EPSON COLOR SCANNER EXPRESSION 1680

Color Graphics Scanner User's Guide

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. The information contained herein is designed only for use with this EPSON scanner. EPSON is not responsible for any use of this information as applied to other scanners.

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, or (excluding the U.S.) failure to strictly comply with SEIKO EPSON CORPORATION's operating and maintenance instructions.

SEIKO EPSON CORPORATION shall not be liable for 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.

A Note Concerning Responsible Use of Copyrighted Materials

Digital cameras and scanners, like photocopiers and conventional cameras, can be misused by improper copying of copyrighted material. While some countries' laws permit limited copying of copyrighted material in certain circumstances, those circumstances may not be as broad as some people assume. EPSON encourages each user to be responsible and respectful of the copyright laws when using digital cameras and scanners.

Trademarks

EPSON and EPSON Stylus are registered trademarks of SEIKO EPSON CORPORATION.
EPSON Store, Micro Step Drive, and MatrixCCD are trademarks, and EPSON Expression and ColorTrue are registered trademarks of Epson America, Inc.

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

Copyright © 2001 by Epson America, Inc.

CPD-11741
1/01

Printed on recycled paper

Contents

Chapter 1 WELCOME 1

About Your Scanner 1

About Your Software 2

Getting More Information 4

Warnings, Cautions, Notes, and Tips 5

Reading Your Reference Guide 5

Viewing Your Other Electronic Manuals 7

Registering 9

Chapter 2 SETTING UP YOUR SCANNER 11

Unpacking Your Scanner 12

Choosing a Good Place for Your Scanner 13

Identifying Scanner Parts 14

Unlocking the Scanner 15

Testing Your Scanner's Operation 16

Connecting the Scanner to Your Computer 17

Connecting to a USB Interface 18

Connecting to a SCSI Interface 19

Connecting to an IEEE 1394 FireWire Interface 21

Installing the Windows Software 22

Installing the Windows Me Software 22

Installing the Windows 2000 Software 28

Installing the Windows 98 Software 34

Installing the Windows 95 Software 39

Installing the Windows NT 4.0 Software 43

Installing Additional Windows Software 45
Installing Adobe Photoshop LE 45
Installing LaserSoft SilverFast 46
Installing MonacoEZcolor 46
Installing ScanSoft TextBridge Pro 46
Installing the Macintosh Software 47
Starting the Macintosh Software Installation 48
Installing Other Software on Your Scanning Tools CD-ROM 49
Installing Adobe Photoshop LE 50
Installing LaserSoft SilverFast 51
Installing MonacoEZcolor 51
Selecting the Expression 1680 as Your Default Scanner 52

Chapter 3 HOW TO SCAN 53

Scanning Tips 53
Selecting Resolution 53
Scaling (Resizing) Images 54
Scanning Color Images 54
Batch Scanning 54
Recommended Settings 55
Step-by-Step Scanning Instructions 56
Placing Your Original Document 56
Scanning with EPSON TWAIN Pro 57
Using the ⎆ Start Button 59
Setting Up the ⎆ Start Button 59
Setting Up Presto! PageManager for One-Touch Scanning 63

Chapter 4 NETWORK SCANNING **65**

Setting Up the Scanner Server **66**

- Installing the Scanner Server Software on Windows Me **66**
- Installing the Scanner Server Software on Windows 2000 **71**
- Installing the Scanner Server Software on Windows 98 **75**
- Installing the Scanner Server Software on Windows 95 and Windows NT 4.0 **80**
- Starting the Scanner Server Installation on Windows 95 **81**
- Starting the Scanner Server Installation on Windows NT 4.0 **83**
- Finishing the Scanner Server Installation on Windows 95 and Windows NT 4.0 **84**
- Changing the Scan Server Start Up Mode **86**

Setting Up Client Computers **87**

- Installing EPSON TWAIN Pro Network on Windows **87**
- Installing EPSON TWAIN Pro Network on a Macintosh **89**

Using a Network Scanner **91**

- Starting EPSON Scan Server **92**
- Starting EPSON TWAIN Pro Network **93**
- Starting a Scan **94**
- Stopping a Scan in Progress **94**

Chapter 5 USING OPTIONAL EQUIPMENT **95**

Transparency Unit **96**

- Unpacking the Transparency Unit **96**
- Removing the Shipping Screw **97**
- Installing the Transparency Unit **97**
- Using the Film Guides **99**
- Scanning Reflective Documents **103**

Automatic Document Feeder **104**
Unpacking the Automatic Document Feeder **104**
Installing the Automatic Document Feeder **105**
Loading Paper in the Automatic Document Feeder **107**
Fixing Paper Jams **108**
IEEE 1394 FireWire Scanner Interface Card **108**
Installing the Card in Your Scanner **109**

Chapter 6 SCANNER MAINTENANCE 111

Transporting the Scanner **111**
Transporting the Transparency Unit **113**
Cleaning the Scanner **114**

Chapter 7 SOLVING PROBLEMS 115

Lights and Buttons **115**
Problems and Solutions **117**
Setup Problems **117**
Scanner Problems **119**
Software Problems **120**
Scanning Problems **122**
Uninstalling the Expression 1680 Software **127**
Uninstalling EPSON TWAIN Pro **127**
Uninstalling EPSON TWAIN Pro Network **128**
Uninstalling EPSON Scan Server **129**
Where To Get Help **129**
EPSON Technical Support **129**
Software Technical Support **130**

Appendix A SPECIFICATIONS **131**

Appendix B INSTALLING THE TCP/IP PROTOCOL **135**

Installing the TCP/IP Protocol on Windows Me and Windows 2000 **136**

Installing the TCP/IP Protocol on Windows 95 and Windows 98 **137**

Assigning an IP Address for Windows 95 and Windows 98 (First Release) **138**

Installing the TCP/IP Protocol on Windows NT 4.0 **140**

Assigning an IP Address on Windows NT 4.0 **141**

Appendix C REQUIREMENTS AND NOTICES **143**

System Requirements **143**

Windows **143**

Macintosh **144**

Important Safety Instructions **144**

Declaration of Conformity **145**

FCC Compliance Statement **146**

ENERGY STAR Compliance **147**

Warranty **147**

INDEX **149**

Chapter 1
Welcome

The EPSON Expression® 1680 is a 48-bit color, professional scanner designed to meet the needs of graphic arts professionals and business graphics users. It's ideally suited for small LAN (Local Area Network) users who want to share a scanner within their workgroup. Using EPSON's ColorTrue® II Imaging System, the scanner reproduces images with amazingly accurate detail and color. Your scanner can achieve up to 1600 × 3200 dpi hardware resolution with EPSON's proprietary Micro Step Drive™ technology, and is one of the fastest scanners in its class.

About Your Scanner

Your EPSON Expression 1680 scanner comes with these features:

- Superior image quality with remarkable 1600 × 3200 dpi hardware resolution
- 48-bit color and 3.6 Dmax optical density
- Start button for easy, automated scanning
- Can be shared by users in a network configuration
- USB and SCSI 2 interfaces standard, and IEEE 1394 FireWire® optional
- Optional transparency unit, automatic document feeder, and IEEE 1394 FireWire scanner interface card

About Your Software

The EPSON Expression 1680 scanner includes these leading-edge applications for professional-quality scans:

EPSON TWAIN Pro
Exclusive professional-quality scanner driver with powerful features for controlling every aspect of your scan. Includes Auto Area Segmentation (AAS) to separate text from background colors, and Text Enhancement Technology (TET) for more accurate OCR scanning.

EPSON Scan Server (PC only)
Enables you to share the Expression 1680 with other users in a networked workgroup.

EPSON TWAIN Pro Network
This network version of EPSON TWAIN Pro lets client computers use the Expression 1680 when it's attached to another computer. (EPSON Scan Server must be installed on the computer sharing the scanner.)

Adobe® Photoshop® LE
Edit your photos with this version of the ultimate imaging application. Add special effects, overlay titles and captions, restore old photos, and add many other creative enhancements to your photographs. (Not included with the Special Edition model.)

Adobe Acrobat® Reader
This software allows you to read the electronic manuals that are included on your CDs as described in the following section.

LaserSoft® SilverFast®

SilverFast is professional color scanning software for use with Adobe Photoshop. This high-end scanning program uses artificial intelligence to produce the finest images available from your scanner. By matching the prescan to the final scanned image, SilverFast ensures accurate, high quality scans. SilverFast also features global and selective color correction, unsharp masking, descreening, and scan to RGB, CMYK, or CIE Lab color spaces. (Not included with the Special Edition model.)

MonacoEZcolor™

Simplify the process of color management by creating customized color profiles for your scanner, monitor, and printer with this easy-to-use ICC profiling tool. (Not included with the Special Edition model.)

ScanSoft® TextBridge® Pro

Use the premiere OCR (Optical Character Recognition) software to turn your paper documents into electronic text without retyping. (Not included with the Special Edition model.)

NewSoft™ Presto!™ PageManager for EPSON

After you've scanned your paper documents, use this leading document management software to organize, file, edit, copy, fax, and e-mail them from one convenient screen. (Not included with the Special Edition model.)

Getting More Information

There are several ways to learn more about your EPSON Expression 1680 scanner. In addition to the printed materials, help utilities and electronic manuals are available on your computer and CD-ROMs. Here's where to look for help:

- Checklist
  Read the checklist for your scanner model to make sure you have everything. If anything is missing, call EPSON at (562) 276-4382 (United States) or (905) 709-3839 (Canada).

- EPSON Expression 1680 Reference Guide
  Provides detailed information about EPSON TWAIN Pro, including additional troubleshooting tips. You must have a web browser (Netscape Navigator® or Microsoft® Internet Explorer, versions 3.0 or later) on your computer to read this guide. See page 5 for instructions on viewing your *Reference Guide*.

- On-Screen Help
  Most of the applications that come with your scanner include on-screen help. For EPSON TWAIN Pro, just click the ? button or select Help from the menu.

- Electronic Documents
  Several of the applications that came with your scanner include electronic manuals in the Adobe Acrobat PDF format. You'll find electronic user's guides in the Manuals folder on the EPSON Expression 1680 Scanning Tools CD-ROM, as well as in the product folders. See page 7 for instructions on locating and viewing your Acrobat manuals.

If none of these sources answers your questions, please see "Where To Get Help" on page 129.

Warnings, Cautions, Notes, and Tips

Please follow these guidelines as you read your documentation:

Warnings must be followed carefully to avoid bodily injury.

Cautions must be observed to avoid damage to your equipment.

Notes contain important information about your scanner.

Tips contain additional hints for great scanning.

Reading Your Reference Guide

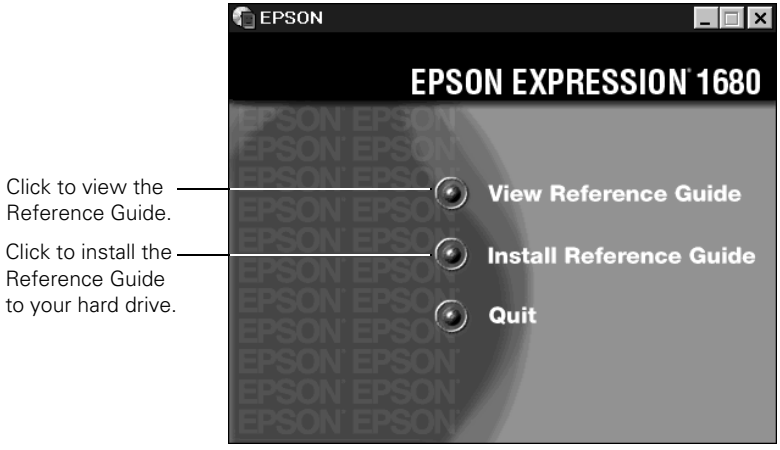
Your electronic *EPSON Expression 1680 Reference Guide* is on your EPSON Expression 1680 Scanning Tools CD-ROM. You can view it from the CD-ROM or copy it to your hard drive and view it from there. You must have a web browser (Netscape Navigator or Internet Explorer, versions 3.0 or later).

If you install the manual to your hard drive, you can read it anytime. For Windows®, just click Start, Programs, EPSON, and select Exp1680 Guide. For Macintosh®, double-click the View Reference Guide icon in the Expression 1680 folder on your hard drive.

Follow these steps to view the manual:

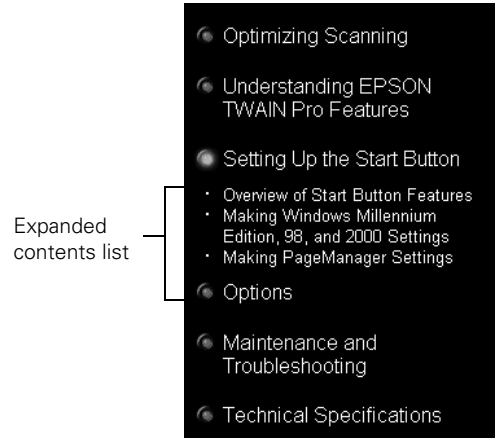
1. Insert your EPSON Expression 1680 Scanning Tools CD-ROM.
   - If you're running Windows, when you see the Software Setup window, click Browse this CD, and double-click the Manuals folder. Then double-click the Exp1680.exe icon.
   - If you have a Macintosh, double-click the Manuals folder, and then double-click the EPSON Expression 1680 icon.

The Reference Guide window opens:



2. Click View Reference Guide. Your browser opens and you see this window:

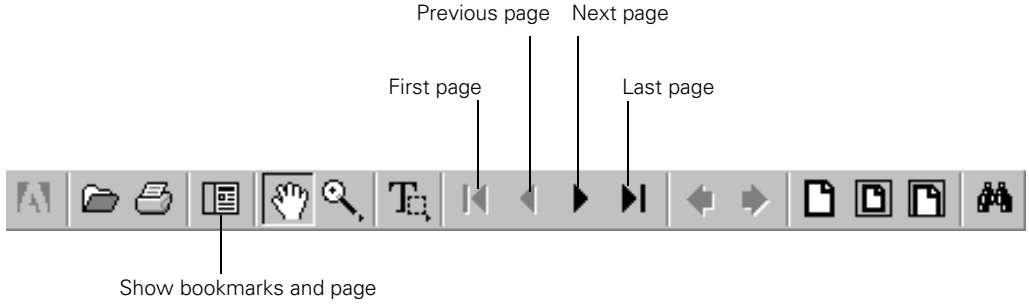
3. Click topics on the left to expand the contents. Then click the subtopic you want to view.



Viewing Your Other Electronic Manuals

To view your electronic manual for Presto! PageManager for EPSON, ScanSoft TextBridge Pro, or any other PDF manuals, you'll use Adobe Acrobat Reader. If Acrobat Reader is not already installed on your computer, you can install it with the other scanner software. See the software installation instructions for your system in Chapter 2.

When you open an electronic manual, you'll see this toolbar:



NOTE This is the toolbar for Acrobat Reader 4.05. The toolbar for Acrobat Reader 3.0 looks slightly different.

With Acrobat Reader, you have several ways to navigate through text:

- Use the bookmark section on the left side of the screen to move quickly to the topic of your choice. Click the Show Bookmarks icon on the toolbar to see the bookmark section, if the manual has bookmarks. Some manuals only have a table of contents, but you can also use this to navigate the manual if the topics are hot.
- Use the arrow buttons in the toolbar or the vertical scroll bar on the right side of the document to move through the manual. (The box to the left of the scroll bar displays the current page number.)
- Click on hot topics, which are usually underlined or displayed in a different color. To find out if a topic is hot, move your cursor over it. If the cursor turns into a pointing hand, the topic is hot—you can jump to it by clicking once.

For more information, see your Acrobat Reader online guide.

Locate your PDF manuals as follows:

- **EPSON Expression 1680 User's Guide**—You can find a PDF version of this user's guide in the Manuals folder on your Expression 1680 Scanning Tools CD-ROM.
- **Presto! PageManager**—For Windows, click Start, Programs, Presto! PageManager for EPSON, PageManager User's Manual.

  For Macintosh, double-click the User's Guide.pdf icon in the Presto! PageManager for EPSON folder on your hard drive.
- **ScanSoft TextBridge Pro**—For Windows, click Start, Programs, TextBridge Pro, and select User Guide.

  For Macintosh, insert your Expression 1680 Scanning Tools CD-ROM, then double-click the TextBridge Pro folder. Double-click the TextBridge Pro Documents folder, then the Getting Started PDF file for the chapter you want to read.
- **Acrobat Reader**—For Windows, select Reader Guide from the Acrobat Reader Help menu.

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

- **MonacoEZcolor**—For Windows, click Start, Programs, MonacoEZcolor, and then select MonacoEZcolor User Guide.

  For Macintosh, double-click the MonacoEZcolor folder on your hard drive, and then double-click the MonacoEZcolor User Guide.pdf icon.

- **Adobe Photoshop LE**—Insert your Adobe Photoshop LE CD-ROM.

  For Windows, double-click the My Computer icon on your desktop, then double-click the Photoshop CD-ROM icon. Finally, double-click the User Guide icon.

  For Macintosh, double-click the Adobe Photoshop LE CD-ROM icon on your desktop, then double-click the User Guide.pdf icon.

- **LaserSoft SilverFast**—Insert your LaserSoft SilverFast CD-ROM.

  For Windows, double-click the My Computer icon on your desktop, double-click the SilverFast CD-ROM icon, and then click the English folder. Double-click the Documentation folder and finally, double-click the desired User Guide icon.

  For Macintosh, double-click the SilverFast CD-ROM icon on your desktop, and then double-click the English folder. Double-click the Documentation folder and finally, double-click the desired User Guide icon.

Registering

Please take a minute to complete the electronic registration form. If you are installing software under Windows, the electronic registration form will display at the end of the software installation process (see "Chapter 2, Setting Up Your Scanner"). If you are installing software on a Macintosh, click Browse this CD on the Expression 1680 Scanning Tools CD-ROM, double-click the E-Reg folder, and then double-click the EPSON Registration icon.

Registering enables you to receive special information on options, new products, and software upgrades. You'll get immediate attention if you have a problem with your scanner.

Chapter 2
Setting Up Your Scanner

Setting up your scanner is easy. For most installations, just follow the steps in this book in the order listed below.

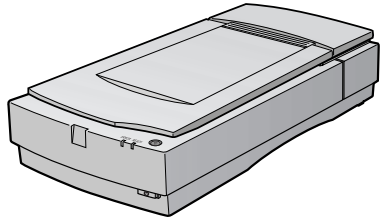
1. Unpack and choose a place for your scanner.
2. Unlock the scanner.
3. Connect the scanner to your computer.
4. Power on your scanner, then power on your computer.
5. Install the scanner software.
6. View your electronic manuals.

If you have a Macintosh, you may prefer to install the scanner software before you connect the scanner to your computer. See "Installing the Macintosh Software" on page 47. If you decide to connect the scanner before you install the software, you'll see a message that your scanner driver needs to be installed. Just close the message and proceed with the installation instructions.

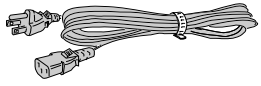
If you're installing a transparency unit, an automatic document feeder, or an IEEE 1394 FireWire scanner interface card, see Chapter 5, "Using Optional Equipment."

Unpacking Your Scanner

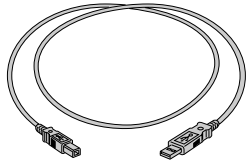
Remove the scanner from the box, then remove the packing material from your scanner. Save the packaging in case you need it later. Your EPSON Expression 1680 comes with these items:



scanner



power cord



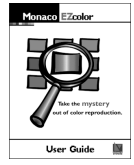
USB cable

EPSON Expression 1680
Scanning Tools CD-ROM

Adobe Photoshop LE CD-ROM

LaserSoft SilverFast CD-ROM

MonacoEZcolor CD-ROM (located in plastic sleeve attached to the *MonacoEZcolor User Guide*



MonacoEZcolor User Guide

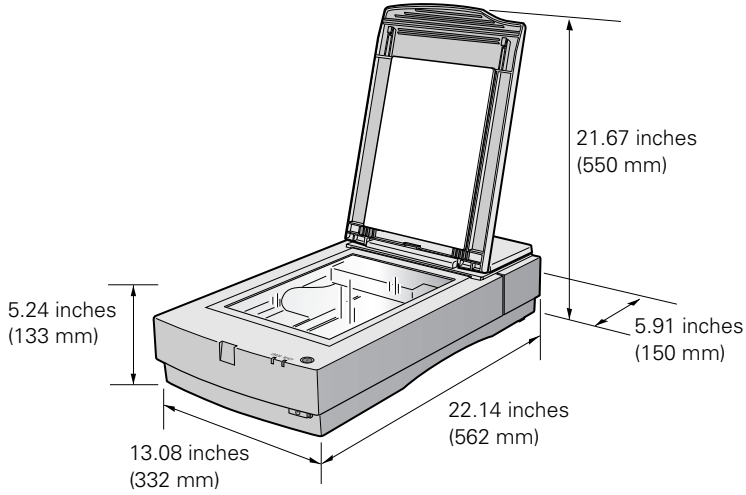
EPSON Expression 1680
User's Guide

The Special Edition model of the scanner doesn't include MonacoEZcolor, Adobe Photoshop, or LaserSoft SilverFast.

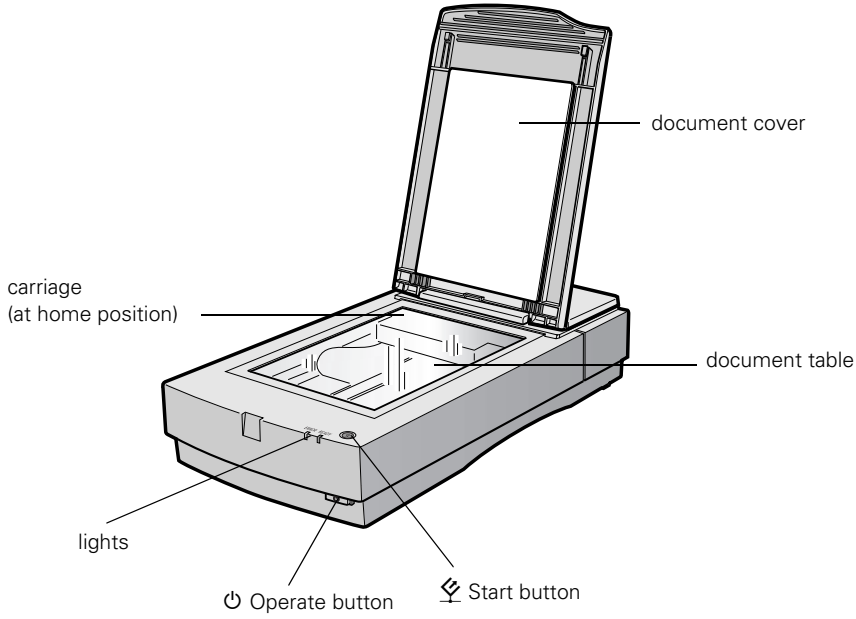
Choosing a Good Place for Your Scanner

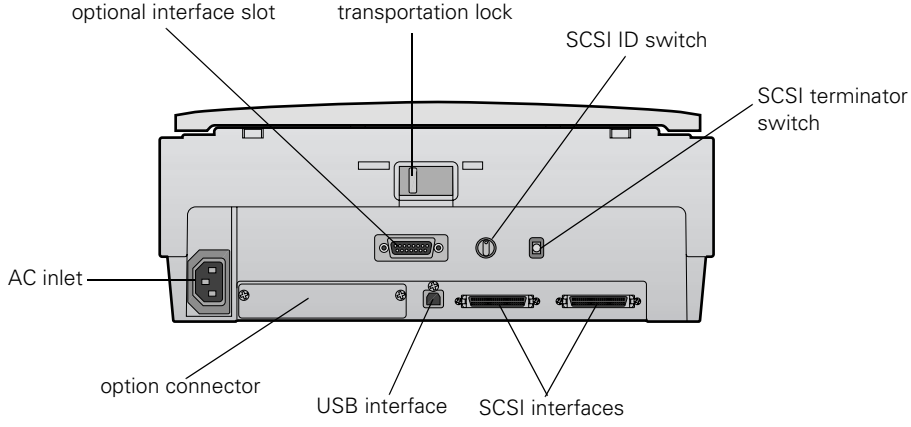
Here are some points to consider when you set up your scanner:

- Place the scanner on a flat, stable surface. If the scanner is tilted, it can't operate properly.
- Make sure to place the scanner where you can easily unplug the power cord, and where your cable can reach your computer.
- Keep the scanner away from direct sunlight and strong light sources.
- Be sure there's enough room behind the scanner for the cables, and above the scanner so you can fully raise the document cover.
- Avoid places subject to shocks and vibrations, or high or rapidly changing temperatures and humidity.



Identifying Scanner Parts

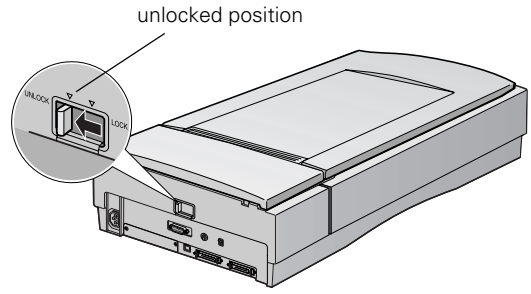




Unlocking the Scanner

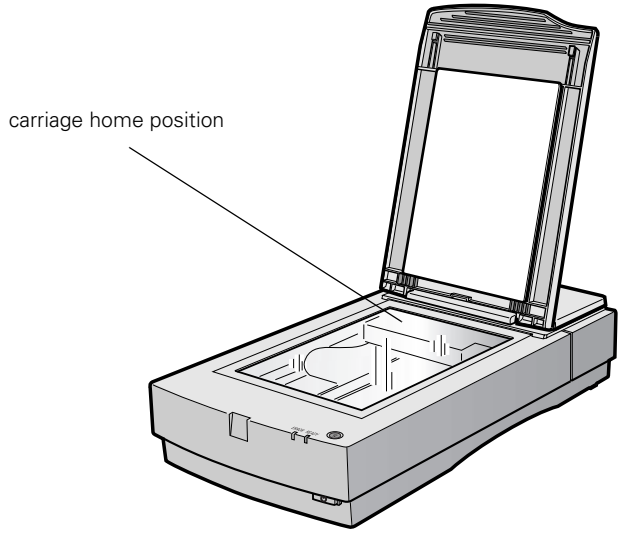
Before connecting the scanner to a power source, you must release the transportation lock, located on the back of the scanner.

To release the transportation lock, slide it to the UNLOCK position, as shown.



CAUTION

Always lock the transportation lock before moving the scanner. Also, be sure the carriage is in the home position (shown below). See "Transporting the Scanner" on page 111 for more information.



Testing Your Scanner's Operation

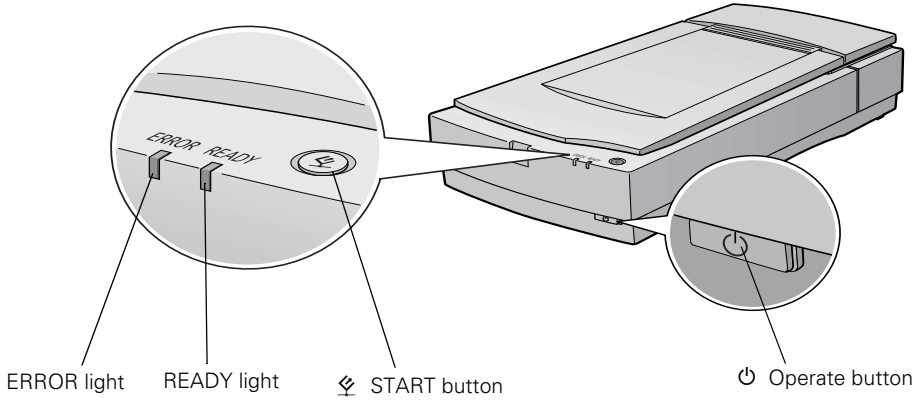
To make sure your scanner is working properly, it's a good idea to turn it on before you connect it to your computer.

CAUTION

The scanner's voltage cannot be changed. If the label on the back of the scanner does not display the correct voltage for your area, contact your dealer. Do not plug in the power cord.

1. Plug the scanner's power cord into a grounded electrical outlet. Then open the scanner's document cover so you can see the operation of the carriage.
2. Press the ⏻ Operate button to turn on the scanner.

   The READY light on the scanner's front panel flashes, and the scanner's carriage moves forward, then back. The READY light stays on when the scanner is ready to scan.



CAUTION

If you turn off the scanner, wait at least 10 seconds before turning it back on. Rapidly turning the scanner on and off can damage the scanner.

Connecting the Scanner to Your Computer

You can connect the scanner to your computer in any of these ways:

- **USB**
  If you have a Power Macintosh® with built-in USB support or your computer is running Windows Me (Windows Millennium), Windows 2000, or Windows 98 (factory installed), you can connect the Expression 1680 with the USB cable that came with the scanner. Windows Me, Windows 2000, or Windows 98 must be preinstalled on your computer; upgrades from previous versions are not supported. There is no USB support for Windows 95 and Windows NT 4.0.

- **SCSI**
  If you have a Power Macintosh with built-in SCSI support or a compatible PCI SCSI/SCSI 2 adapter board, or your Windows computer has an ASPI-compliant SCSI 2 board (Adaptec® boards are recommended), you can connect the scanner with a SCSI 2 cable not more than 9.8 feet long. If your computer is running Windows 95 or Windows NT 4.0, you must use a SCSI connection.

- **IEEE 1394 (FireWire)**
  If you have the Professional FireWire model of the Expression 1680, or you've purchased the optional IEEE 1394 FireWire scanner interface card, you can connect the scanner to your Power Macintosh or PC with the IEEE 1394 FireWire cable. Your Power Macintosh must have a built-in IEEE 1394 FireWire port or an IEEE 1394 FireWire PCI card, and must be running Macintosh OS 8.6 or later with FireWire Update 2.1 or later. Your PC must have an OHCI compliant IEEE 1394 port or card, and must be running a pre-installed version of Windows 2000 or Windows Me.

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

If you install a USB card in your Macintosh and then upgrade your system to OS 8.6, your USB Manager won't be installed and your scanner may not work. To have USB support, you must perform a full installation of OS 8.6 from a CD-ROM before you install the card.

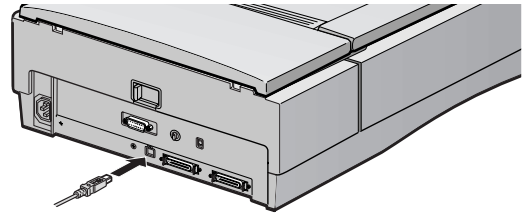
Connecting to a USB Interface

With the USB interface, you can connect or remove your scanner without having to shut down or restart your computer.

Don't disconnect or connect the USB cable when the Expression 1680 is scanning.

Windows Me, Windows 2000 or Windows 98 must be preinstalled on your computer, not upgraded. There is no USB support for Windows 95 or Windows NT 4.0.

1. Locate the USB cable that came with your scanner.
2. Connect the square end of the USB cable to the scanner's USB port.
3. Connect the flat end of the USB cable to your computer's USB port or USB hub port.



If you're using a USB hub, connect the scanner to a first tier hub, which is the hub closest to the computer. If the scanner doesn't work with the hub, connect it directly to a USB port on your computer.

If your scanner and computer are both powered on, you see the Add New Hardware Wizard if you're running Windows 98 (Found New Hardware wizard in Windows Me or Windows 2000) or a message that your scanner driver needs to be installed if you have a Macintosh. Continue with the instructions in "Installing the Windows Software" on page 22 or "Installing the Macintosh Software" on page 47.

Connecting to a SCSI Interface

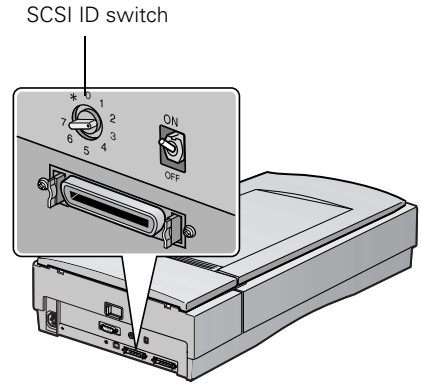
Before you connect the scanner, you must have an ASPI-compliant SCSI 2 interface board installed in your computer (Adaptec SCSI 2 interface boards are recommended). Some computers come with a SCSI 2 board preinstalled; check your computer documentation.

NOTE

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

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

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



NOTE

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

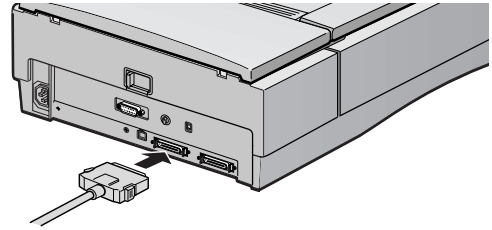
Follow these steps to connect the scanner to a SCSI interface:

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

CAUTION

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

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



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

NOTE

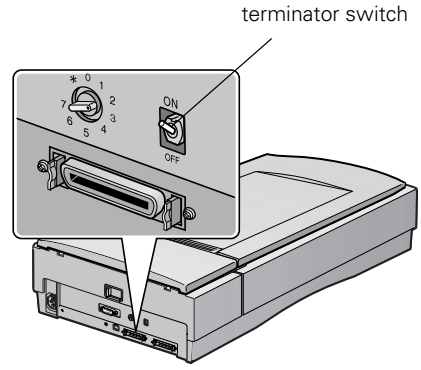
If you are connecting the scanner directly to your computer, use a cable no more than 9.8 feet (3 meters) long.

Don't use an external terminator.

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

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

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



Continue with the instructions in "Installing the Windows Software" on page 22 or "Installing the Macintosh Software" on page 47.

Connecting to an IEEE 1394 FireWire Interface

If you have the Professional FireWire model of the Expression 1680, or if you have purchased the optional IEEE 1394 FireWire scanner interface card, you can connect the scanner to your Power Macintosh or PC using an IEEE 1394 FireWire interface. Your Power Macintosh must have a built-in IEEE 1394 FireWire port or an IEEE 1394 FireWire PCI card, and must be running Macintosh OS 8.6 or later with FireWire Update 2.1 or later. Your PC must have an OHCI compliant IEEE 1394 port or card, and must be running a pre-installed version of Windows 2000 or Windows Me.

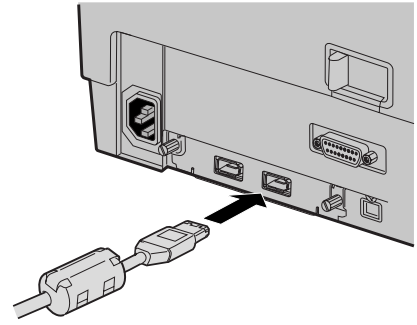
See "IEEE 1394 FireWire Scanner Interface Card" on page 108 for information about system requirements and instructions on installing the card. See page 95 for information about ordering the card.

The IEEE 1394 FireWire scanner interface card has two cable connectors. You can use either one to connect the scanner directly to your computer. At the same time, you can use the second connector to connect other IEEE 1394 FireWire devices in a daisy chain or tree configuration. You can also connect the scanner to another IEEE 1394 FireWire device so that it's the last IEEE 1394 FireWire device in a chain connected to your computer.

Neither your scanner nor your computer has to be off when you connect the cable. However, be careful not to connect or disconnect the cable when the scanner is in use.

Follow these steps to connect the scanner:

1. Connect one end of the cable to the IEEE 1394 FireWire port on the card.
2. Connect the other end of the cable to the IEEE 1394 FireWire port on your computer or on another IEEE 1394 FireWire device.



If you are using Windows, see the next page. Otherwise, continue with "Installing the Macintosh Software" on page 47.

Installing the Windows Software

Before you begin installing software, make sure you recalibrate your monitor to factory specifications. Then follow the instructions for your operating system:

- If you're running the Windows Me, continue with the next section.
- If you're running Windows 2000, go to page 28.
- If you're running Windows 98, go to page 34.
- If you're running Windows 95, go to page 39.
- If you're running Windows NT 4.0, go to page 43.

For instructions on installing software for a network scanner, go to Chapter 4, "Network Scanning."

When you've finished installing the software on your EPSON Expression 1680 Scanning Tools CD-ROM, continue with "Installing Additional Windows Software" on page 45 if you want to install Adobe Photoshop LE, ScanSoft TextBridge Pro, LaserSoft SilverFast, or MonacoEZcolor.

Adobe Photoshop LE, ScanSoft TextBridge Pro, LaserSoft SilverFast, MonacoEZcolor, and Presto! PageManager are not included with the Special Edition model of the scanner.

Installing the Windows Me Software

Before you begin, make sure the Expression 1680 is connected to your computer. Also, make sure you've recalibrated your monitor to factory specifications.

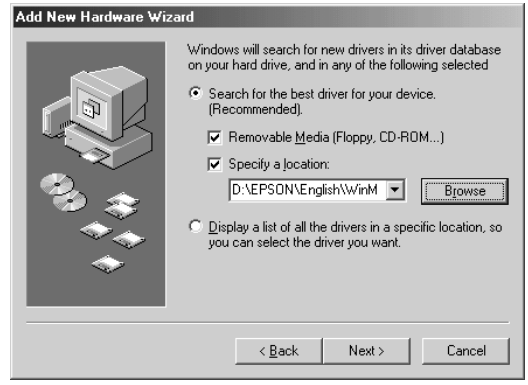
This procedure automatically installs your EPSON TWAIN Pro driver and any software you need for a USB connection. If you're using a SCSI or IEEE 1394 connection and are configuring your SCSI or IEEE 1394 interface card for the first time, you'll be asked to install your SCSI or IEEE 1394 driver at the beginning of installation. Follow the instructions on the screen to install your driver, or see the documentation that came with your card.

You may be asked to insert your Windows CD-ROM during this procedure. Make sure you have your Windows CD-ROM available, or know where to find the Windows source files on your hard drive. If you need help locating your source files, contact your computer manufacturer.

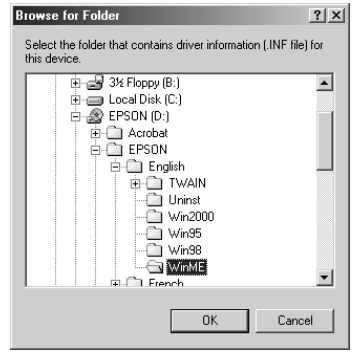
1. Turn on your scanner first, then turn on your computer.
2. When you see the window on the right, select Specify the location of the driver, and then click Next.
3. Insert the EPSON Expression 1680 Scanning Tools CD-ROM in your drive.

NOTE The Add New Hardware Wizard screen above illustrates a SCSI connection and may look slightly different for USB and FireWire connections.

4. Make sure the Search for the best driver for your device, Removable Media (Floppy, CD-ROM...) and Specify a location options are selected.



5. Browse to EPSON\English\WinME on your CD-ROM drive. (The example to the right uses "D" as the CD-ROM drive letter. Your CD-ROM drive letter may be different.) Click OK to close the Browse window, and then click Next.



6. Follow the instructions on the screen.

   If you see a message asking for your Windows Me CD-ROM, insert it and click OK (or click Browse and locate the Windows Me source files on your hard drive; then click OK).

7. Click Finish when you see a message that installation is complete.

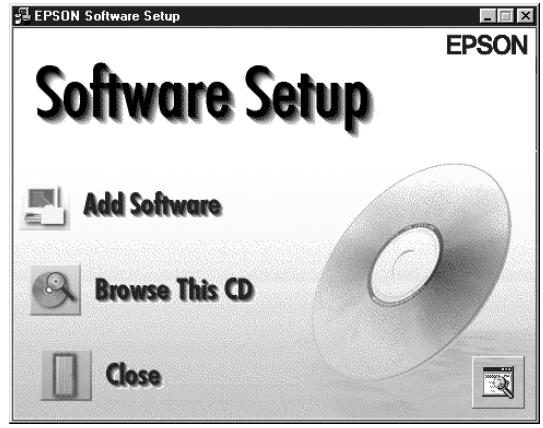
Continue with the instructions in the next section, "Installing Other Software on Your Scanning Tools CD-ROM."

Installing Other Software on Your Scanning Tools CD-ROM

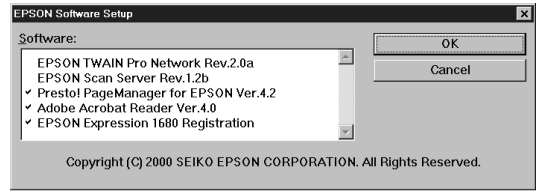
Follow these steps to install Presto! PageManager and Adobe Acrobat, and complete the Expression 1680 electronic registration form:

1. If the Select Language window doesn't appear, double-click the My Computer icon on your Windows desktop, then double-click the Epson CD-ROM icon.
2. Double-click the CDSETUP.exe icon.
3. When the Select Language window appears, make sure English is selected and click OK.

4. Click the Add Software button to display the software selection window.



5. A check mark appears beside applications selected for installation. If you want to deselect either Presto! PageManager or Acrobat Reader, click the application to clear the check mark. Then click OK.



Don't select either of the two network applications, EPSON TWAIN Pro Network or EPSON Scan Server. The EPSON TWAIN Pro driver, which is already installed on your computer, lets you scan to an Expression 1680 connected to your computer. If you want to install software for a network scanner, go to Chapter 4, "Network Scanning."

If you have the Special Edition model of the scanner, Presto! PageManager does not appear in the software selection window. This software is not included with your scanner.

6. Follow the instructions on the screen to install the software.

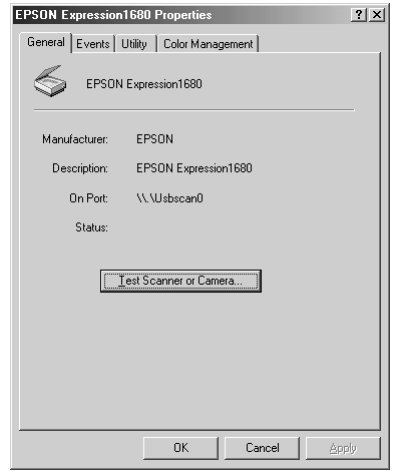
If you're done installing software, remove the EPSON Expression 1680 Scanning Tools CD-ROM and restart your computer. Then follow the instructions in the next section to make sure your scanner is operating properly.

If you want to install ScanSoft TextBridge Pro, MonacoEZcolor, LaserSoft SilverFast, or Adobe Photoshop LE, continue with the instructions under "Installing Additional Windows Software" on page 45.

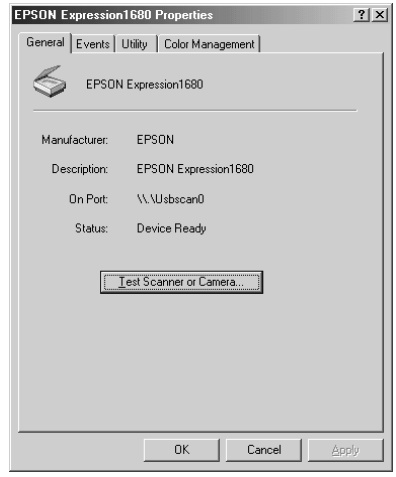
Testing the Scanner's Operation (Windows Me)

Follow these steps to test scanner operation:

1. Open the Windows Control Panel and double-click the Scanners and Cameras icon to open the Scanners and Cameras Properties window.
2. Double-click the EPSON Expression 1680 icon to display the Properties window.



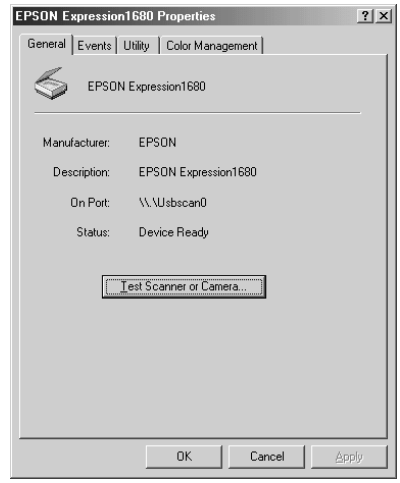
3. Click the Test Scanner or Camera button. If the scanner is operating properly, a Test Successful message displays. Click OK to close the message. Device Ready appears next to Status on the Properties window.
4. Click OK to close the Properties window.



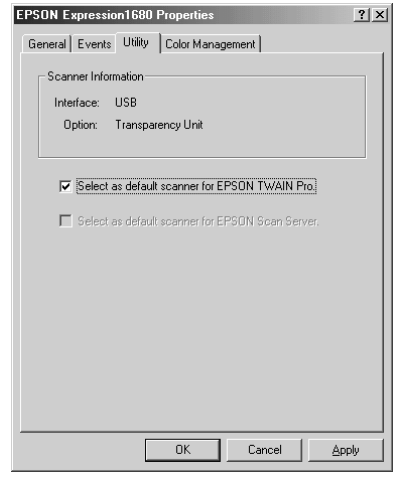
Selecting the Expression 1680 as Your Default Scanner (Windows Me)

If you have more than one scanner connected to your computer, you can set up the Expression 1680 as the default scanner.

1. Open the Windows Control Panel and double-click the Scanners and Cameras icon.
2. Double-click the EPSON Expression 1680 icon. You see the EPSON Expression 1680 Properties window.



3. Click the Utility tab. Make sure Select as default scanner for EPSON TWAIN Pro is checked, and then click OK.



Installing the Windows 2000 Software

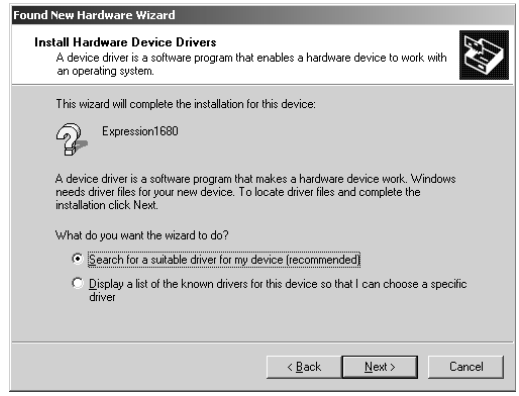
Before you begin, make sure the Expression 1680 is connected to your computer. Also, make sure you've recalibrated your monitor to factory specifications.

This procedure automatically installs your EPSON TWAIN Pro driver and any software you need for a USB connection. If you're using a SCSI or IEEE 1394 connection and are configuring your interface card for the first time, you'll be asked to install your SCSI or IEEE 1394 driver at the beginning of the installation. Follow the instructions on the screen to install your driver, or see the documentation that came with your interface card.

You may be asked to insert your Windows CD-ROM during this procedure. Make sure you have your Windows CD-ROM available, or know where to find the Windows source files on your hard drive. If you need help locating your source files, contact your computer manufacturer.

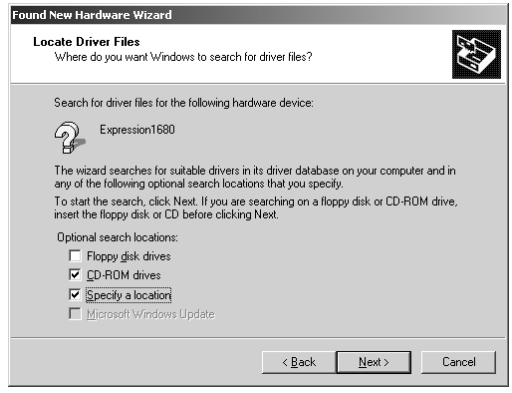
1. Turn on your scanner first, then turn on your computer.
2. When you see the window on the right, insert the EPSON Expression 1680 Scanning Tools CD-ROM in your drive and click **Next**.

3. Select Search for a suitable driver for my device and click Next.

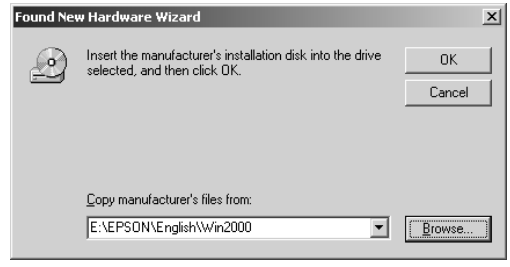


NOTE The Found New Hardware Wizard screen above illustrates a USB connection and may look slightly different for SCSI and FireWire connections.

4. Select CD-ROM drives and Specify a location, then click Next.



5. Browse to EPSON\English\Win2000 on your CD-ROM drive. (The example to the right uses "E" as the CD-ROM drive letter. Your CD-ROM drive letter may be different.) Click OK to close the Browse window, and then click OK.



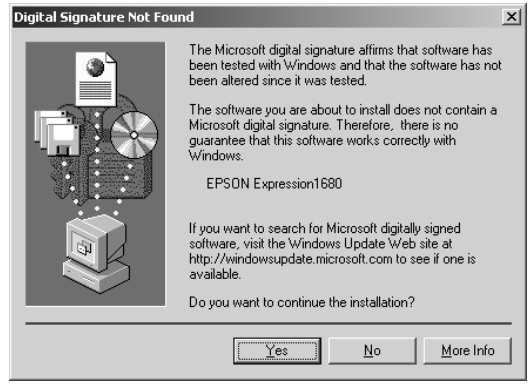
6. Follow the instructions on the screen.

   If you see a message asking for your Windows 2000 CD-ROM, insert it and click OK (or click Browse and locate the Windows 2000 source files on your hard drive; then click OK).

7. When you see the Digital Signature Not Found screen, click Yes.

   If prompted for the EPSON Scanners Driver Disk 1, reinsert your EPSON Expression 1680 Scanning Tools CD-ROM.

8. Click Finish when you see a message that installation is complete, then continue with the instructions in the next section.

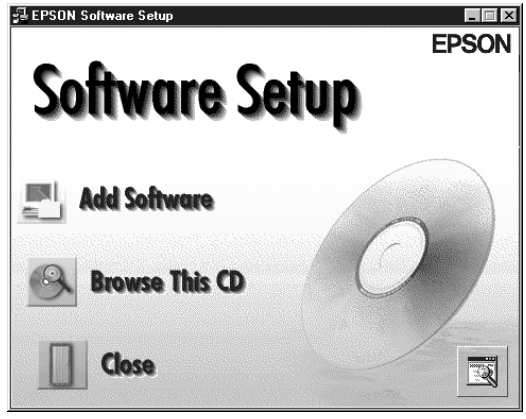


Installing Other Software on Your Scanning Tools CD-ROM

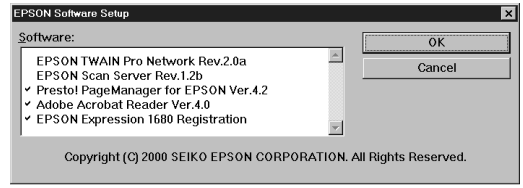
Follow these steps to install Presto! PageManager and Adobe Acrobat, and complete the Expression 1680 electronic registration form:

1. If the Select Language window doesn't appear, double-click the My Computer icon on your Windows desktop, then double-click the Epson CD-ROM icon.

2. Make sure English is selected and click OK. The Software Setup window appears.



3. Click the Add Software button to display the software selection window. A check mark appears beside applications selected for installation. If you want to deselect either Presto! PageManager or Acrobat Reader, click the application to clear the check mark. Then click OK.



Don't select either of the two network applications, EPSON TWAIN Pro Network or EPSON Scan Server. The EPSON TWAIN Pro driver, which is already installed on your computer, lets you scan to an Expression 1680 connected to your computer. If you want to install software for a network scanner, go to Chapter 4, "Network Scanning."

If you have the Special Edition model of the scanner, Presto! PageManager does not appear in the software selection window. This software is not included with your scanner.

4. Follow the instructions on the screen to install the software.

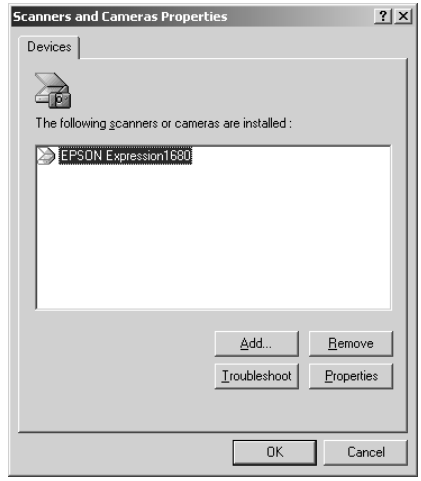
If you're done installing software, remove the EPSON Expression 1680 Scanning Tools CD-ROM and restart your computer. Then follow the instructions in the next section to make sure your scanner is operating properly.

If you want to install ScanSoft TextBridge Pro, MonacoEZcolor, LaserSoft SilverFast, or Adobe Photoshop LE, continue with the instructions under "Installing Additional Windows Software" on page 45.

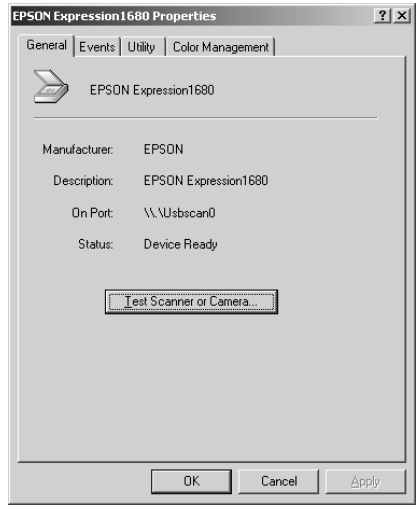
Testing the Scanner's Operation (Windows 2000)

Follow these steps to test scanner operation:

1. Open the Windows Control Panel and double-click the Scanners and Cameras icon to open the Scanners and Cameras Properties window.
2. Make sure EPSON Expression 1680 is selected, and then click the Properties button.



3. Click the Test Scanner or Camera button. If the scanner is operating properly, a Test Successful message displays. Click OK to close the message. Device Ready appears next to Status.
4. Click OK to close the Properties window.

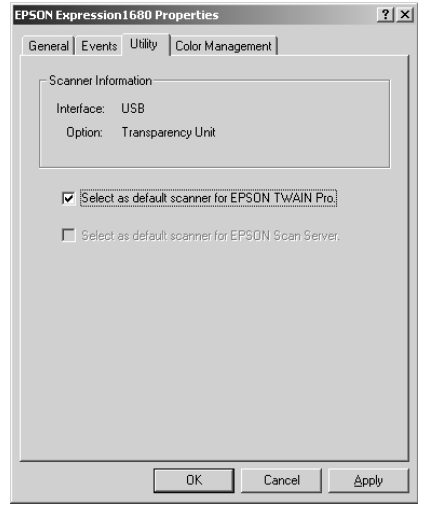


Selecting the Expression 1680 as Your Default Scanner (Windows 2000)

If you have more than one scanner connected to your computer, you can set up the Expression 1680 as the default scanner.

1. Open the Windows Control Panel and double-click the Scanners and Cameras icon to open the Scanners and Cameras Properties window.
2. Make sure EPSON Expression 1680 is selected, and click the Properties button. You see the EPSON Expression 1680 Properties window.

3. Click the Utility tab. Make sure Select as default scanner for EPSON TWAIN Pro is checked, and then click OK.
4. Click OK to close the Properties window.



Installing the Windows 98 Software

Before you begin, make sure the Expression 1680 is connected to your computer. Also, make sure you've recalibrated your monitor to factory specifications.

This procedure automatically installs your EPSON TWAIN Pro driver and any software you need for a USB connection. If you're using a SCSI connection and are configuring your SCSI interface card for the first time, you'll be asked to install your SCSI driver at the beginning of installation. Follow the instructions on the screen to install your SCSI driver, or see the documentation that came with your SCSI card.

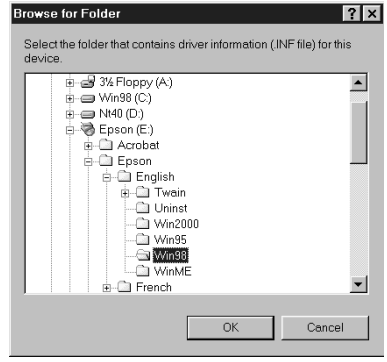
You may be asked to insert your Windows CD-ROM during this procedure. Make sure you have your Windows CD-ROM available, or know where to find the Windows source files on your hard drive. If you need help locating your source files, contact your computer manufacturer.

1. Turn on your scanner first, then turn on your computer.
2. When you see the window on the right, insert the EPSON Expression 1680 Scanning Tools CD-ROM in your drive and click Next.

3. Select Search for the best driver for your device and click Next.

4. Make sure CD-ROM drive and Specify a location are selected and click Browse.

5. Browse to Epson\English\Win98 on your CD-ROM drive. (The example to the right uses "E" as the CD-ROM drive letter. Your CD-ROM drive letter may be different.) Click OK to close the Browse window, and then click Next.



6. Follow the instructions on the screen.
7. Click Finish when you see a message that installation is complete.

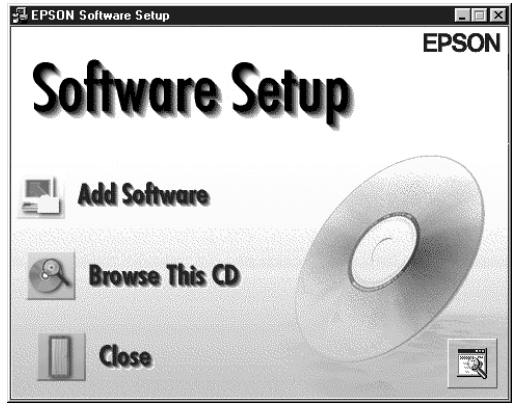
Continue with the instructions in the next section.

Installing Other Software on Your Scanning Tools CD-ROM

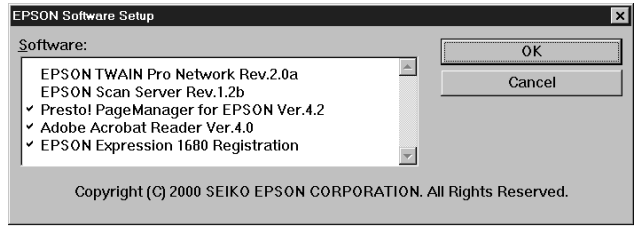
Follow these steps to install Presto! PageManager and Adobe Acrobat, and complete the Expression 1680 electronic registration form:

1. If the Select Language window doesn't appear, double-click the My Computer icon on your Windows desktop, then double-click the Epson CD-ROM icon.

2. Make sure English is selected and click OK to display the Software Setup window.



3. Click the Add Software button to display the software selection window. A check mark appears beside applications selected for installation. If you want to deselect either Presto! PageManager or Acrobat Reader, click the application to clear the check mark. Then click OK.



Don't select either of the two network applications, EPSON TWAIN Pro Network or EPSON Scan Server. The EPSON TWAIN Pro driver, which is already installed on your computer, lets you scan to an Expression 1680 connected to your computer. If you want to install software for a network scanner, go to Chapter 4, "Network Scanning."

If you have the Special Edition model of the scanner, Presto! PageManager does not appear in the software selection window. This software is not included with your scanner.

4. Follow the instructions on the screen to install the software.

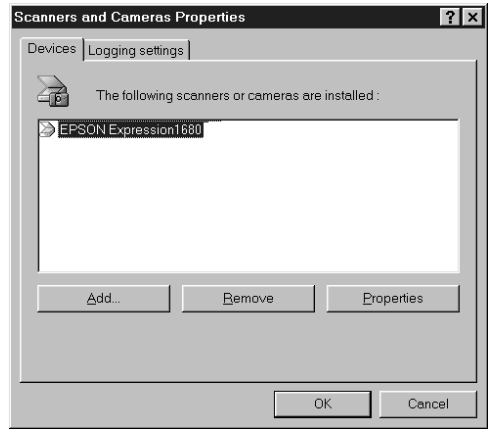
If you're done installing software, remove the EPSON Expression 1680 Scanning Tools CD-ROM and restart your computer. Then follow the instructions in the next section to make sure your scanner is operating properly.

If you want to install ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, or MonacoEZcolor, continue with the instructions under "Installing Additional Windows Software" on page 45.

Testing the Scanner's Operation (Windows 98)

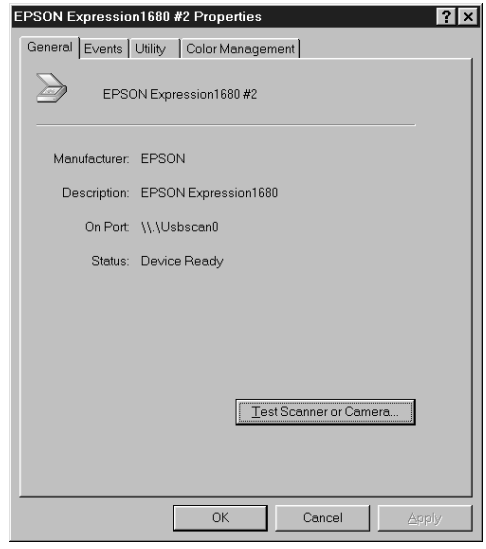
Follow these steps to test scanner operation:

1. Open the Windows Control Panel and double-click the Scanners and Cameras icon to open the Scanners and Cameras Properties window.



NOTE The Scanners and Cameras Properties screen above illustrates a USB connection and may look slightly different for SCSI and FireWire connections.

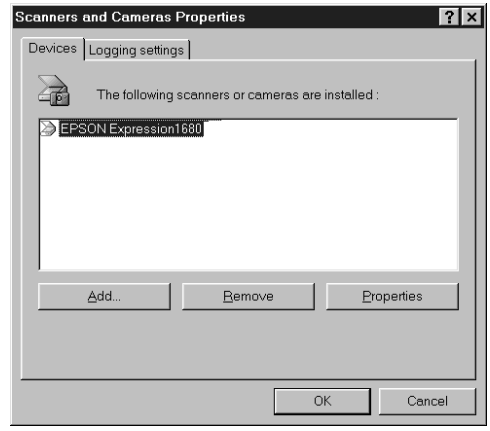
2. Make sure EPSON Expression 1680 is selected, and then click the Properties button.
3. Click the Test Scanner or Camera button. If the scanner is operating properly, a confirmation message appears. Click OK to close the message. Device Ready appears next to Status.
4. Click OK to close the Properties window.



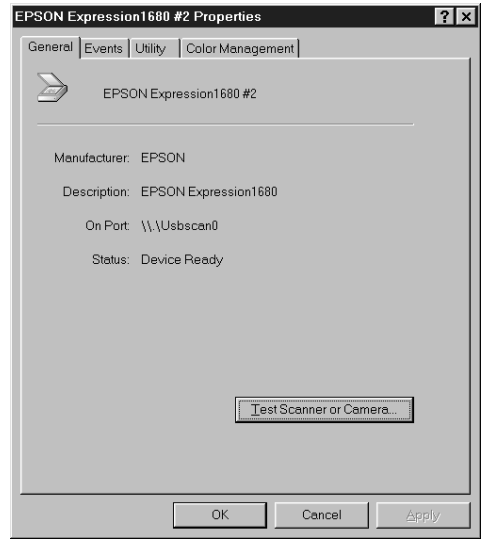
Selecting the Expression 1680 as Your Default Scanner (Windows 98)

If you have more than one scanner connected to your computer, you can set up the Expression 1680 as the default scanner.

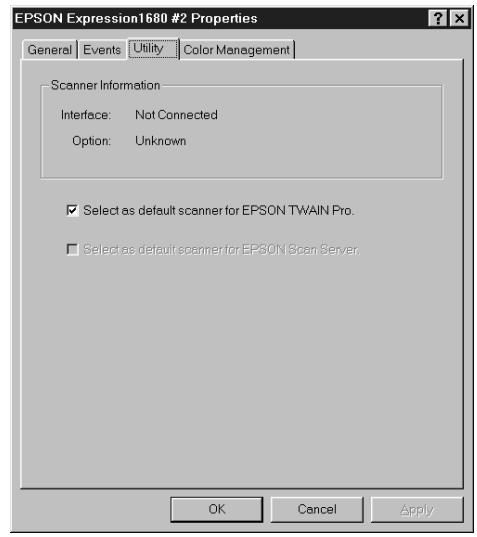
1. Open the Windows Control Panel and double-click the Scanners and Cameras icon to open the Scanners and Cameras Properties window.



2. Make sure EPSON Expression 1680 is selected, and click the Properties button. You see the EPSON Expression 1680 Properties window.



3. Click the Utility tab. Make sure Select as default scanner for EPSON TWAIN Pro is checked, and then click OK.



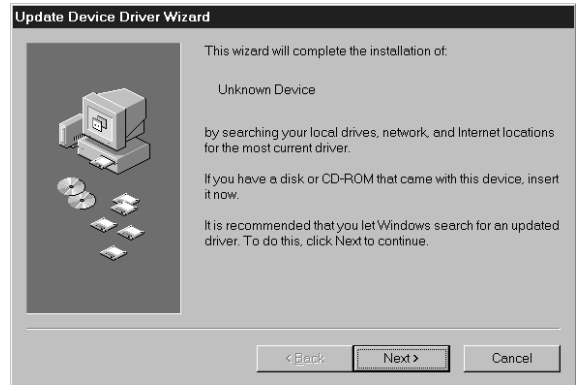
Installing the Windows 95 Software

Before you begin, make sure the Expression 1680 is connected to your computer.

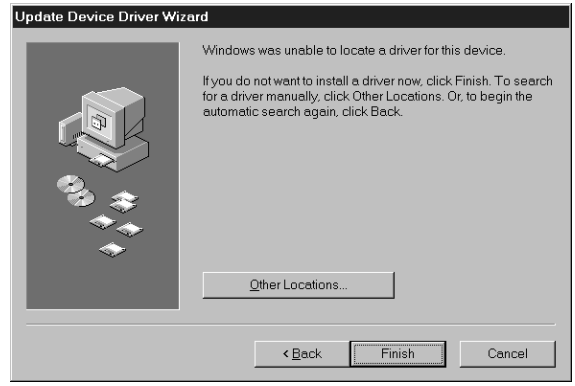
If you're configuring your SCSI interface card for the first time, you'll be asked to install your SCSI driver at the beginning of installation. Make sure you have your Windows CD-ROM available, or know where to find the Windows source files on your hard drive. Then follow the instructions on the screen, or see the documentation that came with your SCSI card for more information.

If you need help locating your source files, contact your computer manufacturer.

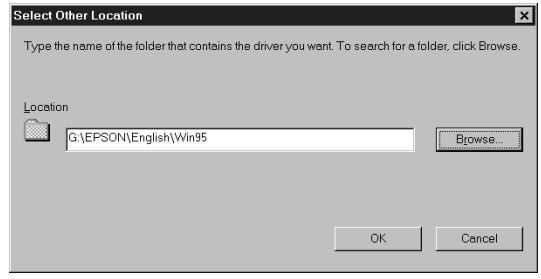
1. Turn on your scanner first; then turn on your computer. When you see the window on the right, click Next.



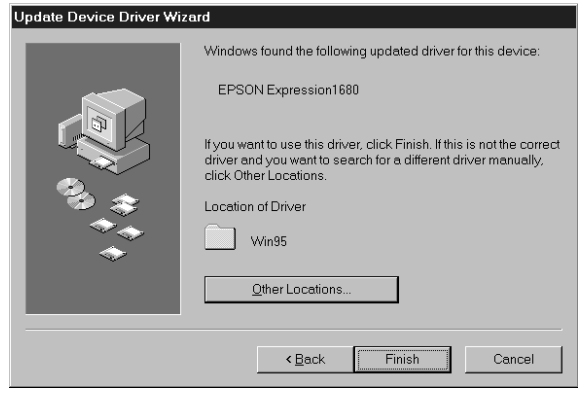
2. Insert your Expression 1680 Scanning Tools CD-ROM in your drive. Then click **Other Locations**.



3. Browse to the following location on your CD-ROM drive: **EPSON\English\Win95**. (The example on the right uses "G" as the CD-ROM drive letter. Your CD-ROM drive may have a different letter.) Click **OK**.



4. When you see this window, click **Finish**.



Continue with the instructions in the next section to install EPSON TWAIN Pro and other software on your Expression 1680 Scanning Tools CD-ROM.

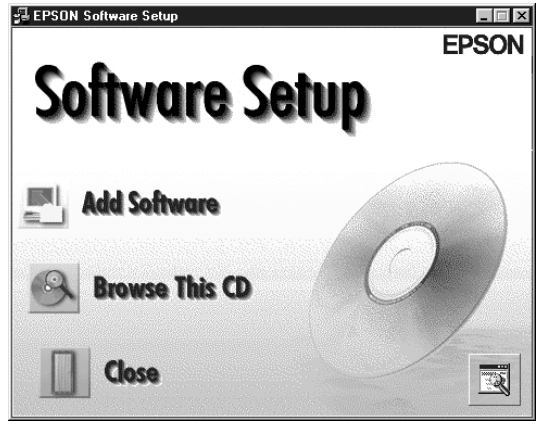
Installing Other Software on Your Scanning Tools CD-ROM

Follow these steps to install EPSON TWAIN Pro, Presto! PageManager, and Acrobat Reader, and complete the Expression 1680 electronic registration form:

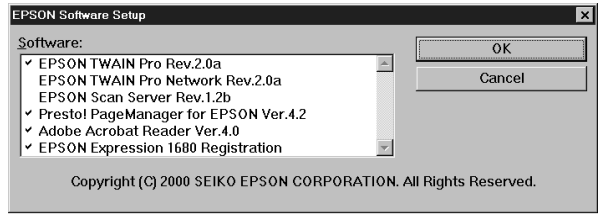
1. If the Select Language windows doesn't appear, double-click the My Computer icon on your Windows desktop, then double-click the Epson CD-ROM icon. You see the Select Language window.

2. Make sure English is selected and click OK.

3. You see the Software Setup window. Click Add Software.



4. You see the software selection window.

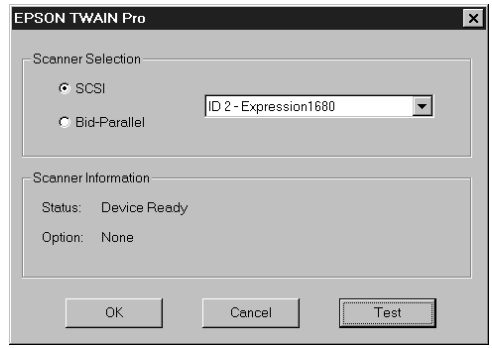


   A check mark appears beside applications selected for installation. If you want to deselect either Presto! PageManager or Acrobat Reader, click the application to clear the check mark. Then click OK.

Don't select either of the two network applications, EPSON TWAIN Pro Network or EPSON Scan Server. If you want to install software for a network scanner, go to Chapter 4, "Network Scanning."

If you have the Special Edition model of the scanner, Presto! PageManager does not appear in the software selection window. This software is not included with your scanner.

5. Follow the instructions on the screen to install EPSON TWAIN Pro. When installation is complete, you see the window on the right. Make sure SCSI is selected and Expression 1680 appears in the Scanner Selection box.



6. Click Test to check the connection. If the scanner software is installed correctly, you see Status: Device Ready under Scanner Information. Click OK to close the window.
7. Click OK to close the setup complete message.
8. Follow the instructions on the screen to install the software.

   If you're done installing software, remove the EPSON Expression 1680 Scanning Tools CD-ROM and restart your computer.

   If you want to install ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, or MonacoEZcolor, continue with the instructions under "Installing Additional Windows Software" on page 45.

Verify that the scanner is listed in the Windows Device Manager. (Click Start, Settings, Control Panel, then double-click the System icon. Select the Device Manager tab and double-click EPSON Scanners. EPSON Expression 1680 should appear in the list.)

Installing the Windows NT 4.0 Software

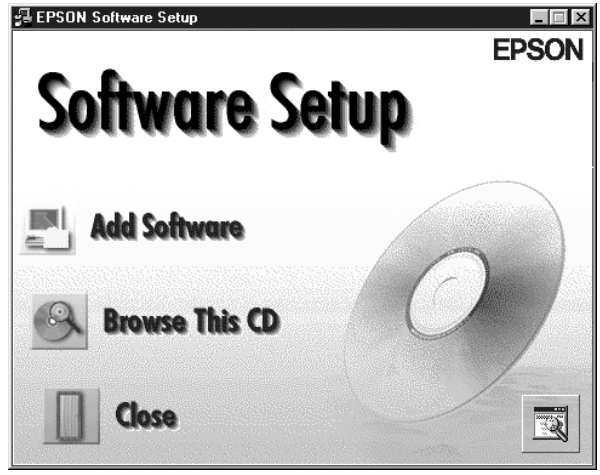
This procedure installs EPSON TWAIN Pro, Presto! PageManager, and Acrobat Reader. Before you begin, make sure the scanner is attached to your computer, and that you've recalibrated your screen to factory specifications.

If you're configuring your SCSI interface card for the first time, you'll be asked to install your SCSI driver at the beginning of installation. Make sure you have your Windows CD-ROM available, or know where to find the Windows source files on your hard drive. Then follow the instructions on the screen, or see the documentation that came with your SCSI card for more information.

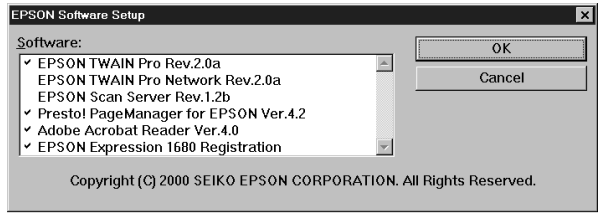
If you need help locating your source files, contact your computer manufacturer.

1. Turn on your scanner first; then turn on your computer.
2. Log onto Windows NT. Then insert the EPSON Expression 1680 Scanning Tools CD-ROM.
3. If the Select Language window doesn't appear, double-click the My Computer icon on your Windows desktop, then double-click the Epson CD-ROM icon.

4. Make sure English is selected and click OK to display the Software Setup window.



5. Click Add Software. You see the software selection window.

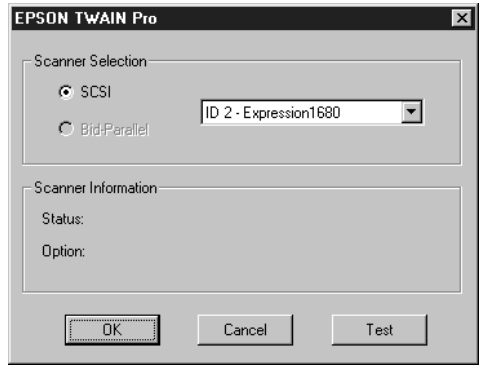


   A check mark appears beside applications selected for installation. If you want to deselect either Presto! PageManager or Acrobat Reader, click the application to clear the check mark. Then click OK.

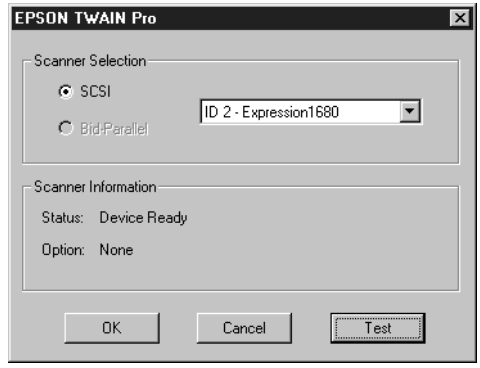
Don't select either of the two network applications, EPSON TWAIN Pro Network or EPSON Scan Server. If you want to install software for a network scanner, go to Chapter 4, "Network Scanning."

If you have the Special Edition model of the scanner, Presto! PageManager does not appear in the software selection window. This software is not included with your scanner.

6. Follow the instructions on the screen to install EPSON TWAIN Pro. When installation is complete, you see the window on the right. Make sure SCSI is selected and Expression 1680 appears in the Scanner Selection box.



7. Click Test to check the connection. If the scanner software is installed correctly, you see Status: Device Ready under Scanner Information. Click OK to close the window.
8. Click OK to close the setup complete message.
9. Follow the instructions on the screen to install Presto! PageManager for EPSON and Acrobat Reader, and complete the Expression 1680 electronic registration form.



If you're done installing software, remove the EPSON Expression 1680 Scanning Tools CD-ROM and restart your computer.

If you want to install ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, or MonacoEZcolor, continue with the instructions under "Installing Additional Windows Software" on page 45.

Installing Additional Windows Software

Follow the instructions in this section to install Adobe Photoshop LE, MonacoEZcolor, LaserSoft SilverFast, and ScanSoft TextBridge Pro.

Adobe Photoshop LE, MonacoEZcolor, LaserSoft SilverFast, and ScanSoft TextBridge Pro are not included with the Special Edition model of the scanner.

Installing Adobe Photoshop LE

To find out how to upgrade to the full version of Adobe Photoshop, see the Acrobat file titled Upgrade.pdf on the Adobe Photoshop LE CD-ROM (you must have Acrobat Reader installed to view this file).

1. Insert the Adobe Photoshop LE CD-ROM in your drive.
2. Double-click the My Computer icon on your Windows desktop, then double-click the Photosle CD-ROM icon.
3. Double-click the Photosle folder, then double-click the

setup icon.
4. Follow the instructions on the screen. When you see the User Information dialog box, enter your name and company, and then enter the serial number (including the hyphen) of your software exactly as it appears on the CD-ROM sleeve. Then click Next.
5. Follow the instructions on the screen to complete installation and create a Photoshop Limited Edition program folder in your Adobe program group.
6. Remove the Adobe Photoshop LE CD-ROM. If you're done installing software, restart your computer.

Installing LaserSoft SilverFast

1. Insert the LaserSoft SilverFast CD-ROM in your drive.
2. Double-click the My Computer icon on your Windows desktop, then double-click the SilverFast CD-ROM icon.
3. Click the English folder, double-click the Photoshop Plugin folder, and then double-click the SF US folder.
4. Double-click the Setup.exe icon and follow the instructions on the screen. When you're done installing the software, click Finish and restart your computer.

Installing MonacoEZcolor

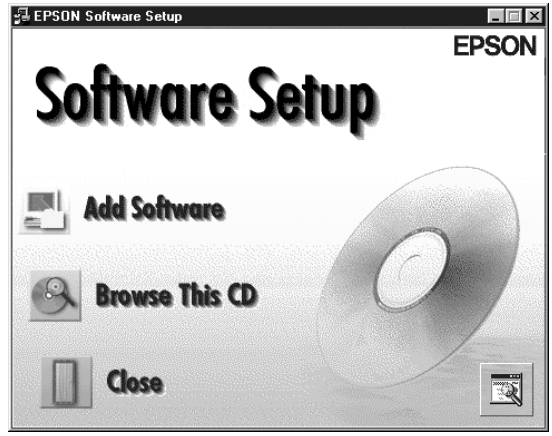
1. Insert the MonacoEZcolor CD-ROM in your drive.
2. Double-click the My Computer icon on your Windows desktop, then double-click the MonacoEZcolor CD-ROM icon.
3. Double-click the Setup.exe icon and follow the instructions on the screen. When you're done installing the software, click Finish and restart your computer.

Installing ScanSoft TextBridge Pro

1. If necessary, insert the EPSON Expression 1680 Scanning Tools CD-ROM in your drive.
2. If the Select Language window doesn't appear, double-click the My Computer icon on your Windows desktop, then double-click the Epson CD-ROM icon.

3. Make sure English is selected, and then click OK to display the Software Setup window.

4. Click Browse This CD.
5. Double-click the TBPro80 folder on the CD-ROM, then double-click the Setup installer icon.



If you're running Windows NT, you must have Service Pack 3 installed. Otherwise, you may see an error message indicating that your path to Setup.exe is invalid.

6. Follow the instructions on the screen to install ScanSoft TextBridge Pro. When installation is complete, remove the EPSON Expression 1680 Scanning Tools CD-ROM. If you're done installing software, restart your computer.

Installing the Macintosh Software

Although you can connect the scanner either before or after installing the scanner software, you'll see a message that your scanner driver needs to be installed if you connect it before installing. Close the message and continue with the installation instructions in the next section. For instructions on installing software for a network scanner, go to Chapter 4, "Network Scanning."

You can connect the scanner using either a SCSI or USB interface. If you have the Professional FireWire model of the scanner or you've installed the optional IEEE 1394 FireWire scanner interface card, you can also connect the scanner using the IEEE 1394 FireWire interface. See "Connecting the Scanner to Your Computer" on page 17 for instructions on connecting the scanner, and "IEEE 1394 FireWire Scanner Interface Card" on page 108 for instructions on installing the card.

If you've used an EPSON scanner on your Macintosh and have installed an older version of EPSON TWAIN software, open the Extensions Manager before you begin installation. Clear the checkboxes next to EPSON Scanner Monitor Extension or EPSON Scanner Monitor USB Extension and restart your computer. Then continue with the instructions below.

Starting the Macintosh Software Installation

Before you begin, make sure you've recalibrated your monitor to factory specifications. You can use tools such as ColorSync 2.5 or above, the Adobe Gamma utility included with Adobe Photoshop 5.0 and above, or MonacoEZcolor.

If you don't calibrate your monitor, you may get inconsistent scanning results.

1. Turn on your Macintosh and turn off any virus protection programs you're using.
2. Insert the EPSON Expression 1680 Scanning Tools CD-ROM in your drive.
3. Double-click the EPSON TWAIN Pro folder.
4. Double-click the EPSON TWAIN Pro Installer icon.
5. Click Install, and then follow the instructions on the screen to install EPSON TWAIN Pro and EPSON Scanner Monitor.
6. When installation finishes, click Restart.

   Your computer restarts.

Installing Other Software on Your Scanning Tools CD-ROM

Follow these steps to finish installing the software on your Expression 1680 Scanning Tools CD-ROM:

If you have the Special Edition model, Presto! PageManager and TextBridge Pro are not included with your scanner.

1. Double-click the Presto! PageManager folder. (If necessary, double-click the EPSON CD-ROM icon to open the CD-ROM window.)
2. Double-click the English folder.
3. Double-click the Presto! PageManager Disk 1 folder. Double-click the PageManager Installer #1 icon and follow the instructions on the screen to install Presto! PageManager.
4. If you want to install Acrobat Reader 4.0, double-click the Acrobat Reader folder.
5. Double-click the English folder.
6. Double-click the Reader Installer icon and follow the instructions on the screen to install Acrobat Reader.
7. When you're done installing Acrobat Reader, double-click the TextBridge Pro folder.
8. Double-click the TextBridge Pro Installer folder.
9. Double-click the TextBridge Pro Installer icon, and then follow the instructions on the screen to install TextBridge Pro.
10. If you've finished installing software, remove the Expression 1680 Scanning Tools CD-ROM and restart your computer. If you want to install other software, continue with the instructions in the next sections.

Installing Adobe Photoshop LE

To find out how to upgrade to the full version of Adobe Photoshop, see the Acrobat file titled Upgrade.pdf on the Adobe Photoshop LE CD-ROM (you must have Acrobat Reader installed to view this file).

If you have the Special Edition model, Adobe Photoshop LE is not included with your scanner.

1. Insert the Adobe Photoshop LE CD-ROM in your drive.
2. Double-click the Adobe Photoshop LE CD-ROM icon, then double-click the Adobe Photoshop LE folder.
3. Double-click the Install Photoshop LE icon. You see the Adobe Photoshop Installer banner. Click Continue.
4. At the next window, choose the country you're in and click OK. You see the License Agreement.
5. Read the agreement and click Accept.
6. Follow the instructions on the screen until you see the registration screen. Enter your name and company, and then enter the serial number of your software (including the hyphen) exactly as it appears on the CD-ROM case. Click Next.
7. Follow the instructions on the screen to install the software and create an Adobe Photoshop LE folder on your hard drive.
8. If you've finished installing software, restart your computer. If you want to install other software, continue with the instructions in the next sections.

Installing LaserSoft SilverFast

If you have the Special Edition model, LaserSoft SilverFast is not included with your scanner.

1. Insert the LaserSoft SilverFast CD-ROM in your drive.
2. Double-click the SilverFast CD-ROM icon on your desktop.
3. Double-click the English folder, and then double-click the Photoshop Plugin folder.
4. Double-click the Installer icon.
5. When you see the installer window, click Continue and follow the instructions on the screen.
6. Click Yes when installation is complete to restart your computer.

Installing MonacoEZcolor

If you have the Special Edition model, MonacoEZcolor is not included with your scanner.

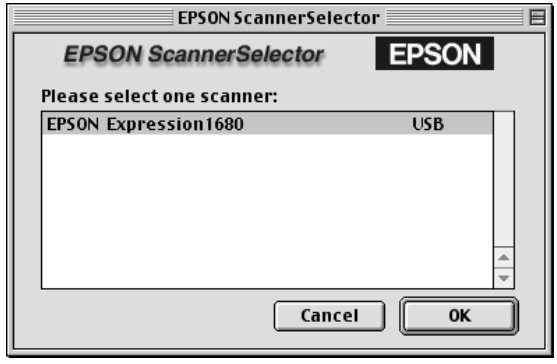
1. Insert the MonacoEZcolor CD-ROM in your drive.
2. Double-click the MonacoEZcolor CD-ROM icon on your desktop.
3. Double-click the MonacoEZcolor folder, and then double-click the MonacoEZcolor Installer icon.
4. When you see the installer window, click Continue and follow the instructions on the screen.
5. Click Quit when installation is complete. Then restart your computer.

Selecting the Expression 1680 as Your Default Scanner

You can use the EPSON Scanner Selector to verify that the scanner is properly connected or, if you have more than one EPSON scanner connected to your computer, you can choose which scanner you want to use as your default.

Follow these steps to use the EPSON Scanner Selector:

1. From the Apple menu, click Control Panels, EPSON Scanner Selector. You see the following window:



2. To use your scanner as the default, select EPSON Expression 1680 in the scanner list and click OK. Your selection remains in effect until you change it.

Chapter 3

How To Scan

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

Scanning Tips

Getting the best scan possible depends on several factors, including the quality of your original and the resolution you select. The better your original is, the better your scan will be. While you can make some color corrections in your scanning software, you'll need to do any major color photo retouching in a program such as Adobe Photoshop. To get the best possible scan, keep the document table clean, and make sure the document is flat against the glass surface.

Selecting Resolution

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

As a rule of thumb for most images except line art, use a scanning resolution that is approximately one third of your output resolution. For example, use a scanning resolution up to 100 dpi with a 300 dpi laser printer, and up to 200 dpi with a 600 dpi laser printer. For 1440 dpi ink jet printers, such as the EPSON Stylus® Color series, use a scanning resolution of up to 300 dpi. Try a scanning resolution of 240 dpi for 720 dpi printing.

Keep the following in mind when you choose a resolution:

- The higher the resolution you select, the larger the resulting image file will be. For example, an 8.5 × 11-inch original scanned at 300 dpi can produce a 24MB file. The same original scanned at 72 dpi creates only a 1.3MB file. Large files take longer to process and print, so consider the practical limitations of your computer system and hard disk drive when selecting a resolution. To keep your file size manageable, select the lowest possible resolution that gives acceptable quality. (If your final output is for on-screen viewing, you can scan at 72 dpi and reduce your file size.)
- If you need to scan at a higher resolution, you can reduce the size of the resulting image file by scanning only part of the image. For information about selecting part of an image, see "Making and modifying marquees" in your electronic *EPSON Expression 1680 Reference Guide*.

Scaling (Resizing) Images

If you plan to enlarge your image, it's better to enlarge it by scanning at a higher resolution rather than adjusting resolution in your application. Each time you modify an image, you lose some image quality.

Keep in mind when you enlarge a small photo, such as 35 mm slides or wallet-size photos, you'll need to scan at a high enough resolution to retain your image quality, but not so high that your file size is too large to be efficient.

Scanning Color Images

If the colors in your scanned image don't match those in your original document, try experimenting with the Unsharp Mask setting. Click the Destination button in the EPSON TWAIN Pro main window to display the Destination window, and then select or deselect Unsharp Mask.

Batch Scanning

You can use batch scanning to save time. Batch scanning allows you to scan several images at once, or the same image with several different settings. For more information, see "Making and modifying marquees" in your electronic *EPSON Expression 1680 Reference Guide*.

Recommended Settings

Here are some recommended settings for different types of scans.

Image type	Recommended application	Recommended TWAIN Pro* settings	Scanning resolution for printing**
Photograph	Photoshop LE	Image Type: 48-bit Color (HiFi)***, 24-bit Color (Std), 16-bit Gray (HiFi)***, or 8-bit Gray (Std)	300 dpi**
Magazine	Photoshop LE	Image Type: 24-bit Color De-screening	300 dpi
Newspaper (text only)	TextBridge Pro or PageManager	Image Type: OCR****	300 or 400 dpi*****
Text for OCR	TextBridge Pro or PageManager	Image Type: OCR****	300 or 400 dpi*****
Text with images	TextBridge Pro or PageManager	Image Type: Line art B/W option: Auto Area Segmentation	300 or 400 dpi *****
Line art	Photoshop LE	Image Type: Line Art	300 to 3200 dpi
Negative transparency (35 mm film)	Photoshop LE	Document Source: TPU for Neg. Film	300 to 3200 dpi
Positive transparency (35 mm slides)	Photoshop LE	Document Source: TPU for Pos. Film	300 to 3200 dpi

* Recommendations for EPSON TWAIN Pro also apply to EPSON TWAIN Pro Network.

** If your output is for on-screen viewing (for example, on a web page), select a resolution of 72 dpi.

*** This Image Type is available only in certain applications, such as Photoshop.

**** Automatically selects Text Enhancement Technology (TET) as your B/W option.

***** If you are enlarging your image, you must manually change the resolution (dpi).

Step-by-Step Scanning Instructions

This section contains step-by-step instructions for scanning an image. Although the Windows interface is shown, Macintosh steps are the same.

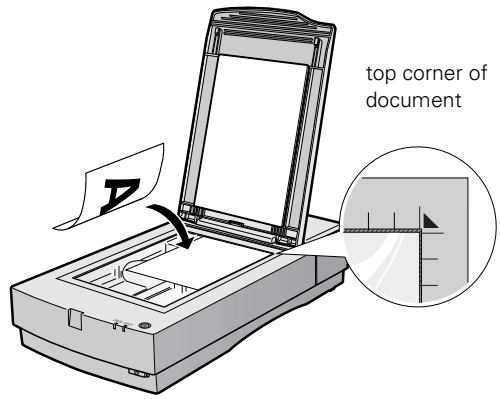
Placing Your Original Document

1. Raise the scanner cover and place your document face down on the document table. If you're scanning a transparency, the optional transparency unit should be installed. (See "Installing the Transparency Unit" on page 97.)

NOTE

If you have the Professional or Professional FireWire model of the EPSON Expression 1680, the transparency unit came with your scanner. If you have the Artist or Special Edition models, you can order the transparency unit.

2. Position the document so the horizontal and vertical edges are carefully aligned with the scales along the sides of the document table.
3. Close the document cover slowly. Be careful not to move the document.



NOTE

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

Scanning with EPSON TWAIN Pro

1. Start your host application (for example, Adobe Photoshop LE).
2. Select your scanner driver. (Unless you change your source, you only need to do this step once.)

   For example, if you're running Windows and using Adobe Photoshop LE as your host application, click File, Import, Select TWAIN_32 Source. In the Select Source dialog box, select EPSON TWAIN Pro(32-bit). Then click Select.

   If you have a Macintosh, click File, Import, Twain Select. In the Select a source dialog box, choose EPSON TWAIN Pro and click OK.

The command you choose from the File menu differs from one host application to another. With other host applications, you might choose Acquire or Select Source instead of Import.

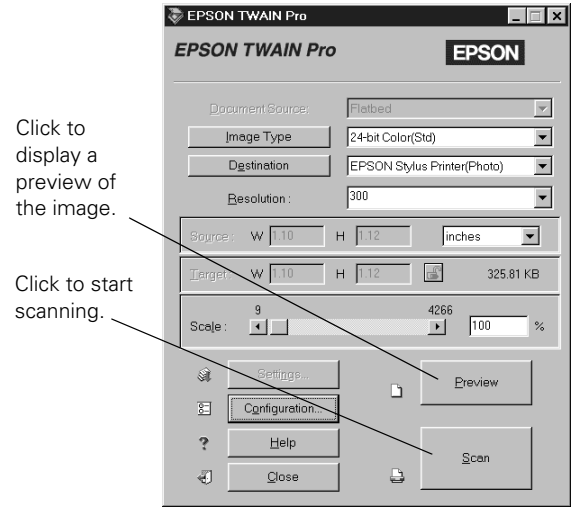
3. Open the scanner software.

   For example, choose Import from Photoshop's File menu.

   In Windows, select TWAIN_32.

   On a Macintosh, select TWAIN_Acquire.

   The EPSON TWAIN Pro main window appears.



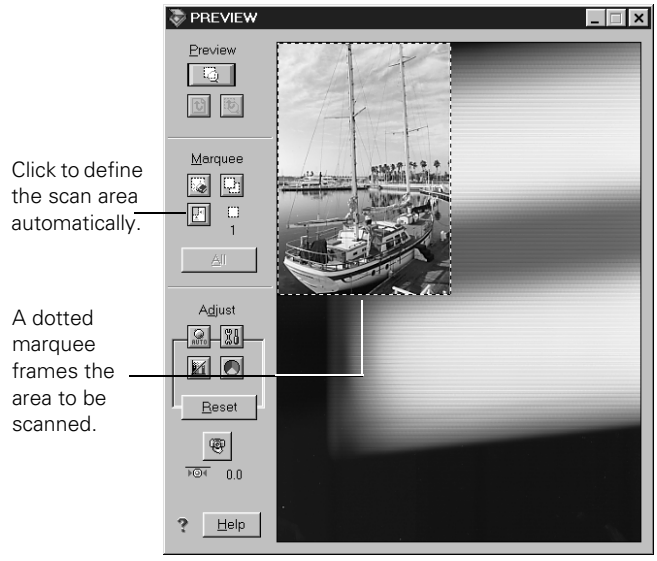
4. Choose the Document Source, Image Type, and Destination.

   For example, if you're scanning a photograph, select Flatbed as your Document Source, 24-bit Color (Std) as your Image Type, and EPSON Stylus Printer (Photo) as the Destination, if you're sending the scanned image to an EPSON ink jet printer. If you're using the optional transparency unit, select TPU for Neg. Film or TPU for Pos. Film as your Document Source. If you're using the optional automatic document feeder, select Auto Document Feeder as your Document Source.

5. Click the Preview button.

   You see a preview of your scan in the window that opens.

6. Click the Auto Locate button to automatically define the scan area around the edges of your image. Or adjust the scan area by positioning the mouse pointer over any of the eight boxes around the marquee's edge and dragging the box to resize the marquee.



   Click the Auto Exposure button to automatically set the highlight, midtones, and shadow exposure.

NOTE

Generally it's a good idea to use the Auto Exposure button to obtain the best settings for your scan. If you're not satisfied with the results, see your electronic *EPSON Expression 1680 Reference Guide* for information about adjusting settings.

If you need to remove color cast from your image, use the Gray Balance Intensity feature.

7. When you've finished making adjustments, click the Scan button.

   The READY light on the front of the scanner flashes while it's scanning. In a few moments, a scanned image is imported into your host application's window.

   (If the READY light continues to blink, it may indicate an error condition. See Chapter 7, "Solving Problems," for more information.)

8. Click Close to close the EPSON TWAIN Pro window and return to your application.

9. If you want, save your image using the Save or Save As options from the File menu of your host application.

Using the ⚲ Start Button

You can load a document in the scanner, press the ⚲ Start button, and watch while Presto! PageManager starts and then scans, copies, faxes, or e-mails your document.

If you have the Special Edition model of the Expression 1680, Presto! PageManager was not included with your scanner.

This section shows you how to set up Presto! PageManager for one-touch scanning.

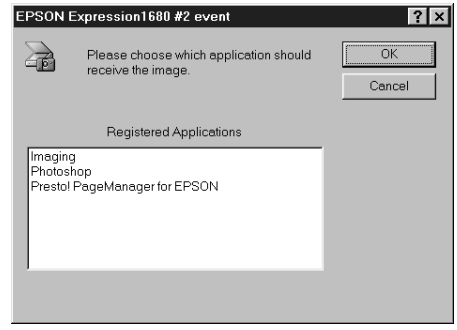
To use the ⚲ Start button with a network scanner, the client computer must start both the host application and EPSON TWAIN Pro Network. Pressing the ⚲ Start button sends the scanned image to the client computer currently connected to the scanner server, but does not automatically launch any applications.

When EPSON Scan Server is running, the Expression 1680 connected to the scanner server becomes a network scanner available only to remote users. The scanner server cannot use the ⚲ Start button features described in this chapter, which are only available to a local scanner.

Setting Up the ⚲ Start Button

If you didn't install Presto! PageManager, you need to assign an application to the ⚲ Start button before you use it the first time.

If you're running Windows Me, Windows 2000, or Windows 98, whenever you press the ⚲ Start button you'll see a window asking you to choose which application to launch. To avoid this window, make sure that only one application is assigned to the ⚲ Start button. Continue with the next section, "Windows Me, Windows 2000, and Windows 98."

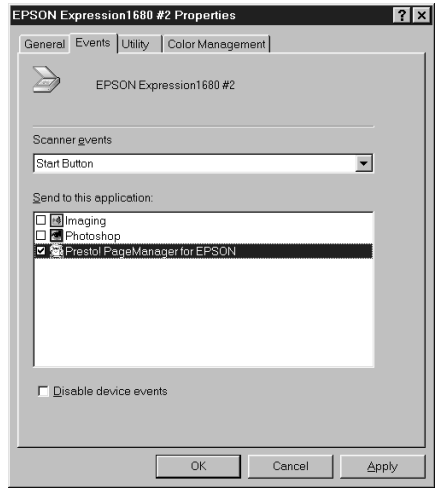


Windows Me, Windows 2000, and Windows 98

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

1. Open the Windows Control Panel and double-click the Scanners and Cameras icon.
2. Select EPSON Expression1680 and click the Properties button.

3. Click the Events tab. You see the window to the right.
4. Make sure Start Button appears in the Scanner events box, then deselect any applications you don't want to use in the Send to this application list. When you finish, a check should appear only beside the application that you want to assign to the Start button.
5. Click Apply, then click OK to close the EPSON Expression 1680 Properties window, then click OK again to close the Scanners and Cameras Properties window.



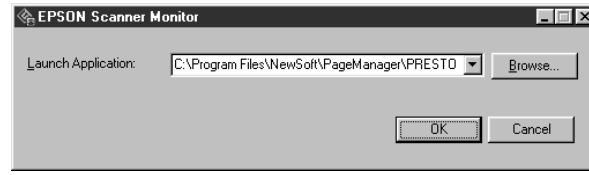
NOTE You can disable the Start button by clicking the Disable device events checkbox on the Events tab.

Whenever you press the scanner's Start button, the application you assigned launches. If you assigned Presto! PageManager, it automatically starts EPSON TWAIN Pro. If you assigned another application, you must start EPSON TWAIN Pro manually.

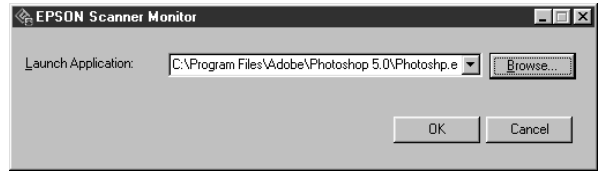
Windows 95 and Windows NT

You don't need to assign an application to the Start button if you want it to automatically launch Presto! PageManager. If you want it to launch a different application, follow these steps:

1. Click the Scanner Monitor icon located on your Windows taskbar.
2. Select Preferences. You see the EPSON Scanner Monitor window.



3. Do one of the following:
   - Choose an application in the Launch Application list.
   - Browse to another application on your hard drive. Select the application and click Open to close the Browse window. Your application's path appears in the Launch Application box.



4. Click OK to close the EPSON Scanner Monitor window and save your setting.

Whenever you press the scanner's Start button, the application you assigned launches. You can then start EPSON TWAIN Pro.

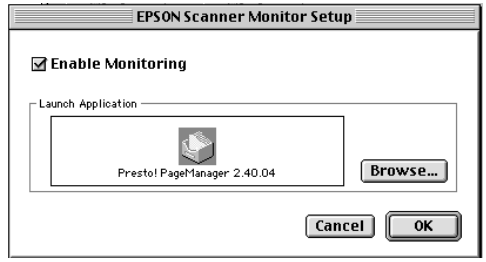
NOTE

Only Presto! PageManager automatically starts EPSON TWAIN Pro. If you assign another application to the Start button, you must start your EPSON TWAIN Pro manually.

Macintosh

You don't need to assign an application to the Start button if you want it to automatically launch Presto! PageManager. If you want it to launch a different application, follow these steps:

1. Select EPSON Scanner Monitor Setup in the Apple menu. You see the window to the right.
2. Browse to the application you want to use and open it. When your application's icon appears in the Launch Application box, click OK.



Whenever you press the scanner's Start button, the application you assigned launches. You can then start EPSON TWAIN Pro.

NOTE

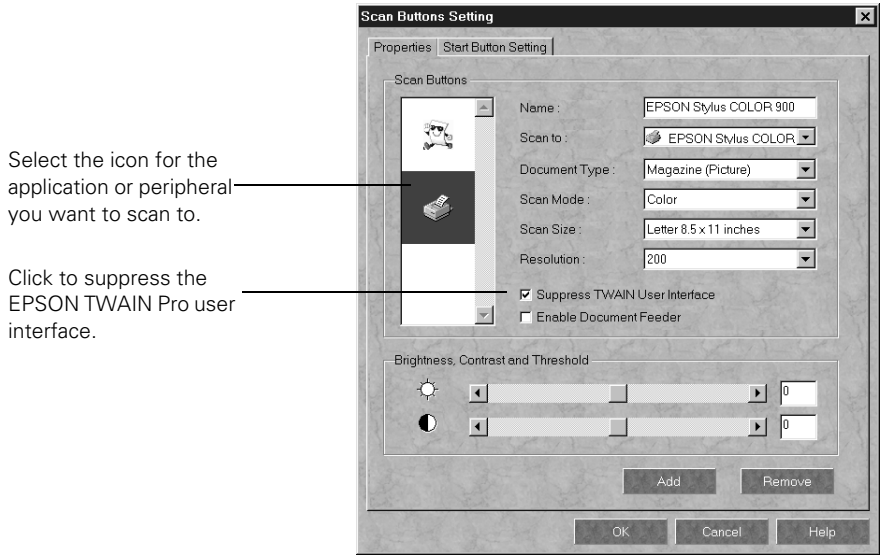
Only Presto! PageManager automatically starts EPSON TWAIN Pro. If you assign another application to the Start button, you must start your EPSON TWAIN Pro manually.

Setting Up Presto! PageManager for One-Touch Scanning

You can set up Presto! PageManager to send your image directly to another application or utility, or to a peripheral device such as a printer. You can suppress the EPSON TWAIN Pro user interface so the scanner uses the settings assigned in this procedure. If you use this shortcut, faxing or printing an image could be as easy as pressing the scanner's ⬇ Start button.

Follow these steps:

1. Start Presto! PageManager and select Scan Buttons Setting from the File menu. The Scan Buttons Setting window opens.
2. You see an icon for your default printer, fax program, e-mail program, and other applications in the Scan Buttons box. Click the icon you want to highlight to see its settings.



3. Click the Suppress TWAIN User Interface checkbox to select it. The settings for your scan become active.
4. Choose the Scan Mode, Scan Size, and Resolution. If you plan to use the automatic document feeder, select Enable Document Feeder. Make any other settings you want.

These are the default settings that will be used whenever you press the scanner's Start button. Choose settings that you can use for most of the scans you initiate with one-touch scanning.

5. Click the **Start Button Setting** tab.
6. Scroll the **Select target application** box until you see the icon for your printer or program. (Programs or printers you added appear to the right.) Select the icon and click **OK** to assign it to the Start button.

A Start button icon appears next to the selected icon in Presto! PageManager's Scan Buttons Palette. Now you can copy, fax, e-mail, print, or scan by simply pressing the Start button.

Start button icon

NOTE You can only assign one function at a time to the Start button.

Chapter 4

Network Scanning

You can use EPSON Scan Server and EPSON TWAIN Pro Network, two applications on your EPSON Expression 1680 Scanning Tools CD-ROM, to share your scanner with other users in a small workgroup.

Your network must have a scanner server (the Windows computer connected to the scanner) and one or more client computers. Only one client computer at a time can connect to the scanner server and access the scanner. However, you can have more than one scanner and scanner server on a network, so clients can choose which scanner to use.

Here are some other requirements for sharing a scanner:

- The scanner server must be an IBM®-compatible PC with a Pentium® processor running Windows Me, Windows 2000, Windows 98, Windows 95, or Windows NT 4.0 with Service Pack 3 or higher.
- Client computers can be an IBM®-compatible PC with a Pentium® processor running Windows Me, Windows 2000, Windows 98, Windows 95, Windows NT 4.0, or a Power Macintosh or higher system running OS 8.0 or later.
- Both the client computers and the scanner server must have a network interface card installed, and must be running the TCP/IP protocol (see Appendix B for instructions on installing the TCP/IP protocol).
- EPSON Scan Server must be installed on the scanner server, and EPSON TWAIN Pro Network must be installed on client computers.

This chapter includes the following:

- How to install, set up, and start EPSON Scan Server on the scanner server
- How to install and start EPSON TWAIN Pro Network on client computers
- How to begin a scan from the client computer, the scanner server, or the scanner's ⎆ Start button
- How to stop a scan in progress.

Setting Up the Scanner Server

You can set up any Windows Me, Windows 2000, Windows 98, Windows 95, or Windows NT 4.0 computer as a scanner server, as long as it has a network interface card installed and is running the TCP/IP protocol.

Before you begin, make sure to unlock the scanner and connect it to the scanner server (see Chapter 2, "Setting Up Your Scanner," for details). If you don't have the TCP/IP protocol installed on the scanner server, see Appendix B, "Installing the TCP/IP Protocol."

Follow the instructions for your operating system:

- If you're running Windows Me, continue with the next section.
- If you're running Windows 2000, go to page 71.
- If you're running Windows 98, go to page 75.
- If you're running Windows 95 or Windows NT, go to page 80.

Installing the Scanner Server Software on Windows Me

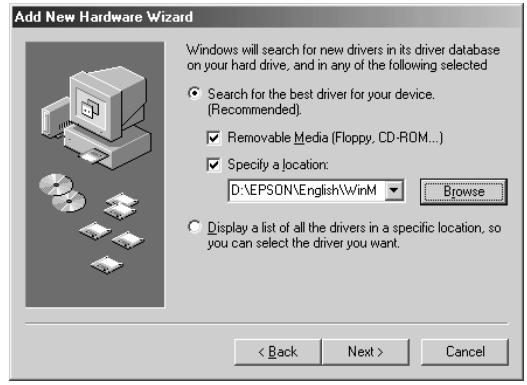
Before you begin, make sure the Expression 1680 is connected to your computer. Also, make sure you've recalibrated your monitor to factory specifications.

Depending on how your computer system was originally set up, you may be asked to insert your Windows Me CD-ROM during driver installation. Make sure you have it available, or know where to find the Windows source files on your hard disk (for example, in the Windows folder). If you need help, contact your computer manufacturer.

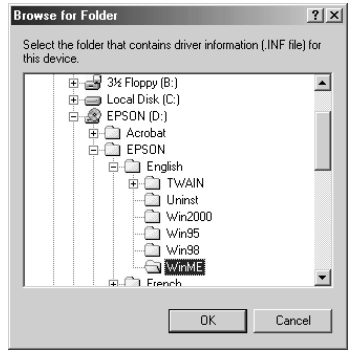
If you've just installed a SCSI or IEEE 1394 interface card, you may be asked to install a driver at the beginning of installation. Follow the instructions on the screen to install the best driver, then continue with the scanner server installation.

1. Turn on your scanner first, then turn on your computer.
2. When you see the window on the right, select **Specify the location of the driver**, and then click **Next**.
3. Insert the EPSON Expression 1680 Scanning Tools CD-ROM in your drive and click **Next**.

4. Make sure the **Search for the best driver for your device**, **Removable Media (Floppy, CD-ROM...)** and **Specify a location** options are selected.



5. Browse to **EPSON\ English\WinME** on your CD-ROM drive. (The example to the right uses "D" as the CD-ROM drive letter. Your CD-ROM drive letter may be different.) Click **OK** to close the Browse window, and then click **Next**.
6. Follow the instructions on the screen.



If you see a message asking for your Windows Me CD-ROM, insert it and click **OK** (or click **Browse** and locate the Windows Me source files on your hard drive; then click **OK**).

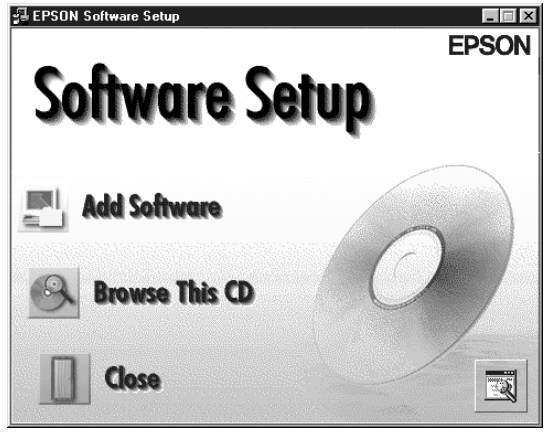
7. Click **Finish** when you see a message that installation is complete.
8. Continue with the instructions in the next section.

Finishing the Scanner Server Installation on Windows Me

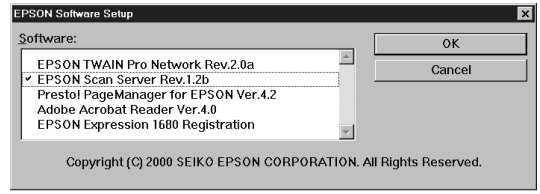
Before your computer can share its scanner, you must install EPSON Scan Server. At the same time, you can install other software that came with your scanner. Your scanner comes with an unlimited license for EPSON TWAIN Pro Network and TWAIN Pro, and a single-user license for Presto! PageManager, ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, and MonacoEZcolor. If you want to install these applications on additional computers, please contact the software manufacturer to purchase additional licenses.

1. If the Select Language window doesn't appear, double-click the My Computer icon on your Windows desktop, then double-click the Epson CD-ROM icon.
2. Double-click the CDSETUP.exe icon.
3. When the Select Language window displays, make sure English is selected and click OK.

4. Click the Add Software button to display the software selection window.



5. A check mark appears beside applications selected for installation. If you want to deselect either Presto! PageManager or Acrobat Reader, click the application to clear the check mark (as shown above). Then click OK.



You don't need to install EPSON TWAIN Pro Network to use the scanner connected to your computer. EPSON TWAIN Pro is automatically installed when you install the scanner server software. Only install EPSON TWAIN Pro Network if you want to use an Expression 1680 attached to another computer.

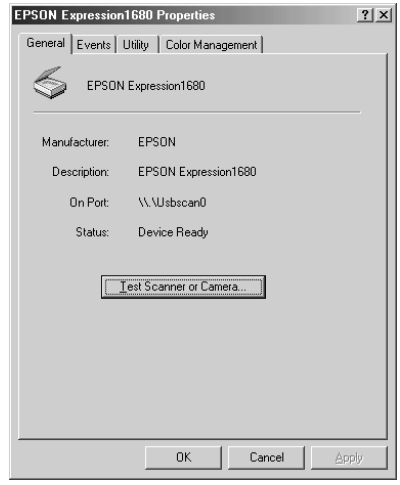
6. Follow the instructions on the screen to install EPSON Scan Server and any other software you selected in the software selection window.
7. Follow the instructions in "Installing Additional Windows Software" on page 45 if you want to install ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, or MonacoEZcolor.
8. When you're done installing software, restart your computer.

If you don't want to close Scan Server each time you need to scan locally, you can install TWAIN Pro Network and type LOCALHOST in the Network Scanner Address field. Choose TWAIN Pro Network as the scanner source in your application.

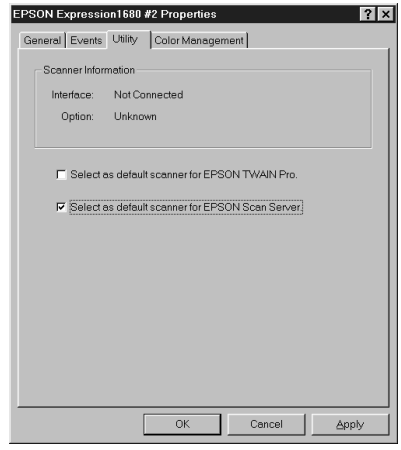
Setting Up the Default Scanner on Windows Me

If you have more than one scanner connected to your computer, you can set up the Expression 1680 as the default scanner.

1. Open the Windows Control Panel and double-click the Scanners and Cameras icon.
2. Double-click the EPSON Expression 1680 icon. You see the EPSON Expression 1680 Properties window.



3. Click the Utility tab. Make sure Select as default scanner for EPSON Scan Server is checked, and then click OK.



Installing the Scanner Server Software on Windows 2000

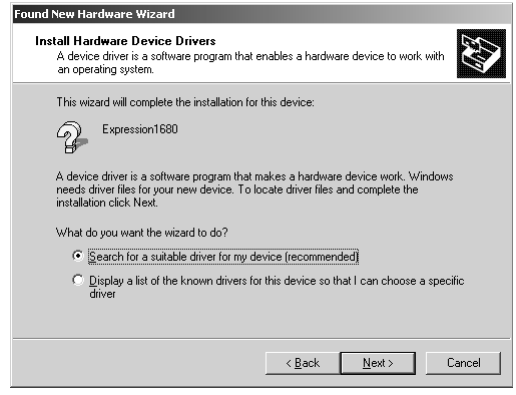
Before you begin, make sure the Expression 1680 is connected to your computer. Also, make sure you've recalibrated your monitor to factory specifications.

Depending on how your computer system was originally set up, you may be asked to insert your Windows 2000 CD-ROM during driver installation. Make sure you have it available, or know where to find the Windows source files on your hard disk (for example, in the Windows folder). If you need help, contact your computer manufacturer.

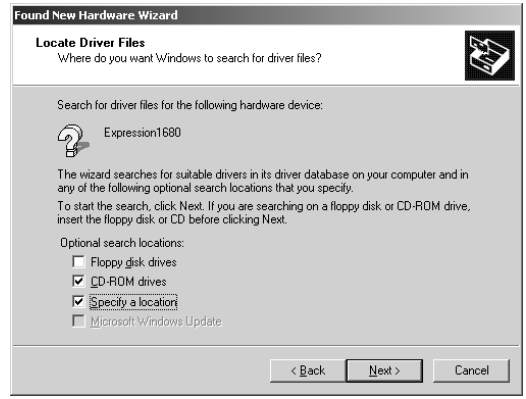
If you've just installed a SCSI or IEEE 1394 interface card, you may be asked to install a driver at the beginning of installation. Follow the instructions on the screen to install the best driver, then continue with the scanner server installation.

1. Turn on your scanner first, then turn on your computer.
2. When you see the window on the right, insert the EPSON Expression 1680 Scanning Tools CD-ROM in your drive and click **Next**.

3. Select **Search for a suitable driver for my device**, and then click **Next**.



4. Select **CD-ROM drives** and **Specify a location**, if necessary, and click **Next**.



5. Browse to **EPSON\English\Win2000** on your CD-ROM drive. (The example to the right uses "E" as the CD-ROM drive letter. Your CD-ROM drive letter may be different.) Click **OK** to close the Browse window, and then click **Next**.

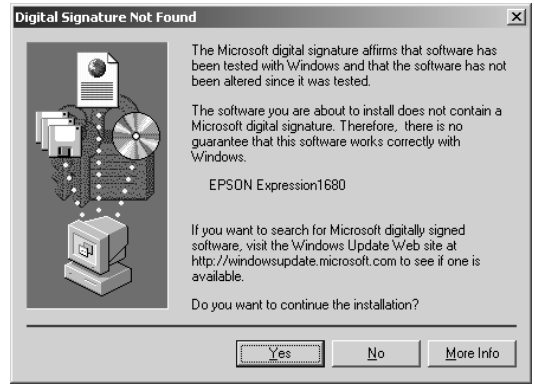
6. Follow the instructions on the screen to complete the driver installation.

   If you see a message asking for your Windows 2000 CD-ROM, insert it and click **OK** (or click **Browse** and locate the Windows 2000 source files on your hard drive; then click **OK**).

7. When you see the window to the right, click **Yes**.

   If prompted for the EPSON Scanners Driver Disk 1, reinsert your EPSON Expression 1680 Scanning Tools CD-ROM.

8. Click **Finish** when you see a message that installation is complete.



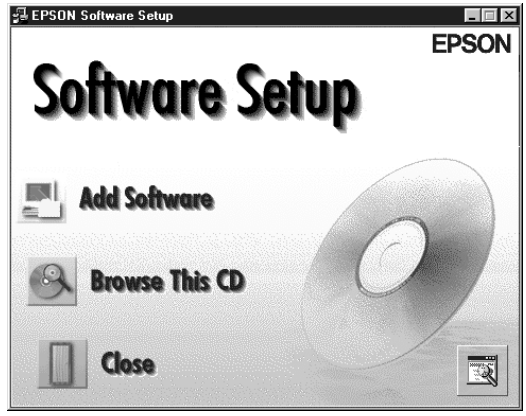
Continue with the instructions in the next section.

Finishing the Scanner Server Installation on Windows 2000

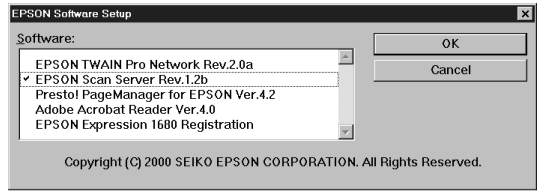
Before your computer can share its scanner, you must install EPSON Scan Server. At the same time, you can install other software that came with your scanner. Your scanner comes with an unlimited license for EPSON TWAIN Pro Network and TWAIN Pro, and a single-user license for Presto! PageManager, ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, and MonacoEZcolor. If you want to install these applications on additional computers, please contact the software manufacturer to purchase additional licenses.

1. If the Select Language window doesn't appear, double-click the My Computer icon on your Windows desktop, then double-click the Epson CD-ROM icon.

2. Make sure English is selected and click OK. The Software Setup window appears.
3. Click the Add Software button to display the software selection window.



4. Select EPSON Scan Server. A check mark appears beside applications selected for installation. If you want to deselect either Presto! PageManager or Acrobat Reader, click the application to clear the check mark. Then click OK.



You don't need to install EPSON TWAIN Pro Network to use the scanner connected to your computer. EPSON TWAIN Pro is automatically installed when you install the scanner server software. Only install EPSON TWAIN Pro Network if you want to use an Expression 1680 attached to another computer.

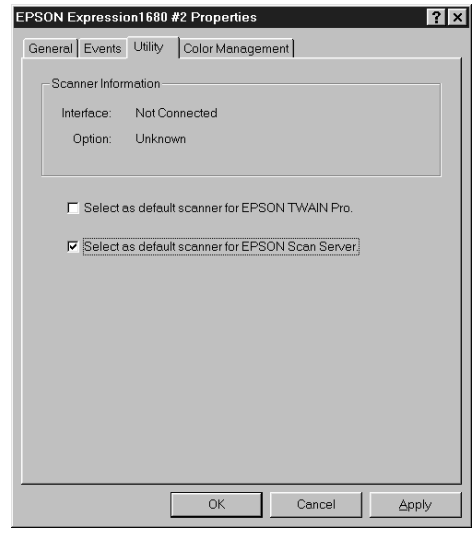
5. Follow the instructions on the screen to install EPSON Scan Server and any other software you selected in the software selection window.
6. Follow the instructions in "Installing Additional Windows Software" on page 45 if you want to install ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, or MonacoEZcolor.
7. When you're done installing software, restart your computer.

Setting Up the Default Scanner on Windows 2000

If you have more than one scanner connected to your computer, you can set up the Expression 1680 as the default scanner.

1. Open the Windows Control Panel and double-click the Scanners and Cameras icon to open the Scanners and Cameras Properties window.
2. Make sure EPSON Expression 1680 is selected, and click the Properties button. You see the EPSON Expression 1680 Properties window.

3. Click the Utility tab. Make sure Select as default scanner for EPSON Scan Server is checked, and then click OK.



Installing the Scanner Server Software on Windows 98

Before you begin, make sure the Expression 1680 is connected to your computer. Also, make sure you've recalibrated your monitor to factory specifications.

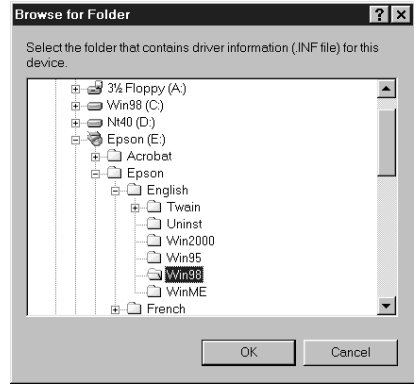
You may be asked to insert your Windows CD-ROM during this procedure. Make sure you have your Windows CD-ROM available, or know where to find the Windows source files on your hard drive. If you need help locating your source files, contact your computer manufacturer.

1. Turn on your scanner first, then turn on your computer.
2. When you see the window on the right, insert the EPSON Expression 1680 Scanning Tools CD-ROM in your drive and click Next.

3. Select **Search for the best driver for your device**, and then click **Next**.

4. Make sure **CD-ROM** drive and **Specify a location** are selected and click **Browse**.

5. Browse to **EPSON\English\Win98** on your CD-ROM drive. (The example to the right uses "E" as the CD-ROM drive letter. Your CD-ROM drive letter may be different.) Click **OK** to close the Browse window, and then click **Next**.
6. Follow the instructions on the screen.
7. Click **Finish** when you see a message that installation is complete.

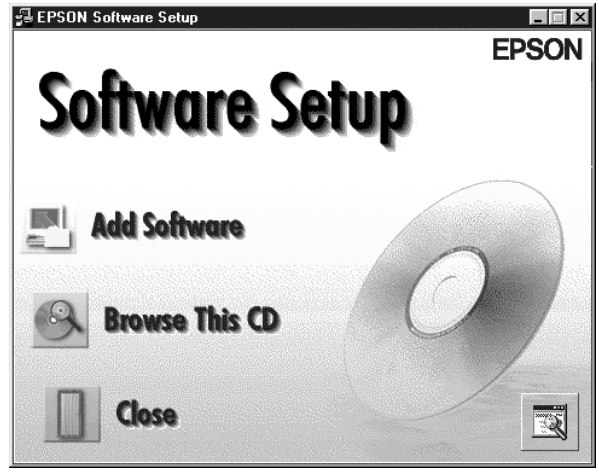


Finishing the Scanner Server Installation on Windows 98

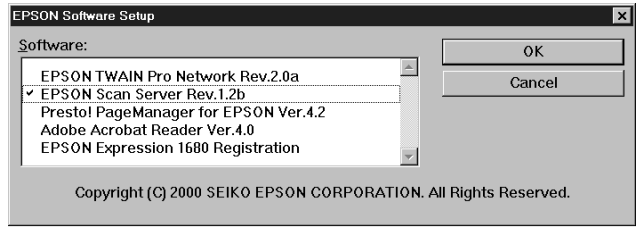
Before your computer can share its scanner, you must install EPSON Scan Server. At the same time, you can install other software that came with your scanner. Your scanner comes with an unlimited license for EPSON TWAIN Pro Network and TWAIN Pro, and a single-user license for Presto! PageManager, ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, and MonacoEZcolor. If you want to install these applications on additional computers, please contact the software manufacturer to purchase additional licenses.

1. If the Select Language window doesn't appear, double-click the My Computer icon on your Windows desktop, then double-click the Epson CD-ROM icon.

2. Make sure English is selected and click OK to display the Software Setup window.
3. Click the Add Software button to display the software selection window.



4. Select EPSON Scan Server. A check mark appears beside applications selected for installation. If you want to deselect either Presto! PageManager or Acrobat Reader, click the application to clear the check mark. Then click OK.



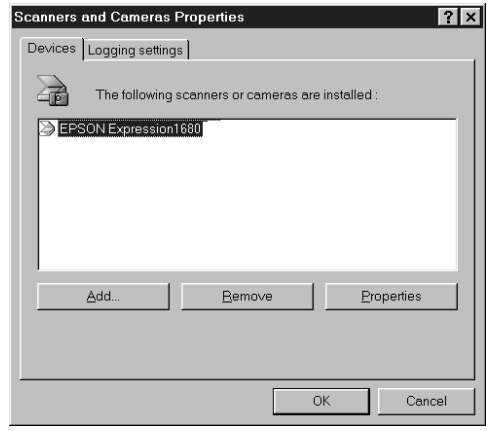
NOTE You don't need to install EPSON TWAIN Pro Network to use the scanner connected to your computer. EPSON TWAIN Pro is automatically installed when you install the scanner server software. Only install EPSON TWAIN Pro Network if you want to use an Expression 1680 attached to another computer.

5. Follow the instructions on the screen to install EPSON Scan Server and any other software you selected in the software selection window.
6. Follow the instructions in "Installing Additional Windows Software" on page 45 if you want to install ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, or MonacoEZcolor.
7. When you're done installing software, restart your computer. Then follow the instructions in "Testing the Scanner's Operation (Windows 98)" on page 37 to make sure the scanner is operating properly.

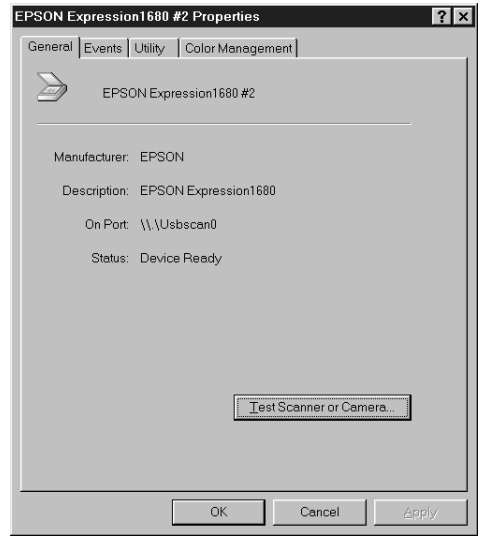
Setting Up the Default Scanner on Windows 98

If you have more than one scanner connected to your computer, you can set up the Expression 1680 as the default scanner.

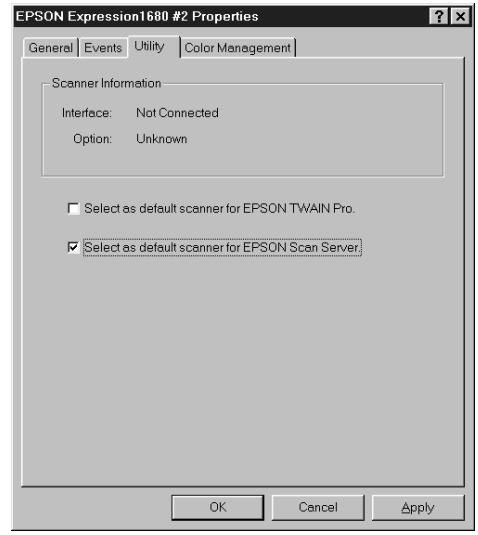
1. Open the Windows Control Panel and double-click the Scanners and Cameras icon to open the Scanners and Cameras Properties window.



2. Make sure EPSON Expression 1680 is selected, and click the Properties button. You see the EPSON Expression 1680 Properties window.



3. Click the Utility tab. Make sure Select as default scanner for EPSON Scan Server is checked, and then click OK.



Installing the Scanner Server Software on Windows 95 and Windows NT 4.0

Make sure the Expression 1680 is connected to your computer. Also, make sure you've recalibrated your monitor to factory specifications.

If you're configuring your SCSI interface card for the first time, you'll be asked to install your SCSI driver at the beginning of installation. Make sure you have your Windows CD-ROM available, or know where to find the Windows source files on your hard drive. Then follow the instructions on the screen, or see the documentation that came with your SCSI card for more information.

If you need help locating your source files, contact your computer manufacturer.

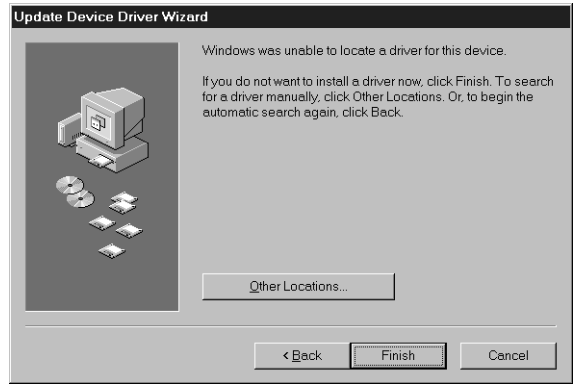
If you're running Windows 95, continue with the instructions in the next section. If you're running Windows NT 4.0, go to page 83.

Starting the Scanner Server Installation on Windows 95

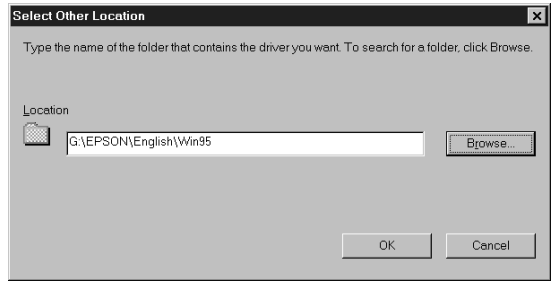
Follow these steps to install the scanner driver and begin software installation:

1. Turn on your scanner first, then turn on your computer. When you see the window on the right, click Next.

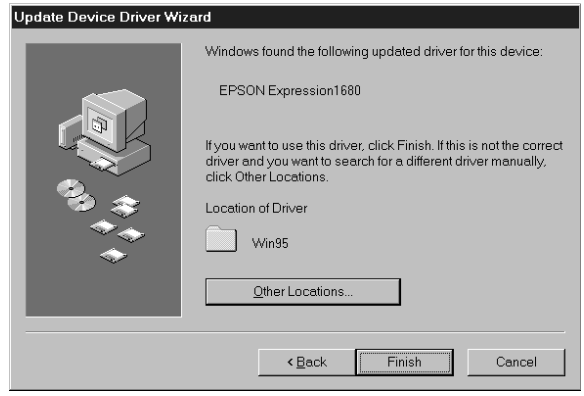
2. Insert your EPSON Expression 1680 Scanning Tools CD-ROM in your drive and click Other Locations.



3. Browse to the following location on your CD-ROM drive: EPSON\English\Win95. (The example on the right uses "G" as the CD-ROM drive letter. Your CD-ROM drive may have a different letter.) Click OK to close the Browse window, then click OK again.



4. When you see this window, click Finish.



5. Double-click the My Computer icon on your Windows desktop, then double-click the Epson CD-ROM icon. You see the window on the right.

6. Make sure English is selected, and click OK.
7. Click Add Software.

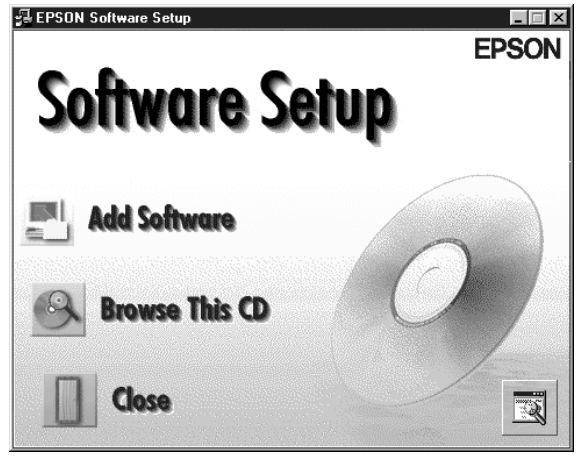
Continue with the instructions in “Finishing the Scanner Server Installation on Windows 95 and Windows NT 4.0” on page 84.

Starting the Scanner Server Installation on Windows NT 4.0

Follow these steps to begin the scanner server installation:

1. Turn on your scanner first; then turn on your computer.
2. Log onto Windows NT. Then insert the EPSON Expression 1680 Scanning Tools CD-ROM.
3. If the Select Language window doesn't appear, double-click the My Computer icon on your Windows desktop, then double-click the Epson CD-ROM icon.

4. Make sure English is selected, then click OK to display the Software Setup window.
5. You see the Software Setup window. Click the Add Software button to display the software selection window.

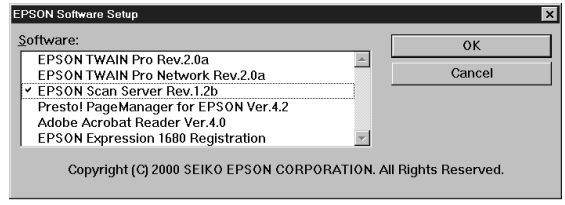


Continue with the instructions in the next section to finish installing the scanner server software.

Finishing the Scanner Server Installation on Windows 95 and Windows NT 4.0

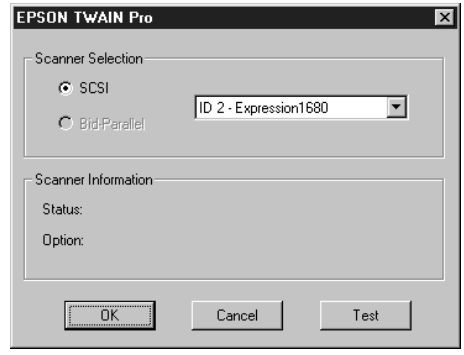
Before your computer can share its scanner, you must install EPSON Scan Server. At the same time, you can install other software that came with your scanner. Your scanner comes with an unlimited license for EPSON TWAIN Pro Network and TWAIN Pro, and a single-user license for Presto! PageManager, ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, and MonacoEZcolor. If you want to install these applications on additional computers, please contact the software manufacturer to purchase additional licenses.

1. Select **EPSON Scan Server**. A check mark appears beside applications selected for installation. Click to select other software you want to install, or deselect software you don't want. Then click **OK**.

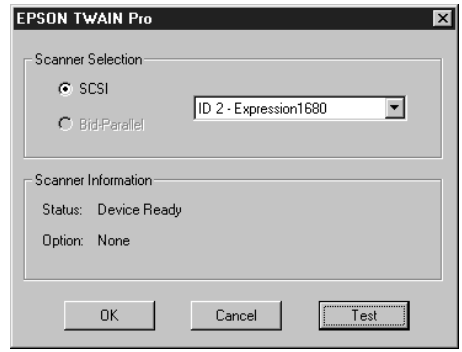


NOTE Use EPSON TWAIN Pro to scan from the Expression 1680 connected to your computer. Only install EPSON TWAIN Pro Network if you want to use an Expression 1680 attached to another computer.

2. If you are installing EPSON TWAIN Pro, follow the instructions on the screen. When you see the window on the right, make sure **SCSI** and **Expression1680** are selected under Scanner Selection.

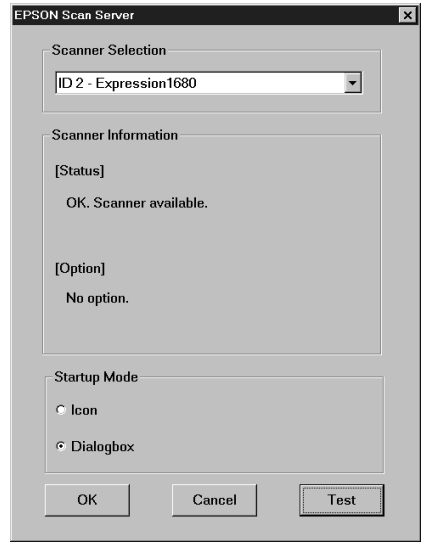


3. Click Test to check the scanner operation. If the scanner is communicating with your computer, you see Status: Device Ready under Scanner Information. Click OK to close the window.



4. Follow the instructions on the screen to install EPSON Scan Server. When you see the window on the right, make sure Expression1680 is selected under Scanner Selection. Select either Icon or Dialogbox as the scanner server Startup Mode. (See "Changing the Scan Server Start Up Mode" on page 86 for details.

5. Click Test to test scanner operation. OK. Scanner Available appears under Scanner Information if the scanner is communicating with the scanner server. Click OK to close the window.



If you want to share a different network scanner with client computers, you can access the EPSON Scan Server window at any time by double-clicking the EPSON Scan Server icon in the Windows Control Panel. Then select the scanner you want in the Scanner Selection list.

6. Follow the instructions on the screen to complete installation of any other software you've selected in the software selection window.

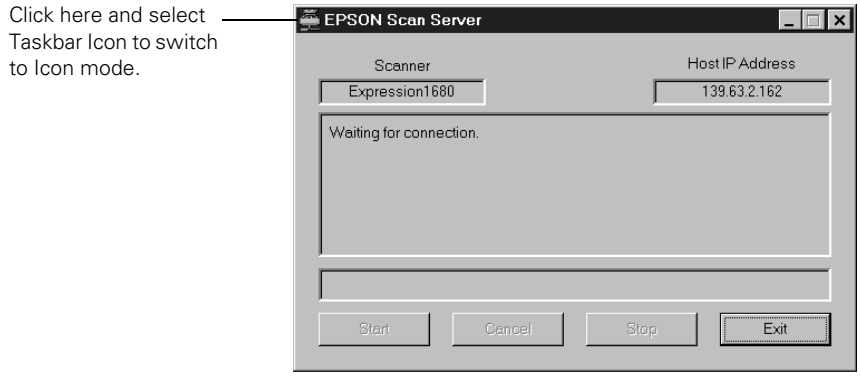
7. Follow the instructions in "Installing Additional Windows Software" on page 45 if you want to install ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, or MonacoEZcolor.

8. When you're done installing software, restart your computer.

Changing the Scan Server Start Up Mode

When you installed the software, you set up the Scan Server to start in either Dialog Box mode or Icon mode.

In Dialog Box mode, the following dialog box appears whenever you start EPSON Scan Server. (The message Waiting for connection in the status area indicates that the scanner is waiting for a connection to a client computer.)



In Icon mode, the EPSON Scan Server icon appears on the Windows taskbar when you start EPSON Scan Server.

- To change from Dialog Box mode to Icon mode, click the scanner icon in the upper left corner of the dialog box and select Taskbar Icon from the list.
- To change from Icon mode to Dialog Box mode, right-click the EPSON Scan Server icon on the taskbar and click Taskbar Icon to deselect it.

Your setting takes effect when you exit and restart EPSON Scan Server. See page 92 for instructions on starting EPSON Scan Server.

Make sure no client computer is connected to the scanner server when you exit EPSON Scan Server.

Setting Up Client Computers

To set up a client computer, you'll need to know the IP address or host name of the scanner server. Also, make sure the TCP/IP protocol is installed (see Appendix B, "Installing the TCP/IP Protocol," for instructions).

The TCP/IP protocol is preinstalled on newer Macintosh systems. If you have a Macintosh, just make sure that TCP/IP is enabled in your Extensions Manager.

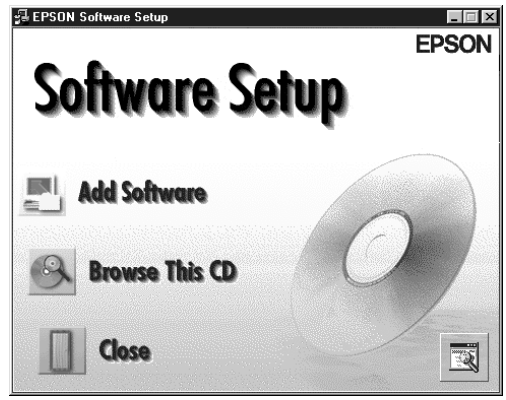
Installing EPSON TWAIN Pro Network on Windows

You must install EPSON TWAIN Pro Network on the client computer before the client can use the network scanner. At the same time, you can install other software that came with your scanner. Your scanner comes with an unlimited license for EPSON TWAIN Pro Network and TWAIN Pro, and a single-user license for Presto! PageManager, ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, and MonacoEZcolor. If you want to install these applications on additional computers, please contact the software manufacturer to purchase additional licenses.

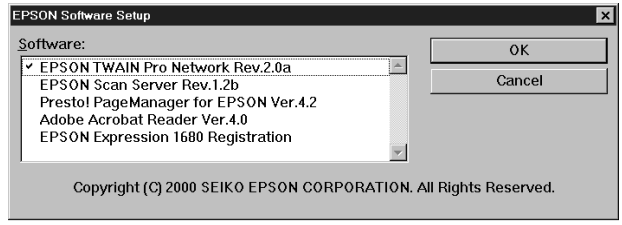
1. Insert the EPSON Expression 1680 Scanning Tools CD-ROM in the CD-ROM drive. If the Select Language window doesn't appear, double-click the My Computer icon on your desktop, and then double-click the Epson CD-ROM icon.

2. Make sure English is selected and click OK.

3. Click Add Software. You see the software selection window.



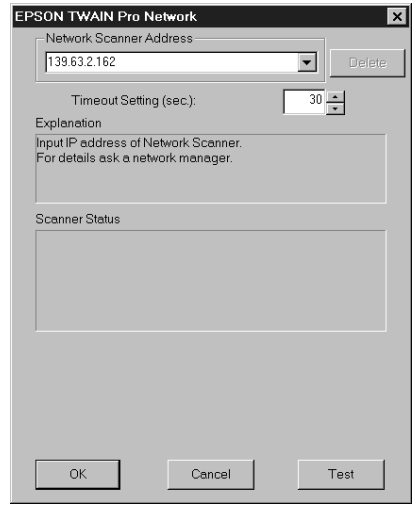
4. Make sure EPSON TWAIN Pro Network is selected. If you want to install them, select Presto! PageManager for EPSON and Adobe Acrobat Reader. (A check mark appears beside selected applications.) Then click OK.



5. Follow the instructions on the screen to continue the installation. When you see the window to the right, enter the IP address or host name of the scanner server in the Network Scanner Address box.

   You can only use host names if you have a WINS or DNS server on your network.

6. Click Test to test the connection. If your computer is communicating with the scanner server and the scanner is on, you see a message that the scanner is available. Click OK to save your settings.



If you need to connect to a different network scanner or change the timeout setting, you can open the EPSON TWAIN Pro Network window anytime by double-clicking the EPSON TWAIN Pro Network icon in the Control Panel. You can enter up to five IP addresses or host names in the Network Scanner Address box.

7. Follow the instructions on the screen to complete installation of any other software you've selected.
8. Follow the instructions in "Installing Additional Windows Software" on page 45 if you want to install ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, or MonacoEZcolor.
9. When you're done installing software, restart your computer.

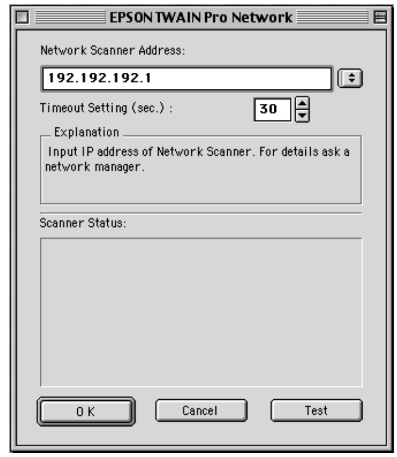
Installing EPSON TWAIN Pro Network on a Macintosh

You can install EPSON TWAIN Pro Network on all of the computers in your workgroup. Your scanner comes with an unlimited license for EPSON TWAIN Pro Network and TWAIN Pro, and a single-user license for Presto! PageManager, ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, and MonacoEZcolor. If you want to install these applications on additional computers, please contact the software manufacturer to purchase additional licenses.

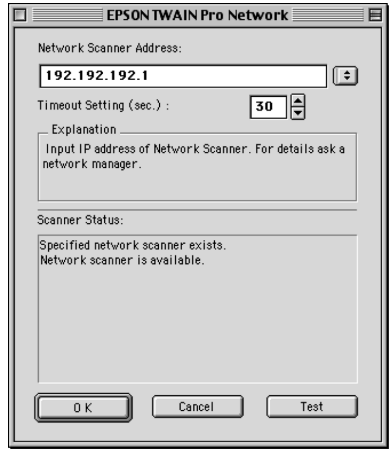
1. Insert the EPSON Expression 1680 Scanning Tools CD-ROM in your drive.
2. Double-click the EPSON TWAIN Pro Network folder.
3. Double-click the English folder.
4. Double-click the EPSON TWAIN Pro NET Installer icon. You see the screen to the right.
5. Click Install and follow the instructions on the screen. When you see a message that software was successfully installed, click Quit.

6. When you see the screen on the right, enter the IP address or host name of the scanner server in the Network Scanner Address box.

   (You can only use a host name if you have a DNS server on your network.)



7. Click Test to test the connection. You see a message that the scanner is available in the Scanner Status section of the window. Click OK to save your settings.
8. Follow the instructions on page 45 if you want to install ScanSoft TextBridge Pro, Adobe Photoshop LE, LaserSoft SilverFast, or MonacoEZcolor.
9. When you're done installing software, restart your computer.



If you need to connect to a different network scanner or change the timeout setting, you can open the EPSON TWAIN Pro Network window anytime by selecting Control Panels from the Apple menu, then selecting EPSON TWAIN Pro Net. You can enter up to five IP addresses or host names in the Network Scanner Address box.

Using a Network Scanner

Network scanning involves the following steps:

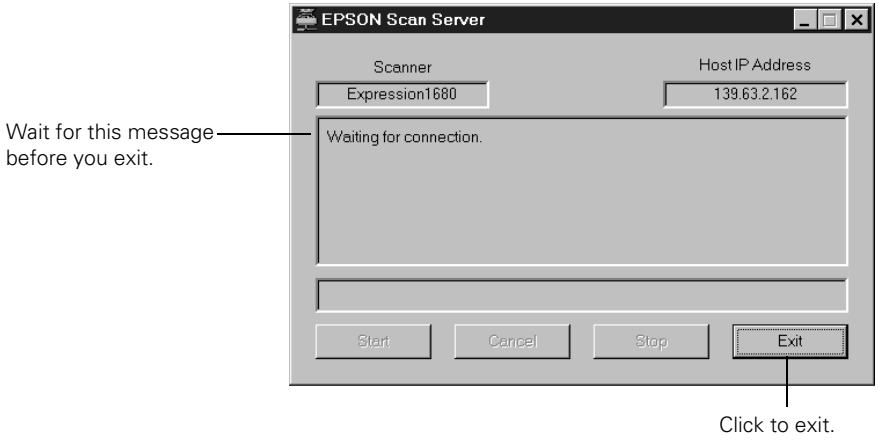
- The scanner server must be turned on and running EPSON Scan Server.
- From the client computer, start EPSON TWAIN Pro Network to establish a connection to the scanner server. Only one client computer at a time can connect to the scanner server. (See page 93 for instructions.)
- Choose the Image Type, Resolution, and other settings you want for your scan. (See Chapter 3, "How To Scan," for more information about choosing settings.)
- Place your first image on the document table (or in the optional automatic document feeder or one of the optional transparency unit's film guides).
- Start the scan. Although this can be done from EPSON TWAIN Pro Network on the client computer, it may be more convenient to press the scanner's ⧩ Start button or to start the scan from the scanner server. Then you can scan several images with a single trip to the scanner.
- If you want to scan more than one image, place your second image on the document table and press the scanner's ⧩ Start button again. Repeat this step for every image you want to scan. (The settings you chose for the first image apply to these images too.)
- When you return to the client computer, your scanned images appear in the host application's window. Close EPSON TWAIN Pro Network to end your connection to the scanner server and allow other client computers to use the scanner.

Some applications, such as Adobe Photoshop LE, automatically close the client computer's connection to the scanner server when you press the ⧩ Start button. You can't use the ⧩ Start button to scan multiple images if you're using these applications.

Starting EPSON Scan Server

EPSON Scan Server starts automatically whenever the scanner server is turned on. When EPSON Scan Server is running, you'll see either the EPSON Scan Server dialog box, or the EPSON Scan Server icon on the Windows taskbar. If you need to start EPSON Scan Server manually, click Start, Programs, EPSON Scan Server, and then select EPSON Scan Server.

You can quit EPSON Scan Server at any time. Just click the Exit button on the EPSON Scan Server dialog box.



Before you quit, make sure no client computers are trying to use the scanner. Don't exit if the status area of the EPSON Scan Server dialog box indicates that you are connecting to a client. Wait until you see the message Waiting for connection.

If you installed EPSON TWAIN Pro on the scanner server so that you could make a direct connection to the scanner, remember that you must exit EPSON Scan Server to use EPSON TWAIN Pro. EPSON Scan Server disables EPSON TWAIN Pro.

Starting EPSON TWAIN Pro Network

You connect to the scanner server by starting EPSON TWAIN Pro Network from the client computer. Follow these steps:

1. Start your host application.
2. Select EPSON TWAIN Pro Network as your source or scanner driver. (You only need to do this step once.)

   For example, if you're running Windows and using Presto! PageManager for EPSON as your host application, choose Select Source from the File menu. In the Select Source window, choose EPSON TWAIN Pro Network and click Select.

   If you have a Macintosh and are using Presto! PageManager for EPSON, click File, Select Source, then Select TWAIN Source. In the Select a source window, select the EPSON TWAIN Pro Network icon and click OK.

   The command you choose from the File menu differs from one host application to another. With other host applications, you might choose Import or Select TWAIN_32 Source, for example.

3. Start EPSON TWAIN Pro Network.

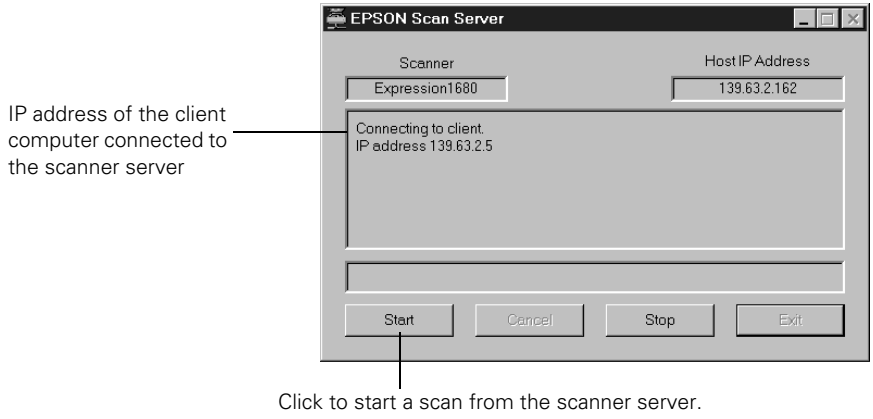
   If your host application is Presto! PageManager for EPSON, choose Acquire from the File menu. When EPSON TWAIN Pro Network starts, the EPSON TWAIN Pro Network main menu appears and you connect to the scanner server.

   Since the settings and controls for EPSON TWAIN Pro Network are the same as those for EPSON TWAIN Pro, see "Scanning with EPSON TWAIN Pro" on page 57 for general scanning instructions. For more detailed information about settings, see the *EPSON Expression 1680 Reference Guide* on your EPSON Expression 1680 Scanning Tools CD-ROM.

Starting a Scan

You can start a scan on your network scanner in several ways:

- Start EPSON TWAIN Pro Network on the client computer, make your scan settings, and click the Scan button on the EPSON TWAIN Pro Network main window. The scanned image is imported into your host application's window.
- Press the ⟡ Start button on the scanner to send the scanned image to the client computer that is currently connected to the scanner server.
- Click the Start button on the EPSON Scan Server dialog box to send the scanned image to the client computer currently connected to the scanner server.



No matter how you start the scan, the client computer must be running EPSON TWAIN Pro Network to connect to the scanner server.

Stopping a Scan in Progress

You can stop a scan in progress from either the client computer or the scanner server.

- To cancel a scan from the client computer, click the Cancel button on the Progress bar.
- To cancel from the scanner server, click the Cancel button at the bottom of the EPSON Scan Server dialog box.
- To break the connection between the client computer and the scanner server, click the Stop button on the EPSON Scan Server dialog box. This closes EPSON TWAIN Pro Network on the client computer and allows other client computers to connect to the scanner server.

Chapter 5
Using Optional Equipment

There are three options available for the EPSON Expression 1680 color scanner: the transparency unit (B813182), the automatic document feeder (B813162), and the IEEE 1394 FireWire scanner interface card (B808342).

If you have the Professional or Professional FireWire model of the EPSON Expression 1680, the transparency unit came with your scanner. If you have the Professional FireWire model, the IEEE 1394 FireWire scanner interface card was preinstalled in your scanner.

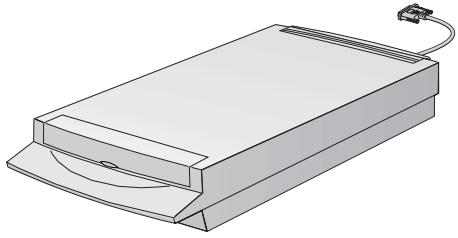
You can purchase supplies and accessories from the EPSON Store™ at (800) 873-7766, or visit www.epsonstore.com (U.S. sales only). In Canada, please call (800) 873-7766 for dealer referral.

Transparency Unit

The transparency unit (B813182) allows you to scan transparent materials—35 mm slides, filmstrips, and film up to 8.5 × 11.7 inches (216 × 297 mm) in size. To switch between scanning transparent materials and normal reflective (paper) documents, simply insert or remove the reflective document mat that came with the scanner. For instructions on using the reflective document mat, see page 103.

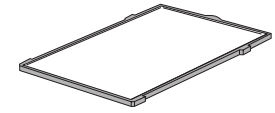
Unpacking the Transparency Unit

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

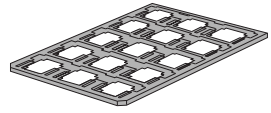


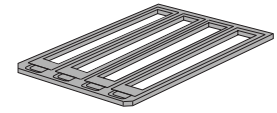
transparency unit

screws

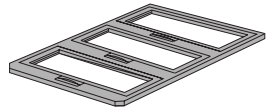


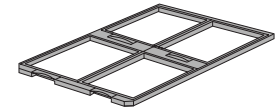
reflective document mat





film holders



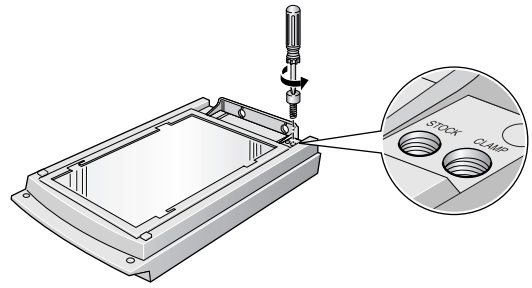


Use the transparency unit's pocket to store the reflective document mat. Don't store anything else in the pocket.

Removing the Shipping Screw

To prevent damage during shipping, a shipping screw is attached to the transparency unit to secure its lamp assembly. You must remove this screw before using the transparency unit.

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

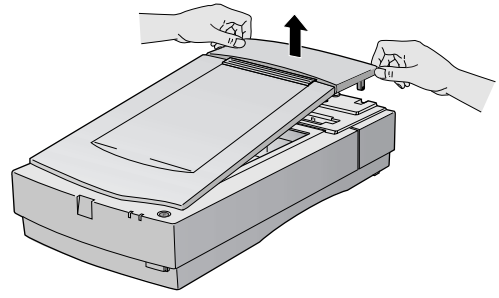


Before transporting the scanner, remove the transparency unit, reinstall the shipping screw in the hole labeled CLAMP, and slide the transportation lock on the back of the scanner to the LOCK position. See “Transporting the Scanner” on page 111 for instructions.

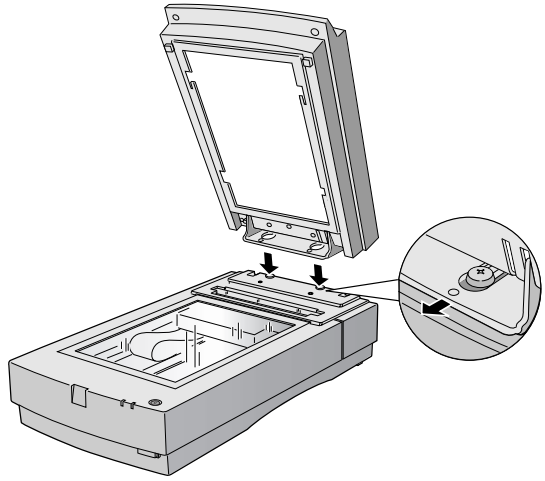
Installing the Transparency Unit

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

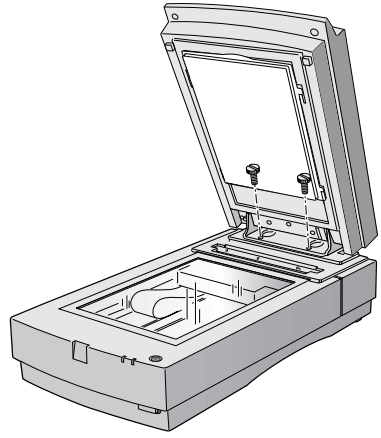
1. Make sure the scanner is turned off. Then unplug the power cable from the scanner.
2. Remove the document cover by grasping the back of the document cover and easing the cover up.
3. Make sure the document table is clean and dust free.



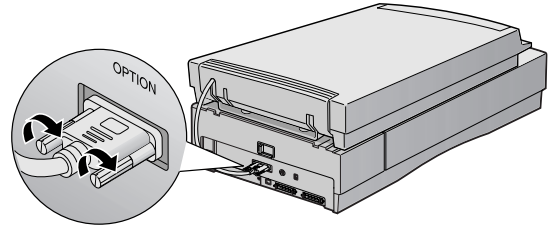
4. Position the slots on the transparency unit's mounting bracket over the heads of the two mounting screws located at the back of the scanner. Slide the transparency unit forward slightly until the two holes in front of these slots are aligned with the screw holes at the back of the scanner.



5. Insert the two installation screws that came with the transparency unit into the screw holes, then tighten the screws with a coin.
6. Gently close the transparency unit.



7. Connect the transparency unit's connector to the OPTION connector at the back of the scanner. Tighten the attached screws to secure the connector.



If you haven't connected the scanner to your computer, continue with "Connecting the Scanner to Your Computer" on page 17. Then plug the scanner in and turn it on.

See "Step-by-Step Scanning Instructions" on page 56 for scanning instructions. For more detail on scanning with EPSON TWAIN Pro, see your electronic *EPSON Expression 1680 Reference Guide*.

Using the Film Guides

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

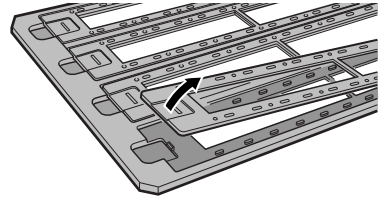
When using the film guides, be sure the transparency unit is completely closed or an error will occur and you will be unable to scan.

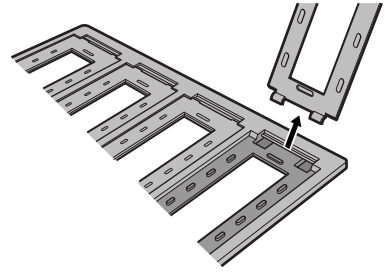
Store the reflective document mat in the transparency unit pocket when not in use.

Loading 35 mm film

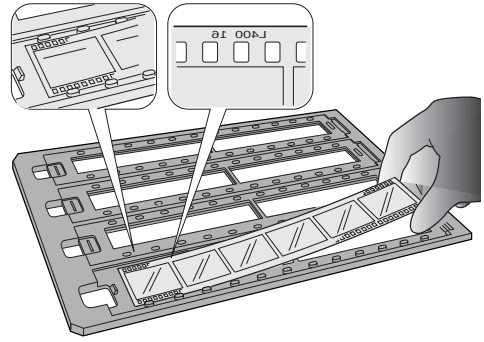
Follow these steps to load 35 mm positive or negative film:

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

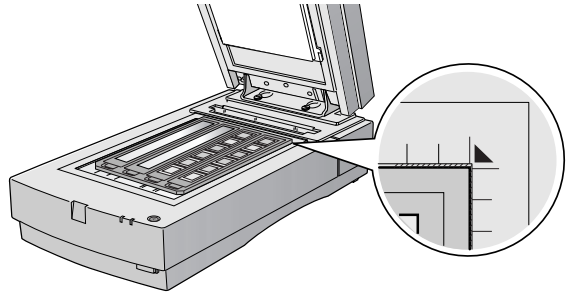




2. Insert a filmstrip in the holder face down, and then replace the cover. The glossy (smooth) side of the film should be facing down, and the film emulsion layer should be facing up.
3. Repeat steps 1 and 2 for all the film strips you scan.



4. Place the 35 mm filmstrip guide on the document table, and align it with the ruled edges of the document table.
5. Close the TPU and begin scanning.



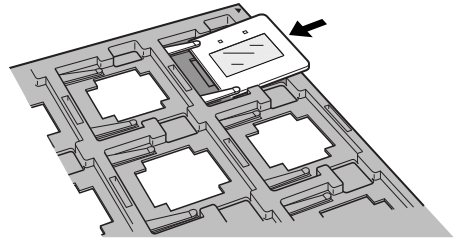
Make sure to select TPU for Neg. Film or TPU for Pos. Film as your Document Source in EPSON TWAIN Pro.

If a color stripe appears when scanning film (known as "Newton's ring"), try scanning the film upside down.

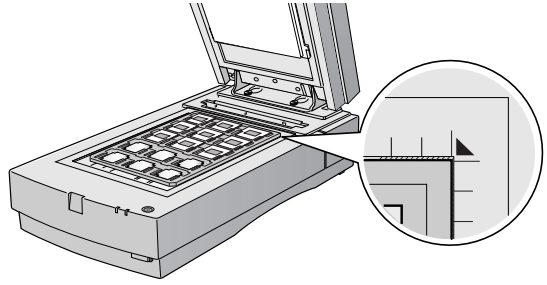
Loading 35 mm slides

Follow these steps to load 35 mm slides:

1. Load slides in the 35 mm slide holder as shown. Make sure the glossy side of each slide faces down, and the film emulsion layer faces up.



2. Position the slide holder on the document table. Align the slide holder with the ruled edges of the document table.
3. Close the TPU and begin your scan.

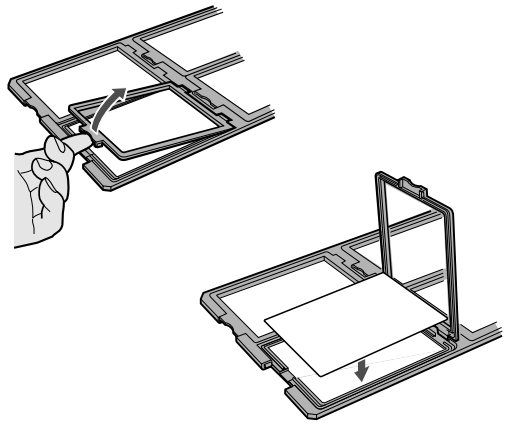


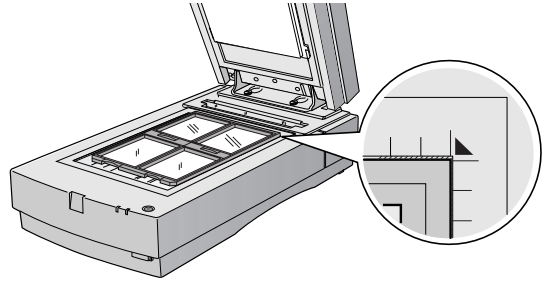
If you're using EPSON TWAIN Pro to scan, make sure to select TPU for Pos. film as your Document Source.

Loading 4 × 5-inch film

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

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

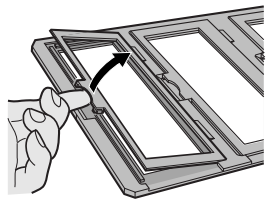


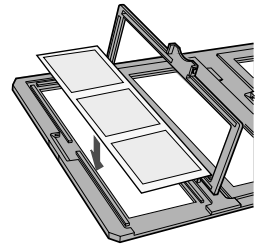


NOTE If you're using EPSON TWAIN Pro to scan, make sure to select TPU for Neg. Film or TPU for Pos. Film as your Document Source.

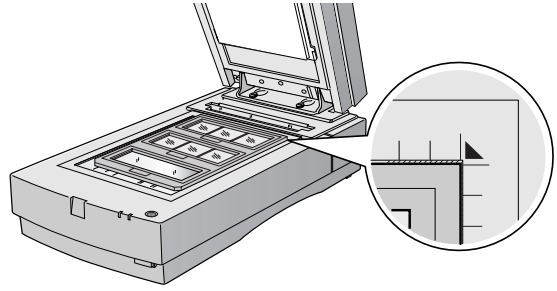
Loading 120-size or 220-size (medium format) film

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





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



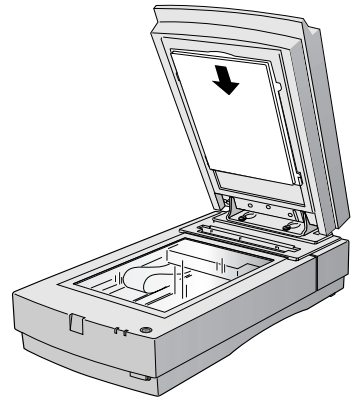
If you're using EPSON TWAIN Pro to scan, make sure to select TPU for Neg. Film or TPU for Pos. Film as your Document Source.

Scanning Reflective Documents

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

1. Open the transparency unit. If there's a film guide on the document table, remove it.
2. Slide the mat into place and insert the tabs into the slots on the transparency unit.
3. Place your document face down on the document table and close the transparency unit.
4. Scan your document.

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

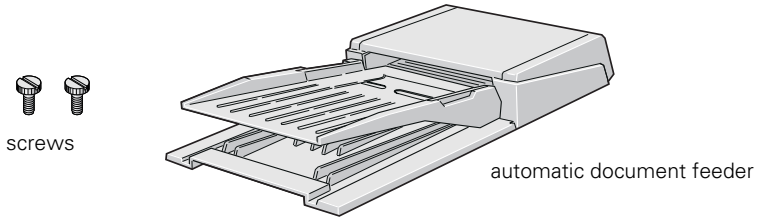


Automatic Document Feeder

The automatic document feeder (B813162) allows you to automatically load multi-page documents into your scanner. This document feeder is particularly useful for OCR (optical character recognition) scanning, or for creating an image database.

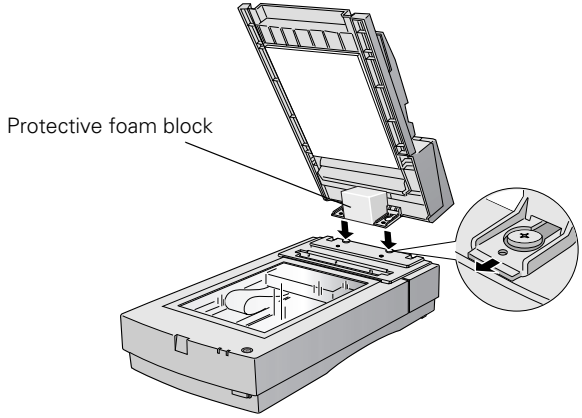
Unpacking the Automatic Document Feeder

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



CAUTION

Don't remove the protective foam block from beneath the ADF until you've finished installing it.

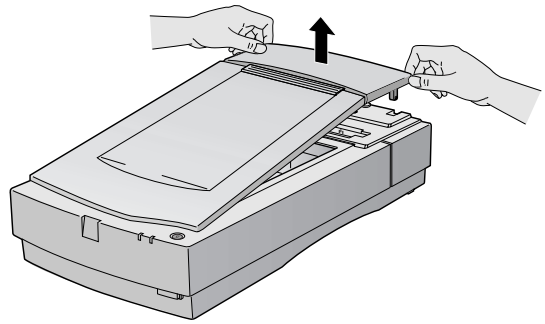


Installing the Automatic Document Feeder

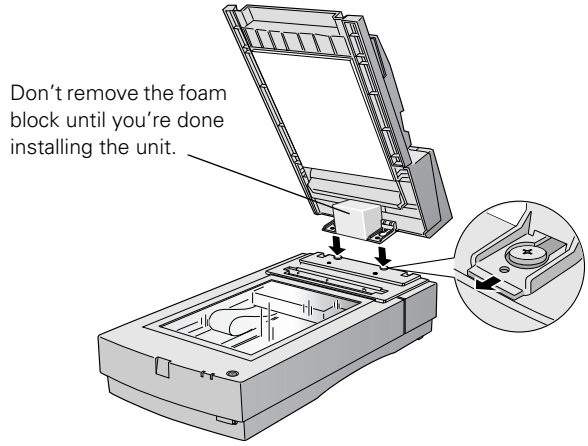
Because the automatic document feeder is heavy, you may want to have someone help you with this procedure. Also, the document feeder is large, so be sure to allow adequate space around the scanner.

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

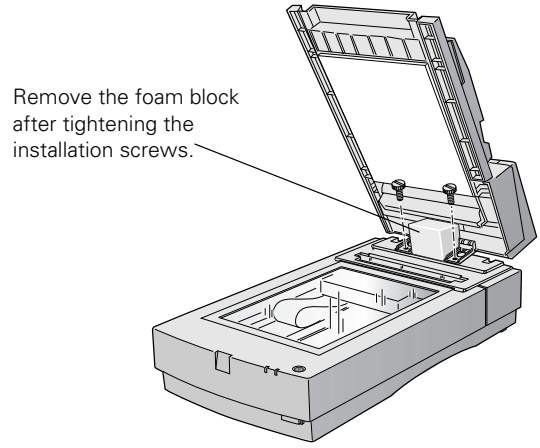
1. Make sure your scanner is turned off and unplug the cables.
2. Remove your scanner's document cover by grasping the back of the cover as shown and easing the cover up.



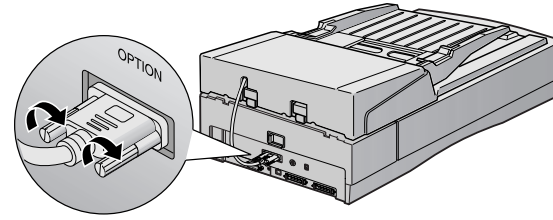
3. Make sure the document table is clean and dust free.
4. Position the automatic document feeder's mounting slots over the two mounting screws located at the back of the scanner. Slide the automatic document feeder forward slightly until the two holes in front of these slots are aligned with the screw holes at the back of the scanner.



5. Insert the two installation screws that came with the automatic document feeder into the screw holes, then tighten the screws with a coin.
6. Remove the protective foam block from the automatic document feeder's mounting hardware, and then gently close the automatic document feeder.



7. Attach the ADF's connector to the scanner's OPTION interface. Secure the connection by tightening the connector screws.
8. Close the ADF.

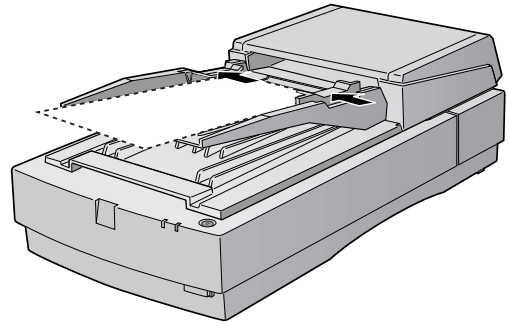


If you haven't connected the scanner to your computer, continue with "Connecting the Scanner to Your Computer" on page 17.

Loading Paper in the Automatic Document Feeder

Your automatic document feeder can load up to 30 sheets of the following paper sizes: Letter, Legal, Checks (3.3 × 5 inches), A4 (8.27 × 11.7 inches), and B5 (7.17 × 10.1 inches). Follow these steps to load paper:

1. Slide the automatic document feeder's left edge guide all the way to the left.
2. Insert your document face up in the ADF. Feed it until it meets resistance. Then move the right edge guide so it touches the right edge of your paper.
3. Scan your document.



NOTE

You can still load documents manually, if you want. Just lift the automatic document feeder and place the first sheet of your document face down on the document table. Always close the automatic document feeder before scanning, and do not open it during scanning or an error will result.

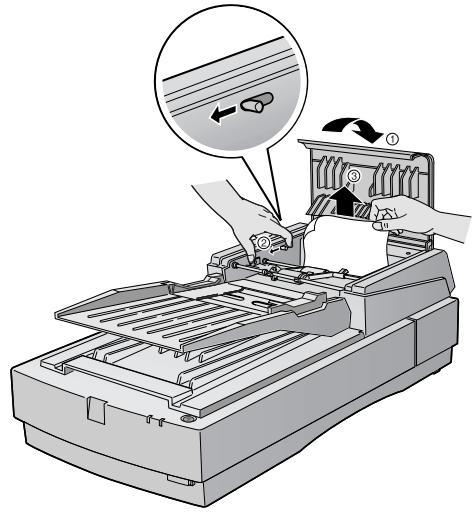
Make sure to select Auto Document Feeder as your Document Source in EPSON TWAIN Pro.

If you want to scan only part of the document area, load the first page of the document in the automatic document feeder. When you start EPSON TWAIN Pro and click the Preview button, the first page is ejected. You can adjust the marquee in the Preview area, and then reload the first page, along with up to 30 pages of the document in the automatic document feeder. The Expression 1680 scans the area defined by the marquee on each page.

Fixing Paper Jams

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

1. Open the ADF cover to determine where the paper jam occurred.
2. Pull forward on the jam-release lever, and slowly pull the jammed paper out of the feeder mechanism. Be careful not to tear the paper.
3. After removing the jammed paper, close the document feeder cover. Make sure the ERROR light is off and the READY light isn't flashing.



IEEE 1394 FireWire Scanner Interface Card

To use the IEEE 1394 FireWire scanner interface card (B808342), your system must have either a built-in IEEE 1394 FireWire port or an IEEE 1394 FireWire PCI card, and must be running Macintosh OS 8.6 or later with FireWire Update 2.1 or later. Your PC must have an OHCI compliant IEEE 1394 port or card, and must be running a pre-installed version of Windows 2000 or Windows Me.

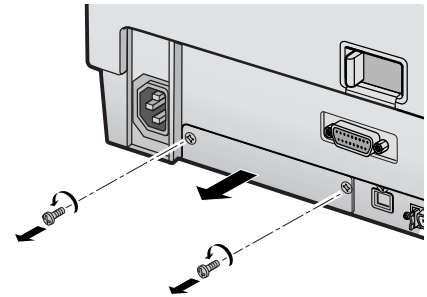
This section explains how to install the IEEE 1394 FireWire scanner interface card in your scanner, and how to connect the scanner to your computer.

- If you have the Professional FireWire model of the EPSON Expression 1680, the card was preinstalled in your scanner. Go to "Connecting to an IEEE 1394 FireWire Interface" on page 21.
- If you purchased the IEEE 1394 FireWire scanner interface card as an option, continue with the next section.

Installing the Card in Your Scanner

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

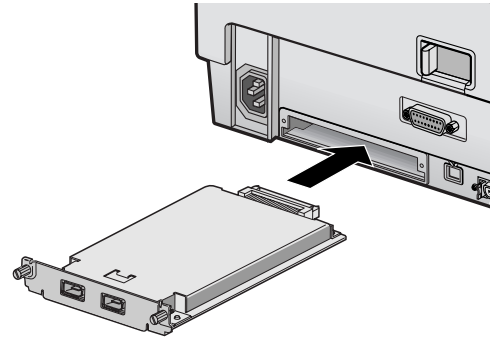
1. Remove the two screws securing the shield plate to the scanner's optional interface slot, and then remove the plate. Put the screws in a safe place in case you want to reinstall the shield plate later.



CAUTION

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

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



Now you're ready to connect the scanner to your computer. Continue with "Connecting to an IEEE 1394 FireWire Interface" on page 21.

Chapter 6

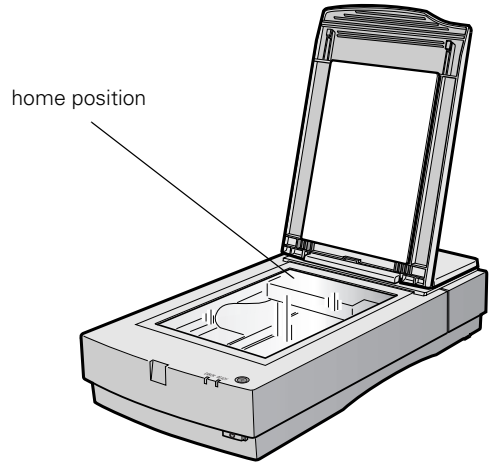
Scanner Maintenance

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

Transporting the Scanner

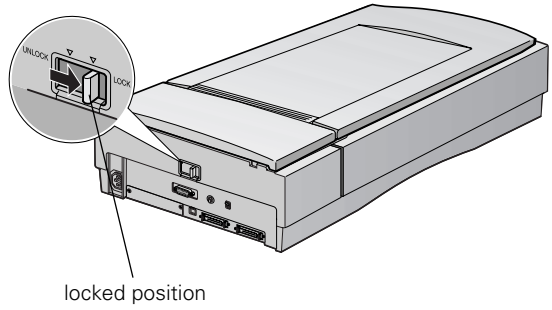
When you transport the scanner a long distance or store it for an extended time, follow the steps below to secure the carriage.

1. Make sure the transportation lock on the back of the scanner is in the UNLOCK position.
2. Locate the SCSI ID rotary switch on the back of the scanner. Align the dot on the rotary switch with the asterisk (*).
3. If you're using a transparency unit or automatic document feeder, remove it and replace the scanner cover.
4. Turn on the scanner and wait until the carriage moves to the home position as shown. Then turn off the scanner.



5. Slide the transportation lock at the back of the scanner to the LOCK position.

   If the carriage does not automatically return to the home position, slowly raise the front of the scanner and hold it up until the carriage comes to rest in the home position. Then slide the transportation lock to the LOCK position.

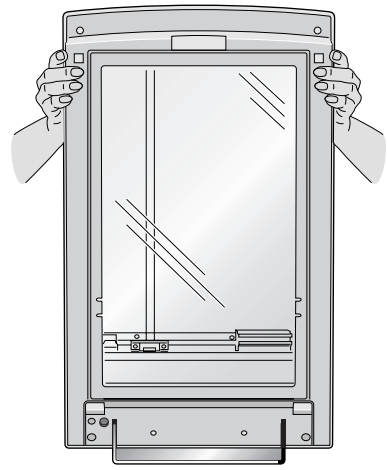


NOTE If you are using a transparency unit and it is switched on, the scanner carriage will not move to the home position. Remove the transparency unit first, then perform the steps above. See the next section for instructions.

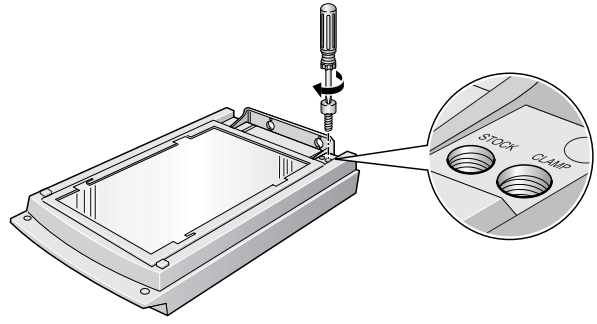
Transporting the Transparency Unit

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

1. Slowly raise the front of the transparency unit to allow the lamp assembly to slide to the back of the unit. Wait until the lamp assembly comes to rest.



2. Reinstall the transparency unit's shipping screw in the hole marked CLAMP.



Cleaning the Scanner

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

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

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

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

When using the optional TPU, a transparent window in the scanner is used for white calibration before each scan. Light from the TPU lamp is used as a reference by the scanner head. Make sure to keep this area clean to prevent colored vertical lines from appearing in your scanned image.

Always unplug the scanner before cleaning.

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

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

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

Don't spray lubricants inside the scanner.

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

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

Chapter 7

Solving Problems

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

For additional troubleshooting tips, see your electronic *EPSON Expression 1680 Reference Guide*.

Lights and Buttons

The scanner has two indicator lights and two buttons:

Scanner indicator lights

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

○ = on, ● = off, ☼ = flashing

Error conditions

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

O = on, ● = off, Ö = flashing

Scanner buttons

Button	Function
⏻ Operate	Turns the scanner on and off.
Start	Automatically launches a Start button-compatible application. You must set up your scanner software and a compatible application to use this button. If you installed Presto! PageManager, it's automatically assigned to the Start button. You can set up Presto! PageManager to scan your image automatically and send it directly to another application or a peripheral device, such as a printer.

Problems and Solutions

If you're having problems, this section answers some of the most common questions. For additional software troubleshooting tips, see your electronic *EPSON Expression 1680 Reference Guide*.

Setup Problems

Your system doesn't recognize the scanner
or
EPSON TWAIN Pro (or EPSON TWAIN Pro Network) doesn't appear in the list where you select your scanner.

- Check your cable connections. If your cable is securely connected to both the scanner and computer, try another cable. If you have a USB connection, use an EPSON USB cable. If you have a SCSI connection, use a high quality, shielded SCSI cable, and be sure to restart your computer after you change the cable.
- The USB connection only supports a Macintosh, Windows 98, Windows 2000 or Windows Me system. The Windows operating system must be preinstalled on your system, not upgraded. There is no USB support for Windows 95 or Windows NT.
- Make sure your scanner is on. If you opened your host application before you turned on the scanner, close your application and reopen it. Also, try restarting your system.
- If your scanner is connected to a USB hub, try connecting it directly to the computer's USB port.
- Check the Plug and Play option for your computer; it should be active (Windows 95, 98, 2000 and Me only).
- If you have a SCSI connection, turn off both your scanner and computer. Then turn on your scanner before you turn on the computer.
- If you have a SCSI connection, make sure your SCSI board is installed correctly.
- If the SCSI board is found, but not the scanner, check the SCSI terminator and ID. Make sure the SCSI ID doesn't conflict with another SCSI device.

- If you've replaced your SCSI board or changed the SCSI ID, you may need to uninstall and reinstall your scanner software. See the instructions beginning on page 127.
- Check for IRQ conflicts with built-in options.
- Windows users: check the System Device Manager in the Windows Control Panel. If there is an Unknown Device icon, select it and click Remove.
- Macintosh users: if you have an IEEE 1394 FireWire interface connection, make sure the following Extensions are selected in the Extensions Manager: EPSON FW Scanner Enabler, EPSON FW Scanner Expert, and EPSON FW ScannerLib.

  Also, make sure the IEEE 1394 FireWire scanner interface card is installed correctly in the scanner. (See "Installing the Card in Your Scanner" on page 109.)
- If all else fails, uninstall and reinstall your software. See the instructions for uninstalling software beginning on page 127.

You are unable to connect to the scanner when you click the Test button.

- Check to make sure your cable is securely connected to both the scanner and computer.
- Try a different cable. If you have a USB connection, be sure to use the USB cable that came with your scanner. If you have a SCSI connection, try using a high quality, shielded SCSI cable, and be sure to restart your computer after you change the cable.
- Turn off both the scanner and your computer. Then turn on your scanner before you turn on the computer.
- If you're connected to a USB hub, try connecting the cable to the computer's USB port.
- If you have a SCSI connection, make sure your system is correctly terminated and there are no conflicting SCSI IDs.
- If you're using a network scanner, check with your network administrator to see whether your computer is on a different router than the scanner server. If it is, make sure the

router for the scanner server is configured to allow traffic from your network.

- Uninstall and reinstall your software. See the instructions for uninstalling software beginning on page 127.

Scanner Problems

The READY light doesn't come on or flashes.

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

The scanner doesn't scan your image.

- Make sure the scanner is ready to scan. Wait until the READY light stops flashing and remains on.
- Check your image source setting. Make sure you selected EPSON TWAIN Pro (or EPSON TWAIN Pro Network).
- Run the scanner test to verify the scanner is communicating with your computer. For Windows Me, Windows 2000, or Windows 98, see "Testing Your Scanner's Operation" on page 16. For Windows 95 or NT and Macintosh, open the EPSON TWAIN Pro window (or EPSON TWAIN Pro Network window) and click the Test button.
- Make sure you have enough memory to scan your image. If you're scanning a large image or scanning at a high resolution, try closing other programs before you scan. If you have a Macintosh, try increasing the memory of the host application. If your computer still doesn't have enough memory to process the image, try scanning at a lower resolution, or select part

of the image to scan. If you still cannot scan, you may need to upgrade your RAM.

- If you're using a network scanner, the scanner may have timed out. Check the time out setting on the EPSON TWAIN Pro Network window and increase the value, if necessary.

You installed a ZIP drive.

Your ZIP drive may be interfering with your scanner. Disconnect your ZIP drive, then try using the scanner.

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

- Make sure the unit is correctly installed and connected to the scanner's OPTION interface.
- Make sure you selected the correct Document Source setting for your image.
- Make sure your transparency unit or automatic document feeder is closed (lying flat against the document table).
- If paper is jammed in your automatic document feeder, see "Fixing Paper Jams" on page 108.

Software Problems

You can't start EPSON TWAIN Pro.

- Make sure the scanner's READY light is on.
- Check to make sure your cable is securely connected to both the scanner and computer.
- Try a different cable. If you have a USB connection, be sure to use an EPSON USB cable. If you have a SCSI connection, try using a high quality, shielded SCSI cable, and be sure to restart your computer after you change the cable.
- If you have a SCSI connection, you can't turn the scanner off and on again while you're using your computer. Turn both the scanner and computer off, then turn on the scanner before you turn on the computer.
- If you have a SCSI connection, make sure the SCSI interface board is installed correctly in your computer.
- For SCSI connections, check that your system recognizes your scanner and SCSI board (Windows only). Check the System Device Manager in the Windows Control Panel. For

Windows NT, check the SCSI Adapters dialog in the Windows Control Panel.

- For SCSI connections, check for conflicts in your SCSI ID setting, I/O address, the interrupt setting for your SCSI board, and other settings. For information about the SCSI ID setting, see "Connecting to a SCSI Interface" on page 19. For information about choosing other settings, see your computer manual.
- If you have more than one scanner connected to your computer, make sure the Expression 1680 is selected as your default scanner. For Macintosh, check the EPSON Scanner Selector. For Windows Me, Windows 2000, or Windows 98, check the Utility tab on the Expression 1680 Properties window. For Windows 95 or NT, check the EPSON TWAIN Pro window.
- Make sure you selected EPSON TWAIN Pro as your TWAIN source.
- If you have an older EPSON scanner and have a previous version of EPSON TWAIN installed, uninstall the older version (Windows) or close any extensions like EPSON Scanner Monitor, EPSON Scanner Monitor USB, or EPSON Monitor 3 (Macintosh).
- If none of these solutions help, uninstall your software, then reinstall it. See the instructions for uninstalling software beginning on page 127.

You can't start EPSON TWAIN Pro Network from a client computer.

- Make sure the scanner and the scanner server are both powered on, and that the Scan Server is running on the server.
- Make sure the cables connecting the scanner, the scanner server, and the client computer meet system requirements and are properly connected.
- Make sure the correct IP address for the scanner server is entered in the EPSON TWAIN Pro Network setup window for the client computer.
- Make sure the network interface card is installed correctly in both the scanner server and the client computer.

- Make sure both the scanner server and client computer are running the TCP/IP protocol.
- If more than one scanner is connected to the scanner server, make sure the Expression 1680 is selected as the default scanner.

The scanner software doesn't work properly.

- Make sure the system requirements (for example, the operating system version) are correct for your software. See page 143.
- Check your computer's memory. If you're running other software at the same time, using RAM resident programs, or have many device drivers, the computer may not have enough memory. (See your software and computer manuals.) If you're scanning a large image or scanning at a high resolution, your computer may not have enough memory to process the image.
- Check your software installation. Make sure that your software is correctly installed and set up. If all else fails, uninstall your software, then reinstall it.

You can't select any of the following as your Document Source: Auto Document Feeder, TPU for Neg. Film, TPU for Pos. Film.

Make sure your option is installed correctly, and that it's securely connected to the OPTION connector. If you need to reinstall the option or connect it to the OPTION connector, restart your computer afterward.

Scanning Problems

The file size is too big.

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

Your scanned image is faint or has gaps.

- Check the brightness. Decrease the software or driver's brightness setting.
- Try adjusting the Gamma and Exposure settings in the Image Controls window.
- Check the condition of your original. If the document is damaged, dirty, or wrinkled, these imperfections will show up in your scan.
- Make sure the document is placed flat against the document table.

Your scanned image is blurred or distorted.

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

The edges of the document aren't scanned.

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

Your image scans at an angle.

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

Straight lines in the image come out jagged.

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

A line of dots is missing from the image.

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

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

- Experiment with the Unsharp Mask setting. Click the Destination button in the EPSON TWAIN Pro main window to display the Destination window, then select or deselect Unsharp Mask.
- Make sure the Image Type and Destination settings are correct.
- Try different combinations of gamma and color settings in your scanner software.
- If you're using a transparency unit or automatic document feeder, make sure they're closed when scanning.

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

- Make the image size slightly smaller.
- Use a transparent sheet between the document and the document table to defocus the image.
- Reposition the document on the document table. Try positioning the document at a slight angle.
- Make sure Unsharp Mask is deselected in the Destination window.
- Select 24-bit Color De-screening as your Image Type, or select On for De-screening in the Image Type window.

The printed image is larger or smaller than the original.

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

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

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

OCR scanning produces poor character recognition.

- Select OCR as both the Image Type and Destination.
- Select Text Enhancement Technology for the Black and White Option in the Image Type window.
- Adjust the Threshold setting in the Image Controls window.

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

- Make sure the document is face down on the document table.
- If you're using an automatic document feeder, make sure the original document is inserted face up.
- If you've selected OCR as your Image Type, select None for the Black and White Option in the Image Type window. Then adjust the Threshold setting in the Image Controls window.
  Or try changing the Image Type from OCR to Line Art, then adjust the Threshold setting.

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

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

Uninstalling the Expression 1680 Software

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

Uninstalling EPSON TWAIN Pro

Follow the procedure for uninstalling EPSON TWAIN Pro on your system.

Windows Me, Windows 2000, and Windows 98

1. Open the Windows Control Panel. and double-click the Scanners and Cameras icon.
2. On the Devices tab, select EPSON Expression1680.
3. Click the Remove button. Then click OK to close the window.
4. Restart your computer.

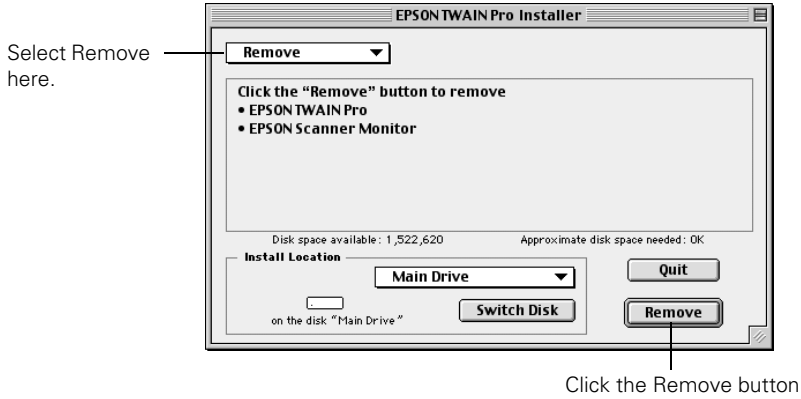
Windows 95 and Windows NT

1. Click Start, then click Programs, EPSON Scanner, EPSON TWAIN Pro Uninstall.
2. When you're finished, restart your computer.

Macintosh

1. Insert the EPSON Expression 1680 Scanning Tools CD-ROM in your drive.
2. Double-click the EPSON TWAIN Pro folder.
3. Double-click the EPSON TWAIN Pro Installer icon.

4. At the Installer window, select Remove at the top of the window, then click the Remove button.



5. When you're finished, restart your computer.

Uninstalling EPSON TWAIN Pro Network

Follow the procedure for uninstalling EPSON TWAIN Pro Network on your system.

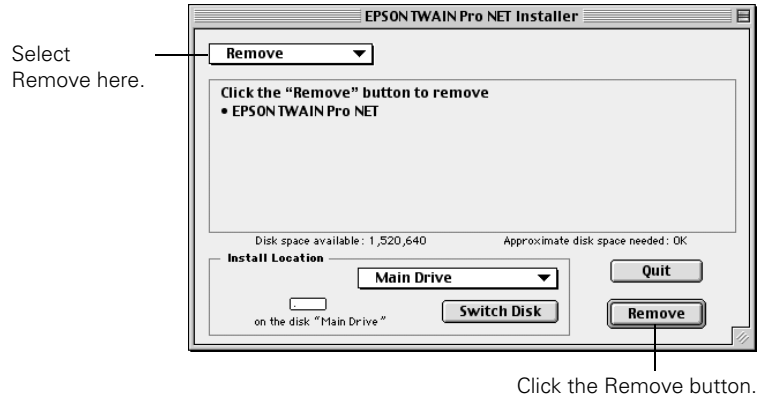
Windows 95, Windows 98, Windows 2000, Windows Me, and Windows NT

1. Click Start, then click Programs, EPSON Network Scanner, EPSON TWAIN Pro Network Uninstall.
2. When you're finished, restart your computer.

Macintosh

1. Insert the EPSON Expression 1680 Scanning Tools CD-ROM in your drive.
2. Double-click the EPSON TWAIN Pro Network folder.
3. Double-click the EPSON TWAIN Pro NET Installer icon.

4. At the Installer window, select Remove at the top of the window, then click the Remove button.
5. When you're finished, restart your computer.



Uninstalling EPSON Scan Server

1. To uninstall EPSON Scan Server on your Windows system, click Start, Programs, EPSON Scan Server, and select EPSON Scan Server Uninstall.
2. When you're finished, restart your computer.

Where To Get Help

EPSON Technical Support

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

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

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

Before you call, please have the following information ready:

- Product name (EPSON Expression 1680)
- Product serial number (located on the back of scanner)
- Proof of purchase (such as a store receipt) and date of purchase
- Computer configuration
- Description of the problem

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

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

Software Technical Support

Software	Telephone	Fax	Online and E-mail
EPSON TWAIN Pro	(562) 276-4382 (800) 922-8911	(800) 922-8911 fax-on-demand system	http://support.epson.com
ScanSoft TextBridge Pro	(562) 276-4382 (800) 922-8911	(800) 922-8911 fax-on-demand system	http://support.epson.com
Adobe Photoshop LE	Macintosh: (900) 555-3300 Windows: (900) 555-2200 $2.00 per minute	—	www.adobe.com techdocs@adobe.com
NewSoft Presto! PageManager	(510) 445-8616	(510) 445-8601	www.newsoftinc.com
LaserSoft Imaging, Inc.	941-383-7496	941-387-7574	info@lasersoft-imaging.com
MonacoEZcolor	(978) 749-9944	(978) 749-9977	www.monacosys.com

Appendix A
Specifications

Scanner

General

Scanner type
Flatbed, color

Photoelectric device
Color MatrixCCD™ line sensor

Effective pixels
13600 × 18720 pixels (1600 dpi)

Optical density
3.6 Dmax

Color depth
48-bit internal/48-bit external

Grayscale depth
16-bit internal/16-bit external

Maximum document size
8.5 × 11.7 inches (216 × 297 mm)
A4 or Letter (the reading area can be specified from your software)

Resolution
1600 optical

Maximum hardware resolution*
1600 dpi (main scan)
3200 dpi with Micro Step Drive (sub scan)

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

Maximum interpolated resolution
12800 × 12800 dpi

Speed (1600 dpi, draft mode)
Color: 9.2 msec/line (approx.)
Grayscale: 3.1 msec/line (approx.)
Line Art: 3.1 msec/line (approx.)

Color separation
RGB color filters on CCD

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

Zoom
50 to 200% in 1% increments

Command level
ESC/I-B8
FS

Pixel depth
16 bits per pixel (16 bits per pixel input, 1 to 16 bits per pixel output)

Brightness
7 levels

Line art settings
Fixed threshold
TET (Text Enhancement)
Technology, enable/disable selectable)

Digital halftoning
AAS (Auto Area Segmentation, enable/disable selectable)

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

Gamma correction
2 types for CRT display
3 types for printer
1 type user-defined

Color correction
1 type for CRT display
3 types for printer (available in color byte sequence mode and color line sequence mode)
1 type user-defined

Interfaces
SCSI 2 (micro DB 50-pin connectors)
USB (Type B receptacle connector)
IEEE 1394 (FireWire), optional

Light source
Xenon gas cold cathode fluorescent lamp

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

Dimensions

Width:	13 inches (332 mm)
Depth:	22.1 inches (562 mm)
Height:	5.3 inches (133 mm)

Weight
Approximately 18.7 lb (8.5 kg)

Electrical

Input voltage range

100 to 120 VAC:	90 to 132 VAC
220 to 240 VAC:	198 to 264 VAC

Rated frequency
50 to 60 Hz

Rated current

100 to 120 VAC:	0.8 A
220 to 240 VAC:	0.4 A

Power consumption

Operating:	Approximately 30 W Approximately 50 W with TPU or ADF unit
Standby:	Approximately 10 W

Environmental

Temperature

Operating:	41 to 95 °F (5 to 35 °C) 50 to 89 °F (10 to 32 °C) when using ADF
Storage:	–13 to 140 °F (–25 to 60 °C)

Humidity (without condensation)

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

Operating conditions
Ordinary office or home conditions. Avoid dust, direct sunlight, and proximity to strong light sources.

Safety Approvals

120 V model
Safety: UL 1950
CSA C22.2 No. 950
EMC FCC part 15 subpart B class B
CSA C108.8 class B

230 V model

Safety:	EN 60950
EMC:	EN 550022 (CISPR Pub 22) class B AS/NZS 3548 class B

SCSI Interface

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

Logic level
TTL-compatible

ID setting
Selectable from 0 to 7

Terminator
Internal terminator (enable/disable selectable)

Connector type
Two micro DB 50-pin connectors

USB Interface

Interface type
Universal Serial Bus Specification Revision 1.1

Electrical standard
Full speed mode (12Mb) of Universal Serial Bus Specification Revision 1.1

Connector type
One receptacle (Type B)

IEEE 1394 FireWire

Interface type
IEEE 1394-1995 compatible

Data transfer method
Half-duplex Data/Strobe differential serial

Synchronization method
Clock synchronization with DS-Link

Encoding/decoding
DS-Link

Logic level
3.3 V

Compatible connectors
IEEE 1394-1995 compatible

Power class
Power class code 100
No power supply from external sources
Fitted with a repeat function with bus power

Environmental

Temperature

Operating:	41 to 95 °F (5 to 35 °C)
Standby:	–13 to 140 °F (–25 to 60 °C)

Humidity (without condensation)

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

Option Interface Connector

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

Output voltage
21.6 to 26.4 VDC
4.75 to 5.25 VDC

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

Initialization Methods

SCSI interface

Hardware:	Initialized when the scanner is turned on or the scanner receives a SCSI Reset signal from the SCSI interface
Software:	Initialized when the software sends the Esc @ (initialize the scanner command), or the scanner receives a SCSI Bus Device message

USB interface

Hardware:	Initialized when the scanner is turned on or the USB cable is unplugged from the USB port on the scanner
Software:	Initialized when the software sends the Esc @ command or the scanner receives a Bus Reset from the USB interface

Transparency Unit (B813182)

General

Reliability

MCBF 100,000 cycles

Readable area

8.5 × 11.7 inches (216 × 297 mm)

Dimensions

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

Weight

Approximately 11 lb (6 kg)

Electrical

Input voltage

21.6 to 26.4 VDC
4.7 to 5.25 VDC

Rated current

1.6 A
0.1 A

Environmental

Temperature

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

Humidity (without condensation)

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

Automatic Document Feeder (B813162)

General

Paper input/output

Load face up; eject face down

Paper quantity

30 pages (55 g/m^2 paper, maximum total thickness under 0.24 inches [6 mm])

Reliability

100,000 sheets (load/eject MCBF)

Dimensions

Width:	12.2 inches (310 mm)
Depth:	20.9 inches (528 mm)
Height:	3.6 inches (92 mm)

Weight

Approximately 9.9 lb (4.5 kg)

Electrical

Input voltage

22.8 to 25.2 VDC
4.75 to 5.25 VDC

Input current

24 V:	0.6 A
5 V:	0.3 A

Environmental

Temperature

Operating:	50 to 89 °F (10 to 32 °C)
Standby:	–4 to 140 °F (–20 to 60 °C)

Humidity (without condensation)

Operating:	20 to 80%
Standby:	95% or less

Appendix B

Installing the TCP/IP Protocol

To use your EPSON Expression 1680 as a network scanner, your client computers and scanner server must have a network interface card, a network interface card driver, and the TCP/IP protocol installed. In addition, both the client computers and the scanner server must have an IP address assigned.

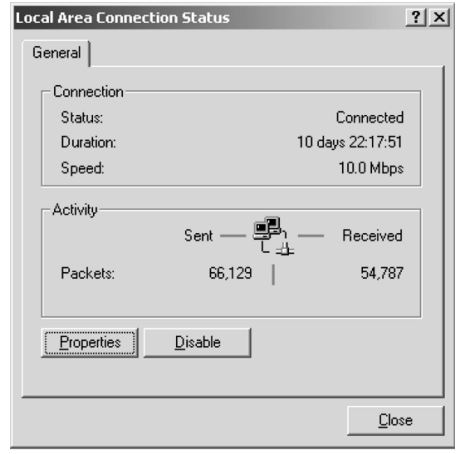
If you have a newer Macintosh, the TCP/IP protocol was preinstalled on your computer. Just make sure that TCP/IP is enabled in your Extensions Manager. Your computer has already been assigned an IP address if you are running a DHCP server, so no further setup is necessary. Obtain an IP address from your network administrator if you want to enter an address manually.

If you're running DHCP and WINS (Windows only), or if you have a DNS server (Macintosh or Windows), you may find it easier to use a host name rather than an IP address to identify the scanner server. To specify a host name, you must enable DNS. See your Windows or Macintosh documentation for instructions.

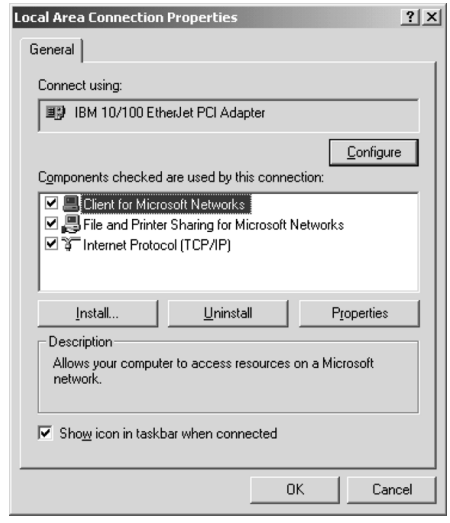
Installing the TCP/IP Protocol on Windows Me and Windows 2000

When running Windows Me or Windows 2000, your TCP/IP protocol should automatically be set correctly for the station it is installed if you are not running a DHCP server. To check the protocol, follow these steps.

1. Open the Control Panel and double-click the Network & Dial Up Connections icon. Then, double-click the Local Area Connection icon to display the screen to the right.
2. Click the Properties button to display the Local Area Properties screen.



3. Double-click Internet Protocol (TCP/IP) to display the Internet Protocol Properties screen.

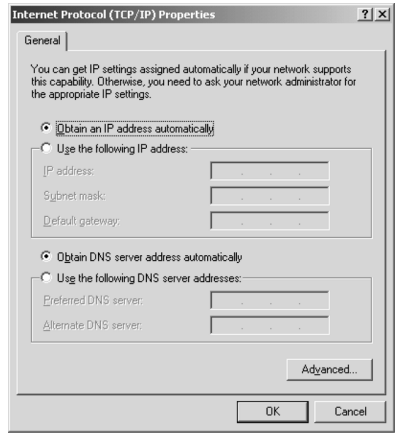


4. Make sure that Obtain an IP address automatically is selected and click OK.

   (If you need to manually assign an IP address, contact your Network Administrator.)

5. Click OK to close the Local Area Connection Properties screen.

6. Click Close to close the Local Area Connection screen.



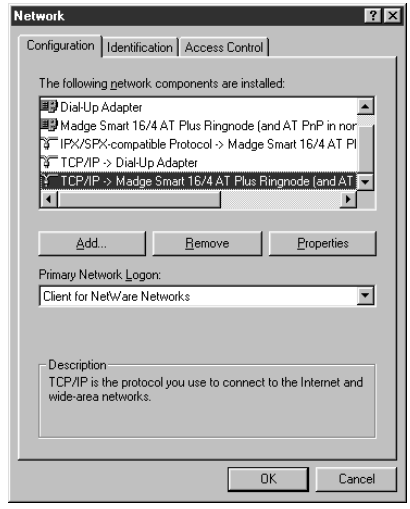
Installing the TCP/IP Protocol on Windows 95 and Windows 98

1. Open the Control Panel and double-click the Network icon. If necessary, click the Configuration tab to display the window on the right.

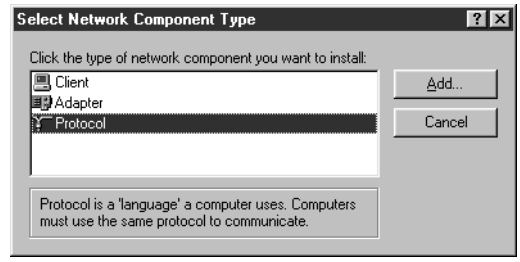
2. Check that TCP/IP appears in the list of installed network components.

   If it appears in the list, go to "Assigning an IP Address for Windows 95 and Windows 98 (First Release)" on page 138.

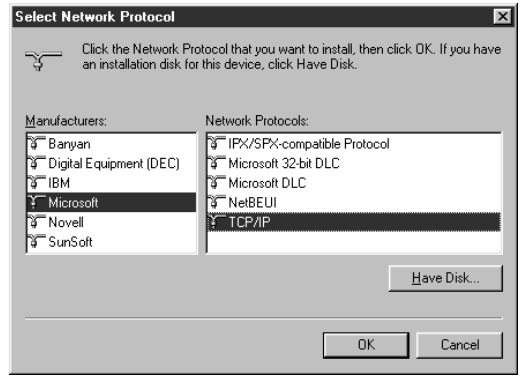
   If you don't see TCP/IP in the list, continue with the next step.



3. Click the Add button. You see the screen to the right.



4. Select Protocol from the list and click the Add button. The screen to the right appears.
5. Select Microsoft from the Manufacturers list, and TCP/IP from the Network Protocols list. Then click OK.
6. Continue with the instructions below to assign an IP address.



Assigning an IP Address for Windows 95 and Windows 98 (First Release)

If your network is connected to the Internet, ask your Internet provider or IS department for a formal IP address.

If your network is not connected to the Internet, you can use an IP address in the following ranges: 10.0.0.0 to 10.255.255.255, 172.16.0.0 to 172.31.255.255, or 192.168.0.0 to 192.168.255.255. Use a different IP address for every computer on your network.

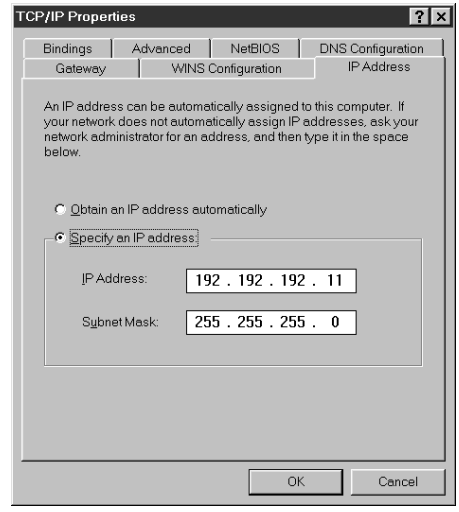
If you use IP addresses in the ranges listed above, you may need to change them before you connect the network to the Internet. Check with your network administrator.

Windows 98 (Second Edition) automatically assigns an IP address to itself (for the station it is installed on) if you are not connected to a DHCP server.

If your network uses a DHCP server, you don't need to obtain an IP address before beginning this procedure—the server finds one for you.

When you have your IP address, follow the steps below to assign it to your computer.

1. Select TCP/IP on the list of installed network components on the Configuration tab, and then click the Properties button. If necessary, click the IP Address tab.
2. Click Specify an IP address, and then enter the IP address and subnet mask.



If you're using a DHCP server on your network, you can assign an IP address automatically by selecting Obtain an IP address automatically and clicking OK.

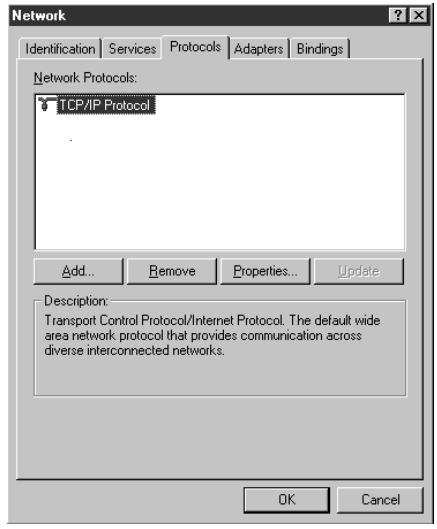
3. Click OK to close the TCP/IP Properties window, then click OK again to close the Network window and have your IP address assignment take effect. Make sure you share the IP address for the scanner server with client computers.

Installing the TCP/IP Protocol on Windows NT 4.0

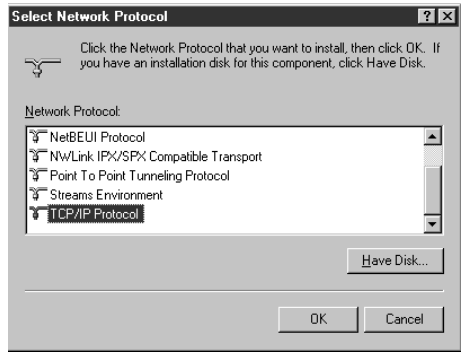
1. Open the Control Panel and double-click the Network icon. If necessary, click the Protocols tab.
2. Check that TCP/IP Protocol appears in the list of network protocols.

   If it appears in the list, go to "Assigning an IP Address on Windows NT 4.0" on page 141.

   If you don't see TCP/IP Protocol in the list, continue with the next step.



3. Click the Add button. You see the screen to the right.
4. Select TCP/IP Protocol and click OK.
5. Continue with the instructions in the next section to assign an IP address.



Assigning an IP Address on Windows NT 4.0

If your network is connected to the Internet, ask your Internet provider or IS department for a formal IP address.

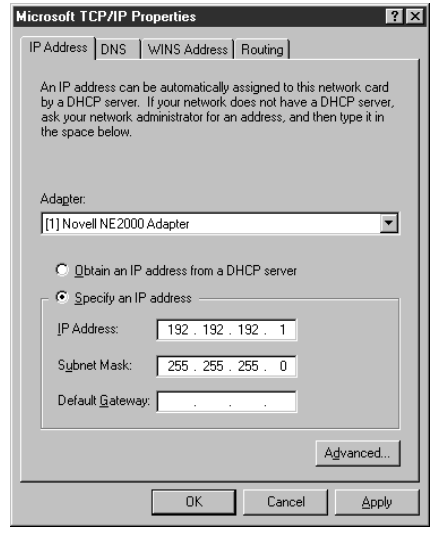
If your network is not connected to the Internet, you can use an IP address in the following ranges: 10.0.0.0 to 10.255.255.255, 172.16.0.0 to 172.31.255.255, or 192.168.0.0 to 192.168.255.255. Make sure you use a different IP address for every computer on your network. If you are running a mixed Windows 95, Windows 98, Windows Me, and Windows NT environment, you can use an IP address in the range of 169.254.XXX.XXX.

If you use IP addresses in the ranges listed above, you may need to change them before you connect the network to the Internet. Check with your network administrator.

If your network uses a DHCP server, you don't need to obtain an IP address before beginning this procedure—the server finds one for you.

Follow the steps below to assign the IP address to your computer:

1. Select TCP/IP Protocol in the Network Protocols list on the Protocols tab, and then click the Properties button.
2. Click the IP Address tab to display the screen to the right.
3. Click Specify an IP address, and then enter your IP address and subnet mask. Click OK. (If you're using a DHCP server on your network, you can assign an IP address automatically by selecting Obtain an IP address from a DHCP server and clicking OK.)
4. Click OK again to close the Network window and have your IP address assignment take effect.



Make sure you share the IP address for the scanner server with all client computers on the network.

Appendix C

Requirements and Notices

System Requirements

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

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

Windows

- An IBM-compatible PC with a Pentium or higher processor
- Microsoft Windows 95, Windows 98, Windows Me, Windows 2000, or Windows NT 4.0 (Service Pack 3 or higher)
- SCSI or USB (Windows 98, Windows Me, and Windows 2000 only) port
- FireWire IEEE 1394: preinstalled Windows 2000 or Windows Me and an OHCI-compliant port or card
- 32MB RAM (64MB RAM recommended for all systems)
- 50MB available hard disk space
- CD-ROM drive
- VGA color monitor with 640 × 480 resolution (a color monitor with a resolution of 800 × 600 or higher recommended)
- 8-bit, 256-color display adapter card (24-bit display adapter card with millions of colors recommended)

Macintosh

- An Apple® Power Macintosh or higher system with one of these operating systems:
  - USB: Macintosh OS 8.5 or later
  - SCSI: Macintosh OS 8.0 or later
  - FireWire: Macintosh OS 8.6 with FireWire Update 2.1

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

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

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

Important Safety Instructions

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

- Unplug the scanner before cleaning. Clean with a damp cloth only. Do not spill liquid on the scanner.
- Do not place the scanner on an unstable surface or near a radiator or heat source.
- Do not block or cover the openings in the scanner's cabinet. Do not insert objects through the slots.
- Use only the type of power source indicated on the scanner's label.
- Connect all equipment to properly grounded power outlets. Avoid using outlets on the same circuit as photocopiers or air control systems that regularly switch on and off.

- Do not let the power cord become damaged or frayed.
- If you use an extension cord with the scanner, make sure the total ampere rating of the devices plugged into the extension cord does not exceed the cord's ampere rating. Also, make sure the total ampere rating of all devices plugged into the wall outlet does not exceed the wall outlet's ampere rating.
- Do not attempt to service the scanner yourself.
- Unplug the scanner and refer servicing to qualified service personnel under the following conditions: if the power cord or plug is damaged; if liquid has entered the scanner; if the scanner has been dropped or the cabinet damaged; if the scanner does not operate normally or exhibits a distinct change in performance. Do not adjust controls that are not covered by the operating instructions.

Declaration of Conformity

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

We: EPSON AMERICA, INC.

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

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

Trade Name: EPSON
Type of Product: Image Scanner
Model: G780B
Product: EPSON Expression 1680

FCC Compliance Statement

For United States Users

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning

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

For Canadian Users

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

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

ENERGY STAR Compliance

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

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

Warranty

Epson America, Inc. Limited Warranty

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

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

What This Warranty Does Not Cover: This warranty covers only normal use in the United States and Canada. This warranty does not cover damage to the EPSON product caused by parts or supplies not manufactured, distributed or certified by EPSON. This warranty does not cover third party parts, components or peripheral devices added to the EPSON product after its shipment from EPSON, e.g., dealer-added boards, chips or drives. This warranty is not transferable and will not apply to products

purchased from an end user. EPSON is not responsible for warranty service should the EPSON label or logo or the rating label or serial number be removed or should the product fail to be properly maintained or fail to function properly as a result of misuse, abuse, improper installation, neglect, improper shipping, damage caused by disasters such as fire, flood, and lightning, improper electrical current, software problems, interaction with non-EPSON products, or service other than by an EPSON Authorized Servicer. If a claimed defect cannot be identified or reproduced in service, you will be held responsible for costs incurred.

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

In Canada, warranties include both warranties and conditions.

Some jurisdictions do not allow limitations on how long an implied warranty lasts and some jurisdictions do not allow certain exclusions or limitations on damages, so the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

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

Index

A

Accessories, 95, 130
Acrobat Reader
  how to use, 7 to 8
  locating the PDF manuals, 8 to 9
Adobe Photoshop
  installing, 45, 50
  user's guide, 9
Auto Exposure button, 58
Auto Locate button, 58
Automatic document feeder
  fixing paper jams, 108
  installing, 105 to 106
  loading paper, 107
  problems, 122
  specifications, 134
  unpacking, 104
  using, 107

B

Batch scanning, 54
Blurred image, 123
Buttons, 14, 116

C

Cable length, 17, 20
Cleaning the scanner, 114
Client software, installing, 87 to 90
Colors, problems, 125 to 126
Connecting the scanner
  connecting with FireWire, 17, 21
  connecting with SCSI, 17, 19 to 20
  connecting with USB, 17, 18

D

Default scanner, setting up
  Macintosh, 52
  Windows 2000, 33, 74 to 75
  Windows 95, 85
  Windows 98, 38 to 39, 79 to 80
  Windows Me, 27, 70
  Windows NT, 44, 85
Dial, SCSI ID, 14
Document position, 56, 124
Documentation
  PDF manuals, viewing, 7 to 9
  Reference Guide, viewing, 5 to 7

E

Electrical requirements, 132
EPSON
  help, 129 to 130
  Store, 130
EPSON TWAIN Pro Network, *see* TWAIN Pro Network
EPSON TWAIN Pro, *see* TWAIN Pro

F

File size, 122
Film guides, using, 99 to 102
Film, scanning, 99, 101 to 102
FireWire
  connecting the scanner, 17, 21
  installing the scanner card, 109
  requirements, 17
  scanner card specifications, 133

H

Help
  EPSON, 129 to 130
  software, 130
Home position, 14, 15

I

IEEE 1394, *see* FireWire
Image quality problems, 122 to 126
Installing
  additional software for Macintosh, 49 to 51
  additional software for Windows, 45 to 47
  automatic document feeder, 105 to 106
  client software, 87 to 90
  FireWire scanner interface card, 108 to 109
  Macintosh software, 47 to 48, 89 to 90
  scanner server software, 66 to 85
  TCP/IP on a network, 135 to 141
  transparency unit, 97 to 98
  Windows 2000, 22 to 25, 28 to 31
  Windows 95, 39 to 42, 80 to 82, 84 to 85
  Windows 98, 34 to 36
  Windows NT, 43 to 45, 80, 83 to 85
IP address, assigning, 138 to 139, 141

L

LaserSoft
  installing, 46, 51
  user's guide, 9
Lights, 14, 115 to 116
Loading paper
  automatic document feeder, 107
  single sheet, 56
Lock, transportation, 15, 111 to 112

M

Macintosh
  connecting with FireWire, 17, 21
  FireWire requirements, 17
  installing client software, 89 to 90
  installing the software, 47 to 48
  system requirements, 144
  USB requirements, 18
Magazines, scanning, 55
Maintenance, 111 to 114
Manuals
  PDF, locating, 8 to 9
  Reference Guide, viewing, 5 to 7
MonacoEZcolor
  installing, 46, 51
  user guide, 9
Moving
  scanner, 111 to 112
  transparency unit, 113

N

Network
  assigning an IP address, 138 to 139, 141
  changing scanner server start up mode, 86
  installing client software, 87 to 90
  installing scanner server software, 66 to 85
  installing TCP/IP, 135 to 141
  starting a scan, 94
  starting EPSON Scan Server, 92
  stopping a scan in progress, 94
  using the Start button, 94
Newspapers, scanning, 55

O

Operate button, 14, 116
Optional equipment, 95 to 109

P

Paper jams, fixing, 108
Photographs, scanning, 55
Power-on sequence, 16
Presto! PageManager
  installing, 25, 31, 36, 41, 44, 49, 69, 73
  locating the user's guide, 8
  setting up one-touch scanning, 63 to 64

R

Recommended settings, 55
Reference Guide, viewing, 5 to 7
Registering your software, 9
Requirements
  electrical, 132
  environmental, 132
  system, 143 to 144
Resizing images, 54
Resolution
  choosing, 53 to 54, 55
  maximum, 131

S

Safety instructions, 144 to 145
Scaling images, 54
Scanner parts, 14
Scanner server
  changing start up mode, 86
  installing the software, 66 to 85
  starting EPSON Scan Server, 92
  stopping a scan, 94
  uninstalling Scan Server, 129
Scanning
  defining the scan area, 58
  film, 99, 101 to 102
  multiple images at once, 54
  network, 91 to 94
  photographs, 55
  slides, 100
  transparencies, 55, 57, 99 to 102
  using TWAIN Pro, 57 to 58
  with auto document feeder, 57
Scanning color images, 54
SCSI
  cable length, 17
  connecting the scanner, 17, 19 to 20
  ID number, 19
  interface specifications, 132 to 133
  terminator switch, 20
Service, 129 to 130
Settings, software, 55
Setup problems, 117 to 119
Slides, scanning, 100
Software
  problems, 120 to 122
  settings, 55
  uninstalling, 127 to 129
Space requirements, 13
Specifications
  automatic document feeder, 134
  FireWire card, 133
  scanner, 131 to 134
  transparency unit, 134
Start button
  assigning applications to, 59 to 62
  one-touch scanning, 63 to 64, 116
  using on a network scanner, 94
Start up mode, changing for scanner server, 86
Support, 129 to 130
System requirements, 143 to 144

T

TCP/IP, installing, 135 to 141
Technical support, 129 to 130
Terminator switch, SCSI, 20
Text Enhancement Technology (TET), 55
Text, scanning, 55
TextBridge Pro
  installing, 47, 49
  locating the manual, 8
Transparency unit, 96 to 98
  color problems with transparencies, 126
  problems, 122
  scan settings, 55
  specifications, 134
  using film guides, 99 to 102
Transportation lock, 15, 111 to 112
Transporting
  scanner, 111 to 112
  transparency unit, 113
Troubleshooting
  automatic document feeder, 122
  image quality, 122 to 126
  scanner, 119 to 120
  setup, 117 to 119
  software, 120 to 122
  testing the scanner, 16
  testing the scanner connection, 26, 32, 37, 42, 44
  transparency unit, 122
TWAIN Pro
  problems, 120 to 122
  scanning with, 57 to 58
  uninstalling, 127 to 128
TWAIN Pro Network
  problems, 120 to 122
  starting, 93
  uninstalling, 128 to 129

U

Uninstalling software, 127 to 129
Unlocking the scanner, 15
Unpacking
  automatic document feeder, 104
  scanner, 12
  transparency unit, 96
USB
  connecting the scanner, 17, 18
  interface specifications, 133
  requirements, 17, 18, 143, 144

W

Warranty, 147 to 148
Windows
  installing TCP/IP, 135 to 141
  installing the software, 22 to 47
  system requirements, 143
World Wide Web, 130