Screen/Web** if you will only view your image on the screen
 - **Other** if you're shrinking or enlarging your image. Then choose the target size for your final scanned image.
7. Select a target size if you want to specify any size other than that of the original document.
8. Adjust the Brightness and Contrast settings, if necessary.
9. If you're scanning printed materials, select **Descreening Filter** to reduce the moiré patterns in the image.
10. Click **Scan**.


- If you're scanning from an application, the image opens in your application window. Click **Close** to close the EPSON Scan window.
- If you're scanning to your hard drive, you see a File Save Settings window. Type a name for your file in the Prefix field, then choose an image type and click **OK**. (For more details, see the EPSON Scan on-screen Help.)



Scanning With EPSON Scan in Office Mode

1. Start EPSON Scan and choose **Office Mode** from the Mode menu (see page 15). You see this dialog box:



2. Click **Preview** to see a preview of your scan.
3. Click the  Auto Detect button in the Preview window to automatically select your entire document, or click and drag in the Preview window to create a scanning selection area (marquee). For more information on using marquees, see page 25.
4. Choose an Image Type:
 - **Color** for documents with color
 - **Grayscale** for documents with grayscale images
 - **Black&White** for plain text documents and line art illustrations

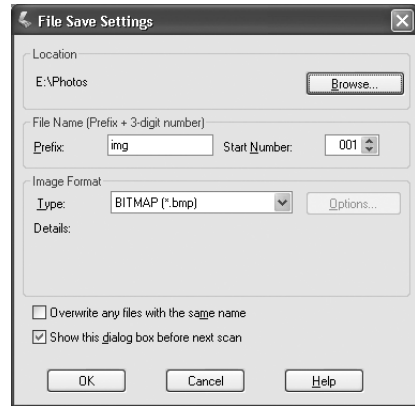
5. Choose the Document Source:
 - **Document Table** for documents placed on the scanner's document table (See page 14.)
 - **ADF** for documents loaded in the optional automatic document feeder (You must have the automatic document feeder installed to see this option; see page 45.)
 - **Auto Detect** to allow the scanner to automatically detect whether your document is on the document table or loaded in the automatic document feeder (You must have the automatic document feeder installed to see this option; see page 45.)
6. Select the Size of your document, or select **Auto Detect** in the Size list to let the scanner automatically detect the document size.



The Orientation option is not functional for the Expression 1640XL.

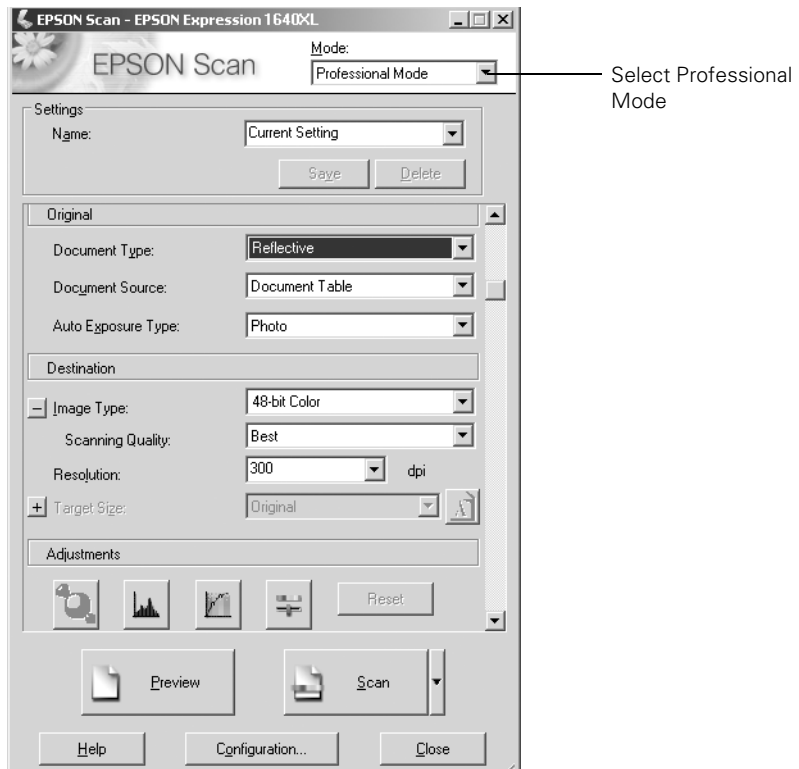
7. Make any of these adjustments, as necessary:
 - Select a resolution
 - Adjust the Brightness and Contrast settings for your image
 - If you're scanning printed materials, select **Descreening Filter** to reduce the moiré patterns in the image
 - To sharpen the image, select **Unsharp Mask Filter**
8. Click **Scan**.


- If you're scanning from an application, the image opens in your application window. Click **Close** to close the EPSON Scan window.
- If you're scanning to your hard drive, you see a File Save Settings window. Type a name for your file in the Prefix field, then choose an image type. (For more details, see the EPSON Scan on-screen Help.)



Scanning With EPSON Scan in Professional Mode

1. Start EPSON Scan and choose Professional Mode from the Mode menu (see page 15). You see this dialog box:



2. Click **Preview** to see a preview of your scan.
3. Click the  **Auto Detect** button in the Preview window to automatically select your entire document, or click and drag in the Preview window to create a scanning selection area (marquee). For more information on using marquees, see page 25.
4. Choose the Document Type:
 - **Reflective** for a photo or printed document
 - **Transparency** for film or slides (You must have the transparency unit installed to see this option; see page 33.) If you choose this option, go to step 6.



The Document Type you select determines which options appear in the EPSON Scan dialog box.

5. If you chose **Reflective** as the Document Type, do the following:
 - Choose the Document Source: **Document Table**, or **ADF** for documents loaded in the optional automatic document feeder (see page 45).
 - Choose the Auto Exposure Type: **Photo** to optimize exposure for photos, or **Document** to optimize exposure for printed material.
6. If you chose **Transparency** as the Document Type, choose the Film Type: **Positive Film** (for slides and some film), **Color Negative Film**, or **B&W Negative Film**.
7. Either click **Scan** to complete your scan, or continue with the instructions in the next section to fine-tune it.


Using Professional Mode To Customize Your Scan

1. Choose a color depth setting from the Image Type menu:


- 48-bit Color
- 24-bit Color
- Color Smoothing
- 16-bit Grayscale
- 8-bit Grayscale
- Halftone
- Black & White

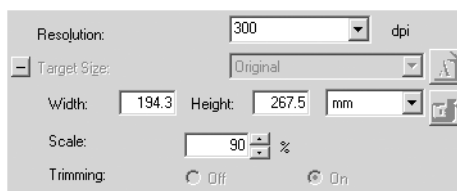


Even though you can choose 48-bit color depth as an option, the Expression 1640XL can produce a maximum color depth of 42 bits.

Click  to see more options, then choose **Best** or **Draft** for the Scanning Quality setting.

2. Choose a resolution setting (50 to 12800 dpi).

3. If you want to specify a Target Size for your scanned image other than the original size, select a size from the pull-down menu. You can also click  to see more options, then type in the width and height, or scale the image with a percentage. If Trimming is set to **On**, your image is cropped to fit your specified size. If it is **Off**, your image is sized to fit your specified size as closely as possible.



4. Use the Adjustment settings to modify your image as necessary. (You may have to use the scroll bar to see these options.)



Auto Adjust – Click this button to let the software detect and analyze the image with the document settings you've specified to determine the optimum settings for your scan.



Histogram Adjustment – Click this button to adjust the highlight, shadow, and gamma input levels.




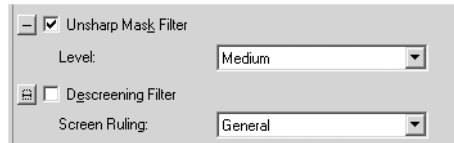
Tone Correction – Click this button to choose a preset tone curve for specific effects or to change the tone curve manually.




Image Adjustment – Click this button to adjust the color balance, saturation, brightness, and contrast settings.

For any of the settings windows above, you can click **Reset** to go back to the default settings for your image. See the EPSON Scan on-screen help for more information about the Adjustment options.

5. If you want to sharpen the image, select the **Unsharp Mask Filter** option. Click  to see more options, then choose a Level to reduce or increase the effect.

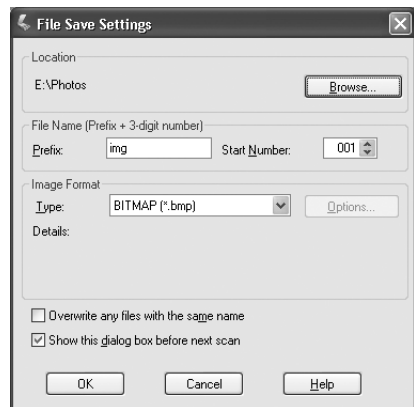


6. Select the **Descreening Filter** option to reduce the moiré patterns in the image.

To specify the source image you are scanning, click  to see more options, then choose the closest option to your source document in the Screen Ruling menu. (You may have to use the scroll bar to see this menu.)

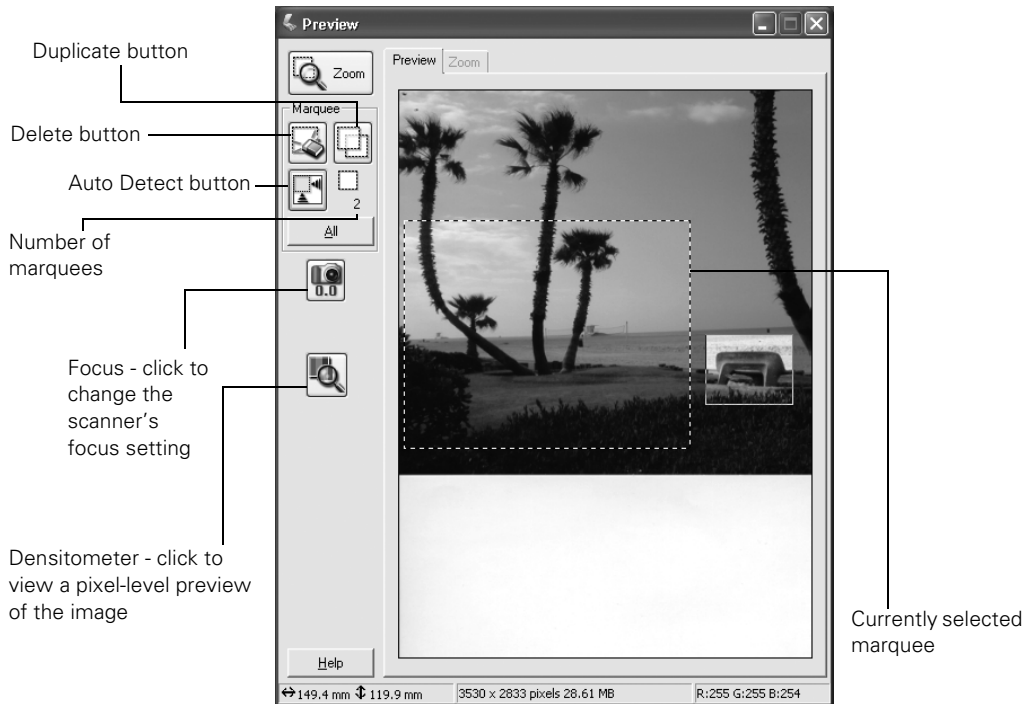
7. Click **Scan**.


- If you're scanning from an application, the image opens in your application window. Click **Close** to close the EPSON Scan window.
- If you're scanning to your hard drive, you see a File Save Settings window. Type a name for your file in the Prefix field, then choose an image type. (For more details, see the EPSON Scan on-screen Help.)






Selecting the Scanning Area in the Preview Window

The Preview window lets you select the area of your image that you want to scan with a marquee (a frame that you draw around the previewed image). You can create up to 50 marquees at one time. The currently selected marquee has a moving, dotted line. EPSON Scan adjusts the image quality settings to optimize each selected area.



- To automatically create a marquee around the entire image (and cut out the document table area) click the  Auto Detect button.
- To select the area to scan, click and drag in the Preview window. A marquee appears around the selection.
- To move the marquee, move the cursor to its center. When the cursor turns to a hand symbol, click and drag the marquee to a new position.
- To resize the marquee, move the cursor to an edge or corner of the dotted line. When the cursor turns into an arrow symbol, click and drag to resize the selection area.

- To zoom to the selected area, click the  **Zoom** button. If you have multiple marquees, the currently selected one appears in the Zoom preview.
- To erase a marquee, click the marquee and click the  **Delete** button.
- To create multiple marquees of the same dimensions, select one marquee, then click the  **Duplicate** button.
- To scan all marquees at once, click the **All** button.

Scanning Tips

Getting the best scan possible depends on several factors, including the quality of your original and the resolution you select. The better your original is, the better your scan will be. To get the best possible scan, keep the document table clean, and make sure the document is flat against the glass surface. You can make many corrections in your scanning software (EPSON Scan, or LaserSoft SilverFast if you have the Graphic Arts Edition model of the scanner). For additional photo retouching, use an image editing program such as Adobe Photoshop Elements.

Selecting Resolution

Resolution refers to how many dots per inch (dpi) or dots per centimeter (dpcm) your image contains. The best resolution for a scanned image depends on the type of image you're scanning and your final output device.

For most images except line art, use a scanning resolution that is approximately one third of your output resolution. For example, use a scanning resolution up to 100 dpi with a 300 dpi laser printer, and up to 200 dpi with a 600 dpi laser printer. If you're scanning an image to view on-screen, choose a resolution of 96 dpi. For ink jet printers such as the EPSON Stylus® Photo series, use a scanning resolution of up to 300 dpi. Try a scanning resolution of 240 dpi for 720 dpi printing.

Keep the following in mind when you choose a resolution:

- The higher the resolution you select, the larger the resulting image file will be. For example, an 8.5 × 11-inch original scanned at 300 dpi can produce a 24MB file. The same original scanned at 72 dpi creates only a 1.3MB file. Large files take longer to process and print, so consider the practical limitations of your computer

system and hard disk drive when selecting a resolution. To keep your file size manageable, select the lowest possible resolution that gives acceptable quality. (If your final output is for on-screen viewing, you can scan at 72 dpi and reduce your file size.)

- If you need to scan at a higher resolution, you can reduce the size of the resulting image file by scanning only part of the image. For information about selecting part of an image, see “Selecting the Scanning Area in the Preview Window” on page 25.

Recommended Settings

Follow the guidelines in this table for selecting a resolution:

Type of scan	Resolution
Photograph	300 dpi
Text with images	400 dpi
Film or slides	300 to 3200 dpi
Line art	300 to 3200 dpi
Image for web	96 to 150 dpi
Image to be sent by e-mail	96 to 150 dpi
Text for OCR	400 dpi
Newspaper	400 dpi
Magazine	300 dpi



Scaling (Resizing) Images

If you plan to enlarge your image, it's better to enlarge it by scanning at a higher resolution. If you change the image resolution or size in an application, you lose image quality. Keep in mind when you enlarge a small photo, such as 35 mm slides or wallet-size photos, you'll need to scan at a high enough resolution to retain your image quality, but not so high that your file size is too large to be efficient.


Scanning Color Images

If the colors in your scanned image don't match those in your original document, try experimenting with the Document Type/Image Type settings and Image Adjustment settings to adjust the colors. Also, try selecting just the area that you want to scan with a marquee (see page 25). This will let the scanner software choose the optimum color and exposure settings for that part of the image. If there is a border around your image or if the document cover is in the scanning area, this may adjust the exposure and colors in your scan.


Using the Start Button

If you're using Windows, you can load a document in the scanner, press the  Start button, and watch while Adobe Photoshop Elements starts and then scans your document. If you are using Windows XP or 2000, you must have administrator rights to use the  Start button.


This section includes the following:



- How to set up the  Start button to launch applications in Windows
- How to set up Adobe Photoshop Elements for one-touch scanning.



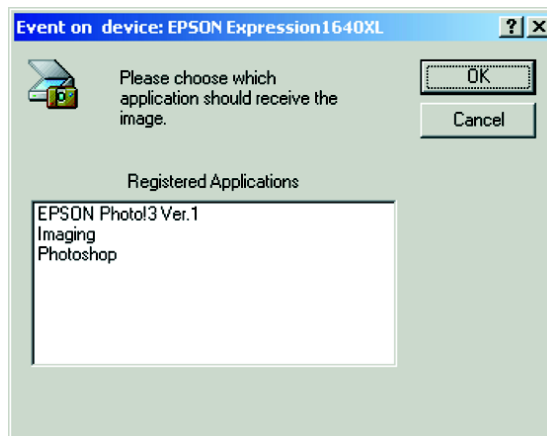
The  Start button features described in this section are only available when you use EPSON Scan to access a scanner connected to your computer.

Setting Up the Start Button


You need to assign an application to the  Start button before you use it the first time.


If you're running Windows XP, Windows Me, Windows 2000, or Windows 98, when you press the  Start button you'll see a window asking you to choose which application to launch. To avoid seeing this window, make sure only one application is assigned to the  Start button.

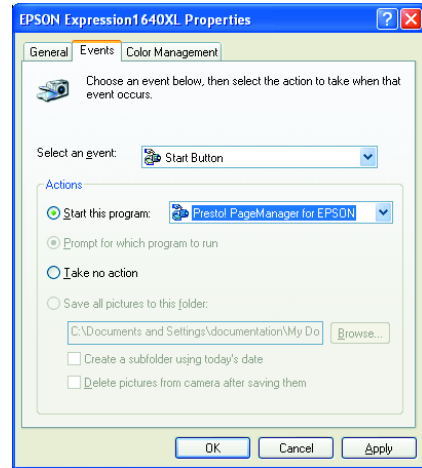
If you're using Windows XP, continue with the next section. If you're running Windows Me, 2000, or 98, go to page 31.



Windows XP

Follow these steps to assign an application to the  Start button on the scanner:


1. Click the Windows **Start** button, then click  **My Computer**.
2. Right-click the **EPSON Expression 1640XL** icon, and then click **Properties**.
3. Click the **Events** tab. You see the window to the right.
4. Make sure the **Start Button** is selected in the **Select an event** box.
5. Click **Start this program** and select a program from the list.



If the **Start this program** option is grayed out, start the application you want to assign to the Start button, and then follow these steps again.

You can disable the  Start button by clicking the **Take no action** checkbox on the Events tab.

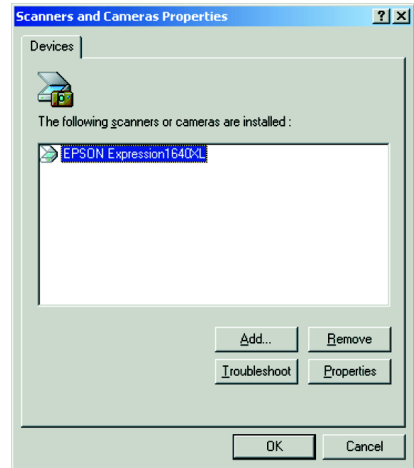
6. Click **OK** to close the dialog box.


Whenever you press the scanner's  Start button, the application you assigned launches. If you assigned Adobe Photoshop Elements, it automatically starts EPSON Scan and Photoshop Elements. If you assigned another application, you must start EPSON Scan manually.

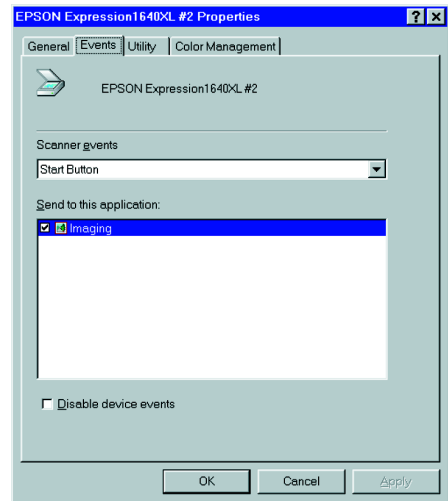
Windows Me, Windows 2000, and Windows 98

Follow these steps to assign an application to the  Start button:


1. Double-click the **Scanners and Cameras** icon in the Windows Control Panel.
2. Select **EPSON Expression 1640XL** and click the **Properties** button.



3. Click the **Events** tab. You see the window to the right.
4. Make sure **Start Button** appears in the Scanner events box, then deselect any applications you don't want to use in the **Send to this application** list. When you finish, a check should appear only beside the application(s) that you want to assign to the  Start button.
5. Click **Apply**, then click **OK** to close the EPSON Expression 1640XL Properties window, then click **OK** again to close the Scanners and Cameras Properties window.

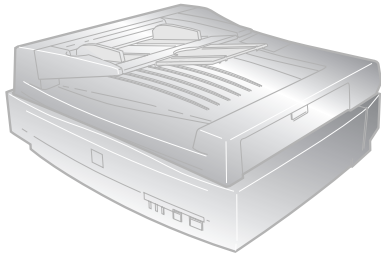


You can disable the  Start button by clicking the **Disable device events** checkbox on the Events tab.

Whenever you press the scanner's  Start button, the application you assigned launches. If you assigned Adobe Photoshop Elements, it automatically starts EPSON Scan also. If you assigned another application, you must start EPSON Scan manually.

Chapter 3

Using Optional Equipment



There are three options available for the EPSON Expression 1640XL color scanner: the transparency unit (B813202), the automatic document feeder (B813212), and the IEEE 1394 FireWire scanner interface card (B808342).

You can purchase these options from your reseller or from the EPSON StoreSM at (800) 873-7766 or

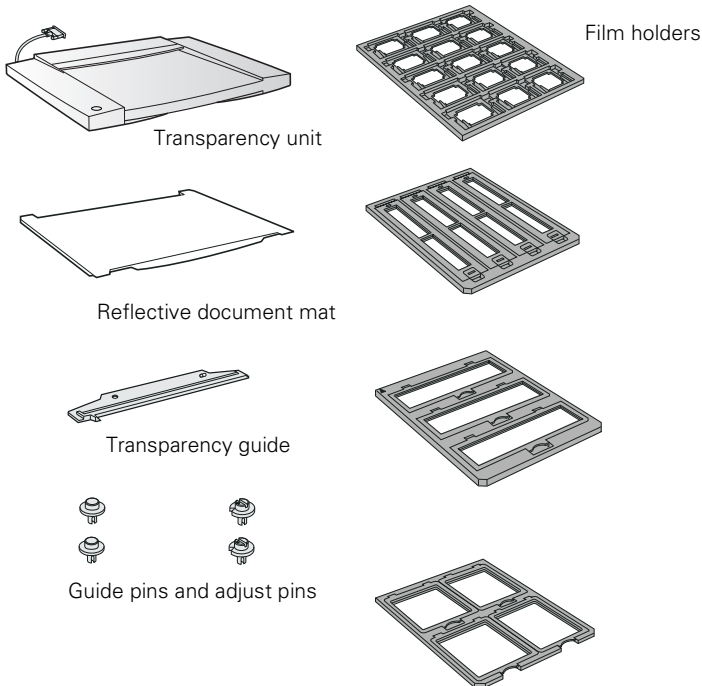
www.epsonstore.com (U.S. sales only). In Canada, please call (800) 463-7766 for dealer referral.

Transparency Unit

The transparency unit (B813202) allows you to scan transparent materials—35 mm slides, 4 × 5 inch film, and 120/220 film. To switch between scanning transparent materials and normal reflective (paper) documents, simply insert or remove the reflective document mat that came with the unit. For instructions on using the reflective document mat, see “Scanning Reflective Documents” on page 44.

Unpacking the Transparency Unit

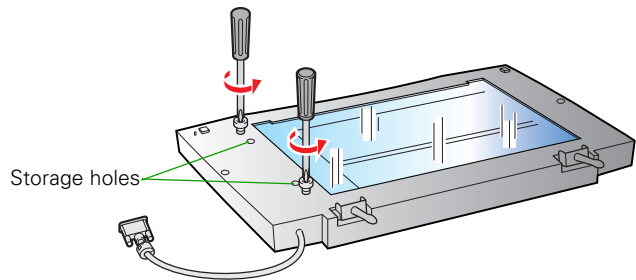
Make sure that all of the following items are included in the transparency unit box. If any items are missing or damaged, contact your EPSON dealer, or contact EPSON at (562) 276-4382 (in the United States) or (905) 709-3839 (in Canada). Keep all the packing materials so you can use them for storage when you are not scanning transparencies.




Removing the Shipping Screws

To prevent damage during shipping, two shipping screws are attached to the transparency unit to secure its lamp assembly. You must remove these screws before using the transparency unit.

1. Turn the transparency unit so the glass side faces up.
2. Use a Phillips head (cross head) screwdriver to remove the shipping screws, as shown at right.
3. Install the screws in the storage holes.



If either screw is left in a shipping hole (the outer holes) while using the transparency unit, the unit may be damaged.

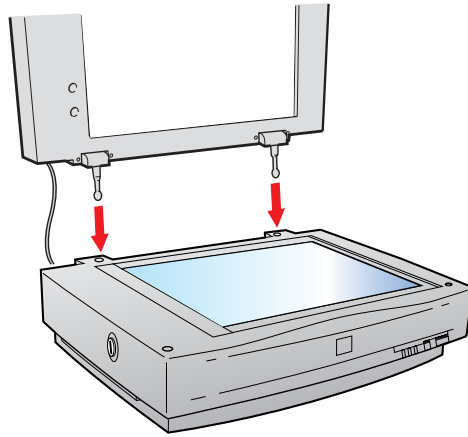
Before transporting the scanner, remove the transparency unit, reinstall the shipping screws, and turn the transportation lock on the side of the scanner to the  locked position. See “Transporting the Scanner” on page 55 for instructions.

Installing the Transparency Unit

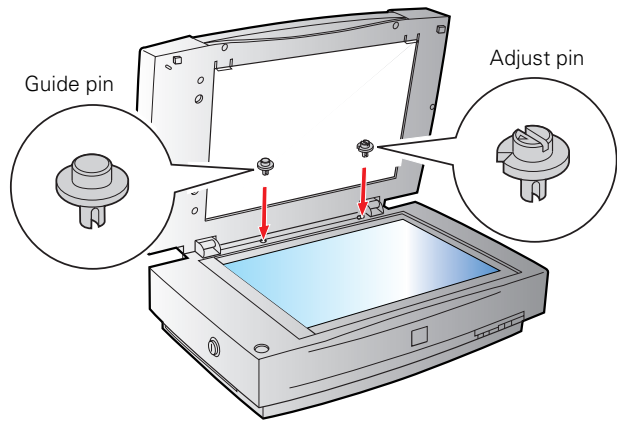
Follow these steps to install the transparency unit on the scanner.

1. Make sure the scanner is turned off. Then unplug the power cable from the scanner.
2. Remove the document cover by grasping the back of the document cover and easing the cover up.
3. Make sure the document table is clean and dust free.

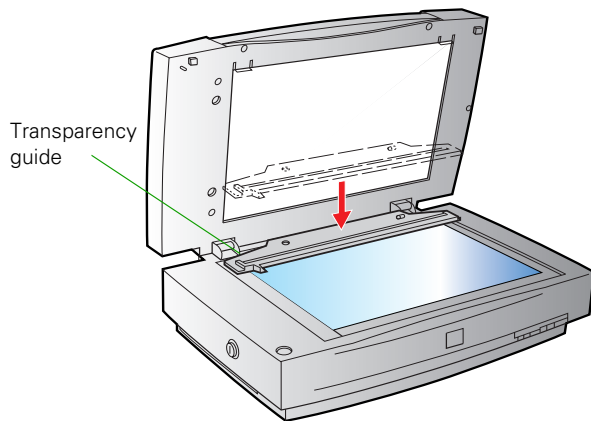
4. Align the transparency unit's pins with the holes in the scanner and lower the unit until it rests securely.



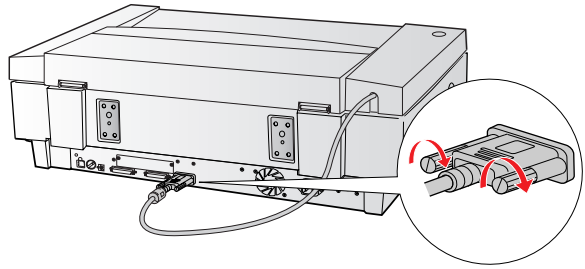
5. Insert the guide pin and adjust pin that came with the transparency unit into the screw holes. Make sure the adjust pin's arrow faces directly towards the center of the guide pin.



6. Place the transparency guide on the scanner's document table.
7. Gently close the transparency unit.



8. Connect the transparency unit's connector to the option (ADF/TPU) connector at the back of the scanner. Tighten the attached screws to secure the connector.



If you haven't connected the scanner to your computer, see the *Start Here* sheet for instructions. Then plug the scanner in and turn it on.

See Chapter 2 for scanning instructions.

Using the Film Guides

You can use the four film guides that came with the scanner to scan 35 mm slides, strips of 35 mm negative or positive film, 120-size or 220-size format film, and 4 × 5-inch film.



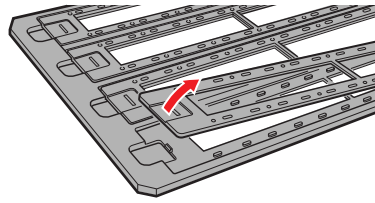
When using the film guides, be sure the transparency unit is completely closed and the calibration area (next to the notch on the transparency guide) is uncovered or an error will occur and you will be unable to scan.

Store the reflective document mat in the transparency unit pocket when not in use.

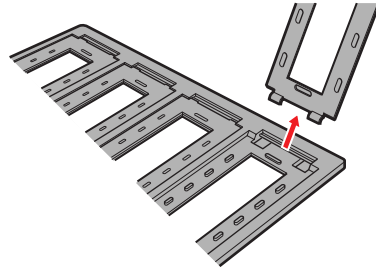
Loading 35 mm film

Follow these steps to load 35 mm positive or negative film:

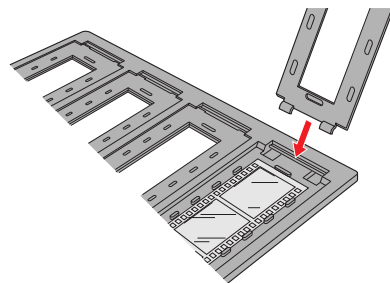
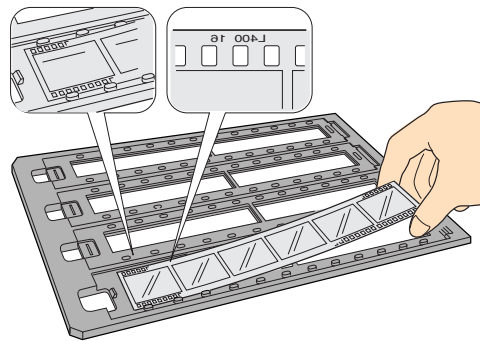
1. Place the 35 mm filmstrip guide on a flat surface and remove the cover from one of the strip holders.



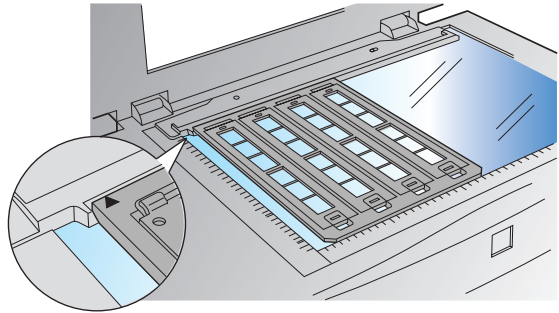
2. Insert a filmstrip in the holder face down.



3. Replace the strip holder you removed in step 1.
4. Repeat steps 1 through 3 for all the film strips you scan.



5. Place the 35 mm filmstrip guide on the document table, and align it with the notch on the transparency guide as shown.
6. Close the TPU and begin scanning.



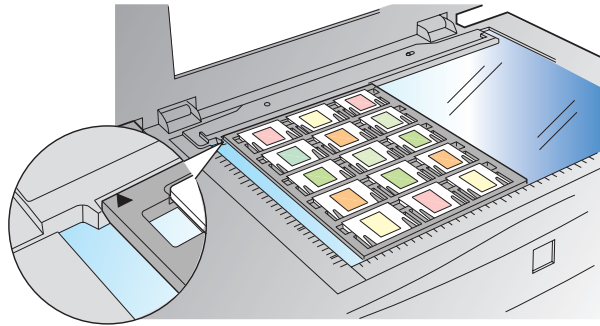
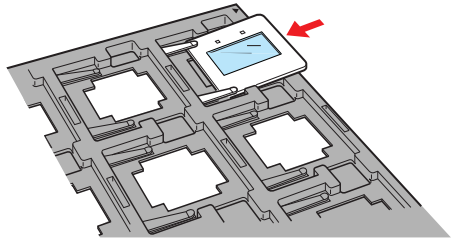
If you're using EPSON Scan, set the following options:

- If you're using Home Mode, select one of the following for the Document Type option: **Positive Film**, **Color Negative Film**, or **B&W Negative Film**.
- If you're using Professional Mode, set the Document Type option to **Transparency**, and then set the Film Type option to **Positive Film**, **Color Negative Film**, or **B&W Negative Film**.

Loading 35 mm slides

Follow these steps to load 35 mm slides:

1. Load slides in the 35 mm slide holder as shown. Make sure the glossy side of each slide faces down, and the film emulsion layer faces up.
2. Position the slide holder on the document table. Align the slide holder with the notch on the transparency guide as shown.
3. Close the TPU and begin your scan.



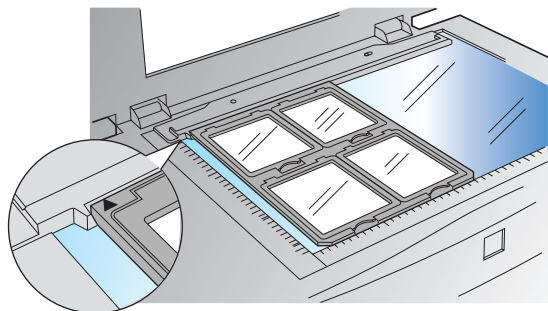
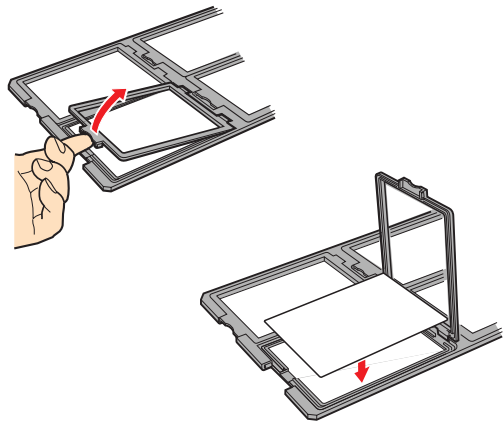
If you're using EPSON Scan to scan, set the following options:

- If you're using Home Mode, set **Positive Film** as the Document Type option.
- If you're using Professional Mode, set the Document Type option to **Transparency**, and then set the Film Type option to **Positive Film**.

Loading 4 × 5-inch film

Follow these steps to load 4 × 5-inch film:

1. Place the 4 × 5-inch film guide on a flat surface and remove the cover from one of the film holders.
2. Insert the film in the film holder, making sure the glossy (smooth) side of the film faces down and the film emulsion layer faces up. Then close the cover.
3. Repeat steps 1 and 2 for all the film you scan.
4. Place the 4 × 5-inch film guide on the document table. Align it with the notch on the transparency guide as shown.
5. Close the TPU and begin your scan.



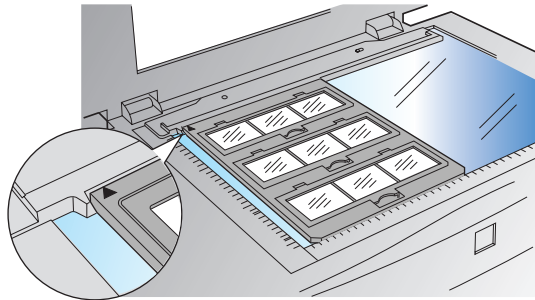
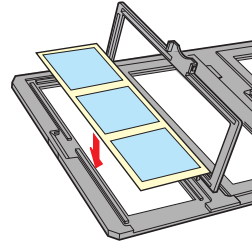
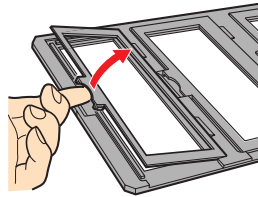
If you're using EPSON Scan, set the following options:

- If you're using Home Mode, select one of the following for the Document Type option: **Positive Film**, **Color Negative Film**, or **B&W Negative Film**.
- If you're using Professional Mode, set the Document Type option to **Transparency**, and then set the Film Type option to **Positive Film**, **Color Negative Film**, or **B&W Negative Film**.

Loading 120-size or 220-size (medium format) film

Follow these steps to load 120-size or 220-size format film:

1. Place the 120/220-size film guide on a flat surface and open the cover for one of the film holders.
2. Insert the film in the film holder, making sure the glossy (smooth) side of the film faces down, and the film emulsion layer faces up. Then close the cover.
3. Repeat steps 1 and 2 for all the film you scan.
4. Place the film guide on the document table. Align it with the notch on the transparency guide as shown.
5. Close the TPU and begin your scan.



If you're using EPSON Scan, set the following options:

- If you're using Home Mode, select one of the following for the Document Type option: **Positive Film**, **Color Negative Film**, or **B&W Negative Film**.
- If you're using Professional Mode, set the Document Type option to **Transparency**, and then set the Film Type option to **Positive Film**, **Color Negative Film**, or **B&W Negative Film**.

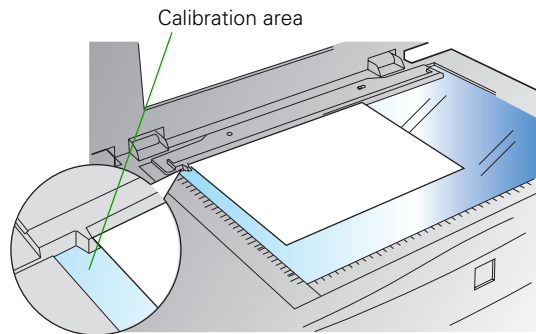
Loading non-standard sized film

Follow these steps to load non-standard sized film:

1. Place the film directly on the document table making sure the glossy (smooth) side of the film faces down.

If the reflective document mat is installed in the transparency unit, remove it.

2. Close the TPU and begin your scan.



If you're using EPSON Scan, set the focus position to 0.0.

An area 2 ± 1.5 mm from the horizontal and vertical edges of the document table glass will not be scanned.

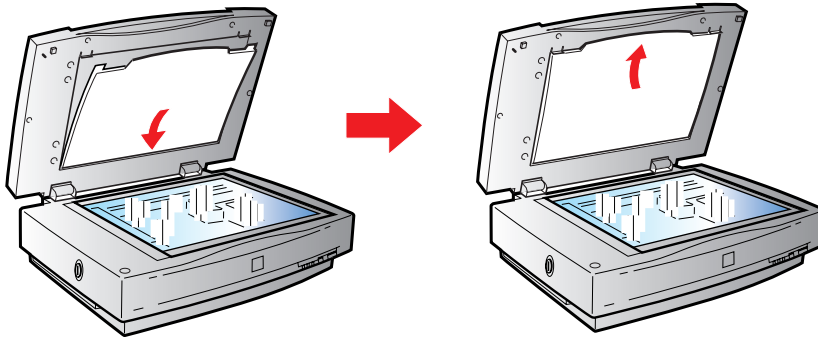


The scanner will generate an error message if the calibration area is blocked. Also, dirt or dust on the calibration area can result in vertical lines being added to the image. Keep the calibration area clear and clean.

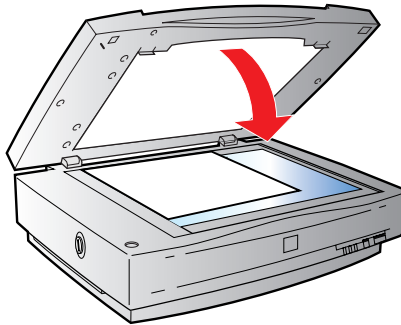
Scanning Reflective Documents

To scan reflective documents with the transparency unit installed, insert the reflective document mat included with the transparency unit.

1. Open the transparency unit. If there's a film guide or transparency unit on the document table, remove it.
2. Slide the mat into place and insert the tabs into the slots on the transparency unit.



3. Place your document face down on the document table and close the transparency unit.

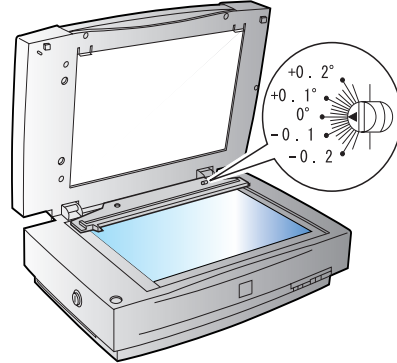


4. Scan your document.

To remove the reflective document mat, slide it up and out of the slots on the transparency unit.

Adjusting the Transparency Guide Scanning Angle

If your scanned image's edges are at a slight angle, adjust the scanning angle by turning the adjust pin. The direction and degree you adjust the angle depends on your individual scanner and the placement of the document to be scanned. You may want to experiment with this feature to determine the best angle.

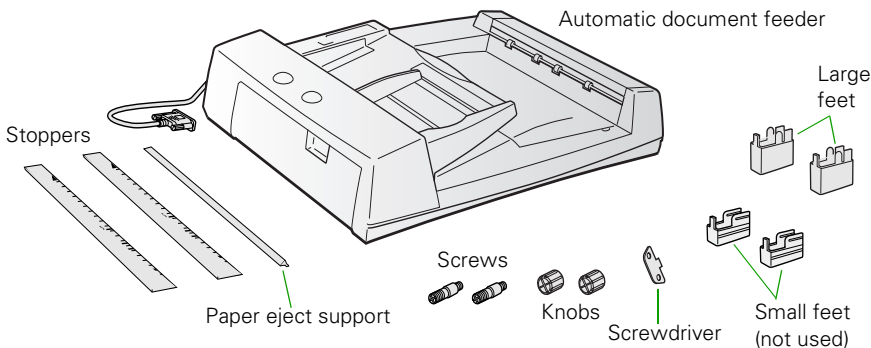


Automatic Document Feeder

The automatic document feeder (B813212) allows you to automatically load multi-page documents into your scanner. This document feeder is particularly useful for OCR (optical character recognition) scanning, or for creating an image database.

Unpacking the Automatic Document Feeder

When you unpack your automatic document feeder, make sure you have the parts shown below. If any items are missing or damaged, contact your EPSON dealer, or call EPSON at (562) 276-4382 (in the United States) or (905) 709-3839 (in Canada).



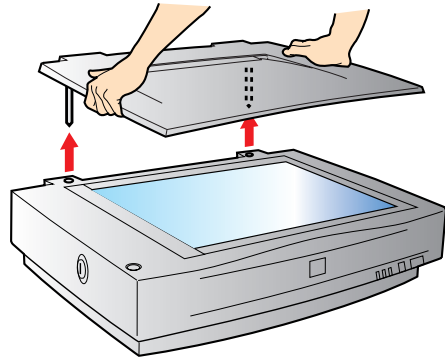
Installing the Automatic Document Feeder



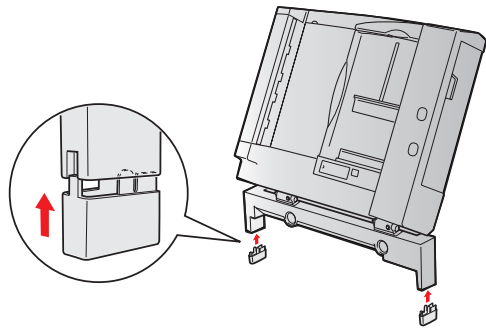
Because the automatic document feeder is heavy, you may want to have someone help you with this procedure. Also, the document feeder is large, so be sure to have adequate space around the scanner.

Follow the steps below to install the automatic document feeder on your scanner:

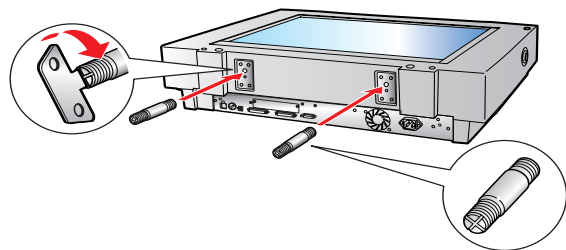
1. Make sure your scanner is turned off and unplug the cables.
2. Remove your scanner's document cover by grasping the back of the cover as shown and easing the cover up.



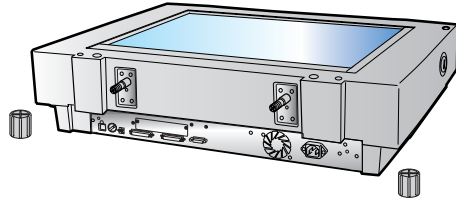
3. Attach the two large feet as shown.



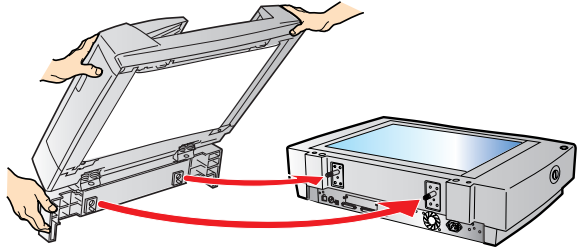
4. Insert the installation screws that came with the ADF into the holes in the back of the scanner and secure them with the enclosed screwdriver tool, as shown.



5. Place the two knobs included with the ADF beside the scanner.

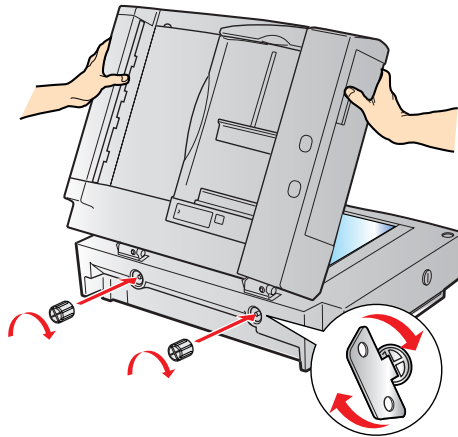


6. Align the installation screws with the holes in the ADF and slide together as shown.

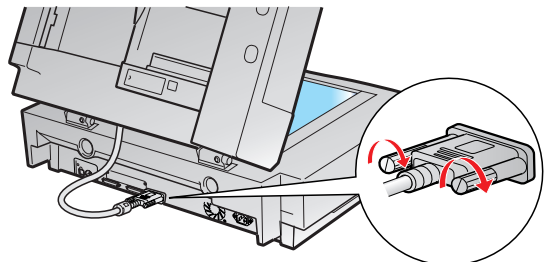


The ADF is heavy. Ask for assistance when lifting it.

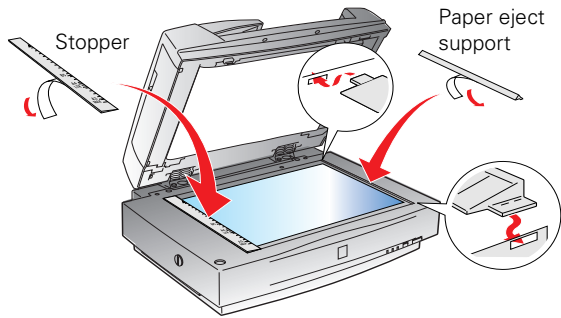
7. Twist the knobs onto the ends of the screws and tighten them using the enclosed screwdriver tool.



8. Attach the ADF's connector to the scanner's option (ADF/TPU) interface. Secure the connection by tightening the connector screws.



9. Peel the backing from the stopper and from the paper eject support provided with the ADF. Then attach the stopper and paper eject support to the scanner as shown. Insert the tabs on the paper eject support into the slots at the right end of the document table.



There are two stoppers included with the ADF, a light gray one and a dark gray one. Use the light gray stopper, not the dark gray stopper.

10. Close the ADF.

If you haven't connected the scanner to your computer, see the *Start Here* sheet for instructions.

Loading Paper in the Automatic Document Feeder

The ADF can hold up to 100 sheets of the following paper sizes, based on a paper weight of 17 pounds (64 g/m²) and a thickness of 0.2 inch (6.0 mm) or less:

Paper size	Direction
A3, Ledger, B4, Legal, A4, Letter, B5, A5, 5.5 × 5.8-inch (140 × 148 mm)	Portrait
A4, Letter, B5, A5	Landscape

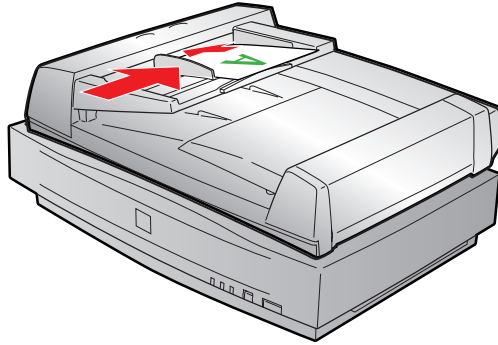
Before loading the ADF, make sure the document:

- Has no wet ink on it.
- Has no holes or no cut-out areas.
- Is not ripped or wrinkled.
- Has no staples or other objects attached that may damage the feeder.
- Has no folds.
- Is not a multipart form.

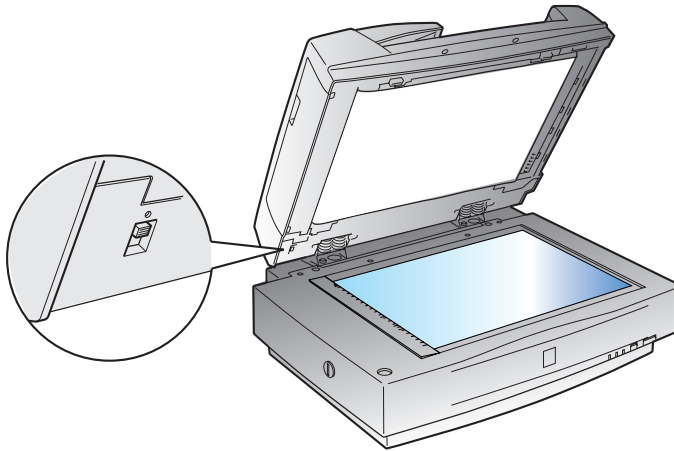
- Is not bound.
- Has no carbon coating.

Follow these steps to load paper:

1. Slide the right edge guides all the way to the right.

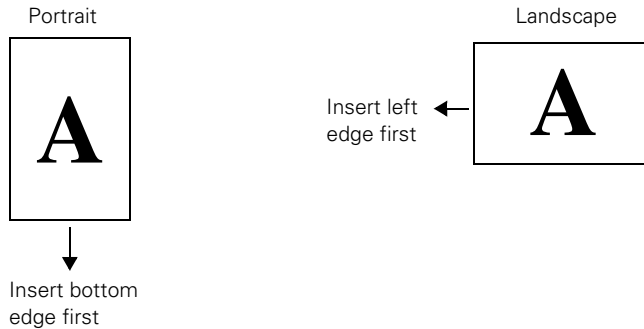


2. Make sure that the switch on the lower left corner of the ADF is set with the switch towards the circular mark as shown.



3. Arrange your stack of originals face up. Follow these guidelines when inserting paper:
 - Portrait orientation (top and bottom edges are shorter than the side edges)—insert your document bottom edge first.
 - Landscape orientation (top and bottom edges are longer than the side edges)—insert your document left edge first.

Insert the document until it meets resistance.



If your document is large, slide out the paper support.

4. Slide the edge guides to the edges of your paper.
5. Scan your document. If you're using EPSON Scan, follow these guidelines:
 - Select either **Office Mode** or **Professional Mode** in the Mode box.
 - Select **ADF** as the Document Source.
 - If you want to scan only part of the document page, load the first page only. Click the **Preview** button. The first page is ejected. Adjust the marquee in the Preview area, then load your entire document. When you click **Scan**, the scanner scans the area defined by the marquee on each page.



If you load multiple pages, they will be fed from the top and ejected face down.

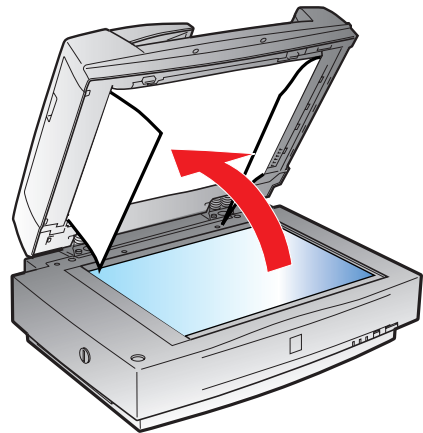
To automatically scan both sides of a document, select the **Double-Side** setting in EPSON Scan.

You can still load documents manually if you want. Just lift the automatic document feeder and place the first sheet of your document face down on the document table, and select **Document Table** under the Document Source option in EPSON Scan. Be sure to close the automatic document feeder before scanning. If you open it while scanning, you'll get an error.

Fixing Paper Jams

If a paper jam occurs, follow these steps to clear it:

1. Open the ADF cover to determine where the paper jam occurred.

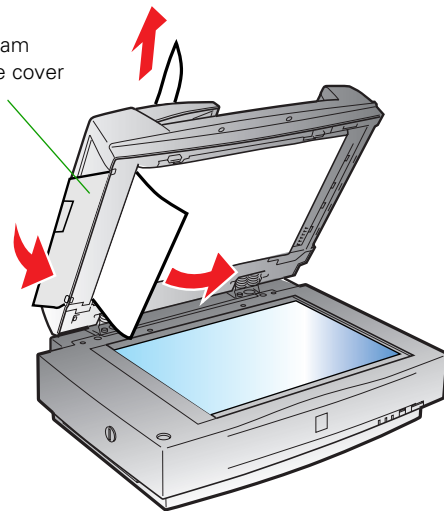


2. If paper is jammed in the feeder, open the cover on the left and slowly pull out the jammed paper as shown.



Be careful not to pull too hard or the paper may tear, making it more difficult to remove.

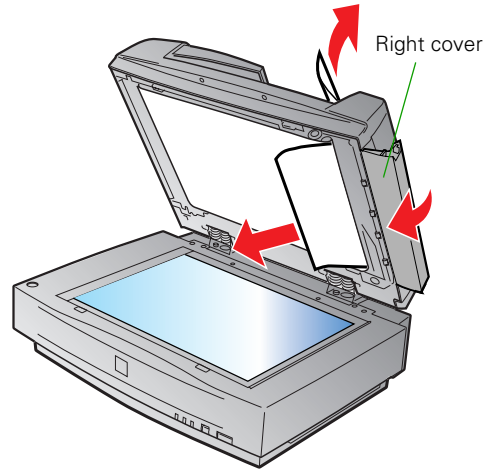
Open jam release cover



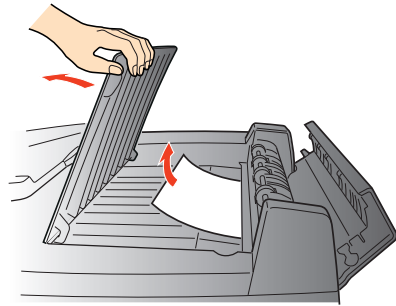
3. If paper jams in the paper eject position, open the cover on the right and slowly pull out the jammed paper as shown.



Be careful not to pull too hard or the paper may tear, making it more difficult to remove.

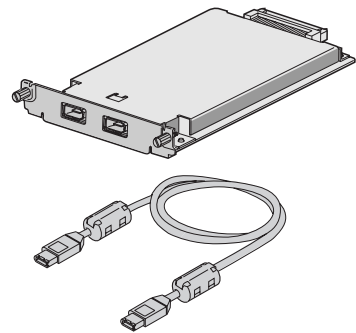


4. After removing the jammed paper, close the ADF cover.



IEEE 1394 FireWire Scanner Interface Card

To use the IEEE 1394 FireWire scanner interface card (B808342), your Power Macintosh must be running Macintosh OS X 10.1.4 and higher or OS 8.6 to 9.X with FireWire Update 2.1 or later. Your PC must have an OHCI-compliant FireWire port or card, and must be running a pre-installed version of Windows XP, Me, or 2000.

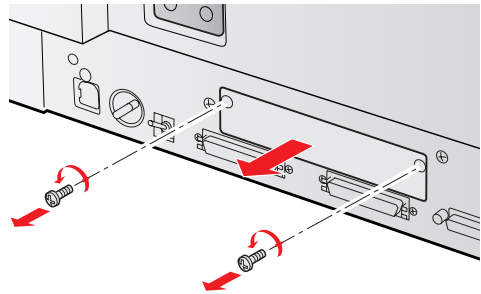


When you install the scanner software, FireWire Update 2.1 will automatically be installed or updated, if it's not already on your Macintosh or if you have an older version.

Installing the Card in Your Scanner

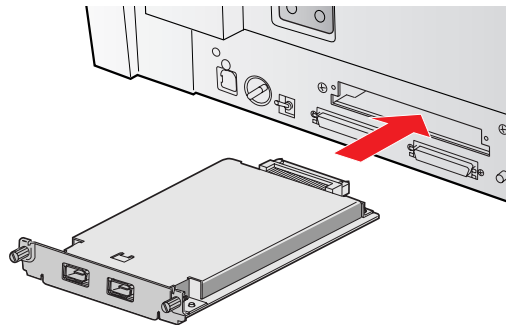
Before you begin, turn off the scanner and disconnect the power cord and any cables.

1. Remove the two screws securing the shield plate to the scanner's optional interface slot, and then remove the plate. Put the screws in a safe place in case you want to reinstall the shield plate later.



Static electricity can damage electronic components like the IEEE 1394 FireWire scanner interface card. To discharge static electricity, touch the scanner's metal frame before handling the card.

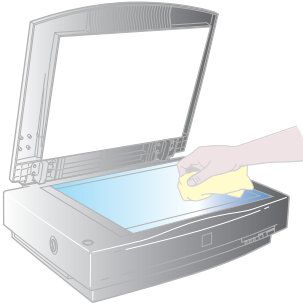
2. Turn the card over so that the component side is facing down, and insert it in the optional interface slot. Push gently until the card is firmly seated in the expansion slot inside the optional interface slot.
3. Tighten the retaining screws and reconnect the scanner's cables.



Now you're ready to connect the scanner to your computer. See the *Start Here* sheet for instructions.

Chapter 4


Scanner Maintenance

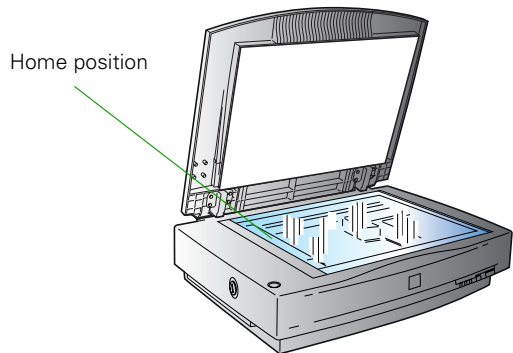



This section gives you basic maintenance instructions and tells you how to transport your scanner safely.

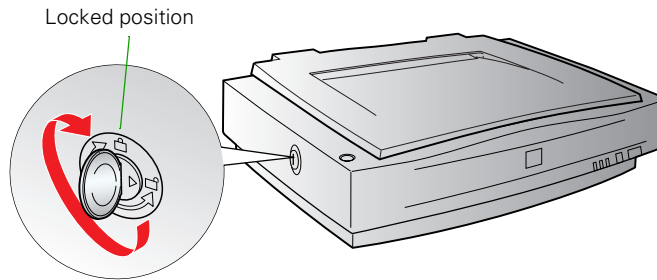
Transporting the Scanner

When you transport the scanner a long distance or store it for an extended time, follow the steps below to secure the carriage.

1. Make sure the transportation lock on the back of the scanner is in the  unlocked position.
2. If you're using a transparency unit or automatic document feeder, remove it and replace the scanner cover.
3. Turn on the scanner and wait until the carriage moves to the home position as shown. Then turn off the scanner.



4. Turn the transportation lock at the back of the scanner to the  locked position.

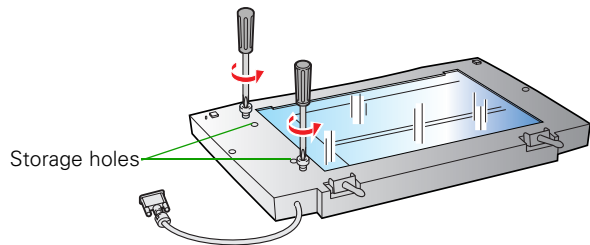


If you are using a transparency unit and it is switched on, the scanner carriage will not move to the home position. Remove the transparency unit first, then perform the steps above. See the next section for instructions.

Transporting the Transparency Unit

After you've removed the transparency unit from the scanner, prepare it for shipping as follows:

1. Turn the transparency unit so the glass side faces up.
2. Use a Phillips head (cross head) screwdriver to remove the shipping screws from the storage holes.
3. Install the screws into the shipping holes (the outer holes).



Cleaning the Scanner

To keep your scanner operating at its best, you should clean it periodically. Before cleaning, unplug the power cord.

Use a soft cloth to clean the outer case with mild detergent dissolved in water.

If the document table glass gets dirty, clean it with a soft, dry cloth. If the glass is stained with grease or other hard-to-remove material, use a small amount of glass cleaner on a soft cloth to remove it. Wipe off any remaining liquid with a dry cloth.

Be sure there's no dust on your document table. Dust can cause white spots to appear in your scanned image.



Always unplug the scanner before cleaning.

Never use a harsh or abrasive brush or cleaning product to clean the document table. A damaged glass surface can decrease the scanning quality.

Never use alcohol, thinner, or corrosive solvent to clean the scanner. These chemicals can damage the scanner components as well as the case.

Be careful not to spill liquid into the scanner mechanism or electronic components. This could permanently damage them.

Don't spray lubricants inside the scanner.

Never open the scanner case. If you think repairs or adjustments are necessary, consult your dealer or contact EPSON.

Unplug the scanner and refer servicing to qualified service personnel if the power cord or plug is damaged, if liquid has entered the scanner, if the scanner has been dropped or the case damaged, or if the scanner does not operate normally or exhibits a distinct change in performance.

Chapter 5

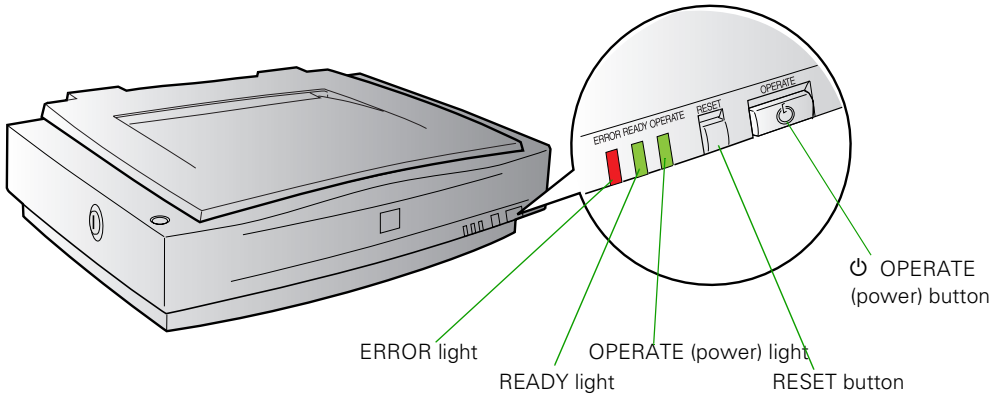
Solving Problems



This chapter explains how to interpret the signals from your scanner indicator lights, and gives you the basics for diagnosing and solving scanner problems. It also provides instructions on how to handle scanning quality problems and tells you how to contact EPSON and other software manufacturers.

There are additional troubleshooting tips in your electronic *EPSON Expression 1640XL Reference Guide*. See “Reading the Reference Guide” on page 7.

Lights and Buttons



The scanner has three indicator lights and three buttons:

Scanner indicator lights

Light	Light status	Color	Scanner status
OPERATE	○ on	Green	Scanner is on
READY	● off	Green	Ready to scan images
	○ (flashing)	Green	Scanning is in progress
ERROR	○ on	Red	An error occurred; see the following table for more information
	○ (rapidly flashing)		
	● off		

Error conditions

ERROR light	READY light	Error type
○ on	○ on	Command error: The scanner has received incorrect commands from your scanning software. Try rescanning the document.
◐ flashing	● off	Interface error: Check that your scanner is securely connected to your computer, and then turn the scanner off and back on again.
◐ flashing	◐ flashing	Fatal error: Check that the transportation lock is released, and then turn the scanner off and on again. If this doesn't solve the problem, call your EPSON dealer.
● off	● off	Option error: There's a problem with an installed option. Check to make sure the transparency unit or automatic document feeder is flat against the document table. Check that your option is securely connected to the option (ADF/TPU) connector at the back of the scanner. Finally, check that the automatic document feeder isn't out of paper and doesn't have a paper jam. If these suggestions don't solve the problem, call your EPSON dealer.

Scanner buttons

Button	Function
⏻ OPERATE	Turns the scanner on and off.
RESET	Resets the scanner to its default settings after an error. Pressing this button while scanning a document stops the scanner and may cause an error.
🏠 Start	Automatically launches EPSON Scan, or another 🏠 Start button-compatible application such as Photoshop Elements. You can choose a compatible application to use this button.

Problems and Solutions

Here are some troubleshooting tips if you're having trouble setting up your scanner, scanning, or getting the quality you want from your scans.

Setup Problems

You see an error message that there is no response from the scanner, or that you can't start EPSON Scan.

- Check your cable connections. If your cable is securely connected to both the scanner and computer, try another cable. If you have a USB connection, use an EPSON USB cable. If you are using the optional IEEE 1394 FireWire interface card, use the cable that came with the card. If you have a SCSI connection, try using a high quality, shielded cable, and be sure to restart your computer after you change the cable.
- The USB connection only supports Macintosh, or Windows 98, 2000, Me, or XP system. The Windows operating system must be preinstalled on your system, not upgraded.

- The IEEE 1394 FireWire interface only supports Macintosh, or Windows Me, 2000, and XP. The Windows operating system must be preinstalled on your system, not upgraded, and the computer must have an OHCI-compliant IEEE 1394 port or card. There is no IEEE 1394 support for Windows 98.
- If your scanner is connected to a USB hub, try connecting it directly to the computer's USB port.
- Make sure your scanner is on. If you opened your host application before you turned on the scanner, close your application and reopen it. If that doesn't work, restart your system.
- Check the Plug and Play option for your computer; it should be active (Windows 98, 2000, Me, and XP only).
- If you have a SCSI connection, turn off both your scanner and computer. Then turn on your scanner before you turn on the computer.
- If you have a SCSI connection, make sure your SCSI board is installed correctly.

If the SCSI board is found, but not the scanner, check the SCSI terminator and ID. Make sure the SCSI ID doesn't conflict with another SCSI device.

- If you've replaced your SCSI board or changed the SCSI ID, you may need to uninstall and reinstall your scanner software. See the instructions beginning on page 70.
- Check for IRQ conflicts with built-in options.
- Windows users: check the System Device Manager in the Windows Control Panel. If there is an **Unknown Device** icon, select it and click **Remove**.
- Macintosh OS 8.6 to 9.x users: if you have an IEEE 1394 FireWire interface connection, make sure the following Extensions are selected in the Extensions Manager: **EPSON FW Scanner Enabler**, **EPSON FW Scanner Expert**, and **EPSON FW ScannerLib**.

Also, make sure the IEEE 1394 FireWire scanner interface card is installed correctly in the scanner. (See "Installing the Card in Your Scanner" on page 53.)

- If all else fails, uninstall and reinstall your software. See the instructions for uninstalling software beginning on page 70.

Scanner Problems


The READY light doesn't come on, or flashes.

- Check the scanner power cord. Make sure the power cord is securely plugged into the scanner and the power outlet, and that the scanner is turned on.
- Check that the power outlet is working and provides sufficient power for the scanner.
- If you're using a transparency unit or automatic document feeder and both the **READY** and **ERROR** lights are off, make sure your installed option is closed (lying flat against the document table). Also, make sure that the shipping screws on the TPU have been removed and that the automatic document feeder doesn't have a paper jam and isn't out of paper.
- When using the film guides with the transparency unit, be sure the calibration area (next to the notch on the transparency guide) is uncovered.

The scanner doesn't scan your image.

- Make sure the scanner is ready to scan. Wait until the **READY** light stops flashing and remains on.

If you attempt to preview or scan before the scanner is ready, EPSON Scan may stop responding. If this happens, restart your computer.

- Make sure the scanner's transportation lock is in the  unlocked position.
- Windows users: check the Device Manager in the Windows Control Panel. If there is an Unknown Device icon, select it and click Remove.
- If you're using photo-editing software like Adobe Photoshop or Photoshop Elements, make sure you select File > Import > EPSON Expression 1640XL as your source. If you're using the SilverFast Plug-in with a program like Photoshop, select File > Import > SilverFast (Epson Expr 1640XL).
- If you are using a SCSI connection, make sure the SCSI ID switch on the back of the scanner is not set to the asterisk (*), and that it's set to a number that doesn't conflict with any other SCSI devices. If you reset the SCSI ID switch, turn the scanner off and then on again. Then restart your computer.
- Make sure you have enough memory to scan your image. If you're scanning a large image or scanning at a high resolution, try closing other programs before you

scan. For Macintosh OS 8.6 to 9.x, try increasing the memory of the host application. If your computer still doesn't have enough memory to process the image, try scanning at a lower resolution, or select part of the image to scan. If you still cannot scan, you may need to upgrade your RAM.

- If you have a ZIP drive, it may be interfering with your scanner. Disconnect your ZIP drive, restart your computer, then try scanning.
- If you're using the optional automatic document feeder, run EPSON Scan in Office Mode or Professional Mode, and select ADF as the Document Source. Also, make sure the original document is inserted face up.

When previewing a scan, you see a message that the document could not be located.

Make sure you've selected the correct Document Type in EPSON Scan.

You're using a transparency unit or automatic document feeder.

- Make sure the unit is correctly installed and connected to the scanner's option (ADF/TPU) interface.
- Make sure you selected the correct Document Source setting for your image.

- Make sure your transparency unit or automatic document feeder is closed (lying flat against the document table).
- If paper is jammed in your automatic document feeder, see “Fixing Paper Jams” on page 51.
- When using the film guides with the transparency unit, be sure the calibration area (next to the notch on the transparency guide) is uncovered.

Software Problems

EPSON Scan doesn't work properly.

- Make sure the scanner's READY light is on.
- Check to make sure your cable is securely connected to both the scanner and computer.
- Try a different cable. If you have a USB connection, be sure to use the USB cable that came with your scanner. If you are using the optional IEEE 1394 FireWire interface card, use the cable that came with the card. If you have a SCSI connection, try using a high quality, shielded cable, and be sure to restart your computer after you change the cable.
- If you have a SCSI connection, you can't turn the scanner off and on again while you're using your

computer. Turn both the scanner and computer off, then turn on the scanner before you turn on the computer.

Make sure the SCSI interface board is installed correctly in your computer.

Check that your system recognizes your scanner and SCSI board (Windows only). Check the System Device Manager in the Windows Control Panel.

Check for conflicts in your SCSI ID setting, I/O address, the interrupt setting for your SCSI board, and other settings. For information about the SCSI ID setting, see “Connecting to a SCSI Interface” on page 10. For information about choosing other settings, see your computer manual.

- If none of these solutions help, uninstall your software, then reinstall it. See the instructions for uninstalling software beginning on page 70.

The scanner software doesn't work properly.

- Make sure the system requirements are correct for your software. See “System Requirements” on page 3.
- Check your computer's memory. If you're running other software at the same time, using RAM

resident programs, or have many device drivers, the computer may not have enough memory. (See your software and computer manuals.) If you're scanning a large image or scanning at a high resolution, your computer may not have enough memory to process the image.

- Make sure that your software is correctly installed and set up. If all else fails, uninstall your software, then reinstall it.

Scanning Problems




The file size is too big.

Adjust your scan settings. Try setting at a lower resolution (dpi), or scan only part of the image.



Your scanned image is faint or has gaps.

- Check the brightness. Decrease the software or driver's brightness setting.
- Select **Professional Mode** and experiment with the  Image Adjustment setting.
- Check the condition of your original. If the document is damaged, dirty, or wrinkled, these imperfections will show up in your scan.
- Make sure the document is placed flat against the document table.



Your scanned image is blurred or distorted.

- Check the position and condition of your document. Make sure the document is placed flat against the scanner's document table glass. If only part of the image is blurred, part of your document may be wrinkled or warped.
- Make sure the document table glass is clean.
- Make sure the scanner is on a flat, stable surface.



The edges of the document aren't scanned.

- Check the position of your document. Adjust it so that the image is within the glass area of the document table.
- If colors are patchy or distorted at the edges of the image, the document may be too thick, or there may be outside light interfering with the scan.



Your image scans at an angle.

Check the position of your document. It may be placed at an angle on the document table. Align it so the horizontal and vertical edges are carefully aligned with the scales on the top and side of the document table.

Straight lines in the image come out jagged.

Make sure the document is aligned with the scales on the top and side of the document table.

A line of dots is missing from the image.

- When a line of dots is missing from the scanned image on your screen, the scanner sensor has malfunctioned. Contact your EPSON dealer.
- When a line of dots is missing from your printouts, your printer has malfunctioned. See your printer manual.

The colors in your scanned image look different from the colors in the original document.

- Experiment with the Unsharp Mask Filter setting in EPSON Scan (not available in Home Mode).
- Make sure the Image Type setting is correct.
- Try different combinations of gamma and color settings in EPSON Scan. Click the **Configuration** button at the bottom of the window, then make any changes on the **Color** tab.
- If you're using a transparency unit or automatic document feeder, make sure they're closed when scanning.

Moiré (cross-hatch) patterns appear in the image when you perform halftone scanning.

- Make the image size slightly smaller.
- In EPSON Scan, select the **Descreening Filter** checkbox in Home Mode or the **Unsharp Mask Filter** checkbox in Professional or Office Mode.
- Use a transparent sheet between the document and the document table to defocus the image.
- Reposition the document on the document table. Try positioning the document at a slight angle.

The printed image is larger or smaller than the original.

You can't judge the size of the printed image by what you see on your screen. The image size settings in your scanner software determine the size of the printed image.

You can't print scanned images, or the printed image looks garbled.

- Make sure your printer is securely connected to your computer and that you're using the correct cable.
- Make sure the correct printer is selected in your printer software.

The image doesn't scan, or you can only scan a few dots.

- Make sure the document is face down on the document table.
- If you're using an automatic document feeder, make sure the original document is inserted face up.

You're using a transparency unit, and the colors of your negative film preview look strange.

- Make sure you've selected the correct Document Type in EPSON Scan.
- The scanner perceives the film guide's frame as white, which alters the exposure of the scanning area and makes the preview appear darker. To see the correct colors, do a zoom preview on an area toward the center of an image.
- If you see light vertical lines on the scanned image, the TPU calibration area may contain dirt or dust. Clean the calibration area with a lint-free cloth.

Uninstalling and Reinstalling EPSON Scan

If you've tried every other solution and your system still doesn't recognize your scanner, try uninstalling and reinstalling the scanner software (EPSON Scan).

Follow a procedure below to uninstall EPSON Scan.

Windows

1. Double-click the Add or Remove Programs utility in the Windows Control Panel.
2. Select EPSON Scan, and then click the Change/Remove (or Add/Remove) button.
3. Follow the on-screen instructions to remove the software.

See the *Start Here* sheet to reinstall EPSON Scan.

Macintosh OS 9.x

1. Insert the EPSON Expression 1640XL Scanner Software CD-ROM in the drive.
2. Double-click the EPSON icon.

The EPSON Installation Program window appears.

3. Double-click the Install Software.

The EPSON Scan Installer window appears.

4. Click Easy Install to drop down the list, and then click Uninstall.
5. Click the Uninstall button, and then click Continue on the confirmation message.

See the *Start Here* sheet to reinstall EPSON Scan.

Macintosh OS X

1. Insert the EPSON Expression 1640XL Scanner Software CD-ROM in the drive.
2. Double-click the EPSON icon.
3. Open the Mac OS X folder, and then open the English folder.

4. Double-click **EPSON Scan Installer**.
5. Enter a name and password in the Authenticate dialog box.
6. Click **Accept** in the License dialog box.

The EPSON Scan Installer window appears.

7. Click **Easy Install** to drop down the list, and then click **Uninstall**.
8. Click the **Uninstall** button.
9. Click **Continue** and **OK** on any confirmation messages.
10. Click **Quit** and then remove the CD-ROM.

See the *Start Here* sheet to reinstall EPSON Scan.

Where To Get Help

EPSON Technical Support

EPSON provides technical assistance 24 hours a day through the electronic support services and automated telephone services listed in the following table:

Service	Access
World Wide Web	From the Internet, you can reach EPSON Support at http://support.epson.com . At this site, you can download drivers and other files, look at product documentation, access troubleshooting information, and receive technical advice through e-mail.
Automated Telephone Services	A variety of automated help services are available 24 hours a day, seven days a week. To use these services, you must have a touch tone telephone and call (800) 922-8911 . Your EPSON SoundAdvice SM Express Code is 65200. Use it to quickly select your scanner in SoundAdvice.

To speak to a technical support representative, dial (562) 276-4382 (U.S.) or (905) 709-3839 (Canada), 6 AM to 6 PM, Pacific Time, Monday through Friday. Toll or long distance charges may apply.

Before you call, please have the following information ready:

- Product name (EPSON Expression 1640XL)
- Product serial number (located on the lower right side of the back of the scanner)
- Proof of purchase (such as a store receipt) and date of purchase
- Computer configuration
- Description of the problem

You can purchase genuine EPSON supplies and accessories from the EPSON Store at (800) 873-7766 or www.epsonstore.com (U.S. sales only). In Canada, please call (800) 463-7766 for dealer referral.



If you need help using another manufacturer's software with an EPSON product, see the documentation for that software for technical support information.

Software Technical Support

Software	Telephone	Fax	Online and E-mail
EPSON Scan	(562) 276-4382 (800) 922-8911	(800) 922-8911 fax-on-demand system	http://support.epson.com
Adobe Photoshop Elements	Macintosh: (900) 555-3300 Windows: (900) 555-2200 \$2.00 per minute	—	www.adobe.com techdocs@adobe.com
ArcSoft	(510) 440-9901	—	www.arcsoft.com/techmain.htm support@arcsoft.com
MonacoEZcolor	(978) 749-9944	(978) 749-9977	www.monacosys.com
LaserSoft Imaging, Inc.	(941) 383-7496	(941) 387-7574	info@lasersoft-imaging.com

Appendix A

Specifications



This appendix includes general, electrical, environmental, and interface specifications. It also includes specifications for the transparency unit, automatic document feeder, and IEEE 1394 FireWire scanner interface card.

Scanner

General

Scanner type

Flatbed, color

Photoelectric device

Color MatrixCCD™ line sensor

Effective pixels

19520 × 27520 pixels at 1600 dpi,
100% scaling

Optical density

3.6 Dmax

Color depth

42-bit internal/42-bit external

Grayscale depth

14-bit internal/14-bit external

Maximum document size

12.2 × 17.2 inches (310 × 437 mm)
A3 or Letter
(The reading area can be specified from
your software)

Output resolution

50 dpi - 9600 dpi

50 to 4800 in 1 dpi increments

7200 and 9600 dpi with zoom

Maximum hardware resolution*

1600 dpi (main scan)

3200 dpi with Micro Step Drive
(sub scan)

*The maximum hardware resolution of
1600 × 3200 dpi is achieved using
EPSON's Micro Step Drive technology

Maximum interpolated resolution

12800 × 12800 dpi

Speed (1600 dpi, draft mode)

Color: 9.2 msec/line (approx.)

Grayscale: 3.1 msec/line (approx.)

Line Art: 3.1 msec/line (approx.)

Color separation

RGB color filters on CCD

Reading sequence

Monochrome: One-pass scanning

Color byte sequence: One-pass scanning (R, G, B)

Color line sequence: One-pass scanning (R, G, B)

Zoom

50 to 200% in 1% increments

Command level

ESC/I-B8

Pixel depth

14 bits per pixel (12 bits per pixel input, 1 to 14 bits per pixel output)

Brightness

7 levels

Line art settings

Fixed threshold

TET (Text Enhancement Technology, enable/disable selectable)

Digital halftoning

AAS (Auto Area Segmentation, enable/disable selectable)

3 halftoning modes (A, B, and C)

4 dither patterns (A, B, C, and D) for bi-level and quad-level data (2 downloadable dither patterns)

Gamma correction

2 types for CRT display

3 types for printer

1 type user-defined

Color correction

1 type for CRT display

3 types for printer (available in color byte sequence mode and color line sequence mode)

1 type user-defined

Interfaces

SCSI 2 (micro DB 50-pin connectors)

USB (Type B receptacle connector)

Optional IEEE 1394 (FireWire)

Light source

Xenon gas cold cathode fluorescent lamp

Reliability

100,000 cycles of carriage movement (main unit MCBF)

Dimensions

Width: 25.8 inches (656 mm)

Depth: 18 inches (458 mm)

Height: 6.9 inches (176 mm)

Weight

Approximately 46.2 lb (21 kg)

Electrical

Input voltage range

100 to 120 VAC: 90 to 132 VAC

220 to 240 VAC: 198 to 264 VAC

Rated frequency

50 to 60 Hz

Rated current

100 to 120 VAC: 1.2 A

220 to 240 VAC: 0.7 A

Power consumption

Operating: Approximately 45 W
Approximately 55 W
with TPU or ADF unit

Standby: Approximately 12 W

Environmental

Temperature

Operating: 41 to 95 °F
(5 to 35 °C)
50 to 89 °F when
using ADF
(10 to 32 °C)

Standby: -13 to 140 °F
(-25 to 60 °C)

Humidity (without condensation)

Operating: 10 to 80%

Standby: 10 to 85%

Operating conditions

Ordinary office or home conditions.

Avoid dust, direct sunlight, and
proximity to strong light sources.

Safety Approvals

120 V model

Safety: UL 1950

CSA C22.2 No. 950

EMC FCC part 15 subpart B class B

CSA C108.8 class B

230 V model

Safety: EN 60950

EMC: EN 550022
(CISPR Pub 22)
class B

AS/NZS 3548 class B

SCSI Interface

Interface type

ANSI X3T9.2/375R Revision 10L
(SCSI 2)

Logic level

TTL-compatible

ID setting

Selectable from 0 to 7

Terminator

Internal terminator (enable/disable
selectable)

Connector type

Two micro DB 50-pin connectors

USB Interface

Interface type

Universal Serial Bus Specification
Revision 1.0

Electrical standard

Full speed mode (12Mb) of Universal
Serial Bus Specification Revision 1.0

Connector type

One receptacle (Type B)

Option (ADF/TPU) Interface Connector

Interface type

For use with the optional automatic document feeder (B813212) and transparency unit (B813202)

Output voltage

21.6 to 26.4 VDC
4.75 to 5.25 VDC

Output current

0.6 A (24 V)
0.3 A (5 V)

Initialization Methods

SCSI interface

Hardware: Initialized when the scanner is turned on or the scanner receives a SCSI Reset signal from the SCSI interface

Software: Initialized when the software sends the Esc @ (initialize the scanner command), or the scanner receives a SCSI Bus Device message

USB interface

Hardware: Initialized when the scanner is turned on or the USB cable is unplugged from the USB port on the scanner

Software: Initialized when the software sends the Esc @ command or the scanner receives a Bus Reset from the USB interface

Transparency Unit (B813202)

General

Reliability

MCBF 100,000 cycles

Readable area

11.4 × 16.5 inches (290 × 420 mm)

Dimensions

Width: 12.8 inches (324 mm)
Depth: 21.3 inches (540 mm)
Height: 3.6 inches (92 mm)

Weight

Approximately 11 lb (6 kg)

Electrical

Input voltage

21.6 to 26.4 VDC
4.7 to 5.25 VDC

Rated current

1.3A
0.3 A

Environmental

Temperature

Operating: 41 to 95 °F
(5 to 35 °C)
Standby: -14 to 140 °F
(-20 to 60 °C)

Humidity (without condensation)

Operating: 10 to 80%
Standby: 10 to 85%

Automatic Document Feeder (B813212)

General

Paper input/output

Load face up; eject face down

Paper quantity

100 pages (55 g/m² paper, maximum total thickness under 0.48 inches [12 mm])

Reliability

100,000 sheets (load/eject MCBF)

Dimensions

Width: 23.8 inches (606 mm)

Depth: 19.2 inches (488 mm)

Height: 5.3 inches (134 mm)

Weight

Approximately 28.7 lb (13 kg)

Electrical

Input voltage

22.8 to 25.2 VDC

4.75 to 5.25 VDC

Input current

24 V: 1.3 A

5 V: 0.3 A

Environmental

Temperature

Operating: 50 to 89 °F
(10 to 32 °C)

Standby: -4 to 140 °F
(-20 to 60 °C)

Humidity (without condensation)

Operating: 20 to 80%

Standby: 95% or less

IEEE 1394 FireWire Scanner Interface Card (B808342)

General

Interface type

IEEE 1394 compatible

Data transfer method

Half-duplex Data/Strobe differential serial

Synchronization method

Clock synchronization with DS-Link

Encoding/decoding

DS-Link

Logic level

3.3 V

Compatible connectors

IEEE 1394 compatible

Power class

Power class code 100

No power supply from external sources

Fitted with a repeat function with bus power

Environmental

Temperature

Operating: 41 to 95 °F
(5 to 35 °C)

Standby: -13 to 140 °F
(-25 to 60 °C)

Humidity (without condensation)

Operating: 10 to 80%

Standby: 10 to 85%

Appendix B

Notices



This chapter includes system requirements, safety instructions, your Epson America Limited Warranty, and other important information about your EPSON Expression 1640XL.

Important Safety Instructions

Read all of these instructions and save them for later reference. Follow all warnings and instructions marked on the scanner.

- Unplug the scanner before cleaning. Clean with a damp cloth only. Do not spill liquid on the scanner.
- Do not place the scanner on an unstable surface or near a radiator or heat source.
- Do not block or cover the openings in the scanner's cabinet. Do not insert objects through the slots.
- Use only the type of power source indicated on the scanner's label.
- Connect all equipment to properly grounded power outlets. Avoid using outlets on the same circuit as photocopiers or air control systems that regularly switch on and off.
- Do not let the power cord become damaged or frayed.
- If you use an extension cord with the scanner, make sure the total ampere rating of the devices plugged into the extension cord does not exceed the cord's ampere rating. Also, make sure the total ampere rating of all devices plugged into the wall outlet does not exceed the wall outlet's ampere rating.
- Do not attempt to service the scanner yourself.
- Unplug the scanner and refer servicing to qualified service personnel under the following conditions: if the power cord or plug is damaged; if liquid has entered the scanner; if the scanner has been dropped or the cabinet damaged; if the scanner does not operate normally or exhibits a distinct change in performance. Do not adjust controls that are not covered by the operating instructions.

ENERGY STAR Compliance

As an ENERGY STAR Partner, EPSON has determined that this product meets the ENERGY STAR guidelines for energy efficiency.



The EPA ENERGY STAR Office Equipment Program is a voluntary partnership with the computer and office equipment industry to promote the introduction of energy-efficient personal computers, monitors, printers, fax machines, copiers, and scanners, in an effort to reduce air pollution caused by power generation.

Declaration of Conformity

According to 47CFR, Part 2 and 15 for Class B Personal Computers and Peripherals; and/or CPU Boards and Power Supplies used with Class B Personal Computers:

We: EPSON AMERICA, INC.
Located at: MS 6-43
3840 Kilroy Airport Way
Long Beach, CA 90806-2469
Telephone: (562) 290-5254

Declare under sole responsibility that the product identified herein, complies with 47CFR Part 2 and 15 of the FCC rules as a Class B digital device. Each product marketed, is identical to the representative unit tested and found to be compliant with the standards. Records maintained continue to reflect the equipment being produced can be expected to be within the variation accepted, due to quantity production and testing on a statistical basis as required by 47CFR §2.909. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Trade Name: EPSON
Type of Product: Image Scanner
Model: G650C
Product: EPSON Expression 1640XL

FCC Compliance Statement

For United States Users

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 or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and 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/TV technician for help.

Warning

The connection of a non-shielded equipment interface cable to this equipment will invalidate the FCC Certification of this device and may cause interference levels which exceed the limits established by the FCC for this equipment. It is the responsibility of the user to obtain and use a shielded equipment interface cable with this device. If this equipment has more than one interface connector, do not leave cables connected to unused interfaces. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

For Canadian Users

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

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

Warranty

Epson America, Inc. Limited Warranty

What Is Covered: Epson America, Inc. ("EPSON") warrants to the first end user customer of the EPSON product enclosed with this limited warranty statement, that the product if purchased and used in the United States or Canada, conforms to the manufacturer's specifications and will be free from defects in workmanship and materials for a period of one year from the date of original purchase. EPSON warrants that the EPSON product is manufactured from new components and parts, or in the case of a refurbished unit, may contain refurbished parts that meet the EPSON standard of quality.

What EPSON Will Do To Correct Problems: Should your EPSON product prove defective during the warranty period, please bring the product securely packaged in its original container or an equivalent, along with proof of the date of original purchase, to your EPSON Dealer or EPSON Customer Care Center. You are responsible for all costs (shipping, insurance, travel time) in getting the product to the service location. EPSON will, at its option, repair or replace on an exchange basis the defective unit, without charge for parts or labor. The replacement unit may be new or refurbished to the EPSON standard of quality, and at EPSON's option, the replacement may be another model of like kind and quality. EPSON's liability for replacement of the covered product will not exceed the original retail selling price of the covered product. Exchange or replacement products or parts assume the remaining warranty period of the product covered by this limited warranty.

What This Warranty Does Not Cover: This warranty covers only normal use in the United States and Canada. This warranty does not cover damage to the EPSON product caused by parts or supplies not manufactured, distributed or certified by EPSON. This warranty does not cover third party parts, components or peripheral devices added to the EPSON product after its shipment from EPSON, e.g., dealer-added boards, chips or drives. EPSON is not responsible for warranty service should the EPSON label or logo or the rating label or serial number be removed or should the product fail to be properly maintained or fail to function properly as a result of misuse, abuse, improper installation, neglect, improper shipping, damage caused by disasters such as fire, flood, and lightning, improper electrical current, software problems, interaction with non-EPSON products, or service other than by an EPSON Authorized Servicer. Postage, insurance, or shipping costs incurred in presenting your EPSON product for warranty service are your responsibility. If a claimed defect cannot be identified or reproduced in service, you will be held responsible for costs incurred.

THE WARRANTY AND REMEDY PROVIDED ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME LAWS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES. IF THESE LAWS APPLY, THEN ALL EXPRESS AND IMPLIED WARRANTIES ARE LIMITED TO THE WARRANTY PERIOD IDENTIFIED ABOVE. UNLESS STATED HEREIN, ANY STATEMENTS OR REPRESENTATIONS MADE BY ANY OTHER PERSON OR FIRM ARE VOID. NEITHER EPSON AMERICA, INC. NOR ITS AFFILIATES SHALL BE LIABLE FOR ANY LOSS, INCONVENIENCE, OR DAMAGE, INCLUDING DIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OR INABILITY TO USE THE EPSON PRODUCT, WHETHER RESULTING FROM BREACH OF WARRANTY OR ANY OTHER LEGAL THEORY.

In Canada, warranties include both warranties and conditions.

Some jurisdictions do not allow limitations on how long an implied warranty lasts and some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

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

To locate the EPSON Authorized Reseller or EPSON Customer Care Center nearest you call 800-922-8911 or write to Epson America, Inc., P.O. Box 93008, Long Beach, CA 90809-9985.

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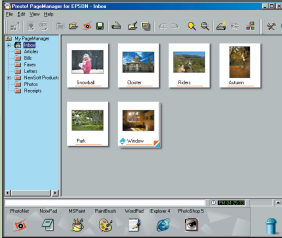
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Scanning Overview

These are the basic steps you perform when you scan an image. For step-by-step instructions, see Chapter 3.

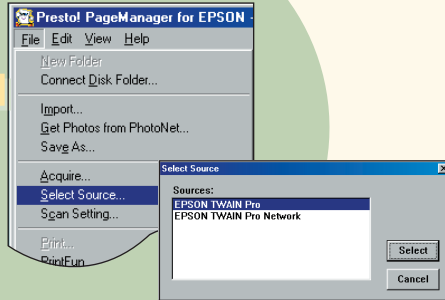
1

Start your host application.



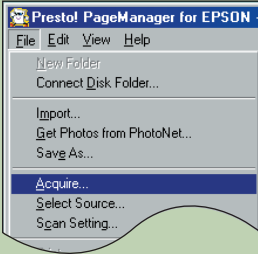
2

Select your scanner software.



3

Start your scanner software.



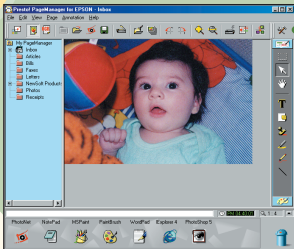
4

Choose your scan settings and preview your image.



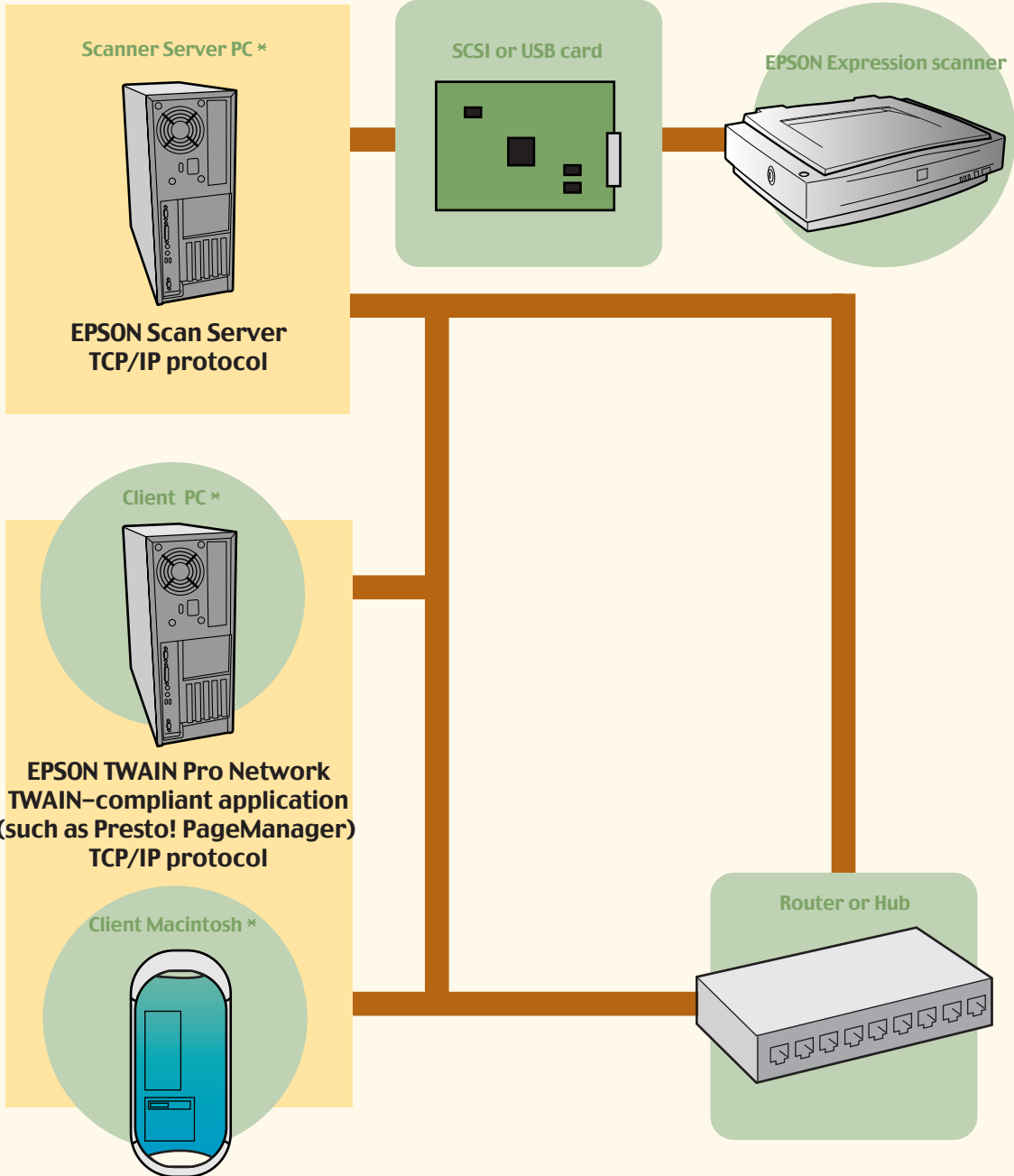
5

Scan your image. Your scanner software closes, and the scanned image appears in your application window.



Network Scanning Overview

This illustration shows the hardware and software you need to install to use the EPSON Expression as a network scanner. For details, see Chapter 4.



* Must have a network interface card installed.