EPSON®

Scanning Utilities

EPSON TWAIN EPSON Scan! II

User's Guide for Windows

Printed on recycled paper with at least 10% post-consumer content

Copyright Notice

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of Seiko Epson Corporation. No patent liability is assumed with respect to the use of the information contained herein. Neither is any liability assumed for damages resulting from the use of the information contained herein.

Neither Seiko Epson Corporation nor its affiliates shall be liable to the purchaser of this product *or* third parties for damages, losses, costs, or expenses incurred by purchaser or third parties as a result of: accident, misuse, or abuse of this product or unauthorized modifications, repairs, or alterations to this product.

Seiko Epson Corporation and its affiliates shall not be liable against any damages or problems arising from the use of any options or any consumable products other than those designated as Original EPSON Products or EPSON Approved Products by Seiko Epson Corporation.

EPSON and EPSON Stylus are registered trademarks of Seiko Epson Corporation. ActionScanner is a trademark and EPSON Connection is a service mark of Epson America, Inc.

General Notice: *Other product names used herein are for identification purposes only and may be trademarks of their respective companies. EPSON disclaims any and all rights in those marks.*

Copyright © 1996 by Epson America, Inc. 1/96
Torrance, California, USA

Contents

introduction

System Requirements 2
How to Use This Manual 3
Warnings, Cautions, Tips, and Notes 4
Where to Get Help 4
Electronic Support Services 5

Chapter 1 *Installing Your Software*

Installing the Scanning Utilities 1-1
Using TWAIN With Windows 95 and Photoshop 3.0.4 . . 1-4

Chapter 2 *Calibrating Your System*

Calibrating Your Monitor to Your Scanner 2-1
Performing Screen Calibration 2-2
Enabling Screen Calibration 2-3
Calibrating Your Printer to Your Scanner 2-3
Exporting a Calibration Chart 2-4
Creating Printer Calibration Profiles 2-6
Scanning Using Calibration 2-8

Chapter 3 **Capturing** *images From with in Applications*

Accessing EPSON TWAIN 3-2
Using the Easy Screen 3-3
Selecting the Document Source 3-3
Selecting the Image Type 3-4
Selecting the Destination 3-4
Using the Advanced Screen 3-5
Modifying an Image Type 3-5
Modifying the Destination 3-10
Previewing and Adjusting the Image 3-13
Scanning the Image 3-15

Chapter 4 ***Using Special Effects***

Modifying the TWAIN Configuration 4-1
Using Image Controls 4-2
Adjusting Gamma Correction 4-4
Adjusting Colors 4-6
Setting the Gray Balance 4-7
Changing Saturations. 4-7
Using Color Filters 4-8
Inverting an Image 4-8
Using Automatic Features 4-9
Using Auto Exposure 4-9
Using Auto Locate 4-9

Chapter 5 ***Saving and Exporting images***

Saving a Scanned Image 5-1
Exporting an Image 5-2
Acquiring and Exporting an Image 5-3
Exiting EPSON Scan! II 5-5

Chapter 6 ***Troubleshooting***

Problems Using the EPSON Scanning Utilities 6-1
Problems With Image Quality 6-9

Appendix

icon Glossary

Term Glossary

index

Introduction

The EPSON® Scanning Utilities let you perform the following functions with your EPSON scanner:

- ❑ Calibrate your scanner to your monitor and your printer
- ❑ Capture scanned images from within your application
- ❑ Automatically locate, expose, and scan an image
- ❑ Adjust individual settings and preview the effects before you scan
- ❑ Choose single- or triple-pass scanning
- ❑ Save and reuse scanning settings that work well in your environment
- ❑ Take advantage of the multipage scanning feature available with scanners that have an automatic document feeder (ADF)
- ❑ Take advantage of the text enhancement technology built into some EPSON scanners.

The Scanning Utilities include two integrated programs:

- ❑ EPSON Scan! II and EPSON TWAIN (for 16-bit scanning with Microsoft® Windows® 3.1)
- ❑ EPSON Scan! II32 and EPSON TWAIN32 (for 32-bit scanning with Windows 95 or Windows NT).

Note:
This guide refers to the 32-bit programs as EPSON Scan! II and EPSON TWAIN to reduce confusion.

EPSON Scan! II calibrates your scanner with your monitor and color printer to produce images whose colors match the originals. It can also capture images and then save and export these images in a variety of file formats.

EPSON TWAIN is the interface between most of your software and your scanner. The interface has two screens: easy and advanced. You can access either screen from within any software that supports the TWAIN standard or from EPSON Scan! II to take advantage of your scanner s features.

Note:
The top line of **the** *screen identifies whether you are using EPSON Scan! II or EPSON TWAIN.*

System Requirements

For the EPSON Scanning Utilities to work properly, your system must have at least the following configuration:

- Microsoft Windows 3.1, Windows 95, or Windows NT

  Note:
  To *use 32-bit scanning features, your system must be running* Windows *95* or *Windows NT.*

- A 386-based (or higher) IBM® compatible computer or an IBM PS/2®

- *DOS 5.0* or higher

- At least 100MB of free hard disk space for scanner applications and images

- At least 8MB of available RAM

- Video Graphics Array (VGA) or higher monitor

- One of these EPSON scanners: ES-300C, ES-600C, ES-800C, ES-1000C, ES-1200C, or the ActionScanner II. (Some features are not available or are restricted for these scanners.)

- A bidirectional parallel interface (either the standard bidirectional parallel interface or a PS/2 standard printer port) or an Adaptec® SCSI adapter.

  Note:
  EPSON supports some Adaptec compatible SCSI adapters.

How to Use This Manual

This User s Guide contains information you need to install and use the EPSON Scanning Utilities with your EPSON scanner.

Chapter 1 describes installing your EPSON Scanning Utilities software. Be sure to read this first. Chapter 2 describes how to calibrate your system. Basic information for scanning from within your application is included in Chapter 3, while Chapter 4 describes using the special effects features of your software. Chapter 5 tells you how to use EPSON Scan! II to export images. Troubleshooting tips are contained in Chapter 6 and default settings are listed in the Appendix.

This manual also includes two glossaries-an icon glossary that describes how each icon works, and a term glossary that describes common scanning terms. The final section is an index.

Warnings, Cautions, Tips, and Notes

This manual displays important information as follows:

Warnings
must be followed carefully to avoid damage to your scanner and computer.

Cautions
should be followed carefully to ensure your Scanner operates correctly.

Tips
contain helpful ideas for using these utilities.

Notescontain important information about these utilities.-

Where to Get Help

If you purchased your scanner in the United States or Canada, EPSON provides customer support and service through a network of Authorized EPSON Customer Care Centers. EPSON also provides the following services when you dial (800) 922-8911:

- Technical information on the installation, configuration, and operation of EPSON products
- Assistance in locating your nearest Authorized EPSON Reseller or Customer Care Center
- Customer relations
- EPSON technical information library fax service
- Product literature on current and new products.

You can purchase printed manuals, accessories, or parts for EPSON products from EPSON Accessories at (800) 873-7766 (U.S. sales only). In Canada, call (800) **BUY-EPSON.**

If you purchased your scanner outside the United States or Canada, contact your EPSON dealer or the marketing location nearest you for customer support and service.

If you need help with any software program you are using, see that program s documentation for technical support.

Electronic Support Services

If you have a modem, the fastest way to access helpful tips, specifications, drivers, application notes, and bulletins for EPSON products is through the online services below.

World Wide Web

If you are connected to the Internet and have a Web browser, you can access EPSON s World Wide Web site at http://www.epson.com. EPSON s home page links users to What s New, EPSON Products, EPSON Connection,SM Corporate Info, and EPSON Contacts.

Link to EPSON Connection for the latest drivers and FAQs (Frequently Asked Questions) and the EPSON Chat area. To get in touch with EPSON around the world, EPSON Contacts includes contact information for local EPSON subsidiaries.

EPSON Bulletin Board Service

You can call the EPSON Bulletin Board Service (BBS) at (310) 782-4531. No membership is required. Make sure your communications software is set to 8 data bits with 1 stop bit, no parity bit, and a modem speed up to 28.8 Kbps. See the documentation that came with your communications software for more information.

To download the latest TWAIN drivers from the BBS, use the Drivers library.

CompuServe online support

CompuServe@ members can call the Epson America Forum on CompuServe. If you are already a member, simply type GO EPSON at the menu prompt to reach the Forum.

If you are not currently a member, you are eligible for a free introductory membership as an owner of an EPSON product. This membership entitles you to:

- An introductory credit on CompuServe
- Your own user ID and password

A complimentary subscription to *CompuServe Magazine,* CompuServe s monthly publication.

To take advantage of this offer, call (800) 848-8199 in the United States and Canada and ask for representative #529. In other countries, call the following U.S. telephone number: (614) 529-1611, or your local CompuServe access number.

Chapter 1

Installing Your Software

EPSON Scanning Utilities come with installer software that makes them easy to install with Windows 3.1 or Windows 95.

First make sure that the interface cable is connected properly. If you are using a SCSI interface, also make sure the SCSI software has been installed and the interface settings, such as SCSI IDs and terminators, are set properly. Then follow the instructions below to install your software.

Installing the Scanning Utilities

Follow the steps in this section to install EPSON Scanning Utilities for Windows 3.1 or Windows 95. The installer program automatically detects your operating system and installs 16-bit and/or 32-bit files as necessary.

1. Start Windows 3.1 or Windows 95.

2. Insert the EPSON Scanning Utilities 1 diskette in a diskette drive.

3. From the Windows 3.1 Program Manager, open the File menu and choose Run.

   From Windows 95, click Start and select Run.

   Type A:\SETUP (or B:\SETUP if you inserted the disk in drive B) in the command line field and choose OK. After a few moments, you see the initial setup screen.

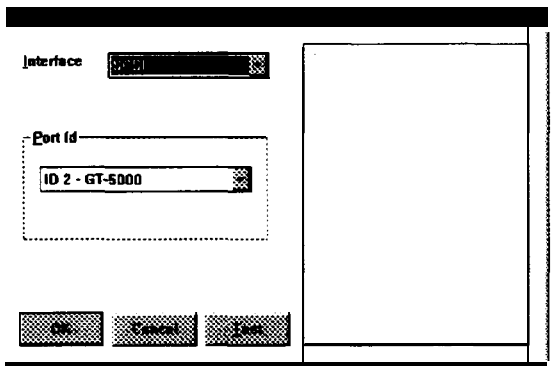
4. Choose OK to continue. A dialog box displays the path in which the installer software installs the program. The default path is C:\EPSCAN2\ (for Windows 3.1) or C: \EPSCAN32 (for Windows 95).

5. Choose OK to accept the default pathname, or delete it, type a new path, and choose OK.

6. The next dialog box displays the default Windows directory. If the displayed path is correct, choose OK. Otherwise, delete the displayed path, type a new path, and choose OK.

7. The program copies the files to your hard disk drive and prompts you for diskette 2 as necessary.

8. Then you see the EPSON Scanner Setup dialog box.

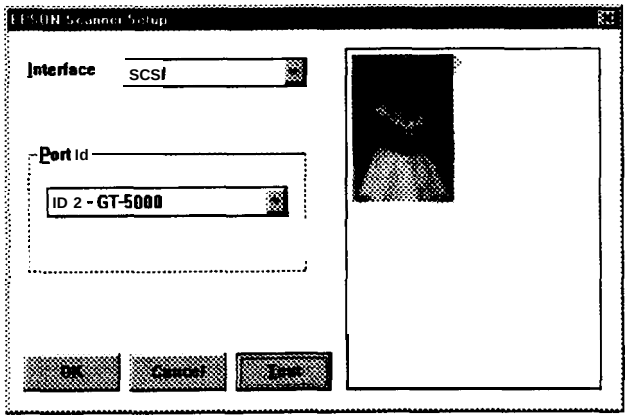


From the Interface pull-down menu, choose SCSI if your scanner is connected to a SCSI interface or BiD Parallel if it is connected to a bidirectional parallel interface. The program changes the **Port** ID field to the correct setting.

Note:
If you selected SCSI and see *no SCSI ID number in* the *Port ID field, make sure no two SCSI devices have* the *same ID number.*

9. Now test your scanner. Raise the scanner s cover and place an image face down on the glass surface. Then carefully close the cover.

10. Click the Test button. If the scanner, interface, and EPSON Scanning Utilities are set up correctly, the scanner scans the image. After a few moments, you see the scanned image in the EPSON Scanner Setup dialog box, as shown below:



11. Click OK to close the EPSON Scanner Setup dialog box.

12. Remove the EPSON Scanning Utilities diskette from the drive.

13. If you are using Windows 3.1, exit and restart it.

The program creates an EPSON Scanner program group or folder in Windows.

Before you can acquire an image from within your application the first time, you need to select EPSON Scanners as your TWAIN data source; see your application documentation for instructions.

Note:
If you are using *Adobe® Photoshop 3.0.4 with Windows 95, see the next section for instructions on selecting a 32-bit TWAIN data source in Photoshop.*

Using TWAIN With Windows 95 and Photoshop 3.0.4

To use a 32-bit TWAIN data source with Photoshop 3.0.4 and Windows 95, you need to obtain patch files from Adobe to enable Photoshop 3.0.4 to operate in 32-bit mode. Contact Adobe at (800) 87-ADOBE for more information.

Once you have the patch files, follow these instructions to install them:

1. Install Photoshop 3.0.4, if you have not done so already.

2. Insert the patch diskette in your diskette drive or copy the files to a directory on your hard disk.

3. Copy these files from the patch diskette or directory to your Photoshop program directory (usually C:\WIN32APP\PHOTOSHP):

   PSUT9516.DLL
   PSUT9532.DLL

4. Copy the file TWAIN_32.8BA to the Photoshop Plugins directory (usually C:\WIN32APP\PHOTOSHP\PLUGINS).

5. In the Photoshop Plugins directory, delete the file TWAIN32.8BA; do not delete the file with an underscore (_).

6. Start Photoshop 3.0.4.

7. Under the File menu, select Acquire.

8. Choose Select TWAIN-32 Source.

9. Choose EPSON Scanners (32bit) and click Select.

10. When you re ready to scan, select Acquire and then choose TWAIN32.

Chapter 2

Calibrating Your System

Sometimes the colors of your original image do not match the colors you see on your screen and in the final printed output. This is because of the different color processes your scanner, monitor, and printer use to produce color.

The scanner and the monitor both create a range of colors by adding red, green, and blue in different proportions and intensities (an additive color process). Printers, on the other hand, produce colors by combining cyan (C), magenta (M), yellow (Y), and black (K) inks (CMYK) to create the desired hues. This is a subtractive color process.

When you print a scanned image, the image goes through both the additive and subtractive interpretive processes to acquire color-the first when it is scanned, and the second when it is printed on your color printer. As a result, the printed colors may not match the colors in the original.

Calibration allows you to fine-tune your scanner, monitor, and printer to produce colors that are very close to those in the originals. Use the procedures in this chapter to:

- ❑ Calibrate your monitor to your scanner
- ❑ Calibrate your printer to your scanner
- ❑ Use the calibration profiles when you scan an image.

Calibrating Your Monitor to Your Scanner

To calibrate your monitor, you first need to perform a screen calibration using EPSON Scan! II and then enable screen calibration in TWAIN.

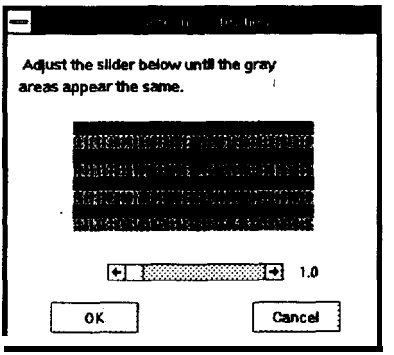
Performing Screen Calibration

Follow these steps to perform a screen calibration:

1. From the Windows 3.1 Program Manager, double-click on the EPSON Scan! II icon in the EPSON Scanner program group.

   From Windows 95, click Start and select Programs; **then** select EPSON Scan! II from the EPSON Scanner folder.

2. Choose Screen Calibration from the Calibrate menu. YOU see this screen:



3. Look at the display from a distance and adjust the slide bar until the separate rows have the same basic color intensity.

   Tip:
   If the rows don t *look the same after you* adjust the *slide bar, increase the number of colors your monitor displays using Windows 3.1 Setup or Windows 95 Display. See your Windows documentation or online help for more information.*

4. Choose OK.

If you use a different monitor or change your video display resolution, calibrate your screen again.

Enabling Screen Calibration

Once you have calibrated your screen, you need to make sure screen calibration is enabled. Follow these steps:

1. Start EPSON Scan! II, if necessary.

2. From the File menu, choose Acquire. You see the TWAIN screen.

   If the screen is fairly small and has an Advanced button, it is the easy screen. Click Advanced to switch to the Advanced screen. If the screen is large and has a Configuration button, it is the advanced screen.

3. Click Configuration to open the Configuration dialog box.

4. Make sure the Enable Screen Calibration check box is selected. If it isn t, select it to enable screen calibration.

5. Choose OK.

When screen calibration is enabled, TWAIN uses it as it scans images until you change this setting.

Calibrating Your Printer to Your Scanner

If you are printing color images on a color printer, you must choose a calibration profile for each of the printers you use. Printer calibration profiles ensure that your printed images print with colors that closely match those in the original.

If you have one of these EPSON Stylus@ ink jet printers, EPSON Scan! II provides printer calibration profiles for you so you do not have to create them:

EPSON Stylus COLOR	EPSON Stylus Pro
EPSON Stylus COLOR II	EPSON Stylus Pro XL
EPSON Stylus COLOR IIs	

For these printers you simply select the correct printer calibration profile before you scan an image. See Scanning Using Calibration on page 2-8.

If you have a color printer that is not a color EPSON Stylus, you must create a printer calibration profile using the instructions in this section.

To create a printer calibration profile, you must perform these operations:

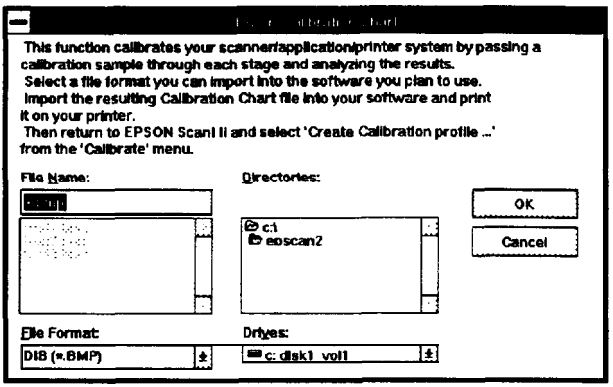
- ❑ Export a calibration chart from EPSON Scan! II to your application in a format your application can open and print.
- ❑ Scan the printed chart to create the printer calibration profile.

Exporting a Calibration Chart

Follow these steps:

1. Start EPSON Scan! II, if necessary.
2. Choose Export Calibration Chart from the Calibrate menu.

You see the following screen:



3. From the File Format pull-down menu, select a format your application software can open. If you want to change the location where the file will be saved, use the other pull-down menus to select the new drive or directory.

4. In the File Name field, type the name (such as COLOR1.BMP) you want to assign to the calibration chart file. Make sure the extension (.BMP, .TIF, .EPS) you assign corresponds to the file format type you ve selected.

5. Choose OK to export the calibration chart.

6. Exit EPSON Scan! II.

7. Start your image editing application.

8. Open the calibration chart file you just created. The chart contains nine blocks of color gradations, some grayscale gradations, and a black border on three sides.

9. Save the calibration chart file. You can use the same name you assigned when you exported the chart, or you can assign a new name.

10. Print the calibration chart on your color printer.

11. Exit your image editing application.

Note:
To print images on more than one color printer, print **the** *calibration chart on each printer you ll use. If you plan to print the image on a service bureau s color printer, have them print the calibration chart on their printer so you can create a calibration profile it.*

Tip:
When you label the printed charts to help you identify which printer produced them, don t write on *the chart itself. Write on the back of the page.*

Tip:
If you plan to print your image on a printing press that requires a four color separation, you'll need to ask your service bureau or printer to create a color sample using your calibration chart. You can **then** *use that color sample to create a calibration profile.*

You are now ready to scan the printed calibration chart to create a printer calibration profile.

Creating Printer Calibration Profiles

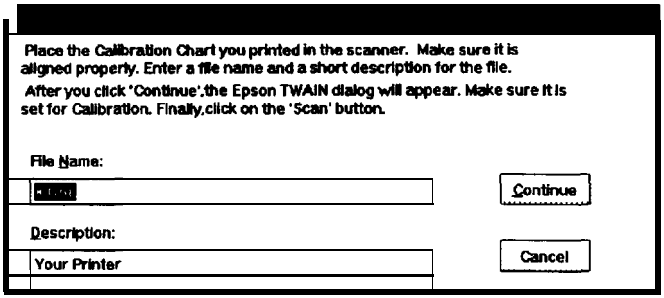
Follow these steps to create a calibration profile for each color printer you want to use:

1. Start EPSON Scan! II, if necessary.

2. Place the printed calibration chart face down on the glass surface of your scanner and close the cover.

3. Choose Create Calibration Profile from the Calibrate menu.

You see the following screen:



4. In the File Name field, type the filename of the calibration file you want to create, such as COLOR1.CAL. Make sure you use the CAL extension.

5. In the Description field, type a short description of the printer for which you created the calibration chart, such as Custom.

> ***Tip:***
> *If you are creating more than one calibration profile (for instance, if you have more than one color printer), make sure you assign unique descriptions to each calibration profile so you can distinguish between them.*

6. Choose Continue. You see the TWAIN advanced screen.

7. If necessary, choose Color Photo from the Image Type pull-down menu.

8. Choose Calibration Profile from the Destination pull-down menu.

9. Click Scan. The program scans the calibration chart and creates a calibration profile. Then you see the EPSON Scan! II program **screen.**

Note:
If a message appears indicating that the specified scan settings are incorrect, you need to reset the *Destination options to their* ***default*** *settings. Click the* Destination *button to open the Destination dialog box; then select* General for the Calibration *setting, and 180 for both the* Resolution *settings.* Save *the settings by clicking* Save; *then choose* Scan *again. Always create Calibration profiles using these default settings.*

You can now use this calibration profile when you scan images.

Scanning Using Calibration

If you are using one of the predefined printer calibration profiles, such as one of the EPSON Stylus printer profiles, or you have created a custom calibration profile for your printer, you can now use that profile to scan and print your image.

Follow these steps to use a calibration profile when you scan:

1. Choose Acquire (or Place, or the appropriate command) from the File menu of your application.

2. If you see a submenu, choose TWAIN or TWAIN32. You see the EPSON TWAIN advanced screen. (If you see the easy screen, click Advanced.)

3. Click Destination to display the destination dialog box.

4. In the Destination Name field, select the name of your output device. If you have one of the EPSON Stylus printers listed on page 2-4, select the printer from the Destination Name pull-down menu. The Calibration description is assigned automatically. Go to step 6.

If you created a custom calibration profile for your printer, type a unique name for the profile in the Destination Name field. Go to step 5.

5. From the Calibration pull-down menu, select the profile name you assigned when you created the profile.

6. Choose Save.

7. Choose OK. You see the EPSON TWAIN advanced screen.

You can now preview or scan your image using the calibration profile for your color printer.

Tip:
If the colors in your printed image do not closely match the original, recalibrate your monitor and your printer and try again.

Chapter 3

Capturing Images From Within Applications

When you scan an image from within an application using EPSON TWAIN, you follow these basic steps:

- ❑ Access TWAIN from within your application s File menu
- ❑ Choose either the easy or advanced TWAIN screen
- ❑ Select the correct image type and destination settings
- ❑ Preview the image and select the scan area (advanced screen only)
- ❑ Scan the image
- ❑ Close TWAIN and edit the image in your application.

Guidelines for performing each of these basic steps are provided in this chapter.

If you don t need to preview the image you are scanning and want only to specify the document source (if available), the image type, and the destination, you can use the easy screen; see page 3-3.

If you want to select calibration profiles, or add, delete, or modify an image or destination before you scan, you must use the advanced screen; see page 3-5. (To use the special effects features in the advanced screen, see Chapter 4.)

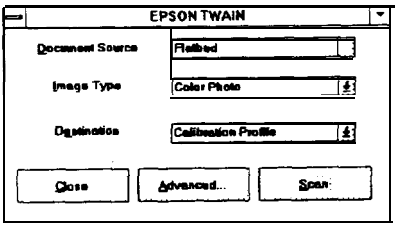
Note:
If your application does not support TWAIN, you can use EPSON Scan! II to scan an image and export it in a format your image editing software can use. See Chapter *5 for more information.*

Accessing EPSON TWAIN

To access EPSON TWAIN, choose Acquire (or Place, or the appropriate command) from the File menu within your application. You may then have to select TWAIN or TWAIN32 from a submenu. When TWAIN opens, you see either the easy or advanced screen, depending on which was opened last.

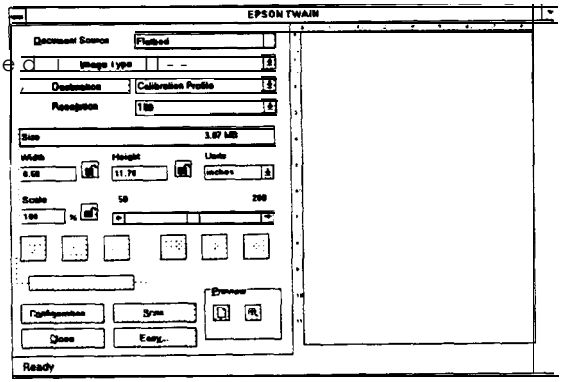
The easy screen allows you to select the type, destination, and document source (if available) of your image. When you scan with this screen, your entire image is captured and scanned.

easy screen



The advanced screen lets you select the same basic settings as the easy screen, plus it allows you to modify, add to, or delete these settings. The advanced screen also lets you preview and select the portion of your image you want to scan.

advanced screen



Using the Easy Screen

The following basic settings are available on the TWAIN easy screen:

- ❑ Document source
- ❑ Imagetype
- ❑ Destination.

You must select the appropriate option from each of these settings to successfully scan your image.

selecting the Document Source

If you have the optional Automatic Document Feeder (ADF) or the optional Transparency Unit installed on your scanner, you can select the option from the Document Source pull-down menu. The following table describes the available options:

Document Source options

Source option	Function
Flatbed	Scans the image from the document table
Automatic Document Feeder	Scans images as they feed through the ADF (multipage scanning)
Transparency Unit	Scans an image from the Transparency Unit

Note:
When the Automatic Document *Feeder is installed, the easy and advanced screens contain* check boxes for selecting *one page or all pages in a document.*

Selecting the Image Type

To scan images with satisfactory results, you must use the correct image type option. You can select one of the following options from the Image Type pull-down menu:

Color Photo	Color Drawing
256 Colors	Black & White Halftone
Black & White Photo	Line Art
Color Halftone	OCR

If you haven t modified these options by changing any of their settings, the image type you select uses the default settings listed in the Appendix. To add a new Image Type option or modify any existing settings, see Using the Advanced Screen.

To scan text, select OCR (for Optical Character Recognition) from both the Image Type and Destination pull-down menus. Leave the settings for these options at their defaults, listed in the Appendix. If you have a scanner that supports Text Enhancement Technology, see Using Text Enhancement Technology on page 3-9 for additional OCR instructions.

Selecting the Destination

You must select the appropriate output destination for your image to successfully scan and print. You can select one of the following options from the Destination pull-down menu:

General	Laser 600 dpi
Screen	Stylus COLOR
Impact dot printer	Stylus Pro XL
Thermal Printer	Stylus Pro
Inkjet Printer	Stylus COLOR II
Laser Printer	Stylus COLOR IIs
Fax	Calibration Profile
OCR	

If you haven t modified these options by changing any of their settings, the destination you select uses the default settings listed in the Appendix. To add a new Destination option or modify any existing settings, see Using the Advanced Screen.

To scan text, select OCR (for Optical Character Recognition) from both the Destination and Image Type pull-down menus. Leave the settings for these options at their defaults, listed in the Appendix. If you have a scanner that supports Text Enhancement Technology, see Using Text Enhancement Technology on page 3-9 for additional OCR instructions.

Using the Advanced Screen

The advanced screen allows you to select the same basic settings as the easy screen, but allows you to add new options and modify existing ones. In addition, you can select calibration profiles, enable the text enhancement technology feature, preview an image, and alter it before you scan.

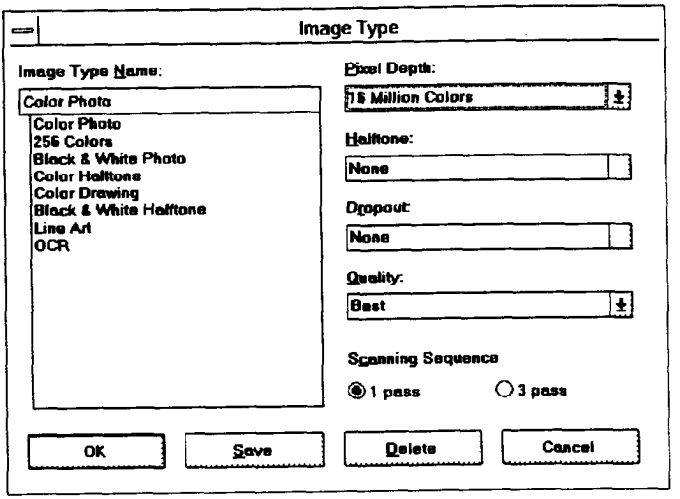
Note:
For information about using the basic settings, see "Using the *Easy Screen on page 3-3.*

To access the advanced screen, select Advanced from the easy screen, if necessary. Then see the sections below to modify settings, work with calibration profiles, or preview your image.

Modifying an Image Type

To modify an Image Type setting, choose the Image Type button.

You see the following screen:



Not all options on this screen are available with all scanners, Image Types, or Pixel Depth settings. The Image Type advanced options are described in the following table.

Image Type advanced options

Category	Options	Function
Pixel Depth	Black &White	Uses a data format of 1 bit/pixel to produce black and white images
	16 Gray	Uses a data format of 4 bits/pixel to produce 16 shades of gray
	256 Gray	Uses a data format of 8 bits/pixel to produce 256 shades of gray
	8 Color	Uses a data format of 1 bit/pixel/color to produce images in 8 colors
	256 Color	Uses a data format of 8 bits/pixel/color to produce images In 256 colors
	16 Million Colors	Uses a data format of 8 bits/pixel/color to produce images in 16 million colors

Image Type advanced options (continued)

Category	Options	Function
Halftone*	None	Determines tones based on data format
	Mode A	Converts image into a hard tone to produce a distinct image (1 and 2 bits/pixel/color)
	Mode B	Converts image into a softer tone; most suited for images containing large areas of similar tones (1 bit/pixel/color)
	Mode C	Represents images similar to the screen commonly used for newspaper photographs (1 bit/pixel/color)
	Dither A	Expresses halftone in a 4 x 4 bayer dither pattern
	Dither B	Expresses halftone in a 4 x 4 spiral pattern
	Dither C	Expresses halftone in a 4 x 4 net screen dither pattern
	Dither D	Expresses halftone in 8 x 8 net screen dither pattern
Dropout	None	Includes all color values in a monochrome scan
	Red	Drops out reds so red areas are white in a monochrome scan
	Green	Drops out greens so green areas are white in a monochrome scan
	Blue	Drops out blues so blue areas are white in a monochrome scan
Quality	Draft	Faster scanning at a lower resolution
	Best	Produces the best quality scan
Scanning Sequence	1 pass	Scans the image with a single pass
	3 pass	Scans the image with three passes (available only in 16 million colors)
TET **	On or Off	See page 3-9

* When possible, let your image editing software perform halftoning.

** The Text Enhancement Technology option does not appear unless your scanner supports this feature.

The following table identifies the options available with each Pixel Depth setting. Since both the Draft and Best Quality settings are available with all the Pixel Depth settings, this option is not included in the matrix.

Pixel Depth option selection matrix

Pixel Depth	Halftone*	Dropout	Scanning Sequence
Black & White	None Mode A (Hard tone) Mode B (Soft tone) Mode C (Net screen) Dither A (4 x 4 Bayer) Dither B (4 x 4 Spiral) Dither C (4 x 4 Net screen) Dither D (8 x 8 Net screen)	None Red Green Blue	1 pass
16 Gray	-	None Red Green Blue	1 pass
256 Gray	-	None Red Green Blue	1 pass
8 Color	None Mode A (Hard tone) Mode 6 (Soft tone) Mode C (Net screen) Dither A (4 x 4 Bayer) Dither B (4 x 4 Spiral) Dither C (4 x 4 Net screen) Dither D (8 x 8 Net screen	-	1 pass
256 Color	-	-	1 pass
16 Million Colors	-	-	1 pass 3 pass**

* Dither options are not available for the ES-300C scanner.

** When you choose 3-pass, your application does not use the Calibration, Color Filter, or Saturation features in TWAIN; see Chapter 4 for more information.

Adding and deleting Image Type options

To modify an existing image type, select it from the Image Type pull-down menu and change the necessary settings. Choose Save and then choose OK.

To add a new image type, select a predefined type that closely resembles the one you want to create. Then delete the existing name from the Image Type Name field and type in a new name. Change the other Image Type settings as necessary. Choose Save and then choose OK.

To delete an existing image type, select the image type name from the list and choose Delete; then choose OK.

Note:
If you don t choose Save before you *choose* **OK**, *the image type settings are not changed.*

Using Text Enhancement Technology

EPSON s Text Enhancement Technology filters out background noise in text images, such as background colors, and increases the threshold levels so that your OCR (optical character recognition) software can recognize the text more easily.

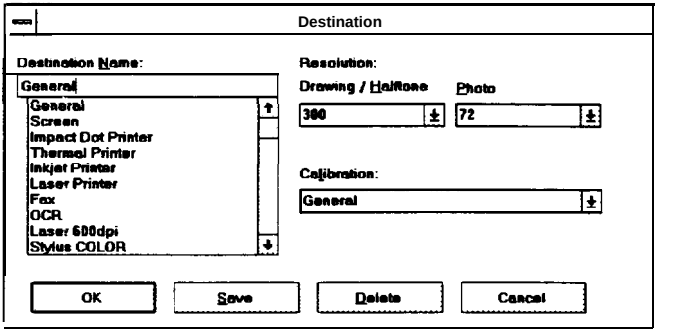
If your scanner supports Text Enhancement Technology, you can activate it from the Image Type dialog box. First select OCR from the Image Type pull-down menu. The Text Enhancement Technology checkbox indicates the feature is turned on. Choose Save and then choose OK. Then select OCR from the Destination pull-down menu as well.

Note:
If your scanner does not support Text Enhancement Technology, the option does not appear or is grayed out in *the Image Type dialog box.*

Modifying the Destination

The Destination dialog box allows you to define different resolutions for each destination output device. You can also use it to modify, add, or delete a calibration profile for your output device.

To modify the Destination, click the Destination button, you see the following dialog box:



Selecting resolution settings

Use the Resolution pull-down menus to select resolutions that produce the best results for your image type and output device. You can select one resolution for line drawings and halftones and a separate resolution for photographs.

The best resolution setting for your image depends on the type of image you are scanning and your final output device. The following table shows the best scanning resolutions for most needs.

Optimum scanning resolutions

Output device	line aft	Grayscale	Color
Monochrome printer	300-600	80-170	-
Desktop or off ice color printer	300-720	150-240	150-240
Printing press or imagesetter	600-1200	150-350	150-350

The higher the resolution you select, the larger the resulting image file. For example, an 8.5 x 11 photograph scanned at 300 dpi can produce a 24MB file. The same photograph scanned at 72 dpi creates a file of only 1.36MB. Large files take longer to process and print, so consider the limitations of your computer and hard disk drive when you select a resolution. To keep file sizes manageable, select the lowest possible resolution that gives acceptable quality.

Tip:
As a rule of thumb for any image except line art, use scanning resolutions that are one third of your output resolution. For example, use a scanning resolution of up to 110 with a 300 dpi laser printer and up to 170 with a 600 dpi laser printer. For the color EPSON Stylus printers, choose a resolution from 100 to 240 dpi for 720 dpi output and from 100 to 150 dpi for 360 dpi output.

Tip:
For printing on a commercial printing press, multiply the lines per inch (lpi) the press prints by 2 to determine your scanning resolution. For example, if your lpi is 150, try scanning at 300 dpi. (If the file size is too large, multiply the lpi by 1.5 to determine the scanning resolution.)

Tip:
If you plan to enlarge an image when you print it, scan it at a higher resolution than you normally would.

Selecting calibration profiles

Use the Calibration pull-down menu to select a predefined calibration profile or create a custom one. TWAIN can then use the profile as it scans to create the best quality image.

EPSON TWAIN provides many predefined printer calibration profiles, including those for the EPSON Stylus color printers, listed below.

General	Laser Printer 600
Screen	Stylus COLOR
Impact dot printer	Stylus COLOR II
Thermal Printer	Stylus COLOR IIs
Inkjet Printer	Stylus Pro
Laser Printer	Stylus PRO XL

Note:
In addition to the calibration profiles provided with the *Scanning Utilities, you can create your own calibration profiles for any color printer you use. For more information, see Chapter 2.*

Adding, modifying, and deleting destinations

To modify an existing Destination, select it from the Destination Name pull-down menu and change the necessary settings. Choose Save and then choose OK.

To add a new Destination, select an existing one with similar settings to the one you want to create. Then delete the existing name from the Destination Name field and type a new name. Change the necessary settings and choose Save; then choose OK.

Note:
If you don t click Save *before you click* OK, *the Image* Type *settings are not changed.*

To delete an existing Destination, select it from the Destination Name pull-down menu and choose Delete; then choose OK.

Previewing and Adjusting the Image

Once you have selected the Image Type and Destination settings, you can preview and adjust your image before you scan it. (To use the special effects features, see Chapter 4.)

Two Preview icons on the TWAIN advanced screen allow you to preview your image: the Preview icon and the Zoom Preview icon:

Preview icon

Zoom Preview icon

Click the Preview icon to preview the entire document table in the preview window.

Click the Zoom Preview icon to see a full-size preview in the selected area. See the next section for instructions on selecting the preview area.

Note:
If you click the Zoom Preview icon before you select an area, the preview includes the entire document table.

Tip:
If you cannot see the image clearly after you preview it, change your video display settings in Windows 3.2 Setup or Windows 95 Display to a lower resolution with more colors. Then perform a screen calibration again.

Adjusting the Preview Area

Once you see a preview of the image on the screen, you can define the area you want to scan or select the entire image area.

To define a specific area, position the mouse pointer at a comer of the area; the pointer changes to a +. Hold down the mouse button as you drag the pointer across the image. When you release the mouse button, a rectangle on the screen identifies the scan area.

To adjust the size of your selected area, move the mouse pointer to the edge of the selection rectangle; the pointer changes to a small square. Hold down the mouse button and drag the edge of the rectangle to the new location.

You can also move the position of the selected area. Place the mouse pointer inside the selection rectangle. The mouse pointer changes to a hand. Hold down the button to drag the selection rectangle to the new location.

To select the entire image area, click the Auto Locate icon, , to select the entire image for scanning. See Using Automatic Features in Chapter 4 for more information about using the Auto Locate icon.

Adjusting image Size

Vertical and horizontal rulers along two sides of the preview window provide measurements for the image you have previewed. You can change the unit of measure for these rulers by selecting pixels, inches, or cm (centimeters) from the Units pull-down menu.

The size of the full image or the selected area appears in the Width and Height fields. You can type new values in these fields to define a selection area of a specific size.

You can select the Lock icon to keep specific values in either the Width field or the Height field. Click the Lock icon once to lock the value in place; the Lock icon shows a closed lock. Click it again to unlock the value.

As you modify your selection area or other image settings, you see the file size of the image in the Size field.

Note:
Some applications convert the image to full 24-bit data, so the actual size of the image may be larger than the value displayed in Size.

Setting the image Scale

The Scale field displays the amount by which an image is enlarged or reduced during a scan. You can use this setting to scan the image from half its normal size (50%) to twice its normal size (200%). To change this value, move the slide bar or type the value you want in the Scale field.

Note:
If you increase the Scale *size, the* Size *value also* increases *to indicate a larger file size.*

You can use the Lock icon to keep the scale value constant. Click the Lock icon once to lock in the value; the icon shows a closed lock. Click it again to unlock the value.

Scanning the Image

When you are finished selecting settings on either the easy or advanced screen, and the image you are scanning looks just right in the preview window, you can scan the image by choosing the Scan button.

If you choose Scan from the easy screen, TWAIN automatically selects the entire image and scans it.

If you are scanning from the advanced screen and have not previewed the image or selected a preview area for it, be sure to click the Auto Locate icon before choosing Scan. Otherwise, the entire document table is **scanned.**

When you close the TWAIN screen, you can further modify your image using the features of your image editing software.

Chapter 4

Using Special Effects

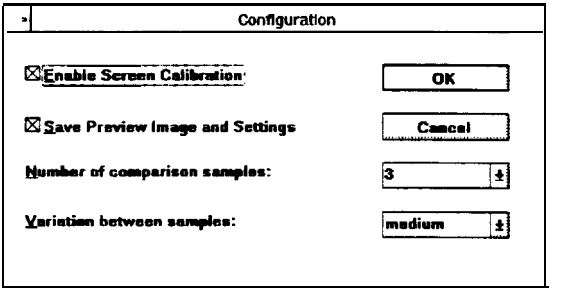
The EPSON TWAIN advanced screen gives you many options for editing images before you scan them. If you have image editing software, you can achieve all of the special effects described in this chapter-and more-using that software. However, if you don t have image editing software, EPSON TWAIN allows you to create a broad range of special effects using these options:

Cl TWAIN configuration options

- Image control settings
- Gamma correction
- Color adjustments
- Invert image feature
- Automatic features.

Modifying the TWAIN Configuration

When you choose the Configuration button on the TWAIN advanced screen, you see the following dialog box:



To save the preview image so it reappears in the preview window when you next open the advanced screen, select the Save Preview Image and Settings option.

If you have performed a screen calibration (as described in Chapter 2), you can enable it by selecting the Enable Screen Calibration option.

Note:
The ES-300C does not support calibration.

In the Configuration dialog box, you can select the number of samples that will simultaneously display in the preview area (either 3 or 5) from the Number of comparison samples pull-down menu. This setting will be used if you select the Comparison icon for any of the special effects features described in this chapter. Comparison samples let you select the image you prefer from a group of preview images that use different settings.

You can also define the amount of variation between the settings displayed in the comparison samples by selecting small, medium, or large from the Variation between samples pull-down menu.

Using Image Controls

The Image Controls available when you choose the ❑ icon let you adjust the following image settings:

- ❑ Brightness changes the intensity of light
- ❑ Contrast determines the gradation between highlights and shadows
- ❑ Highlight adjusts the lightest areas
- ❑ Shadow adjusts the darkest areas

- Sharpness adjusts the focus

- Threshold adjusts the point at which the gray values change to either black or white. This option is available only when the Pixel Depth setting is Black & White and the Halftone setting is None in the Image Type dialog box. When Threshold is available, the other image control settings are not available.

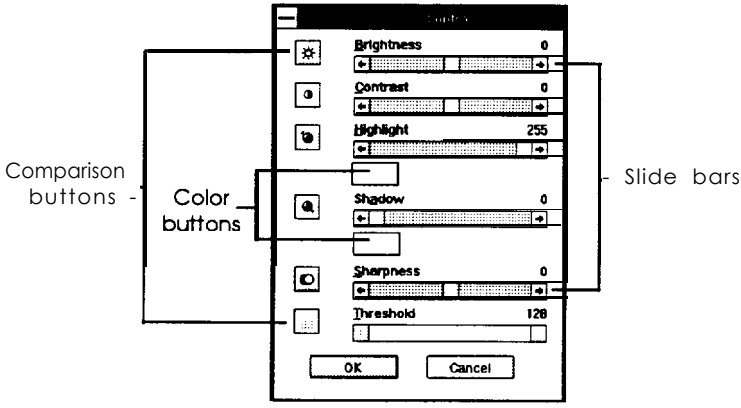
Note:
The ES-300C scanner does not support Contrast, Highlight, Shadow, Sharpness, and Threshold settings.

Follow these steps to use the Image Controls:

1. From the advanced screen, choose the Preview icon, , to display your image in the preview window.

Tip:
To scam only a portion of the image displayed in the preview ***window, define the*** *area you want to scan and click the* ***Zoom Preview icon,*** *, to display only that area. This will make your comparison previews larger and easier to see.*

2. Choose the Image Control icon. You see the following dialog box:



3. Adjust the settings until the image in the preview window looks the way you want it to look. See the following table for guidelines on changing these settings.

Method	**Description**
Value fields	Type in the value you want for the setting in the field,
Slide bars	Move the slide bar until the preview looks correct.
Comparison icons	Click the Comparison icon next to the slide bar to display 3 or 5 comparison samples using different settings, In the preview window, click the sample that most closely reflects the image you want. That sample is then highlighted and placed in the middle position. Click the sample again: it reappears alone.
Highlight and Shadow Color buttons •	Click the Color button below the slide bar; the mouse pointer changes to an eyedropper. Select the color you want to represent the highlights or shadows from the preview image. When you select the color in the preview window. the button turns that color.

• You cannot choose the Highlight and Shadow color buttons when comparison samples are displayed in the preview window.

4. When the image in the preview window looks the way you want, choose OK.

5. You **can now scan** the image into your application.

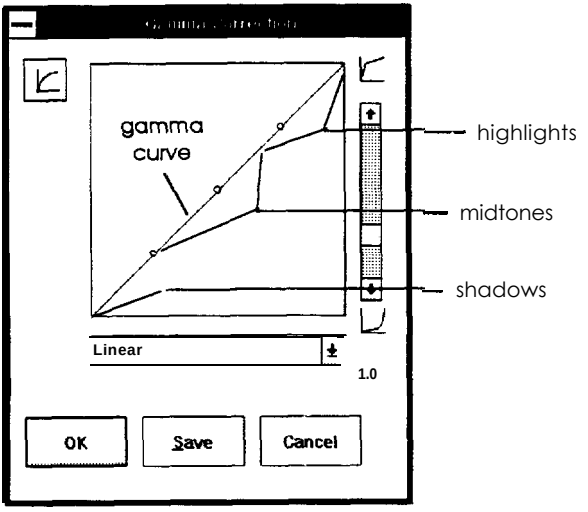
You can reset any preview image you ve modified by choosing the Reset button just below the Image Controls icon.

Adjusting Gamma Correction

Adjusting the gamma levels lets you change the pixel brightness in the midtones, highlights, and shadows of an image without dramatically changing it. This modifies the contrast in image tones so they reproduce with greater detail.

Note:
Gamma Correction is not available for the ES-300C.

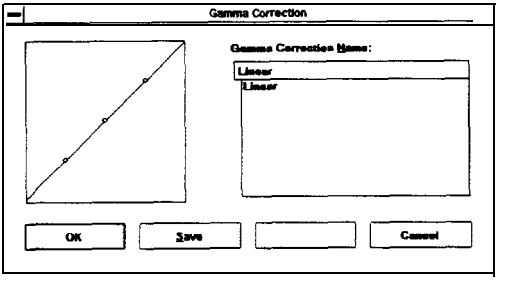
After you have previewed an image, choose the Gamma Correction icon, , You see the following dialog box:



Adjust the gamma curve settings using the slide bar. You see the effects of the new settings in the preview window.

If you choose the Comparison icon to the left of the graph, you see either three or five comparison views with different gamma settings. You can choose the comparison sample that most closely reflects what you want the image to look like.

If you modify the existing setting, you can save it for future use by choosing the Save button. You see the following screen.



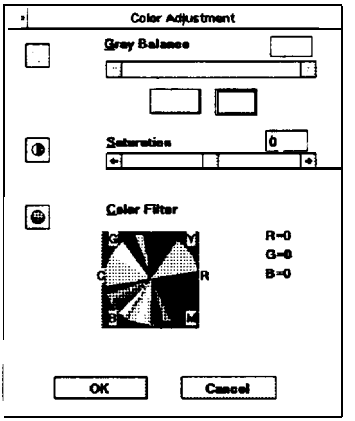
Type the name you want to assign to the setting in the Gamma Correction Name field and choose Save. Then choose OK. Now the name for the new setting is available in the pull-down menu so you can select it whenever you want to use it.

You can also delete an existing setting by selecting it from the Gamma Correction Name field and choosing Delete. Then choose OK to return to the Gamma Correction dialog box.

You can reset any preview image you ve modified using the Gamma Correction dialog box by choosing the Reset button just below the Gamma Correction icon.

Adjusting Colors

After you have previewed the image, choose the Color Adjustment icon, . , you see the following dialog box:



Note:
Color adjustment settings are not *available for the ES-300C.*

You can change these settings in the Color Adjustment dialog box, as described in this section:

- ❑ Gray Balance
- ❑ Saturation
- ❑ Color Filter.

You can reset any preview image you ve modified using the Color Adjustment dialog box by choosing the Reset button just below the Color Adjustment icon.

Setting the Gray Balance

Neutral shades of gray are produced by mixing the three colors in the image in approximately equal proportions. Sometimes, however, the resulting gray shades are not truly neutral. To create a more neutral gray, adjust the Gray Balance setting.

Choose the left Color button below the Gray Balance slide bar; the mouse pointer changes to an eyedropper. Select the color in the preview scan you want to neutralize. Then either move the slide bar to adjust the color or choose the Comparison icon next to the slide bar to choose the level from the comparison samples. The rectangle to the right of the Color button shows the result of the adjustment on the selected color.

Changing Saturations

Changing the saturation levels of a color increases or decreases the amount of color in a specific hue. Less saturated colors are more pale while saturated colors are richer.

You can change the saturation levels in the image by adjusting the Saturation slide bar. You can also click on the Comparison icon next to the slide bar to choose the saturation level you want from the comparison samples.

To remove color completely from an image, move the Saturation slide bar all the way to the left.

Note:
The saturation setting is ignored in 3-pass scanning.

Using Color Filters

Color filters can help eliminate color tinges (or an undesirable overall color tone) that exist in the original. You can also use filters to give your image a specific color effect.

When you click any point in the Color Filter wheel radials, that color is increased in the image. You can see numerical values for the amount of red, green, and blue to the right of the color wheel.

When you choose the Comparison icon for Color Filter, you can select from a group of comparison samples of the image using different color filters.

Note:
Color filters are ignored in 3-pass scanning.

Inverting an Image

The Invert icon, , creates a negative of an image. You can use this icon to turn a positive image into a negative or to create a positive image from a negative.

To invert an image, preview the image and click the Invert icon. You see the inverted image in the preview window.

Using Automatic Features

The TWAIN advanced screen offers two automatic features:

- Auto Exposure, which automatically adjusts the exposure of an image and sets the Highlight and Shadow settings
- Auto Locate, which locates and selects the target image from within the preview image.

Note:
When *you scan using the easy screen, these automatic features are* always *in effect.*

Using Auto Exposure

After you preview an image, click the Auto Exposure icon, **,** to automatically adjust the brightness and contrast in an image.

Note:
Auto Exposure is not available for the ES-300C.

Using Auto locate

After you preview an image, click the Auto Locate icon, , to crop out everything on the document table except the image.

If a document contains more than one image, you can roughly define the scan area using the mouse, then choose the Auto Locate icon. Auto Locate then defines the image area to include only the image or portion of the image you ve selected.

Chapter 5

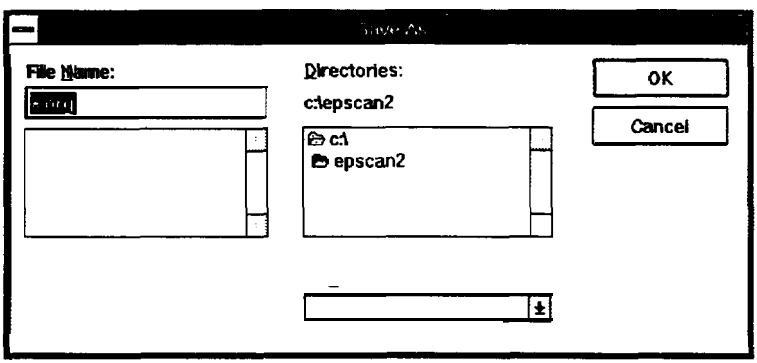
Saving and Exporting Images

You can always scan an image using your TWAIN-compliant image editing application. However, if your application is not TWAIN-compliant, you can use EPSON Scan! II to scan the image and export it in a format your application can open, as described in this chapter.

Saving a Scanned Image

before you export an image, you need to save it in its original EPSON Scan! II format. Otherwise, you will not be able to retrieve it again in EPSON Scan! II. Follow these steps:

1. Start EPSON Scan! II, if necessary.
2. Select Acquire from the File menu.
3. Select Scan to scan your image.
4. Choose **Save As** from the File menu. You see the following dialog box:



5. Choose the drive and directory where you want to save the image.

6. Type a filename for your image in the File Name field. Make sure to use the file extension .ORG.

7. Choose OK.

The image is saved in the EPSON Scan! II file format. You can now open this file and export it with a different format, as described below.

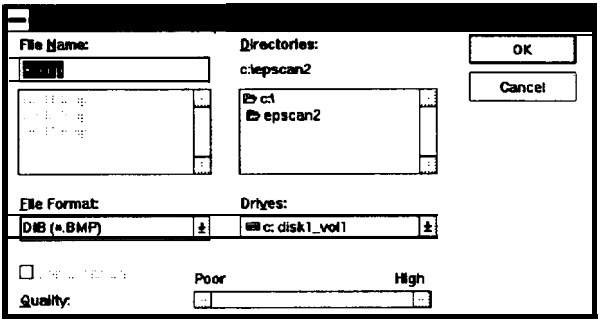
Exporting an Image

EPSON Scan! II allows you to export an image in a file format your application software can use. For information on file formats your software can open, see your software manual.

Note
Your application software cannot *open images saved in the EPSON Scan! II file format and EPSON Scan! II cannot open an exported image file. Always save an image in EPSON Scan! II before exporting.*

Follow these steps to export an image:

1. Choose Export from the File menu. You see the following dialog box:



2. Choose the drive and directory where you want to save the image.

3. Type a filename for your image in the File Name field.

4. You can choose one of these formats from the File Format menu: DIB, TIFF 5.0, TIFF 6.0 (JPEG), JPEG, and EPSF. (For a description of these file formats, see the Term Glossary.)

   Note:
   You can select TIFF 6.0 (JPEG) and JPEG formats only if you selected 16 Million Colors for *the Pixel Depth* setting *in the Image Type dialog box when you scanned the image.*

5. If you selected the TIFF 6.0 (JPEG) or JPEG format, EPSON Scan! II allows you to choose the image quality. Since JPEG uses a Lossy compression scheme, selecting higher quality gives you less compression. To choose the image quality, move the Quality slide bar to the desired setting.

6. Choose OK.

The image is saved in the selected file format. You can now import this file into your application software; see your software manual for instructions.

Acquiring and Exporting an Image

EPSON Scan! II allows you to scan and export an image directly into a selected file format, without displaying it on the screen. Since the image is not displayed, you can perform scanning operations more quickly.

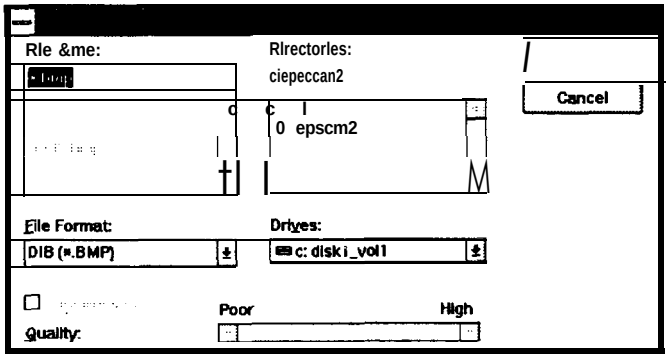
Note:
EPSON Scan! II cannot open an image file once it is exported.

Follow these steps:

1. Start EPSON Scan! II, if necessary.

2. Choose Acquire and Export from the File menu. You see the TWAIN screen. (If you see the easy screen, click Advanced.)

3. Choose Scan. You see the following dialog box:



4. Choose the directory and drive where you want to save the exported image.

5. Type a filename for your image in the File Name field.

6. You can choose one of these formats from the File Format menu: DIB, TIFF5.0, TIFF6.O(JPEG), JPEG, and EPSF. (For a description of these file formats, see the Term Glossary.)

   Note:
   You *can* select TIFF6.0(JPEG) and JPEG *formats only if you selected* 16 Million Colors *for the Pixel Depth setting in the Image Type dialog box when you scanned the image.*

7. If you selected the TIFF6.0fJPEG) or JPEG format, EPSON Scan! II allows you to choose the image quality. Since JPEG is a Lossy compression scheme, selecting higher quality gives you less compression. To choose the image quality, move the Quality slide bar to the desired setting.

8. Choose OK.

The image is scanned and exported in the selected file format. You can now import this file into your application software; see your software manual for instructions.

Exiting EPSON Scan! II

To exit EPSON Scan! II, make sure you have saved or exported your image file. Then choose Exit from the File menu.

Chapter 6

Troubleshooting

If you have problems using the EPSON Scanning Utilities, or with the quality of your printed or scanned images, check the two sections in this chapter for possible solutions.

Problems Using the EPSON Scanning Utilities

When you select a TWAIN data source, EPSON Scanners is not listed.

Either the EPSON Scanning Utilities were not installed or they were not installed correctly. Reinstall the EPSON Scanning Utilities; see Chapter 1 for instructions.

Nothing happens when you select Acquire.

Make sure your scanner is turned on and the cables are connected properly.

EPSON Scanners may not be selected as the TWAIN data source in your application. You ll usually find the Select TWAIN Source option under the File menu in your application.

If you are running Windows 3.1, you may not have restarted it after you installed the EPSON Scanning Utilities. Restart Windows 3.1 and try again.

The EPSON TWAIN data source file, or the SCSI support software may not be installed correctly. Reinstall the EPSON Scanning Utilities from your installation diskettes; see Chapter 1 for instructions.

You may have selected the wrong port number or SCSI ID during setup. Check the settings for your scanner and any other SCSI devices you may have. Then reinstall the EPSON Scanning Utilities.

You may have changed the interface from parallel to SCSI or from SCSI to parallel without reinstalling the EPSON Scanning Utilities. Reinstall the Utilities for the correct interface.

You may have tried to install the EPSON Scanning Utilities using the EZ-SCSI Setup software when you were using an interface card that does not support EZ-SCSI. The EPSON Scanning Utilities supports only SCSI host adapter interface cards which support EZ-SCSI, or are Adaptec compatible.

An error condition may have caused your application or the TWAIN data source in the EPSON Scanning Utilities to stop working correctly. Save any documents in process, close any open applications, and exit Windows. Restart Windows to restore the TWAIN data source, then start your application and try again.

Sometimes an error condition may cause the computer to display a message telling you that your scanner is not recognized. If this happens, reset your scanner by turning it off and on or pushing the Reset button. Then restart your computer and try again.

If you are using Windows 95, its hardware detection utility may not have correctly detected the SCSI controller. Restart Windows 95 and see the Windows 95 online Help utility for instructions on detecting new hardware.

The system fails or an error message appears when you choose Acquire from your application software.

You may have more than one TWAIN screen open at once. Reset your computer and use only one active TWAIN screen.

Your scanned image may be too big. Reset your system and reduce the size of the scanned image.

The EPSON Scanning Utilities do not start.

Make sure you are using a system with the minimum requirements for the EPSON Scanning Utilities. See the Introduction in this manual.

Check that the system requirements are correct for your application software and that your software supports your scanner model.

Be sure that you have correctly installed and set up your application software.

See if your computer has enough memory to run your software. If you are running other software at the same time, using RAM resident programs, or have many device drivers installed, the computer may not have enough memory left to run the software. See the section on memory allocation in your computer manual.

The scanner does not start scanning.

See that the scanner s **READY** light is on.

Make sure that you have selected the correct interface port and settings with your software. Also make sure the interface board on your computer is properly installed.

If you are connecting the scanner with the SCSI interface, see that the terminator and SCSI ID are correctly set up.

If you have other expansion cards in your computer, see that they are not set at the same interrupt level as the interface card for your scanner. See your computer manual and interface card manual.

After choosing the Preview icon, the image does not appear in the preview window.

Press Enter or click on the TWAIN preview window.

The scan is not the full width you selected in the preview area.

The EPSON ES-3OOC and ES-3OOC scanners restrict the scan width to 4096 pixels at high resolutions. Choose a lower resolution for a wider scan.

After scanning and opening several scanned images, your application software fails and your scanned image is lost.

Save and close the scanned images before scanning a new one.

The size of your image increases after scanning it into your image editing application.

Your image editing software may be converting the image to full 24-bit data, which requires more disk space. See your application software manual for more information.

An error in the scanner or a paper jam in the Automatic Document Feeder caused an error message.

Remove the jammed paper or reset the scanner to clear the error condition; then try scanning again.

The Sharpness setting is grayed out in the Image Controls dialog box.

Your scanner does not support the Sharpness feature.

The Document Source setting is grayed out in the EPSON TWAIN screen.

This is normal. You must first connect an optional Automatic Document Feeder or a Transparency Unit to the scanner for any Document Source option other than Flatbed.

The Preview button is grayed out when the Automatic Document Feeder is selected under Document Source.

The preview feature is disabled when the Automatic Document Feeder is selected because the document would have to be fed through the feeder for the preview scan and then reinserted into the feeder for the final scan. If necessary, use the document table for previewing your document.

Auto Locate does not work when scanning two or more originals.

Make sure none of the documents are touching one another on the document table.

When you scan a monochrome image, the scanned image is reversed like a negative image.

If your application has an invert function, use it to reverse the image, or use the Invert feature on the TWAIN advanced screen.

Some applications misinterpret the scanner data; check with your application s manufacturer for an updated program version.

The default settings for Image Type and Destination don t meet your specific scanning requirements.

You can define your own settings; see Chapter 3 of this manual.

The Halftone setting in the Image Type dialog box is grayed out.

Halftone and dither settings on most EPSON scanners are only available when the Pixel Depth setting is set to Black & White or 8 Colors (1 or 2 bits per pixel per color).

The application software displays an error message, freezes, or fails after scanning.

Make sure you close the TWAIN screen before switching to your application software. (Do not use the Windows Minimize button.)

The image you scanned may be oversized. Try reducing its file size by changing its resolution or dimension; then scan it again.

If you selected 16 Gray as the Pixel Depth setting, change to 256 Gray and try scanning again.

If you scanned an image at high resolution (800 dpi) and at the maximum allowable width and using the Color Photo Image Type setting, restart Windows and reduce the resolution and the width of the scanned image. Then try scanning again.

If your application contains a scan manager feature, you may have closed it before closing the EPSON TWAIN screen. Scan your image again, but close the TWAIN screen before closing your application s scan manager.

If you selected 3-Pass scanning on the TWAIN screen, you may need to free some space on your hard disk to scan.

After scanning with an image editing application, the scanned image disappears.

Make sure you close the TWAIN screen before switching to your application software. (Do not use the Windows Minimize button.)

The rows in the screen calibration dialog box never seem to match closely enough.

Try adjusting your monitor s brightness and contrast settings.

The TWAIN screen changed its color settings after a preview scan.

Increase the number of colors or decrease the resolution your monitor displays using Windows 3.1 Setup or Windows 95 Display.

The colors in the Color Filter wheel do not reflect the gradated rainbow spectrum of colors.

Increase the number of colors or decrease the resolution your monitor displays using Windows 3.1 Setup or Windows 95 Display.

You may be using an outdated video display driver. Check with your computer manufacturer for an updated driver.

After changing video display resolutions, the computer display seems smaller or different.

You need to adjust your monitor; see the manual that came with it.

After starting a multipage scan using the Automatic Document Feeder, the image editing application freezes, displays an error message, or fails.

Reset the system and reduce the number of pages you are scanning with the Automatic Document Feeder.

After closing the EPSON TWAIN screen, a partial image of the screen **appears** over the scanned image.

Use the Up or Down arrow or the mouse to scroll the application s frame and clear the partial image.

Using CPI Image-In® Color Professional 3.1x or CPI Image-In Scan&Paint 3.10x to acquire and scan an image, the application failed.

Try selecting **Color Photo** as the Image Type and then convert the image to the desired number of colors or grays within the Image-In applications.

Make sure you have an updated TWAIN driver from CPI.

After selecting a part of an image to scan, the image did not **scan** correctly.

Scan the whole image instead of a portion of it.

After changing the Windows video display setting to 1024 x 768 pixels, some icons, boxes, or slide bars in the TWAIN screen look out of proportion.

Reset your Windows video display to 800 x 600 pixels.

Using Adobe Photoshop 3.0.4 with Windows 95, you cannot select a 32-bit TWAIN data source.

You need to obtain patch files from Adobe Photoshop to allow the program to use the 32-bit TWAIN data source. See the instructions at the end of Chapter 1.

Problems With Image Quality

The entire image is distorted or blurred.

Make sure that the document is placed flat against the document table.

You may have moved the document during scanning. Check the position of the document.

See that the scanner is not tilted or placed on an unstable surface.

Part of the image is distorted or blurred.

Part of the original may be wrinkled, warped, or not in contact with the document table. Be sure the document is flat.

Caution:
Do not place heavy objects on the document table.

The edges of the document are not scanned.

The document table has non-readable areas around the edges. Adjust your document s position so that the image comes inside the readable area.

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

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 having outside light interfere.

If part of the original is outside the document table, the edge may not be in contact with the document table and may be discolored. Change the position of the original.

The image is faint or out of focus.

Make sure the document is placed flat on the document table.

Check your Gamma Correction setting.

Make the Brightness setting darker.

Make sure you have calibrated your monitor and printer to your scanner, and that you are using the resulting calibration profile. See Chapter 2 for more information.

The image is too dark and without details.

Adjust the Brightness, Gamma Correction, and Shadow settings to lighter values and scan the image again. Also check the brightness and contrast values of your monitor.

Check that the Destination output device is set correctly. If it is set to Screen, output on the printer may be too dark.

Straight lines in the image are jagged.

The document may be placed at an angle on the document table. Align it so that the horizontal and vertical lines are carefully aligned with the rulers on the document table.

The image does not look the same as the original.

Make sure you have performed the calibration procedures and selected the correct printer profile; see Chapter 2 for more information.

Try different combinations of scanner settings.

Check that your software is correctly installed.

If you are importing an image file into your application software, see if the file format is acceptable for your software. Also check that the settings of your application and your image match. See your application software manual.

A line of dots is always missing on the scanned image.

If this happens on your printed image, your printer or its print head may have a problem or need cleaning; see your printer manual.

If this happens on both your screen and printout, the scanner s sensor may be malfunctioning. Consult your dealer.

Using halftoning, textured dot patterns appear in the image.

This is normal; see your scanner manual for examples of halftoning.

The color on the video display seems different from that of the original image.

Depending on your monitor, its resolution/color settings, and your EPSON TWAIN settings, the screen colors may be different from the original. This may be normal, especially if the colors in the printed image more closely match the original.

Make sure you have correctly performed the calibration process in EPSON Scan! II. Recalibrate and try again.

Check your scanner settings-such as Pixel Depth, Gamma Correction, and Color Adjustment-or try a different combination of these settings.

The printed color seems different from that of the originals.

Check that you have correctly performed the printer calibration process in EPSON Scan! II using the correct printer profile. Recalibrate and try again.

The colors in the printed image may not match the colors of the original image exactly because the scanning and printing processes use two different color interpreting technologies.

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

Check the image size settings in your application and TWAIN. You may also have used the Zoom Preview icon. Do not use the size of the image on your monitor to judge the printed size.

The image cannot be printed on the printer, the printout is garbled, or the printout is not an image.

Check that the printer is properly connected to the computer and is correctly set up; see your printer manual.

Check that your software is properly installed and set up for your printer; see your software manual.

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

Try different EPSON TWAIN settings. Be aware that some settings disable others for a particular effect. Also, depending on your scanner, some features may not be available.

Set the Brightness, Highlight, or Gamma Correction to darker settings and scan the image again.

If you selected Line Art as the Image Type setting and any setting other than Screen as your Destination setting, try increasing the Threshold **setting** to a higher value.

Moiré (interference) patterns appear in the scanned image.

Moiré patterns commonly occur when you scan images that include halftone screens. To minimize this effect, try any of the following solutions:

- ❑ Move or angle the original slightly
- ❑ Change the Sharpness setting
- ❑ Change the Scale setting slightly
- ❑ Scan in 3-pass mode.

When you select 16 Gray as a Pixel Depth setting, the scanned image appears black in your application software.

Choose 256 Gray as a Pixel Depth setting and try scanning your image again.

The image appears upside down and truncated in your application software after scanning.

Before you scan the image, reduce its file size to less than 1MB by adjusting the settings on the TWAIN advanced screen.

When you select 256 Color as a Pixel Depth setting, the scanned image does not match the previewed image.

Select Color Photo as the Image Type and try scanning again.

Select 16 Million Colors for Pixel Depth and try scanning again.

The image looks corrupted.

Check your printer driver settings. If the paper size is set larger than Letter or A4, select a smaller paper size or the maximum paper size your scanner can support. See your scanner documentation for more information.

You may need to choose a lower resolution for the video display setting using Windows 3.1 Setup or Windows 95 Display. See your Windows documentation or online help for more information.

If you change the Windows video display setting, make sure to perform another screen calibration.

Appendix

This appendix lists the default settings for the Image Type and Destination options in EPSON TWAIN.

Default Image Type settings

Image type	Default setting
Color Photo	I&million colors, best quality,. and 1 pass scanning
256 Colors	256 colors, best quality, and 1 pass scanning
Black & White Photo	256 grays. best quality, and 1 pass scanning
Color Halftone	8 colors, Mode A (Hard Tone) halftone, draft quality, and 1 pass scanning
Color Drawing	8 colors, draft quality, and 1 pass scanning
Black & White Halftone	Black-and-white, Mode A (Hard Tone) halftone, draft quality, and 1 pass scanning
Line Art	Black-and-white, draft quality, and 1 pass scanning
OCR	Black-and-white. draft quality, 1 pass scanning, and Text Enhancement Technology On

Default Destination settings

Destination	Default setting
Impact Dot Printer	360 dpi resolution for line drawings and halftone images, 120 dpi resolution for photos, and calibration for Dot Impact printers
Thermal Printer	360 dpi resolution for line drawings and halftone images, 120 dpi resolution for photos, and calibration for Thermal printers
Inkjet Printer	360 dpi resolution for line drawings and halftone images, 120 dpi resolution for photos, and calibration for Inkjet printers
Laser Printer	300 dpi resolution for line drawings and halftone images, 100 dpi resolution for photos, and calibration for Laser Printers

Default Destination settings (continued)

Destination	Default setting
Fax	200 dpi resolution for line drawings and halftone images, 200 dpi resolution for photos, and calibration for Inkjet printers
OCR	300 dpi resolution for line drawings, halftone images, and photos, with General calibration
Laser 600 dpi	600 dpi resolution for line drawings and halftone images, 200 dpi resolution for photos, and calibration for Laser Printer 600
Stylus COLOR	800 dpi resolution for line drawings and halftone images, 240 dpi resolution for photos, and calibration for Stylus COLOR Printers
Stylus Pro XL	800 dpi resolution for line drawings and halftone images, 240 dpi resolution for photos, and calibration for Stylus Pro XL Printers
Stylus Pro	800 dpi resolution for line drawings and halftone images, 240 dpi resolution for photos, and calibration for Stylus Pro Printers
Stylus COLOR II	800 dpi resolution for line drawings and halftone images, 240 dpi resolution for photos, and calibration for Stylus COLOR II Printers
Stylus COLOR IIs	800 dpi resolution for line drawings and halftone images, 240 dpi resolution for photos, and calibration for Stylus COLOR IIs Printers
Calibration Profile	180 dpi resolution for line drawings, halftone images, and photos, with General calibration

Icon Glossary

This glossary describes the TWAIN icons. If you want to know what a specific icon does, locate the icon in this glossary; then read its description. Some icons open dialog boxes which contain more icons.

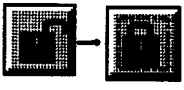
Preview. Allows you to see your entire image before scanning it. Once an image is in the preview window, you can check its width, height, and file size on the screen. Previewing also allows you to see the effects of changes you make to your image.

Zoom Preview. Allows you to select a specific area of an image in the preview window and preview it again so that only the selected portion of the image is shown. Use the mouse to select the part of the image you want to preview.

Invert. Allows you to change negative images into positive images, or positive images into negative images.

Auto Exposure. When you click this icon, the Highlight and Shadow settings in the Image Controls dialog box are automatically set. When you select Scan from the easy screen, TWAIN uses these settings.

Auto Locate. Allows you to automatically select just the image. If your preview window contains more than one image and you only need one, roughly select the image you want by dragging the mouse pointer and clicking the Auto Locate icon. When you select Scan from the easy screen, TWAIN uses this setting.



Lock and Unlock. Allow you to lock or unlock the current width, height, unit, or scale settings for an image. The default setting is unlock.

Image Controls. Opens the Image Controls dialog box, which contains the settings described below.

Brightness Comparison. Allows you to compare three or five image samples of varying brightness. The middle sample reflects the current setting.

Contrast Comparison. Allows you to compare three or five image samples of varying color contrast. The middle sample reflects the current setting.

Highlight Comparison. Allows you to compare three or five image samples of varying highlight intensity or color. The middle sample reflects the current highlight setting.

Shadow Comparison. Allows you to compare three or five image samples of varying shadow intensity or color. The middle sample reflects the current shadowsetting.

Sharpness Comparison. Allows you to compare three or five image samples of varying sharpness. The middle sample reflects the current sharpness setting.

Threshold Comparison. Allows you to compare three or five image samples of varying black and white contrast. The middle sample reflects the current threshold setting.

Gamma Correction and Gamma Correction Comparison. Opens the Gamma Correction dialog box, which contains settings for adjusting gamma levels when you want to alter the midtones, highlights, and shadows in an image. This lets you more accurately modify an image to reflect the tones in the original and bring out the details in shadow areas.

The Gamma Comparison icon allows you to compare three or five image samples of varying tonal quality. The middle sample reflects the current gamma adjustment.

Color Adjustment. Opens the Color Adjustment dialog box, which lets you adjust colors in an image using the settings described below.

Gray Balance Comparison. Allows you to compare three or five varying casts of gray in image samples so you can select the most neutral gray.

Saturation Comparison. Allows you to compare three or five image samples of varying color saturations so you can select the paleness or richness you want in an image. Three-pass scanning ignores saturation settings.

Color Filter Comparison. Allows you to compare three or five image samples of varying colors so you can select the specific color effect you want in an image. Three-pass scanning ignores color filter settings.

Term Glossary

Application Program
A software program designed to perform a specific task, such as word processing, image editing, or spreadsheet functions.

Automatic Document Feeder
A scanner accessory that automatically feeds a stack of paper into the scanner.

Bidirectional Parallel Interface
An interface for communicating between the computer and the scanner.

Brightness
A scanner software function to lighten or darken the output image data.

Calibration
A process that adjusts the color or black and white values in the scanned image file to compensate for the effects that software programs, printers, and monitors have on the image. Calibration produces a final output that more closely reflects the original.

Color Correction
A method of adjusting the color image data for a particular type of device so that the reproduction results are close to the original colors.

Color Filter
An EPSON TWAIN setting that lets you modify the color of an entire image.

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.

Contrast
The range between the darkest and lightest shades in an image.

Destination
A set of resolution and calibration settings that match the characteristics of the scan to the final output device. EPSON TWAIN provides several Destination settings to adjust your scanned image to suit the output device you intend to use. You can also define your own Destination settings.

Device
A piece of computer equipment that performs a specific task, such as a disk drive, a monitor, a printer, or a scanner. Also called a peripheral.

Device Driver
A file containing instructions that allow your computer to recognize and control a device (such as a monitor, printer, or scanner).

DIB
Device-Independent Bitmap. A graphics format for Windows version 3.0 or later.

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

DPI
Dots per inch. A unit of measurement for resolution. The higher the value, the higher (finer) the resolution.

Dropout
A scanner software setting which lets you instruct your scanner to ignore a color.

EPSF
Encapsulated PostScript File. An industry standard file format supported by most applications.

Exposure
The brightness and contrast of an image.

File Format
The manner in which a graphic image is stored on the disk.

Gamma Correction
A method of adjusting the transfer curve so that the reproduction results on different types of output devices have gradations similar to the original image.

Gray Balance
An EPSON TWAIN software setting that lets you adjust the grayness of any area of an image. You can remove color casts and discoloration to make the grays in an image more neutral.

Grayscale
The measure of grayness of any area of an image. When an image is scanned, the gray level of each pixel is determined.

Halftone
An image type which simulates grayscale by varying the sizes of the dots printed.

Halftoning
A process of converting continuous tones into digital data so that the output data simulates the tones.

Highlight
The lightest portion of an image.

Image Type
The way an image will be scanned or reproduced. EPSON TWAIN provides Pixel Depth, Halftone, Dropout, and Quality settings to adjust the scanned image you are creating. You can also define your own image type settings.

Interface
The connection between or among computer devices.

JPEG
Joint Photographic Experts Group. JPEG is standard file format for Lossy data compression and is supported by many applications.

Jumper
A small device that connects pins on a circuit board and is used to activate a particular function.

Line Art
An image made up of lines and solids with no grays.

Lossy
A data compression system that intentionally discards (or loses) some data from the original image.

Midtone
The tonal value of a dot, located approximately halfway between the highlight value and the shadow value.

Moiré
An unwanted pattern that can occur when a halftone image is scanned or when it is scaled in an application after it has been scanned.

Path
The directory and subdirectories you specify to locate a file. For example, the path for the TWAIN directory in Windows may be C:\WINDOWS\TWAIN.

Pixel
Picture Element. Each image is composed of a number of pixels. Pixels are sometimes called dots.

Pixel Depth
An EPSON TWAIN setting that lets you select the amount of color information in a file.

Port
An interface channel through which data is transmitted between devices.

Resolution
Indication of how finely an image is resolved into pixels. Measured in dots per inch (dpi), pixels per inch (ppi), or sometimes samples per inch (spi).

RLE Compression
Run-Length Encoding. A type of data compression.

Saturation
The amount of color in a specific hue. Unsaturated colors tend to be pale. Saturated colors tend to be rich and vibrant.

Scaling
Reducing or increasing the size of an image.

scan
An operation performed by the sensor and the carriage of a scanner. The image is divided into pixels by scanning.

Scanning Area
The physical size of the image that can be scanned by the scanner.

SCSI
Small Computer System Interface. EPSON scanners may use the Adaptec AHA-1510 SCSI host adapter card or any other ASPI - compliant adapter card to communicate between the computer and the scanner.

Shadow
The darkest area of an image. The range between highlight and shadow determines the range and the color differentiation of the image.

Sharpness
The measure of enhanced detail in an image.

Threshold
The point at which the gray values are changed to either black or white.

TIFF 5.0
Tagged Image File Format, version 5.0. TIFF is an industry-standard file format supported by many applications.

TIFF6.0fJPEG)
Tagged Image File Format, version 6.0 with JPEG compression. TIFF and JPEG are industry-standard file formats supported by many applications.

Transfer Curve
A Gamma correction graph which shows the contrast ratio between the input (original image) and output (image data) in image processing.

Transparency Unit
A scanner accessory which allows the scanner to use materials such as transparencies.

TWAIN
An open industry interface allowing you to acquire image data directly from external sources without leaving your current application.

Zoom
The ability to enlarge a portion of an image.

Index

A

Accessories, purchasing, Intro-4 to Intro-5
Acquire & Export option, 5-3 to 5-5
Acquire option, 3-2, 5-1, 6-1
Additive color process, 2-1
Adobe Photoshop, 1-3 to 1-4, 6-9
Advanced screen
- accessing, 3-2, 3-5
- Destination settings, 3-10 to 3-13
- Image Type settings, 3-5 to 3-9
- preview features, 3-13 to 3-15
- scanning using, 3-15 to 3-16
- special effects, 4-1 to 4-9
- using 3-5 to 3-15

Auto Exposure, 4-9
Auto Locate, 3-14, 3-16, 4-9, 6-5
Automatic Document Feeder, 3-3, 6-5, 6-8
Automatic features, 4-9

B

Best Quality mode, 3-7 to 3-8
Bit modes, see Data
Brightness, 4-2 to 4-4, 6-7, 6-10, 6-13
Bulletin Board Service, EPSON, Intro-5

C

Calibration
- chart, 2-4 to 2-7
- monitor, 2-1 to 2-3, 4-2
- printer, 2-3 to 2-9
- problems, 6-7, 6-10 to 6-12
- profile, see Calibration profile
- screen, 2-1 to 2-3, 4-2
- system, 2-1 to 2-9

Calibration profile
- creating 2-6 to 2-8
- enabling, 4-2
- EPSON Stylus printers, 2-4, 2-8, 3-12
- exporting chart, 2-4 to 2-6
- modifying, 3-12 to 3-13
- scanning using, 2-8 to 2-9
- selecting, 3-12

Capturing images, 3-1 to 3-16
Cautions, Intro-4
CMYK, 2-1
Color
- adjustment, 4-6 to 4-8, 6-12
- buttons, 4-3, 4-7
- correction, 4-6 to 4-8
- filters, see Color Filters option
- optimum resolution, 3-10 to 3-11
- problems, 6-7, 6-10 to 6-12
- processes, 2-1, 6-12
- removing, 4-8
- resolution, see Resolution
- saturation, see Saturation
- separation, 2-6
- settings, 4-6 to 4-8

Color Filters option, 3-8, 4-6 to 4-8, 6-7
Color Photo option. 2-7, 3-4, 6-6, 6-8, 6-14
Comparisons, 4-2 to 4-5, 4-7 to 4-8
Compression, 5-3, 5-5
CompuServe, Intro-6
Configuration
- system, Intro-2 to Intro-3
- TWAIN, 2-3, 4-1 to 4-2

Contrast, 4-2 to 4-4, 6-7
Create Calibration Profile option, 2-6 to 2-8
Customer support, Intro-4 to Intro-6

D

Data
- 24-bit mode, 3-15, 6-4
- 32-bit source, Intro-1, 1-3 to 1-4, 6-9
- formats, 3-6
- source, 1-3 to 1-4, 6-1 to 6-2, 6-9

Default settings, 3-4 to 3-5, A-1 to A-2

Destination
- advanced screen options, 3-5 to 3-15
- button, 2-8, 3-10
- default settings, A-1 to A-2
- easy screen options, 3-3 to 3-5
- problems, 6-6, 6-10

Display, see Video display

Dither options, 3-7 to 3-8, 6-5

Document Source option, 3-3, 6-5

Document table, 3-3, 3-16, 6-5, 6-9 to 6-10

Draft Quality mode, 3-7 to 3-8

Dropout setting, 3-7 to 3-8

E

Easy screen
- accessing 3-2
- Destination setting 3-4 to 3-5
- Document Source setting 3-3
- Image Type setting 3-4
- scanning using, 3-15 to 3-16

Electronic support services, Intro-5 to Intro-6

Enable Screen Calibration option, 2-3, 4-2

EPSF, 5-3 to 5-4

EPSON
- Accessories, Intro-5
- America Forum, CompuServe, Intro-6
- Bulletin Board Service, Intro-5
- Customer Care Centers, Intro-4
- electronic support, Intro-5 to Intro-6
- World Wide Web site, Intro-5

EPSON Scan! II
- acquiring and exporting images, 5-3 to 5-5
- calibrating with, see Calibration
- exiting 5-5
- exporting images, 5-1 to 5-5
- file format, 5-1 to 5-2
- installing 1-1 to 1-3
- introduction, Intro-1 to Intro-2
- problems, 6-1 to 6-9
- requirements, system, Intro-2 to Intro-3
- saving images, 5-1 to 5-2
- testing 1-3

EPSON TWAIN, see TWAIN

Errors, 6-2, 6-4, 6-6

ES-300C scanner restrictions, 3-8, 4-2 to 4-4, 4-6, 4-9,6-4

ES-6OOC scanner restrictions, 6-4

Export Calibration Chart option, 2-4 to 2-6

Exporting images, 5-1 to 5-6

F

File
- 24-bit data, 3-15, 6-4
- EPSON Scan! II, 5-1 to 5-2
- formats, 2-5, 5-1 to 5-5, 6-11
- size, 3-11, 3-14 to 3-15, 6-6, 6-12

Flatbed setting, 3-3

G

Gamma correction, 4-4 to 4-6, 6-10, 6-12 to 6-13

Gray Balance, 4-6 to 4-7

Grayscale, 3-11

H

Halftone setting 3-7 to 3-8, 4-3, 6-6, 6-11
Height setting, 3-14 to 3-15
Help, where to get, Intro-4 to Intro6
Highlight setting 4-2 to 4-4,6-13

I

Image
- acquiring and exporting 5-3 to 5-5
- adjusting preview, 3-14 to 3-15
- exporting 5-1 to 5-5
- file size, 3-11, 3-14 to 3-15, 6-6, 6-12
- inverting 4-8, 6-5
- monochrome, 6-5
- negative, 6-5
- previewing, see Preview
- quality, 3-7 to 3-8, 5-3, 5-5, 6-9 to 6-14
- swing, 4-1 to 4-2, 5-1 to 5-2
- scale, 3-15, 6-13
- scanning, 3-15 to 3-16
- size, 3-14 to 3-15, 6-12

Image Controls
- icon, 4-2
- settings, 4-2 to 4-4

Image editing software, 3-16, 4-1, 6-4, 6-7, 6-9
Image Type option
- advanced screen, 3-5 to 3-9, 4-3
- default settings, 6-6, A-1
- easy screen, 3-4

Installation, EPSON Scanning Utilities, 1-1 to 1-4, 6-1
Invert feature, 4-8, 6-5

J

JPEG, 5-3 to 5-5

L

Line Art, 3-11, 6-13
Lock setting, 3-15
Lossy compression scheme, 5-3, 5-5

M

Manual, how to use, Intro-3
Measurement units, 3-14
Memory, 6-3
Moire patterns, 6-13
Monitor calibration, see Calibration
Multipage scanning 3-3, 6-8

N

Net screen options, 3-7 to 3-8
Notes, Intro-4
Number of comparison samples option, 4-2

0

OCR option, 3-4 to 3-5, 3-9
Online support, Intro-5 to Intro-6
Optimum resolutions, 3-11

P

Paper jam, 6-4
Paper size, 6-14
Photoshop, 1-3 to 1-4, 6-9
Pixel Depth setting 3-6, 3-8, 4-3, 5-3 to 5-4, 6-6, 6-12 to 6-14
Preview
- adjusting 3-14 to 3-15
- area, 3-13 to 3-16, 4-3, 4-9, 6-4
- icon, 3-13, 4-3, 6-4
- problems, 6-4, 6-14
- saving image, 4-1 to 4-2
- zoom, see Zoom Preview

Printer calibration, see Calibration
Printer driver, 6-14
Problems
EPSON Scanning Utilities, 6-1 to 6-9
Image quality, 6-9 to 6-14
Profile, see Calibration profile

Q

Quality setting 3-7 to 3-8
Quality slide bar, 5-3, 5-5

R

READY light, 6-3
Requirements, system, Intro-2 to Intro-3, 6-3
Reset button, 4-4, 4-6 to 4-7
Resolution
limitations, 3-13, 6-4, 6-6, 6-11, 6-14
optimum scanning 3-11
selecting 3-10 to 3-11
RGB, 2-1
Rulers setting, 3-14

S

Samples, comparison, 4-2
Saturation, 3-8, 4-7 to 4-8
Save Preview Image and Settings option, 4-2
Scale setting 3-15, 6-13
Scan manager, 6-6
Scanners
compatible, Intro-3
ES-3OOC, 3-8, 4-2 to 4-4,4-6, 4-9, 6-4
ES-600C, 6-4
Scanning options
1 pass sequence, 3-7 to 3-8
3 pass sequence, 3-7 to 3-8, 4-8 6-6,6-13
advanced screen, 3-5 to 3-15
easy screen, 3-3 to 3-5
special effects, 4-1 to 4-9
using calibration, 2-8 to 2-9
Scanning Sequence setting, 3-7 to 3-8
Scanning Utilities, EPSON, see EPSON Scan! II ***and TWAIN***
Screen calibration, see Calibration
SCSI
problems, 6-1 to 6-3
settings, 1-1 to 1-2
Selection matrix, 3-8
Service bureau, printer, 2-6
Service, EPSON, Intro-4 to Intro-6
Shadow setting, 4-2 to 4-4, 6-10
Sharpness setting 4-3, 6-4, 6-13
Size, see Image ***and*** File
Software installation, 1-1 to 1-4
Special effects, 4-1 to 4-9
Subtractive color process, 2-1
Support services, Intro-4 to Intro-6
System requirements, Intro-2 to Intro-3, 6-3

T

Technical help, Intro-4 to Intro-6
Telephone numbers, EPSON, Intro-4 to Intro-6
Text Enhancement Technology option, 3-4 to 3-5, 3-7, 3-9
Threshold setting, 4-3,6-13
TFF5.0, 5-3 to ***5-5***
TIFF6.0(JPEG), 5-3 to ***5-5***
Tips, Intro-3
Transparency Unit, 3-3, 6-5
Troubleshooting 6-1 to 6-14

TWAIN
accessing, 3-2
advanced screen, see Advanced screen
automatic features, 4-9
compliant applications, 5-1
configuration, 2-3, 4-1 to 4-2
data source, 1-3 to 1-4, 6-1 to 6-2, 6-9
default settings, A-1 to A-2
easy screen, see Easy screen
installing 1-1 to 1-4
introduction, Intro-1 to Intro-2
problems, 6-1 to 6-9
requirements, system, Intro-2 to Intro-3
scanning using, 3-15 to 3-16
special effects, 4-1 to 4-9
testing 1-3

U

Units, measurement, 3-14
Utilities, EPSON Scanning, see ***EPSON*** Scan! ***II and TWAIN***

V

Variations between samples option, 4-2
Video display, 3-13, 6-11, 6-14

W

Warnings, Intro-3
Width setting 3-14 to 3-15
World Wide Web site, Intro-5

Z

Zoom Preview, 3-13, 4-3, 6-12