

***EPSON TWAIN***  
***User's Guide***

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# Introduction

EPSON® TWAIN is the interface program between your application software and scanner that lets you scan images into your software. It is the ideal interface for producing professional quality images, scanning text into optical character recognition (OCR) programs, and managing text pages in NewSoft™ Presto!™ PageManager™.

EPSON TWAIN includes many features for previewing and modifying your images for the perfect scan:

- ▶ Captures all kinds of image types, from black and white text to 36-bit color images
- ▶ Automatically locates and exposes the image
- ▶ Opens a preview image allowing you to change settings and view their effects before you scan
- ▶ Provides a helpful marquee feature so you can frame the exact image borders or only portions of it for scanning
- ▶ Uses EPSON's [Auto Area Segmentation](#) and [Text Enhancement Technology](#) features to improve text recognition and provide clear separation from graphic areas when you scan images with text
- ▶ Gives you predefined settings for a variety of image types and output destinations and lets you customize your own settings



Here is a brief overview of scanning steps using the EPSON TWAIN Advanced window (the Windows® interface is shown; the Macintosh® steps are the same):

1 Select the basic settings:

Document Source  
Image Type  
Destination  
Resolution

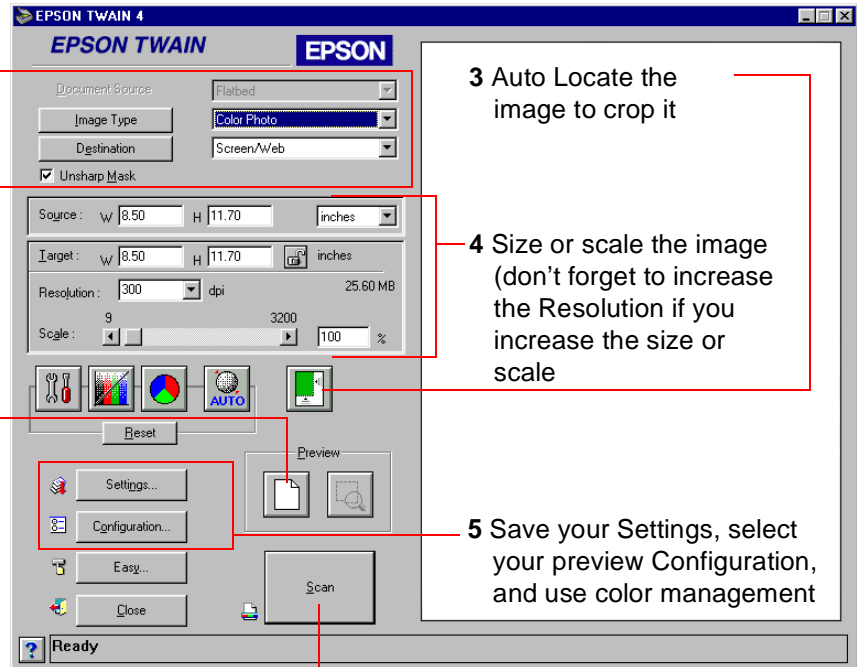
2 Preview your image

3 Auto Locate the image to crop it

4 Size or scale the image (don't forget to increase the Resolution if you increase the size or scale)

5 Save your Settings, select your preview Configuration, and use color management

6 Scan the image into your application



EPSON TWAIN also comes with these utilities:

- ▶ EPSON Scanner Monitor (Macintosh) or Scan Events (Windows) utilities that let you scan with Presto! PageManager using the Start button
- ▶ EPSON Screen Calibration utility to calibrate your screen to your scanner for accurate previews
- ▶ EPSON Scan! II (Macintosh only), a TWAIN-compliant application you can use for basic scanning and exporting of images (if you don't have a TWAIN-compliant image editing application)

## System Requirements

Before installing the scanner software, make sure your system meets the following requirements.



Color and tone reproduction depend on the display capabilities of your computer system, including the video controller, monitor, and software.

### Windows System Requirements

- ▶ Microsoft Windows NT® 4.0, Windows 95, or Windows 98 preinstalled (USB support requires Windows 98)
- ▶ PC with an available built-in USB port or hub connection or a PCI slot for the SCSI card (included with the Perfection™ 1200S)
- ▶ VGA or higher standard monitor with 640 × 480 resolution (800 × 600 or higher recommended) and 256 colors (65,000 colors or more recommended)



If you're using Mac OS 8.1 on your iMac, you must install the iMac Update 1.0, available from the Apple web site, before installing your scanner software. If you're using Mac OS 8.5 or later, check the Apple web site for any updates.

## Macintosh System Requirements

EPSON TWAIN supports the Apple® ColorSync™ 2 color management system and QuickTime.™

- ▶ Apple Macintosh computer running system 8.1 or later
- ▶ Available iMac or G3 standard USB interface or hub connection, (Perfection 1200U), or Macintosh standard SCSI Port (Perfection 1200S)
- ▶ Color monitor with 640 × 480 resolution (800 × 600 or higher recommended) and 256 colors (32,000 colors or more recommended)

## How to Use This Manual

For instructions on installing EPSON TWAIN, see the *Scanner Basics* book. This *User's Guide* tells you what you need to know to scan with EPSON TWAIN and use the TWAIN utilities.

[Basic Scanning](#) gives step-by-step instructions for basic scanning and previewing of your images.

[Advanced Scanning](#) describes advanced EPSON TWAIN procedures, such as scanning with the optional transparency unit and auto document feeder, customizing image type and destination settings, adjusting image size and scale, using image controls, tone correction, and color adjustments, saving custom setting groups, and configuring TWAIN.

[Using the EPSON TWAIN Utilities](#) tells you how to use EPSON Scan! II, the scanner monitor utilities, and EPSON Screen Calibration (Macintosh only).

[Using the Start Button](#) gives step-by-step instructions on setting up and using your scanner's Start button for one-touch scanning.

[Troubleshooting](#) provides solutions to problems you may encounter.

At the end, you'll find a [Glossary](#) and an [Index](#).

## Cautions, Notes, and Tips

You'll find this information throughout your manual:



Cautions must be observed to avoid damage to your equipment.



Notes contain important information about your scanner.



Tips contain additional hints for better scanning.

## Using Electronic Links

Blue underlined text indicates a link (cross-reference) to other parts of this guide. Click on the link text with the mouse pointer to view the referenced information.

# Basic Scanning



EPSON Scan! II (Macintosh only) is a TWAIN-compliant application supplied with EPSON TWAIN in case you don't have a TWAIN-compliant program for scanning. For best results, use one of the TWAIN-compliant applications that came with the scanner instead. See [Using EPSON Scan! II](#) for instructions on scanning with EPSON Scan! II.

Before scanning, make sure you've installed the EPSON TWAIN software (as described in the *Scanner Basics* book) and the application software that supports EPSON TWAIN, such as Adobe® PhotoDeluxe® or Presto! PageManager.

This chapter gives you instructions on:

- ▶ [Starting EPSON TWAIN](#)
- ▶ [Selecting Basic Settings](#)
- ▶ [Previewing Your Scan](#)

If you're scanning with the optional transparency unit or auto document feeder, see these sections for basic scanning instructions:

- ▶ [Scanning Transparencies](#)
- ▶ [Scanning with the Auto Document Feeder](#)



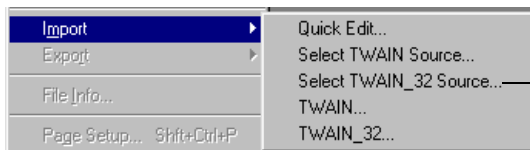
If you start your application software before turning on your scanner, the software may not work properly.

The steps in this section cover scanning with common TWAIN-compliant applications. Other applications, such as PhotoDeluxe, use different scanning steps. See your *Scanner Basics* book for instructions on scanning with PhotoDeluxe; see your application's documentation for additional details on scanning.

## Starting EPSON TWAIN

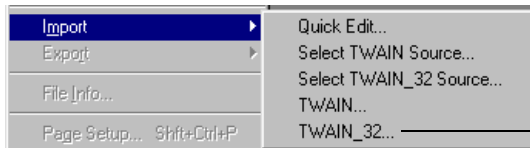
Follow the steps in this section to start EPSON TWAIN from your application software. The steps may vary, depending on your application.

- 1 Make sure you set up and turned on the scanner. Then place the document you want to scan on the document table. See the *Scanner Basics* book for instructions.
- 2 Start your application software by selecting the program icon in its program folder.
- 3 Select the scanner source. Open the File menu and choose **Import**, **Acquire**, or **Select Source**, and then select either **Select TWAIN\_32 Source** (Windows) or **TWAIN Select** (Macintosh).



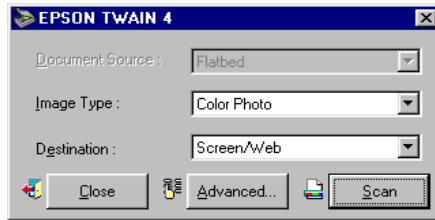
Click to select the scanner source

- 4 Select either **EPSON TWAIN 4 (32-bit)** (Windows) or **EPSON TWAIN 4** (Macintosh) and click **Select**.
- 5 Start EPSON TWAIN for scanning. Open the File menu and choose **Import** or **Acquire** and then select either **TWAIN\_32** (Windows) or **TWAIN Acquire** (Macintosh).

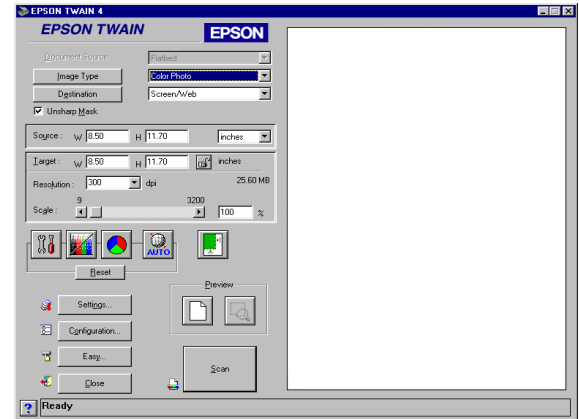


Click to open EPSON TWAIN

One of the EPSON TWAIN windows appears.



Easy window



Advanced window



The screen examples in this book are from EPSON TWAIN for Windows. The screens for Macintosh look a bit different, but they contain the same options. Any exceptions are noted in the text.

The first time you start EPSON TWAIN, you see the Easy window. After that, you'll see the window that was open the last time you closed EPSON TWAIN. To switch between the windows, click the **Easy** or **Advanced** button.

Both the Easy and Advanced windows contain the basic settings you need to scan an image. See [Selecting Basic Settings](#) for details.

The Advanced window lets you preview your image and select many advanced settings. See [Previewing Your Scan](#) and [Advanced Scanning](#) for details.



Document Source settings for optional equipment appear in the list only when that option is installed.

If you're scanning positive, reflective originals (such as a photograph) with the optional transparency unit installed, be sure to turn off the transparency unit. Then select **Flatbed** as the Document Source option.

## Selecting Basic Settings

For most scans, you need to check four basic settings: **Document Source**, **Image Type**, **Destination**, and **Resolution** (Advanced window only).

- 1 You only need to change the Document Source setting if you've installed an optional transparency unit (TPU) or auto document feeder (ADF) on your scanner.

If you're scanning a document from the scanner's document table, select **Flatbed** (default) as the **Document Source** setting. If you've installed the optional auto document feeder or transparency unit on your scanner, select one of the following options in the Document Source list:

Setting	Type of document source
ADF (Windows) Auto Document Feeder (Macintosh)	For scanning single-sided documents up to legal size (8.5 × 14 inches) using the auto document feeder
TPU for neg. Film	For scanning negative film with the transparency unit, such as negative film strips
TPU for pos. Film	For scanning positive film with the transparency unit, such as slides

For detailed steps in scanning with the optional transparency unit or auto document feeder, see [Scanning Transparencies](#) or [Scanning with the Auto Document Feeder](#).





To view the default settings for the Image Type you selected, click the **Image Type** button.

You can also change the settings for these options or save your own custom Image Types. See [Customizing Image Types](#) for more information.

- 2 You must select the correct Image Type setting each time you scan. These image types automatically select other TWAIN settings that are the best for your type of image and set the ranges for your Image Controls. Select one of the following options:

Setting	Type of image (positive or negative)
Color Photo	For color photographs
Color Photo De-screening	For color images scanned from pre-printed material
Black & White Photo	For black and white photographs
Line Art	For black line drawings
OCR	For black text that will be input into an OCR (Optical Character Recognition) application; optionally uses the <a href="#">Text Enhancement Technology</a> feature
Copy & Fax	For text and graphic images in a document that you intend to copy or fax; uses the <a href="#">Auto Area Segmentation</a> feature



To view the default settings for the Destination you selected, click the **Destination** button.

You can also change the settings for these options or save your own custom destinations. See [Customizing Destination Settings](#) for more information.

- 3 Now select the output device where you want to display or print your scanned image from the Destination list. These destinations automatically select resolution and sharpness settings appropriate for the output device. Select one of the following options:

<b>Setting</b>	<b>Type of output device</b>
Screen/Web	For viewing on a monitor screen or within a web page
EPSON printer	For printing on your EPSON ink jet printer
Laser Printer	For printing on a laser printer
Fax	For sending to a fax machine or fax/modem
OCR	For sending to an OCR (Optical Character Recognition) application



With applications that let you select ICM, sRGB, or ColorSync profiles for your printer, you'll get great printed output when you scan using ICM/sRGB (Windows 98) or ColorSync (Macintosh). See [Configuring Preview and Color Options](#) for details.

- 4 The Image Type and Destination settings you choose automatically select the correct Resolution setting for your image.

If you need to change the resolution, click **Advanced** to open the Advanced window, if necessary. Then select a new setting from the Resolution list. The available resolutions range from 50 to 9600 dpi (dots per inch). You can also type in a specific **Resolution** setting, such as 1600 or 2400 dpi for enlargements, if it's not in the list.

If you enlarge your target image size by scaling or by selecting a larger Target size, be sure to increase the Resolution setting by the same proportion to retain your image quality. See [Adjusting Source and Target Image Sizes](#) for more information.

For additional information on selecting scanning resolution, see your *Scanner Basics* book.

- 5 It's a good idea to preview your image before you actually scan so you can make any necessary changes. To preview your image, click **Advanced** to open the Advanced window, if necessary. Then see [Previewing Your Scan](#) for preview instructions.

See [Advanced Scanning](#) for information on the rest of the TWAIN settings in the window.

- 6 When you're ready to scan, click the **Scan** button. The scanned image appears in your application window.
- 7 Click the **Close** button to close the EPSON TWAIN window and return to your application.

To modify or save your scanned image using your application software, see your software documentation.



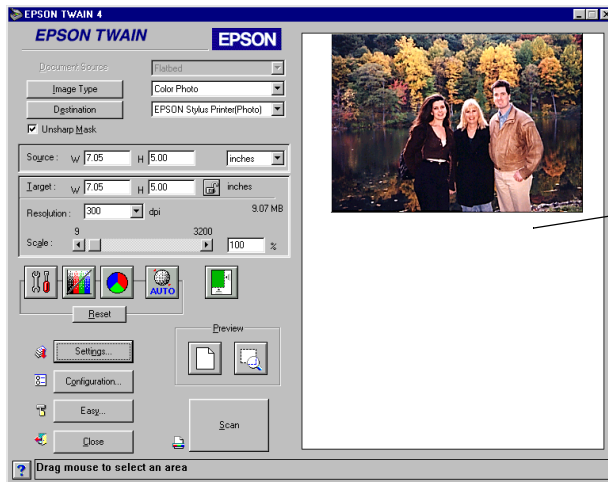
You cannot preview an image that exceeds your system's available memory or disk space.

Although the preview image changes when you modify settings, the settings don't affect the image until you scan it.


## Previewing Your Scan

You can preview your image in the Advanced window to see the effects of your settings before scanning. Previewing also allows you to determine the width and height of the scanned image and the final file size.

In the Advanced window, click the  Preview button to preview the entire image area.




preview image area

If you want to crop the image, you can preview and use a marquee. Then you can zoom into the cropped area using the  Zoom Preview button. See [Using Marquees](#) for instructions.

If you want to save your preview image and settings after closing EPSON TWAIN, or select other previewing options, see [Configuring Preview and Color Options](#) for instructions.



If the mouse pointer doesn't change to a cross hair, click the  Preview button again.



You can save different sets of settings for your marquee and then batch scan all the variations. See [Batch Scanning](#) for details.


## Using Marquees

A marquee is a frame around an entire image, or a portion of an image so you can scan only the most important part. To create a marquee, follow these steps:

- 1 Move the mouse pointer over the preview image; the pointer becomes a cross hair.
- 2 Position the pointer in the corner of the area you want to select and press the mouse button.
- 3 Hold down the mouse button as you drag the mouse across the image, creating a marquee.



marquee

- 4 Release the button when the marquee contains the image area you want.
- 5 To enlarge the preview of the new image area, click the  Zoom Preview button.

If you need to adjust the marquee size or position, or delete the marquee, see [Adjusting a Marquee](#).

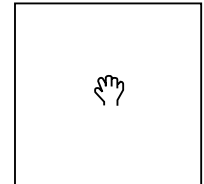
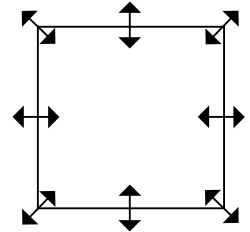
## *Adjusting a Marquee*

To resize a marquee, place the mouse pointer over its edge; the pointer changes to a double-headed arrow. Click the mouse button and drag the box up, down, sideways, or diagonally to the size you want.

To resize a marquee and retain its width-to-height proportions, hold down the **Shift** key as you drag the edge of the marquee.

To move a marquee, place the mouse pointer anywhere in the marquee image area; the pointer changes to a hand. Click the mouse button and drag the entire marquee to move it where you want it.

To delete a marquee, double-click anywhere in the preview image area.



# Advanced Scanning

The instructions in this chapter tell you how to perform these advanced scanning operations:

- ▶ [Scanning Transparencies](#)
- ▶ [Scanning with the Auto Document Feeder](#)
- ▶ [Customizing Image Types](#)
- ▶ [Customizing Destination Settings](#)
- ▶ [Adjusting Source and Target Image Sizes](#) and scaling
- ▶ [Using Automatic Adjustment Features](#), such as Auto Locate and Auto Exposure
- ▶ [Adjusting Image Controls](#), such as the exposure, highlights, and shadows
- ▶ [Using Tone Correction](#)
- ▶ [Using Color Adjustments](#), such as saturation
- ▶ [Saving Custom Settings](#) and [Batch Scanning](#)
- ▶ [Configuring Preview and Color Options](#)



The screen examples in this book are from EPSON TWAIN for Windows. The screens for Macintosh look a bit different, but they contain the same options. Any exceptions are noted in the text.



If you're scanning positive, reflective originals (such as a photograph) with the optional transparency unit installed, be sure to turn off the transparency unit. Then select **Flatbed** as the Document Source option; see [Selecting Basic Settings](#) for instructions.

Maximum transparency area is 4 × 5 inches.

## Scanning Transparencies

When you scan with the optional transparency unit (TPU) installed, you need to select the correct basic settings in EPSON TWAIN. Before you begin, make sure you've installed and turned on the transparency unit, then place your transparent original in the unit. See your *Scanner Basics* book for instructions.

For most scans, you need to check four basic settings: **Document Source**, **Image Type**, **Destination**, and **Resolution** (Advanced window only). Follow these steps:

- 1 Select one of the following options in the Document Source list, depending on the type of transparency you're scanning:

Setting	Type of document source
TPU for neg. Film	For scanning negative film with the transparency unit, such as negative film strips
TPU for pos. Film	For scanning positive film with the transparency unit, such as slides





To view the default settings for the Image Type you selected, click the **Image Type** button.

You can also change the settings for these options or save your own custom Image Types. See [Customizing Image Types](#) for more information.

- 2 You must select the correct Image Type setting each time you scan. These image types automatically select other TWAIN settings that are the best for your type of image and set the ranges for your Image Controls. Select one of the following options:

Setting	Type of image (positive or negative)
Color Photo	For color photographs
Color Photo De-screening	For color images scanned from pre-printed material
Black & White Photo	For black and white photographs
Line Art	For black line drawings
OCR	For black text that will be input into an OCR (Optical Character Recognition) application; optionally uses the <a href="#">Text Enhancement Technology</a> feature
Copy & Fax	For text and graphic image in one document that you intend to copy or fax; uses the <a href="#">Auto Area Segmentation</a> feature



To view the default settings for the Destination you selected, click the **Destination** button.

You can also change the settings for these options or save your own custom destinations. See [Customizing Destination Settings](#) for more information.

- 3 Now select the output device where you want to display or print your scanned image from the Destination list. These destinations automatically select resolution and sharpness settings appropriate for the output device. Select one of the following options:

Setting	Type of output device
Screen/Web	For viewing on a monitor screen or web page
EPSON printer	For printing on your EPSON ink jet printer
Laser Printer	For printing on a laser printer
Fax	For sending to a fax machine or fax/modem
OCR	For sending to an OCR (Optical Character Recognition) application

The default resolution setting set by the Destination you choose is based on the Image Type you selected in [step 2](#).



With applications that let you select ICM, sRGB, or ColorSync profiles for your printer, you'll get great printed output when you scan using ICM/sRGB (Windows 98), or ColorSync (Macintosh). See [Configuring Preview and Color Options](#) for details.

- 4 The Image Type and Destination settings you choose automatically select the correct Resolution setting for your image.

If you need to change the resolution, click **Advanced** to open the Advanced window, if necessary. Then select a new setting from the Resolution list. The available resolutions range from 50 to 9600 dpi. You can also type in a specific Resolution setting, such as 1600 or 2400 dpi for enlargements, if it's not in the list.

If you enlarge your target image size by scaling or by selecting a larger Target size, be sure to increase the Resolution setting by the same proportion to retain your image quality. See [Adjusting Source and Target Image Sizes](#) for more information.

For additional information on selecting resolution, see your *Scanner Basics* book.

- 5 It's a good idea to preview your image before you actually scan so you can make any necessary changes. To preview your image, click **Advanced** to open the Advanced window, if necessary. Then see [Previewing Your Scan](#) for preview instructions.

See [Advanced Scanning](#) for information on the rest of the TWAIN settings in the window.

- 6 When you're ready to scan, click the **Scan** button. The scanned image appears in your application window.
- 7 Click the **Close** button to close the EPSON TWAIN window and return to your application.

To modify or save your scanned image using your application software, see your software documentation.

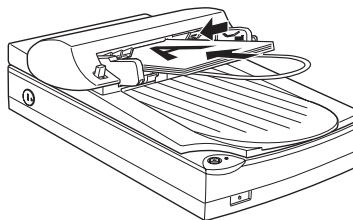


The maximum page size using the ADF is Legal size (8.5 × 11 inches).

The minimum size is 3.35 × 5 inches.

## Scanning with the Auto Document Feeder

When you scan with the optional auto document feeder (ADF) installed, you need to select the correct basic settings in EPSON TWAIN. Before you begin, make sure you've installed the ADF and loaded your single- or multi-page document into it, as shown below. See your *Scanner Basics* book for more details.



Follow these steps to scan with the ADF and EPSON TWAIN:

- 1 Select the **ADF** (Windows) or **Auto Document Feeder** (Macintosh) option in the Document Source list. You see a message telling you to make sure there is no document on the scanner's document table. Ensure there is no document on the document table and click **OK**.



If you're scanning an original on the scanner's document table with the optional auto document feeder installed, select **Flatbed** as the Document Source option; see [Selecting Basic Settings](#) for instructions.

For more information on the Image Type setting, see [Customizing Image Types](#).

- 2 Select the correct Image Type setting for your document as described in the table below. For example, if you'll be using an OCR (Optical Character Recognition) application to process your scanned document, select the **OCR** setting.

Setting	Type of image
Color Photo	For color photographs
256 Colors	For 256 color images, such as presentation graphics you'll be displaying on a computer monitor
Black & White Photo	For black and white photographs
Line Art	For black line drawings
OCR	For black text that will be input into an OCR application; optionally uses the <a href="#">Text Enhancement Technology</a> feature
Copy & Fax	For text and graphic images in a document that you intend to copy or fax; uses the <a href="#">Auto Area Segmentation</a> feature



For more information on the Destination setting, see [Customizing Destination Settings](#).

- Now select the output device where you want to display or print your scanned image from the Destination list. These destinations automatically select resolution and sharpness settings appropriate for the output device. Select one of the following options:

Setting	Type of output device
Screen	For viewing on a monitor screen
Screen Vivid	For viewing on a monitor screen with added sharpness
EPSON printer	For printing on your EPSON ink jet printer
Laser Printer	For printing on a laser printer
Fax	For sending to a fax machine or fax/modem
OCR	For sending to an OCR application


- The Image Type and Destination settings you choose automatically select the correct Resolution setting for your document. If you set these options to **OCR**, the Resolution is set to 300 dpi; change the Resolution setting to **400 dpi** for best results.




With applications that let you select ICM, sRGB, or ColorSync profiles for your printer, you'll get great printed output when you scan using ICM/sRGB (Windows 98) or ColorSync (Macintosh) mode. See [Configuring Preview and Color Options](#) for details.

If you need to change the resolution, click **Advanced** to open the Advanced window, if necessary. Then select a new setting from the Resolution list. The available resolutions range from 50 to 9600 dpi. You can also type in a specific Resolution setting, if it's not in the list.

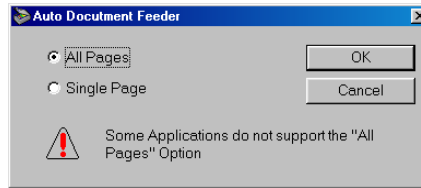
For additional information on scanning resolution, see your *Scanner Basics* book.

- 5 You must preview the first page of your document and set the correct page size. To preview your image, click **Advanced** to open the Advanced window, if necessary. Then click the  Preview button.

The scanner feeds the first (or only) page of your document into the ADF and prescans it. The prescanned image appears in the EPSON TWAIN preview image area. When the ADF ejects the first (or only) page, reload it in the ADF on top of your document.

- 6 To set the page size for your document and crop out the rest of the document table, click the  Auto Locate button. A marquee appears around the page image and the Target width and height are set automatically. See [Adjusting Source and Target Image Sizes](#) for details.

7 Click the **Scan** button. You see this dialog box:



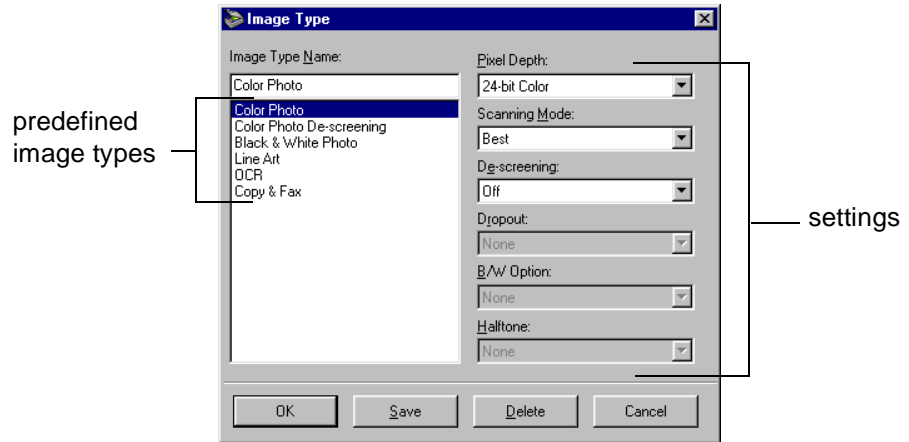
Click **Single Page** (to scan a single page) or **All Pages** (to scan a multi-page document). Then click **OK**.

- 8 EPSON TWAIN scans the document. If you're scanning a multi-page document, it scans and loads one page at a time. When scanning is finished, close the EPSON TWAIN window. A scanned image of each (or your only) page appears in your application window.
- 9 Now you can follow the instructions in your application documentation to process your files as necessary.



## Customizing Image Types

You can change the settings for the predefined Image Type options in EPSON TWAIN or add new image types. Click the **Image Type** button in the Advanced window. You see the Image Type dialog box:



To change the settings of one of the predefined image types, select it from the Image Type Name list, change the settings, and click **Save**.

To create a new image type, select a predefined type with similar settings from the Image Type Name list. Then type a name for your new image type in the box at the top of the list. Change the settings as necessary and click **Save**.

To delete an image type, select it in the Image Type Name list and click **Delete**.

The table below describes the Image Type settings.

<b>Image Type setting</b>	<b>Options</b>	<b>Description</b>
Pixel Depth	24-bit Color	For 24-bit color images
	8-bit Gray	For 8 bits/pixel images in 256 gray shades
	Black & White	For 1 bit/pixel black and white images
Halftone*	None	Lets the data format of your image determine the tone
	Mode A (Hard tone)	Converts the image into a hard toned distinct image of 1 and 2 bits/pixel/color
	Mode B (Soft tone)	Converts the image into a softer tone for images with large areas of similar tones (1 bit/pixel/color)
	Mode C (Net Screen)	Represents images in net screen, similar to newspaper photographs (1 bit/pixel/color)
	Dither A (4 × 4 Bayer)	Represents images in a 4 × 4 Bayer dither pattern
	Dither B (4 × 4 Spiral)	Represents images in a 4 × 4 spiral dither pattern
	Dither C (4 × 4 Net screen)	Represents images in a 4 × 4 net screen dither pattern
	Dither D (8 × 4 Net screen)	Represents images in an 8 × 4 net screen dither pattern

Image Type setting	Options	Description
Dropout**	None	Includes all color values in a monochrome scan
	Red	Scans red areas as white so they don't appear in a monochrome scan
	Green	Scans green areas as white so they don't appear in a monochrome scan
	Blue	Scans blue areas as white so they don't appear in a monochrome scan
Scanning	Draft	Scans faster at a lower resolution for drafts
	Best	Scans at the highest quality
De-screening	On	Automatically removes printing patterns from printed material
	Off	—
B/W Option* (Windows) Black and White Options* (Macintosh)	None	Selects no black and white scanning options
	Text Enhancement Technology	Improves text recognition accuracy and removes the document background when performing OCR (Optical Character Recognition) scanning
	Auto Area Segmentation	Separates text from graphics when scanning pages containing text and grayscale images for more accurate text recognition

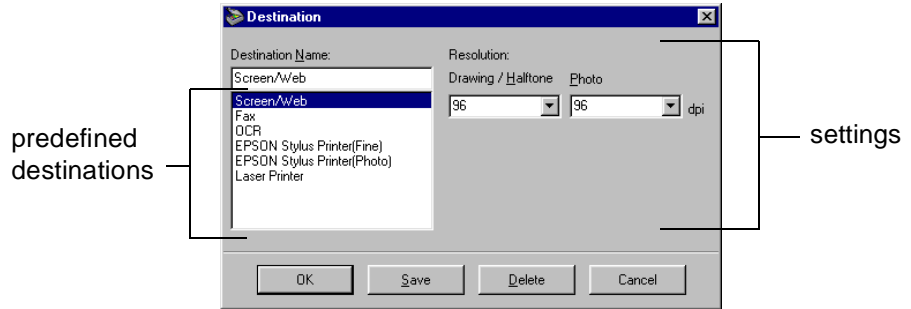
\* Available only when the Pixel Depth setting is set to **Black & White**.

\*\* Available only when the Pixel Depth setting is set to **8-bit Gray** or **Black & White**.

## Customizing Destination Settings

You can change the settings for the predefined Destination (output device) options available in EPSON TWAIN or add new Destination options of your own.

Click the **Destination** button in the EPSON TWAIN window. You see the Destination dialog box:



To change the settings of one of the predefined destinations, select it from the Destination Name list, change the settings, and click **Save**.

To create a new destination, type a name for it in the box at the top of the list. Change the settings as necessary and click **Save**.

To delete a destination, select it in the Destination Name list and click **Delete**.

The resolution and sharpness settings for each of the predefined Destination options are listed in the table below:

Destination options	Drawing/Halftone Resolution	Photo Resolution
Screen/Web	96	96
EPSON ink jet printer	360 to 720	150 to 360
Laser Printer	600	200
Fax	200	200
OCR	300	300



You can change the Resolution setting on the EPSON TWAIN main window if you don't want to use the default resolution set by the Destination option.

The default resolution settings set by the Destination option are based on the Image Type you select:

- If you selected **Color Photo** or **Black & White Photo** as the Image Type setting, the resolution listed in the Photo Resolution column is used
- If you selected **Line Art**, **OCR**, or **Copy & Fax** as the Image Type setting, the resolution listed in the Drawing/Halftone Resolution column is used.

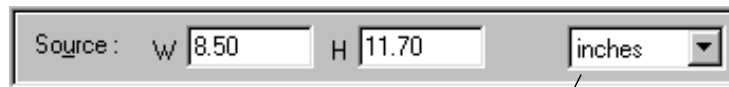


Sometimes the values you select may be rounded up or down to retain the proportions of your image or marquee. The width and height settings are ignored if you scan without first previewing the image.

If you enlarge your target image size by scaling or selecting a larger Target size, be sure to increase the Resolution setting by the same proportion to retain your image quality. See [Selecting Basic Settings](#) for instructions on changing the Resolution setting.

## Adjusting Source and Target Image Sizes

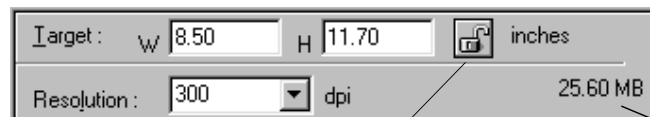
The Source width and height fields indicate the size of the entire preview image or of the marquee. You can type in a new width and height to specify exactly how much of the image you want to scan.



measurement units

To change the unit of measurement used for the Source and Target width and height fields, select **inches**, **pixels**, or **cm** (centimeters) from the measurement units list.

The Target width and height fields indicate the size of your scanned image using the current settings. The values in these fields change as you modify settings. You can also type in a specific width and height to specify the target image size exactly.



lock icon

file size

To retain the Target width and height no matter how you size the source image, click the lock icon. Click it again to unlock the values. The file size indicator shows the approximate size of the scanned image in KB or MB, based on the image's size and selected resolution.



The range of the possible scale values depends on the Resolution setting.

If you enlarge your target image size by scaling it, be sure to increase the Resolution setting by the same proportion to retain your image quality. See [Selecting Basic Settings](#) for instructions on changing the Resolution setting.

## Scaling the Image

The Scale field indicates the amount by which an image is enlarged or reduced during scanning.



You can adjust the scale by moving the slider box, clicking the left or right arrow, or typing a percentage in the Scale field.

## Using Automatic Adjustment Features


EPSON TWAIN includes two automatic adjustment features to help you quickly prepare your preview image for scanning, as described in these sections:

- ▶ [Using Auto Exposure](#)
- ▶ [Using Auto Locate](#)




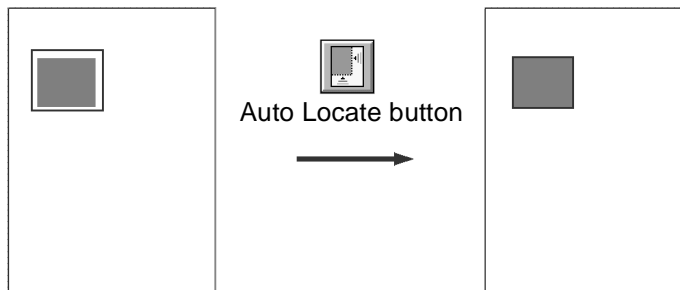
Auto Exposure is automatically enabled when you scan from the Easy window. Auto Locate is automatically enabled if you click the Scan button without previewing the image, unless you're scanning with the ADF and Text Enhancement Technology is turned on (see [Customizing Image Types](#) for details on the Text Enhancement Technology feature).

## Using Auto Exposure


Click the  Auto Exposure button in the Advanced window to automatically adjust the image exposure. Auto Exposure sets the Exposure, Highlight, Gamma, and Shadow settings in the Image Controls dialog box automatically. See [Adjusting Image Controls](#) for details.

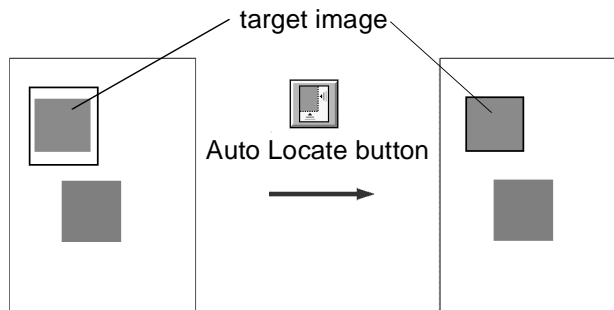
## Using Auto Locate

After previewing your image, click the  Auto Locate button in the Advanced window to crop out everything on the document table except your image.





If the document table contains more than one image, select the target image by dragging the mouse pointer across it to create a rough marquee (see [Using Marquees](#) for instructions). Then click the  Auto Locate button. The marquee is placed exactly around the target image borders automatically.






Auto Exposure overrides any Image Controls setting you select.

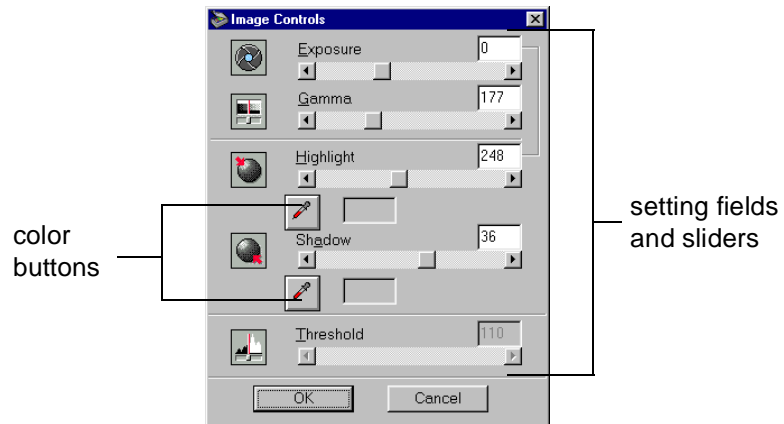
You can't use the Image Controls when Text Enhancement Technology is turned on (see [Customizing Image Types](#) for details).

## Adjusting Image Controls

Use the Image Controls to adjust the following settings:

- ▶ [Exposure](#)
- ▶ [Gamma](#)
- ▶ [Highlight](#)
- ▶ [Shadow](#)
- ▶ [Threshold](#)

Click the  Image Controls button in the Advanced window to display the Image Controls dialog box:



To change the Image Controls, move the slider for the setting, click the left or right arrows, or type a value in the field on the right. See [Using the Color Buttons](#) for instructions on using the color buttons.

The Image Controls settings are described in the table below.

<b>Image Controls*</b>	<b>Description</b>
Exposure	Sets the intensity of light in the image as determined by a combination of the <b>Highlight</b> and <b>Shadow</b> settings from -10 (darkest) to 20 (brightest)
Gamma	Sets the amount of contrast in your image from 50 (lowest) to 500 (highest)
Highlight	Sets the amount of detail visible in the brightest areas of the image from 61 (lightest) to 490 (darkest)
Shadow	Sets the amount of detail visible in the darkest areas of your image from 0 (lightest) to 60 (darkest)
Threshold	Sets the point at which the gray image areas are scanned as either black or white from 0 (lightest) to 255 (darkest)

\* The Threshold setting is available only when the Pixel Depth setting is set to **Black & White** and the Halftone setting is set to **None**. When the Threshold setting is active, the rest of the Image Controls are not available.


## Using the Color Buttons

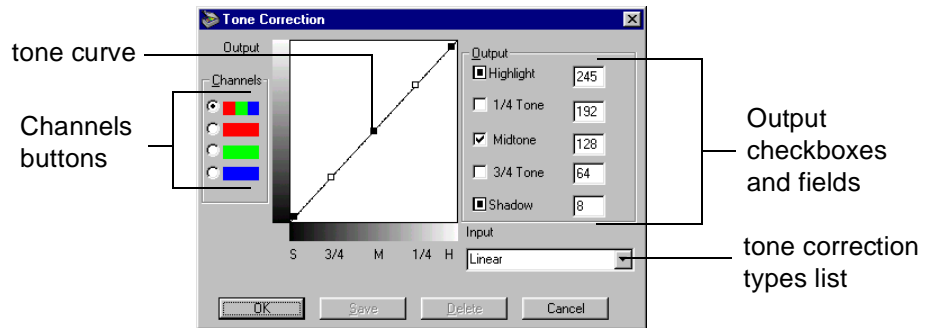
You can use the Highlight and Shadow color buttons to select particular colors in the image for use as the highlight and shadow colors. Click a color button and move the mouse pointer over the preview image; the pointer changes to an eyedropper icon. Then click on a color that you want to use as the highlight or shadow color for the entire image. The color box beneath the setting turns to that color.



You can't use Tone Correction when the Pixel Depth is set to Black & White, Halftone is set to None, or Text Enhancement Technology is turned on (see [Customizing Image Types](#) for details).

## Using Tone Correction

You can use Tone Correction to change the pixel brightness in the midtones, highlights, and shadows of an image. This produces more detail in the image without dramatically changing it. Click the  Tone Correction button in the Advanced window to display the Tone Correction dialog box.



Each point on the tone curve represents the Output checkbox characteristic to its right. For example, the top point on the curve represents the Highlight characteristic.

In addition, the Channels radio buttons indicate the color(s) that the tone curve will modify: red, green, blue, or all three colors.

Once you've selected the color you want to modify using the Channels buttons, use these methods to change the tones:

- ▶ Drag points on the tone curve to adjust the tone value.
- ▶ Select a predefined group of settings from the tone correction type list. Select **Linear**, **Lighten**, **Darken**, **Flat Contrast**, **High Contrast**, or **Open Shadow**. You can also create your own custom tone correction settings, as described below.
- ▶ Type a value in the field for an Output setting (the range of acceptable values varies for each setting). To lock a setting in place so it's unaffected by changes in other settings, click its checkbox. The setting will not change unless you drag its point on the tone curve.

## Customizing Tone Correction Settings

To save a custom tone correction setting, first make the changes on the Tone Correction dialog box. The tone correction setting in the list changes to **User Defined**. Change the name in the list box to the one you want to use for your custom setting. Then click **Save**.

To delete a setting, select its name in the tone correction list and click **Delete**.




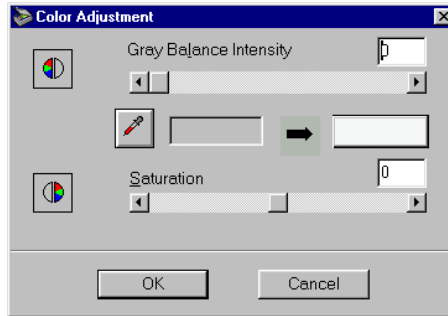
Color Adjustment settings are disabled if you click the **Scan** button without previewing the image.

You can't use Color Adjustment if the Pixel Depth is set to **8-bit Gray** or **Black & White** (see [Customizing Image Types](#) for details).

## Using Color Adjustments

You can adjust the **Gray Balance Intensity** and **Saturation** of colors in a color image using the Color Adjustment tools.

Click the  Color Adjustment button in the Advanced window to display the Color Adjustment dialog box:



## Changing the Gray Balance Intensity

The **Gray Balance Intensity** setting adjusts the gray tones in the image to appear more neutral. You may need to adjust this setting if the three colors that are mixed together to form the neutral gray are unbalanced. For example, if a photograph has an undesirable green color cast caused by fluorescent lighting, you can select a greenish area in the photo and adjust the intensity to achieve the correct colors.

To change the Gray Balance Intensity, follow these steps:

- 1 First click the eyedropper button and move the mouse pointer onto your preview image. The mouse pointer changes to an eyedropper icon.
- 2 Select a color that you want removed from the neutral gray tones in the preview image. The original and corrected colors appear in the boxes beside the eyedropper button.
- 3 Adjust the gray level (from 0 to 100) by moving the slider, clicking the left or right arrow, or typing a value in the field on the right.

## Changing the Saturation

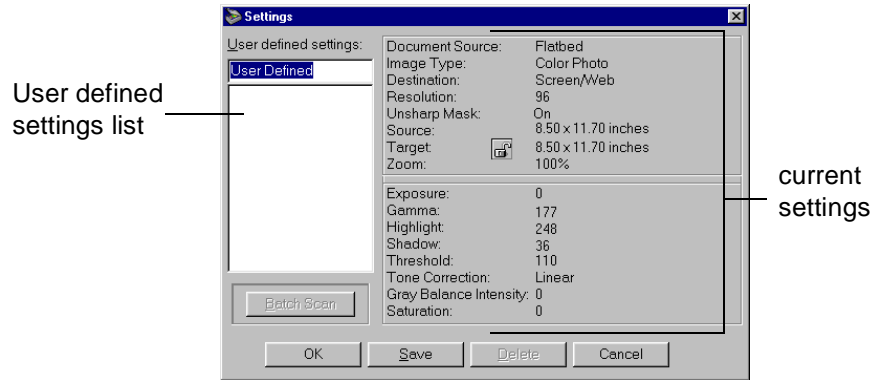
Changing the saturation level of colors increases or decreases the amount of color in each hue. Less saturated colors are more pale, while saturated colors are richer.

Adjust the saturation level from -100 (less saturated) to 100 (more saturated) by moving the slider, clicking the left or right arrow, or typing a value in the field on the right.

## Saving Custom Settings

You can save a custom set of all the EPSON TWAIN settings for your scan so you can easily select it when you perform a similar scan later. You can even save different settings for the same image or marquee and scan all of them at once; see [Batch Scanning](#) for details.

Click the **Settings** button in the Advanced window to display the Settings dialog box:



The currently selected EPSON TWAIN settings are listed on the right. To create a custom setting group, type a name for the group to replace the name **User Defined** at the top of the list. Then click **Save**.

Whenever you want to use the setting group for a scan, click **Settings**, select its name, and click **OK**.

To delete a custom setting group, click its name in the list; then click **Delete**.



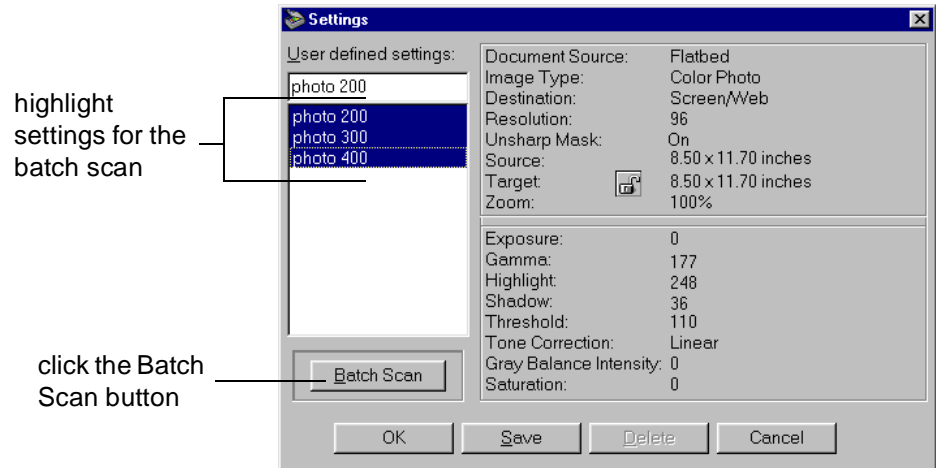


Some applications don't support batch scanning or must have multiple image support turned on to support batch scanning. Check your application documentation to see if it supports batch scanning before using this feature.

## Batch Scanning

To quickly scan one image or marquee with a variety of different settings, you can perform a batch scan. Follow these steps:

- 1 Create and save each group of settings you want to scan with, giving each a unique name, as described in [Saving Custom Settings](#).
- 2 In the Settings dialog box, highlight all the settings you want to include in the batch scan using the **Shift** or **Ctrl** (Windows only) keys.

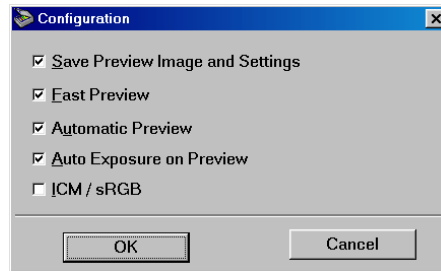


- 3 Click the **Batch Scan** button.

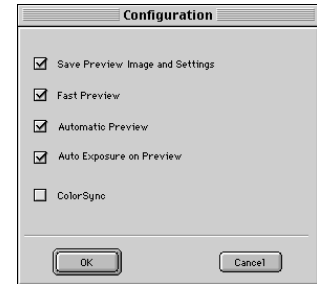
TWAIN scans the image once for each setting group and loads the scanned images separately into your application software.

## Configuring Preview and Color Options

You can configure EPSON TWAIN's preview and color options so they work the way you want whenever you use the program. Click the **Configuration** button to display the Configuration dialog box:



Windows



Macintosh

To automatically save the preview image and all the scanning settings when you preview, scan, or close TWAIN, click the **Save Preview Image and Settings** checkbox.

Click the **Fast Preview** checkbox to enable high-speed loading of the preview image in draft mode (the quality will not be as good as a normal preview).

To automatically preview an image whenever you start EPSON TWAIN, click the **Automatic Preview** checkbox.



To successfully scan with ICM/sRGB or ColorSync, you must also set up that color management system for your monitor and printer. See your operating system documentation for instructions. You should also use devices and software compatible with your color management system.

To automatically adjust the exposure each time you preview, click the **Auto Exposure on Preview** checkbox. See [Using Auto Exposure](#) for details. If you select the **ICM/sRGB** (Windows 98/NT 4.0) or **ColorSync** (Macintosh) checkbox, you can't change the current **Auto Exposure on Preview** setting.

If you're using applications that let you select color management profiles for your printer, you'll get great printed output when you scan your images using either **ICM/sRGB** (Windows 98/NT 4.0) or **ColorSync** (Macintosh) to reproduce colors more closely. (To use **ICM/sRGB**, the Pixel Depth setting of your selected Image Type must be **24-bit Color**; see [Customizing Image Types](#) for details.)

With ColorSync select either **Perceptual** (for photographs), **Colorimetric** (for spot color images), or **Saturation** (for charts and graphs).

# *Using the EPSON TWAIN Utilities*

These sections give instructions for using the utilities installed along with EPSON TWAIN to help you scan and calibrate your system:

- ▶ [Using the Scanner Monitoring Utility](#)
- ▶ [Using the EPSON Screen Calibration Utility](#)
- ▶ [Using EPSON Scan! II](#)

## **Using the Scanner Monitoring Utility**

When you installed EPSON TWAIN on your system, the installer automatically installed one of these scanner monitoring utilities:

- ▶ Scan Events monitor in the Scanners and Cameras Control Panel (Windows 98)
- ▶ EPSON Scanner Monitor (Macintosh)

The scanner monitoring utilities let you use one-touch scanning with the scanner's Start button and the Presto! PageManager software. If you installed PageManager when you installed your scanner software, see [Using the Start Button](#) for instructions on using your scanner monitoring utility.

# Using the EPSON Screen Calibration Utility

When you installed EPSON TWAIN on your system, you calibrated your screen at the end of the installation sequence. If you ever change your monitor or want to re-calibrate your screen, you can run the EPSON Screen Calibration utility again. Calibrating your screen improves the accuracy of your preview images in EPSON TWAIN.

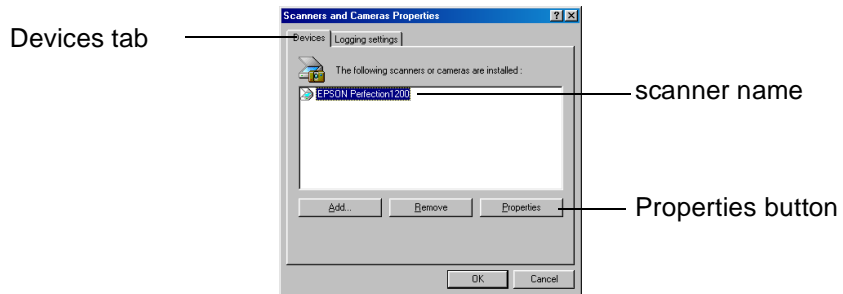
Follow the instructions for your operating system in these sections:

- ▶ [Calibrating the Screen with Windows](#)
- ▶ [Calibrating the Macintosh Screen](#)

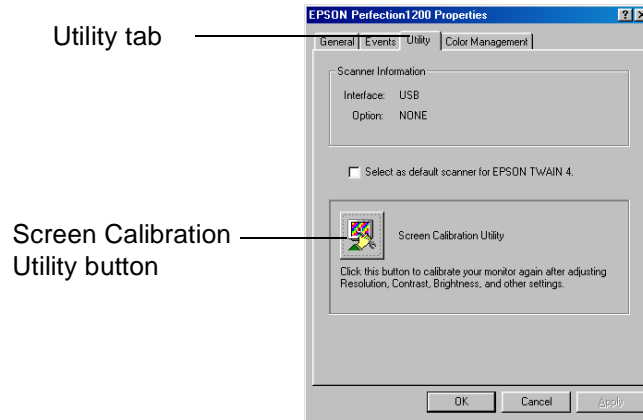
## Calibrating the Screen with Windows

Follow these steps to calibrate your screen:

- 1 Click **Start**, point to **Settings**, and click the **Control Panel** icon.
- 2 Click the **Scanners and Cameras** (Windows 98) or **EPSON TWAIN 4** (Windows 95/NT) icon. Windows 95/NT users should skip ahead to step 5; Windows 98 users see this dialog box:



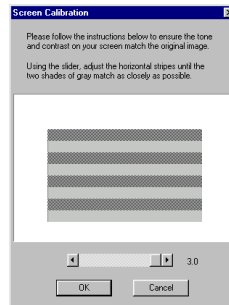
- 3 If necessary, click the **Devices** tab. Click your scanner name in the box, then click the **Properties** button.
- 4 On the next screen, click the **Utility** tab. You see this dialog box:



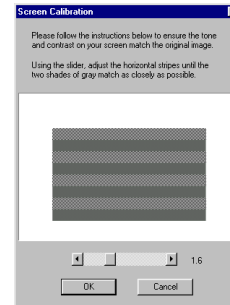
- 5 Click the **Screen Calibration Utility** button. You see the following:



View the screen from a short distance when you calibrate it. The gray stripes won't blend perfectly together; however, try to make them match as closely as possible.



before calibration



after calibration

- 6 Click and drag the slider box or click the left or right slider arrows until the shades of the gray stripes match as closely as possible.
- 7 Click **OK**. The profile is saved as the **Screen** Destination setting in EPSON TWAIN.
- 8 Click **OK** at all the open windows to close them and return to the Control Panel.

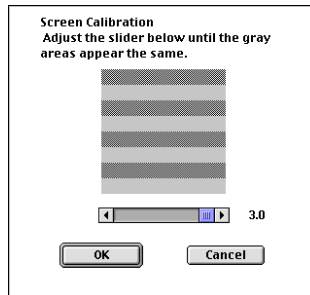
## Calibrating the Macintosh Screen

Follow these steps to calibrate your screen:

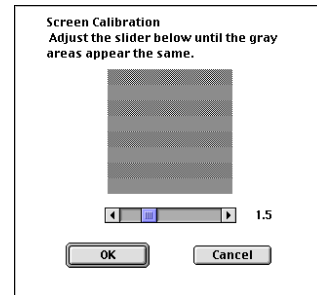
- 1 Open the EPSON Scanner folder and select **EPSON Screen Calibration**. You see the following dialog box:



View the screen from a short distance when you calibrate it. The gray stripes won't blend perfectly together; however, try to make them match as closely as possible.



before calibration



after calibration

- 2 Click and drag the slider box or click the left or right slider arrows until the shades of the gray stripes match as closely as possible.
- 3 Click **OK**. The profile is saved as the **Screen** Destination setting in EPSON TWAIN.

## Using EPSON Scan! II

EPSON Scan! II is a TWAIN-compliant application supplied with EPSON TWAIN (Macintosh only) in case you choose not to install Presto! PageManager, Adobe PhotoDeluxe, or another TWAIN-compliant program for scanning. For best results, however, scan with one of the TWAIN-compliant applications that came with your scanner instead of EPSON Scan! II.

Before scanning, make sure you've installed the EPSON TWAIN software (as described in the *Scanner Basics* book).

These sections tell you how to use EPSON Scan! II:

- ▶ [Scanning with EPSON Scan! II](#)
- ▶ [Exporting Images with EPSON Scan! II](#)



If you start EPSON Scan! II before turning on your scanner, the software may not work properly.

### Scanning with EPSON Scan! II

Follow the steps in this section to scan using EPSON TWAIN with EPSON Scan! II.

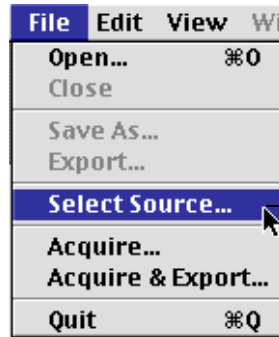
- 1 Make sure you've set up and turned on the scanner, and placed the document you want to scan on the document table. See the *Scanner Basics* book for instructions.
- 2 To start EPSON Scan! II, select the **EPSON Scan! II** icon in the **EPSON Scanner** folder.





You usually need to perform steps 3 and 4 only once, when you use your scanner and EPSON Scan! II for the first time.

- 3 Select your scanner source. Open the File menu and choose **Select Source**.



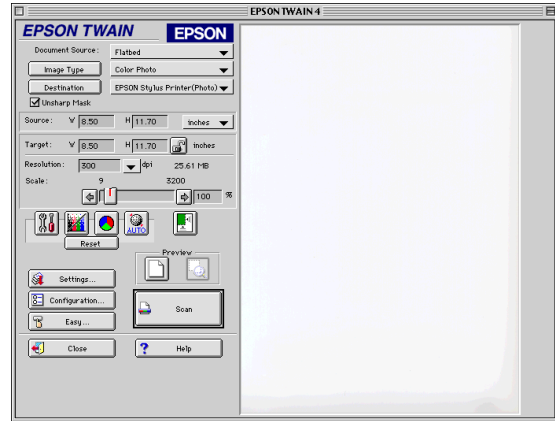
Click to select the scanner source

- 4 Select **EPSON TWAIN 4** and click **Select**.
- 5 Open EPSON TWAIN for scanning. Choose **Acquire** from the File menu.

One of the EPSON TWAIN windows appears.



Easy window



Advanced window

For instructions on selecting EPSON TWAIN settings, see [Selecting Basic Settings](#) and [Advanced Scanning](#).

- 6 When you're ready to scan, click the **Scan** button. The scanned image appears in your EPSON Scan! II window.
- 7 Click the **Close** button to close the EPSON TWAIN window to return to EPSON Scan! II.
- 8 To export your image in a format your image-editing application can read, see [Exporting Images with EPSON Scan! II](#).

To use any other program features, see [Using Other EPSON Scan! II Features](#).



You can open only EPSON Scan! II original format files in EPSON Scan! II; you cannot open any other file formats.

## Exporting Images with EPSON Scan! II

EPSON Scan! II can save your scanned images in two ways:

- saved in its original format that cannot be opened by other applications
- exported into one of a variety of standard formats that can be opened by other applications

Most of the time, you'll want to export any images you scan with EPSON Scan! II so you can open them in an image-editing or desktop publishing program for use in your documents. If you save them in EPSON Scan! II's original format, you can open them with EPSON Scan! II only.

You can export images into any of the formats described in the table below.

Export file format	Description
TIFF 5.0 (*.TIF)	Standard Tagged Image File Format version 5.0; for exporting black and white images with G3 compression
EPS (*.EPS)	Encapsulated PostScript format
TIFF 6.0 (JPEG) (*.TIF)	Tagged Image File Format version 6.0; for exporting 16-million color or 256-gray level images with JPEG compression
JPEG (*.JPG)	Joint Photographic Experts Group format; for exporting 16-million color or 256-gray level images with data compression
PICT	Standard QuickDraw™ picture format; for exporting black and white images with G3 compression and 16-million color or 256-gray level images with JPEG compression

You can export an image you already scanned into EPSON Scan! II or you can use the Acquire and Export option, which lets you scan and export in one step. See the instructions in these sections:

- ▶ [Exporting Scanned Images](#)
- ▶ [Acquiring and Exporting](#)

### *Exporting Scanned Images*

- 1 Start EPSON Scan! II and scan your image as described in [Scanning with EPSON Scan! II](#).
- 2 In the EPSON Scan! II window, select **Export** from the File menu. You see the Export dialog box.
- 3 Select the drive and folder to which you want to export the file.
- 4 Select the format you want to use in the Export File Format list.
- 5 Type a name for the file in the Export image as list.
- 6 Click **Export**. The image is exported and you return to the EPSON Scan! II window.

## *Acquiring and Exporting*

To scan and export an image in one operation, follow these steps:

- 1 Start EPSON Scan! II as described in [Scanning with EPSON Scan! II](#).
- 2 Select **Acquire & Export** from the File menu. You see one of the EPSON TWAIN windows. For instructions on selecting EPSON TWAIN settings, see [Selecting Basic Settings](#) and [Advanced Scanning](#).
- 3 When you're ready to scan, click the **Scan** button. You see the Export dialog box.
- 4 Select the drive and folder in which you want to export the file.
- 5 Select the format you want to use in the Export File Format list.
- 6 Type a name for the file in the Export image as list.
- 7 Click **Export**. EPSON Scan! II scans and then exports the image.
- 8 Close the EPSON TWAIN window and return to the EPSON Scan! II window.

## Using Other EPSON Scan! II Features

EPSON Scan! II also provides features for viewing images and copying them into other applications, as described in the sections below.

### *Using the View Features*

To modify the view of your image in the EPSON Scan! II window, open the View menu.

Select the **All Dots[1:1]** option if you want each dot (pixel) in your image represented by one dot on your screen. The higher the resolution of your image, the larger it appears on the screen.

Select the **Fit in Window** option if you want to adjust the view of the image so it fits into the EPSON Scan! II window. The smaller the window size, the smaller the image appears. This option centers the image in the window if the window is larger than the scanned image.

## *Copying Images*

You can copy all or a portion of a scanned image in EPSON Scan! II and then paste it into another application. Follow these steps:

- 1** To select the entire image area for copying, open the Edit menu and choose **Select All**. You see a dotted line around the image.

To select a portion of the image, click in the image and drag a box around the area you want to copy. You see a dotted line around the area you selected.

(To delete the box, click anywhere in the image.)

- 2** Open the Edit menu and select **Copy**.
- 3** Open the application program you want to paste your image into, then open the document in which you want the image to appear.
- 4** Select **Paste** (or another command as necessary). The image appears in your document.

# Using the Start Button

The scanner's Start button lets you set up your system for one-touch scanning with Presto! PageManager and a scanner monitoring utility. With one-touch scanning, you can load a document in the scanner, press the Start button, and watch while PageManager starts and then opens EPSON TWAIN automatically. You can even set up PageManager to automatically load your scanned document into another application—such as PhotoDeluxe—or send it to another device—such as your printer.

## Preparing to Use the Start Button

To use the Start button, you must have installed PageManager (see the *Scanner Basics* book for installation instructions). With Windows 98, you can also use other programs that support linking to scanner events with the Start button, such as Photoshop 5.0 and Windows Imaging. Then you must enable scanner monitoring and configure PageManager (or another compliant application) to handle your scanned images.

Follow the instructions in these sections to set up Start button scanning:

- ▶ [Enabling Scanner Monitoring](#)
- ▶ [Setting Up PageManager for Start Button Scanning](#)

When you're ready to use the Start button, follow the instructions in [Scanning with the Start Button](#).



## Enabling Scanner Monitoring

When you installed EPSON TWAIN on your system, the installer automatically installed the TWAIN utilities, including these scanner monitoring utilities:

- ▶ Scan Events monitor in the Scanners and Cameras Control Panel (Windows 98)
- ▶ EPSON Scanner Monitor (Windows 95 and NT 4.0)
- ▶ EPSON Scanner Monitor (Macintosh)

These utilities let your scanner's Start button communicate with your operating system and open PageManager (or another Windows 98 Start button compliant program).

Follow the steps in these sections to enable scanner monitoring:

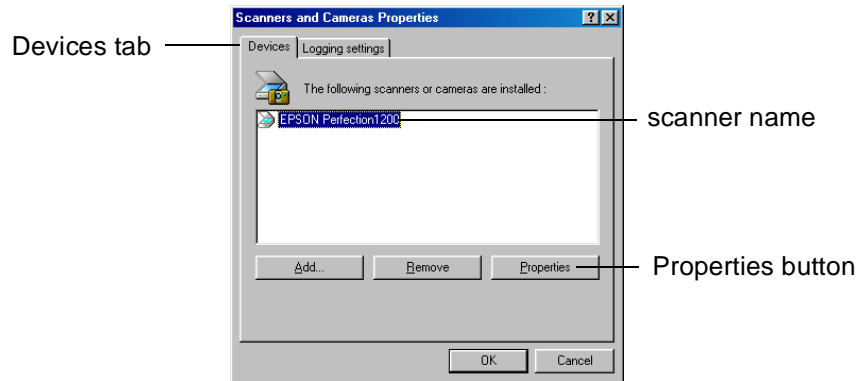
- ▶ [Setting Up Monitoring for Windows 98](#)
- ▶ [Setting Up Monitoring for Windows 95 and Windows NT 4.0](#)
- ▶ [Setting Up Monitoring for Macintosh](#)

## Setting Up Monitoring for Windows 98

The Scan Events monitor installed into the Windows Scanners and Cameras Control Panel is automatically enabled and ready to scan to PageManager (and any other Start button compatible programs) when you press the Start button.

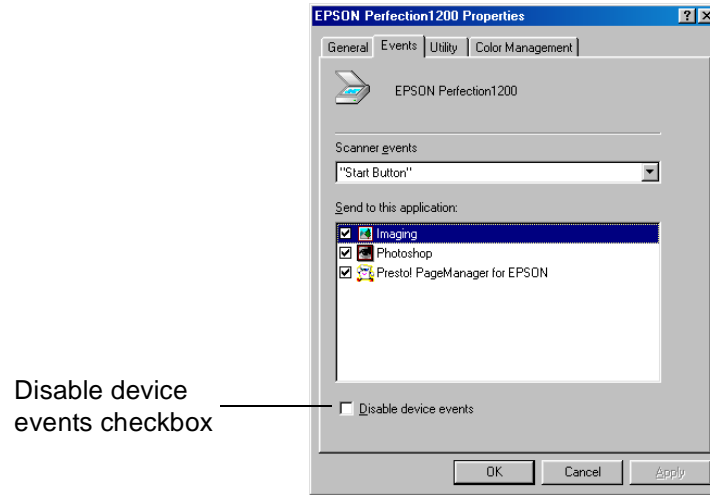
If you ever want to disable (or enable) Start button scanning, follow these steps:

- 1 Click **Start**, point to **Settings**, and click the **Control Panel** icon.
- 2 Click the **Scanners and Cameras** icon. You see this dialog box:



- 3 If necessary, click the **Devices** tab. Click your scanner name in the box, then click the **Properties** button.

- 4 Click the **Events** tab. You see this dialog box:



- 5 To *disable* Start button scanning, click the **Disable device events** checkbox; a check appears in the checkbox.  
To *enable* Start button scanning, click the **Disable device events** checkbox to uncheck it. Then click the checkbox for each application you'd like to be able to use with the Start button. If you select more than one application, you'll be prompted for the application you want to use when you press the Start button.
- 6 Click **OK**.

## *Setting Up Monitoring for Windows 95 and Windows NT 4.0*

The EPSON Scanner Monitor installed with EPSON TWAIN on the PC is automatically enabled and set up to scan with PageManager when you press the Start button.

If you want to disable the EPSON Scanner Monitor for the current computing session, do the following:

- 1 Right-mouse-click the green  **EPSON Scanner Monitor** icon from the Windows Taskbar (located next to the clock).
- 2 Choose **Close** from the pop-up menu.

To enable monitoring, do the following:

- 1 From the Windows desktop, click **Start > Programs > EPSON Scanner > EPSON Scanner Monitor**.

You may see a dialog box momentarily appear as EPSON Scanner Monitor establishes communication with the scanner.

- 2 The **EPSON Scanner Monitor** icon appears on the Windows Taskbar, next to the clock.



To stop EPSON Scanner Monitor from loading every time you start Windows, remove the EPSON Scanner Monitor icon from your Startup folder in the Start menu.

## *Setting Up Monitoring for Macintosh*

The EPSON Scanner Monitor installed with EPSON TWAIN on the Macintosh is automatically enabled and set up to scan with PageManager when you press the Start button.

If you ever want to disable the EPSON Scanner Monitor, do the following:

- 1 Select **EPSON Scanner Monitor Setup** from the Apple menu; you see the EPSON Scanner Monitor dialog box.
- 2 Click the **Enable Monitoring** checkbox to uncheck it.
- 3 Click **OK**.

To enable monitoring, do the following:

- 1 Select **EPSON Scanner Monitor Setup** from the Apple menu; you see the EPSON Scanner Monitor dialog box.
- 2 Click the **Enable Monitoring** checkbox to check it.
- 3 Click **OK**.



To set up other Start button compliant applications in Windows, see the application documentation for instructions.

The PageManager program icon on the Macintosh is different; it is shaped like a desktop inbox. See PageManager online help for details.


## Setting Up PageManager for Start Button Scanning

To use PageManager with your scanner's Start button, you must set up PageManager's Scan Buttons palette and assign a destination program or device to the Start button. For example, if you want the images you scan to be sent directly to your image editing program, you can assign the Start button to PhotoDeluxe (or another image editing program).

The Scan Buttons palette appears on the screen whenever PageManager is running so you can select the destination program or device for your scanned images. (If it doesn't appear, open the View menu and click the **Scan Buttons** option.)

PageManager program icon with the Start button assigned to it



The icon that contains the  Start button icon indicates where images scanned using the Start button will be sent. (You can select PageManager as the destination program for your scanned images if you don't want them to load into a different program.)

Follow the instructions in these sections to set up the Scan Buttons:

- ▶ [Assigning a Destination to the Start Button](#)
- ▶ [Adding a Destination to the Scan Buttons Palette](#)
- ▶ [Reassigning Destinations on the Scan Buttons Palette](#)
- ▶ [Selecting Scan Button Settings](#)

## Assigning a Destination to the Start Button

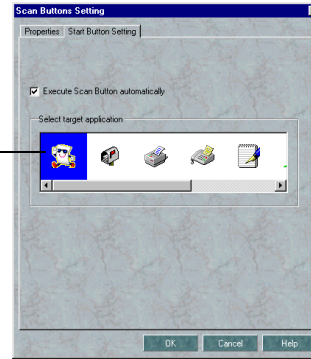
PageManager is the default destination program for the Start button. To assign another destination to the Start button, follow these steps:

- 1 Open the File menu and select **Scan Buttons Setting**. You see the Scan Buttons Setting dialog box. Click the **Start Button Settings** tab.



If you select a program or device for which you suppressed the TWAIN interface, be sure to set PageManager's scan settings before you press the Start button. See [Selecting Scan Button Settings](#) for details.

select the icon for the program or device you want to assign to the Start button



- 2 To change the program or device assigned to the Start button, click its icon in the Select target application box.
- 3 If you want to automatically launch EPSON TWAIN within PageManager when you press the Start button, make sure the **Execute Scan Button automatically** checkbox is checked.

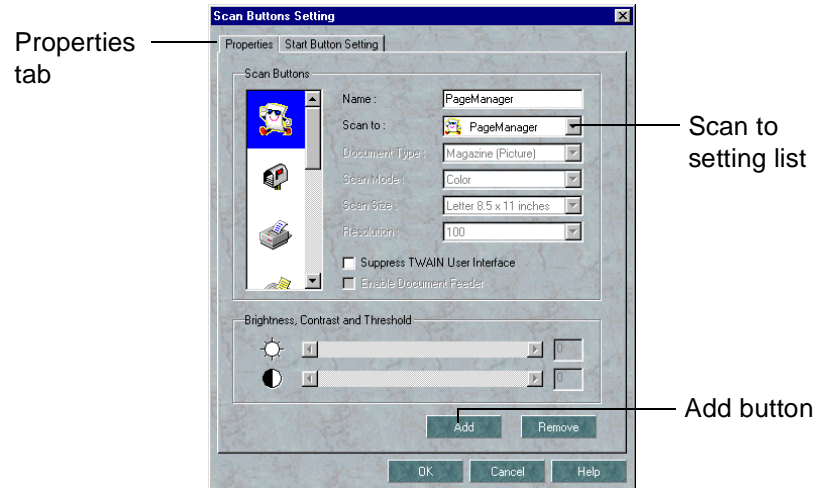
If you want to launch PageManager and display only the Scan Buttons palette when you press the Start button, click the **Execute Scan Button automatically** checkbox to uncheck it. You'll then need to click a button in the Scan Buttons palette to continue with your scan.

- 4 Click **OK**.

## *Adding a Destination to the Scan Buttons Palette*

If you want to add program or device icons to the Scan Buttons palette, follow these steps:

- 1 Open the File menu and select **Scan Buttons Setting**. You see the Scan Buttons Setting dialog box. Click the **Properties** tab, if necessary.



- 2 Click the **Add** button. On the Macintosh, you see the Add scan button dialog box.
- 3 Click the arrow in the **Scan to** (Windows) or **Scan to App** (Macintosh) setting box. The Scan to setting lists the programs and devices on your system that PageManager can send your scanned file to. Select the program or device you want to add. An icon for it appears in the scroll bar on the left (Windows only).





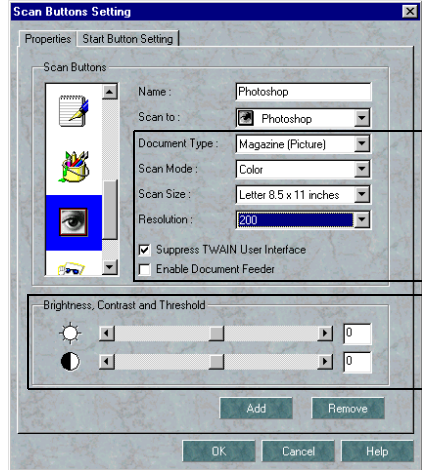
For the best results, don't suppress the EPSON TWAIN interface when scanning with the Start button. This lets you preview and adjust your image settings the way you want them before you scan. You'll also get a wider variety of setting choices than if you suppress TWAIN and use the PageManager scan settings.

- 4 Type a name for the icon in the Name field. On a Macintosh, click **OK** to close the Add scan button dialog box.
- 5 If the **Suppress TWAIN User Interface** checkbox is active, you can select whether you want PageManager to open the EPSON TWAIN dialog box when you press the Start button.

If you don't check the checkbox, the EPSON TWAIN dialog box appears after you press the Start button and PageManager opens. Then you can preview, select settings, and click **Scan** when you're ready.

If you check the checkbox, PageManager suppresses the EPSON TWAIN dialog box and uses the settings described in step 6.

- 6 If you checked the **Suppress TWAIN User Interface** checkbox in step 5, the PageManager scan settings become active.



active PageManager scan settings

If these settings are active, select the scan settings you want to use whenever you press the program or device icon; see [Selecting Scan Button Settings](#) for details.

- 7 If you want to assign a new destination program or device to the Start button, see [Assigning a Destination to the Start Button](#) for instructions.
- 8 When you're finished adding programs or devices, click **OK**.

## *Reassigning Destinations on the Scan Buttons Palette*

You may want to reassign an existing icon to a different program or device, or just change its settings. For example, if you use more than one printer, you may want to reassign the printer icon to each printer as you need it.

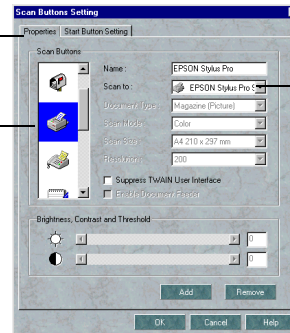
- 1 Open the File menu and select **Scan Buttons Setting**; then click the **Properties** tab, if necessary.



If you want to delete an icon from the Scan Buttons palette, select the icon in the scroll bar on the left of the dialog box and click the **Remove** button.

Properties tab

click the icon for the program or device you want to reassign



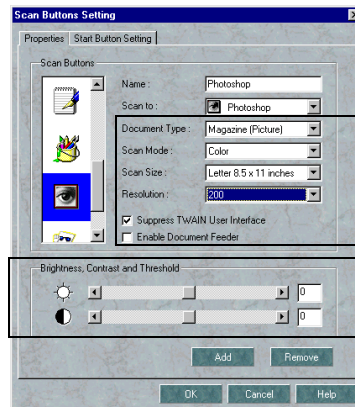
Scan to setting list

- 2 Click the icon for the program or device you want to reassign in the scroll bar on the left of the dialog box. The current properties for the icon appear to the right.

- 3 To select a different program or device for the icon, choose it from the **Scan to** (Windows) or the **Scan to App** (Macintosh) setting list.
- 4 If you checked the **Suppress TWAIN User Interface** checkbox, change any of the active PageManager scan settings as necessary; see [Selecting Scan Button Settings](#) for details.
- 5 If you want to assign a new program or device to the Start button, see [Assigning a Destination to the Start Button](#) for instructions.
- 6 When you're finished reassigning destinations, click **OK**.

## Selecting Scan Button Settings

If you select a device or program for which you've checked the **Suppress TWAIN User Interface** checkbox, the PageManager scan settings become active. If they're active, select the options you want to use whenever you press the destination icon in the Scan Buttons palette or assign the Start button to the icon.



active PageManager  
scan settings

The table below describes the settings and their available options.

<b>Setting</b>	<b>Options</b>	<b>Description</b>
Document Type (Windows only)	Magazine (Text and Picture) Magazine (Picture) Photograph Document Letter Business Card Others	Select the type of original you're scanning so PageManager can choose the best default options for the rest of the settings. Select Others to customize a different document type.
Scan Mode	Color Gray Black and White	Select the color specification of the original you're scanning.
Scan Size	Legal 8.5 × 14 inches Letter 8.5 × 11 inches A4 210 × 297 mm B5 182 × 257 mm A5 148 × 210 mm Custom (Windows only) 3 × 5 (Landscape) [Macintosh only] 3 × 5 (Portrait) [Macintosh only] 4 × 6 (Landscape) [Macintosh only] 4 × 6 (Portrait) [Macintosh only] 5 × 7 (Portrait) [Macintosh only] 5 × 7 (Landscape) [Macintosh only] Business Card (Macintosh only)	Select the size of the area you want to scan. When you select Custom (Windows only), you see a Customize Size dialog box; select the measurement unit, type in the Width and Height values, and then click <b>OK</b> .

<b>Setting</b>	<b>Options</b>	<b>Description</b>
Resolution	72      300 100     360 150     400 200     600 240     800	Select the scanning resolution you want to use. You can't type in a custom resolution.
Enable Document Feeder	On Off	If you're scanning with the optional auto document feeder, check the checkbox to turn this feature on.
Brightness	-100 to 100	Adjust the brightness of the scan as necessary. This setting appears only when the Scan Mode is set to Color or Gray.
Contrast	-100 to 100	Adjust the contrast of the scan as necessary.
Threshold	0 to 255	Adjust the threshold for the highlights and shadows of the scan as necessary. This setting appears only when the Scan Mode is set to Black and White and replaces the Brightness setting.

## Scanning with the Start Button

Once you've set up your scanner monitoring utility and configured PageManager to handle your scanned images the way you want, you're ready to scan with the Start button.

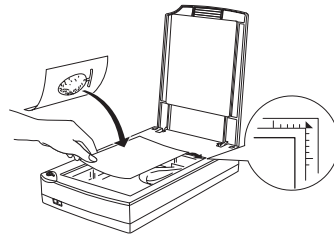
The sequence of steps varies (as noted in the text), depending on whether you've elected to suppress the TWAIN interface or not, and whether you've set up PageManager to send your scanned images to another application or not. For details on these selections, see [Setting Up PageManager for Start Button Scanning](#).

Because Start button scanning is most useful for scanning text documents into an OCR application, these steps use OCR scanning as an example. If you're scanning photographs or other types of documents, see [Selecting Basic Settings](#) and [Advanced Scanning](#) for details on other TWAIN settings you may want to select.

Follow these steps to scan with the Start button:

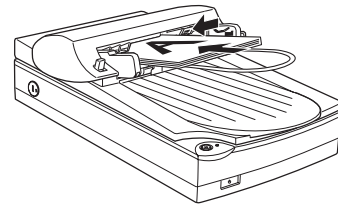
- 1 If you're scanning a single page on the scanner's document table, place the document face down and align its horizontal and vertical edges with the scales on the top and right side of the document table.

If you're using the auto document feeder to scan a multi-page document, load your document face up with the first page on top of the document. Make sure the top of the page faces into the feeder.



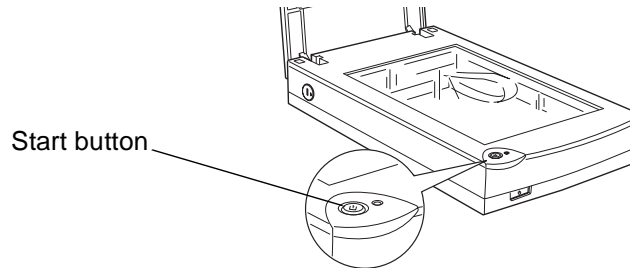
scanning single pages

5



scanning multiple pages  
with ADF installed

- 2 Press the scanner's Start button.



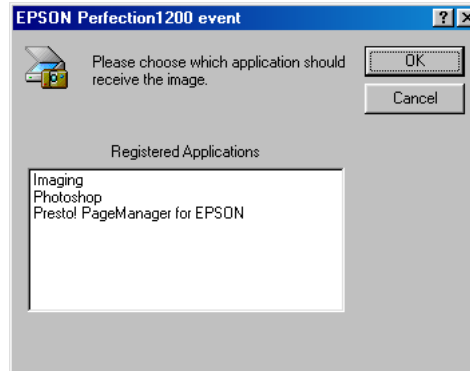


For instructions on changing the applications available for use with the Start button, see [Enabling Scanner Monitoring](#).



If you suppressed the TWAIN interface, you must have set the correct scan settings in the PageManager Scan Button Settings dialog box to scan successfully. See [Setting Up PageManager for Start Button Scanning](#) for details.

- 3 In Windows, if you've selected more than one application to use with the Start button in the Scan Events utility, you see this dialog box:



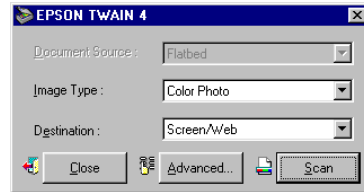
Click **Presto! PageManager for EPSON** and click **OK**. (If the dialog box disappears before you select an application, press the scanner's Start button again.)

- 4 If PageManager wasn't running when you pressed the Start button, PageManager starts on your system.

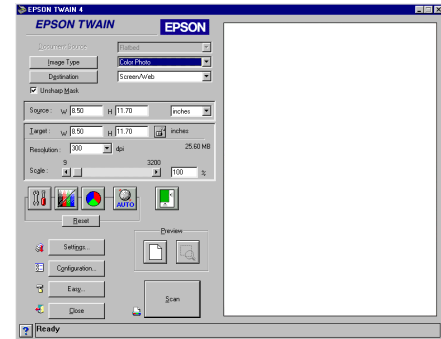
If you suppressed the TWAIN interface, the scanner begins scanning your document. Go to [step 10](#).



If you didn't suppress the TWAIN interface, the EPSON TWAIN Easy or Advanced window opens in PageManager, along with the Scan Buttons bar. Go to step 5.



Easy window



Advanced window

- 5 To scan a document for an OCR application, select the following settings in EPSON TWAIN:

**Document Source:**

Select **Flatbed** to scan a document on the document table.

Select **ADF** (Windows) or **Auto Document Feeder** (Macintosh) to scan a document from the ADF.



**Image Type and Destination:**

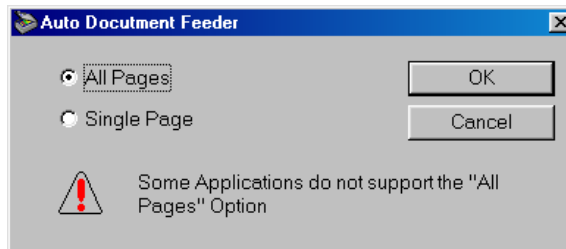
Select **OCR** for both settings.

**Resolution:**

Select **400** dpi for the best OCR results.

(If you're scanning a different type of document, select the settings for it as necessary. See [Selecting Basic Settings](#) for more information.)

- 6 Click the  Preview button to prescan the image. (If you're using the Easy window, click **Advanced** to open the Advanced window.)  
If you're scanning from the document table, EPSON TWAIN prescans the page.  
If you're using the ADF, EPSON TWAIN loads the first page and prescans it. When the ADF ejects the first page, reload it in the ADF on top of your document with the top edge facing into the feeder.
- 7 Click the  Auto Locate button to set the page size for your scan and crop out the rest of the document table.
- 8 Click the **Scan** button to scan your document. If you're scanning from the document table, go to step 10.
- 9 If you're scanning with the ADF, you see this dialog box:



Click **Single Page** (to scan a single page) or **All Pages** (to scan a multi-page document). Then click **OK**.

- 10 EPSON TWAIN scans the document. If you're scanning a multi-page document, it scans and loads one page at a time. When scanning is finished, click the **Close** button to close the EPSON TWAIN window. (If you suppressed the TWAIN interface, the EPSON TWAIN window doesn't appear.)

**11** If you set up the Start button to load your scanned images into PageManager, click the **Inbox** icon to view the images in PageManager. (See your PageManager documentation for instructions on processing images.)

If you set up the Start button to load the scanned images into your OCR application (or another application), PageManager processes the images and opens the application. After a moment, the scanned images appear in your selected application window.

**12** Now you can follow the instructions in the documentation for your application or for PageManager to process your images as necessary.

# Troubleshooting

If you encounter any problems using EPSON TWAIN, try the solutions in these sections:

- ▶ [Problems Using EPSON TWAIN](#)
- ▶ [Problems Using the Start Button](#)
- ▶ [Problems with Image Quality](#)

If the information here doesn't help you solve the problem, check with your dealer or contact EPSON. See [Where To Get Help](#) for contact information.

## Problems Using EPSON TWAIN

***The rows in the Screen Calibration dialog box never seem to match closely enough.***

Problem	Solution
You're viewing the screen too closely.	View the screen from a short distance when you calibrate it. The gray stripes won't blend perfectly together; however, try to make them match as closely as possible.
Your monitor adjustments may be off.	Try adjusting your monitor's brightness and contrast settings.

### ***When you select a TWAIN source, EPSON TWAIN isn't listed.***


<b>Problem</b>	<b>Solution</b>
EPSON TWAIN wasn't installed or it wasn't installed correctly.	Reinstall the software following the instructions in the <i>Scanner Basics</i> book.

### ***EPSON TWAIN doesn't start.***

<b>Problem</b>	<b>Solution</b>
The scanner isn't ready.	Make sure your scanner is turned on and the cables are connected properly. Also make sure you turned on your scanner before starting EPSON TWAIN. If you started EPSON TWAIN first, exit the program, turn off your scanner, turn it on again, and reboot your system.
Your system doesn't meet the minimum requirements.	Make sure your computer, scanner, and software are compatible and meet the specifications under <a href="#">System Requirements</a> .
EPSON TWAIN needs more memory.	Make sure EPSON TWAIN can access enough system memory. See the section on memory allocation in your computer manual.
EPSON TWAIN is not selected as your TWAIN source.	EPSON TWAIN may not be selected as the TWAIN source in your application. See <a href="#">Starting EPSON TWAIN</a> for instructions on selecting it.

Problem	Solution
<p>A system error has occurred.</p>	<p>An error condition may have caused your application or the TWAIN source to stop working correctly. Save any documents in process, close any open applications, and restart Windows: then start your application and try again.</p> <p>Sometimes an error condition may cause the computer to display a message telling you that your scanner is not recognized. If this happens, turn the scanner off and then on again; then restart your computer and try again.</p>

***The scanner does not start scanning.***

Problem	Solution
<p>The scanner isn't ready.</p>	<p>Check if the scanner's operate light is on. If not, press the  operate button. Then restart your computer and try scanning again.</p>
<p>You're scanning a large image and running out of system memory.</p>	<p>If the image you're scanning is too large or if your system has a minimum amount of memory installed, you may run out of memory when you scan. You'll usually get an error message or your system locks up when this happens. Reduce the image size or resolution and try scanning again. If you still can't scan the image, add more system memory.</p> <p>If you've just scanned a large image in your application and then immediately scanned another, the application may not have released the memory allocated for the first image. Close your application, restart it, and try scanning again. If restarting your application doesn't solve the problem, you may need to reboot your computer.</p>

### ***You have trouble batch scanning.***

<b>Problem</b>	<b>Solution</b>
Your application program doesn't support batch scanning or you don't have enough system memory.	<p>Some applications don't support batch scanning. When you try to batch scan or use the optional auto document feeder with this type of program, you get an error message or the system locks up. Check the program documentation and, if necessary, use another program for batch scanning.</p> <p>You also may not have enough system memory for the batch scan. Try reducing the document size, scanning fewer pages at once, or adding more system memory.</p>

### ***You cannot scan images at all or only a few dots appear in the scanned image.***

<b>Problem</b>	<b>Solution</b>
You may have selected incorrect scan settings.	Select different EPSON TWAIN settings. You may have selected an incorrect Image Type or Destination setting, or the Exposure, Highlight, and Tone Correction settings may be inappropriate for your image. See <a href="#">Advanced Scanning</a> for details.

## Problems Using the Start Button

***You see the message “No Push button scanner detected.”***

Problem	Solution
Scanner monitoring doesn't detect the scanner.	<p>The EPSON Scanner Monitor periodically checks on the status of your scanner to make sure it's ready. Sometimes the scanner check occurs when your system is processing other information and the scanner is not detected during that particular check. (You may see this message anytime, not just when you press the Start button.)</p> <p>If you see this message, make sure your scanner cable is securely connected. Then open and close the scanner monitoring utility to manually check for the scanner. See <a href="#">Enabling Scanner Monitoring</a> for instructions. If you still see the message, turn off your scanner, then turn it on again and restart your system.</p>

***When you press the Start button, nothing happens.***

Problem	Solution
Scanner monitoring is not enabled.	Scanner monitoring must be enabled for the Start button to work. See <a href="#">Enabling Scanner Monitoring</a> for instructions.



Problem	Solution
<p>PageManager is not installed or the scanner monitor isn't pointing to it.</p>	<p>Make sure you installed PageManager correctly, as described in the <i>Scanner Basics</i> book. Also make sure the scanner monitoring utility still points to PageManager as the target application for Start button scanning. See <a href="#">Enabling Scanner Monitoring</a> for instructions.</p> <p>If PageManager starts, but you don't see the EPSON TWAIN window, make sure the destination program or device you assigned to the Start button does not suppress the EPSON TWAIN interface. See <a href="#">Assigning a Destination to the Start Button</a> for details.</p>

***When you press the Start button, your system opens programs and scans slowly.***

Problem	Solution
<p>You assigned another destination program to the Start button in PageManager.</p>	<p>When you set up PageManager to automatically send files scanned with the Start button to another application, scanning may take longer. This is because your system must use extra resources to open PageManager and EPSON TWAIN, and then scan your image, process it, and send it to another application.</p>

## Problems with Image Quality

### *Images are very dark and without details.*

Problem	Solution
Some EPSON TWAIN settings may be set incorrectly.	<p>Make sure the Destination (output device) setting is set to Screen/Web. If you selected a printer as the Destination setting, the image may more closely match the original when printed, but not when displayed on the screen.</p> <p>Change the Exposure, Tone Correction, and Shadow settings to lighter values and scan the image again. See <a href="#">Advanced Scanning</a> for instructions on changing these settings.</p>

### *The image is distorted or blurred.*

Problem	Solution
The document isn't positioned correctly on the document table.	<p>Make sure that the document is placed flat against the document table and that no part of the original is wrinkled or warped.</p> <p>You may have moved the document during scanning. Check the position of the document.</p> <p>Make sure the scanner isn't tilted or placed on an unstable surface.</p>

### ***Color is patchy or distorted at the edges of the document.***

<b>Problem</b>	<b>Solution</b>
The document isn't placed correctly on the document table.	<p>If the original is very thick or warped at the edges, the edges of the image may be discolored. Cover the edges of the original with opaque paper to avoid interference from outside light.</p> <p>If part of the original is outside the document table, the edge may be discolored. Change the position of the original.</p>

### ***The image is faint or out of focus.***

<b>Problem</b>	<b>Solution</b>
The document isn't positioned correctly on the document table.	Make sure the document is placed flat on the document table.
Some EPSON TWAIN settings may be set incorrectly.	Check your Tone Correction setting and/or select a darker Exposure setting. See <a href="#">Advanced Scanning</a> for instructions on changing these settings.
Your monitor isn't calibrated or isn't adjusted correctly.	Make sure you have calibrated your monitor to your scanner as described in <a href="#">Using the EPSON Screen Calibration Utility</a> . Also check your monitor's brightness and contrast settings. Make sure the Destination (output device) setting is set to <b>Screen/Web</b> in EPSON TWAIN.

***The colors on the monitor seem different than the original image or printed image.***

<b>Problem</b>	<b>Solution</b>
Your monitor may not be calibrated correctly.	Depending on your monitor, its resolution/color settings, and your EPSON TWAIN settings, the screen colors may be different from the original colors. This may be normal, especially if the colors in the printed image more closely match the original. Make sure you have correctly calibrated the screen as described in <a href="#">Using the EPSON Screen Calibration Utility</a> .
Some EPSON TWAIN settings may be set incorrectly.	Check your Image Type and Destination settings to make sure they are correct for the type of image you're scanning and for the output device you're using. See <a href="#">Selecting Basic Settings</a> for instructions on changing these settings.
You may need to use a color correction mode.	The colors in the printed image may not match the original image exactly because the scanning and printing processes use two different color interpreting technologies. Use the ICM/sRGB (Windows 98) or ColorSync (Macintosh) settings in EPSON TWAIN to more closely match the colors. See <a href="#">Configuring Preview and Color Options</a> for instructions.

***The printed image is larger or smaller than the size of the original.***

<b>Problem</b>	<b>Solution</b>
You may have changed the Target image size or used the Zoom Preview feature.	Check the image size settings in your application and EPSON TWAIN; see <a href="#">Adjusting Source and Target Image Sizes</a> for details. Don't use the size of the image on your monitor to judge the printed size; you may have used the Zoom Preview feature, which only affects the preview image size. Also, some applications display high resolution images on lower resolution monitors so they appear larger than their original size.

***The printer can't print the image, or the printout is garbled or isn't an image.***

<b>Problem</b>	<b>Solution</b>
Your printer and computer may not be securely connected.	Check that the printer is properly connected to the computer and is correctly set up; see your printer manual.
Your software is not installed correctly for your printer.	Check that your application software is properly installed and set up for your printer; see your application software manual.

***The quality of an enlarged image is worse than when it's scanned at its original size.***

<b>Problem</b>	<b>Solution</b>
You didn't increase your Resolution setting to compensate for the image enlargement.	<p>If you enlarge your target image size by scaling or by selecting a larger Target size, be sure to increase the Resolution setting by the same proportion to retain your image quality. For example, if you select 300 dpi as the resolution setting for an image scanned at 100% of its original size and then scale the image 200%, you should increase (in this case, double) the resolution to 600 dpi to retain the same image quality. See <a href="#">Selecting Basic Settings</a> for instructions on changing the Resolution setting.</p> <p>For additional information on selecting scanning resolution, see your <i>Scanner Basics</i> book.</p>

### ***Moiré (crosshatch) patterns appear in the scanned image.***

<b>Problem</b>	<b>Solution</b>
You have scanned a document with halftone patterns.	<p>To minimize moiré patterns, try the following:</p> <ul style="list-style-type: none"><li>▶ Place a transparent sheet between the document and the document table to slightly unfocus the image.</li><li>▶ Move or angle the document slightly.</li><li>▶ Adjust the Sharpness setting to a lower value to unfocus the image. See <a href="#">Customizing Destination Settings</a> for more information.</li><li>▶ Change the Target image size setting slightly.</li><li>▶ Make sure De-screening is turned on in the Image Type dialog box. See <a href="#">Customizing Image Types</a> for details.</li></ul>

### ***Character recognition is inaccurate after OCR scanning.***

<b>Problem</b>	<b>Solution</b>
You scanned the document using incorrect Image Type and Destination settings.	<p>Scan the document again using <b>OCR</b> as the Image Type and Destination settings in EPSON TWAIN. This automatically turns on the Text Enhancement Technology setting that eliminates background document noise. See <a href="#">Selecting Basic Settings</a> for details.</p> <p>If character recognition is still too inaccurate, change the Image Type setting by selecting <b>None</b> for the B/W (Black &amp; White) option setting. Then adjust the Threshold setting in the Image Controls dialog box; see <a href="#">Adjusting Image Controls</a> for details. Try scanning again.</p>

## Where To Get Help

EPSON provides technical assistance through electronic support services and automated telephone services 24 hours a day. The following tables list the contact information:

### *Electronic support services*

Service	Access
World Wide Web	From the Internet, you can reach EPSON's Home Page at <b><a href="http://www.epson.com">http://www.epson.com</a></b> .
EPSON Internet FTP Site	If you have Internet FTP capability, use your Web browser (or other software for FTP downloading) to log onto <b>ftp.epson.com</b> with the user name <b>anonymous</b> and your e-mail address as the password.
EPSON Forum on CompuServe®	Members of CompuServe can type <b>GO EPSON</b> at the menu prompt to reach the Epson America Forum. For a free introductory CompuServe membership, call <b>(800) 848-8199</b> and ask for representative #529.

## Automated telephone services

Service	Access
EPSON SoundAdvice <sup>SM</sup>	For pre-recorded answers to commonly asked questions about EPSON products 24 hours a day, seven days a week, call <b>(800) 922-8911</b> .
EPSON FaxAdvice <sup>TM</sup>	Access EPSON's technical information library by calling <b>(800) 922-8911</b> . You must provide a return fax number to use this service.
EPSON Referral Service	For the location of your nearest Authorized EPSON Reseller or Customer Care Center, call <b>(800) 922-8911</b> .



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

To speak to a technical support representative, dial (310) 974-1970 (U.S.) or (905) 709-3839 (Canada), 6 AM to 8 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 Perfection 1200)
- ▶ Product serial number (located on the back of the scanner)
- ▶ Computer configuration
- ▶ Description of the problem

You can purchase optional equipment, manuals, and accessories from EPSON Accessories at (800) 873-7766 or visit our web site at [www.epsonsupplies.com](http://www.epsonsupplies.com) (U.S. sales only). In Canada, please call (800) 873-7766 for dealer referral.



# Glossary

<b>bit</b>	Short for binary digit. The smallest unit of data in computer processing. A bit can represent two values, on and off, or 1 and 0.
<b>bit/pixel</b>	The unit that indicates the number of bits allocated for a pixel. The larger the value, the more detail a pixel can represent.
<b>color correction</b>	A method of adjusting the color image data for a particular type of device so that the reproduction results come close to the original colors.
<b>default</b>	A set of values used when no other selections have been made.
<b>dither</b>	A process in which software or an output device simulates continuous tones with groups of dots.
<b>dpi</b>	Dots per inch. A unit of measurement for resolution. The higher the value, the higher the resolution.
<b>Dropout</b>	An EPSON TWAIN option that lets you select a color for the scanner to ignore.
<b>Halftone</b>	A method of using dot patterns to represent an image.
<b>marquee</b>	A sizeable and moveable frame on a preview image that identifies the part of it selected for scanning.

- monochrome** Black and white images, or images represented only by the intensity of luminosity.
- pixel** Short for picture element. Every image is composed of a number of pixels. Pixels are also counted in units of dots.
- resolution** Indication of how finely an image is resolved into pixels. Measured in dots per inch (dpi), pixels per inch (ppi), or samples per inch (spi).
- scan** An operation performed by the sensor and the carriage of a scanner. The sensor “reads” the colors in an image, and sends the color information to the computer as digital data.
- Threshold** An EPSON TWAIN option that sets the point at which gray values in an image are represented as either black or white.

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