EPSON®

PERFECTION™ 636

EPSON® Perfection™ 636 Reference Guide

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Contents

About Your Documentation

This manual includes information on the following:

Understanding SCSI Connections explains what daisy chains, SCSI IDs, and terminators are.

Upgrading from Windows 95 to Windows 98 explains how to uninstall and re-install the scanner software.

Installing the Optional Equipment gives installation and use instructions for the optional transparency unit and auto document feeder.

Maintaining the Scanner explains how to clean the scanner and prepare it for shipping.

Troubleshooting provides solutions to problems you may encounter.

Specifications give the specifications for the scanner and optional equipment.

The Glossary defines terms you may not be familiar with.

The Index gives you a quick way to jump to indexed information.

See your *Scanner Basics* book for instructions for setting up your scanner, scanning tips, and basic troubleshooting advice. For help with the scanner software, see the *EPSON TWAIN User's Guide* or the *LaserSoft® for EPSON Perfection 636 User's Guide*.

Using Links

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

Cautions, Notes, and Tips

Please follow these guidelines as you read your documentation:

Cautions must be observed to avoid damage to your equipment.

Notes contain important information about your scanner.

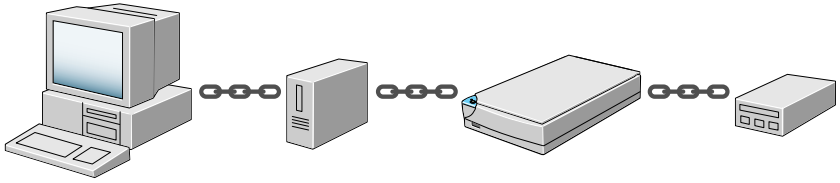
Tips contain additional hints for better scanning.

Understanding SCSI Connections

Read the following sections to determine how to set up your SCSI devices and whether you need any optional SCSI cables.

SCSI chain

The SCSI interface allows you to connect up to seven devices (such as a scanner, hard disk, CD-ROM, and so on) to the computer. This arrangement is often called a “daisy chain.” Only the first SCSI device in the chain is connected to the computer; each of the other devices is connected to another SCSI device.



SCSI cables

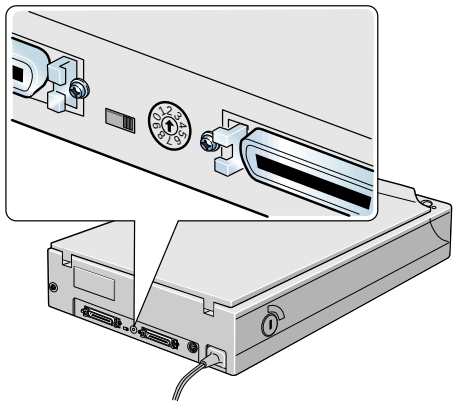
If you are using a SCSI cable other than the one provided, the length of the cable must not exceed 9.8 feet (3 meters) to maintain compliance with SCSI-2.

If you are connecting multiple SCSI devices to your computer, you may need to purchase SCSI cables before setting up your SCSI chain. Be sure the SCSI cable connectors are suitable for your hardware, depending on the maker of your SCSI device and SCSI interface board.

To connect the scanner to another SCSI device, the length of cable must not exceed 19.7 feet (6 meters); otherwise the system may not work properly.

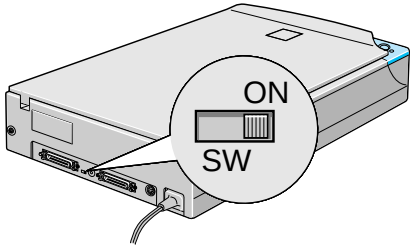
SCSI ID

Each device has a SCSI ID number: the SCSI adapter in the computer is usually number 7, and each of the other devices must have a different number between 0 and 6. The EPSON Perfection 636 default SCSI ID number is 2.



SCSI termination

The first device and the last device in the chain (not including the adapter) must have a terminator. No other device can have a terminator, or if a terminator does exist, it must be turned off or removed. The EPSON Perfection 636 terminator is located at the rear of the scanner. The default position of the termination switch is ON. Do not use an external terminator with the EPSON Perfection 636.



Make sure the scanner is turned off before changing the SCSI ID number.

Do not set the SCSI ID to an ID number that is already assigned to another device otherwise the computer, scanner, and other devices will not operate properly.

If you are using Windows 98, see Changing the SCSI ID Number in Windows 98 for more information.

Setting the SCSI ID Number

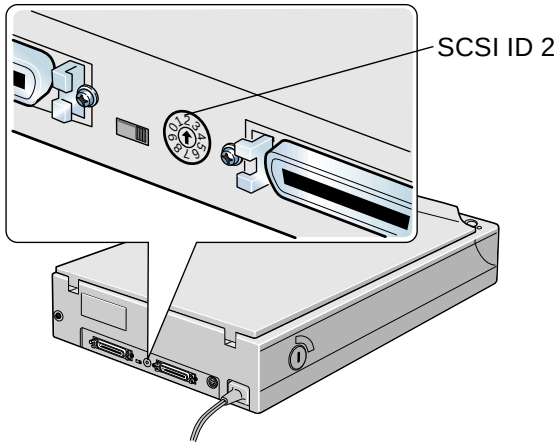
The scanner's default SCSI ID number is 2. If you add the scanner to a system in which one of your SCSI devices already has SCSI ID 2, you can change the ID number to an unused number using the rotary switch at the rear of the scanner. See the table on the next page for a guide to SCSI ID numbers. Then follow these steps to change the ID number:

1 Turn the scanner off.

2 Change the SCSI ID number.

3 Turn the scanner back on.

4 Restart your computer.



Changing the SCSI ID Number

ID	Availability
0	Not available for Macintosh®; used for hard disk
	Not recommended for Windows®; usually used for hard disk
1	Not recommended; usually used for hard disk
2	Factory setting of the scanner; can be changed
3	Available for Windows. Not available if your Macintosh has a built-in CD-ROM
4	Available
5	Available
6	Available
7	Not available for Macintosh; always used for the Macintosh itself
	May not be available for Windows; usually used for the SCSI board
8, 9	Not available; scanner will not work if selected.

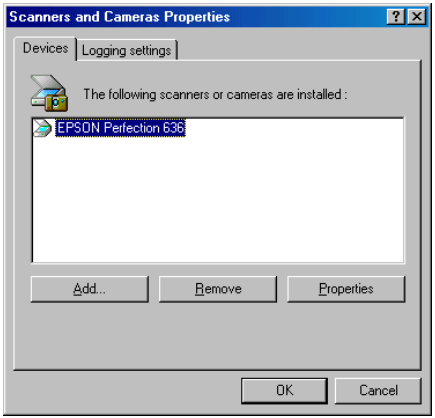
Changing the SCSI ID Number in Windows 98

If you are using your scanner with Windows 98 and you want to change the scanner's SCSI ID number, follow the steps below.

1 Double-click the 

Scanners and Cameras icon in the Control Panel.

2 Select your scanner in the installed devices list, then click **Remove**.



3 Click **OK** and close the dialog box.

4 Shut down Windows 98 and turn off your PC and scanner.

5 Change the SCSI ID number of the scanner.

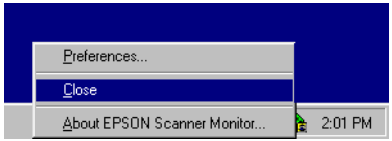
6 Turn on your scanner, and then turn on your PC.

7 Follow the instructions on the screen.

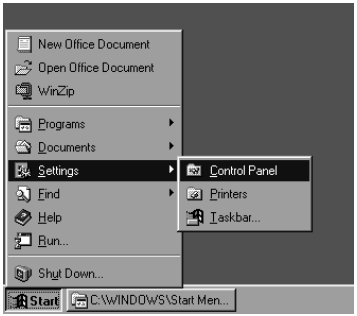
Upgrading from Windows 95 to Windows 98

If you installed the scanner software on a computer with Windows 95 and then upgraded to Windows 98, you must uninstall and re-install the scanner software. Follow these steps:

1 Click the  EPSON Scanner Monitor icon in the task bar and select **Close** to close EPSON Scanner Monitor.



2 Click **Start**, **Settings**, and then select **Control Panel**.



3 Double-click **Add/Remove Programs**. Select **EPSON TWAIN** and click **Add/Remove**. Then follow the instructions on the screen.

4 To re-install the EPSON scanner software:

a Insert your scanner CD-ROM in your CD-ROM drive. The CD-ROM automatically opens to the Main Menu. If it doesn't, click **Start**, select **Run**, and type **D:\epson**, where D is your CD-ROM drive letter.

b Select **Re-install Scanner Software**.

c At the next screen, click **Re-install**.

Installing the Optional Equipment

This chapter includes information on installing and using the two options for the EPSON Perfection 636:

- Transparency Unit (B813132)
- Auto Document Feeder (B813142)

You can purchase these options from EPSON Accessories at (800) 873-7766 (U.S. sales only). In Canada, please call (800) 873-7766 for dealer referral. Or visit our web site at www.epsonsupplies.com (U.S. sales only).

To use the optional equipment, you must first remove the document cover, as described in Removing the Document Cover.

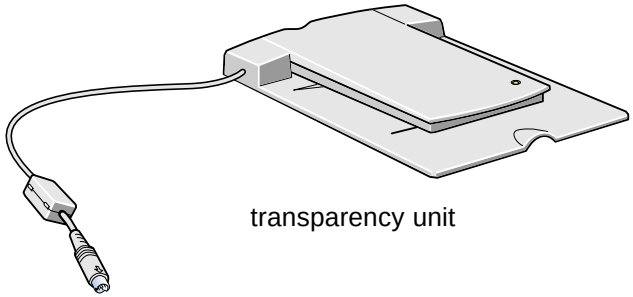
Transparency Unit

The transparency unit (B813132) lets you scan negative or positive film strips and slides on your scanner. The transparency unit is compact so it can be attached or removed easily when you alternate between scanning transparent materials and normal reflective (paper) documents. See the following sections for information on:

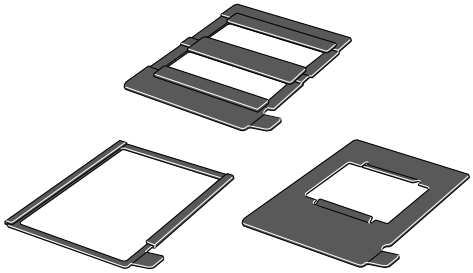
- Unpacking the Transparency Unit
- Installing the Transparency Unit
- Loading Transparencies
- Scanning Reflective Documents or Photographs
- Removing the Transparency Unit
- Selecting Settings

Unpacking the Transparency Unit

Make sure that all the following items are included in the transparency unit box. If any items are missing or damaged, contact your EPSON dealer immediately. Keep all the packing materials so you can use them for storage when you are not scanning transparencies.



transparency unit

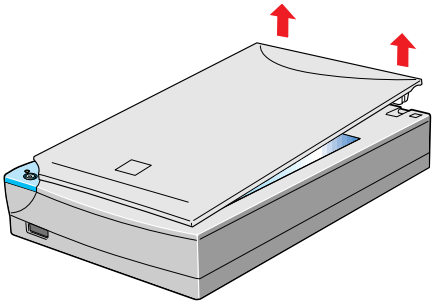


film holders

Installing the Transparency Unit

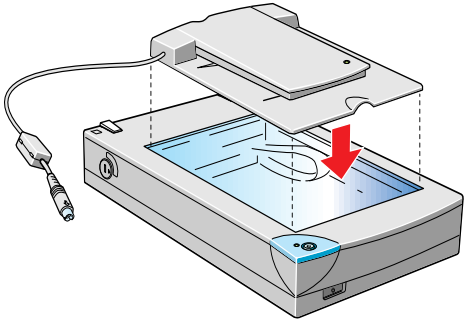
Follow the steps below to install the transparency unit on the scanner.

1. Make sure the scanner is turned off.
2. Remove the document cover from the scanner by lifting the back straight up.



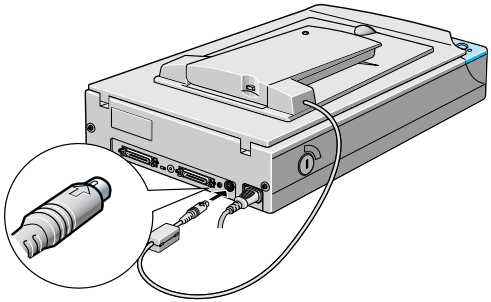
3 Make sure the document table glass is clean and dust free.

4 Place the transparency unit on the document table glass so that the hinges face the rear of the scanner and it fits on the document table glass:



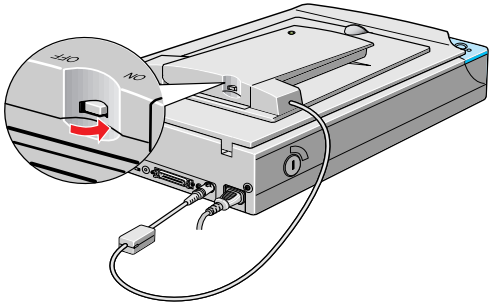
5 Connect the transparency unit connector (arrow faces up) to the scanner's option interface:

6 Turn on the scanner.



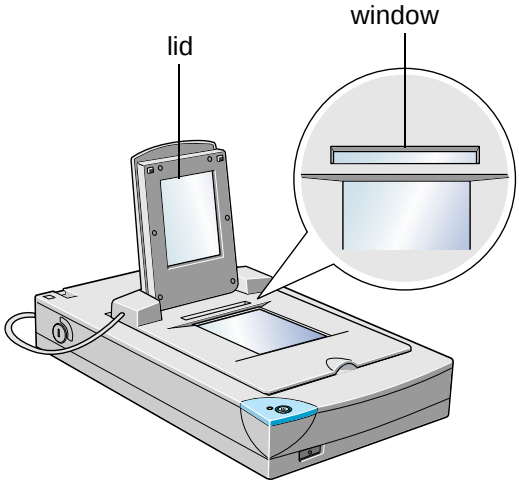
7 Turn on the transparency unit:

8 See the next section for information on loading transparencies.



Loading Transparencies

Before scanning transparencies, wipe the lid of the transparency unit, the scanner's document table glass, and the narrow window near the hinges. Be sure to keep the window uncovered when loading your transparencies. If your transparency obstructs the window, the colors in your scans will be affected.



You can load transparencies in the film holders or you can place them directly on the document table, as described in the following sections:

- Using Film Holders
- Loading Slides and Film Directly on the Document Table

Hold the film by the edges or use gloves. Touching the film surface with bare hands can leave fingerprints or other marks on the film.

The base side of the film is the side on which the film maker's name and film ID numbers are printed.

Using Film Holders

Three film holders are included with this unit. To place film in the holders, see the instructions below.

- Placing the Film
- Loading 35 mm Negative or Positive Film
- Loading Brownie Size Film
- Loading 4 x 5 inch Film

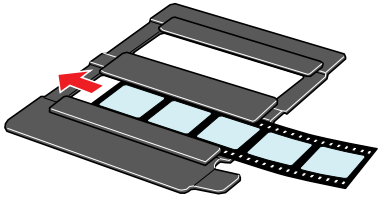
To remove a film holder from the document table, lift it out by its tab.

Placing the Film

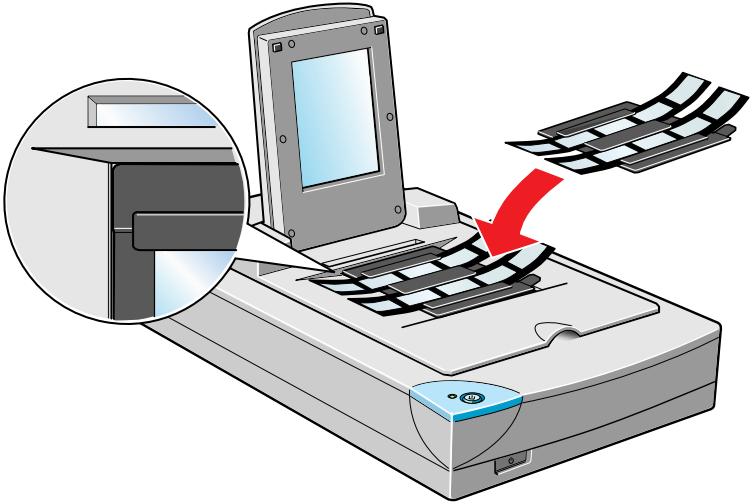
Film has two sides, a base side that is shiny and a dull side with the emulsion. Film should always be loaded in the film holders or placed on the document table with the base side down.

Loading 35 mm Negative or Positive Film

Insert a strip of film in the 35 mm film holder, base side facing down.



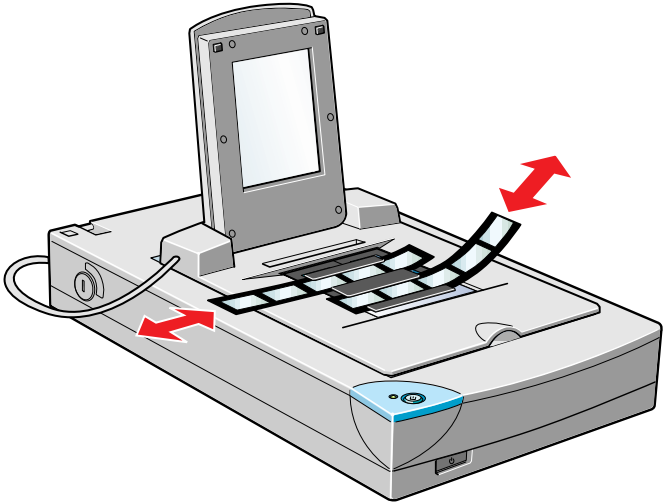
Then place the film holder on the document table. Be sure to align the upper left corner of the film holder with the upper left corner of the transparency unit.



Note

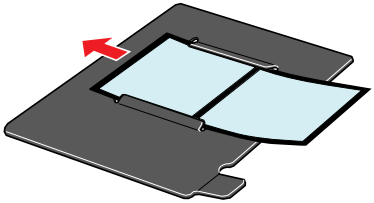
The base side of the film is the side on which the film maker's name and film ID numbers are printed.

You can adjust the position of 35 mm film by sliding the strips in the film holder so the frames you want to scan are positioned in the window.



Loading Brownie Size Film

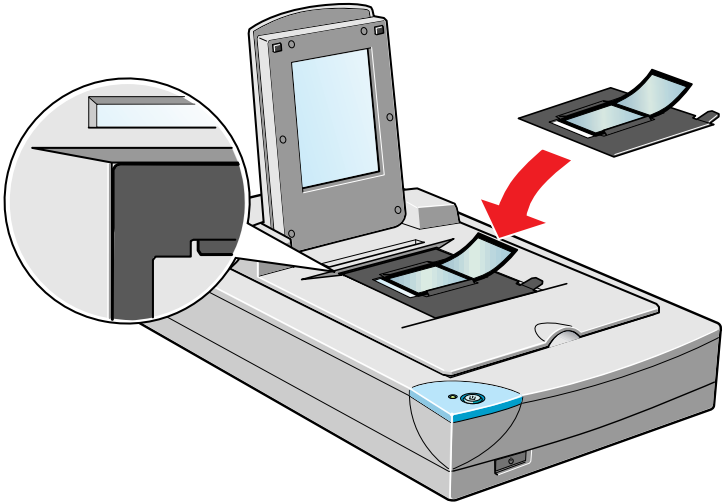
Insert film in the Brownie size film holder, base side facing down.



Note

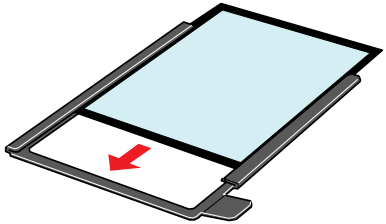
Brownie size film is 2.4 × 3.5 inches (6 cm × 9 cm).

Then place the film holder on the document table. Be sure to align the upper left corner of the film holder with the upper left corner of the transparency unit.

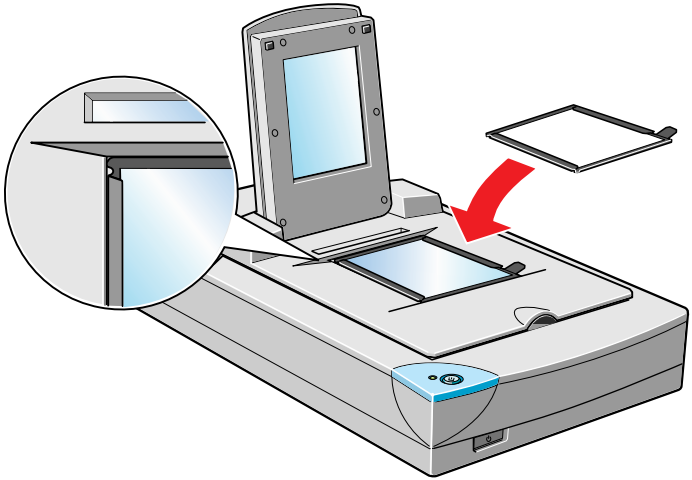


Loading 4 x 5 inch Film

Insert film in the 4 × 5 inch film holder, base side facing down.



Then place the film holder on the document table. Be sure to align the upper left corner of the film holder with the upper left corner of the transparency unit.



Hold the film by the edges or use gloves. Touching the film surface with bare hands can leave fingerprints or other marks on the film.

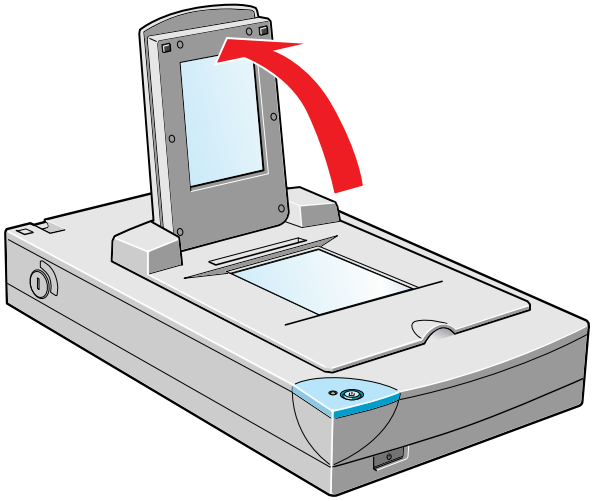
If the film size is 4" × 5", it may be easier to use the film holder. If you place the film directly the document table, it may be difficult to pick up.

Loading Slides and Film Directly on the Document Table

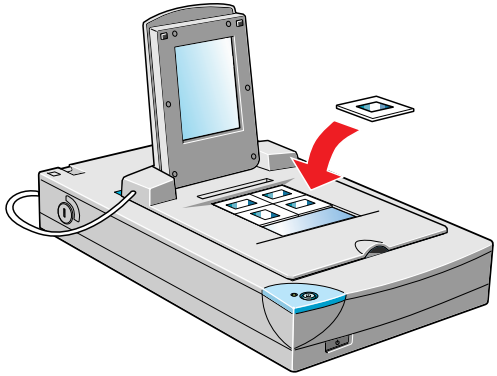
You can scan slides and film strips in the 4 × 5-inch (101.6 × 127 mm) scanning area of the transparency unit. You can use film holders (as described in the previous sections) or place them directly on the document table.

Follow the steps below to scan film or slides.

1 Open the top of the transparency unit while holding the base down.



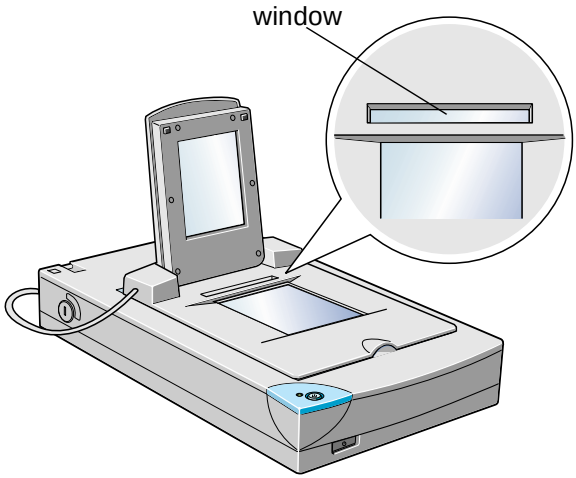
2 Load the slide or film with the base side down on the scanner's document table in the window of the transparency unit as shown:



3 Close the transparency unit.

Leave the narrow window uncovered, otherwise the colors in your scans will be affected.

Make sure the unit is completely closed, otherwise an option error results and you will not be able to scan the document or get correctly colored images.



Selecting Settings

If you are using EPSON TWAIN, select **TPU - Neg. Film** or **TPU - Pos. Film** in the Document Source settings, depending on the type of film (35 mm film strips or slides) you are scanning. When previewing images of negatives scanned using a film holder, the color may appear odd as the frame of the film holder is perceived as white, causing your scans to appear darker. To see the correct color, click and drag the mouse over an area, then click the zoom preview button. For details on scanner software settings, see the electronic *EPSON TWAIN User's Guide*.

If you are using LaserSoft, select **Neg. Transparency** or **35 mm** for negative film or 35 mm film strips or **Pos. Transparency** for 35 mm slides and positive film in the Original setting. When previewing images, you may need to adjust the marquee (frame border). For details on scanner software settings, see the electronic *LaserSoft for EPSON Perfection 636 User's Guide*.

Scanning Reflective Documents or Photographs

When you return to scanning normal reflective documents (such as memos or photographs), you can turn off the transparency unit, then place documents between it and the document table. Remember to change the Document Source setting to **Flatbed** in EPSON TWAIN or the Original setting to **Reflective** in LaserSoft. Be aware that the entire document table will be scanned so you will scan not only your document, but also the underside of the transparency unit. To prevent scanning the underside of the transparency unit, you can place a white piece of paper between your document and the transparency unit.

When scanning thin documents, you may see an impression of the underside of the transparency unit in your scans. If so, remove the transparency unit and re-install the document cover as described in the next section.

If you don't plan to scan transparencies for a while, you can remove the transparency unit and re-install the document cover as described in the next section.

Removing the Transparency Unit

Follow these steps to remove the transparency unit:

1. Turn off the transparency unit and the scanner.
2. Remove any film holders or film from the document table.
3. Unplug the transparency unit connector from the scanner's option interface.
4. Store the transparency unit and film holders in their original packaging.
5. Reattach the document cover as described in Reattaching the Document Cover.

Auto Document Feeder

Note

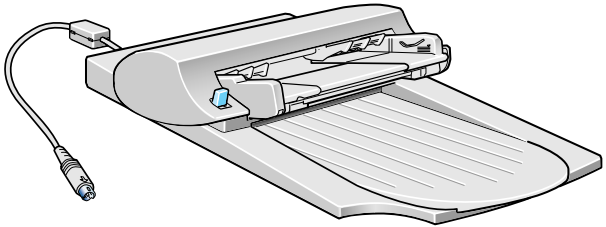
When using the auto document feeder, you must select EPSON TWAIN 3 as your TWAIN source and Auto Document Feeder (ADF) as your Document Source in TWAIN. See your electronic *EPSON TWAIN User's Guide* for more information.

The auto document feeder (B813142) allows you to automatically load single-sided, multiple-page documents into your scanner. The document feeder is particularly useful for OCR (optical character recognition) scanning or for creating an image database. See the following sections for information on:

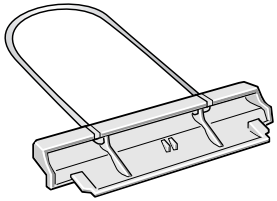
- Unpacking the Auto Document Feeder
- Installing the Auto Document Feeder
- Loading Paper into the Auto Document Feeder
- Loading Documents Manually

Unpacking the Auto Document Feeder

When you unpack your auto document feeder, make sure you have all the parts shown below. Keep all the packing materials so you can use them for storage when you are using the auto document feeder. If any items are missing or damaged, contact your EPSON dealer.



auto document feeder



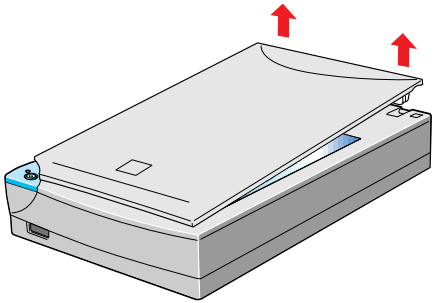
paper support

Installing the Auto Document Feeder

Follow the steps below to install the auto document feeder (ADF) on your scanner.

1 Make sure your scanner is turned off.

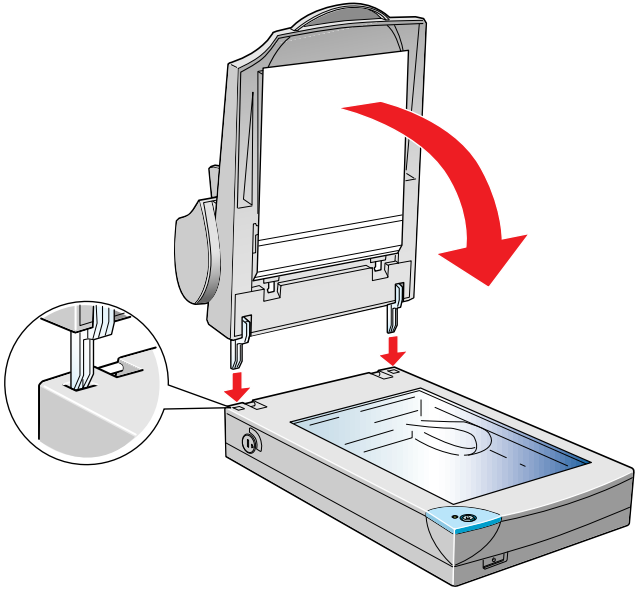
2 Remove your scanner's document cover by lifting the back straight up.



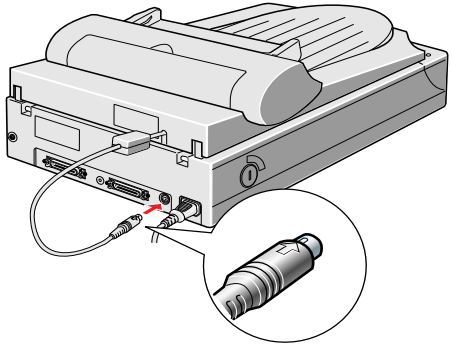
3 Make sure the document table is clean and dust free.

4 Remove the protective materials from the ADF.

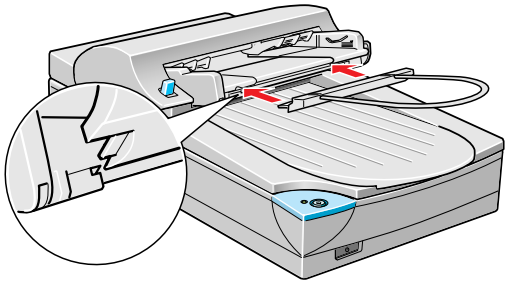
5 Insert the hinges on the ADF into the outer square holes at the back of the scanner and close the ADF.



6 Attach the ADF's connector to the scanner's option interface.



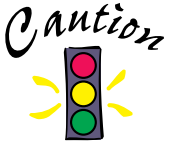
7 Attach the paper support to the ADF, as shown.



8 Turn on the scanner.

9 See the following section for instructions on loading paper in the ADF.

Loading Paper into the Auto Document Feeder



Do not feed photographic sheets or valuable original artwork into the auto document feeder as a misfeed may result in accidental wrinkling or damage.

If you are scanning high-quality color or halftone documents, place the documents directly on the document table.

Your auto document feeder can automatically load up to 20 sheets of the following paper sizes (based on a paper weight of 17 lbs and a stack thickness of 0.16 inch [4.0 mm] or less):

Checks:	3.3 × 5 inches (83 × 127 mm)
B5:	7.17 × 10.1 inches (182 × 257 mm)
A4:	8.27 × 11.69 inches (210 × 297 mm)
Letter:	8.5 × 11 inches (215.9 × 279.4 mm)
Legal:	8.5 × 14 inches (215.9 × 355.6 mm)

Check the following before feeding a document into the feeder:

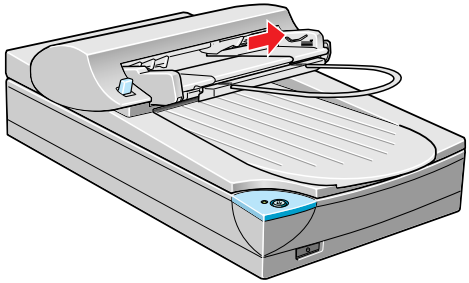
- Ink on the document is dry.
- The document has no holes, is not ripped or wrinkled, and has no articles attached to it.
- The document has no staples or other objects attached that might damage the feeder mechanism.
- The document has no folds closer than 0.2 inch (5 mm) from its edge.
- The document is not a multi-part form or bound.
- The document has no rear carbon coating.
- The document has no cut-out areas.

Note

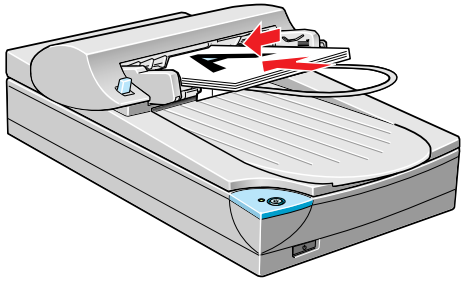
Make sure no documents or dust are on the document table glass when using the auto document feeder. Dust on the document table glass near the carriage home position may result in vertical lines on the scanned images.

Follow the steps below to load paper into the auto document feeder (ADF):

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



2 Insert the paper stack into the ADF until it meets resistance. Make sure that the side you want to scan is facing up, with the top edge facing into the feeder; the first page you want to scan should be on top. Then move the right edge guide so it is flush with the right edge of your paper.



Documents are output into the lower tray after scanning is finished.

Loading Documents Manually

You can load documents manually even when the auto document feeder (ADF) is installed.

Lift the ADF and place the document on the document table. Then lower the ADF and scan the document.

Always close the ADF and its cover before scanning. If you are scanning thick material or documents more than 1.6 inches (2 cm) thick, leave the ADF in the upright position. Be sure to cover any exposed areas of the document table glass.

Be sure to select **Flatbed** in the Document Source settings in EPSON TWAIN.

Opening the auto document feeder or its cover while it is operating results in an option error and paper feeding stops.

When scanning thin documents, you may see an impression of the underside of the auto document feeder in your scans. If so, remove the auto document feeder and re-install the document cover as described in Reattaching the Document Cover.

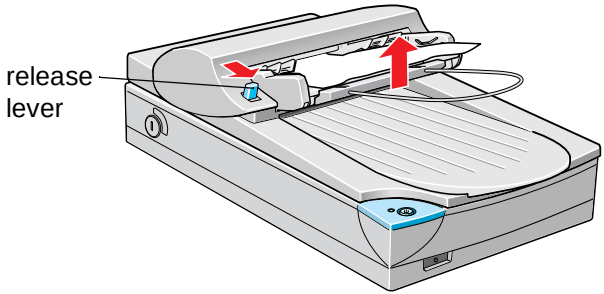
Selecting Settings

When you are using the auto document feeder, you must use the EPSON TWAIN driver. For information on selecting driver settings, see the *EPSON TWAIN User's Guide*.

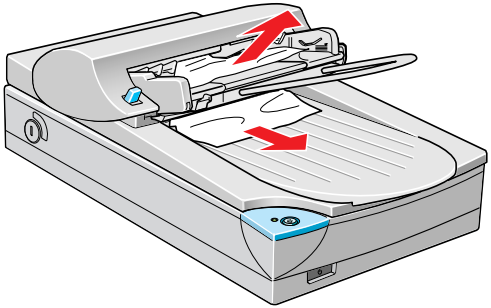
Clearing Jammed Paper from the Auto Document Feeder

To clear jammed paper in the optional auto document feeder, follow the steps below:

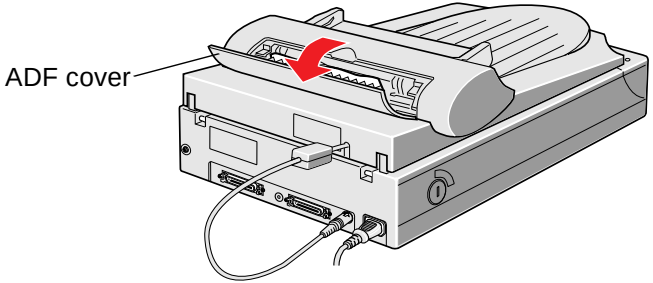
1. Turn off the scanner.
2. Push down the release lever to slightly raise the feeder mechanism and release the paper.



3 Then slowly pull the jammed paper out of the feeder mechanism. (Be careful not to pull too hard; the paper may tear, making it more difficult to remove.)



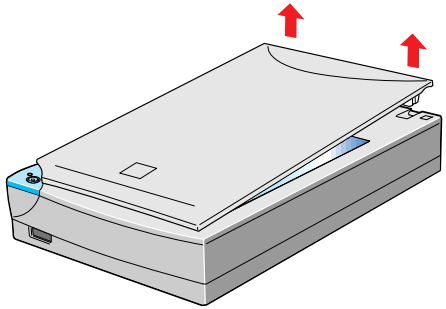
4 If paper is still jammed inside the mechanism, open the cover to remove it.



5 After removing jammed paper, make sure that the cover is closed, and push the feeder mechanism down until it clicks into place.

Removing the Document Cover

If you're scanning something that doesn't fit under the document cover, you can remove it. To do this, simply lift the back of the document cover straight up.



When scanning with the cover removed, make sure you cover any exposed areas of the document table glass to prevent interference from external light.

Reattaching the Document Cover

When reattaching the document cover, be sure to hold the cover in a vertical position as you push its attachments into place.

Be careful not to scratch or damage the document table glass, and don't use a hard or abrasive brush to clean it. A damaged glass surface can decrease scanning quality.

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

Don't spray lubricants inside the scanner. Be careful not to spill liquid in the scanner. This could permanently damage the scanner.

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.

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

Replacing the Fluorescent Lamp

The luminosity of the fluorescent lamp declines over time. If the lamp breaks or becomes too dim to operate normally, the scanner stops working and the operate light rapidly flashes red. If this happens, the lamp assembly must be replaced. For details, contact your dealer.

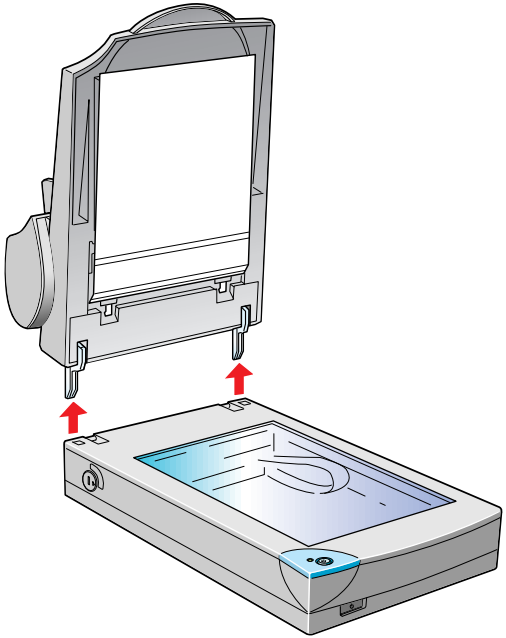
Cleaning the Paper Path Guide

If you notice the quality of your scans have declined, or you simply want to keep the quality of your scans at their best, clean the auto document feeder paper path guide.

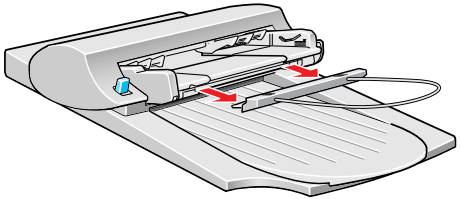
Follow the instructions below to remove, clean, and reattach the paper path guide.

Removing the Paper Path Guide

1. Turn off the scanner.
2. Disconnect the cable for the auto document feeder (ADF), and remove the ADF.

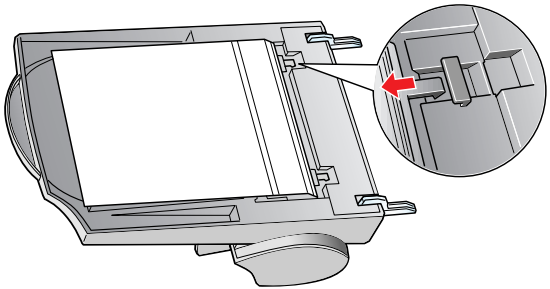


3 Gently pull out the paper support.

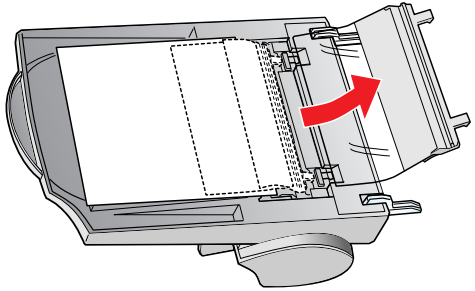


4 Place the ADF on the document table upside down, with the front of the ADF towards you.

5 Gently pull the two white hooks up, and then push them back down out of the rectangular holes.



6 Pull the paper path guide upwards and out to remove it.



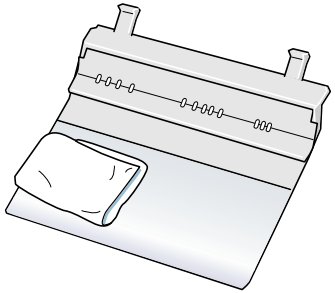
Be careful not to scratch or damage the paper path guide.

To avoid damaging the auto document feeder, be careful not to touch the rollers or metal parts.

To clean the paper path guide, see Cleaning the Paper Path Guide. To reattach the paper path guide, see Attaching the Paper Path Guide.

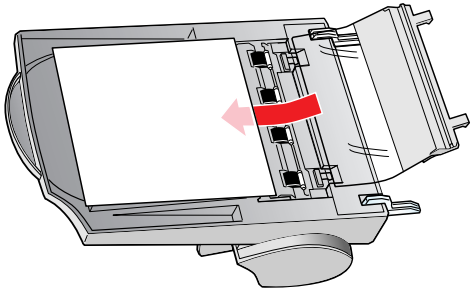
Cleaning the Paper Path Guide

Use a soft dry cloth to gently wipe the transparent plastic sheet of the paper path guide.

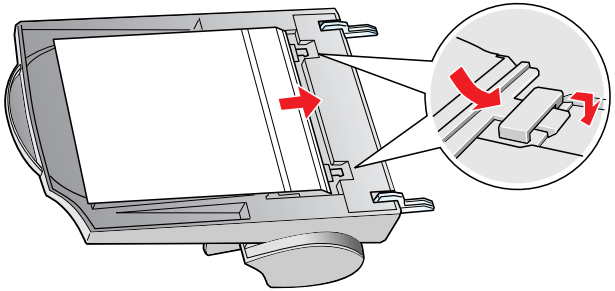


Attaching the Paper Path Guide

1 Insert the transparent plastic sheet of the paper path guide into the paper path of the auto document feeder.



2 Insert the hooks into the rectangular holes in the bottom of the auto document feeder. Make sure the hooks click into place.

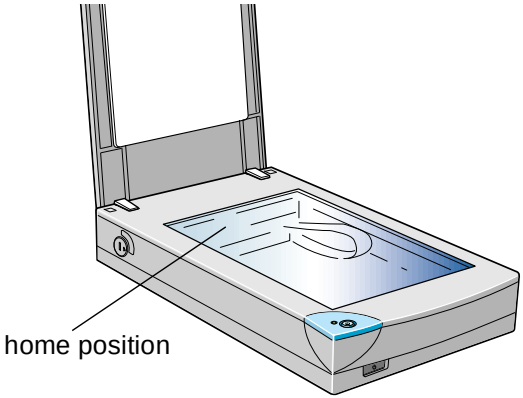


Transporting the Scanner

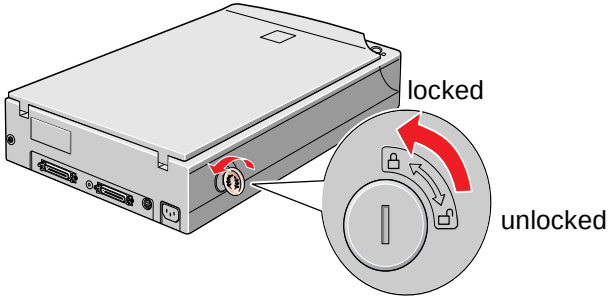
If you are transporting the scanner a significant distance or storing it for an extended period, follow the steps below to secure the carriage.

1 Remove any optional equipment and replace the document cover.

2 Turn on the scanner and wait until the carriage moves to the home position (towards the back of the scanner). Then turn off the scanner.



3 Use a coin or screwdriver to turn the transportation lock to the locked position to secure the carriage.



Note

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

If you are using the transparency unit and it is switched on, the carriage will not move to the home position. Remove the transparency unit first, then perform steps 2 and 3.

Troubleshooting

This chapter gives you the basics for diagnosing and solving scanner problems. For additional troubleshooting tips, see the “Problems? Need Help?” chapter of your *Scanner Basics* book and the “Troubleshooting” chapters of your electronic *EPSON TWAIN User’s Guide* and *LaserSoft for EPSON Perfection 636 User’s Guide*.

First see Problems and Solutions. If none of the suggested solutions solve your problem, contact your EPSON dealer or see Where to Get Help.

Problems and Solutions

This section divides scanner problems into two categories:

- Operating Problems
- Image Quality Problems

See the table in Scanner Light first. If this does not help you solve your problem, go to the category for the type of problem you have, then look for the problem description.

Scanner Light

The operate light indicates the status of the scanner. If an error occurs, the scanner stops operating and the operate light shows the type of error.

Light status	Scanner status	Solution
☼ (slowly flashing green)	Initializing or busy scanning	—
○ (green)	Ready to scan images	—
●	The scanner is turned off	—
☼ (rapidly flashing red)	The interface setup is wrong, or the scanner is not properly connected to the computer.	Check the interface connection. Then turn the scanner off and back on to reset it.
	The transportation lock has not been released, the fluorescent lamp needs to be replaced, or the scanner is broken.	Make sure that the transportation lock is in the unlocked position; then turn the scanner off and then back on. If the scanner still does not operate properly, or if this error occurs repeatedly, consult your dealer.
☼ (rapidly flashing orange)	The cover of the optional auto document feeder is open, or the release lever is pressed and paper feeding unit is slightly open.	Make sure that the cover of the optional auto document feeder is closed and/or push the paper feeding mechanism down until it clicks into place.
	No paper is loaded, or paper has jammed in the auto document feeder.	Load paper in the auto document feeder, or turn the scanner off and remove the jammed paper from the auto document feeder.

○ = on (green), ● = off, ☼ = flashing

Operating Problems

Problems you may have while using the scanner often involve the operation of your software and computer. Operation problems usually occur because of:

- Incorrect setup of the interface card (see *Scanner Basics*).
- Incorrect setup of your computer or software (see *Scanner Basics*).
- Incorrect operation of your software (see your electronic *EPSON TWAIN User's Guide* and *LaserSoft for EPSON Perfection 636 User's Guide*).
- Inappropriate selection of the scanner software settings (see your electronic *EPSON TWAIN User's Guide* and *LaserSoft for EPSON Perfection 636 User's Guide*).

Also see the documentation that came with your computer and printer for possible solutions.

The operate light does not come on.

Problem	Solution
The scanner is not turned on.	Press the ⏻ operate button to turn on the scanner.
The power cord is not plugged in.	Make sure the power cord is correctly plugged into the power outlet. Also, make sure the power outlet is working.

The scanner does not start scanning.

Problem	Solution
The scanner is not turned on.	Press the ⏻ operate button to turn on the scanner.
The interface board is not correctly installed.	Make sure that you have selected the correct interface port and settings with your software. Also make sure the interface board in your computer is properly installed. Make sure that the terminator and SCSI ID are correctly set up. If you have other expansion boards in your computer, make sure that they are not interfering with the interrupt setting of the interface board for your scanner. (See your computer documentation.)

The scanner software does not work properly.

Problem	Solution
The scanner software was not installed correctly or has been corrupted.	Be sure you have correctly installed your software or re-install your software.
You have not selected a TWAIN source.	For your TWAIN source, select **Perfection 636 (32-bit)** if you are using LaserSoft or **EPSON TWAIN3** if you are using EPSON TWAIN.

Problem	Solution
Your system does not meet the minimum system requirements.	Make sure that your computer system meets the minimum system requirements, such as the operating system version, specified for your software.
You are trying to scan an image at too high a resolution.	Confirm that the computer has enough memory for your software. If your computer has many device drivers, or if you are running other software at the same time, or using RAM-resident programs, the computer may not have enough memory available. (See your software and computer documentation.)

Image Quality Problems

The entire image is distorted or blurred.

Problem	Solution
Your document is not flat against the document table.	Make sure that the document is placed flat against the document table. You may have accidentally moved the document during scanning. Check the position of the document and do not move it while the scanner is operating.
The scanner is not on a flat surface.	Make sure that the scanner is not tilted or placed on an unstable surface.

Part of the image is distorted or blurred.

Problem	Solution
Your document is not flat.	Make sure your document is in good condition. Part of the document may be wrinkled, warped, or not in contact with the document table. Be sure the document is uniformly flat.

Edges of the document are not scanned.

Problem	Solution
Your document is too large.	The document table has non-readable areas around the edges. If part of your document extends beyond the maximum limits marked on the document table edge guides, you may have to reposition your document so that the image you want to scan is within the readable area.

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

Problem	Solution
Your document is not flat.	If the document is very thick or warped at the edges, the edges of the image may be discolored. Cover the edges of the document with opaque paper to block outside light.
Your document is too large.	If part of the document extends beyond the document table, that edge may not be in contact with the document table. Change the position of the document.

The image is faint or out of focus.

Problem	Solution
Your document is not flat.	Check that the document is placed flush against the document table.
Your software settings are not correct for your document type.	See your electronic *EPSON TWAIN User's Guide* and *LaserSoft for EPSON Perfection 636 User's Guide* for information on software settings.

The image is too dark.

Problem	Solution
Your software settings are not correct for your document type.	Adjust the brightness with your application software. Also check the brightness and contrast values of your display screen.

Straight lines in the image are jagged.

Problem	Solution
The document is not aligned with the scanner lamp.	The document may have been placed at an angle on the document table. Align it so that the horizontal and vertical lines are carefully aligned with the scales on the top and side of the document table.

The image does not look the same as the original.

Problem	Solution
Your software settings are not correct for your document type.	Try different combinations of image settings using your scanner software.
The colors displayed on your monitor don't match the original or printed colors.	Try increasing your monitor's color palette to 16 bit or 24 bit. Because your monitor and printer use different technologies to represent colors, your printed colors cannot exactly match the colors you see on your monitor screen. Your software may not have sufficient color matching and color management features, or these components of your software may not be correctly installed. (See your software, monitor, and computer manuals for information on color matching and calibration.)
You selected an incompatible image type for your scanned image.	If you are importing an image file into your application software, make sure the file format is one your software can read. Also check that the image settings in your application are appropriate for the type of image you want to scan. (See your software manual.)

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

Problem	Solution
Your printer is running out of ink or toner.	If this happens in your printed image only, your printer is low on ink or toner. Replace your ink or toner cartridge. If this does not solve the problem, your printer may be malfunctioning. (See your printer manual.)
The scanner is malfunctioning.	If this happens on both your screen and printout, the scanner's sensor may be malfunctioning. Consult your dealer.

A line of dots always appears in the scanned image.

Problem	Solution
Your scanner needs cleaning.	If this happens on both your screen and printout, the document table glass may be dusty or scratched. Clean the document table glass as described in Cleaning the Scanner. If you are using the auto document feeder, the paper path guide of the auto document feeder may be dusty. Clean the paper path guide as described in Cleaning the Paper Path Guide. If the problem still exists, the guide may be scratched and must be replaced.

Textured patterns of dots appear on areas of an image.

Problem	Solution
You are using halftoning.	This is normal and caused by moiré patterns. Your scanner automatically minimizes the problem if Best & de-screening is selected as the Quality & de-screening setting in the Image Type dialog box.

Colors in the image look odd.

Problem	Solution
Your software settings are not correct for your document type.	See your electronic *EPSON TWAIN User's Guide* and *LaserSoft for EPSON Perfection 636 User's Guide* for information on software settings.
You are not using the transparency unit correctly.	When you are using the transparency unit, make sure the rectangular window near the hinges on the base is uncovered, or make sure the top of the transparency unit is closed when scanning.

Colors on your monitor are different from those in the original image.

Problem	Solution
The colors displayed on your monitor don't match the original or printed colors.	Try increasing your monitor's color palette to 16 bit or 24 bit. Because your monitor and printer use different technologies to represent colors, your printed colors cannot exactly match the colors you see on your monitor screen. Check the image settings in your scanner software, especially data format (bits/pixel/color), gamma correction, and color correction. Try a different combination of these settings. Your software may not have sufficient color matching and color management features, or these components of your software may not be correctly installed. (See your software, monitor, and computer manuals for information on color matching and calibration.)

Printed colors are different from those in the original image.

Problem	Solution
The colors displayed on your monitor don't match the original or printed colors.	Try increasing your monitor's color palette to 16 bit or 24 bit. Because your monitor and printer use different technologies to represent colors, your printed colors cannot exactly match the colors you see on your monitor screen. Your software may not have sufficient color matching and color management features, or these components of your software may not be correctly installed. (See your software, monitor, and computer manuals for information on color matching and calibration.)

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

Problem	Solution
You have changed the resolution or scaled your image.	The image size settings in your software determine the size of the printed image. Do not use the size of the image on your monitor to judge the printed size.

Your image cannot be printed or the printout is garbled.

Problem	Solution
Your image file size is too large.	Confirm that the computer has enough memory for your software. If your computer has many device drivers, or if you are running other software at the same time, or using RAM-resident programs, the computer may not have enough memory available. (See your software and computer documentation.)
Your printer is not set up correctly.	Check that the printer is properly connected to the computer and is correctly set up. (See your printer manual.)
Your software is not installed correctly.	Check that your software is properly installed and set up for your printer. (See your software manual.)

Color of negative film preview images looks odd.

Problem	Solution
You are not using the software settings.	Check that settings are correct. See your electronic *LaserSoft for EPSON Perfection 636 User's Guide* or *EPSON TWAIN User's Guide* for details. Make sure the narrow window at the top of the transparency unit is not covered. Remember that the dark area around the film, such as the frame of the film holder, is perceived as white—altering the exposure of the scanning area and causing your scans to appear darker. See the correct color by adjusting the marquee or frame border and then adjusting the exposure. See your electronic *LaserSoft for EPSON Perfection 636 User's Guide* or *EPSON TWAIN User's Guide* for details.

Where to Get Help

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

Electronic support services

Service	Access
World Wide Web	From the Internet, you can reach EPSON's Home Page at **http://www.epson.com**.
EPSON Internet FTP Site	If you have Internet FTP capability, use your Web browser (or other software for FTP downloading) to log onto **ftp.epson.com** with the user name **anonymous** and your e-mail address as the password.
EPSON Download Service	You can call the EPSON Download Service at **(800) 442-2007**. Set your communications software to 8 data bits, 1 stop bit, no parity. Modem speed can be up to 28.8 Kbps.
EPSON Forum on CompuServe®	Members of CompuServe can type **GO EPSON** at the menu prompt to reach the Epson America Forum. For a free introductory CompuServe membership, call (800) 848-8199 and ask for representative #529.

Automated telephone services

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

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

To speak to a technical support representative, dial (310) 974-1970 (U.S.) or (905) 709-3839 (Canada), 6 AM to 8 PM, Pacific Time, Monday through Friday. Toll or long distance charges may apply.

Before you call, please have the following information ready:

- Product name (EPSON Perfection 636)
- Product serial number (located on the back of scanner)
- Computer configuration
- Description of the problem

You can purchase genuine Epson supplies and accessories from EPSON Accessories at (800) 873-7766 (U.S. sales only). In Canada, please call (800) 873-7766 for dealer referral. Or visit our web site at www.epsonsupplies.com (U.S. sales only).

Specifications

Specifications are subject to change without notice.

This chapter contains specifications for the scanner and options:

Scanner Specifications

Basic Specifications

Scanner type	Flatbed, color
Photoelectric device	Color CCD line sensor
Effective pixels	5100 × 7020 pixels at 600 dpi, 100% scaling
Maximum document size	A4 or US letter size (8.5 inches × 11.7 inches [216 mm × 297 mm]) Up to legal size if using the optional auto document feeder (The reading area can be specified from software.)
Optical resolution	600 dpi

Maximum hardware resolution*	600 dpi (main scan) 2400 (sub scan) * The maximum hardware resolution of 600 × 2400 dpi is achieved using EPSON's Micro Step™ drive technology.
Maximum interpolated resolution	9600 dpi
Speed (600 dpi, draft mode)	Color: 8.1 msec/line Monochrome (bi-level): 2.7 msec/line
Output resolution	50 to 9600 dpi (50 to 4800 dpi in 1 dpi increments, 4800 dpi reading at 200% produces 9600 dpi reading with 16, 368 pixel limit in main scan, 7200 dpi, and 9600 dpi; 7200 dpi and 9600 dpi performed with zoom function)
Color separation	By the color filter of CCD
Command level	ESC/I-B7
Reading sequence	Monochrome: One-pass scanning Color page sequence: Three-pass scanning (R, G, B) 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
Pixel depth	8 bits per pixel (12 bits per pixel input, 8 bits per pixel output)
Brightness	7 levels
Line art settings	Fixed threshold TET (Text Enhancement Technology, enable/disable selectable)

Digital halftoning	AAS (Auto Area Segmentation, enable/disable selectable) 3 halftoning modes (A, B, and C) and 4 dither patterns (A, B, C, and D) for bi-level and quad-level data
Gamma correction	2 types for CRT display 3 types for printer 1 type for user-defined
Color correction	1 type for CRT display 3 types for printer output (available in color byte sequence mode and color line sequence mode) 1 type for user-defined
Interface	Two SCSI (50-pin half pitch connectors)
Light source	White cold cathode fluorescent lamp
Reliability	30,000 cycles of carriage movements (main unit MCBF)
Dimensions	Width: 11.3 inches (287 mm) Depth: 16.7 inches (425 mm) Height: 3.4 inches (88 mm)
Weight	Approx. 9.9 lb (4.5 kg)

Electrical

Specification	100–120 V model	220–240 V model
Input voltage range	AC 90 to 132 V	AC 198 to 264 V
Rated frequency	50 to 60 Hz	
Input frequency	49.5 to 60.5 Hz	
Rated current	0.5 A	0.3 A
Power consumption	Approx. 20W	

Check the label on the back of the scanner for voltage information.

Environmental

Temperature

Operation: 41 °F to 95 °F (5 °C to 35 °C)
50 °F to 89 °F (10 °C to 32 °C) when using the auto document feeder
Storage: –13 °F to 140 °F (–25 °C to 60 °C)

Humidity (without condensation)

Operation: 10% to 80%
20% to 80%, when using the auto document feeder
Storage: 10% to 85%

Operating conditions

Ordinary office or home conditions; avoid extreme dust, operation under direct sunlight, and strong light sources.

Safety Approvals

120V model

Safety standards: UL 1950 with D3
CSA C22.2 No. 950

EMI: FCC part 15 subpart B class B
CSA C108.8 class B

230V model	Safety standards	EN 60950
	EMC	EN 55022 (CISPR Pub 22) class B AS/NZS 3548 class B

CE marking

230 V model

Low Voltage Directive 73/23/EECEN 60950
EMC Directive 89/336/EECEN 55022 Class B
- EN 61000-3-2
- EN 61000-3-3
- EN 50082-1
  - IEC 801-2
  - IEC 801-3
  - IEC 801-4

SCSI Interface

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

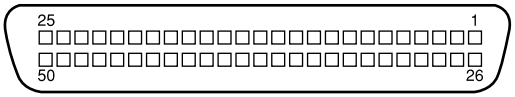
Functions:

BUS FREE phase
ARBITRATION phase
SELECTION/RESELECTION phase
COMMAND phase
- (the Logical Unit Number is fixed to 0 and the command link function is not supported)

DATA phase
- Data in phase
- Data out phase

STATUS phase

MESSAGE phase
MESSAGE IN phase
MESSAGE OUT phase
ATTENTION condition
RESET condition

Logic level	TTL compatible
Electrical standard	ANSI X3T9.2/375R Revision 10L (SCSI 2)
ID Setting	Selectable from 0 to 7
Terminator	Internal terminator selectable (enable/disable)
Connector type	Two 50-pin half pitch connectors (micro DB 50 connectors)
Connector pin arrangement	

Initialization Methods

The scanner can be initialized (returned to a fixed set of conditions) in the following ways:

Hardware initialization	* The scanner is turned on. * The scanner receives a SCSI Reset signal from the SCSI interface.
Software initialization	* Software sends the ESC @ (initialize the scanner) command. * The scanner receives a SCSI Bus Device Message.

Transparency Unit Specifications

Basic Specifications

Dimensions	Width: 8.8 inches (222.4 mm) Depth: 12.0 inches (305.4 mm) Height: 1.4 inches (36.9 mm)
Weight	1.5 lb (0.7 kg)
Maximum readable area	3.6 inches × 4.6 inches (93 × 118 mm, size of 4 × 5 film holder opening)
Electrical	Supply voltage: DC 24V 10%V Rated current: 0.5A
Reliability	10,000 hours
Humidity (without condensation)	Operation: 10% to 80% Storage: 10% to 85%
Operating conditions	Ordinary office or home conditions; avoid extreme dust, operation under direct sunlight, and strong light sources.
Document specifications	Transparencies up to 4 × 5 film (negative film, positive/reversal film) 35 mm strip film 35 mm slides Brownie size strip film
Safety approvals	UL 1950 CSA C22.2 No. 950 EN 60950 IEC 950

EMC	FCC Part 15 subpart B class B CSA C108.8 class B AS/NZS3548 Class B	
	CE Marking	
	Low voltage directive 73/23/EEC EMC Directive 89/336/EEC	EN60950 EN55022 Class B EN50082-1 IEC 801-2/801-3/801-4
Resistance to electrical noise (static electricity)	panel: 10kV metal: 7kV/150pF, 150 ohm	

Auto Document Feeder Specifications

Basic Specifications

Dimensions	Width: 12.6 inches (319 mm) Depth: 17.8 (451 mm) Height: 5.4 inches (137 mm)
Weight	4.9 lbs (2.2 kg)
Feeder type	Sheet through, face up loading, face down ejecting, roller friction
Loading position	Left side of document against left side of feeder, opposite scanner's original point
Scanning speed	3 pages per minute (A4, line art, 300 dpi, draft mode)
Connector	8-pin DIN male
Environmental temperatures	Operation: 50 °F to 90 °F (10 °C to 32 °C) Storage: –4 °F to 140 °F(–20 °C to 60 °C)
Humidity (without condensation)	Operation: 20% to 80% Storage: 10% to 85%
Operating conditions	Ordinary office or home conditions; avoid extreme dust, operation under direct sunlight, and strong light sources.
Reliability	Load/eject: MCBF 20,000 sheets Hinge: MCBF 12,000 cycles
Electrical	Input voltage: DC 24V±10% DC 5V±5% Input current: 24V: 0.8 A 5V: 0.2 A

Safety approvals	UL 1950 CSA C22.2 No. 950 EN60950 (VDE) IEC950 (ROSTEST, PSB)	
EMC	FCC Part 15 Subpart B Class B CSA C108.8 Class B AS/NZS3548 Class B CISPR Pub 22 Class B CNS13438 Class B	
CE Marking	Low voltage directive 73/23/EEC EMC Directive 89/336/EEC	EN60950 EN55022 Class B EN50082-1 IEC 801-2/801-3/801-4
Resistance to electrical noise (static electricity)	Casing: 10kV Metal: 7kV/150pF, 150 ohm	

Document Specifications

Feeder capacity	Total stack: 20 sheets of maximum weight 55 gm paper, thickness less than 4 mm
Size	Width: 3.3 to 8.5 inches (85 to 216 mm) Length: 5 to 14 inches (127 to 356 mm)
Thickness	0.0028 to 0.0063 inch (0.07 to 0.16 mm)
Ream weight	50 to 105 kg
Weight	58 to 122 g/m^2

Paper quality	High-quality bond paper, check paper, recycled paper
Applied color	Color and monochrome
Document type	Documents printed with impact printers, laser printers, or facsimile machines

Don’t use the following paper types: transparencies, coated paper, labels, carbon paper, or paper with staples, holes, rips, curls, or folds.

Glossary

additive primary colors	The colors of red, green and blue (RGB)—which give the perception of white when fully added. These are the colors of the color system used with monitors and scanners.
bit	Short for binary digit. The smallest unit of data in computer processing. A bit can represent two values: on and off, or 1 and 0.
bit/pixel	The unit that indicates the number of bits allocated for a pixel. The larger the bit value, the more detail a pixel can represent.
brightness	A scanner function to lighten or darken the output image data.
carriage	A component of the scanner that contains the optical sensor and light source for scanning.
color correction	A method of adjusting the color image data for a particular type of device so that the reproduction results are as close as possible to the original colors.
color separation	A process of converting full-color images into a limited number of primary colors. Additive primary colors (red, green, and blue) are used by the scanner, and the subtractive primary colors (cyan, magenta, and yellow) plus black are used for printing press separation.

default	A set of values used when no other selections have been made. These are sometimes called factory defaults if the original values have not been changed since the scanner has left the factory.
dithering	A process in which software or an output device simulates continuous tones with groups of dots.
document	The item, such as a sheet of paper or a book, that is placed on the document table for the scanner to read.
dpi	Dots per inch. A unit of measurement for resolution. The higher the value, the higher the resolution.
grayscale	Images represented with various shades of gray in addition to black and white.
halftoning	A method of using dot patterns to represent an image.
home position	The position at the rear (nearest the cover hinge position) of the scanner where the carriage rests before a scanning operation.
interface	A piece of hardware, a method, or a standard used for connection between or among computer devices.
line sequence	A type of color scanning that separates primary colors line by line. The carriage makes only one pass.
monochrome	Black and white images, or images represented only by the intensity of luminosity.

OCR	Optical Character Recognition. The technology that allows computers to "read" text from physical objects. OCR requires a graphical representation of text to interpret, which usually comes from a scanned image.
page sequence	The type of color scanning in which the entire image is scanned once for each separate color.
pixel	Short for picture element. Each image is composed of a number of pixels. Pixels are also counted in units of dots.
port	An interface channel through which data is transmitted between devices.
resolution	Indication of how finely an image is resolved into pixels. Measured in dots per inch (dpi), pixels per inch (ppi), or samples per inch (spi).
scan	An operation performed by the sensor and the carriage of a scanner. The image is divided into pixels by scanning.
scanning area	The physical size of the image that can be scanned by the scanner.
SCSI	Small Computer System Interface. A method used to connect your computer to peripherals such as scanners, hard disk drives, and CD-ROM drives.
SCSI chain	A SCSI bus arrangement that allows several devices to be connected simultaneously in a line to a single computer. Sometimes called a daisy chain.
SCSI ID	The numbers that all devices in a SCSI connection use to identify each other. If the same ID number is used by two devices in the same SCSI chain, the devices cannot operate properly.

subtractive primary colors The colors cyan, magenta, and yellow (CMY)—which produce black when mixed in certain amounts. In printing, black is often added to give more definition as mixing of actual inks cannot produce pure black.

terminator A device that stops electronic signals, and prevents them from proceeding or returning to other devices. This is necessary to stop a signal from continuously bouncing between devices.

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