EPSON

EPSON TWAIN Pro

USER'S GUIDE

English

EPSON® TWAIN Pro

SCANNER UTILITY PROGRAM

User's Guide

Contents

Chapter 3 *Using EPSON TWAIN Pro*

Chapter 4 *Troubleshooting*

Glossary

Index

Introduction

Features

The EPSON TWAIN Pro utility program is the perfect companion for your EPSON scanner. With this program you can scan images in color, grayscale, or black-and-white and save the scanned images to disk as a file.

EPSON TWAIN Pro directly controls all of the features of your EPSON scanner. This program is the standard cross-platform interface for other application programs, and automatically starts when you scan from another application.

Additionally, EPSON calibration utilities allow you to match your scanner and output device to reproduce images so that they are identical to the originals. Calibration is one of the most important factors for precisely reproducing scanned images on display monitors.

Finding Your Way Around

This user's guide provides step-by-step instructions for installing and using the software. It also provides a complete reference to all software features.

❑ Chapter 1 contains information on installing the software. Be sure to read this chapter first.

❑ Chapter 2 instructs you on the basics of scanning.

❑ Chapters 3 contains important information on the detailed settings in EPSON TWAIN Pro.

❑ Chapter 4 contains troubleshooting information. If this software does not operate properly or scanned images are not what you expect, see this chapter.

❑ The Index is provided to help you find needed information quickly.

Notes in this book contain important information and useful tips on operating your scanner or software.

Chapter 1
Installing the Software

1

System Requirements

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

Scanner   EPSON GT-12000

For Windows Users

System: Microsoft® Windows® 95, Windows 3.1x,
               Windows for Workgroups 3.1x, Windows
               NT® 3.5x, or Windows NT 4.0

Interface: EPSON bidirectional parallel interface or
               Adaptec® SCSI adapter

Note:
❑ *The interface may vary depending on the scanner model, see your scanner manual for connection instructions.*

❑ *If you are using Windows NT, you cannot use a bidirectional parallel interface; you need to use the Adaptec SCSI adapter.*

❑ *If you use an Adaptec SCSI adapter with Windows 3.1x or Windows for Workgroups, make sure EZ-SCSI (from Adaptec) is installed. EZ-SCSI does not need to be installed if you are running Windows 95 or Windows NT.*

❑ *You cannot use a serial interface with this software.*

Display: VGA or higher resolution monitor 640 × 480 screen resolution (800 × 600 or higher recommended), and 256-color (65,000-color or higher recommended)

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

For Macintosh Users

System: Apple® Macintosh® computer (except the Plus, SE, Classic, and Power Book 100) running system 7.x, 7.5.x, or 7.6.x.

Interface: Macintosh standard (SCSI).

Note:
You cannot use a serial interface.

Display: Color Monitor, 640 × 480 screen resolution (or higher recommended), and 256-color (32,000-color or higher recommended)

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

EPSON TWAIN Pro supports the Apple ColorSync™ 2.0 color management system and QuickTime™.

Installing the Scanner Software for Windows

After connecting the scanner to your computer, install the scanner software (EPSON TWAIN Pro) from the floppy disk or CD-ROM. The installation steps differ depending on the version of Windows you use. Instructions for Windows 95 and NT 4.0 users are in the next section, and instructions for Windows 3.1x, Windows for Workgroups, and NT 3.5x users begin in "For Windows 3.1x and Windows NT 3.5x users" on page 1-10.

Note:
If you are using the floppy disk version of the software, make a backup copy of the scanner software before you begin installation.

For Windows 95 and Windows NT 4.0 users

1. Make sure that the scanner is turned on.

2. Turn on the computer, and start Windows.

    If you use the parallel interface or if you use Windows NT 4.0, insert the scanner software CD in the CD-ROM drive. (If you are using the floppy disk version, insert it in the floppy drive.) Go to step 3.

    If you use Windows 95 with the SCSI interface, either of the following dialog boxes may appear.

❑ If the following dialog box appears, insert the scanner software CD (or floppy disk) in the CD-ROM (or floppy) drive.

Select Driver from disk provided by hardware manufacturer, then click OK. Click Browse. Select the CD-ROM (or floppy) drive, then click OK. Follow the instructions on the screen, then go to the next step.

❑ If the following dialog box appears, insert the scanner software CD (or floppy disk) in the CD-ROM (or floppy) drive, then click Next.

If the following dialog box appears, click Finish.

3. Double-click the My Computer icon.

4. Double-click the CD-ROM drive icon. You see the EPSON folder. (For the floppy disk version, double-click the floppy drive icon.)

    Note:
    If the folder contains a README file, double-click it and read it. This file contains important information and any updates regarding this software.

5. Double-click the SETUP.EXE icon. Follow the instructions on the screen.

6. When the following dialog box appears, click Next.

7. After EPSON TWAIN Pro is installed, the following dialog box appears.
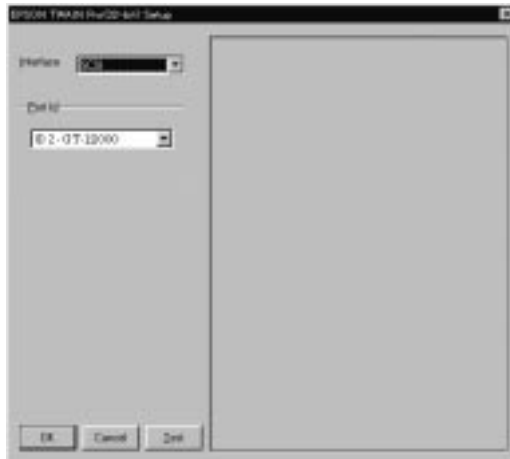
8. **For the parallel interface model**
   Make sure that BiD Parallel is selected in the Interface
   pop-up list.
   Make sure that the port address setting matches the port
   address of the interface board as shown below. (Use the
   port address you wrote down when you installed the
   parallel interface board.)

Interface board	Port setting in the EPSON TWAIN Setup dialog box
LPT1	Port 378
LPT2	Port 278

Note:
❑ *You do not need to change the port address setting if you
   install the parallel interface board packed with your scanner
   without changing jumper settings.*

❑ *For information on I/O port addresses, see the user's guide
   that came with the parallel interface board.*

For the SCSI interface model
Make sure that SCSI is selected in the Interface pop-up list.
Make sure your EPSON scanner appears in the Port ID list
automatically.

9. Place a document on the document table of the scanner.

10. Click Test to check the connection. The scanner scans the document and a scanned reproduction appears in the right window of the dialog box if everything is properly installed and connected.

11. Click OK to close the EPSON TWAIN Pro Setup dialog box.

The EPSON Screen Calibration utility automatically starts. Go to page 1-11.

Note:
It may take some time after clicking OK to start the EPSON Screen Calibration utility depending on the Windows version.

For Windows 3.1x and Windows NT 3.5x users

1. Make sure that the scanner is turned on.

2. Turn on the computer and start Windows.

3. Insert the scanner software CD in the CD-ROM drive. (If you are using the floppy disk version, insert it in the floppy drive.)

4. Choose Run from the File menu.

5. Click Browse. Then select the CD-ROM (or floppy) drive.

6. Choose SETUP.EXE, then click OK. Follow the instructions on the screen.

7. When the following dialog box appears, follow the steps on page 1-7 from step 6.

Installing the Scanner Software for Macintosh

After connecting the scanner to your Macintosh computer, install the scanner software (EPSON TWAIN Pro) from the floppy disk or CD-ROM. Follow the steps below.

1. Make sure your scanner is on. Then turn on the computer.

2. Insert the CD in the CD-ROM drive. If you are using the floppy disk version, insert it in the floppy drive.

3. Double-click the disk icon to open it.

4. Double-click the Install EPSON TWAIN Pro icon.

5. The installer software shows a dialog box. Click Install, then follow the instructions on the screen.

When you have finished the entire installation, the EPSON Screen Calibration utility automatically starts. Go to the next page.

Calibrating Your Screen

After the scanning software has been installed, the following dialog box appears.

You must calibrate your screen and scanner to reproduce images identical to the originals. Follow the steps below.

1. Click Next.

2. In the following window, move the slider to the right or left until the shades of gray of the two sets of horizontal stripes match.
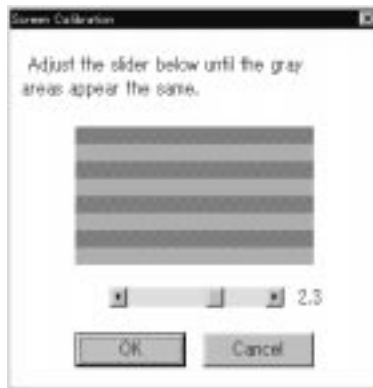
Note:
View the screen from a slight distance. The gray stripes will not perfectly blend together; the object is to make the different tones match as much as possible.

3. Click OK to register the calibration setting.

4. When the message "Setup is completed" appears, click OK.

You will not need to change the screen calibration again so long as you continue to use the same display.

Using ColorSync (Macintosh)

If your application software and output devices support the Apple ColorSync management system, you can use the ColorSync calibration method. If you use ColorSync, you do not need to use the Calibrate menu.

Note:
If your application software and output devices do not support ColorSync, use the EPSON calibration method.

The ColorSync profile for EPSON scanners comes standard with this software. If the software is set up properly, the ColorSync profile for EPSON scanners will have been installed in the System Folder; EPSON TWAIN Pro selects it automatically.

Follow the basic steps below to use ColorSync as the calibration profile:

1. Start EPSON TWAIN Pro from your application using the Acquire command.

2. Select Apple ColorSync as the Screen Calibration option and select Perceptual, Colorimetric, or Saturation from the Matcher menu in the Configuration dialog box.

    Note:
    Use Perceptual for photographs, Colorimetric for spot color, and Saturation for color charts or graphs.

3. Make any other settings you desire.

4. Start the scanning operation with the Scan or Scan All button. The scanner scans an image using the ColorSync profile.

Chapter 2

Scanning With Your Software

2

Starting the Software

Before scanning, install the EPSON TWAIN Pro software as described on page 1-4 (Windows) or 1-11 (Macintosh), and the application that supports EPSON TWAIN Pro.

Before you start the software, turn on the scanner and place a document on the document table of your scanner.

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

For information on setting up and using the scanner, see your scanner manual.

Using your application software

Many applications allow you to operate scanners from inside the application. If your application supports TWAIN_32, you may be able to operate the scanner from your application. For information on compatibility with TWAIN_32, see your application manual.

You can start EPSON TWAIN Pro from within your software as follows:

Note:
The following steps are merely representative. For specific information, see your software manual.

1. Start your application software.

2. Select the scanner in your application; for example, choose TWAIN_32 Select Source from the File menu, and then select your scanner.

3. Choose EPSON TWAIN Pro from the menu that appears. Then choose Twain_32 Acquire from the File menu.

Getting Help

When you use EPSON TWAIN Pro, click the Help button in the main window to get information on specific features.

Scanning an Image

When you open EPSON TWAIN Pro, the following window appears.

Follow these steps to scan an image:

1. If you have installed the optional document feeder or transparency unit on your scanner, select from the Document Source menu. Document sources are Flatbed, ADF-Single-sided, ADF-Double-sided, TPU for Neg. Film, or TPU for Pos. film.

2. Select the type of image you will scan from the Image Type menu. You can scan any document from one of these image types:
36-bit Full Color (HiFi), 24-bit Full Color, 12-bit Grayscale (HiFi), 256 Color, 256 Grayscale, Line Art, OCR, and Copy & Fax.

   You can also save custom Image Type settings in the Image Type dialog box. Click the Image Type button to view the Image Type dialog box, and see page 3-24 for more information.

   Note:
   The 36-bit Full Color (HiFi) and 12-bit Grayscale (HiFi) settings are available only for certain applications, such as Adobe PhotoShop.

3. Select an output device from the Destination menu. The predefined destination settings are Screen, Screen Vivid, Prepress 175 lpi, Prepress 150 lpi, Prepress 133 lpi, Prepress 120 lpi, LineWork Scan, InkJet Printer, Laser Printer 600, FAX, and OCR. You can also save custom destination settings in the Destination dialog box. Click the Destination button to view the Destination dialog box, and see page 3-26 for more information.

   Note:
   Select Calibration Profile only when creating calibration profiles using the Create Calibration Profile feature in the Calibration menu.

4. Click the Scan button to start scanning an image.

Note:
You can close an active EPSON TWAIN Pro window by clicking the Close *button or double-clicking the* Control *menu box at the left of the title bar in the window (Windows), or by clicking the close box at the left of the title bar in the window (Macintosh).*

The scanned image is displayed on the right of the screen.

Saving the Scanned Image

When you start EPSON TWAIN Pro from your software, save the scanned image using Save or Save As in your software. For information on saving and file formats, see your software manual.

Chapter 3
Using EPSON TWAIN Pro

3

Overview

When you start EPSON TWAIN Pro through a compatible application, the following window appears on the screen:

The following sections describe EPSON TWAIN Pro's features.

Note:
Some settings may be dimmed and cannot be selected, because they have been overridden by other settings or are not supported by your scanning application.

Preview Feature

The Preview feature displays your image in the Preview window and allows you to see the effects of your settings before scanning. Click the Preview button to view your image in the Preview window.

You can also use the Preview feature to determine the width and height of the scanning image and the file size of the image to be saved. See the section on Image Size in this chapter.

Note:
❑ *You cannot preview an image that exceeds available memory or disk space.*

❑ *Select part of the preview image with the mouse pointer before using the Zoom Preview feature.*

❑ *When the mouse pointer is placed on the frame of the marquee, it changes to a hand tool so that you can drag the selected image anywhere in the preview window.*

❑ *Clicking the preview image cancels the selection.*

❑ *Double-clicking a full or zoom preview image selects the entire image.*

Preview Window

To preview an image, click the Preview button on the EPSON TWAIN Pro main dialog box.

Clicking the Preview button causes the following window to appear.

You can see the effects to the preview image of any of the following settings.

❑ Pixel Depth, Halftone, and Dropout in the Image Type dialog box

❑ Exposure, Gamma, Highlight, Shadow, Sharpness, and Threshold in the Image Controls dialog box

❑ Tone Correction in the Tone Correction dialog box

❑ Gray Balance, and Saturation in the Color Adjustment dialog box

Note:
Although the image in the Preview window changes as you make settings, the settings do not affect the real image until you scan, or rescan, the image.

The vertical and horizontal rulers indicate the size of an image. You can change the unit of measurement by selecting pixels, inches, or centimeters from the Units menu beside the Width and Height settings.

For more information on image settings, see the sections on Image Controls, Color Adjustment, and Configuration in this chapter.

Preview

Zoom Preview

Clicking the Zoom Preview button enlarges the active marquee. See the next page for information about marquees.

Return to Full Preview

Clicking the Return to Full Preview button restores the image to a full preview. This button is available only when the marquee is zoomed as described in the previous section.

Return to Zoom Preview

Clicking the Return to Zoom Preview button restores the image to the previous zoom. This button is available only when a marquee has been previously zoomed. This restores the zoom preview from memory, which is quicker than rescanning the same zoom by clicking the Zoom Preview button again.
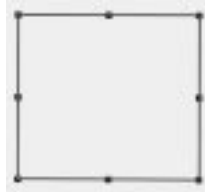
Marquees

A marquee is a frame around an entire image, or just a certain part of an image. Marquees are often used in scanning and image-editing software to select only the most important part of an image.

Making and Modifying Marquees

To make a marquee, move the pointer over the image in the Preview window, and the pointer becomes a cross-hair. Drag (move the mouse while holding down the mouse button) this cross-hair over any area of the image, and a frame appears. The point where you first clicked is anchored, but the rest of the frame is sizable and movable. After you finish creating a marquee, you can again resize and move it as described below.

Multiple marquees

You can make multiple marquees in one image to scan the most important parts while ignoring the rest. Marquees can be different sizes, and they can overlap. Extra marquees can be made anywhere except on the frame of another marquee; you can begin a marquee anywhere the pointer appears as cross-hairs. To distinguish the active marquee from other marquees, look at the marquee frames. The active marquee has eight small boxes on the frame as shown below.


Resizing

When you move the pointer over any of these eight boxes, the pointer will change to a double-headed arrow as shown below. You can then resize the marquee selection by dragging a box up, down, sideways, or diagonally. The double-headed arrows only appear on the active marquee.

If you drag an arrow while pressing the Shift key, the marquee will be resized proportionally.

Moving

> To move a marquee, move the pointer along the frame of the
> marquee, and when the pointer changes into a hand, drag the
> marquee to move it.
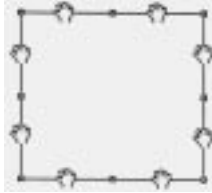
> If you drag a hand while pressing the Shift key, the marquee
> will be limited to vertical or horizontal movement.

Delete Marquee

> Clicking the Delete Marquee button removes the active
> marquee.

> ***Note:***
> *You can also delete the active marquee by pressing the* Delete *key on*
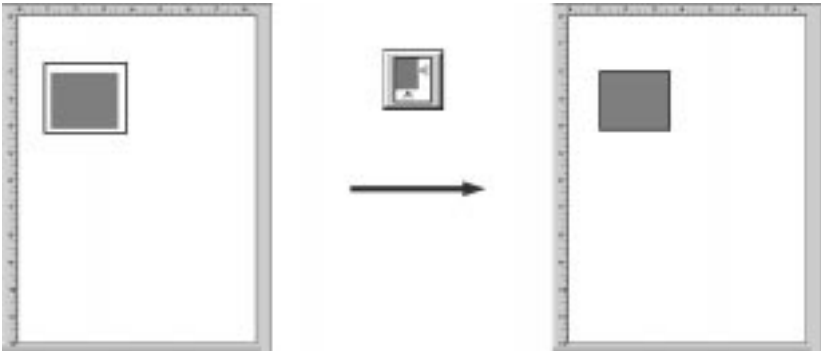> *your keyboard.*

Duplicate Marquee

> Clicking the Duplicate Marquee button creates another
> marquee the same size as the active marquee. Use this button
> to make multiple marquees.

Auto Locate

Clicking the Auto Locate button automatically locates and selects the target image and then displays it in the preview window.

Note:
The Auto Locate feature is automatically enabled if you click the Scan *button without previewing the image.*

If a document contains more than one image, select the target image by dragging the mouse pointer over the image. You do not have to be precise when selecting the size and position of the image; a rough estimate will do. Then click the Auto Locate button. The exact location and size of the image are automatically determined, and the image is displayed in the preview window.
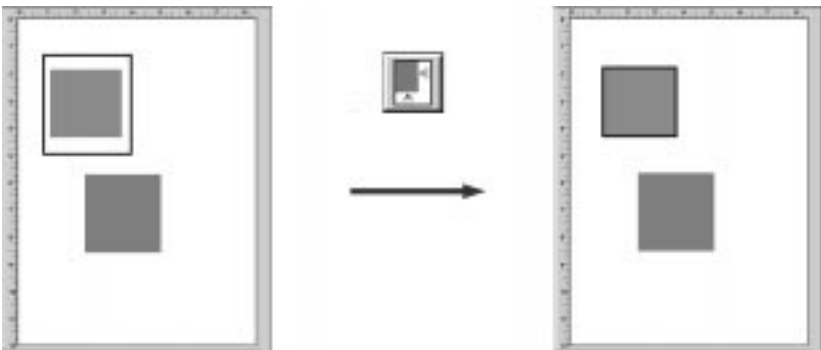
No. of Marquee Indicator

This shows the number of marquees in the Preview window. To create more marquees, see "Duplicate Marquee" on page 3-**8**.

Adjust

You can use the Adjust menu to modify the focus of an image, which is the part of the image that the scanner uses to determine the range. There are two ways to adjust the focus of an image, Auto Focus and Manual Focus.
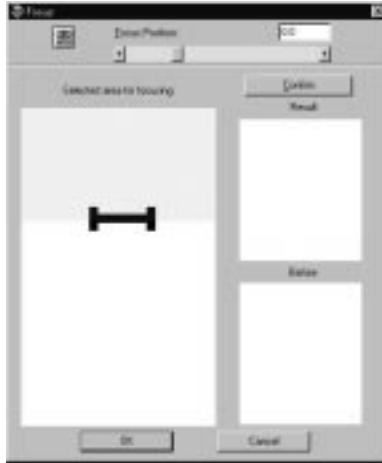
Auto Focus

Clicking the Auto Focus button uses the default setting to adjust the focus position.

Manual Focus

Clicking the Manual Focus button lets you determine where the focus should be. This may help improve the quality of your image. When you click this button, the following window appears.

Auto Focus:

> Clicking this button adjusts the focus position automatically. This works exactly the same way the Auto Focus button in the Adjust dialog box works.

Focus Position:

> You can select from -3.0 (lowest) to 9.0 (highest) by moving the slider, clicking the left or right arrow, or typing a value from -3.0 to 9.0 in increments of 0.1 in the Focus Position box. By adjusting the focus position, you can reduce the occurrence of moiré patterns when scanning.

> *Note:*
> *If TPU (for Neg. Film or for Pos. Film) is selected in the Document Source, the value of the Focus Position is automatically set to 2.5. If Flatbed or ADF (Single-sided or Double-sided) is selected, the value is automatically set to 0.*

Selected area for focusing window:

This window shows a preview image of the active marquee. If there is no marquee in the Preview window, the focus marquee window shows a full preview image. To change the image in the focus marquee window, change the marquee or the image in the Preview window.

Focus Line:

The focus line appears at the center of the focus marquee window (default). If you move the cursor over the focus line, the cursor will change to a "hand" cursor. You can then move the focus line by clicking and dragging the "hand" cursor to a new part of the image.

Confirm:

Click this button to compare the new image that you just modified (shown in the Result window) with the unmodified image (shown in the Before window).

Result window:

This window shows the image whose focus line position you just modified.

Before window:

This window shows the image with the focus line in the default position. The focus line determines what point of the image is used.

Auto Exposure

Clicking the Auto Exposure button automatically adjusts the exposure for an image. This means the Exposure, Highlight, Gamma, and Shadow settings in the Image Controls dialog box and the Gray Balance Intensity in the Color Adjustment dialog box are automatically set.

Note:
The Auto Exposure feature is automatically enabled after a full page preview and zoom preview.

Image Controls

Clicking the Image Controls button causes the following dialog box to appear:

Note:
- ❑ *The Exposure setting can be changed from -10 to 20.*

- ❑ *Be aware that the Auto Exposure feature overrides any Image Controls setting you make.*

- ❑ *If the Pixel Depth setting is set to* Black & White *and the Halftone setting is set to* None *in the Image Type dialog box, the Exposure, Gamma, Highlight, Shadow, and Sharpness settings are dimmed and cannot be selected.*

- ❑ *The effects of settings you make appear in the Preview window.*

Exposure:

You can select from -10 (darkest) to 20 (brightest) by moving the slider or clicking the left or right arrow. Exposure works as a combination of the Highlight and Shadow settings to determine the overall brightness or darkness of an image.

Gamma:

You can select from 50 (lowest) to 500 (highest) by moving the slider or clicking the left or right arrow. Gamma determines the amount of contrast in your image.

Highlight:

You can select from 61 (lightest) to 490 (darkest) by moving the slider or clicking the left or right arrow. Highlight determines the amount of detail that is visible in the bright areas of your image.

If you click the Highlight Color button below the left arrow, the mouse pointer changes to an eyedropper icon, which allows you to select a specific color(s) to be used as the highlight for the entire image.

Shadow:

You can select from 0 (lightest) to 60 (darkest) by moving the slider or clicking the left or right arrow. Shadow determines the amount of detail that is visible in the dark areas of your image.

If you click the Shadow Color button below the left arrow, the mouse pointer changes to an eyedropper icon, which allows you to select a specific color(s) to be used as the shadow for the entire image.

Threshold:

Note:
The Threshold setting is only available when the Pixel Depth setting is set to Black & White *and the Halftone setting is set to* None.

You can select from 0 (darkest) to 255 (lightest) by moving the slider or clicking the left or right arrow. Threshold determines what shade of gray is used as the cutoff point to differentiate what will be scanned as black and what will be white.

Tone Correction

When you click the Tone Correction button, the following
dialog box appears.
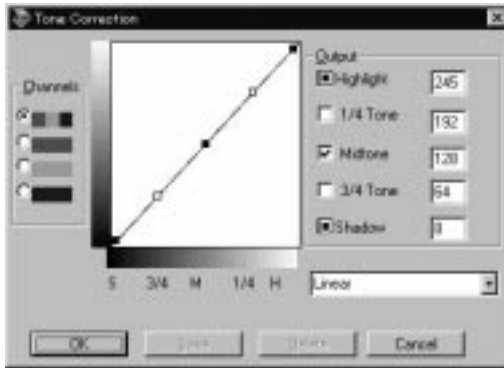
Note:
You can see the effects of the Tone Correction settings in the Preview
window.

The tone value represents a tint or color that appreciably
modifies an image and appears in the scanned reproduction on
your screen or printout.

Tone Curve editor:
> Drag points on the tone curve to adjust the tone value.
> The editor allows you to modify one color, or channel,
> or all colors at the same time.

Channel radio buttons:
> You can select the master (RGB), red, green, or blue
> channel to modify all colors or a particular color.

Output check boxes:
> There are five movable points on the tone curve which you can drag to modify your image. Each one relates to one of the five Output settings. You can also type a number in the box next to an Output setting to modify a specific part of your image. To lock a setting in place and make sure it is unaffected by changes in other settings, click the setting name. A check in the check box next to the setting name means the setting has been locked and will not move unless you drag it. If there is no check in the check box, the setting will automatically be modified to match any changes you make to other parts of the Tone Curve.

Tone Correction list:
> Select a tone correction setting from this menu. Several predefined or saved settings appear in this menu.

Save button:
> To save tone correction settings, click the Save button and a dialog box appears. Type a name for the new setting in the Tone Correction Name field and click the Add (Save) button.
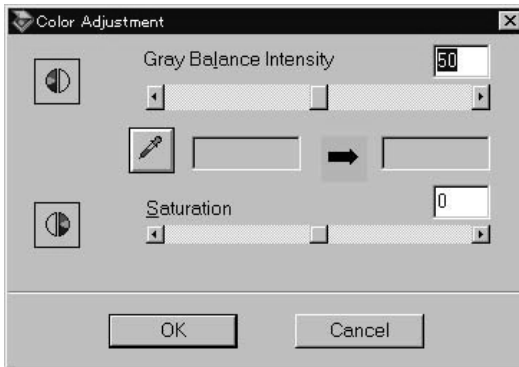
Delete button:
> To delete a setting, select the name you want to delete in the dialog box and click the Delete button. The Cancel button allows you to cancel the operation.

Color Adjustment

When you click the Color Adjustment **button, the following dialog box appears so that you can adjust color attributes.**

Note:

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

❑ *If Image Type is set to grayscale or black-and-white, the* Color Adjustment *button is dimmed, meaning it cannot be selected.*

❑ *You can see the effects of the Color Adjustment settings in the Preview window.*

Gray Balance Intensity:

> Adjusts the amount of gray in a color combination that appears neutral gray by removing shades or traces of the selected color.

> Click the eyedropper button below the Gray Balance Intensity bar to change the mouse pointer to an eyedropper icon, which allows you to select a color in the preview image and remove unwanted discoloration from that color. Correct the gray level from 0 to 100 by moving the slider or clicking the left or right arrow. The original and corrected colors appear in the boxes beside the eyedropper button.

Saturation:

> Select the saturation level for colors from -100 (less color) to 100 (more color) by moving the slider or clicking the left or right arrow.

> The scanner scans the strength of colors using this saturation setting. Saturation is the property that defines a color as pale or rich.

Scan
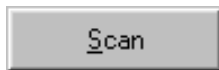
Scan

Clicking the Scan button scans the image or active marquee in the Preview window. The scanned image is transferred to the application software you used to open EPSON TWAIN Pro so that you can work with the image from within that application.

While scanning, a progress indicator appears. If necessary, click the Cancel button to cancel the operation.

Scan All
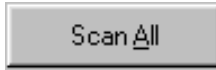
> Scan <u>A</u>ll

Clicking the Scan All button scans all of the marquees as seperate images, one at a time. This button is available only when there are multiple marquees.

Note:
❑ *You cannot scan an image whose size exceeds available memory or disk space. If you attempt to scan an image that is too large, an error message appears on the screen.*

❑ *Before you begin scanning, you should calibrate your scanner and display monitor. For more information, see Chapter 1.*

❑ *After an image is scanned, be sure to save it. For information on saving files, see Chapter 2.*

Document Source

If you have installed the optional auto document feeder or the transparency unit on the scanner, you need to select a document source from the Document Source menu. Otherwise, leave the Document Source set to Flatbed.

Flatbed	±
Flatbed	
Auto Document Feeder	

Select any of the following settings from the Document Source menu:

Flatbed:
Select this setting when you use the document table of the scanner.

ADF - **Single-sided:**
Select this setting when you use the optional Auto Document Feeder with single sided documents. This setting is available only when the optional Auto Document Feeder has been installed.

ADF - **Double-sided:**
Select this setting when you use the optional Auto Document Feeder with double sided documents. This setting is available only when the optional Auto Document Feeder has been installed.

TPU for Neg. Film:
Select this setting when you use the optional transparency unit with negative film. This setting is available only when the optional unit has been installed.

TPU for Pos. Film:
Select this setting when you use the optional transparency unit with positive film. This setting is available only when the optional unit has been installed.

Note:
❏ *Uninstalled options cannot be selected.*

❏ *If an older model Auto Document Feeder is installed, the Document Source setting displays "Auto Document Source".*

Multi-page Support with Auto Document Feeder
If you select ADF - single sided or ADF - double sided as the
Document Source and click the Scan button, the following
dialog box appears.
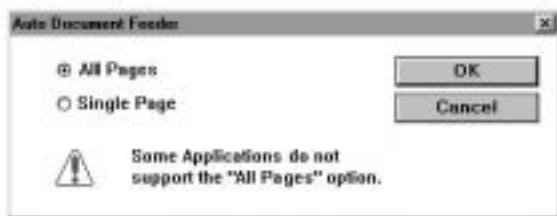
If you select Single Page, only one page is fed from the Auto
Document Feeder and scanned.

If you select All Pages (default), all the pages are fed from the
Auto Document Feeder and are scanned. Depending on your
application, the All Pages option may not work correctly.

Image Type

You always need to select the type of image to be scanned with
the Image Type menu or button. Click the arrows on the right
to view all the available settings.

Select a predefined choice from the menu. Click the Image
Type button to make and save the custom settings as described
on the next page. The following predefined settings are
available:

36-bit Full Color (HiFi):
> 36-bit colors, high quality, and de-screening

> *Note:*
> *This setting is available only in certain applications, such as Adobe PhotoShop.*

24-bit Full Color :
> 24-bit colors, high quality, and de-screening

12-bit Grayscale (HiFi):
> 4096 gray, high quality, and de-screening

> *Note:*
> *This setting is available only in certain applications, such as Adobe PhotoShop.*

256 Color:
> 256 colors, high quality, and 1-pass scanning sequence

256 Grayscale:
> 256 grays, high quality, and de-screening

Line Art:
> Black-and-white, draft quality and fast

OCR:
> Black-and-white, draft quality, and Text Enhancement Technology

Copy & Fax:
> Black-and-white, draft quality and fast, Auto Area Segmentation

Clicking the Image Type button opens the following dialog box, allowing you to customize the Image Type settings.

Image Type Name:
> Names of the predefined settings and any custom settings you have saved appear in the Image Type Name menu.

Pixel Depth:
> Select scanning colors from the Pixel Depth menu. Your choices are 36-bit colors, 24-bit colors, 256 Color, 4096 Gray, 256 Gray, and Black & White.

Halftone:
> Select a halftone or dither setting from the Halftone menu to optimize the reproduction of your image. Halftones are patterns of dots. Your choices are Mode A (Hard Tone), Mode B (Soft Tone), Mode C (Net Screen), Dither A (4 × 4 Bayer), Dither B (4 × 4 Spiral), Dither C (4 × 4 Net Screen), Dither D (8 × 4 Net Screen), and None.
>
> *Note:*
> *Halftone is available only when Pixel Depth is set to* 4096 Gray *or* Black & White.

Dropout:

>Select the color you do not want to scan from the Dropout menu. Your choices are None, Red, Green, and Blue.

>*Note:*
>*If Pixel Depth has been set to any color setting, Dropout is dimmed and cannot be selected. Dropout is available only for Gray or Black & White.*

Quality & de-screening:

>Select a scanning quality from the Quality & de-screening menu. Your choices are Draft and Best & de-screening.

B/W Options:

>Select the options you want to scan from the B/W Options menu. This menu is available only when Pixel Depth is set to Black & White. Your choices are Text Enhancement Technology, Auto Area Segmentation, and None.

Text Enhancement Technology:
This function eliminates the document background and raises recognition accuracy during OCR (Optical Character Recognition) scanning.

Auto Area Segmentation:
This function separates text from graphics so that grayscale images will be clearer and text recognition more accurate.

None:
Select None *if neither the Text Enhancement Technology nor the Auto Area Segmentation feature is needed.*

After you customize your settings, click the Add or Modify button (Save button) and then the OK button to enable your custom settings for the current scanning operation. Clicking the Cancel button returns the settings to their original state.

For Windows users:
You can save the Image Type settings with the Add *or* Modify
button. Type a new name in the Image Type Name box, change the
settings and click Add*, or change the settings and click* Modify*.*

For Macintosh users:
You can save the Image Type settings with the Save *button. Type a*
new name in the Image Type Name box, change the settings, and then
click the Save *button.*

To delete an Image Type setting, select the setting name in the
Image Type Name **menu and click the** Delete **button.**

Destination

Select the destination or output device where the scanned image
is to be printed or displayed with the Destination list or button.
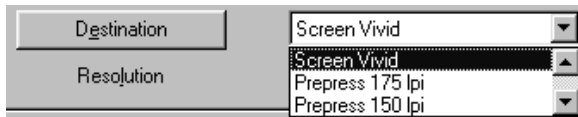
Select a predefined or custom choice from the menu. Click
the Destination **button to make and save custom settings as**
described later in this section. The following predefined
settings are available:

Screen, Screen Vivid (default), Prepress 175 lpi, Prepress
150 lpi, Prepress 133 lpi, Prepress 120 lpi, LineWork Scan,
InkJet Printer, Laser Printer 600, FAX**, and** OCR

If you click the Destination button, the following dialog box
appears.
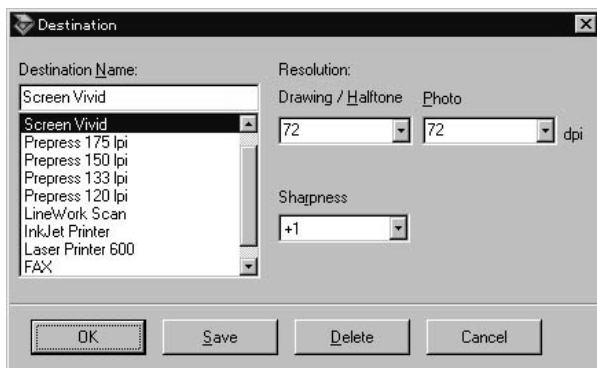
Destination Name:
> Names of the predefined and custom settings appear in
> the Destination menu.

Resolution:
> Select a scanning resolution from the Resolution menu
> for line drawings and halftone images or photos. Your
> choices depend on the capabilities of your scanner.
>
> The Resolution setting depends on the Pixel Depth
> setting in the Image Type dialog box. When Pixel
> Depth has been set to 8 Color or Black & White, you
> can set the Drawing/Halftone resolution. For other
> Pixel Depth settings, you can set the Photo resolution.
>
> *Note:*
> *The Resolution setting is closely related to the Image Size and
> Scale settings. Changing one may change the others, and the
> resulting image may not be what you expect.*

Sharpness:

> You can select from -2 (most defocused) to 2 (sharpest) by moving the slider or clicking the left or right arrow.

Clicking the Save button stores the current settings as a group of customized Destination settings. Click Save and type a new name in the Destination Name field, then click the Save button. This allows you to select your settings from the Destination pull-down menu in the main window or from the Destination Name list and scan using those settings. To remove a group of settings from the pull-down menu and list, select the name of the group from the list above and click Delete.

Resolution

The Resolution pop-up menu provides easy access to resolution options. The default resolution options are 50, 72, 200, 240, 266, 300, 350, 360, 400, 600, 720, 800, 1200, 3200, 4800, and 6400 dpi.

You can also type a value in the Resolution dialog box. The value has a range of 50 to 3200 dpi in increments of 1 dpi.

Source

The Source values indicate the width and height of all or a selected part of the source image in the specified unit of measurement. You can type in a new width and height to specify how much of the image you want to select. You can also define a specific scan area using the marquee.

You can use the pull-down menu to specify one of the following units of measurement for the Source and Target values: pixels, inches, or cm.
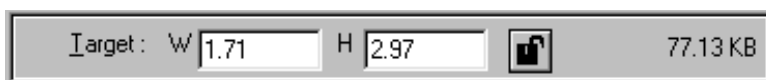
Source : W 1.71   H 2.97   inches ▼

Note:
❑ *The Image Size values are ignored if you click the* Scan *button without previewing the image.*

❑ *The Image Size setting is closely related to the Resolution and Scale settings. Changing one may change the others, and the resulting image may not be what you expect.*

Target

Use these settings to specify the width and height of the output image in relation to the scale you selected in the Resolution pull-down menu.

Target : W 1.71   H 2.97   🔓   77.13 KB

The Target size can be locked using the Lock button.

You can use the Source pull-down menu to specify the unit of measurement for Target values.

The File Size indicator on the right shows the approximate size of the scanned image in KB or MB.

Scale

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

```
          34                 8888
Scale:  ◄ |□              ► |100    %
```

Note:
❑ *The Scale feature is disabled if you click the* Scan *button without previewing the image.*

❑ *The Scale setting is closely related to the Resolution and Image Size settings. Changing one may change the others, and the resulting image may not be what you expect.*

Scale bar:
> An image can be reduced or enlarged by moving the Scale slider. You can also click the left or right arrow to change the image size in increments of 1%.
>
> ***Note:***
> *The range of the possible reduction or enlargement varies depending on the current resolution setting.*

Scale indicator:
> The percentage of enlargement or reduction is indicated in the Scale indicator field. You can type a new value directly in this field. When you move the Scale slider, the value changes in this field.

Settings

Settings...

Clicking the Settings button opens the following dialog box, allowing you to save all of the customized settings of the current scanning session under a single name.

Configuration

Configuration...

Clicking the Configuration button opens following dialog box, allowing you to adjust the comparison feature and screen calibration.
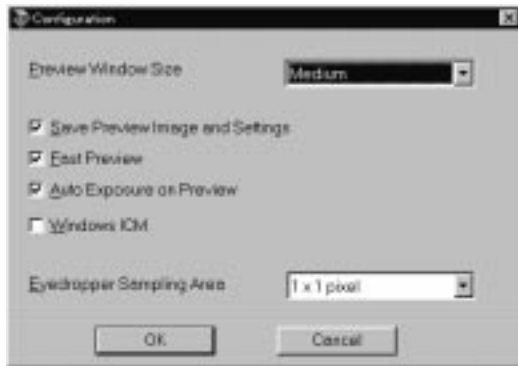
Preview Window Size:
       Select the size of the Preview window. Your choices are Large, Medium, and Small.

Save Preview Image and Settings:
       Saves the preview image and all of scanning parameters when you perform a scan or close EPSON TWAIN Pro.

Fast Preview:
       Enables high-speed loading of the preview image.
       Do not use this feature (no check in the checkbox) when quality is more important than speed.

Auto Exposure on Preview:
>Optimize the exposure settings for your image, and then displays an optimized image in the Preview window. The result is the same as if you clicked the Auto Exposure button.

Windows ICM:
>Reproduces the colors in your image using Windows ICM (Image Color Matching). ICM uses a special color matching scheme to make sure the colors in your output match the colors in the original image. This setting appears only in Windows 95.

Apple ColorSync:
>Reproduces the colors in your image using Apple ColorSync. ColorSync uses a special color matching scheme to make sure the colors in your output match the colors in the original image. This setting appears only in Macintosh.

Eyedropper Sampling Area:
>Allows you to select one of the three following size settings for the Eyedropper Sampling Area: 1×1 pixel, 3×3 pixel, and 5×5 pixel. The Eyedropper feature can sample the average Highlight, Shadow, and Gray Balance Intensity values of the target area.

Chapter 4
Troubleshooting

4

Problems and Solutions

Most problems you encounter while operating your scanner and software have simple solutions. Read the appropriate section to find your problem; then follow the recommended steps.

Note:
Some EPSON TWAIN Pro settings may be dimmed and cannot be selected, because they have been overridden by other settings or are not supported by your scanner.

If you cannot solve your problem, contact your dealer or a qualified customer support person for assistance.

The software does not work properly.

Check that you are using a compatible computer, scanner, and software. See the section on hardware and software requirements in Chapter 1.

Check that the computer has enough memory to run the software.

Make sure that the software can access enough memory. See the section on memory allocation in your computer manual.

Images are very dark and without details.

Check that the Halftone setting is set to black-and-white mode or color mode.

Check that the destination or your type of output device is correctly set. If it is set for a display monitor, printouts on the printer may be too dark.

Make the Exposure, Tone Correction, and Shadow settings lighter and scan the image again.

Images cannot be scanned at all or only a few dots appear in the scanned image.

Try different settings. Remember that the software features are subject to scanner capability and some settings may disable others.

Make the Exposure, Highlight, and Tone Correction settings darker and scan the image again.

Moiré (cross hatch) patterns appear in the scanned image.

This problem occurs when images that include halftone patterns are scanned. To minimize moire' patterns, try any of the following solutions:

❑ Place a transparent sheet between the document and the document table to slightly defocus the image.

❑ Move or angle the document slightly.

❑ Change Sharpness to the defocus level.

❑ Change the Scale size slightly.

❑ Change the Focus position setting.

Glossary

additive primary colors

Primary colors which produce white when mixed in a certain proportion. These are red, green, and blue—the colors of the scanner lamps and color monitor displays.

bi-level data

Image data that is composed of 1 bit/pixel. A pixel is represented by a single bit of digital data that can express only 1 (light) or 0 (dark).

bit

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.

bit/pixel

The unit that indicates the number of bits allocated for a pixel. The larger the value, the more detail a pixel can represent.

byte

A unit of information consisting of eight bits. A byte can represent a control code or character.

carriage

A component of the scanner that contains the optical sensor and light source for scanning.

color correction

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.

color separation

A process to convert full-color images into a limited number of primary colors. The additive primary colors (red, green, and blue) are used by the scanner and the subtractive primary colors (cyan, magenta, and yellow) plus black are used for printing press separations.

default

A set of values used when no other selections have been made.

dithering

A process in which software or an output device simulates continuous tones with groups of dots.

document

The physical item, such as a sheet of paper or a book, that you place on the document table for the scanner to read.

dpi

Short for dots per inch. A unit of measurement for resolution. The higher the value, the higher the resolution.

dropout color

A color you set the scanner not to recognize.

ESC/I

Abbreviation for EPSON Standard Code for Image scanners, a system of commands that is used to control image scanners.

ESC/P

Abbreviation for EPSON Standard Code for Printers, a system of commands that is used to control printers.

Exposure

A scanner function that lightens or darkens the scanned image data.

gamma correction

Methods of adjusting the gamma curve that make sure the reproduced image is as close to the original as possible. Output devices require different methods.

halftoning

Methods of using dot patterns to represent an image.

home position

The position at the back of the scanner where its carriage rests before a scanning operation.

imagesetter

A device that uses computer files to produce high-resolution text and graphics output on film or paper. These are usually found in service bureaus and printing companies.

impact dot printer

A printer that transfers ink onto the paper by striking an ink ribbon with a number of small pins.

ink jet printer

A printer that sprays ink onto paper through a number of small nozzles.

interface

A piece of hardware, a method, or a standard used for connection between or among computer devices and peripherals.

line sequence

A type of color scanning that separates primary colors line by line. The carriage makes only one pass.

marquee

A resizeable and moveable frame that identifies the part of an image that is selected.

monochrome

Black and white images, or images represented only by the intensity of luminosity.

page sequence

The type of color scanning in which the entire image is scanned once for each separation color.

pixel

Short for picture element. Every image is composed of a number of pixels. Pixels are also counted in units of dots.

plain bi-level

Bi-level image data without the halftoning process.

port

An interface channel through which data is transmitted between devices.

primary colors

The basic colors. See *additive primary colors* and *subtractive primary colors.*

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. The sensor "reads" the colors in an image, and sends the color information to the computer or an output device as digital data.

scanning area

The physical size of the area that will be scanned by the scanner.

subtractive primary colors

Primary colors that produce black when mixed in certain proportions. These are cyan, magenta, and yellow. In printing, black is often added to give more definition because the mixing of color inks cannot produce pure black.

threshold

A value that is referenced to determine how data is represented; for example the data is represented as 1 or "on" if the value of the data is larger than the threshold value, and the data is represented as 0 or "off" if the value of the data is smaller than the threshold value. Scanners use a number of thresholds to convert an image into digital data.

tone curve

The graph that shows the contrast between the input (original image) and output (image data) in image processing.

Index

EPSON